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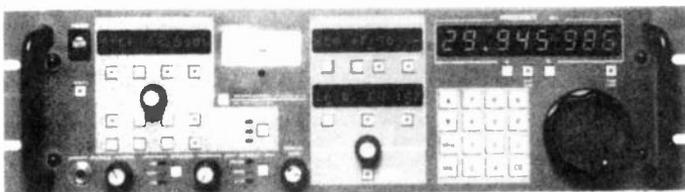
**DIE STEM VAN SUID AFRIKA**



**THE VOICE OF SOUTH AFRICA**



## HF-1000 LF/MF/HF COMMUNICATIONS RECEIVER



The new Watkins-Johnson HF-1000 is a fully synthesized general coverage receiver that combines analog and digital signal processing (DSP) to achieve a level of performance not previously available to the shortwave listener. Covering 5 kHz to 30 MHz with 1 Hz tuning and display resolution, the HF-1000 now provides capability previously enjoyed only by military and commercial users. Functions such as synchronous AM demodulation, noise blanking, I.F. filtering, AGC, demodulation, Beat Frequency Oscillator and passband tuning are accomplished through the use of DSP techniques. Filters with superior amplitude and group delay characteristics are achieved with digital stability and repeatability. An astounding array of 56 I.F. bandwidths are available to allow the operator to optimize selectivity under any signal environment. Filters range from 56 Hz, for monitoring CW with exceptional signal-to-noise ratios, all the way up to 8 kHz for monitoring AM signals with maximum fidelity. Available detection modes are synchronous AM, FM, CW, USB, LSB and ISB. A tunable BFO can be adjusted in 10 Hz steps over a  $\pm 6000$  Hz range, and passband tuning is available to further enhance the reception of CW signals. Gain control can be accomplished manually or automatically, with fast and slow AGC modes available. The squelch threshold is adjustable from 0 to -135 dBm, or it can be disabled. A noise blanking feature can also be enabled to effectively eliminate the adverse effects of impulse noise. A tunable I.F. notch filter allows the operator to reject undesired signals with the IF passband. The HF-1000 has an internal switchable preamplifier and attenuator, and analog S-meter, plus a built-in diagnostic self-test capability.

In addition to fixed-frequency tuning, the HF-1000 provides fast, flexible scanning capability. Three scan modes are available: channel scan, F1-F2 scan and F1-F2 scan with lockouts. For all scan modes, the dwell time can be set from .5 to 20 seconds or infinite. In channel scan mode, 100 programmable memory channels are available. Sectors of memory can be specified for individual channel scans, allowing the available memory to be subdivided into multiple search scenarios. The operator can specify certain channels to be skipped without having to delete them from memory. Memory channels can also be single-stepped manually. In both F1-F2 scan modes, the step size is user-selectable from 1 Hz to 25 Hz. Up to 100 independent frequency lockouts can be stored.

The HF-1000 can be operated locally via the front panel or remotely via one of two selectable serial interfaces. Measuring 5.25 x 19 inches, the microprocessor-controlled front panel provides a user-friendly operator interface with dedicated, logically arranged controls and large, easy-to-read LED displays. A majority of the HF-1000 operator-selectable parameters are controllable and accessible via the RS-232C remote interface. A carrier Sense Multiple Access with Collision Detection (CSMA) with a limited instruction set interface may be enabled, in lieu of RS-232 to allow the HF-1000 to be controlled using a command protocol similar to several popular consumer receivers. Selection of the active interface is via an internal switch setting or by front panel entry. All receiver inputs and outputs are available on the rear panel of the unit with the exception of the front-panel mounted headphone jack. The antenna and external reference inputs, as well as the signal monitor and predetected I.F. outputs are available on BNC connectors. Speaker and dual-balanced line audio outputs are available on a terminal strip along with DC-coupled audio, RSSI and squelch outputs and a mute control input. The RS-232 interface is available on a DB-25 and CSMA interface is provided via a miniature stereo phone jack. The HF-1000 can be used as a tabletop receiver or mounted in a standard 19 inch equipment rack occupying 5.25 inches of vertical space. Operates 97 to 253 VAC (47-83 Hz) automatically adjusting to the input line voltage. One year limited warranty. Made in U.S.A.

### SPECIFICATIONS

Dimensions ..... 19.0"W x 5.25"H x 20.0"D  
 Weight ..... 15 Lbs. (19 Lbs. ship)  
 Frequency Range ..... 5 - 30000 kHz  
 Display Resolution ..... 1 Hz  
 Power ..... 97 - 253 VAC (47-440 Hz)  
 Consumption ..... 35W typical  
 Antenna Impedance ..... 50 or 450 ohm  
 Selectivity (-3dB) ..... see IF FILTERS chart  
 Sensitivity ..... <.35  $\mu$ V, 5-30 MHz CW  
 <.58  $\mu$ V, 5-30 MHz SSB  
 <1.58  $\mu$ V, 5-30 MHz AM  
 (S+N/N)=10dB, no preamp)

Ref. Freq Stability ..... <= 1 p.p.m.  
 I.F. Rejection ..... 85 dB min (>90 typical)  
 3rd Order Intercept ..... >30 dBm typical  
 2nd Order Intercept ..... >40 dBm typical  
 AGC Attack Time ..... 15 msec typical  
 AGC Decay Time ..... Fast: 25 msec typical  
 Slow: 4 seconds typical  
 Audio Output ..... 1 Watt at 8 Ohms  
 Antenna Input ..... 50 ohms nominal, BNC  
 I.F. Output ..... 455 kHz, 50 ohms, BNC  
 Noise Figure ..... 14 dB max, 11 with pre  
 Remote Control ..... RS-232 full dupl. DB25.

### I.F. FILTERS (-3dB)

56	113	225	450	900	1800	3600	7200
63	125	250	500	1000	2000	4000	8000
69	138	275	550	1100	2200	4400	
75	150	300	600	1200	2400	4800	
81	163	325	650	1300	2600	5200	
88	175	350	700	1400	2800	5600	
94	188	375	750	1500	3000	6000	
100	200	400	800	1600	3200	6400	

### PRICING

HF-1000 List Price ..... \$3995.00  
 HF-1000 Discount Price  
 Order #1500 ..... Please call.

**Universal Radio, Inc.**  
 6830 Americana Pkwy.  
 Reynoldsburg, Ohio  
 43068 U.S.A.

800 431-3939 Orders  
 614 866-4267 Information  
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◆ **HUGE CATALOG** ◆  
 Our new 100 page catalog is bigger than ever, with everything that is new for the listener, ham or scanner enthusiast. Available FREE by fourth class mail or for \$1 by first class mail.

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### STORE HOURS

Monday - Friday 10:00-5:30  
 Except Thursday 10:00-8:00  
 Saturday 10:00-3:00  
 Sunday **CLOSED**

Visa, Mastercard or Discover card.  
 Prices & specifications subject to change.

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## Welcome to the following new NASWA members -

John Anderson, Mt. Airy, NC	Rowland Hamly, Decorah, IA
Robert E. Blstline, Mechanicsburg, PA	Paul Hansen, Marlborough, MA
Geoff Brown, Hopewell, NJ	John Hedberg, Portland, OR
Alvin Buchman, Jamaica, NY	Bill Kingsbury, South St. Paul, MN
Russell L. Cleveley, Wilson, NY	Oscar A. Mendez, Denver, CO
Charles E. Cluck, College Station, TX	Raymond S. Moore, Key Largo, FL
Brent A. Cowen, Portsmouth, OH	Fr. Francis J. Murhammer, Pittsburgh, PA
Jim Donelson, Lantana, FL	John Nitsick Jr., Omaha, NE
Jim Ducharme, South Hadley, MA	Joseph F. Noffsinger, Yardley, PA
Glen W. Eng, Flandreau, SD	Mr. Arthur M. Olsen, Sioux Falls, SD
Donald J. Fredrickson, Cedar Rapids, IA	David Pulkinen, Windham, ME
David Frelmark, Grafton, WI	Dale R. Schlenker, Hamburg, PA
Harold Frodge, Midland, MI	Don Stillman W3WQF, Philadelphia, PA
Robert L. Gerlach, Palmyra, PA	William Tripp, Delray Beach, FL
Bill Gler, Omaha, NE	John J. Wren, Monterey, CA
George V. Graud, Freeport, NY	Peter J. Zuur, Staunton, VA
Christopher F. Guarino, Westlake Village, CA	

## Calendar Of Events

- Nov 16 - Meeting, N.E. Ohio SWLs. Cuyahoga County Library, 9089 Brecksville Rd., Brecksville, OH (Rt. 21, just South of Rt. 82). 7:00 PM. For info send SASE to: NE Ohio SWLs, c/o Donald J. Weber, P.O. Box 652, Westlake, OH 44145-0652
- Nov 19 - Meeting, Philadelphia Area NASWA Chapter. Kulpville Holiday Inn, Kulpville, PA. 7:30 PM Contact Dan Cashin (215)446-7831
- Nov 19 - Meeting, The Boston Area NASWA Chapter. Special guest speaker - Jim Kearman, KR1S, Assistant Technical Editor at the American Radio Relay League (ARRL). Jim will talk about HF propagation in the coming years, and what antennas will be best for DXing. Location - Bull Cafeteria, Billerica, Mass. 7:30 PM For additional information please contact Paul Graveline (508) 470-1971, or via modem on Tom's BBS, (617) 698-8649 (300/1200/2400 baud), (617) 698-8734 (9600).
- Nov 20 - The Miami Valley DX Club (All band orientation) meets on the third Saturday of each month at 1 PM. Locations vary but are announced in advance. For info, call the MVDXC (614) 471-9973 Or, send a SASE to MVDXC, Box 292132, Columbus, OH 43229-8132
- Dec 4 - The North Coast Amateur Radio Club - Fall Hamfest, 8AM-2PM at St. Clarence Church, 30106 Lorain Rd., North Olmsted, OH 44070. Talk in on 145.29 and 224.76 repeaters. Admission \$3 advance, \$4 door. Contact: Rick Mace N8VKE (216)483-4818
- Dec 5 - The Tidewater SWLs meet on the first Sunday of each month at 6:30 PM. For info, call Joe Buch, (804) 721-2782.
- Mar 11-12 The 7th Annual Winter SWL Festival, Kulpville Holiday Inn, Kulpville, PA. Registration form will appear in next month's Journal or SASE to Winter SWL Fest, PO Box 591, Colmar, PA 18915

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

Our Motto is - "Unity and Friendship"

## Musings

*This column provides a forum whereas members can express comments, ideas, and thoughts about NASWA or the SW radio hobby. Please feel free to comment on anything presented this month (or previous months). Opinions expressed here are solely those of the submitters.*

**James F. McElroy, 214 Sinclair Ave., Lanoka Harbor, NJ 08734**

I have an old Hallicrafters radio model S-36D and Hallicrafters is no longer in business. My problem is that the line that controls the tuning dial is broken and no one seems to be able to repair it. Do you know of someone in my area that might help. I am in Southern New Jersey. Any help would be appreciated. Regards - Jim

**Robert Pietraszek, 63 Millers Falls Rd., Turners Falls, MA 01376**

Twenty-five years ago was late 1968 and early 1969. Shortwave radio has changed a great deal since then with modern technology in an ever changing world. To what, though, were we listening to back then and who were the voices and programs that entertained us at the time? Obviously I can't cover them all but I will draw from those that I remember best from my own listening. For those who are curious and for those who were listening then, I would like to take you down the shortwave memory lane .....

Hard line reports on the Cultural Revolution could be heard on Radio Peking. Radio Station Peace and Progress from Moscow was the Voice of Soviet Public Opinion. Radio Berlin International was the Voice of the German Democratic Republic. Radio Portugal was the voice of the west while right next door under President Franco was "The Voice of Spain". On less crowded bands, Radio Ghana could be heard well on 11.850 megacycles at 2000 GMT. ORTF in Paris was only broadcasting in French while the "DX window" could be heard in English from Radio Denmark. From Canada on 6010 mhz was CJCB from Sydney, Nova Scotia and from the U.S. was AFRTS in Washington or WNYW Radio New York Worldwide. The "DX Special" could be heard on Trans World Radio Bonaire while Radio Nederland was completing work on its new relay station there.

Who were those special voices that we looked forward to hearing though? If we go through the week at Radio Nederland, the Dutch World broadcasting System, we find Eddy Startz at the "Happy Station Show" on Sunday, Dody and Jerry Cowan with record requests on "His and Hers" on Tuesday, Harry Van Gelder with "DX Jukebox" on Thursday, Van Dulken with "Letterbox" on Friday and Bruce Parsons and Alan Clark with "What's New?" on Saturday.

On any Sunday morning to North America from 1215 - 1315 GMT on Radio Australia you could hear - "Churches of Australia" followed by a bulletin of Australian News with John Royale, "Listener's Mailbag" with Keith Glover and "DXer's Calling" with Peter Homfray.

At Radio Sweden, Arne Skoog hosted "Sweden Calling DXers" while Trevor Williams, George Varoos, Sydney Coulson and David Noble hosted other programs.

Down to Larry Wayne at the Voice of Germany hosting his daily "Germany Today" with Jezzy the cat what am and on Tuesday and Thursday, "Your Hostess is Marlana".

Then down to the pleasant rotating announcers, Barbara, Monica, Pamela and Valerie, at SBC Bern while after "Echoes from Switzerland" you can hear the "Swiss Shortwave Merry-Go-Round" with Bob Thomann and Dave Simmons. Otto Berner helped with his weekly reports. On Sunday, Monica and Ron gave you a ride on the "Melody Train/Mailbag Show".

Jean Novakova was the friendly voice on the "Magazine of the Air" at Radio Prague. She was no longer heard from again after the Russian Invasion of Czechoslovakia in August 1968 and was replaced by rotating announcers Yana Pavlikova, Martha Tryanova and Olga Mala.

On the very popular Radio Portugal, Margaret would read your letters on "Sincerely Yours" on Thursday or you could tune in to the Radio Portugal DX Club on Monday evening.

The ever jovial Henry Hatch would find you at the BBC World Radio Club while Margaret Howard read your opinions on "Letterbox".

Across the ocean again to Radio Canada where we find Pip Duke, Elaine McMaster and Duncan

Nicholson with the "Radio Canada Shortwave Club" followed by "Country Style" on Saturday. On Sunday, Earle Fisher read your letter on the "Listener's Corner" part one in the morning, part two in the evening.

Lastly, way down to RSA, the Voice of South Africa, where Arthur Hanna and Dorianne Berry hosted "P.O. Box 4559". David Lloyd played the South African Hit Parade and Leo Van Der Walt greeted you on the "DX Corner".

I'm sure there are many other names not mentioned here but perhaps another listener could share a few memories. I hope you found this enjoyable to look through.

**Ernest Lawrence, 11 St. Helena St., Perry, NY 14530**

The summer is over. I am back at the radio again. My shack is in order and my new antennas are up. The late afternoon African stations are gradually improving. A much anticipated PNG opening around the equinox failed to develop due to heavy thunderstorm static. I haven't heard much of the really good stuff yet, so I don't have much to contribute in the way of loggings. Al Underwood of Silver Springs, NY, a fellow Longwave Club of America member, shared this beautiful quote with me. It captures the romance of DXing and might make good material for our Musings column.

"I keep the shortwave radio at my bedside. Most of the time there is only talk to be heard; but if one persists into the unlikely hours of the night there are stations that relent and play music. Fading in, fading out, I heard last night from where? Helsinki? The Cook Islands? Anthems of all the nations, celestial Music, music that left us years ago and now comes back from the stars transfigured, gentle, as evidence that all that is given forth will at length return. A closed universe, curved like an egg, enclosing us.

"There I lay in the dark, listening to the music of the stars and the crackling and humming that accompanied it like the dust of meteors, smiling, my heart filled with gratitude for this good news from afar."

**Age of Iron** by J.M. Coetzee (Vintage Press, 1990)

**Don Moore; 11434 140th St; Davenport, Iowa, 52804-9538**

I thought I should pass along a progress report on my shortwave listening class here at Teikyo Marycrest University, as I explained in a musing last spring. I guess the situation is best described as a short term set-back but a positive long term outlook. The class was scheduled to be taught this fall, but was canceled when not enough students signed up. But, that wasn't because there weren't interested students. A number of students were interested in the class but could not take it because of strict major requirements that specifically map out what the students have to take each semester and leave no room for electives. We are going to try offering the class again spring semester and hope for better luck.

As I said, the long term outlook for the class is good. We are currently revising the entire university curriculum to both allow more student choice in classes and make it more international in focus. The new general education requirements, which all students must take, will require a certain number of credits in classes that have an international focus, and the shortwave class will be one that meets this requirement. I believe this will make us the first university in the world where a class in shortwave listening helps meet the graduation requirements. In the meantime we are discussing putting in a shortwave listening lab, both for use with the class and for other students, including our international students who could use it to keep up with events at home. So, despite the initial setback, the university administration is very interested and supportive and the future is encouraging!

### 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, Dave Kirby N8JQX, and Hausie WB4JSP, host an always lively gang of DX monitors. (Best heard in the eastern half of NAM)

The NASWA Country List Committee has voted the following changes. Please make these changes alphabetically in your NASWA COUNTRY LIST. The committee hopes to bring out an updated country list booklet, reflecting these and other changes since the last printing, by the end of the year.

1. EUROPE: Current listing CZECHOSLOVAKIA. Amended to:

CZECHOSLOVAKIA (CZECH REPUBLIC)

2. EUROPE: Add as a new country:

CZECHOSLOVAKIA (SLOVAKIA)

3. EUROPE: Current listing YUGOSLAVIA. Amended to:

YUGOSLAVIA ( SERBIA-MONTENEGRO)

4. EUROPE: Add as a new country:

YUGOSLAVIA ( CROATIA)

5. EUROPE: Add as a new country:

YUGOSLAVIA ( BOSNIA-HERCEGOVINA )

6. ASIA: Add as a new country:

SIKKIM ( INDIA )

And, simply as a reminder of an addition made earlier this year, which some members may have overlooked.

7. AFRICA: Add as a new country:

ERITREA

The NASWA COUNTRY LIST COMMITTEE has expanded its membership to seven. Recently added to the committee are David Clark, John Herkimer and Dr. Harold Cones, NASWA Award Chairman. Other members of the committee are Jerry Berg, John Bryant, Gerry Dexter and Don Jensen, Chairman.

The committee is working on a new and revised edition of the NASWA COUNTRY LIST which will include these recent additions. That list should be available within several months.

NASWA members with comments, suggestions or questions may contact the chairman, Don Jensen, 5204 70th Street, Kenosha, WI 53142, or any member of the committee. Please include an SASE if you wish a reply.

Those who may be interested in a detailed explanation of "radio country" lists in general and the philosophy involved in creating the NASWA Radio Country List are referred to " Counting Countries ", an article in PROCEEDINGS 1989 (Fine Tuning Publications, Stillwater, OK).

# Easy Listening

Richard D. Cuff  
213 Parkview Avenue  
Allentown, PA 18104-5323  
GENie R.CUFF  
MCI Mail 375-4854  
CompuServe 71207,1604  
Prodigy NCHT70A

## Radio Netherlands— Documentaries and a New Feature

When one thinks of documentaries on radio, one normally first thinks of the BBC or, perhaps, the Voice of America. Radio Netherlands also provides documentaries in its English language service to North America. One such documentary, "Revenge of the Tide", on the 40th anniversary of a significant flood, won a silver medal in the June 1993 New York Festivals' International Radio Competition.

November documentaries include:

November 3rd and 10th: A two-part report on Israel and the Occupied Territories, compiled by Eric Beauchemin.

November 17th: **Prohibition Politics**, a look at the aftermath of the 1961 United Nations Single Convention Treaty on Narcotic Drugs. This treaty aimed to control marijuana and soft drugs use worldwide. Fifteen major European cities have since signed the European Resolution, a movement towards self determination in drug policies. These policies are often at odds with national policies.

November 24th: **Dreamtime In Europe** explores why Australian Aboriginal art and culture have a significant impact in Europe.

December 1st: **Dutch Roots** looks at the Dutch origins of New York City. Brooklyn native Jonathan Groubert visits with poet Leo Vroman and with Charles Goring, curator of the last Dutch Farm.

**Documentaries** air in North America on 2350 Fridays, along with 0050 and 0350 Thursdays. The Pacific airings, often easy to

snag here in Eastern Pennsylvania, include Wednesdays 0750 and 0950, plus Fridays 0850.

Documentaries are also featured in the feature program called **Encore**. Some of the features in **Encore** have previously aired; one example is the series **Dancing Through Columbia**, airing on November 10th, 17th, and 24th. A repeat of Jonathan Marks' series **Marks on Mechanics**, looking at mechanical clocks, carillons, player pianos, early phonographs, and jukeboxes, airs through December. **Encore** is beamed to North America Wednesdays 2350; the Pacific airings include Wednesdays 0850.

Also new on Radio Netherlands is a sports program—**Bats, Balls & Baselines**. This program is airing for 13 weeks on a trial basis, and was prompted by a summer 1993 listener survey. African listeners were particularly interested in sports programming. **Bats, Balls & Baselines** will be split into four segments: **Issues & Investigations**, **Sports Personality Profile**, **General Feature**, and **Fixtures/Results & Sports News**. Howard Shannon is the presenter. While the program makes no claim to cover all sports at all times, the program does hope to capture a little of the enthusiasm that is universal to all sports. Look for **Bats, Balls & Baselines** to North America Saturdays 2350, and to the Pacific Saturdays 0850.

## HCJB Program Highlights

HCJB has begun a new science and technology program—**El Mundo Futuro**. Host Allen Graham looks at topics such as computers, personal communications, medicine, scientists, and other futuristic themes. **El Mundo Futuro** is beamed to North America Wednesdays at 0100, 0330, and 0530.

**Introspect** looks at current events from a Christian perspective; join host Len Kinzel Tuesdays at 0100, 0330, and 0350.

**On-Line** is a magazine program providing information and entertainment from Europe. European politics, arts, and science all are covered. **On-Line** is beamed to the Americas at 0400 Saturdays.

**DX Partyline** has the distinction of having the longest running time—50 minutes—of any major international broadcast program on the shortwave listening hobby. John Beck and Karen Schmidt host; Sundays to the Americas at 0030, 0300, and 0500 UTC.

How many shortwave programs on cooking can you think off? Maybe John Figliozzi needs to add a new program category to his **Shortwave RadioGuide**: HCJB airs **What's Cooking In The Andes**, a weekly program hosted by Karen Schmidt on the foods,

cooking, and cultures of Latin America. If you were looking for a program to interest your XYL in shortwave listening, perhaps this is it. Fridays to the Americas at 0100, 0330, and 0530 UTC.

## BBC World Service Highlights

Unfortunately, *BBC Worldwide* was once again late in arriving. I have contacted the BBC for help in getting my copy sooner, and I hope to resolve this by next month.

That's all for November—training for a marathon (I finished—in 4:23) and business travel conspired to result in an abbreviated column. I'll be back with three full pages in December.

Until next month,

73 DE Richard

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**WANTED:** Any SWL-related software for the MacIntosh. Will discuss terms. James E. Kilgallen, 228 Monterey Road, Fort Ord, CA 93941-5777.

**WANTED:** Hammarlund clock for HQ-170, HQ-180. Bill Wilson, PO Box 1112, Anniston, AL 36202. Phone (205) 236-7440.

**FOR SALE:** ICOM R-71A. Gilfer customized with 4.0 kHz filter and Pre-amp effective in AM band. A-1 shape. \$595.00 including shipping. **ALSO:** Customized Beam Headings (from/to) and Distances (MI/KM) to over 482 WRTH-93 transmitter sites including the new Russian republics. ITU Country Codes included. Send your location or coordinates, \$6.95. NASWA Journals '91 and '92 complete, \$10.50 a year or \$20.00 for both. WRTH-91, \$10.95. "Passport to World Band Radio" '92, \$6.95. All prices include shipping (overseas extra). Cashiers check or money order only, please. Al Drehmann, Route 2, Box 3-B, Tryon, NC 28782. Phone (704) 894-3398, not collect.

**FOR SALE:** ICOM R-71A with PBT. EEB HPXF modification package (improved AGC, improved audio, pre-amp enabled below 1600 kHz, static protection diodes installed), 2.4 kHz 8 pole crystal filter, 4 kHz ceramic filter. RC-11 remote control, EX-310 voice synthesizer, CR-64 high stability oscillator installed. Box and manual. Great DX rig and also suited for physically or visually challenged listeners. \$1616 value if new. Mint condition. \$800.00 U.S. firm plus shipping. **ALSO:** JRC NRD-515 modified by the late Perry Ferrell of Gilfer Shortwave. NDH 518 96 channel memory unit, NVA-515 speaker included. 6, 3.5, 2.4, and .6 filters installed. Operating and service manuals plus copies of various 515 reviews and sales literature included. Very good cosmetically, excellent mechanically and electrically. A DX classic for only \$750.00 U.S. firm plus shipping. **ALSO:** GROVE TUN-4 antenna tuner/pre-amp. Mint. \$50.00 U.S. firm plus shipping. MFJ 959B antenna tuner/pre-amp with power supply. Mint. \$45.00 U.S. firm plus shipping. GROVE PRE-3 VHF/UHF pre-amp with antenna module and power supply. Mint. \$30.00 U.S. firm plus shipping. Serious inquiries only, please. Mark Seiden, PO Box 112007, Miami, FL 33111-2007. Phone (305) 371-6421 1300-2200 UTC Monday to Friday. No collect calls.

# Latin Destinations

Don Moore  
11434 140th St.  
Davenport, IA 52804-9538



Hola amigos! Bienvenidos to Latin Destinations! A few weeks ago I received this year's catalogue for Pueblo to People, so I know it's time for my annual plug for this worthwhile organization. What is Pueblo to People? It's a nonprofit group that markets handicrafts, clothing, & food from Latin America. Their merchandise selection is great & from experience I can say of good quality. Their prices are not discount store prices, but are quite reasonable, especially compared to specialty import shops. If you want to decorate the DX shack with some items from the places you hear on the radio or are looking for some Christmas presents beyond the commercialized schlock of the local shopping mall, PtP is worth looking into. For a catalog, send one dollar to Pueblo to People; 2105 Silber Road, Suite 101-54; Houston, TX 77055.

Usually I stop there in promoting PtP, but I've been wanting to find ways to try to explain the reality of the Third World, as in my "Life in Honduras" article a few months back. So, let's look behind the scenes at PtP to see a little more of that reality and how this one organization in helping improve people's lives.

Pueblo to People helps establish and works with peasant cooperatives and groups in several Latin American countries. PtP not only provides an export market, allowing these groups to produce and sell more, but pays them a much higher and fairer price for their products than is available locally. In some cases this translates into jobs for men who would otherwise not have a livelihood. In other cases it allows women to earn their families some much needed cash income. Although I did not work with Pueblo to People, as a Peace Corps volunteer in Santa Barbara, Honduras in 1982-84, I saw PtP's good works first hand, which is why I'm such an enthusiastic supporter.

In the average Honduran peasant family, the woman stays at home during the day patting out tortillas, washing clothes by hand, watching the children, and doing other domestic tasks.

The men work in the fields. Some own a bit of land and raise food for their family and, with luck, have a little surplus to sell in the market. Others work for wealthier (not wealthy) landowners for two dollars a day—which is about enough to buy the beans and tortilla corn necessary to feed a family. Of course, sometimes there's no work.... Either way, Honduran peasant men can do little more than feed their families. There is no money left over for clothes, medicine, notebooks for school, etc. In the poorest families, young peasant children will often go naked or with only a single pair of underwear until they are three or four years old.

Peasant women traditionally do handicrafts at home in between their household tasks to supplement the family income. However, because of the typical Third World economic structure, their work is undervalued and produces very little additional income for the family. Where PtP has gone in organizing cooperatives and paying fairer prices, the additional cash income has allowed families to buy medicine, clothing, school supplies, etc.

A good example of this is with PtP's Honduran utility baskets and the baby bassinets, which are made in the small town of Ilima, a few miles north of Santa Barbara. Ilima is one of the poorest towns in this very poor country, but it has always been famous as a place where high-quality baskets were woven. The women used to sell their baskets to sort of traveling salesman/middlemen (called "coyotes" in local slang), who fixed prices among themselves so that they bought the baskets at very low prices from the women (3 or 4 dollars for a week's work) and then took the baskets elsewhere for resale at very high profits. PtP came in and organized the women into a cooperative and began buying the baskets at a fair (and much higher) price, which also forced the coyotes to pay fair prices. The result has been a lot more cash income for some of Honduras's poorest people.

Similar cases exist around Honduras. The Santa Barbara hats are made by peasant women in the villages surrounding Santa Barbara. The people there are still poor by anyone's standards, but they now have a little more money for their hard work and can lead somewhat better lives. PtP's wood furniture from Honduras is made in a carpentry shop in Juticalpa which was in part set up by a Peace Corps friend of mine to provide jobs for untrained landless peasant men. The men had no carpentry skills at all and he had to train them in everything. Today their products are beautiful and the shop is a great success. Lastly, I've got to squeeze in here a mention of the tasty dried cashew fruit (made from the fruit the cashew grows on) from a peasant cooperative set up by PtP in southern Honduras—it's great!

## Odds And Ends

In followup to my February column on Santiago Atitlan, I recently made email contact via the Internet Central America list with someone who visited the town for two nights in July. He said that while there was still some tension in the air, he saw no soldiers and only two national policeman in town while he was there. Santiago Atitlan is still doing a bustling business with the daily tourist launches from Panajachel as well.

The ups and downs of national economies have a lot to do with whether or not a lot of stations have the power switch of their shortwave transmitter turned on or off. From a number of sources, the good news is that Peru's economy finally appears to be recovering from the 1990 slump when inflation passed 7,000 percent. Inflation this year is expected to be only forty percent and should continue the downward trend next year. Meanwhile investment in the country by both Peruvians and foreigners is increasing dramatically and President Fujimori's popularity remains in the 60-70% range. The Sendero guerrillas are still a very significant force, but they have been pushed back some since their leader's capture a little over a year ago. As money and confidence begins flowing in the country again, hopefully this will translate into more shortwave transmitters being turned on.

Despite rough spots such as Peru, the overall trend in Latin America is positive. While

browsing recently at the University of Iowa library, I came across some interesting statistics in the July 22, 1993 issue of "Latin American Weekly Report." Population growth in the region, which was 2.37% in the 1970s and 2.06% in the 1980s is expected to continue sinking to 1.8% in 1990-95 (although certain smaller countries in the Caribbean & Central America will continue to have very high rates of population growth). The number of lifespan births per woman, which was 5.5 in the early 1960s, fell to 3.4 by the late 1980s and should reach 2.8 by the end of the 1990s. Average lifespan in Latin America was 61.3 in the mid-1970s, but should reach 69.8 by the year 2000. And in the year 2000, Mexico City will be the world's largest city, with 25.6 million inhabitants. Sao Paulo will be third with 22.1 million and Buenos Aires twelfth with 12.9 million.

Finally, we here in the US are not the only ones with an illegal immigration problem. I forgot to note my source, but Argentina's 33 million population includes 2.7 million immigrants, legal and illegal, from other Latin American countries. That number includes a million Bolivians and 800,000 Paraguayans. The immigrants are drawn by Argentina's level of wealth and economic development, relative to their homelands.

## Anniversaries

As far as I know there wasn't a peep from Colombian Radio Guatapurí in response to the request for a 30th anniversary reactivation of shortwave. But, it worked before and was worth a shot. In fact, I'm trying it again with a letter to Venezuela's La Voz de El Tigre (3255) which will complete forty-five years on the air on January 9 (1948). They've been very irregular for the past ten years or so, but maybe we can convince them to share their anniversary with the world. Join me by sending a postcard to the station and don't forget to keep a watch on their frequency come January. A few active stations with anniversaries coming up are Radio Huanata 2000, Peru on January 8 (1983); Radio Federacion, Ecuador on January 29 (1968); HRVC, Honduras on December 8 (1960); Radio Centinela del Sur, Ecuador on November 18 (1956); and Radio Mam, Guatemala on January 11 (1975).

Hasta luego! Don

# Feature Article

Please submit all contributions to:

**Bob Brown KW3F**

238 Cricklewood Circle

Lansdale, PA 19446

CompuServe 74756,1557

Genie R.BROWN106

Packet KW3F @ WB3JOE

## TECHNICAL UPDATE: Recent Changes in the JPS NIR-10 Audio Filter

by Mark Seiden\*

In the DX'ers Forum of the July '92 NASWA Journal, I reviewed the JPS NIR-10 digital audio filter. In that review, while generally extolling the virtues of the filter, I noted that an update would be forthcoming which would reduce the effects of static and lightning crashes. Well, DX fans, there's good news tonight. First of all, the modification is here. Second, it works pretty well, and third, there's been a price reduction on the unit as a whole.

One day a couple of months ago, I received a notice from JPS that a new version of the EPROMS ( designated series 3.0 ) was available for \$25. Its purpose was to reduce "pink noise" in addition to the white noise reduction already provided by the NIR-10. The 3.0 series EPROMS arrived a few days later and installed quickly and easily ( no technical skill required ). The EPROMS I selected were the "SWL version", best suited for AM and SSB voice signals, as well as ECSS tuning of AM signals. The "SWL" EPROMS contain fixed audio bandwidths of 3.0 KHz, 2.4 KHz and 1.8 KHz. Should you require different bandwidths, they can be requested at the time of your order. If your monitoring interests lie in the area of CW, RTTY or FAX, simply order the standard, narrower bandwidths.

Basically, the newest revision keys in on the audio portion of the signal and digitally "peaks" the audio while reducing accompanying noise. To accomplish this, simply set the mode toggle switch to "bypass" and the bandwidth (BW) toggle switch to "narrow" while adjusting your receiver audio

to cause the "peak" indicator light to blink on signal peaks. The NIR-10 will now automatically continually vary the audio bandwidth so as to provide you with the best and strongest audio, minus a good portion of the accompanying "pink" noise.

The new feature can also be employed while using the NIR-10 "white" noise reduction feature by moving the "mode" toggle up to the "NIR" setting while leaving the "BW" toggle in the "narrow" and varying the amount of digital processing via the "NIR" center knob. This will reduce both "white" and "pink" noise, albeit at some degradation of audio quality.

Neither the "white" or "pink" noise reduction feature, as before, will operate when the NIR-10 is employed in the audio bandpass mode; that is, while varying the audio bandpass manually via the fixed 3.0, 2.4 or 1.8 digital bandpass filters.

Don't expect a total elimination of all noise and don't expect FM stereo audio quality. But again, depending on the bandwidths you order, when DX'ing in either AM, ECSS, SSB, CW, FAX or RTTY modes, the device will help to significantly reduce noise, reduce operator fatigue and assist in snagging those rare, hard to hear catches. It also makes program listening more pleasurable, reducing or eliminating hiss, hets, static and monkey chatter that can degrade even some fairly strong signals.

A few final points. The new software seems to work best when the radio contains a quality I.F. filter ( for AM signals ) of 6 KHz or less having good skirt selectivity. The NIR-10

\* P.O. Box 112007  
Miami, FL 33111-2007

also works well with narrower filters for SSB, ECSS, and CW/RTTY use. It enhances the performance of my JRC NRD 535D and Drake R-7. It is of particular benefit to my JRC NRD-93 and JRC NRD-515, since neither of these two radios come equipped with a notch filter. The extremely effective auto-notch on the NIR-10 kills hets - even multiple hets - so quickly and effectively that the absence of a notch filter on the '93 and '515 has never proved to be an inconvenience.

All of the audio outputs on my radios are 4 ohms of impedance. These outputs are then fed into a Scotka Radio Labs audio filtering box that allows the filter to be switched in or out of the circuit, the selection of the radio to be used and then the selection of either a Drake MS-4 or JRC NVA-92 speaker, both of which are 4 ohms of impedance as well. This is a flexible set-up that allows maximum use of the NIR-10 and provides good, listenable audio.

It also helps to use the slow AGC setting on your radio. The constantly varying audio bandwidth ( in the "pink" noise reduction mode ) the new software provides seems to create its own AGC effect and employing a

"fast" AGC setting on the radio will sometimes cause the audio to flutter.

Digital technology and digital signal processing are the wave of the future. If Santa doesn't leave a Watkins-Johnson 8711 DSP receiver under the tree for you this Christmas, the series 3.0 version of the NIR-10 is a relatively inexpensive and effective way to employ advanced digital signal processing technology in cleaning up the audio that comes out of your existing analog receiver. All in all, a good thing.

The folks at JPS are very knowledgeable, professional and easy to deal with. And they've reduced the price of the NIR-10 from its original \$399.95 price to \$349.95, plus \$12 for the AC adaptor. If you already have the NIR-10, the 3.0 series software upgrade is only \$25, postage included.

JPS is located at:

JPS Communications, Inc.  
P.O. Box 97757  
Raleigh, NC 27624-7757  
Tel: (919) 790-1011

## Hardware Bits

by Alan Johnson

**NEW DRAKE RECEIVER** - The R.L. Drake Co. unveiled its new SW8 receiver at the recent Monitoring Times convention. It is a portable (luggable is a better term) whose size and design are based on the old Magnavox D-2999, according to Larry Magne. It is a general coverage LW/MW/SW receiver with FM broadcast and VHF aircraft band coverage as well. It has three IF bandwidths of 6, 4, and 2.4 kHz provided by high quality 455 kHz ceramic filters. It has 100 memory channels and a single event timer. Also included is a built-in battery holder, whip antenna and front panel speaker. It lacks passband tuning and a notch filter. Anticipated price is in the \$600-\$700 range and delivery is expected in December 1993. Contact the R. L. Drake Co., P.O. Box 3006, Miamisburg, OH 45343; 800-937-2530.

**PHILLIPS DC-777 AUTOMOBILE SW RECEIVER** - This option for SW reception in your car is now on sale at EEB and Universal for \$299. The 1994 Passport to World Band Radio says that the radio is being discontinued, so the lower price is to move the units out of the warehouse. I've been very pleased with mine, although after three years, the LCD display has become intermittent. Universal's phone is 800-431-3939 and EEB's is 800-368-3270.

**NEW AOR SW RECEIVER** - The 1994 catalog from Electronic Equipment Bank introduces a desktop SW receiver from the scanner manufacturer AOR, designated the AOR3030. The tentative list price is under \$900 and the unit is expected to be released in late 1993. It is a general coverage radio with provision for an internal VHF convertor. It has synchronous detection, keypad frequency entry, a RS-232C computer interface and can be powered by internal batteries.

The catalog entry touts several advanced engineering features such as Direct Digital Synthesis, high stability crystal oscillator (TCXO) and wide dynamic range. Specified standard IF bandwidths are 6.0 and 2.4 kHz. Contact EEB, 323 Mill St. Vienna, VA 22180; 800-368-3270 (orders) or 703-938-3350 (technical information).

**CRYSTAL CALIBRATOR KIT** - In a recent issue of the British publication, *Shortwave Magazine*, I noticed a kit from C. M. Howes Communications which may be of interest to those using older analog receivers. The XM 1 crystal calibrator provides markers of 10, 2.5 and 1 mHz and 250, 100, 25, 10 and 2.5 kHz with selectable pulsing for marker ID. The kit is \$30.95 (case and hardware kit is additional) and is available in North America from Townsend Electronics, P.O. Box 415, 133 N. 1st St., Pierceton, IN 46562; 800-944-3661 or 219-594-3661.

**LOWE PR-150 PRESELECTOR** - While we're on the subject of British products, let me mention the new Lowe PR-150 preselector. It is designed for those who use the HF-150 receiver in areas where there are strong local broadcasting stations, but is useable with any receiver. The PR-150 covers the range of 100 kHz to 30 MHz in seven bands and has a built-in +10 dB preamp and -16 dB attenuator. There is also a front panel switch to select between a 50 ohm unbalanced antenna or a 600 ohm balanced/unbalanced antenna. A preselector is a tuned circuit that peaks the desired signal and reduces the strength of signals outside the desired band. Although a preselector will not reduce adjacent channel signals (i.e. those 5 kHz away from the received signal), it will reduce strong out-of-band signals (such as local broadcasters) which can cause inter- and cross-modulation. Specified bandwidth of the PR-150 is +/- 5% of tuned frequency at 6 dB down and the -30dB bandwidth is +/- 25% of the tuned frequency. The external size and styling matches the HF-150 receiver. The list price is quite expensive at \$299, but the unit is well-engineered and built like a tank. Contact the U.S. dealers: Universal Radio or the Electronic Equipment Bank.

**MAGNAVOX ANALOG PORTABLE** - NASWA's Doug Robertson wrote that he has been very pleased with the performance of the Magnavox D1875 analog portable that is being closed out at \$39 plus \$5 S/H. The radio had been priced at \$59 from various dealers. It covers LW, MW, FM and 8 SW broadcasting bands between 49 and 11 meters with generous out of band coverage. Doug thinks it's a great knockabout radio. I have not verified that this offer is still available, but if you're interested give Heartland America a call at 800-229-2901.

**FALCON AUDIO DISTRIBUTION AMPLIFIER** - It took almost a year, but I finally received additional information on the Falcon 251A/252A amplifiers. These units allow the selection of any combination of up to seven speaker level audio inputs and routes them to any of four speakers. This allows for hooking up several receivers to a single speaker to minimize shack clutter or running the output of a receiver to several locations ("The family that DX's together, stays together"). The amplifier has a four watt output into two ohms and the unit is well-bypassed to minimize RF interference. Price for the single channel F251A is \$64. Call or write Falcon Communications, P.O. Box 8979, Newport Beach, CA 92658; 714-645-8155 for more information and the location of your nearest dealer.

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**RIG COVERS** - Kenwood TS440S and Icom 751A Free for \$2.00 postage. These are custom made fabric covers that will do a great job keeping your rig dust-free. Vernon Hyson, 5410 Camp Stewart Rd, Charlotte, NC 28215 704-536-3223 (No collect, after 2300UTC)

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# Listener's Library

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T. J. "Skip" Arey WB2GHA  
P.O. Box 644  
Waterford Works, NJ 08089  
GEnie T. AREY1

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Well, here we are again, ankle deep in the DX season. No doubt everyone is too busy chasing elusive signals from Radio Freedonia to sit down and read a good radio book. Still in all, the holidays are fast approaching and you may want to kick back during the break with a tome or two.

Another beginner's book has crossed my path, serving to remind me that I really should get something in print one of these days. I don't really think the market can have enough beginner's books, but it sure is getting fairly competitive.

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## **SHORTWAVE LISTENING GUIDEBOOK THE COMPLETE GUIDE TO HEARING THE WORLD**

Second edition  
by Harry Helms

323 Pages  
\$19.95

HighText Publications Inc.  
Solana Beach, CA  
ISBN: 1-878707-11-6

As I have said in previous columns, many of us increasingly more senior members of the radio monitoring community got our start by reading Hank Bennett's Shortwave Listener's Handbook. Bennett's book was the standard, one stop shortwave listening guide for years. Later editions of Bennett's book benefited from updating by several authors including HARRY HELMS. Harry has written many books and continues to write several columns in the hobby press. Of all his publishing efforts, I think it will be Harry's SHORTWAVE LISTENING GUIDEBOOK that will slowly replace all those dog eared copies of Hank Bennett's book in public libraries across the land.

The reason for a second edition is largely due to the many changes that have occurred in the world since the 1991 edition came out. Not only has the world's map changed, international shortwave broadcasting has changed drastically as well. New governmental and commercial broadcasting stations are appearing throughout what we once called the Soviet Union. We now have a viable "No code" amateur licensing program in the United States. We are awaiting an expansion of the AM broadcast band. Pirate radio is flourishing. All of these shifts in the shortwave milieu have given Helms an opportunity to restring his prose in an updated and expanded manual for the radio hobbyist.

In the tradition of Hank Bennett, Harry Helms wrote this book for folks who have no previous involvement with the shortwave radio hobby. He uses simple, non-technical language to let people in on the wonders of long distance radio reception. Harry gives the beginner a clear and concise understanding of how shortwave radio works. He goes on to help the newcomer pick their first receiver and decide on possible antenna solutions. As in previous books, his antenna selection section is sparse, but this may actually be of some benefit to the beginner who can wallow in antenna lore and legend later in their listening careers. Harry's real forte are his sections describing what a beginner might hear once he or she starts to tune in. Helms has always had an ability to turn the simple facts concerning the various broadcasters into truly enjoyable reading. This, I believe, is his key to hooking beginners. This technique continues beyond the more powerful international broadcasters into discussions of clandestine, pirate and numbers stations. Harry even throws in a little hobby gossip. He doesn't name any names, but a few folks will be recognizable to anyone who has been around the hobby for a few years.

The first thing I do whenever I pick up one of Harry Helms' books is turn to the chapter covering GROUND CONNECTIONS. You see, Harry and I have had a long standing gentlemen's disagreement over the use of ground wires. Harry's theory, as applied to modern receivers is quite sound and he has almost got me convinced on this point as well. This sound theoretical base is behind all of this book's chapters that depend on engineering. The knowledge is passed on to the beginner without scaring him or her away. Helms' chapter on radio propagation is about as good as can be found outside of some dusty, boring technical manuals.

Interestingly, Harry has taken most of the hobby aspects of shortwave listening and pulled them together in a single chapter. In this way he gives the reader a notion about logging, QSLing and the various clubs (including NASWA). This serves to remind us that there is a wider audience for shortwave listening than ever before. The growth of shortwave listening brought about by events such as the fall of the Soviet Union and the Gulf War have not been lost on Helms. These two events are also covered to introduce the beginner to the up to the minute excitement of shortwave listening.

I highly recommend the SHORTWAVE LISTENING GUIDEBOOK to all beginners and folks who think they know it all in the radio hobby. You will be hard pressed to find a better beginner's book. That is, until I get around to writing mine. And THEN we will see who knows a thing or two about ground wires!!!

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### **FERRELL'S CONFIDENTIAL FREQUENCY LIST**

**Eighth Edition**  
**Compiled by Geoff Halligey**  
**544 Pages**  
**\$22.95**  
**Gilfer Associates, Inc.**  
**Park Ridge, NJ**  
**ISBN: 0-914542-24-9**

Perry Ferrell left us too soon!!! The face of our hobby may even have been somewhat

different if he had lived on. His efforts to compile a useful listing of shortwave utility frequencies has been ably carried on through the eighth edition of his CONFIDENTIAL FREQUENCY LIST. Geoff Halligey has been a professional radio operator since 1933 until his retirement. He has since put his expertise in marine, ground and air radio helping hobbyists figure out what was going on out there between the broadcast signals.

Normally, I would review a book such as this in the SHORTWAVE SIDELINES section of this column. Instead I have moved it up a few column inches. With the edges of the various shortwave bands becoming increasingly flexible, (e.g. the 41 meter broadcast band above 7300 kHz) I thought it might be helpful for shortwave broadcast folks to look at a book that might help explain what's going on.

When I make a reception report to a broadcast station, I usually include information about any interfering signals. On more than one occasion the CFL has helped me put a positive ID on the interference, further enhancing my report (and hopefully, the likelihood of a reply) by providing potentially useful information to the station. Also, more and more hobbyists listening posts are including receiver/computer interfaces that translate the multitude of digital modes out there. Books like the CFL go along way in helping the hobbyist get the most use out of his or her demodulator.

Use of the CFL is very straight forward. It is usually as simple as looking up the frequency and seeing what's there to hear. The book covers 1605 through 28,000 kHz covering all the common utility modes: CW, SSB, ISB, FAX, RTTY and Digital Selective Calling. This edition includes all of the changes that occurred in the Maritime frequencies since July of 1991. The listings have special sections for Group Callsigns and locations, Channel markers and "Spy" numbers stations. The numbers station list is quite comprehensive when compared to loggings in the various utility and clandestine club bulletins. A recent, useful addition to the CFL is its "Blue Pages". This is a listing of all identified signals by callsign followed

by the frequencies these signals have commonly been heard on.

The CFL is made available in an easy to handle wire spiral binding that is a joy to use. I wish the WRTVH and Passport to Worldband Radio had such bindings.

If you have more than a passing interest in what goes on underneath your favorite broadcast stations, you might want to add the CONFIDENTIAL FREQUENCY LIST to your holiday gift wish list.

## Shortwave Sidelines

More than a few radio hobby folks will be looking for a VHF/UHF scanning receiver under their Christmas trees this holiday season. "Scanning" remains an exciting aspect of the radio hobby. My Radio Shack Pro-2005 runs nonstop at my listening post, clueing me in at all times to my more immediate universe as I monitor the world on my shortwave rigs. Modern scanners have wide frequency coverage and memories that run well into the hundreds of channels. This allows the monitor to enjoy listening to many things beyond local police and fire calls. If

you want to see what you have been missing take a look at the...

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## SCANNER RADIO GUIDE

by Larry M. Barker  
148 Pages  
\$14.95  
HighText Publications Inc.  
Solana Beach, CA  
ISBN: 1-878707-10-8

Barker's book is a great one volume guide to the modern world of VHF/UHF monitoring. Scanning is shedding its "blue collar" image as modern microprocessor controlled radios give easy coverage of Government, business, marine and rail systems in addition to the more traditional public safety frequencies. Larry reviews the fundamentals of VHF/UHF monitoring including equipment, antennas and propagation all of which can be significantly different from what a shortwave monitor might be used to. The book then covers the myriad of signals worth chasing in this frequency range. Once you read this book you will never be bored with scanning again.

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**FOR SALE:** A cassette tape of Indonesian stations is now available. The tape includes mainly AM stations in Yogyakarta and Surakarta including the RRI stations there. The price is \$5.00. Juichi Yamada, 10 Wata-machi, Yamatokoiyama-City, Nara, 639-11, Japan.

**FOR SALE:** NASWA PRENDX/Journals complete 1979-1991, \$10.50 a year or the entire 13 years for \$100.00. Popular Communications complete 1986-1988, \$12.00 a year or all three years for \$30.00. Prices include the shipping. Cashiers check or money order, please. Paul Brouillette, 611 Illinois Street, Geneva, IL 60134. Phone (708) 208-6406, not collect.

**FOR SALE:** 10:1 matching transformers for matching long-wire and Beverage antennas. Transformers are available for matching Beverage antennas only, or for matching either a Beverage or long-wire antenna. Please specify!. The Beverage version must be grounded at the transformer, while the Beverage/long-wire must be grounded at the receiver only. Price \$20.00 each postpaid in the U.S.A. Steven R. Lare, 824 West 25th Street, Holland, MI. Phone (616) 335-2270.

# Listener's Notebook

Hans Johnson  
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Columbia, MD 21046  
CompuServe 73042,3644

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All times are in UTC and all frequencies are in kilohertz.

**EDITOR'S NOTES** Much thanks to Bob Brown, Bill Oliver, and Alan Johnson. My old computer died the middle of the month and the above gentlemen got me running again. Also thanks to Tom Sundstrom for all his software support that has made doing this column easier.

I am pleased to announce that Mathias Kropf and I are now exchanging Clandestine Radio information via e-mail. Mathias compiled the *Clandestine Radio Survey* in the 1993 *WRTH*. He also writes Clandestine Radio column for *Contact* and *Shortwave News*.

I also received my first direct issue *OZDX* this month. Richard D'Angelo has been providing us with *OZDX* news but receiving it direct will improve our timeliness by one month from time to time such as this month when it arrived on the 27th.

**AFGHANISTAN** - *Radio Afghanistan* The external service was heard on 4775 operating on the following schedule on September 25th: 1400-1430 Urdu 1430-1500 ENGLISH 1500-1530 Russian 1530-1600 Arabic. (BBC Summary of World Broadcasts World Broadcasting Information No. 40 October 1st)

**ARMENIA** - *Arax Radio Agency* 12010 Heard on this new frequency from 2343 until 2357 in English. Parallel 9685 also a new frequency. Yerevan was also heard in English an hour earlier on new 7440. Listed 9705 was not heard. The English transmission from 0344-0357 was heard on new 7105. The station announced these unheard frequencies. 10344 17605 17690. 7105 is via a *Radio Moscow* transmitter. (Brian Alexander October 3rd)

**AUSTRALIA** - *Radio Australia* Undersea power cable problems at *Radio Australia's* Darwin site have affected operations at a second site, Shepparton. Engineers at Shepparton have been told to suspend any work on the commissioning of new Shepparton antennas until the Darwin 66-kv. cable is repaired. So Shepparton's 5995 channel is silent, because Shepparton lacks enough antennas to carry the full schedule. (Media Network September 30th via Mike Fern)

**AZERBAIJAN** - *Radio Dada Gorgud* The station planned to add 15 minute blocks of German and French starting in mid October. (ibid) This station is on the new frequency of

7160 from 1700-1800 with English. (Jacobsen Internet via Ben Krepp)

**BANGLADESH** - *Radio Bangladesh* Has verified via the following address: National Broadcasting Authority, Receiving and Research Centre, 121 Kazi Nazrul Islam Avenue, Dhaka 1000. The verification signer was Md. Romissuddin Bhuiya, Senior Engineer. (Weiss Play Dx No. 760 October 18th)

**BELARUS** - *Radiofenster-Radio Window* is a new German Christian missionary program heard every Friday from 1845-1900 via Minsk on 7150 and via Moscow on Saturdays 0943-1000 15125 15420 17670 17680. The address is: *Radiofenster*, D 58244 Ennepetal, Germany. (Buttner Shortwave News October)

**BHUTAN** - *Bhutan Broadcasting Station* 5030 is the new frequency, ex 5025. First heard on October 1st until 1500 sign off. (Jorma Mantyla Internet via Ben Krepp October 5th) I suggest getting this one now as *TWR Costa Rica* will soon occupy this frequency from 1100-1500 according to Adrian Peterson. (Clark Numero Uno No. 1242 October 22nd)

**BOLIVIA** - Takayuki Inoue Nozaki sends along a special monitoring report from Bolivia that comes to us in his Relampago Dx Logging No. 24 October 2nd-8th:

*Radio 9 de April* 3200.4 Relays news from *Radio Nacional de Huanuni* during its 1030-1200 transmission.

*Radio Chaco* 3280 Inactive  
*Radio Charcas* 3380 Inactive

*Radio Viloco* 3340.2 Not audible  
*Radio Florida* 3370.5 Probably inactive  
*Radio Emisora 20 de Diciembre* Inactive  
*Radio 20 de Septiembre* 3754.3 Inactive  
*Radio Enterrianas* 3884.9 May be closed down

*Radio 11 de Octubre* 4183.4 Irregular  
*Radio Perla del Oriente* 4211v Inactive  
*Radio Eco* 4409.21 Actual schedule is 2230-0200 daily

*Radio Santa Rosa* 4420.7 Inactive  
*Radio Estacion Frontera* 4449.9 Schedule is 2100-0100 daily

*Radio Movima* 4471.93 Schedule is 1030-1600 2100-0200 and Sundays 1100-1700 2200-0200v. They are now using a *Philips Brasil* transmitter which had been used by *Radio Fides* 4845 until March 1992.

*Radio Hitachi* 4530.16 Schedule is 1100-1700 and 2200-2400. They are off on Sundays  
*Radio Perla del Acre* 4600 Schedule is 0900-1100 and 2130-0300. They are off on Sundays

*Radio Machupo* 4625.71 Poor modulation

*Radio Entre Rios* 4630.9 Inaudible

*Radio Santa Ana* 4649.09 Schedule is 1030-1700 and 1930-0200. Sundays 1100-1700 2130-0100

*Radio Mamore* 4739.6 Closed down and July for economic reasons and is for sale *Radio Guanay* 4765.25 Reactivated but weak signal

*Radio Los Andes* 4775.2 Inactive

*Radio Emisoras Ballivion* 4784.5 Active but only heard 1500-1700

*Radio Nueva America* 4795.9 Inactive

*Radio Difusora Libertad* Was closed down in January 1993, because 80 miners who worked in the Mina Santa Fe abandoned the mining center because of poor work conditions

*Radio Nacional de Bolivia* 4815 Inactive

*Radio Norte* 4939.21 Active, but poor modulation

*Radio Maria Auxiliadora* 4974.8 Inactive

*Radio Minería* 4980.6v 1000-1400 2200-2400v

*Radio Animas* 4991.3 Is using a *Sparta* brand transmitter of 1 kW

*Radio Libertad* 5004.75 Active, but poor modulation

*Galaxia Radiodifusion* 5156.24 Schedule is 1200-2000 0000-0230. Sundays 2000-2200v

*Radioemisora 2 de Febrero* 5505.1 Schedule is 1200-1530 and 0000-0230. Off on Saturdays

*Radio San Jose* 5580.25 Irregular in the mornings

*Radio Nacional de Huanuni* 5964.7 Has ids at 0906 sign on in Spanish, Japanese and English

*Radio Loyola* 5990 Inactive

*Radio 21 de Diciembre* 6081.4 Inactive

*Radio Luis de Fuentes* 6140.7 Inactive

*Radio Velmar* 6325.1 Campamento Santa Maria, Oruro This is a new Bolivian pirate outlet that is operated very irregularly by the

Miners' Syndicate of Santa Maria in the local evening. They have a 100 watt transmitter that had been used by *Emisoras 27 de Julio* in 1987. QTH is: Campamento Minero de Santa Maria, Provincia Dalence, Departamento de Oruro.

*Radio Fides* 9625 Inactive

*Radio Ecologia Internacional* 4441.23 When I visited *Radio Movima* in Santa Ana del Yacuma on Santa Ana del Yacuma on September 20th, Sra. Mavis Serrano, the owner of the station, informed me that *Radio Ecologia Internacional* in San Matias and *Radio Santa Rosa* (4420) have been operated by the "Serrano" family. With her assistance, I was able to speak with Sr. Jose Vaca Diez Justiniano, the owner/director of *Radio Ecologia Internacional*. The station was inaugurated on March 5, 1993 and is the first station in San Matias. The station uses a *HUCARR* brand transmitter with a 300 watt output into a half wave dipole antenna. This is a famous brand and the majority of stations in the Bolivian Amazon Basin use them, for example; *Radio 11 de Octubre* (4183.4) *Radio Eco* (4409) *Radio Estacion Frontera* (4449.9) *Radio Hitachi* (4530.1) *Radio Perla del Acre* (4600.1) *Radio San Ignacio* (4901) etc. The operating hours of the station are from 1215-1700 and 2100-2400 daily. When they have alot of music requests with "saludos" from audiences the evening transmission is extended to 0100 or sometimes to 0200. He said that he had sent QSLs to some reception reports. Has anyone received one yet? The QTH is Calle Bolivar No 30, San Matias, Provincia Angel Sandoval, Departamento de Santa Cruz (Relampago Dx No. 50 Takayuki Inoue Nozaki)

*La Palabra* 4903.87 This is the correct name for this station. They started operating on January 1, 1993 using a tiny 100 watt transmitter into a half wave dipole 10 meters high. The slogan is *La Palabra, paz y bien para todos vuestros hogares*. The station's schedule is: 1200-1800 2100-0045 and Sundays 1200-1345 2300-0045. (ibid)

*Radio 27 de Diciembre* 3350 is active again. (EPP LADX No. 157/WRTH LA-NL No. 7 August 7th via Play Dx No. 758 October 3rd)

*Radio Sararenda* 4884.6 is active again but only in the mornings. Sign on is 1030. (ibid)

*Radio San Ignacio* 4901 Sign on is 1045 except for Sundays when it is 1100. (ibid)

*Radio Minería* 4980.6v is active again and sign on is 1000. (ibid)

*Radio Altiplano* 5044.9 Reactivated in early October. Sign on is around 1000. (HJ) Irregular operation, heard in the mornings (TIN Relampago Dx Logging No. 24 October 2nd-8th)

**BRAZIL** - In addition to traveling to Bolivia, Takayuki Inoue Nozaki also went to Brazil:

**Radio Alvorada 2460** This or **Super Radio Alvorada** is the id and they operate 0900-1100 2200-0200. Canned ids every half hour.

**Radio Difusora de Brasileio 3569.9** is the name of the station that was known as **Radio Educadora 3 de Julho** until 1992. They are on from 1000-0400 Sundays 1100-0200 with a home brewed transmitter of 300 watts. This is an unauthorized operation i.e. a pirate.

**Radio Caiari 4785** Has been inactive since 1992.

**Radio Progresso 4945** Is using a **Philips Brasil** transmitter with 7.5 kW rather than the 50 kW **Harris** transmitter due to economic reasons.

Followup to October **LN Radio Difusora 4795** Checking my QSL album, No great solution there with the QSL "certificado" mentioning both **Radio Difusora de Aquidauana Ltda** and **Radio Nova difusora de Aquidauana**. The signature stamp reads **Radio Difusora de Aquidauana Ltda**. The accompanying letter had three references to the station; all were either **Radio Difusora de Aquidauana** or **Radio Didusora**. Take your pick but only one reference to "Nova" in the station's reply. (Rich D'Angelo October 8th)

**Radio Bandeirantes 4838.6** Heard on this new frequency parallel to, but slightly ahead of, 6090. I am still not sure of the site. There is an inactive station, **Radio Atalaia**, in Corumba listed on 4837.6 in the 1992 edition of **LA Dxing** so there might be a connection. (Valko/HJ Dxpeditiion in Dunlo, PA area October 3rd)

**Radio Alvorada 4865** Reactivated on October 23rd. Heard at 0558. (Tony Orr October 23rd)

**Radio Universo 11765** Heard on this new frequency. (Guillermo Play Dx No. 756 September 19th) No times given. (HJ)

**BULGARIA - Radio Bulgaria** English schedule as monitored: 0100-0200 1830-2000 and 2245-0015 7455 9700 0500-0630 9700 11720 1130-1300 11645 13645 1515-1645 12085 2100-2200 6085 9700 and 1330-1500 probably English to the Far East that was to start on October 15th. (Ed Rausch October 3rd) The station has a new interval signal for their English service. (Brian Alexander October 3rd) This station was heard broadcasting in an unidentified language on new 5889.47 parallel 6209.97 from 0335 tune in until 0359 sign off. (ibid October 17th)

**Radio Horizonte 5890** A new frequency parallel 6210, also new, until 2000 off. (Padula Australian Dx News October)

see UNITED STATES VOA

**BURKINA FASO - see SWITZERLAND**

**CANADA - Observations: CKFX 6080** or **CKZU 6160** not heard at any time, although the

AM side of **CKFX** was heard. So obviously those stations are off the air currently. (Dave Valko Dxpeditiion Grayland State Park, Washington October 8th)

**CFMX-Montreal** on 6005, the 500 watt relay of **CIQC-680 MW** left the air sometime in August and a station representative indicates it could be some time before the old transmitter is back online. (Adrian Peterson in Radio News Bulletin No. 10 - September via Dave Clark's World Radio Report DX Ontario November) Still off on October 26th. (HJ)

**CHINA - Xizang PBS** Monitored schedule for Tibetan program is as follows: 5949 5995 from 1200 fade in to 1550 sign off. Also irregular at the same time on 4035 4820 6220 and from 1500 fade in to sign off on irregular 5021. (Kito-Japan-Tropical Band Dx Review No. 29 September via Herkimer Numero Uno No. 1239 October 1st)

**Heilangjian People's Broadcast Station Second Program**, Harbin, was reorganized as **Heilongjiang Economic Broadcast Station** on September 20th. The schedule is 0400-1300 on 5950.

The changeover was preceded by heavy promotion on the former station. (Nobuo Hina, Kunihiro Ishida and Tetsuya Kondo Asia Broadcast Institute on Media Roundup October 4th via Mike Fern)

The ID sounds like **Heilongjiang ching shi guang bo dian tai**. Co-channel QRM from **Radio Moscow** World Service in Japanese is severe from 0930-1200. (MF) The Korean service of **Heilongjiang People's Broadcast Station Second Program** was upgraded to a broadcasting station [more time, more staff] in February to mark its 30th birthday. The **Heilongjiang Korean Broadcast Station** has the following schedule: Sun thru Fri 2100-2300, Mon thru Sat 0200-0400, and Sun only 0000-0400 on 5950. Mon thru Sat 0230-0330 on 7350. (Tooru Yamashita on Media Roundup October 4th via Mike Fern)

**Voice of Jinling** is a special service in Chinese targeted at Taiwan, Hong Kong and Macao. It operates 0035-0300 on 7215. and from 1155-1600 on 4875. It mailing address is: P.O. Box 268, Najing, Jiangsu 210002, China. (Tatsuo Gima, Asian Broadcasting Institute, on Media Roundup September 20th via Mike Fern)

**Sichuan PBS 5900** has been reactivated. Heard from 1025 sign on until 1350. (Kito Tropical Band Dx Review No. 31 October 9th via Herkimer Numero Uno No. 1241 October 22nd)

Jonathan Marks interviewed **VOA's Kim Andrew Elliott**, who recently travelled to China:

JM: Some broadcasters beam programs into the country on SW. Kim's experience as a tourist with a shortwave portable showed that the Chinese authorities are definitely worried

about voices from abroad, and they take measures to stop them.

KE: Because of the jamming I heard, of VOA and BBC, and the jamming makes it very difficult to hear these stations, one has to be a dedicated listener. I think the audience might be smaller for that reason.

JM: Even if the audience is only 1 or 2, that's still a big number in China. Some of the shortwave receivers made in China are appearing as export models in the west and in other parts of Asia.

KE: They are available. They're not widely available. Some stores only have one or two models. One department store in downtown Shanghai had quite a variety. The most active maker seems to be a company called *Bolong*, which may be a trade name. Some had only shortwave broadcast bands, others were general-coverage analog sets. I even saw one digital shortwave receiver with the *Bolong* brand name. Prices ranged from 80 RMB, a bit less than a week's salary, to 400 or 500 RMB, or over a month's salary. You could even buy *Sony* shortwave radios for, maybe, three months' salary. (Media Network October 7th via Mike Fern)

## REPUBLIC OF CHINA - (TAIWAN)

The *Broadcasting Corporation of China* broadcasts part of its domestic service to the People's Republic of China. There are two networks called News Network and Popular Network. Both broadcast in Chinese. News Network uses 7295, 9610, 9765, 11725 and 15270. Popular Network is heard from 0000-0900 on 9280, and from 2100-1700 on 11885 and 15125. (Takashi Kitani and Tetsuya Kondo, Asia Broadcast Institute on Media Roundup September 20th via Mike Fern)

**CLANDESTINE** - My latest survey compiled in June 1993 shows that the average number of years-in-service of all clandestine stations that are currently active on the shortwave is 7.4 years. For comparison, the same number was 5.9 in 1991, 7.0 in 1990 and 6.9 in 1989. Amazingly, this means that even in our fast-paced time, clandestines are getting older than a few years ago. Some of the oldest operations which are currently still active are (starting year in brackets): *Voice of the National Salvation* (1970 as *Voice of the Revolutionary Party for Reunification*, renamed 1985) *Voice of the People of the Wa State* (1971 as *Voice of the People of Burma*, renamed 1990), *Voice of Palestine* (1972), *Echo of Hope* (1973), *Voice of the Free Sahara* (1975) and *Voice of the Resistance of the Black Cockerel* (1979) (Mathias Kropf Contact September via Rich D'Angelo)

**AFRICA** *Radio Mogadishu* the pro-Aideed station, was heard on 6870 at 1700 where it was blocked by a form of pulsating white-noise

signal apparently transmitted without a carrier. On September 27th, the station moved to 6877 where it was free of the interference. (BBC Summary of World Broadcasts World Broadcasting Information No. 40 October 1st) The id in Somali is: *Radio Mogadishu, codka ummad weeyinta Soomaliyeed* was first heard on July 19th. This is the pro-Muhammad Aided station. His previous station, which was on mediumwave, was destroyed by UN forces in June 1993. The location of the radio's studio and transmitter has not been confirmed. (idid Broadcasting Schedules)

*Voice of Free Somalia* The complete address for QSLs is: Sam Voron, 2 Griffith Avenue, Rosewill, NSW 2069, Australia. (Mathias Kropf Shortwave Wave News November)

According to *Reuter* news reports dated October 1st the latest frequency changes by the *Voice of the Resistance of the Black Cockerel* (9700 to 9710 and 11830 to 11837) appear to be a consequence of the VOA starting to use the old *VORGAN* frequencies. Although both sides denied that a deal existed to keep the UNITA frequencies free, some reports suggest that these latest events may be in direct relation to the discontinuation of US support for UNITA. (Mathias Kropf Contact November) Perhaps this is the response. (HJ) Since October 16th, the station's schedule is now: 0445-0845 9550 4960 1045-1440 11830 7290 1630-2200 7290 4960 (BBC Summary of World Broadcasts World Broadcasting Information No. 43 October 22nd) Father John Eckart recently obtained a QSL from this station from the address in the 1993 *PWBR* that is, P.O. Box 65463, Washington, DC 20035. This one is a very tough verifier. (HJ)

The resistance group in opposition to the government of Mozambique, RENAMO, is apparently using the 100 kW transmitter of *Swazi Commercial Radio* in Swaziland although it claims to be broadcasting from Mozambique. The station is using 6155 on the following schedule: Mondays to Fridays 0400-0500 1600-1700. Saturdays 0400-0530 1600-1730. Sundays 0400-0600 1600-1800. The station started these transmissions on October 16th. (BBC Summary of World Broadcasts World Broadcasting Information No. 43 October 22nd)

ASIA Broadcasting from South Korea to North Korea *Echo of Hope* returned to its winter schedule October 1st, which follows: 2300-0100 and 0300-0700 on 6348; 0800-1200, 1400-1700 and 2000-2100 on 3985. (Atsushi Otsuka on Media Roundup October 4th via Mike Fern)

*Voice of the People* Also broadcasts to the North from South Korea. Its new schedule is: 0300-0430 0600-0730 0830-1000 6518 6600 1200-1330 1500-1630 3912 and 2100-2230 2300-0030 6600. (Kito Tropical Band Dx

Review No. 31 October 9th via Herkimer Numero Uno No. 1242 October 22nd)

According to a *Reuter* news report of September 18th citing the *Mekong Journal*, the UN peace keeping forces in Cambodia jammed the Khmer Rouge run *Voice of the Great National Union Front of Cambodia* broadcasts previous to and during the elections in May. The paper said that according to UNTAC sources sometimes even FUNCINPEC (*Voice of Khmer?-MK*) radio programmes were used to jam the Khmer Rouge broadcasts. (Matias Kropf Contact November)

*Voice of Free Tajikistan* Tipped off from the below Moscow story, BBCMS first found this station on October 20th. (HJ) ...People outside Tajikistan are trying to fill the information vacuum: For a second week now a new radio station "Free Tajikistan" has been heard....(The station) is likely near Tajikistan's border or in the mountainous regions of the republic and (those working for it) are former employees of the republic's radio. The station might also have programs in Russian and Uzbek.

The authorities reaction inside the republic was very prompt: The seizing of shortwave radios ordered by the chairman of the Garm Rayon Executive Committee began with 43 sets being confiscated in the first days of the operation. At the same time, the jamming of *Radio Liberty* programs continues. (Nezavisimaya Gazeta, Moscow in BBC Summary of World Broadcasts World Broadcasts Information No. 43 October 22nd) The station's schedule from October 23rd is: 7080 nominal but observed on 7088.5 at 0300 0600 and 0900. (ibid)

*Radio Free Afghanistan* This station's last transmission was on October 20th. (David Walcutt October 25th)

**MIDDLE EAST** *Voice of Human Rights and Freedom for Iran* A verification letter signed by Mina Alborzi was received from 18 bis, rue Violet, 75015 Paris, France. In addition to broadcasting the station claims to conduct "covert operations carried out through an extensive network of cells operating in Iran." A schedule was also sent: 11470 15100 15670 from 1030-1225, 1445-1530 and 0030-0225. 9359 15100 2200-2245. (D'Angelo Numero Uno No. 1237 September 17th) Times are most likely an hour later now with end of summer time in Iran. (HJ) The schedule somehow doesn't seem to fit together with the latest observations. (Mathias Kropf Contact November) 15145 replaces 11470. Heard parallel 15100 and strong 15670 but all frequencies were jammed. (Buschel via Mathias Kropf Shortwave Wave News November)

*Radio of the Republic of Iraq, Voice of the Iraqi People* (1th'at al-Jumhuriya Al-Iraq, Sowt ash-Sha'ab Al-Iraqi-Arabic)

Although they gave no times, this station announced the following frequencies on September 17th: 9980 13670 15135 15235 15580.

(BBC Summary of World Broadcasts World Broadcasting Information No. 39 September 24th)

*Voice of the Movement of the Mojahedin of Iranian Baluchestan-Jonbesh-e Mojahedin-e Baluchestan Iran-e Tabari* (Farsi) Carries programming hostile to the Iranian government and is believed to operate from transmitters in Iraq. A Baghdad post office box is announced as an address. The radio was first observed on March 2, 1987. In October 1993 the radio announced that it broadcasts in the 19 and 21 meter bands. Previous observed frequencies include 7180 7250 9545 11970. The current scheduled programs are in the Baluchi language from 0600-0745 and 1300-1430 on 15340. (Ibid Media Broadcasting Schedules October 14th)

Jonathan Marks recently interviewed author Doug Boyd:

DB: There is something in the Arab character which is fairly receptive to clandestine radio stations. I'm always a little awkward in talking about this, because I'm not a linguist and not an anthropologist. But there is in the Arabic society, in the Arabic language, the discussion and perhaps the embellishment of what we would call facts. So when you are talking to your friends late at night, it's a very different conversation than we might have in the west. Then one talks about, oh, maybe, conspiracy theories and things that are going on that actually might, to the Western mind, sound a little bit bizarre. But this is part of the national character of talking about these things. So you can imagine that a clandestine broadcast could be very helpful in planting the seeds of ideas. What you don't find, in my opinion, is much clandestine broadcast listening, historically in the Arab world. It's not as though there are people like you and me with shortwave radios dialing around listening for the latest broadcasts. But these [clandestine] broadcasts have been targeted for a number of years at certain groups. What we find is that, as the 60's turned into the 70's and the 70's turned into the 80's, it became easier to operate clandestine stations. An individual can still go to Italy and buy a radio station in a suitcase. But in fact most of the clandestine broadcasting in the Middle East from the 70's on is done by governments, using established authorities to do it. Of course that depends on what you mean by a clandestine radio station. There are so many definitions that we have that probably originate from WW II. In the Middle East there is a very different definition. Most people know where these are, and from which transmitters, and what groups are supporting them.

JM: And in some cases, the name of the station is changed to suit the message. During the Gulf War in early 1991 Iraq had a whole string of programs, each of which sounded like another radio station. Take *Voice of the Holy War*, beamed to South Asia.

DB: Iraq in the 1960s, under the Qassem regime, after the royal family was overthrown in 1958, also became interested in radio, in what I would call the Egyptian sense. The Iraqis--once again, I am a little hesitant to characterize people--the Iraqis are, as a country, rather gifted at the use of the Arabic language. They are very, very clever radio and TV people, with a rich history of literature from which to pull. So the higher-power radio stations that Egypt developed really became something that the Iraqis were very interested in fairly early.

JM: 1979 was an important year, when Egypt signed an agreement with Israel. The Arab League moved to Tunis. Saddam Hussein headed a movement called "the Rejectionists," which tried to rally support against the peace accord. Iraq started having better relations with the west as well. Oil prices were up, and Iraq was making money. Most of the revenue, of course, was being used for military purposes.

DB: On the information side, Iraq started building what may still be one of the largest radio transmitter complexes in the world, medium wave and high-powered shortwave transmitter. You can see in the early 80's the development of the broadcasting infrastructure to broadcast to other countries.

JM: Listening to a foreign-language service is not always representative of what listeners are hearing on a domestic service. Take the situation during the Gulf War again, when we had the *Radio Baghdad* service aimed at U.S. troops trying to persuade them to go home. It wasn't typical. Baghdad's rich media tradition has obviously been as a result of the Arabic services out of Baghdad.

DB: Oh, absolutely, yes. I think they're very uncomfortable in broadcasting in foreign languages. The Arabs in general have never done what we have done in the West: to find citizens of other countries to come for short periods of time, or recent citizens of our own country whose native language was, for example, Arabic, to come in and develop the programs. The Iraqi interest building up to the Gulf War was in Arabic. They had a kind of French broadcast, and they broadcast in Hebrew. I don't think they really fooled themselves that these were winning converts and otherwise explaining the Iraqi position. They knew that wasn't the case. This buildup was to communicate with Arabs because Mr. Hussein wanted to, and probably still has some odd hopes of being, the Abdel Nasser of the 1990's, which of course will not happen. So this huge complex of medium wave and

shortwave transmitters was all arranged to broadcast primarily in Arabic and Farsi, to the "enemy" during the 1980s in the Iraq-Iranian war. It's primarily a regional service. The equipment was absolutely there to do it. (Media Network October 7th via Mike Fern)

WESTERN HEMISPHERE Below are the latest times and frequencies for the various Cuban exile programs sponsored by *Radio Miami International*. All dates are UTC and I have marked the new programs with an "N".

- 0000-0030 Mondays *Cuba 21* 7355
- 0000-0500 Tuesdays-Saturdays *La Voz de la Fundacion* 9495
- 0030-0100 Mondays *Mov. Nueva Generacion Cubana* (N) 7355
- 0100-0200 Mondays *Voz de la Democracia Cristiana* 7355
- 0200-0300 Tuesdays-Saturdays *La Voz de la Unidad Cubana* 7355
- 0800-0900 Mondays-Fridays *La Voz de Alpha 66* 7355
- 1000-1300 Mondays-Fridays *La Voz de la Fundacion* 9850
- 2100-2200 Sundays *La Voz del Caribe* (N) 15675
- 2330-0000 Sundays *Voz Ex-Presos Politicos Cubanos* (N) 7355
- 2300-0000 Mondays *La Voz de Alpha 66* 945 (RMI press release October 21st)

*Radio 16 Desam* The final transmission of this station of the Haitian government in exile was to have been October 29th according to the above press release as President Aristide was to have returned to Haiti on the 30th. Time will tell. (HJ) The station's latest is: 1100-1300 Sundays and 2200-2300 Mondays to Fridays. (RMI press release October 21st)

COLOMBIA - *Emisora Meridiano 70* 4925 A report sent to the listed address of Apartado Aereo 18227 in Arauca was returned as undeliverable. (D'Angelo Numero Uno No. 1240 October 8th)

*Radio Macarena* (Correction to October LN) is now an affiliated station of *Cadena Radial Autentica*. (Takayuki Inoue Nozaki October 23rd)

COSTA RICA - The winter schedule for *Radio Exterior de Espana's* relay base in Costa Rica is as follows: 0100-0400 ex Sundays on 5970, 11815 and 15380. Mondays thru Fridays 1100-1400 on 5970, 11880 [sic] and 15125. Mondays thru Fridays 1800-2400 and Saturdays and Sundays 1300-0100 on 9745, 17870, and 17890. The target areas are Central and South America and all broadcasts are in Spanish. Some of these frequencies are used at other times of day by transmitters in Spain, which has caused confusion among listeners. The Costa Rica station has a direct fax number for reception reports: +506 25 29

38. (Andy Sennitt on Media Network September 23rd via Mike Fern)

**AWR-Cahuia** This station has been experiencing transmitter problems associated with low output harmonic radiation, and off-channel operation. Four of the transmitters have been returned to the manufacturer, *Elcor*, in San Jose, for modification. These units will go back two at a time, the first two to be modified are those operating on 5030 and 6150. When they are reinstalled, the txers on 9722.5 and 13750 will receive the same modifications. Unannounced tests transmissions were recently conducted at low power on 15460, which were heard in various places. (Adrian Peterson Australian Dx News October).

**DOMINICAN REPUBLIC** - *Onda Musical* 4779.9 This station, listed as only being on 1150 mediumwave in the 1993 *WRTH* was heard testing in late September between 2300 and 0100 hours. The station signs off and on suddenly and the co-channel utility station does not help matters. Best reception was on September 23rd when several canned mentions of *Onda Musical* were heard. Time checks were UTC -4 that is, this nation's time zone. (Dave Valko/HJ joint effort) Regular transmissions began in the middle of October. (HJ) The station signs off at 0300 with anthem. (Terry Krueger October 19th) Roger that, heard with call letters at this time. (HJ) Signs on at 2330 and best time to get an id is between 25-28 and 55-58 past the hour when the utility stations take a break. They said that they were broadcasting a special transmission to North, Central and South America. (Ed Rausch ANARC SWL net October 24th) Guess what, I thought this was a new station but it is actually a long term reactivation. (HJ) This station used the above frequency among others between 1955-1980 with between 200 watts and 1 kW. (Adrian Peterson Radio Nuevo Mundo No. 185 October 8th)

**ECUADOR** - *Ecoss del Oriente* 3270.1 Has reactivated. First heard signing on at 1017 on September 16th. (Delibert, Orr Fine Tuning No. 707 September 27th)

*La Voz del Rio Tarqui* 3285.3 A verification signed by Alicia Pulla Celleri has been received via the address in the 1993 *WRTH*. The slogan of the station is *La nueva imagen de la radio, 24 horas de compania*. They are now using a new transmitter with an output of 4 kW. (Takayuki Inoue Nozaki Relampago Dx Logging No. 22 August 28th-September 6th)

*Radio Federacion Shuar* 4785.8 Operated here briefly in the middle of July before returning to 4960.9 (Klemetz *WRTH* LA-NL No. 7 August 7th via Play Dx No. 758 October 3rd) This is probably the unid Ecuadorian listed in last month's LN. (HJ)

*Sistema de Emisoras Progreso* 5060.5 Seemingly has a new transmitter since the start of June. (ibid)

*HCJB* on 6050 heard in mid-September carrying the international service in Spanish parallel 11960 and 15230 after 0000. When sunspot numbers were higher, 6050 carried the home service in Spanish and Quechua parallel 3220. (Mike Fern)

**ETHIOPIA** - *Voice of Ethiopia* 7110 Heard signing on at 0359 rather than 0400 with their distinctive "Jack in the Box" interval signal. (Brian Alexander September 26th)

**GABON** - *RDT Gabonaise* 4777 Has apparently improved its transmitter as it is now heard with much better reception and modulation. Try shortly before 2300 sign off (Stephen Price October 3rd)

*Africa Numero Un* 15475 Was heard with English news at 1850 on Tuesday, September 21st. (D'Angelo Fine Tuning No. 708 October 6th)

**GAZA and JERICHO** - Jordan is ready to train radio engineers and technicians for this new nation. (BBC Summary of World Broadcasts World Broadcasting Information No. 41 October 8th) A radio station is to be constructed in Ramallah. (ibid No. 43 October 22nd)

**GERMANY** - *Deutsche Welle* has rescheduled its evening English broadcast to West Africa at 2100-2150 (formerly 1900-1950.) The frequencies announced September 29th were 9690, 9715 and 15425. 15425, which announces its location as Rwanda in French after the buzzer at 2100, has an excellent signal in California, it overrides the *Radio Moscow World Service* in English for the Far East outlet on the same frequency. (Mike Fern September 29th)

Jonathan Mark brings us up to date on changes at *Deutsche Welle*:

JM: A reformation at *Deutsche Welle* is already under way. The Administrative Council and Broadcasting Council at *DW* have been examining a 'reform paper' which looks like a cut of 350 jobs in production and foreign language broadcasting and closer cooperation with the domestic services *ARD* and *ZDF*. By 1996, 1800 people will be working at *DW*'s production centers in Berlin and Cologne. (Wolfgang Pleines?) is head of *DW*'s transcription service in Cologne. He explained the background:

Has the Broadcasting Council fully approved their new mission statement?

WP: Well, that has gone through, but only in part. We do not talk about giving up languages, but about putting these languages to a test. When the supervisory bodies of *DW*

met on 9/24, they decided on the following: We accept that DW has now, after the inclusion of *Deutschlandfunk* [DLF, MW broadcasts to Europe] around 40 foreign languages, which is a little too much because the number of transmitters has more or less remained the same.

So we have to put to the test the following languages in the future: Above all the Scandinavian languages, then of course Dutch, French, Italian and Greek as well as Japanese. The Broadcasting Council said it will have to be tested whether these broadcasts meet with sufficient acceptance by the audiences. These language services will now have the chance and the task of finding appropriate audiences all round the globe in order to justify their existence.

JM: With the exception of Japanese, all the languages you mention are European, formerly with *DLF*, on medium wave. So what's the problem?

WP: The mediumwave transmitter they used in the past will be switched off by the end of 1993, as it has become too costly to operate. So European languages will have to rely heavily on satellite transmission and on rebroadcasting.

JM: So in the case of the Dutch service, DW will have to find stations in Holland willing to rebroadcast it.

WP: Exactly. That's the target.

JM: The Japanese programs will have to find their way onto cable systems in Japan, and might also be distributed in Europe when and if digital audio broadcasting gets going. The language services mentioned above will also have their transmission time limited to just 30 min a day, so they face a very difficult task to establish a satellite-only service within just two years, and then prove they have an audience. Are shortwave services being trimmed too?

WP: Yes. The broadcasts in Slovak, Czech, Slovenian, Macedonian, Hungarian, Albanian, Amharic, Dari and Pashto will also be reduced to 30 minutes a day and also put to a test for the next few years, probably two years. It will be decided in 1995 whether these languages, the European languages and the languages I just mentioned will then be continued or discontinued.

JM: What about English?

WP: English, fortunately, will remain as it was, even more. They have decided on adding another broadcast for Europe, so another hour per day will be added. In the case of the Americas, it was also decided to increase rebroadcasting and to decrease the transmissions on shortwave.

JM: What about other languages on shortwave for which shortwave is a vital method of distribution?

WP: The most important languages for further shortwave distribution are above all

English, because it's a world-wide language; then the African languages, Hausa, Swahili, Amharic, and of course Portuguese, English and French for Africa. This will also apply to the languages used in Asia, Hindi, Urdu, Bengali and Chinese.

JM: DW has been told to cut US \$11 million off its budget for the remainder of FY 1994. The total budget of DW is just over US \$300 million. (Media Network October 7th via Mike Fern)

*Radio Free Europe* The Hungarian service of this station ended on October 31st. (David Walcutt October 25th)

**GUAM - KSDA-Adventist World Radio** plans to have a third 100 kW shortwave transmitter in operation in mid-1994. After testing is complete, *KSDA* will broadcast 273 hours a week instead of the current 235 hours. This additional time will be scheduled during prime propagation periods. *AWR Asia* is also upgrading its automation system. It will provide for automated operation of the transmitters and the input of programming by remote control. Digital recording and playback of programs on computer disks will also be added. (AWR Asiawaves, quarterly newsletter, via Bruce MacGibbon on Media Roundup September 26th via Mike Fern)

**HAITI** see **CLANDESTINES WESTERN HEMISPHERE**

**HAWAII - KWHR** This station will go on the air within the next few weeks according to a letter dated September 1993 from *WHIRI*. (Marlin A. Field October 20th)

**HONDURAS - Radio Litoral 4830** This new station was heard at 1300 on September 11th. Id as "Radio Litoral, La Voz internacional de La Ceiba". Another announcement was "Atencion comerciantes en Bahía (Bahia Islands ?), Atlantida y todo el pais". (BM Shortwave Bulletin No. 1234 September 21st) This is the only log I have seen of this one. (HJ)

*Radio Copan International* has a new schedule, as from early October, on 15675: Mondays-Saturdays at 1400-1500 and 2100-2300; Sundays at 2100-2200. (Jeff White via World of Radio via Dave Clark's World Radio Report DX Ontario November)

**INDIA - Unid Indian 3223** Perhaps *AIR-Shimla* with a new transmitter. Heard at 1330 with continuous music on October 6th. (Foster OZDX No. 85 October)

*AIR-Port Blair 4760* In spite of recent listed changes, this station was heard here on September 27th. Id as *Akashvani kaye, Port Blair Centre He*. (Dx Clusive No. 668 via Play Dx No. 759 October 11th)



# English Schedules

Tom Sundstrom

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GEnie T.SUNDSTROM



Prepared 10/28/93 at 11:29 PM.

This month, thanks to Ed Evans (Christian Science Monitor stations), Dan Ferguson (VOA), Adam Lock (WWCR), Hans Johnson (MD), Jon Klinedinst (PA), Jonathan Marks (R Netherlands), Betsy Robinson (TN) and Andy Sennitt (WRTH).

## Notes

Compilation of the schedule data is getting increasingly difficult. Radio Ukraine is one example of those stations that announce frequencies left over from the summer season; our observations are based upon parallel-frequency hunting with two receivers. Radio Prague is an example of stations that moved only some broadcast times around this year, compared to last year.

Conflicts abound. At 01 HCJB on long time 9745 suffers severe co-channel interference from Deutsche Welle to NAM, but I also found Radio Ukraine on 9745 under both HCJB and DW. All these are in English. At 02 Radio Norway opted for 6120 to NAM, but Radio Canada International via Sackville is on the same frequency also to NAM; there's no question as to who loses. Even with the new limited hours of broadcast the Christian Science Monitor stations have already issued three revisions to the new season's schedule, and the VOA has made a number of revisions as well.

Entries we don't trust in the accompanying schedules (but maybe they'll serve as a starting point for the hunt): China (some), Iraq, Namibia. The declining solar cycle affects our ability to validate some entries.

Miracles Department: Betsy Robinson actually received a rare printed Radio Finland schedule, and kindly forwarded it to us. CRI finally sent *The Messenger*; the July-August issue arrived October 15! The listings have

been modified based upon our monitoring, but we can't hear all the frequencies on all the releases.

Jon Klinedinst recently visited WINB and tells us that WINB is considering an antenna change, adding a broadcast to Mexico and possibly going 24 hours. Jon also wonders if anyone has heard WMLK lately? It's in our skip zone here in NJ.

The listings does not include BBC frequency data. There does not seem to be any changes to the standard BBC World Service frequencies to NAM. Our data is from the summer, and we've not yet been able to extract the winter schedule. I see no point in printing summer season information.

## New Software Released...

A revision of our new version of our Schedules program has been released. The upgrade includes suggestions from Andy Sennitt and Michael Matus. A "current broadcasts" option that shows all broadcasts on the air now additionally looks ahead to the next half-hour. A utilities stations' schedules module has been added. We use it to track press RTTY schedules and gray scale weather photo FAX broadcast times.

Our schedules software has matured over the years since its introduction in 1986. More information than can be published in the *Journal* is included. The data can be searched by country or transmission start time. The data files are continually updated. The entire files are posted on the PICS OnLine BBS and GENIE once or twice a week. If you have a PC-compatible with a fixed disk and modem, like what you see here and want more current information more quickly, please send for a catalog. In our opinion, using the PC software is easier and quicker than shuffling through paper.

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## SCHEDULES BY SUBSTRON

START	End	COUNTRY	STATION	FREQUENCIES										TARGET AREA	NOTES	LAST UPDATE		
0000																		
0030		Australia	R Australia	17750	15510	15365	15320	13605							As/Pac/PapNG		10/09/93	
2400		Canada	CFCX	6005											Canada	relay CFCF-600	01/27/92	
2400		Canada	CFRX	6070											Canada	relay CFRB-1010	01/28/91	
0055		China	China R Int'l	11715	9780										wNAme/NAme		10/24/93	
2400		Costa Rica	R for Peace Int'l	21465U	15030U	13630U	7385	7375U							LAm/NAme		10/16/93	
0200		Cuba	R Havana	9815U	6010										eNAme		04/28/93	
0030		Czech	R Prague	9810	9405	7345	5930	5915							NAme		10/22/93	
2400		Ecuador	HCJB	21455U											Worldwide	Eng exc 90 min	02/27/93	
0030		Lithuania	R Vilnius	7150											NA/Eu	Tu-Sa	09/28/93	
0050		North Korea	R Pyongyang	15130	13760	11335									Am		11/22/92	
0030		Norway	R Norway Int'l	11925	9675										SAm/NAme	Mo only	09/22/93	
0130		Philippines	FEBC	15450											seAs/India	Mo-Fr -02	10/08/93	
0100		Russia	R Moscow Int'l	21690	17665	15425	12050	11860	9685	9620	7165	7110	5985		World Service		09/29/93	
0100		Spain	Spanish National Radio	9540											NAme		10/03/93	
1600		USA	KTBN	7510											eNAme		09/25/92	
0230		USA	KVOH	17775											CAm/Carib	Tu-Sa	05/30/93	
0030		USA	VOA	15205	15120	11580	9775	7405	5995						Americas		06/16/93	
0100		USA	VOA	11695	9455	6130	930								Caribbean		09/03/93	
0100		USA	VOA	17820	17735	15290	-15185	11760	9770	7215	1575				eAs/seAs/Pac		09/03/93	
0030		USA	VOA	1260											ME		10/13/93	
0800		USA	WHRI	9495	7315										Carib/eNAme	separate pgm 00-05	06/16/93	
2400		USA	WJCR	13595	7490										neNAme/Eu/ME/CA/SA		12/09/92	
0100		USA	WSHB/1	5850	5850										eNAme/Carib		09/12/93	
0200		USA	WSHB/2	7395											cAm/SAm		10/18/93	
0100		USA	WYFR	6085											NAme	Network Tu-Su	03/24/93	
0030																		
0100		Australia	R Australia	17880	17750	15510	15240	13605	11880	11720					As/Pac/PapNG		06/16/93	
0100		Australia	R Australia	21740	17795	15365	15320	15240							As/Pac/PapNG		10/09/93	
0055		Belgium	R Vlaanderen Int'l	9930	7370										SAm/NAme		09/11/93	
0430		Ecuador	HCJB	21455U	17490U	15155	9745								NAme		03/27/93	
0130		Iran	V of Islamic Rep of Iran	11790	9022										NAme		10/05/93	
0127		Netherlands	R Netherlands	11655	9840U	6165	6020								eNAme		09/17/93	
0127		Netherlands	R Netherlands	9860	7305										sAs		09/17/93	
0100		Sweden	R Sweden	11650	9695										LAm		09/24/93	
0100		USA	VOA	15205	15120	11580	9775	7405	5995	1580	1530				Americas	#7&8 nCAme	09/03/93	
0040																		
0055		Venezuela	R Nacional de Venezuela	9540											SAm	news/Eng Tu-Su	06/06/91	
0100																		
0200		Argentina	RAE	11710											Americas	Tu-Sa	10/01/93	
0200		Australia	R Australia	17880	17750	15510	15240	11880	11720						As/Pac/PapNG		06/16/93	
0200		Australia	R Australia	21740	17795	17715	15365	15320	15240						As/Pac/PapNG		10/09/93	
0200		Bulgaria	R Bulgaria	9700	7455										NAme		10/25/93	
0130		Czech	R Prague	9405	7345	5915									NAme		10/08/93	
0150		Germany	R Deutsche Welle	9745	9700	9565	6145	6120	6085	6040					NAme		10/25/93	
0400		Iraq	R Iraq Int'l	17940											NAme	News/EE 0230   irreg	07/25/93	

## SCHEDULES BY SUBSTRON

START END	COUNTRY	STATION	FREQUENCIES								TARGET AREA	NOTES	LAST UPDATE		
0100															
0400	Iraq	R Iraq Int'l	15205								India/Pakistan		07/22/93		
0120	Italy	RAI	11800	9725	6005						NAm		10/01/93		
0200	Japan	R Japan	17845	17810	17775	15195	11860	11840			GOS:As		09/03/93		
0200	Russia	AWR Russia	11855								India	v Novosibirsk	04/03/92		
0200	Russia	R Moscow Int'l	15425	9620	7180	7165	7110				World Service		09/29/93		
0130	Slovakia	R Slovakia Int'l	9810	7310	5930						NAm		10/04/93		
0200	South Korea	R Korea	15575								Am		10/03/93		
0200	South Korea	R Korea	7550								Eu		10/03/93		
0200	Spain	Spanish National Radio	9540								NAm		10/03/93		
0130	Switzerland	Swiss R Int'l	17740	9885	6135						NAm/CAM		09/27/93		
0200	Ukraine	R Ukraine Int'l	17690	17605	9860	9745	9685	9505	7240	7195	6070	4825	as obs	10/17/93	
0200	USA	VOA	15205	15120	11580	9775	9455	7405	6130	5995	1580	1530	#9&10 nCam	04/24/93	
0300	USA	VOA	21550	17740	15250	11705	9740	7651U	7205	7115				09/24/93	
0200	USA	WEWN	13710										India	"Program C"	09/11/93
0200	USA	WSHB/1	5850										cNAm		09/12/93
1100	USA	WWCR	7435										Eu/ME/nAf	tx #1	10/28/93
0600	USA	WWCR	5810										Eu/ME/nAf	tx #3	10/28/93
0300	USA	WYFR	15440	9505	6085								NAm	#2&3 Network Tu-Su	03/24/93
0130	Uzbekistan	R Tashkent	11975	9755	9740	7335	7325	5955					As	prob changed since 1	10/26/93
0130	Yugoslavia	R Yugoslavia	9580										eNAm	may move to 6190	10/25/93
0130															
0200	Albania	R Tirana	11840	9580									NAm		10/27/93
0200	Austria	ORF	9655										NAm		09/25/93
0200	Austria	ORF	13730	9870									LAm		09/25/93
0140	Greece	V of Greece	11645	9420	9380								NAm	News/Eng	06/12/93
0227	Netherlands	R Netherlands	11655	9860	9845								sAs		09/17/93
0200	Sweden	R Sweden	11695	9695									As/Pac		09/24/93
0145															
0200	Vatican State	Vatican Radio	9650	7335									As/AusNZ		09/12/93
0200															
0400	Australia	R Australia	21595	21525	17880	17750	11880	11720					As/Pac/PapNG		10/09/93
0400	Australia	R Australia	21740	17795	17715	15365	15320	15240					As/Pac/PapNG		10/09/93
0300	Canada	R Canada Int'l	11845	9755	6120								NAm		09/28/93
0300	Canada	R Canada Int'l	11940	11845	9535								LAm		09/28/93
0300	Canada	R Canada Int'l	11940	11845	9535								Carib		09/28/93
0400	Cuba	R Havana	13660	6010									cNAm/eNAm		04/28/93
0330	Egypt	R Cairo	11600	9475									NAm		07/25/93
0250	Germany	R Deutsche Welle	11945	11865	9745	9565	7355	7285	6120	6035	1548		sAs		10/25/93
0300	Guam	KSDA	13720										China	Sa-Su	04/04/92
0315	Italy	Italian Radio Relay Serv	7125										NAm		09/11/93
0230	Norway	R Norway Int'l	7165	6120									sAs/NAm/CAM	Mo only	09/22/93
0255	Romania	R Romania Int'l	11940	11830	9570	9510	6155						NAm		05/22/93
0300	Russia	R Moscow Int'l	15425	9620	7180	7165	7130						World Service		09/29/93
0300	Taiwan	V of Free China	11740	9680	5950								NAm		10/09/93
0300	Taiwan	V of Free China	15345										Jap/Kor		10/09/93

## SCHEDULES BY SUBSTRON

START	END	COUNTRY	STATION	FREQUENCIES										TARGET AREA	NOTES	LAST UPDATE	
0200																	
0300		Taiwan	V of Free China	9765											AusNZ		10/09/93
0300		Taiwan	V of Free China	11860											Malay/Viet/Window		10/09/93
0300		Taiwan	V of Free China	11740											CAM		10/09/93
1400		USA	KCBI	9815											NAM		09/12/93
0230		USA	VOA	15205	15120	11580	9775	7405	5995						Americas	Tu-Sa	04/24/93
0300		USA	VOA	930											Caribbean		04/24/93
0300		USA	WSHB/1	5850											wNAM		09/12/93
0300		USA	WSHB/2	7395											Mex		10/18/93
0230		Yugoslavia	R Yugoslavia	9580											wNAM	may move to 6190	10/25/93
0245		Albania	R Tirana	11840	9580										NAM		08/11/93
0327		Netherlands	R Netherlands	11655	9860	9845									sAs		09/17/93
0245		Pakistan	R Pakistan	21730	17725	17640	15115	9545							s&seAs	Slow-speed news	04/07/91
0330		Philippines	R Philipinas	21580	17840	17760									eAs		08/27/91
0300		Portugal	R Portugal	11840	9705	9600	9570								SAM/NAM	Tue-Sat	10/04/93
0300		Sweden	R Sweden	11650	9695										NAM		09/24/93
0250																	
0315		Vatican State	Vatican Radio	9605	7305										NAM		09/12/93
0300																	
0400		Australia	Australian Armed Forces	23679U	19038U										Cambodia/Somalia		06/18/93
0400		Canada	R Canada Int'l	9755	6010										NAM		09/28/93
0400		Canada	R Canada Int'l	9725	6010										LAM		09/28/93
0400		Canada	R Canada Int'l	9725	6010										Carib		09/28/93
0355		China	China R Int'l	11715	9780	9690									wNAM/veNAM		10/24/93
0330		Czech	R Prague	9810	9401	7345	5930	5915							NAM		10/22/93
0350		Germany	R Deutsche Welle	9640	9545	9535	6120	6085	6045						NAM		10/25/93
0425		Guatemala	TGNC	3300													12/23/87
0400		Honduras	HRPC	3250											Am	Su-Mo	02/29/92
0400		Hungary	R Budapest	15220	11910	9835	5970								NAM		10/01/93
0330		Japan	R Japan	15325	15230	11885									Reg Svc: NAM/Hawaii		10/28/93
0400		Japan	R Japan	17810	15210										GOS:As		09/03/93
0400		Japan	R Japan	9610	5960										GOS:NAM		10/28/93
0630		Lebanon	Wings of Hope	11530											ME	M-F (Sa/Su -07) Univ	05/29/93
0330		Norway	R Norway Int'l	6115											wNAM	Mo only	09/22/93
0400		Russia	R Moscow Int'l	7295	7180	7165	7130	5940							World Service		09/29/93
0500		South Africa	Channel Africa	9730	5960										e&cA/sAI		10/15/93
0455		South Africa	Radio Orange	3230											Domestic		05/03/93
0400		Taiwan	V of Free China	9680	5950										NAM		10/09/93
0400		Taiwan	V of Free China	15345											Jap/Kor		10/09/93
0400		Taiwan	V of Free China	9765											AusNZ		10/09/93
0400		Taiwan	V of Free China	11745											eIndon/Phil		10/09/93
0350		Turkey	V of Turkey	9445											NAM		03/22/93
0400		USA	VOA	11965	9885	9575	7405	7280	7265	7105	1530	621			Africa		09/24/93
0500		USA	WEWN	7425											NAM	*Program A*	09/11/93
0330		USA	WINB	15145											SAm	We-Mo	12/23/92

## SCHEDULES BY SUBSTATION

START	End	COUNTRY	STATION	FREQUENCIES		TARGET AREA		NOTES	LAST UPDATE
0300	0400	USA	WSHB/1	5850		NAm			09/12/93
	1300	USA	WWCR	5935		Eu/ME/NAf		tx #2	10/28/93
	0500	USA	WYFR	9505	6085	NAm		Network Tu-Sa	03/24/93
0316	0335	Vatican State	Vatican Radio	11625		eAf			04/20/93
0330	0400	Austria	ORF	13730	9870	LA m			09/25/93
	0427	Netherlands	R Netherlands	9590	6165	wNA m			03/14/93
	0400	Sweden	R Sweden	11650	9695	NA m			09/24/93
	0400	United Arab Emir	R Dubai	21485	15400 13675 11945	NA m			07/27/93
0340	0350	Greece	V of Greece	11645	9420 9380	NA m		News/Eng ex Su	06/12/93
	0355	Venezuela	R Nacional de Venezuela	9540		SA m		news/Eng Tu-Su	06/06/91
0345	0400	Armenia	R Yerevan	17690	17605 103440 7105	NA m			10/27/93
0400	0530	Australia	R Australia	21595	21525 17880 11880 11720	As/Pac/PapNG		#2&3 Eng SaSu 04-05	10/09/93
	0530	Australia	R Australia	21740	17795 17715 15365 15320 15240	As/Pac/PapNG			10/09/93
	0430	Canada	R Canada Int'l	9670	9505 6150	ME			09/28/93
	0455	China	China R Int'l	11840	11680	wNA m			03/21/93
	0500	Cuba	R Havana	13660	6180 6010	cNA m/eNA m		#1 -0430	04/28/93
	0430	Czech	R Prague	13715	9810 9405 7345 5930 5915	NA m			10/22/93
	0450	Germany	R Deutsche Welle	9765	9565 7275 7225 7150 6065 6015	e&c&sAf			10/25/93
	0430	Namibia	Namibian B/C Corp	3290	3270			rx/English	12/27/92
	0450	North Korea	R Pyongyang	17765	15230 15180	seAs			07/15/90
	0425	Romania	R Romania Int'l	11940	11830 9570 9510 6155	NA m			05/22/93
	0500	Russia	R Moscow Int'l	12050	9580 7330 7295 7180 7165 7105 6165 5940	World Service		R Aum 0430-05	10/15/93
	0430	Switzerland	Swiss R Int'l	9885	9860 6135	NA m			09/27/93
	0800	USA	KVOH	9785		CAm/Carib		Univ Network	05/29/93
	0430	USA	VOA	9575	7405 7280 7265 1530 621	Afnc			06/19/93
	0500	USA	VOA	1580	1530	nCA m		Tu-Sa	09/24/93
	0430	USA	VOA	7170	6873L 6140 6040 5995 1260	ME/NAf/Eu			10/13/93
	0500	USA	WCNS	9840		Af			09/12/93
	0700	USA	WMLK	9465				Mo-Sa	08/30/89
	0700	USA	WRNO	7395		NA m/CA m			10/28/93
	0500	USA	WSHB/1	5850		eEu/CIS			10/18/93
	0500	USA	WYFR	11825		Eu/Af			10/08/93
0415	0440	Italy	RAI	9575	7275	Mediterranean			07/23/93
0430	0530	Swaziland	Trans World Radio	7215		cAf			09/02/93
	0700	Swaziland	Trans World Radio	5055		sAf			10/08/93
	0500	USA	VOA	9575	7405 7280 7265	Africa			09/24/93
	0500	USA	VOA	7170	6873L 6140 6040 5995 1548 1260	ME/NAf/Eu			10/13/93

## SCHEDULES BY SUBSTATION

START	End	COUNTRY	STATION	FREQUENCIES												TARGET AREA	NOTES	LAST Update		
0445	0515	Sri Lanka	SLBC	15425	9720											wNAm	Tu	03/26/92		
0500	0630	Bulgaria	R Bulgaria	11720	9700											NAm/Eu		10/25/93		
	0700	Cuba	R Havana	9510												wNAm		12/11/92		
	0700	Ecuador	HCJB	21455U	11925											NAm		03/21/93		
	0550	Germany	R Deutsche Welle	9670	9565	6120	5960									NAm		10/25/93		
	0515	Israel	Kol Israel	11605	9435											NAm/wEu		09/25/93		
	0600	Japan	R Japan	17810	15410	11740										GOS:As		09/03/93		
	0600	Japan	R Japan	11885	9610	6025										GOS:NAm		10/28/93		
	0600	Japan	R Japan	7230	6085											GOS:Eu		09/03/93		
	0600	Namibia	R Namibia	3270												Super MN 2-14-91	03/14/91			
	0700	Nigeria	V of Nigeria	7255											wA/		07/23/91			
	0600	Russia	R Moscow Int'l	7330	7295	7180	7165	7105	5940							World Service		09/28/93		
	0553	Seychelles	FEBA	17750											ME	Fr	09/24/93			
	0600	South Africa	Channel Africa	11745	7230											wA/AsA/		10/15/93		
	0755	South Africa	Radio Oranje	7270											Domestic		09/12/93			
	0600	Spain	Spanish National Radio	9540											NAm		10/08/93			
	0530	Switzerland	Swiss R Int'l	9535	6165	3985											Eu		09/27/93	
	0600	Thailand	R Thailand	11905	9655	4830											seAs		08/15/93	
	0600	USA	VOA	15600	12080	9665	7405	6035									Afca		09/24/93	
	0530	USA	VOA	15205	11825	9700	9530	7170	6873L	6140	6040	5995	792			ME/wA/		09/24/93		
	0600	USA	WYCSN	9840											A/		09/12/93			
	0700	USA	WYFR	5985											NAm		10/08/93			
	0600	USA	WYFR	11580	9850											Eu/A/		10/08/93		
	0530	Vatican State	Vatican Radio	15090	11625	9695											e&A/		09/12/93	
0530	0600	Australia	R Australia	21595	21525	11880	11720											As/Pac/PapNG		10/09/93
	0600	Australia	R Australia	21740	17795	17715	15365	15320	15240									As/Pac/PapNG		10/09/93
	0600	Austria	ORF	6015											NAm		09/25/93			
	0600	Austria	ORF	13730	6155											Eu		09/25/93		
	0600	Austria	ORF	15410	13870											ME		09/25/93		
	0550	Finland	R Finland	11755	9635											ME/eA/		10/16/93		
	0600	Italy	AWR Europe	12060											Eu/wA/ME		10/27/93			
	0555	Romania	R Romania Int'l	17790	17745	17720	15360	15340									A/		10/17/93	
	0600	Russia	AWR Russia	12060											neEu	v Ekaterinoburg	10/01/93			
	0835	Swaziland	Trans World Radio	11740											Cape		09/02/93			
	0600	United Arab Emir	R Dubai	21700	17830	15435											seAs/Aus		05/06/91	
	0600	USA	VOA	15205	11825	9700	9530	7170	6873L	6140	6040	5995	3980			ME/wA/		09/24/93		
	0600	USA	VOA	792											ME/wA/		09/24/93			
0555	0825	Malaysia	V of Malaysia	15295	9750	6175											Aus/NZ/Indonesia		04/30/89	
0600	0700	Australia	R Australia	21595	21525	17880	17670	11880	11720									As/Pac/PapNG		10/09/93
	0700	Australia	R Australia	21740	17715	15365	15320	15240	9710									As/Pac/PapNG		10/09/93
	0630	Canada	R Canada Int'l	9760	7155	6150	6050											Eu	#6 0630-M-F	09/28/93

## SCHEDULES BY SUBSTATION

START	End	COUNTRY	STATION	FREQUENCIES							TARGET AREA	NOTES	LAST Update	
0600														
0630		Canada	R Canada Int'l	11905	9760	9740	7155	6150	6050		AI		09/28/93	
0630		Canada	R Canada Int'l	11905	6050						ME	Mo-Fr	09/28/93	
0650		Germany	R Deutsche Welle	15185	13790	11765	9765	5960		wAI			10/25/93	
0915		Italy	Italian Radio Relay Serv	7125						Eu/nAF/ME	M-F		09/11/93	
2245		Italy	Italian Radio Relay Serv	7125						Eu/nAF/ME	Sa-Su		10/28/93	
0700		Japan	R Japan	21610	11860					GOS:As			10/28/93	
0830		Kiribati	R Kiribati	9825						Pacific	0.5 kw		09/04/93	
0830		Liberia	ELWA	4760						Regional	Sa-12 Su-10		09/25/93	
0700		Malta	V of the Mediterranean	9765	1557					ME			09/25/93	
1500		Namibia	R Namibia	7165							-16 SaSu  MN 2-14-91		03/14/91	
0650		North Korea	R Pyongyang	15230	15180					seAs			07/15/90	
0700		Russia	R Moscow Int'l	9890	7330	7180	7165	5940		World Service			09/28/93	
0700		South Africa	Channel Africa	17710	7230					wAI/sAI			10/15/93	
0700		South Korea	R Korea	15155	11945					wNAm			10/03/93	
0700		South Korea	R Korea	7275						GOS			10/03/93	
0805		Swaziland	Trans World Radio	11740	6070					sAI			10/08/93	
0630		Switzerland	Swiss R Int'l	15430	13635	9860				AI			09/27/93	
0615		Switzerland	Swiss R Int'l	9535	6165	3985				Eu	Mo-Fr		09/27/93	
0630		USA	VOA	15600	15080	12080	11925	9665	9530	7405	6035	1530	09/30/93	
0630		USA	VOA	15205	11825	11805	7325	7170	6873L	6140	6060	6040	5995	09/24/93
0630		USA	VOA	3980	792					ME/nAI/Eu			09/24/93	
1200		USA	VOA Europe	1197						Eu	exc Su		04/24/93	
0800		USA	WEWN	7425						NAm	"Program A"		09/11/93	
0700		USA	WEWN	13710						sAI	"Program D"		09/11/93	
0800		USA	WSHB/1	5850						UK/wEu			10/18/93	
0800		USA	WYFR	11580	9680	7355				Eu/Al			10/08/93	
0610		Vatican State	Vatican Radio	15310	11740	9645				Eu	M-Sa		09/29/93	
0620		Vatican State	Vatican Radio	7250	6245					ME/Eu			09/12/93	
0630														
0700		Austria	ORF	6015						NAm			09/25/93	
0700		USA	VOA	15600	12080	11925	9665	9530	7405	6035	1530	6040	5995	09/24/93
0700		USA	VOA	15205	11825	11805	7325	7170	6873L	6140	6060	6040	5995	09/24/93
0700		USA	VOA	3980	1197	792				ME/nAI/Eu			09/24/93	
0700		Vatican State	Vatican Radio	15090	11625	9695				c&s&wAI			09/12/93	
0632														
0642		Romania	R Romania Int'l	11810	9665	9510	7225				Eu	news		05/22/93
0645														
0715		Romania	R Romania Int'l	17805	17720	15335	15250	11775			Pac			05/22/93
0700														
0730		Australia	R Australia	21595	21525	17750	17695	11880	11720		As/Pac/PapNG			10/09/93
0730		Australia	R Australia	21740	17715	15365	15320	15240	9710		As/Pac/PapNG			10/09/93
0730		Czech	R Prague	11990	9505	7345	6055			Eu			09/12/93	
0830		Ecuador	HCJB	21455U	11835	9600				Eu			10/01/93	
0800		Italy	AWR Europe	7230						Eu/nAI/ME			10/27/93	
0800		Japan	R Japan	21610	17810	15410	11740			GOS:As			09/03/93	



## SCHEDULES BY SUBSTATION

START	End	COUNTRY	STATION	FREQUENCIES								TARGET AREA	NOTES	LAST UPDATE							
0830	0900	Austria	ORF	13730	6155							Eu		09/25/93							
	0900	Austria	ORF	17870	15450							Aus/As		09/25/93							
	0927	Netherlands	R Netherlands	9720								Pacific		09/17/93							
	0900	Slovakia	R Slovakia Int'l	21705	17535	15605	11990				Aus		10/04/93								
0855	1000	Guam	KTWR	11805												sPac		10/12/93			
0900	1000	Australia	Australian Armed Forces	253230	204190												Somalia/Cambodia		06/18/93		
	1000	Australia	R Australia	21745	15170	13605	9580	9510	6080							As/Pac/PapNG		10/09/93			
	0955	China	China R Int'l	17710	15440	11755												sPac		08/26/91	
	0930	Finland	R Finland	17800	15330												eAs/Aus	Sa -0925	10/16/93		
	0950	Germany	R Deutsche Welle	21600	17800	15410	9565							e&c&SAI		05/22/93					
	0950	Germany	R Deutsche Welle	21680	21650	17820	17780	11715	6160							As/Pac		08/15/93			
	1200	Italy	Italian Radio Relay Serv	7125												Eu/nA/ME	M-F Irregular	09/11/93			
	1000	Japan	R Japan	15190	11815	11740	9750	9610							GOS:As		10/28/93				
	1000	Japan	R Japan	17860												Reg Svc:Oc		09/03/93			
	1230	Lebanon	King of Hope	6280												ME	M-F	05/29/93			
	1000	N Mariana Is	KHBI/1	17555												Japan/Kor/CIS		09/12/93			
	1000	N Mariana Is	KHBI/2	13615												Aus		09/12/93			
	1100	Palau	KHBN	9830													M-Sa	05/29/93			
	1000	Russia	R Moscow Int'l	17760												World Service	17m	09/28/93			
	1000	Russia	R Moscow Int'l	15580	15550	15480	15440	15380	15345	15210	15190	15175				World Service	19m	09/28/93			
	1000	Russia	R Moscow Int'l	13650												World Service	22m	09/28/93			
	1000	Russia	R Moscow Int'l	12070	12020												World Service	25m	09/28/93		
	0930	Switzerland	Swiss R Int'l	21820	13685	9885												Aus/NZ		09/27/93	
	1000	USA	WEWN	9370												UK	"Program C"	09/11/93			
	1000	USA	WSHB/1	9840												Aus/NZ		09/12/93			
	1000	USA	WSHB/2	7395												cSam		10/18/93			
0903	0910	Croatia	Croatian Radio	13830	13640	9830	5920													News/English	10/01/93
0910	0940	Mongolia	R Ulan Bator	12015	11850												Oc		10/09/92		
0930	1027	Netherlands	R Netherlands	9865	9810	9720	7260												FE & Pacific		09/17/93
	1100	Philippines	FEBC	11690												China/SeAs		10/08/93			
0940	0950	Greece	V of Greece	17525												Aus	News/Eng	04/23/93			
0945	1000	Armenia	R Yerevan	15510	15485	15455												Eu	Su	10/27/93	
1000	1100	Australia	R Australia	21745	15170	9580												As/Pac/PapNG		10/09/93	
	1025	Belgium	R Vlaanderen Int'l	21815	17515	9905												A/Eu	M-Sa	09/11/93	
	1055	China	China R Int'l	17710	15440	11755												sPac		08/26/91	
	1200	Guam	KHBN	9820												China		03/17/91			
	1100	India	AIR	21735	17895	17387	15050												GOS/meAs/AusNZ		04/23/93

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## SCHEDULES BY SUBSTATION

START End 1000	COUNTRY	STATION	FREQUENCIES										TARGET AREA	NOTES	LAST Update		
1100	Italy	AWR Europe	7230												Eu/nA/ME		10/27/93
1100	N Mariana Is	KHBI/1	13625												Indon		09/12/93
1100	N Manana Is	KHBI/2	9430												China		10/18/93
1100	Nigeria	V of Nigeria	7255												wA/		07/27/93
1030	Norway	R Norway Int'l	21705	17840											wA/Eu	Su only	09/22/93
1100	Russia	R Moscow Int'l	17760	17725	17675										World Service	17m	09/28/93
1100	Russia	R Moscow Int'l	15470	15440	15435	15380	15345	15280	15210	15175	15130				World Service	19m	09/28/93
1100	Russia	R Moscow Int'l	13650												World Service	22m	09/28/93
1100	Russia	R Moscow Int'l	12070	12020	11900	11710									World Service	25m	09/28/93
1100	Russia	R Moscow Int'l	9780												World Service	31m	09/28/93
1100	South Africa	Channel Africa	17805												eA/		03/02/93
1100	USA	VOA	15120	11915	9590	7405	930								Caribbean		04/24/93
1100	USA	VOA	15425	11720	5985										Pac		04/24/93
1300	USA	WHRI	9850	7315											Carib/eNA/	seperate pgm	06/16/93
1200	USA	WSHB/1	7465	7465											eNA/Carib		10/18/93
1100	USA	WSHB/2	7395												SAm		10/18/93
1100	USA	WYFR	5950												NAm	Network M-Sa	03/26/91
1025	Vietnam	V of Vietnam	15009	9840											Eu		11/07/89
1003																	
1006	Croatia	Croatian Radio	13830	13640	9830	5920										Su   News/English	10/01/93
1030																	
1100	Austria	ORF	13730	6155											Eu	Mo-Sa	09/25/93
1100	Austria	ORF	17870	15450											Aus/As	Mo-Sa	09/25/93
1127	Netherlands	R Netherlands	9810	7260											FE		09/17/93
1059	South Korea	R Korea	11715												eNA/	10/31 - 9650	10/03/93
1130	Sri Lanka	SLBC	11835												Aus		01/10/93
1055	United Arab Emir	R Dubai	21605	15345	15320	13675									Eu/nA/		05/06/91
1040																	
1050	Greece	V of Greece	17525	15650											Japan	News/Eng	10/09/92
1100																	
1200	Australia	R Australia	15630	15170	13605	9580	9560								As/Pac/PapNG		10/09/93
1300	Costa Rica	AWR LAm	11870	9875	5030										LAm		09/05/93
1150	Germany	R Deutsche Welle	21600	17800	17765	15410	15370								wA/		10/25/93
1130	Israel	Kol Israel	17575	15640											wEu		08/29/93
1130	Israel	Kol Israel	15650												Aus/As		08/29/93
1200	Japan	R Japan	15445	9610											GOS:As		10/28/93
1200	Japan	R Japan	6120												GOS:NA/		09/03/93
1200	N Mariana Is	KHBI/2	9430												Aus		09/12/93
1150	North Korea	R Pyongyang	11335	9977	6576										Am		12/02/90
1120	Pakistan	R Pakistan	21520	17595											wEu	Slow-speed news	03/16/91
1200	Russia	R Moscow Int'l	17880	17805	17780	17760	17725	17675	17625						World Service	17m	09/28/93
1200	Russia	R Moscow Int'l	15585	15550	15525	15480	15470	15440	15435	15380	15345	15210			World Service	19m	09/28/93
1200	Russia	R Moscow Int'l	13650												World Service	22m	09/28/93
1200	Russia	R Moscow Int'l	12070	12020	12010	11900	11710								World Service	25m	09/28/93
1200	Russia	R Moscow Int'l	9780	9705											World Service	31m	09/28/93

# SCHEDULES BY SUBSTATION

START	End	COUNTRY	STATION	FREQUENCIES							TARGET AREA	NOTES	LAST Update
1100	1200	South Africa	Channel Africa	9730							cAf		03/02/93
	1130	Switzerland	Int'l Red Cross	7210							Eu	last Su/mo	09/21/91
	1130	Switzerland	Swiss R Int'l	15505	13635	9885					FE/seAs		09/27/93
	1145	Switzerland	Swiss R Int'l	9535	6165						Eu		09/27/93
	1200	USA	VOA	15120	11915	9590	7405				Caribbean		09/03/93
	1200	USA	VOA	15425	15160	11720	9760	6110	5985		eAs/seAs/Pac		09/03/93
	1200	USA	WSHB/2	7395							CAM/SAm		10/18/93
	0100	USA	WWCR	15685							Eu/ME/nAf	tx #1	10/28/93
	1200	USA	WYFR	7355	5950						NAm	Network M-Sa	10/08/93
	1115	Vatican State	Vatican Radio	21655	15210	11740	7250	6245			Eu	M-Sa	09/12/93
1130	1300	Bulgaria	R Bulgaria	13645	11645						Eu/ME/NAm		10/25/93
	1157	Czech	R Prague	15355	11990	9505	7345	6055			Eu		09/12/93
	1600	Ecuador	HCJB	21455U	17890	17490U	15115	11925			NAm/SAm	#4 -1430	05/08/93
	1225	Iran	V of Islamic Rep of Iran	11930	11790	11715	9685	9525			ME/seAs/Ind/seAf/Aus		10/04/93
	1227	Netherlands	R Netherlands	9650	5955						Eu		09/17/93
	1230	Thailand	R Thailand	11905	9655	4830					seAs		07/29/89
1140	1155	Venezuela	R Nacional de Venezuela	9540							SAm	news/Eng M-Sa	06/06/91
1200	1300	Australia	Australian Armed Forces	9194U							Cambodia		09/04/93
	1230	Australia	R Australia	15630	9710	9580	7240	6080	6020		As/Pac/PapNG		10/09/93
	1320	Brazil	R Nacional de Brasil	15445							NAm/CAM		06/06/92
	1255	China	China R Int'l	15210							eNAM		06/18/93
	1255	China	China R Int'l	11660	9715						seAs		06/18/93
	1255	China	China R Int'l	15440	11795						sPac		06/18/93
	2115	Italy	Italian Radio Relay Serv	7125							Eu/nAf/ME	M-F	09/11/93
	1300	Jordan	R Jordan	9560							wEu/NAm		10/01/93
	1230	Mongolia	R Ulan Bator	12015	11850						FarE	Mo, Th, Sa	10/09/92
	1300	N Mariana Is	KHBI/1	13625							seAs		09/12/93
	1300	N Mariana Is	KHBI/2	9425							Aus		09/12/93
	1230	Norway	R Norway Int'l	25730	21705						Aus/As	Su only	09/22/93
	1430	Palau	KHBN	9830							M-F (Sa 1230-)		05/29/93
	1300	Russia	R Moscow Int'l	21450							World Service	13m	09/28/93
	1300	Russia	R Moscow Int'l	17880	17805	17780	17760	17725	17675	17625	World Service	17m	09/28/93
	1300	Russia	R Moscow Int'l	15585	15540	15525	15495	15480	15465	15440	World Service	19m > 15.4 MHz	09/28/93
	1300	Russia	R Moscow Int'l	15380	15345	15320	15260	15190	15175	15120	World Service	19m < 15.4 MHz	09/28/93
	1300	Russia	R Moscow Int'l	13650							World Service	22m	09/28/93
	1300	Russia	R Moscow Int'l	12070	12055	12025	12020	11980	11900	11710	World Service	25m	09/28/93
	1300	Russia	R Moscow Int'l	9780	9705						World Service	31m	09/28/93
	1300	South Korea	R Korea	9640							GOS		10/03/93
	1230	USA	VOA	930							Caribbean		04/24/93
	1230	USA	VOA	15425	15160	11715	9760	6110	1143		eAs/seAs/Pac		09/03/93
	1700	USA	VOA Europe	1197							Eu		04/24/93
	1300	USA	WSHB/2	9455							Mex		10/18/93

SCHEDULES of SUBSTATION

START	CND	COUNTRY	STATION	FREQUENCIES				TARGET AREA	NOTES	LAST Update	
1200	1300	USA	WYFR	11970	11830	6015	5950	NAm	#1&2&4 Network M-Sa	10/08/93	
	1225	Uzbekistan	R Tashkent	17745	15220	9540	5945	As	not sure abt #4	10/26/93	
1207	1650	New Zealand	R New Zealand Int'l	9510				Pac	occasional use	04/24/93	
1215	1330	Egypt	R Cairo	17595				sAs		08/16/90	
1230	1300	Australia	R Australia	15630	9580	7240	6080	As/Pac/PapNG		10/09/93	
	1300	Austria	ORF	13730				NAm		09/25/93	
	1300	Austria	ORF	13730	6155			Eu		09/25/93	
	1300	Austria	ORF	15430				As		09/25/93	
	1300	Bangladesh	R Bangladesh	13615				Eu	Announces 15220.	09/21/93	
	1300	Canada	R Canada Int'l	11730	6150			As		09/28/93	
	1255	Finland	R Finland	17740	15400			NAm	Mo-Sa	10/16/93	
	1300	France	R France Int'l	17575	15365	15195	15155	11670	9805	06/18/93	
	1240	India	AJR	4860				Am/EU		01/28/93	
	1327	Netherlands	R Netherlands	9650	5955			Feeder Svc	news	09/17/93	
	1300	Sweden	R Sweden	17865	17740	15240		Eu		09/24/93	
	1300	Turkey	V of Turkey	9675				As/Pac		03/22/93	
	1330	USA	VOA	15425	15160	11715	9760	9560	6110	09/24/93	
	1255	Vietnam	V of Vietnam	15009	9840			As		02/25/92	
1300	1430	Australia	R Australia	13755	11800	9580	7240	As/Pac/PapNG		10/09/93	
	1400	Canada	R Canada Int'l	17820	11855			NAm	Mo-Fr	09/28/93	
	1400	Canada	R Canada Int'l	17820				Carib	Mo-Fr	09/28/93	
	1355	China	China R Int'l	7405				wNAm	may be 11855	10/25/93	
	1355	China	China R Int'l	11660	9715			seAs		06/18/93	
	1355	China	China R Int'l	15440				sPac		06/18/93	
	1400	Ethiopia	V of Ethiopia	9560	7165			wAl		09/13/91	
	1630	Lebanon	Wings of Hope	11530				ME	M-F (Su -15)	11/27/92	
	1400	N Mariana Is	KHBI/1	13625				Indon		09/12/93	
	1400	N Mariana Is	KHBI/2	13625				India		09/12/93	
	1350	North Korea	R Pyongyang	15230	13760	11740	9640	9345	seAs/Am/Eu	03/28/93	
	1600	Philippines	FEBC	11995				seAs/India		11/28/91	
	1355	Poland	Polish Radio Warsaw	11815	9525	7270	7145	6135	Eu	10/23/93	
	1400	Romania	R Romania Int'l	17850	17720	15365	11940			10/30/92	
	1400	Russia	AWR Russia	11855				Eu		04/03/92	
	1400	Russia	R Moscow Int'l	21785				nIndia	v Novosibirsk	09/11/93	
	1400	Russia	R Moscow Int'l	17880	17780	17760	17725		World Service	13m	
	1400	Russia	R Moscow Int'l	15540	15495	15480	15385	15380	15345	15260	17m
	1400	Russia	R Moscow Int'l	11980					World Service	19m	
	1400	Russia	R Moscow Int'l	11980					World Service	25m	
	1329	South Korea	R Korea	13670	9570					10/02/93	
	1330	Switzerland	Swiss R Int'l	15505	13635	11690	7480			10/02/93	
	1600	USA	KJES	11715				seAs		09/05/93	
	1400	USA	KNLS	7355				s&seAs		09/27/93	
								wCanada	irregular	10/19/92	
								eAs		09/13/93	

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## SCHEDULES BY SUBSTRON

START END	COUNTRY	STATION	FREQUENCIES						TARGET AREA	NOTES	LAST Update
1300											
1500	USA	WEWN	9350					NAm	"Program A"	09/11/93	
1500	USA	WEWN	17535					eAf	"Program B"	09/11/93	
1700	USA	WHRI	15105	9465				Carib/eNAm	separate pgm 16-17	06/16/93	
1400	USA	WSHB/1	7465	7465				Mex/wNAm		10/18/93	
0300	USA	WWCR	13845					Eu/ME/nAf	tx #2	10/28/93	
1400	USA	WYFR	13695	11970	11830	9750	5950	NAm	#1&3&5 Network M-Sa	10/08/93	
1302											
1502	USA	WYFR	11550					India		11/03/92	
1303											
1315	Croatia	Croatian Radio	13830	13640	9830	5920			News/English	09/24/93	
1330											
1400	Austria	ORF	15450					As		03/23/93	
1355	Belgium	R Vlaanderen Int'l	21810	17555				seAs/NAm	Su	09/11/93	
1500	Bulgaria	R Bulgaria	11630					FE		10/25/93	
1357	Canada	R Canada Int'l	9535	6150				As		09/28/93	
1400	Finland	R Finland	17740	15400				NAm	Mo-Sa	09/25/93	
1500	India	AIR	15120	11760				GOS/seAs		11/10/92	
1427	Netherlands	R Netherlands	15530	13700	9895			sAs		09/17/93	
1400	Sweden	R Sweden	17740	15240				NAm		09/24/93	
1355	United Arab Emr	R Dubai	21605	15395	15320	13675		Eu/nAf		07/28/93	
1400	USA	VOA	15425	15160	9760	6110		eAs/seAs/Pac		04/24/93	
1355	Uzbekistan	R Tashkent	17745	15220	9540	5945		As	not sure abt #4	10/26/93	
1355	Vietnam	V of Vietnam	15009	9840				eAs		11/07/89	
1400	Yugoslavia	R Yugoslavia	11835					Aus		10/25/93	
1345											
1405	Vatican State	Vatican Radio	17525	15090				As/AusNZ		01/17/93	
1400											
1500	Australia	Australian Armed Forces	135990					Somalia		06/18/93	
1425	Belgium	R Vlaanderen Int'l	21810	17555				seAs/NAm	M-Sa	09/11/93	
1700	Canada	R Canada Int'l	17820	11955				NAm	Su	09/28/93	
1700	Canada	R Canada Int'l	17820					Carib	Su	09/28/93	
1455	China	China R Int'l	7405					wNAm	may be 11855	10/25/93	
1455	China	China R Int'l	15165	11815				sAs		06/18/93	
1500	France	R France Int'l	17650	15405	12035	11910		As/ME		10/22/93	
1600	Iraq	R Iraq Int'l	15205					India/Pakistan		07/22/93	
1425	Israel	Kol Israel	15640					wEu/NAm		08/29/93	
1425	Israel	Kol Israel	15650					Aus/As		08/29/93	
1500	Japan	R Japan	11915	9750	9535			GOS:As		10/28/93	
1500	Japan	R Japan	11705	9535				GOS:NAm		10/28/93	
1500	Malta	V of the Mediterranean	11925					Eu/ME		09/05/93	
1500	Morocco	R-TV Morocco	17595						M-F	09/02/92	
1500	N Mariana Is	KHBI/1	9530					India/China		09/12/93	
1500	Russia	R Moscow Int'l	21785	17780	17760	15540	15440	World Service		10/02/93	
1800	Rwanda	R Rwanda	9610					Regional	also Swahili	09/24/93	
1500	South Korea	R Korea	6135	5975				GOS		05/09/93	



**SCHEDULES BY SUBSTATION**

START	END	COUNTRY	STATION	FREQUENCIES										TARGET AREA	NOTES	LAST UPDATE		
1500	0100	USA	WWCR	15610												Eu/ME/nA/	tx #3	10/28/93
	1700	USA	WYFR	17760	11830	9705										NAM	#1&2 Network M-Sa	10/08/93
	1515	USA	WYFR	11550												India		03/26/89
1515	1645	Bulgaria	R Bulgaria	13670												CIS	may be 12085	10/25/93
1530	1555	Albania	R Tirana	9760	7155											Eu		10/01/93
	1600	Austria	ORF	13730	6155											Eu		09/25/93
	1600	Austria	ORF	9880												ME		09/25/93
	1600	Austria	ORF	11780												As		09/25/93
	1540	Greece	V of Greece	17525	15650	15630										NAm/Eu	News/Eng exc Su	10/01/93
	1600	India	AJR	10330	9950	7412										Home Svc	news/features	07/11/92
	1627	Netherlands	R Netherlands	15150	13700	9895										sAs		09/17/93
	1600	Portugal	R Portugal	21515												ME/FE	M-F	10/04/93
	1600	USA	VOA	15395	15205	11705	9760	9700	9645	7125	6110					sAs		09/24/93
1545	1600	Vatican State	Vatican Radio	15090	11640											As/AusNZ		09/12/93
1600	1630	Australia	R Australia	11695	9770	9580	9510	7260	7240							As/Pac/PapNG		10/09/93
	1655	China	China R Int'l	15130	15110	11575										e&sAfr		06/18/93
	1630	Czech	R Prague	15505	13580	11990	7345	6055								Eu/ME/AI		10/24/93
	1700	France	R France Int'l	17850	17795	17620	15530	12015	11975	11705	6175					AI/ME/Eu		10/22/93
	1650	Germany	R Deutsche Welle	15105	11785	9665	9585	7305	7225	6170	1548					sAs		10/25/93
	1700	Guam	KSDA	7455												India		10/14/93
	1800	Lebanon	King of Hope	6280												ME	Su	05/29/93
	1700	N Manana Is	KHBI/2	13625												sAI		09/12/93
	1630	Pakistan	R Pakistan	21495	17725	17555	15555	13665	11570							e&s&AI/ME	Slow-speed news 1615	10/24/92
	1655	Poland	Polish Radio Warsaw	9525	7285											Eu		10/23/93
	1700	Russia	R Moscow Int'l	15380	15175	12045	9890									World Service		09/29/93
	1700	South Korea	R Korea	5975												GOS		10/03/93
	1700	Swaziland	Trans World Radio	9500												eAI		09/02/93
	1640	United Arab Emir	R Dubai	21605	15395	15320	13675									Eu/nAI	#1 anncd as 11795	09/06/93
	2400	USA	KTBN	15590												eNAM		09/25/92
	1630	USA	VOA	17790	15445	15410	15320	15255	13710	12040	11920	1530				Africa	Sa-Su	09/24/93
	1630	USA	VOA	19379L	15205	9700	1548									ME/nAI/Eu		09/30/93
	1700	USA	VOA	15395	15205	9760	9700	9645	7125	6110						sAs		09/24/93
	2200	USA	WEWN	13615												NAM		09/11/93
	1700	USA	WEWN	17510												UK	*Program A*	09/11/93
	1700	USA	WINB	15295												Eu/nAI	*Program C*	12/23/92
	2300	USA	WRNO	15420												NAm/CAM/Eu		09/25/92
	1700	USA	WYFR	21615	21525	15355										Eu/AI		10/08/93
	1630	Vatican State	Vatican Radio	15090	11640											AI	Sa Mass	09/12/93
	1625	Vietnam	V of Vietnam	15009	9840											AI		03/20/93
1630	1800	Australia	R Australia	11880	11695	9770	9580	9510	7260	7240	6080	6060				As/Pac/PapNG		10/09/93

## SCHEDULES BY SUBSTATION

START END	COUNTRY	STATION	FREQUENCIES										TARGET AREA	NOTES	LAST Update	
1630																
1700	Austria	ORF	11780											As		09/25/93
1657	Canada	R Canada Int'l	9550	7150										As		09/28/93
1800	Ecuador	HCJB	21480	214550	17790									ME	Arabic Sa 1745/Su 17	05/08/93
1830	Egypt	R Cairo	15255											c&sAf		08/16/90
2200	Liberia	ELWA	4760											Regional	Sa 16-2130/Su 17-21	09/25/93
1700	USA	VOA	17790	15445	15410	15320	15255	13710	12040	11920	1530			Africa		09/24/93
1700	USA	VOA	19379L	15245	15205	11855	9760	9700	6180	1548				ME/nAf/Eu		09/30/93
1650																
1850	New Zealand	R New Zealand Int'l	9550											Pacific		10/17/93
1655																
2200	South Africa	Radio Oranje	3230											Domestic		09/12/93
1700																
1800	Azerbaijan	R Baku	15240											Eu		04/24/93
1755	China	China R Int'l	15345	11575	9570									e&sAf		06/18/93
1800	Guam	KSDA	13720											India/eAf		04/17/93
1730	Italy	AWR Europe	12060											Eu/nAf/ME		10/27/93
1800	Japan	R Japan	11915	9750										GOS:As		10/28/93
1800	Japan	R Japan	9535											GOS:NAM		10/28/93
1800	Japan	R Japan	17870											GOS:ME/nAf		09/03/93
1712	Lebanon	V of Lebanon	6549											ME	News	09/04/93
1800	Morocco	R-TV Morocco	17815												Sa	09/02/92
1800	N Mariana Is	KHBI/2	13625											eAf		09/12/93
1750	North Korea	R Pyongyang	13785	9977	9640	9325								Eu/ME/Af		09/19/92
1800	Pakistan	R Pakistan	15550	11570										wEu		05/09/93
1730	Russia	AWR Russia	12060											neEu	v Samara	10/01/93
1800	Russia	R Moscow Int'l	15385	9890	9550									World Service		09/23/93
1715	Swaziland	Trans World Radio	9520											cAf		10/08/93
1730	Switzerland	Int'l Red Cross	7210											Eu	Mo after last Su/mo	09/21/91
1730	Switzerland	Swiss R Int'l	17635	13635	9885									ME/Af		09/27/93
2100	USA	KVOH	17775											CAM/Carib	Sa	05/29/93
1730	USA	VOA	17790	15445	15410	15320	13710	12040	11920	1530				Africa		09/24/93
1730	USA	VOA	930											Caribbean		04/24/93
1800	USA	VOA	19379L	15205	9760	9700	6040	792						ME/nAf/Eu		09/24/93
1800	USA	VOA	15395	15205	11855	9700	9645	7125	6110					sAs		09/24/93
1800	USA	WHRI	15105	13760										Carib/nAm/Eu	separate pgm	06/16/93
1730	USA	WINB	15295											Eu/nAf	Mo-Sa	12/23/92
2000	USA	WMLK	9465												Su-Fr	08/30/89
1900	USA	WYFR	21500											Eu/Af		10/08/93
1715																
1730	Swaziland	Trans World Radio	9520											cAf	Mo-Sa	10/08/93
1745	Sweden	R Sweden	6065	1197										Eu		09/24/93
1730	Vatican State	Vatican Radio	9645	7250	6245									ME/eAf/wEu		09/29/93
1730																
1827	Netherlands	R Netherlands	21590	21515	9605	6020								s&e&wAf		09/17/93
1800	Romania	R Romania Int'l	17805	17745	15365	15340								Af		05/22/93

START	END	COUNTRY	STATION	FREQUENCIES							TARGET AREA	NOTES	LAST UPDATE	
1730	1800	USA	VOA	15445	15410	15320	13710	12040	11920	621	Africa	#7 Sa-Su	09/24/93	
	1800	USA	WINB	15295							Eu/NAf	Su-Fr	12/23/92	
	1800	Vatican State	Vatican Radio	17730	15090	11625					e&sAf		05/28/91	
1745	1945	India	AIR	15080	11935	11860	11620	9950	7412		GOS/e&w&nAI/wEu/ME		05/24/92	
1800	1900	Argentina	RAE	15345							Eu/Afr	M-F	10/01/93	
	1900	Australia	R Australia	11880	11695	11660	9580	7260	7240	6080	6060	6060	5960	10/09/93
	1850	Brazil	R Nacional de Brasil	15265										07/17/90
	1827	Czech	R Prague	13580	11990	9490	7345	6055			Eu/Af			10/24/93
	1900	Guam	KSDA	13720							eAf	Sa-Su		04/04/92
	1815	Israel	Kol Israel	11587							wEu/NAm			08/29/93
	1815	Israel	Kol Israel	11675	7465						eEu/wNAm			08/29/93
	2100	Kuwait	R Kuwait	13620							Eu			03/30/92
	0200	Lebanon	King of Hope	6280							ME	Univ Network 22-02		05/29/93
	1900	N Mariana Is	KHBU1	9355							NZ			09/12/93
	1900	N Mariana Is	KHBU2	9355							Eu/ME			09/12/93
	1830	Norway	R Norway Int'l	11860	9590						eAf/Eu/ME/wAf	Su only		09/22/93
	1900	Philippines	R Philippines	17840	15190						As	also Tagalog		09/25/93
	1855	Poland	Polish Radio Warsaw	9525	7285	7270	-				Eu			10/23/93
	1900	Russia	R Moscow Int'l	12055	9890	9550	7180				World Service			09/29/93
	1900	Sudan	R Omdurman	9165	7200						Regional			03/06/93
	1845	Swaziland	Trans World Radio	9500							eAf			09/02/93
	2015	Swaziland	Trans World Radio	3200							sAf			09/02/93
	1900	USA	KJES	9510							wCanada	irregular		10/19/92
	2200	USA	KVOH	17775							CAm/Carib	Su		05/29/93
	1900	USA	VOA	17800	15580	15410	15320	13710	13675	12040	11920	621		09/30/93
	1900	USA	VOA	19379L	15205	9760	9700	6040						09/24/93
	1900	USA	WCSN	21640							ME/NAf/Eu			09/12/93
	2000	USA	WHRI	13760	9590						eNAm/Eu/Carib			07/13/93
	2100	USA	WINB	15295							Eu/NAf			12/23/92
	1825	Vietnam	V of Vietnam	15009	9840						Eu			11/07/89
1815	1900	Bangladesh	R Bangladesh	9565							Eu/ME			09/02/93
	1900	Germany	R Deutsche Welle	1269							Eu			10/25/93
1830	2000	Bulgaria	R Bulgaria	9700	7455						NAm/Eu			10/25/93
	1927	Netherlands	R Netherlands	21590	21515	9605	6020				s&e&wAf			09/17/93
	1900	Sweden	R Sweden	15145	9655	6065	1179				ME/NAf/Eu			09/24/93
1840	1850	Greece	V of Greece	17525	15650						sAf	News/Eng ex Su		10/09/92
	1855	Venezuela	R Nacional de Venezuela	9540							SAm	news/Eng M-Sa		06/06/91
1850	1855	Gabon	Africa No. 1	15475								2 min news summary		10/01/93
	2130	New Zealand	R New Zealand Int'l	11735							Pacific			10/17/93

START		SCHEDULES BY SUBSTRON										TARGET AREA	NOTES	LAST UPDATE			
End	COUNTRY	STATION	FREQUENCIES														
1900																	
2000	Algeria	R Algiers Int'l	17745	11715	9535									eAI/ME			10/01/93
2100	Australia	R Australia	11080	11720	11695	11660	9580	7260	7240	6080	6060	5960	As/Pac/PapNG				10/09/93
1915	Azerbaijdzhan	V of Azerbaïdzhan	15240	4958									Domestic		News		09/28/93
1925	Belgium	R Vlaanderen Int'l	13685	5910									AI/Eu				09/11/93
1955	China	China R Int'l	11515	9440	6955								w&nAfr				06/18/93
2000	Ecuador	HCB	21480	21455U	17790	17490U							Eu				11/14/92
1950	Germany	R Deutsche Welle	15425	13790	11785	11765	11740	9765	9665				wAI/ME				10/25/93
2000	Japan	R Japan	11915	6185									GOS:As				10/28/93
2000	Japan	R Japan	9535										GOS:NAm				10/28/93
2000	Japan	R Japan	11875	9640									GOS:Oc				09/03/93
2000	Morocco	R-TV Morocco	11920													Su	09/02/92
2000	N Mariana Is	KHBI/2	9355										Eu/ME/Al				09/12/93
2100	Nigeria	V of Nigeria	7255										wAI				07/24/93
1930	Portugal	R Portugal	9780										Eu		M-F		10/04/93
2000	Romania	R Romania Int'l	15365	11940	11810	9750							Eu				05/22/93
2000	Russia	AWR Russia	9835										Syria		v Novosibirsk		04/03/92
2000	Russia	R Moscow Int'l	13670	12055	9550	9470	7205	7180	7170				World Service				09/29/93
1915	Sierra Leone	SLBS	3316												Sa UN Radio		09/24/92
2000	Spain	Spanish National Radio	15375										Al				11/02/92
2045	Swaziland	Trans World Radio	3240										sAI				09/02/93
2000	USA	VOA	17800	15580	15410	13710	12040	11920	7415	621			Africa				10/27/93
2000	USA	VOA	15180	11870	9525								Pac				04/24/93
2000	USA	VOA	19379L	15205	9760	9700	6040	3980	1197				ME/nAI/Eu				09/24/93
2000	USA	WCSN	21640										Al				09/12/93
2100	USA	WEWN	15695										UK		"Program C"		09/11/93
2000	USA	WSHB/2	15665										eEu/CIS				09/12/93
2000	USA	WYFR	21615	15355									Eu/Al				10/08/93
1925	Vietnam	V of Vietnam	15009	9840									Eu				11/07/89
1930																	
2000	Austria	ORF	6155	5945									Eu				09/25/93
2000	Austria	ORF	9880										ME				09/25/93
2000	Austria	ORF	13730										Al				09/25/93
2000	Finland	R Finland	11755	9730	6120	963	558						Eu		Sa -1955		10/18/93
2030	Iran	V of Islamic Rep of Iran	15260	9022									Eu/nAI				10/04/93
2000	N Mariana Is	KFBS	9465														03/07/92
2027	Netherlands	R Netherlands	21590	17605									wAI				03/27/92
2000	Slovakia	R Slovakia Int'l	9440	7345	5915								wEu				10/04/93
2000	Yugoslavia	R Yugoslavia	17710	6100									sAI/wEu				10/25/93
1935																	
1955	Italy	RAI	11800	9710	7275								Great Britain				04/08/89
1940																	
2010	Mongolia	R Ulan Bator	11850	11790									Eu				10/09/92
1945																	
2000	Armenia	R Yerevan	6065	5930	4990	4810	1395	864					ME				10/27/93

## SCHEDULES BY SUBSTATION

START End 2000	COUNTRY	STATION	FREQUENCIES								TARGET AREA	NOTES	LAST Update		
2055	China	China R Int'l	11500	9920								Eu		10/17/93	
2130	China	China R Int'l	15110	11715								e&sAf		10/17/93	
2055	China	China R Int'l	9440									w&nAf		10/17/93	
2015	Greece	V of Greece	9375	7450								Eu	News/Eng	04/03/93	
2100	Indonesia	V of Indonesia	11752	9675								Eu		11/29/92	
2200	Iraq	R Iraq Int'l	13680	11810								Eu	News/EE @ 2045 jir	06/15/93	
2030	Israel	Kol Israel	11603	11587	9435	7465						NAm/wEu		10/03/93	
2030	Israel	Kol Israel	11675									wNArnwEu		08/29/93	
2030	Israel	Kol Israel	17575									Af		08/29/93	
2030	Latvia	R Latvia	5935										Sa-Su	10/22/93	
2030	Lithuania	R Vilnius	9710	9675	1557	666						Eu		09/28/93	
2050	North Korea	R Pyongyang	9977	9640	9345	6576						ME/AF/Eu		01/01/90	
2030	Norway	R Norway Int'l	9590									Eu/AF/eNAM	Su only	09/22/93	
2030	Portugal	R Portugal	15515									Af	M-F	10/04/93	
2100	Russia	R Moscow Int'l	13670	12055	9550	9515	9470	7205	7180	7170		World Service	R Aum 2030-21	09/29/93	
2130	Sri Lanka	SLBC	15120	9720								Af		08/24/91	
2030	Switzerland	Swiss R Int'l	15505	13635	12035	9885						Eu		09/27/93	
2030	Switzerland	Swiss R Int'l	6110									Eu		09/27/93	
2050	Turkey	V of Turkey	9445									Eu		03/22/93	
2100	USA	KJES	9510									wCanada	irregular	05/01/93	
2030	USA	VOA	21485	17800	15580	15495	15160	13710	11820	7415	1530	621	Africa	10/27/93	
2100	USA	VOA	19379L	15205	11760	9760	9700	6040	3980				ME/nAF/Eu	09/24/93	
2100	USA	WCSN	13770										Af	09/12/93	
2300	USA	WHRI	17830	13760									Carib/eNAM/Eu	07/13/93	
2200	USA	WSHB/2	9355										UK/e&wEu	10/18/93	
2200	USA	WYFR	21525	17750	15566	7355							Eu/AF	10/27/93	
2030	Vatican State	Vatican Radio	15090	11625	9645								c&s&wAf	09/22/91	
<b>2005</b>															
2105	Syria	R Damascus	15095	12085									Eu/NAM	02/03/91	
<b>2015</b>															
2045	Swaziland	Trans World Radio	3200										eAf	Su	09/02/93
<b>2025</b>															
2045	Italy	RAI	11800	9575	7235								Near East	04/24/91	
<b>2030</b>															
2200	Egypt	R Cairo	15375										wAf	08/16/90	
0100	Palau	KHBN	9830											09/12/93	
2125	Poland	Polish Radio Warsaw	9525	7285	6135	1503							Eu	10/23/93	
2059	South Korea	R Korea	6035										Eu	10/03/93	
2059	South Korea	R Korea	9640										seAs	10/03/93	
2059	South Korea	R Korea	9870										ME/AF	10/03/93	
2059	South Korea	R Korea	5975										GOS	10/03/93	
2100	USA	VOA	21485	17800	15580	15410	13710	7415	1530	621			Africa	10/27/93	
2055	Vietnam	V of Vietnam	15009	9840									Eu	11/07/89	
<b>2045</b>															
2230	India	AIR	15265	11715	11620	9950	9910	7412					GOS/AusNZ/wEu	08/26/91	

## SCHEDULES BY SUBSTATION

SIAM#	End	COUNTRY	STATION	FREQUENCIES								TARGET AREA	NOTES	LAST Update		
2050	2110	Vatican State	Vatican Radio	5882									Eu		09/29/93	
2100	2130	Australia	R Australia	15365	15320	11880	11855	11720	9645				As/Pac/PapNG		10/09/93	
	2200	Bulgaria	R Bulgaria	9700	6085								NAm/Eu		10/25/93	
	2115	Cameroon	R Cameroon	5010										news in English	12/04/88	
	2155	China	China R Int'l	11500	9920								Eu		06/18/93	
	2200	Cuba	R Havana	17760									Eu/AU/ME		12/19/92	
	2127	Czech	R Prague	9490	7345	7265	6055						Eu		10/22/93	
	2150	Germany	R Deutsche Welle	11785	9765	9670	6185						As/Pac		10/25/93	
	2150	Germany	R Deutsche Welle	15425	9715	9690							wAJ		10/25/93	
	2110	Ghana	Ghana BC Corp	3366										News in English	12/23/87	
	2400	Guam	KHBN	9820									China		09/19/90	
	2200	Japan	R Japan	11915	9660	6185	6035						GOS:As		10/28/93	
	2200	Japan	R Japan	9640									GOS:Oc		09/03/93	
	2200	Japan	R Japan	11925									GOS:Eu/ME		09/03/93	
	0100	Lebanon	Wings of Hope	11530									ME	Univ Network	05/29/93	
	2200	N Mariana Is	KHBI/1	13840									Aus		10/18/93	
	2200	Romania	R Romania Int'l	11940	9750	9690	7225	7195					Eu		05/22/93	
	2200	Russia	R Moscow Int'l	13670									World Service	22m	09/29/93	
	2200	Russia	R Moscow Int'l	9890	9550	9470							World Service	31m	09/29/93	
	2200	Russia	R Moscow Int'l	7330	7205	7180	7170	7150	7115				World Service	41m	09/29/93	
	2200	Russia	R Moscow Int'l	6055									World Service	49m	09/29/93	
	2200	Russia	R Moscow Int'l	4860	4795								World Service	60m	09/29/93	
	2200	Spain	Spanish National Radio	6125									Eu		11/15/92	
	2130	USA	VOA	21485	17895	17800	15580	15445	15410	13710	7415	1530	621	Africa		09/30/93
	2200	USA	VOA	930										Caribbean		09/24/93
	2200	USA	VOA	17735	15185	11870								Pac		04/24/93
	2200	USA	VOA	19379L	15205	11960	11760	9760	6040	1260				ME/nAI/Eu		10/13/93
	2200	USA	WCSN	5850										AI/Eu		10/18/93
	2245	USA	WINB	15185										Eu/nAI		12/23/92
2105	2130	Yemen	Yemen Radio & TV Corp	9780										ME		10/13/93
2110	2210	Syria	R Damascus	15095	12085									NAm/AusNZ		07/07/91
2115	2245	Egypt	R Cairo	9900										Eu		08/16/90
	2245	Italy	Italian Radio Relay Serv	7125										NAm	Fr	10/28/93
	2130	Sierra Leone	SLBS	3316										Fr&Sa UN Radio		09/24/92
2130	2300	Australia	R Australia	21740	17795	15365	15320	15240	11880	11855	11720	9645		As/Pac/PapNG		10/09/93
	2230	Canada	R Canada Int'l	15325	13650	11945	7260	5995						Eu		09/28/93
	2230	Canada	R Canada Int'l	17820	15325	15140	13670	13650	11945	7260	5995			AI		09/28/93
	2230	Canada	R Canada Int'l	5995										ME		09/28/93
	2200	Ecuador	HCJB	21480	21450U	17790	17490U							Eu		05/01'93
	2135	Latvia	R Latvia	5935	576										Mo-Fr	10/22/93

## SCHEDULES BY SUBSTRON

START	End	COUNTRY	STATION	FREQUENCIES	TARGET AREA	NOTES	LAST Update
2130	0700	New Zealand	R New Zealand Int'l	15120		Pacific	10/14/93
	2200	Sweden	R Sweden	9655	6065 1179	Eu/AM/ME	09/24/93
	2200	USA	VOA	21485	17800 15580 15410 13710 7415 1530 621	Africa	10/27/93
2140	2155	Venezuela	R Nacional de Venezuela	9540		SAm	news/Eng M-Sa
2145	2245	South Korea	R Korea	15575	6480	Eu	05/09/93
2200	2225	Belgium	R Vlaanderen Int'l	5910		Eu	09/11/93
	2230	Canada	R Canada Int'l	11705		As	09/28/93
	2255	China	China R Int'l	7170		Eu	09/28/93
	2230	China	China R Int'l	3985		Eu	09/28/93
	2300	Cuba	R Havana	6180		Carib/sUSA	11/08/92
	2227	Czech	R Prague	9490	7345 7265 6055	Eu	10/22/93
	2300	Hungary	R Budapest	11910	9835 7220 6110	Eu	10/01/93
	0100	Iraq	R Iraq Int'l	17940	15180	SAm	News/EE @ 2345   irr
	2225	Italy	RAI	15330	11800 9710	Japan	07/23/93
	2300	N Mariana Is	KHBI/1	13625		Japan/Kor/CIS	09/12/93
	2300	N Manana Is	KHBI/2	9430		China	10/18/93
	2205	Nigeria	R Nigeria	4990			News in Eng
	2300	Russia	R Galaxy	9880		wEu/cEu	09/28/93
	2300	Russia	R Moscow Int'l	17690	17665 17655 17605 17570	World Service	17m
	2300	Russia	R Moscow Int'l	13670		World Service	22m
	2300	Russia	R Moscow Int'l	11665		World Service	25m
	2300	Russia	R Moscow Int'l	9885	9750 9725 9620 9550	World Service	31m
	2300	Russia	R Moscow Int'l	7380	7295 7180 7150 7115	World Service	41m
	2300	Russia	R Moscow Int'l	6055		World Service	49m
	2300	Russia	R Moscow Int'l	4860	4795	World Service	60m
	2229	South Korea	R Korea	9640		seAs	10/03/93
	2229	South Korea	R Korea	7275		GOS	10/03/93
	2300	Taiwan	V of Free China	11915	9850	Eu	10/01/93
	2250	Turkey	V of Turkey	11895	9445 7185	Eu/NAm/ME	03/22/93
	2300	Ukraine	R Ukraine Int'l	9860	9745 9505 7240 7195 6020 5985 5960 4825	Eu	10/16/93
	2400	United Arab Emir	V of UAE	13605	11710 9770	NAm	09/25/93
	2300	USA	VOA	17820	17735 15305 15290 15185 11760 9770 7215 6035	eAs/seAs/Pac	10/27/93
	0200	USA	WEWN	7425		NAm	td# 1-*Program A*
	2300	USA	WSHB/1	9465		Eu/eNAm	09/12/93
	2300	USA	WSHB/2	17555		eSAm	09/12/93
	2300	USA	WYFR	21525	17750	Eu/AF	10/08/93
	2230	Yugoslavia	R Yugoslavia	6185	6100	Eu/wEu	10/25/93
2203	2115	Croatia	Croatian Radio	13830	13640 9830 5920		News/English
2230	2300	Finland	R Finland	9615	963 558	Eu	Sa -2255
	2300	Finland	R Finland	9615		eAs/Aus	Sa -2255

## SCHEDULES BY SUNDBLÖM

START	COUNTRY	STATION	FREQUENCIES							TARGET AREA	NOTES	LAST Update		
2230														
2300	Finland	R Finland	9615							SAM	Sa -2255	10/16/93		
2300	Israel	Kol Israel	11603	11585	7465					NAM/Pw/Eu		08/29/93		
2300	Israel	Kol Israel	11675							wNAM/Ve/Eu		08/29/93		
2300	Israel	Kol Israel	17575	9435						LAM		08/29/93		
2300	Lithuania	R Vilnius	9710	9675	1557	666				Eu		09/28/93		
2300	Sweden	R Sweden	6065	1179						Eu/As/ME		09/29/93		
2330	USA	VOA	1260							ME		10/13/93		
2240														
2250	Greece	V of Greece	11645							Aus/NZ	News/Eng	03/27/93		
2245														
2300	Armenia	R Yerevan	11920	9705	7440					Eu		10/27/93		
0015	Bulgaria	R Bulgaria	9700	7455						NAM/Ve		10/25/93		
2300	Ghana	Ghana BC Corp	4915	3366							rx/English	09/09/90		
0045	India	AIR	15145	15110	11745	11715	9910			GOS/As		11/10/92		
2330	USA	WINB	15145							Eu/nAI		12/23/92		
2305	Vatican State	Vatican Radio	11830	9600						As/Aus/NZ		09/12/93		
2300														
2315	Albania	R Tirana	11825	9760	1395					Eu		10/27/93		
2400	Australia	R Australia	21740	17795	15365	15320	15240	11880	11855	11720	As/Pac/Pap/NG		10/09/93	
0100	Canada	R Canada Int'l	7250	5995						Eu		09/28/93		
0100	Canada	R Canada Int'l	7250	5995						AI		09/28/93		
2330	Canada	R Canada Int'l	11845	9755	5960					NAM		09/28/93		
2330	Canada	R Canada Int'l	11940	11845	9535					LAM	SaSu-24	09/28/93		
2330	Canada	R Canada Int'l	11940	11845	9535					Carib	SaSu-24	09/28/93		
0100	Costa Rica	AWR LAM	11870	9725	5030					LAM		09/05/93		
0100	Guam	KSDA	15610							saAs		03/26/92		
2400	Japan	R Japan	15430	9660	7140					GOS:As		10/28/93		
2400	Japan	R Japan	6125	6050						GOS:Eu		09/21/93		
2400	N Mariana Is	KHBI/1	13625							Indon		09/12/93		
2400	N Mariana Is	KHBI/2	9430							China		10/18/93		
2350	North Korea	R Pyongyang	13650	11700						Am		02/24/91		
2330	Norway	R Norway Int'l	6120							eNAM	Su only	09/22/93		
2400	Russia	R Moscow Int'l	17665	17570	15425	12050	11860	9750	9735	9620	7170	7110	World Service	10/17/93
2310	Sierra Leone	SLBS	3316										news/Eng	09/24/92
0300	South Africa	Radio 2000	4810											09/12/93
0200	USA	KCBI	13740							NAM	alt use 23-24		09/12/93	
2400	USA	VOA	17820	17735	15305	15290	15185	11760	9770	7215				09/24/93
0200	USA	WEWN	7425							eAs/saAs/Pac				09/11/93
2400	USA	WHRI	13760	9495						NAM	"Program A"		06/16/93	
0400	USA	WRNO	7355							eNAM/Ve/Carib	separate pgm Tu-Fr		10/28/93	
2400	USA	WSHB/1	9465	9465						NAM/Carib	Spanish Tu-F		09/12/93	
2400	USA	WSHB/2	17555							SAM				09/12/93
2330														
2400	Austria	ORF	13730	9870						LAM				09/25/93
0130	Canada	R Canada Int'l	9755	5960						NAM				09/28/93

START	END	COUNTRY	STATION	FREQUENCIES			TARGET AREA	NOTES	LAST Update
2330	0027	Netherlands	R Netherlands	6165	6020		eNAM		09/22/92
	2400	Sri Lanka	SLBC	15425			eNAM	Mo	07/22/93
	2400	Sweden	R Sweden	11910	1179		As/Eu		09/24/93
	2400	USA	VOA	1548	1260		ME		10/13/93
	2345	USA	WINB	15145			Eu/NA	Sa-Tu&Th	12/23/92
	2355	Vietnam	V of Vietnam	15009	9840		Eu		11/07/89
2335	2345	Greece	V of Greece	11645	11595	9425	SAM/CAM	News/Eng ex Sa	06/18/93
2345	2400	Armenia	R Yerevan	12010	11920	9685	LAm		10/27/93

# tropical bands survey



The 1993 Tropical Bands Survey, 21st edition, is available, as in past years, from the Ontario DX Association. Edited by Argentine DXer Julian Anderson and published by the Danish Short Wave Clubs International, TBS is one of the most valuable references for the Tropical Bands DXer.

The TBS lists all broadcasting stations in the frequency range 2000-5900 kHz and monitored in the past year. Details such as transmission hours, powers and languages are included.

US\$9.00 postpaid to the United States or C\$10.00 postpaid to Canada. Order from the Ontario DX Association, P.O. Box 161, Station A, Willowdale, Ontario M2N 5S8, Canada.

**INDONESIA - RRI Gorontalo** 2160H Second harmonic of new transmitter on 1080 heard at 1516. Parallel 4987.7. (Foster Numero Uno No 1241 October 15th)

**Radio Arma Sebeles** 2378.7H Heard at 1458 with Jakarta news at 1500. 1188 x 2. (Juichi Yamada during trip to Indonesia September 14th)

**Unid** 2914.7v, 1244-1425 possible amatir. Faint Motown music at 1244. Male announcer in Indonesian. Music over the top of the hour. Drifting to 2915.9 by 1343 and 2918.2 by 1425. Very faint signal and poor modulation. (Guy Atkins October 10th Dxpeditiion at Grayland State Park, Washington)

**RKPD2 Manggarai** 2960.15, 1250-1400 sig. off. Echo sound effects at 1258 and possible ID with mentions of Indonesia. Poor modulation. No SCI at 1300, but into Jakarta relay anyway (//4753). Anthem at 1313. Male announcer to 1319, then Indo pop vocals. Probable ID at 1314 and 1358 recheck with mention of Manggarai (sounded like Man-ga-rang). Sign off at 1400 with announcements and Love Ambon. Weak signal. (ibid)

**RRI Samarinda** 9614.8 Heard with English language lesson at 0942 on October 8th, a Friday. (ibid)

**RKPD2 Bengkalis** 3178.4v Poor signal and modulation and drifting. Heard at 1223. (Foster Numero Uno No. 1241 October 15th)

**RRI Banjarmasin** 3249.9 is still active. Heard on September 14th during trip to Denpasar in addition to unidentified stations that were heard on 3286 and 3355. (Juichi Yamada October 19th)

**RRI Palangkaraya** 3325 Heard signing off in mid-song at 1519 which is about 20 minutes later than previous sign off time. (Foster OZDX No. 85 October)

**RRI Medan** 3376 Has reactivated this frequency. (Foster Numero Uno No. 1241 October 15th)

**RRI Malang** 3381 Has not only reactivated but is on until 2100 sign off. (ibid)

**RRI Manakwari** 3987.26 The verification signer is P.M. Tisera, Kepala. They use a Philips transmitter with 1 kW with a delta match antenna 17 meters high. The station uses a Redifon transmitter with 500 watts into the same type of antenna arrangement on 6187. (Takayuki Inoue Nozaki Relampago Dx Logging No. 22 August 28th-September 6th)

**RRI Serui** 4606.4 Has returned to the schedule listed in the 1993 WRTH. (ibid)

**RRI Medan** 4765 Noted on this SCI at 1659. (Dave Valko October 8th) Previous sign off was 1520. (Foster OZDX No. 85 October)

**RRI Kupang** 4805 struggling along at 1148, low-powered outlet (Seager Australian Dx News October)

**RRI Ambon** 4863.8 Noted on past 1130 sign off. (Clark Numero Uno No. 1238 September 24th)

**RRI Sorong** 4873.6 Has retimed English from Sundays to Mondays at 1130. (Valko/HJ Dxpeditiion in Dunlo, Pa area October 4th)

**RRI Pekanbaru** 5040 New frequency since the end of September, ex 5985. (Juichi Yamada October 19th) The station now seems to be on past its old sign off of 1515. (Foster OZDX No. 85 October)

**RRI Palangkaraya** 9545 Thanks to a tip from Foster in the September OZDX this one has been heard from about 1115 until 1223 sign off. Undoubtedly the 50 kW transmitter is being used here now instead of on 3325. (Clark Numero Uno No. 1238 September 24th)

**RRI Nabire** 6127 Not noted during Dxpeditiion. (Dave Valko Dxpeditiion Grayland State Park Washington October 10th)

**RRI Manokwari** 6188 Not noted but 3987 was heard though during Dxpeditiion (ibid)

Last month (see October LN) Dave Clark speculated that the 9 new 250 kW transmitters which *Radio Republik Indonesia* is planning to install in Sulawesi and Java for improved domestic coverage would be utilized on shortwave, as opposed to medium wave. It seems that may not be the case. "Unfortunately, no details are yet available for the new RRI stations in Lhokseumawe, Sungai and Tual, though none is believed to be on shortwave". (Foster Numero Uno No. 1241 October 15th) So it seems we're talking a big expansion on medium wave after all. In my view that still does not bode well over the longer term for the continuation of the extensive RRI network on shortwave which has been slowly contracting over the years with increasing use of both medium wave and FM at the local level. Many of the shortwave transmitters are old, in a sorry operational state (even if on the air), and while periods of inactivity have typically occurred in the past, usually the transmitters could be expected to reappear on shortwave, eventually. I'm not so sure that will continue to be the case, although as a DXer personally most interested in Indonesia, I certainly hope I'm wrong about this! (David Clark World Radio Report Dx Ontario November)

**IRAN - VOIRI** Will soon add 6 new languages to the 12 it is already broadcasting in. (BBC Summary of World Broadcasts World Broadcasting Information No. 41 October 8th)

**IRAQ** see CLANDESTINES-MIDDLE EAST

**ITALY - RAI** Was carrying *Radio Due* on 21775 and 7175 from 0700-1343 sign off but they have switched to *Radio Uno* since September 26th. 9515 is untraced. (Giovanni Serra September 26th)

**AWR Forli** 7230 Has reactivated. (Monferini Play Dx No. 760 October 18th)

**JAPAN - NHKI Fukuoka 1 3259** Is now inactive again. (Juichi Yamada October 19th)

**KASHMIR (AZAD KASHMIR)** - On October 13th, the foundation stone was laid for *Radio Azad Kashmir-Mirpur*. Probably one 100 kW transmitter will be installed here. (BBC Summary of World Broadcasting World Broadcasting Information No. 42 October 15th) No frequencies or times given. Mirpur is located in Azad Kashmir to the south of Muzaffarabad. (HJ)

**KIRIBATI - 9825** *Radio Kiribati* 0600 sign on +, *Radio Kiribati* NOT HEARD on this frequency for 5 straight nights, October 8th through October 13th. First two dates were with the benefit of 1000 ft. Beverage antenna aimed right at Kiribati... not even a het. Per Dave Onley/OZDX in David Clark's WRR/DXO, 9825 may be temporary pending a change to an even lower frequency for better outer-island coverage. Perhaps they've already made the move. (Guy Atkins October 13th)

**KUWAIT** - A recent QSL from *Radio Kuwait* shows English at 1800-2100 on 9840 and 13620 with news at 1830. (Arthur Cushen on Radio New Zealand Mailbag September 26th via Mike Fern) This station has the English program *Our missing POWs* from 2030-2045 daily. (Berg Numero Uno No. 1240 October 8th)

**LATVIA - Radio Latvia** 5935 Since October 2nd, English transmissions have been retimed to 2000, ex 1800. (Southwell Shortwave News October)

**LIBYA** see MALI

**LEBANON - Voice of Lebanon** 6550 Has English Mondays-Saturdays from 1700-1713. (Radio World/Southwell Shortwave News October)

**LITHUANIA - Lithuanina Radio First Program** 9710 Has VOA programming in Lithuanian from 2030-2100 daily. (BBC Summary of World Broadcasts Broadcasting Schedules No. 39 September 24th)

**LUXEMBOURG - Radio Luxembourg** 15350 Noted in German at 2100 with 1960s pop music. (Parks DX South Florida No. 308 September 24th) While 6090 English Service left shortwave in January does anyone know if the above left shortwave and has since returned. (Krueger ibid)

**MADAGASCAR - Radio Malagasy** 3281.79 Heard on this frequency at 1630. (SA Shortwave Bulletin No. 1236 October 19th)

**MALAYSIA (SABAH) - RTM-Kotakinabalu** 5980 Heard at 0935 before listed 1000 sign on. (Seager Australian Dx News October)

**MALAWI - MBC** According to the station, they ceased broadcasting a number of partisan political programs as of September 21st as part of an agreement between the country's president and his political opposition. (BBC Summary of World Broadcasts No. 40 October 1st)

**MALI** - The Malian president asked for LIBYA's help in improving its internal radio network. Libya was interested in helping Mali install a "radio booster station" to improve Mali internal radio broadcasts. (ibid)

**MEXICO - Radio Educacion** 6185 In addition to programs in English and Spanish, this station has occasional programs in Italian. They plan to add programs in German and French if they get enough letters from these countries. (Kuhl Play Dx No. 757 September 26th)

**MONGOLIA - Radio Ulaan Bator** According to a station announcement, English transmissions are only on Mondays, Thursdays and Saturdays. (Clark Numero Uno No. 1241 October 15th)

**MOZAMBIQUE** see CLANDESTINES AFRICA

**NIGERIA - Voice of Nigeria** A QSL has been received from Mr. Lawal Yusuf Saulawa using the address in the 1993 WRTH. (Stephen J. Price September 22nd)

**NORTH KOREA - Pyongyang** 5870 Sign on at 1000 with anthem, then Korean announcements and songs. Runs parallel 4770. I'm not sure what this service is, but it's been around for years (on 4770 at least) and is not covered in the standard reference sources. (Seager Australian Dx News October)

**PALAU** - The High Adventures Ministries station *KHBN* is operating its single 100 kW transmitter at an output of 50 kW and uses two antenna arrays. Palau was far-removed from the epicenter of the quake which struck Guam last August 8th and no damage or disruption to operations was incurred here. (Adrian Peterson in Radio News Bulletin No. 9 - August via Dave Clark's World Radio Report Dx Ontario November)

**PAKISTAN - Radio Pakistan** 15675 The September *Pakistan Calling* list this channel as being in use from 1600-1630 with slow speed news and from 1700-1800 in Turkish. So it's

not a spur (even though it sounds like one !).  
... just poor audio quality. (Chris Sweitzer  
October 10th)

see KASHMIR (AZAD KASHMIR)

**PAPUA NEW GUINEA** - Was hit by a series of strong earthquakes and aftershocks beginning with a quake measuring 7.0 on the Richter Scale on Wednesday, October 13th, soon followed by aftershocks measuring 6.5 and 6.0. Communications to Morobe Province on the north coast were cut off and damage was reported by amateur radio operators at Madang. The quake was also felt in the capital, Port Moresby, some 310 miles away from the epicentre. Another quake hit the Madang coastal area on Saturday, Oct 16th at 1334 local time, according to an initial Associated Press report originating from Canberra, Australia. On the morning of Oct 17 from Newmarket, provincial stations most likely to have been affected by the quakes were checked - that would be Sunday evening in Papua New Guinea. *Radio Madang* 3260, *Radio West Sepik* 3205 and *Radio East Sepik* 3335 were on the air and apparently in normal operation. *Radio Enga* 2410, however, was absent as has often been the case lately. (Chuck Rippel and Dave Clark World Radio Report Dx Ontario November)

**PARAGUAY** - As far as is known, there is only one shortwave station currently operating from Paraguay, *Radio Nacional* on 9735. *Radio Guaira* is off the air on shortwave and some DX reports say that *La Voz del Chaco* will begin shortwave broadcasting soon on the 60mb. (Peterson Australian Dx News October)

**PERU** - *Radio Naylamp* 4300 Is on 24 hours a day. (Latinoamerica Dx No. 159 August via Radio Nuevo Mundo No. 185 October 8th)

*Radio Huanta Dos Mil* 4747 Was heard on 4755.4 around the middle of the month before returning to its nominal frequency. (HJ October 11th)

*Radio Maranon* 4834.9 Has reactivated. This station is listed in the *Tropical Bands Survey* as having been inactive since June 1992. Heard signing at new time of 1000 with "Chariots of Fire" playing in the background. (HJ October 13th)

*Radio Lider* 4860 Is the id I am hearing for a station active here. Heard as early as 0920 since October 22nd. Greeting to listeners in Quillabamba and many mentions of Cusco. While I can find no listing of *Radio Lider* on shortwave, there is one in Cusco on medium wave 1100 so there might be a connection. Additional monitoring will determine the station's QTH. (HJ October 27th)

*Radio Madre de Dios* 4953 Has a special program for their international listeners

Sundays from 0100-0200. (Kuhl Shortwave News October)

*Radio Cultural Amauta* 4955 Sign on is at 0955. (Richard D'Angelo October 21st)

*Radio del Pacifico* 4974.8 Now has a morning transmission, sign on is at 0800v. (Takayuki Inoue Nozaki Relampago Dx Logging No. 24 October 2nd-8th)

*Radio Hispana* 5015v Has reactivated on this new frequency, ex 5895.4. First heard on September 17th. Schedule is 0900-1200 fade out and 2200 fade in to 0400 sign off. Last known power of the transmitter was 300 watts. (ibid) Seems to be the one I am hearing at 1000 on 5016, Thanks TIN (HJ)

*Radio Ritmo* 5602 Not heard during trip to Bolivia (Takayuki Inoue Nozaki ibid)

*Radio Victoria* 6020 A QSL letter sent to the address listed in the 1993 WRTH was returned as undeliverable. (HJ October 6th)

*Radio Nacional del Peru* 6095 Reactivated and heard until 0500 sign off. (Kuhl Play Dx No. 757 September 26th) Station is located in Tacna and previously used 9530. They are asking for letters to the following address: Avenida Hipolito Unanue, Tacna. (Manual Rodriguez Lanza Radio News No. 8 Electronic Edition October 24th)

*Radio La Voz de San Antonio* 6628 In a QSL letter, the station says that it is a cultural operation with a power of 300 watts. They are having a lot of difficulties running the station and are requesting for hints at institutions that are able to help them do their work in a difficult environment. The station also has a new address: Jr. Alfonso Ugarte 732, Bambamarca, Cajamarca. (Kuhl Shortwave News October)

*Radio Universo* 6815.6 Is only on UTC Monday nights and has a new QTH: Av. Lima 307, Saposoa. (Klemetz Play Dx No. 759 October 11th)

**PIRATES-EUROPE** - European hobby pirates can be expected to cross the pond to the U.S. during the fall, winter and perhaps early spring. The traditional time of the week for pirate activity is 0900-1300 Sun UTC. In the last year or two, pirates have developed some additional regular periods. Many operators have added 0900-1300 Sat UTC. The regular Eurpirate band ex.stnds from 6200-6340. A second pirate band, used more in the U.S. than in Europe, runs from 7350-7500; it is used Saturday and Sunday mornings UTC also. Starting last winter pirates began showing up between 3880-3950. Saturday nights and early Sunday mornings. Activity peaks around 2300-0200. Several Russian pirates use this band, including *Radio Without Borders International*, (see below HJ) near Moscow, which first appeared in the 6.2 MHz band but was heard in early 1993 on 3916v. Good overseas reception should begin in

mid-October. The high season ends about March 15. Two regulars are based in Ireland: *DLR-106* in a suburb of Dublin on 6226v between 0700-1800, and an incarnation of *Radio Caroline* on 6295v. (John Campbell Media Network September 30th via Mike Fern)

*Radio Stella* A letter from Jock Wilson, the station operator, states: 11413 is off the air, 7446 is on reduced power of 20 watts and 3945 is operating properly. There are not enough funds to pay the operator in Ireland so the station is not on the air every weekend. (Lobdell Numero Uno No. 1240 October 8th)

*North Ireland Radio Relay Service-IRRS* This station left the air in May as the piece of land they used for a transmitter site has been sold. (Free Radio Page September via Play Dx No. 759 October 11th)

*Radio Without Borders International* Was reported raided on August 3rd and had its transmitters seized. (FreeDx via Contact October)

**UNITED STATES** After a lurid career as a fish trawler, a smugglers ship and finally a radio boat, the *MV Sarah* became a Movie Star for one fleeting moment. In 1987 this old rust bucket was purchased by Alan Weiner, a notorious radio pirate broadcaster, from the US Government. The ship's prior assignment had been to smuggle narcotics under a false deck and it had been taken in a seagoing raid by the DEA and USCG. It was renamed the Sarah in honor of some rock hero's wife, and was immediately rebuilt by some of New York City's FM broadcast pirates as a radio ship. To be later named Radio New York International, the pirates performed the major work on returning the ship to seagoing fitness and installing the towers while it was docked in a secluded part of Boston Harbor. *Radio New York International* hit the air for four days in 1988, and the story of how Weiner, Ivan Rothstein and a reporter for *The Village Voice* were led away in handcuffs caught press attention world wide. After another attempt at broadcasting in 1989, the ship's transmitters were again silenced, but in a less volatile way, by FCC order. While *RNI* began a legal venture as a time buyer on shortwave broadcaster *WWCR* in 1990, the *Sarah* went through some of its own changes. A sale to another seagoing broadcaster fell apart and Weiner again regained ownership of the Vessel. And so it stood in dock in Boston Harbor, until recently. Weiner has been involved in the construction/conversion of another ship into a radio vessel, the *Fury II*, owned by *Voyager Broadcast Services*, also being built in Boston. While working on the *Fury II*, he was approached in June by MGM. They were looking for an old trawler to use in an as yet untitled motion picture to be released next year. Weiner simply said, "sold"!

The movie company also provided Weiner funds to deliver and clean out the ship which meant that Weiner immediately began stripping out all the left over radio gear and the generator for the *Fury II*. The movie people then began stripping off the ship's towers and wheel house and replacing them with wooden facsimiles. They also began painting the ship to look much more rusted and dirty then it ever was. According to Weiner, you had to be closer than 6 feet to tell it wasn't real rust. Finally, the ship was made to lisp into an abandoned dock for an added effect.

Last Saturday, September 25, 1993, the Harbor was cleared, the cameras in position and rolling, and with windows boarded up for a mile around, the director yelled "Action!". In a brilliant display of pyrotechnics, the listing ship was blown up in a sequence of 5 explosions that included the Hollywood mandated fireball and roman candle like, white hot shrapnel fragments spewing out from its inferno engulfed hulk. According to Alan, who was with one of the camera crews across the bay, "the concussion and display was nothing short of spectacular. It lit up the harbor in broad daylight. It was a fitting end to the ship."

As for the *Fury II*, that radio ship is getting it's final wiring right now and it should sail soon. This past Wednesday, (September 22nd) they received their registry and radio license, however the exact location and the country licensing the venture are still being kept secret. After a shakedown cruise and equipment testing, Alan says you can expect them to be on the air by mid winter. (Big Steve Cole Internet via Ben Krepp)

**RUSSIA Radio Rossii** During the excitement on October 3rd and 4th, it was interesting to hear the style of treatment of the news. On news bulletins the disturbances were the first item, but given more attention than would have been given if they had been happening in Paraguay and the language was very detached. The writers of the scripts either didn't like Mr. Yeltsin or were uncertain of the final results and were hedging their bets. (Campbell Numero Uno No. 1240 October 8th) Another shortwave transmitter site is Boishakovo that which is south of Sovetsk in the Kaliningrad enclave. It has nine transmitters of 50/100 kW including one SSB transmitter. The antennas are rhombics and other simpler ones and the site is used for Home and Foreign Service broadcasts. (Alm Dx'ers Calling September via Fred Kohlbrenner)

*Radio Channel Uralskiy Commercheskiy Vestnik* (Ural Commercial Herald) 6200 from 1530-1600. (Samojlov Dx Moscow Newsletter No. 28 September-October via Play Dx No. 758 October 3rd) This is a new independent station broadcasting from Yekaterinburg from

1200-1300 on 6200 Mondays to Fridays only. (Nikolai Rudnev September 28th)

**Radio Kazan** Operates from Tatarstan on the following schedule: 6115 0300-1530 Mondays through Fridays 0300-1200 Saturdays 0400-1230 Sundays. **Radio 7** in Samara and **Radio Moscow** also use this frequency. 11985 1600-1800 (sic) Mondays to Fridays. **Radio Moscow** also uses this channel. (Kokchasharov Dx Moscow Newsletter No. 28 September-October via Play Dx. No. 758 October 3rd) **Slavyanka Radio** logged at this time on this frequency. See: October LN. (HJ)

**Radio Novaya Volna** 5450 from 0500-1300. The station is located in Chelyabinsk. (Samojlov, Zavjalov Dx Moscow Newsletter No. 28 September-October via Play Dx No. 758 October 3rd)

**Radiostation Lena** Is a new independent station that broadcast from 1000-1600 Mondays to Fridays on 5920 6125. The station's address is ul. Dezhneva, 75/4, 677002, Yakutsk. (Spiridonov ibid)

**Radio Mir (Peace)** 12000 A new station, heard from 1600 until 1630 with Russian interviews of various CIS heads of state. (Pankov Shortwave News October)

**Radio Ala** Plans to return to the air with a new program format. (Timofeyev Shortwave News October)

**Radio Alfa and Omega** 9795 from 1500-1600. Latest Schedule (Nikolai Rudnev September 28th)

**Radio Radonezh** 9795 from 1600-1700. Latest Schedule. (ibid)

**Radio Center** Latest schedule is: 0630-0700 1210 1630-1700 1710. (ibid)

**Radio Alef** Latest schedule is: 1700-1730 Tuesdays, Thursdays and Sundays on 4055 5905 12075 17890. (ibid)

**Slavyanka Radio** Latest schedule is: 0230-0300 UTC Tuesdays through Saturdays on 4740 4940 7335. 1700-1730 Mondays through Fridays on 4740 4940 7335 (ibid) See October LN. (HJ)

**Radio Novaya Volna-2** Broadcasts on a new frequency of 6020 between 0800-1200. (Nikolai Rudnev September 28th)

**U-Radio** 5900 Is reported to broadcast from 2100-0100 but it has been heard as early as 1700. The station's address is: U-Radio, P.O. Box 29, Moscow 109444 or U-Radio, Music Center, MGU, Vorobyevy Gory, Moscow, 117234. The editor in chief is Mr. Konstantin Volkov and the station does verify!. (ibid)

**Radio Khanty-Mansiysk** 4820 Has local programs at the following times: 0210-0230 UTC Tuesdays to Fridays. 0220-0240 UTC Mondays 0800-0900 UTC Mondays to Saturdays 1100-1120 Wednesdays and Fridays. (ibid)

**Radio Tyumen** 4895 Has local programs at the following times: 0055-0100 UTC Tuesdays to Sundays 0100-0110 UTC Mondays 0110-

0300 UTC Tuesdays to Fridays 0200-0300 UTC Mondays 0300-0600 UTC Saturdays to Sundays 1300-1400 Saturdays 1310-1410 Mondays to Fridays. (ibid)

**FEBC** Broadcasts a 20-minute weekly program on **Radio Mayak**. One can sponsor a Russian staff member of **FEBC** for \$50 per month and upon request receive information about the person being sponsored. (FEBC publication undated via Marlin A. Field October 20th)

**Radio Arkhangel'sk** 6160 new frequency ex 5015. Heard at 1500. (OAA Shortwave Bulletin No. 1235 October 5th)

**Radio Pamyat** The nationalist movement Pamyat, which operated its own shortwave station using **Radio Moscow** transmitters at Yekaterinburg and elsewhere, was closed down on October 4th by decree of President Yeltsin. (Orange County Register October 5th via Mike Fern)

**Radio Moscow's** operations were hardly affected by the abortive rebellion on the first weekend in October. BBCM did not observe any departure from the **RMWS'** normal transmission schedule. The fighting was at Ostankino Radio & TV Co., which is in a Moscow suburb of the same name. Ostankino facilities are used mainly for domestic broadcasting. The domestic media was quite friendly to Yeltsin and hostile to the parliamentary faction. The Russian media situation is highly complex. There are two main state radio and TV companies, Ostankino and the All-Russian State Radio & TV Co. Although they are separate, they share the same transmitter and distribution facilities.

So all of the Russian state media was affected by the attack on the Ostankino studio complex. The parliamentary faction attacked the Ostankino complex at 1415 Sunday October 3rd and broke into the studios. People in the studios actually had the presence of mind to close down the Ostankino TV service there and then. It very soon went to a test pattern. So the people who broke in never got a chance to broadcast on either radio or TV.

Domestic radio and TV were disrupted for a while. The Ostankino channel went off the air for some time, but within 90 minutes began using its transmitter to relay the other channel, which was almost unaffected by what was going on. Two radio networks including the **Mayak** service were affected for several hours. When **Mayak** went off its frequencies were turned over to **Russia's Radio**, another home service. But by about 2100 Sunday October 3rd **Mayak** had started operating again, albeit from backup studios. Most domestic broadcasting on Monday October 4th was completely back to normal. (Richard Measham, BBCM, on Media Network October 7th via Mike Fern)

**RWANDA - Radiodiffusion Rwanda** 15340 is idling as *Radio Rwanda, deuxieme chaine* (channel two) (Tony Orr Fine Tuning No. 708 October 6th) The station is no longer announcing 3330 in their sign off announcements. (Krone Play Dx No. 757 September 26th)

see SWITZERLAND

**SABAH** see MALAYSIA

**SAUDI ARABIA - BSKSA** 4942.5 This sub-harmonic of 9885 was heard at 0340. (Krueger DX South Florida No. 307 September 23rd) 4790 sub-harmonic of 9580 heard at 0301. (Dave Valko HJ Dunlo Dxpediton October 4th) For the S93 season, Riyadh has deleted the English and French transmissions from the shortwave external services. The *Holy Koran* and *Network One* services have been rearranged. The "Call of Islam" px is available: 1500-1700 on 11780 11950 11965. The *Holy Koran* network is now on the air from 0300-2100 (formerly 0600-2100). *Network One* is now available on shortwave from 0600-2300 (previously 0300-2300). (Padula Australian Dx News October) Heard on new 9555 with *Main Arabic Service*, 2200-2300 sign off, parallel 9870 18/9 (ibid)

**SINGAPORE - Singapore Broadcasting Corporation** is prepared to become a major regional shortwave voice in South Asia. In 1994 it will begin using six 250-kW shortwave transmitters and one 100-kW transmitter. The two 40-kW transmitters in the 60 meter band will be retired. *SBC's Radio One* will then use 6155 and 9530 with 250 kW each. *City Sound* in Chinese will be on 6000 and 9635 also with 250 kW. The *Home Service* in Malay will use 7250 and 9590, also 250 kW. 7170 will carry the *SBC* Tamil channel. These are strictly home service relays to improve reception in nearby countries. The transmitter site is next door to the *BBC* relay station. (Media Network September 23rd via Mike Fern)

**SOMALIA - Radio Mogadishu** This radio station, which identifies itself as "*Radio Mogadishu, the voice of the Somali Republic*" (Somali-Radio Mogadishu, Codka Kamhuryada Somalida) broadcasts in support of interim president Ali Mahdi Muhammad. The radio was first heard on March 16, 1992 and only has one transmitter that operates in upper sideband plus carrier on the following schedule: 6722v 0400-0500 (0600 Fridays) 1000-1130 1600-1800. (BBC Summary of World Broadcasts Broadcasting Schedules No. 39 September 24th)

*Radio Hargeisa* Continues to broadcast and has been heard from 1000-1230 and 1500 until about 1700 on 7120. (BBC World Broadcasting Information ibid)

*Radio Awdal* Reportedly broadcasts from Boorama, which is about 60 miles northwest of Hargeisa in the self-proclaimed *Republic of Somaliland*. The radio is controlled by the Gadabursi clan. The radio has so far not been confirmed from monitoring research. It is reportedly on from 1630-1700 on 6500.

(BBC Summary of World Broadcasts Broadcasting Schedules No. 40 October 1st) For NASWA country purposes, these last two count as **BRITISH SOMALILAND**. (HJ)

**SOUTH VIETNAM** see VIETNAM

**SPAIN** see COSTA RICA

**SRI LANKA - Trans World Radio-South Asia** Is delighted at the number of DX reports received this year, following the introduction of SW programming via the 12.5 kW *Collins* txer. Australia, Finland, Japan and New Zealand reports have been prominent. Since June, the station has been using the Irkutsk relay for broadcasting into Northern India - 90 minutes morning, and 150 minutes evening. The well established broadcasts into India from *KTWR* (Guam) have been subject to propagation problems, and the CIS relay has been encouraging. From October 1, the station was to have introduced an additional morning broadcast from Sri Lanka, 0100-0130 on 6035. The evening programme continues from 1330-1500, also 6035. The shortwave transmitter is located at Puttalam, having been originally used by the *SLBC*, and was moved to this site several months ago. (Station to Ogrizek Australian Dx News October)

**SUDAN - Radio Omdurman** 4994 The station has reactivated this frequency, heard at 2123 parallel 9165. (Foster OZDX No. 85 October) 9165 Heard signing off at 2300 on September 13th. (Price Fine Tuning No. 707 September 27th and John Wilson via Tom Sundstrom October 20th) They have been doing this since September 7th. The previous signoff was at 2200. (BBC Summary of World Broadcasts World Broadcasts Information No. 39 September 24th)

**SWAZILAND - Swazi Commercial Radio** 6155 see **CLANDESTINES-AFRICA**

**SWITZERLAND - SRI** Has agreed to supply the national radio stations of Burkina Faso and Rwanda with programs. *SRI* will provide the station with regular reports on international organizations in Geneva to be broadcast by them. (BBC Summary of World Broadcasts No. 40 October 1st) According to the Swiss PTT, budget cuts have compelled *SRI* to dramatically reduced its programs. The station is moving further into satellite

broadcasting - it now has 24-hour coverage of Europe, Central America, South America, and North America. There has been a new English service to North Western Europe from 2000-2030 on 6110, via a Schwarzenburg txer. (Ogrizek Australian Dx News October)

**TADJIKISTAN** see **CLANDESTINES-ASIA**

**TAIWAN** see **CHINA**

**TONGA** - *Radio Tonga* 5030 is still off the air. The station's engineer says "there are problems with the connection between the studioline and the transmitter beyond the control of *Radio Tonga*". This line is provided by the Tongan Telecom Corporation and he could absolutely not predict if and when the station would return. (Rommerts undated report Shortwave News October)

**VANUATU** - *Radio Vanuatu* 3945 Also noted on 7260 but they signed off on this frequency at 0700. (Atkins Fine Tuning No. 707 September 27th)

**VATICAN** - *Vatican Radio* 7335 Heard on this new frequency with English programming from 0150 tune in until 0159 sign off. (Brian Alexander October 24th)

**VIETNAM** - This is the correct name for the following stations: *Radio TV Son La*, *Radio TV Gia Lai* and *Radio TV Kon Tum* according to their station id: *Dai la Dai phat thanh va truyen hinh* with the first three words meaning "Radio and TV". Other stations are still identifying as *Dai phat thanh*, that means "Broadcasting Station" or "Radio". (Takayuki Inoue Nozaki October 23rd)

*Hanoi-Home Service* 4959.7 Heard on this new frequency at 1143. Parallel 4895 5924.6 10059. (Foster Numero Uno No. 1241 October 15th)

*Radio Lao Cai* (?) A new shortwave transmitter was put into operation in this city in September. (BBC Summary of World Broadcasts World Broadcast Information October 22nd) No times or frequencies given but the 1993 *WRTH* list the station on 5660 1030-1215. (HJ)

**VIETNAM (SOUTH)** - *Radio TV Gin Lai* 4787.93v Tentative 1143, Strong but very distorted audio, scratchy. Just bits of tk by man and woman. If indeed Gia Lai, absolutely no way to get an ID unless audio improves dramatically. (Dave Valko Expedition in Grayland State Park Washington October 8th)

**UNITED STATES** - *WINB* Recently, a 15 % share in this station was bought by Pastor Peter Peters. Currently, the station is on a

reduced schedule of 7.75 hours daily while modifications are being made to the antenna system. The single antenna on the property is a 3-stack rhombic, beamed to Europe, Africa and Latin America. However, the installation of an additional switchable feed point will enable coverage of Mexico from the one antenna. This was to have been completed before the end of September.

Two transmitters are located in the main building at Red Lion and the 50 kW *Continental* that is currently in use is the original unit from 1962. Two or three years ago, an additional used 50 kW *GE* transmitter was procured, but this has not yet been placed on the air. (Peterson Dx'ers Calling September via Fred Kohlbrener)

*WYFR* While in the area of Plymouth Rock in Massachusetts, I re-visited the old and famous transmitter site at Scituate. At the time of my recent visit, the site surely looks abandoned, with old rusted buildings, undergrowth so high that it could be called overgrowth, and the remains of a small mast which was used at one stage as an antenna. The famous brick kiln chimney is still standing too. Currently *WYFR* is commemorating the 20th Anniversary of their acquisition of the station with special historical interviews and items of air memorabilia. (ibid)

*WEWN* has decided to use only three txers on air - the fourth is intended to be on standby. (Frequency Manager of *WEWN* to Ogrizek Australian Dx News October)

*VOA* via Plovdiv, Bulgaria in English is at: 1800-1900 13675 and 15080 0600-0630. (Padula Australian Dx News October)

Rich McVicar visited *WCSN*, Scotts Corners, ME, before returning to Ecuador. His wife's home is about 30 miles from Scotts Corners which Rich described as "a crossing of two dirt roads" near Bangor. He learned that *Adventist World Radio* had expressed interest in buying *WCSN* and had sent two parties to look over the site. (DX Partyline October 9th via Mike Fern)

see **HAWAII**

**YEMEN** - *Radio Yemen-Sana'* 9780v Started an English service in the middle of September. First not'd on September 17th with regional and national news, poetry and commentary. (Chris Sweitzer October 10th) It starts around 2100 and ids as *You are tuned to the English Service from Yemen*. The service lasts about half an hour. (Stephen Price September 27th) *BBCMS* first noticed this on October 10th (HJ) This program is a rebroadcast of the 1600-1630 English program carried by *Radio Yemen-Aden*. (BBC Summary of World Broadcasts World Broadcasts Information No. 43 October 22nd)

**YUGOSLAVIA** - *Radio Belgrade* 6185 is a new frequency with English from 2200-2245 (Padula Australian Dx News October)

**EQUIPMENT** - A French firm is making an accessory keypad for the Yaesu FRG-100. It is simple, well built, and plugs into the back of the receiver. The French price is Fr.420. Postage is extra. Builder Jean-Paul Brodeur's fax number is +33 (875) 25567. It is available in Holland through C.I. Electronics, P.O. Box 22089, 6530-AB Nuth, for 135 guilders. The fax is +31 (452) 41877. Shipping is extra. (Media Network September 30th via Mike Fern)

**EQUIPMENT - BROADCAST GEAR** An American audio processing system called *Optimod* has found wide use among international shortwave broadcasters because it is specially tailored to shortwave signal requirements. Over 200 shortwave stations were using the *Optimod* shortwave system in mid-1993. It was clear to *Optimod*'s developers that the distortion and adjacent-channel interference problems on shortwave were much worse than on mediumwave. *Optimod* increases the average power in the sidebands and treats speech so that the human ear can better process the parts of speech that contribute to intelligibility.

A normal audio processor tracks its own gain to make sure that the output is as close to 100% modulation as possible. [This is oversimplified.] The equalizer adapts to the spectral level of the voice. If the consonant sounds (p, s, t, etc.) are weak, they are built up in order to improve readability on the receiving end. The human ear is mainly sensitive to frequencies between 1000 and 3000 hertz. [A male voice bunches around 700 hz, a woman's voice around 1100 hz.] A great deal of bass power [below 200 hz] can be transmitted without contributing much to loudness or intelligibility of the received voice, so the bass must be rolled off. This also keeps the processed audio output within the modulation capability of the xmtr. [When the modulation capability is exceeded the listener on an adjacent channel hears splatter.] *Optimod* uses a technique called compressor gating so that listeners do not hear the station announcer inhale. The compressor is restrained from shooting back to maximum gain during pauses; the gain is frozen at minimum during silence. (Jonathan Marks and Robert Auburn Media Network September 30th via Mike Fern)

**PROPAGATION** - The Dellinger Phenomenon is a sudden change in the ionosphere that interrupts shortwave communications. It is also called 'Dellinger effect' or simply 'fadeout.' It was discovered by an American engineer, John H. Dellinger.

It is related to solar flares or eruptions on the sun's surface. A scale tells how big the eruptions are. The sudden flares emit a lot of X-rays and ultra-violet rays which reach the earth's surface in less than 10 minutes. They disturb the D and E layers of the ionosphere, which reflect most shortwave signals back to earth. On the daylight side of the earth, these rays cause an unusual increase in the D and E layers' electron density. As a result the SW bands go suddenly dead. The shortwave signals are absorbed instead of being reflected, so nothing returns to the earth. The program one is listening to is replaced by a background hiss. Some very close stations may be heard even during a fadeout. That's because one receives the direct or ground wave rather than the reflected sky wave. The Dellinger phenomenon typically lasts for 10 minutes, but the band can go dead for several hours when a huge solar flare occurs. If all the bands do go dead, you can tune to medium wave to verify that your receiver is not at fault and a shortwave fadeout is in progress. (Masami Shimamura on Media Roundup September 20th via Mike Fern)

**DX PROGRAMS** - Rich McVicar, presenter for *HCJB's Dx Party Line*, now has an Internet account. His number is: [rmcvicar@mhs.hcjb.com.ec](mailto:rmcvicar@mhs.hcjb.com.ec) (HJ)

*Radio Japan* has a short Spanish language Dx program entitled *Noticiero Dxistu* on Sundays at 0353 on 11875 15325 125350 21610, 0953 9675 11875 and 2053 on 15380. (Tetsuya Kondo via Tom Sundstrom October 20th)

**DX PUBLICATIONS** - Due to work commitments and economic difficulties, *Onda Corta* has suspended publication for the time being. (Letter from Onda Corta publisher Gabriel Ivan Barrera October 8th)

**PUBLICATIONS** - *Radio Netherlands'* English service has published a survey of receiver prices worldwide, which is available for the asking from Box 222, 1200 JG Hilversum. (Media Network September 30th via Mike Fern)

# QSL Reports

Sam Barto  
47 Prospect Place  
Bristol, CT 06010



**ADMIRALTY ISLANDS:** Radio Manus 3315 p/d ltr. in 1 mo. for \$1.00. v/s Eliun Sereman, Provincial Program Manager. (Trummel). p/d ltr. in 41 ds. for SASE and stamps. (Jarvis-CA).

**ALASKA:** KNLS 7365 f/d "Transmitter Site" cd. in 1 mo. for ms. Pennant was rcvd. v/s Mike Osborne.

**ANGOLA:** Emissora Provincial de (Trummel).

- \* Benquela 5041 p/d "Transmitter" cd. w/ personal ltr. in 131 ds. for a PT rpt. and \$1.00. v/s Carlos A. A. Gregorio, Director. This after a f/up rpt. (D'Angelo-PA).

**ARMENIA:** Radio Yerevan 11920 f/d ltr. w/ schedule in 287 ds. (Sweitzer-FL).

**ASCENSION ISLAND:** VOA 15160 f/d cd. in 20 ds.

**ASIATIC RUSSIA:** FEBC 6035 via (Trummel).

- \* Khabarovsk rcvd. a ltr. addressing the FEBC ministry in the CIS. (Field-MI). VOA 15525 via Novosibirsk f/d "Mount Lake Colorado" cd. in 47 ds. (Humenyk-ONT). Adventist World Radio 9775 via Ekaterinoburg f/d "Three Trumpet" cd. in 50 ds. for \$1.00. (Buer-FL). Radio Nederlands 7260 via Petrovlovsk f/d cd. in 1 mo. after a f/up rpt. (Field-MI). Khabarovsk Broadcasting and TV Centre 4610 n/d ltr. in RS in 5 mo. (Field-MI). Radio Moscow 15490 via Irkutsk f/d cd. in 102 ds. (Sweitzer-FL).

**AUSTRALIA:** Australian Armed Forces Radio 23678.5 via Belconnen n/d ltr. mailed from Los Angeles in 21 ds. 40 kw. SSB outlet. v/s Hugh McKenzie, Manager. I sent 2 IRCs but they were returned. (Flynn-OR). 9193.5 same in 59 ds. for \$1.00. (Millard-TX). 12070 f/d ltr. in 85 ds. (Humenyk-ONT). same in 21 ds. for 2 IRCs which were returned. (D'Angelo-PA).

**AUSTRIA:** Radio Austria International 13730 f/d folder in 18 ds. (Lane). 9870 f/d "Tiroi" cd. w/ stickers in 33 ds. (Humenyk-ONT). nyk-ONT).

**BELGIUM:** Radio Vlaanderen International 9925 f/d cd. in 103 ds. (Humenyk-ONT).

**BOLIVIA:** Radio Juan XXIII 4965 f/d "Certificado de Sintonia" w/ station seal in 135 ds. for a SP rpt. and \$1.00. v/s Elias Cortezon, Director. This was after a f/up rpt. (Durden-GA). (Humenyk).

**BONAIRE:** Radio Nederlands 6165 f/d "Lovely Surprise Tulip" cd. in 91 ds.

**BOTSWANA:** VOA 7280 via Moepeng Hill f/d cd. in 20 ds. (Trummel). 13710 f/d cd. in 1 mo. (Pankake-MN).

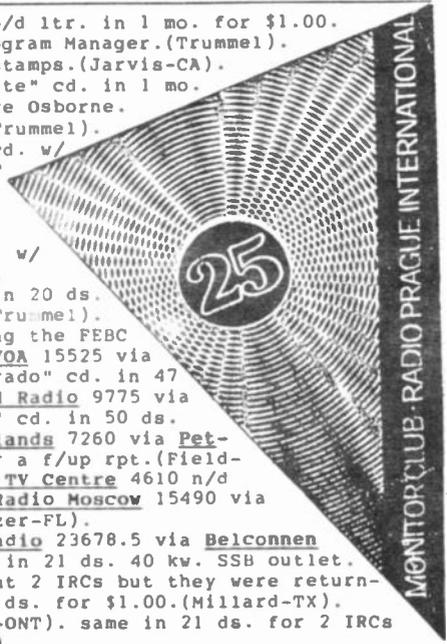
**BRASIL:** Radio Bras 15445 f/d cd. w/ schedule and sticker in 4 mo. for \$1.00. (Pankake-MN). f/d ltr. in 276 ds. for an EG rpt. and \$1.00. v/s Gaby Hertha Einstoss, Correspondence Service. (Lawrence-NY). Radio Nacional do Brasil 15445 f/d cd. in 69 ds. for ms (Dukes-SC). Radio Aparecida 11855 f/d cd. w/ sticker in 156 ds. for a PT rpt. and \$1.00. This after a f/up rpt. v/s Cassiano A. Macedo, Editor DX, who would like to receive DX bulletins or info. on DXing. (Durden-GA).



Father Eckert:  
A VOZ DA RESISTENCIA DO GALO NEGRO (VORGAN)  
The Voice of the Resistance of the Black Cock  
Washington, D.C. July 21, 1993

This card confirms the reception of the UNITA Radio Station A Voz de Resistencia do Galo Negro (Vorgan) on 7100 KHz in the 41 meter short-wave broadcast band.

Signed: Sam Barto  
Title: Office Director





**NOTES:** Al Dukes, Jr. says he uses a Grundig Satellit 500 and only the telescopic antenna that comes with the unit. Not too bad considering the QSLs you've sent in.

Post Card

85c

Dear Listener  
Thank you for your reception report and your interest in our transmissions from

Station UL8T NT.

Date 5-12-93

Time AEST/UTC 11:55 - 12:25 UTC 43 KEIN ROAD

Transmitter Location TENNANT CREEK

Frequency (MHz) 2.325 MHz WEST SENECA, N.Y.

Power (kW) 50-000

Yours Faithfully  
Australian Broadcasting Corporation  
GPO Box 9994  
Sydney NSW 2001

14224 U.S.A.

**ECUADOR:** HCVB 21455 f/d cd. in 23 ds. (Lane).  
Radio Nacional Progreso 5060.5 p/d personal ltr. w/ small HCHE3 pennant in 161 ds. for a SP rpt. v/s Jose A. Guaman Guajala, Director del Programa Circulo Dominical. (Durden-GA).

**EGYPT:** Radio Cairo 9900 f/d "Cairo" cd. in 116 ds. for 2 IRCs. (Mar-tin-CA).  
**ENGLAND:** VOA Woofferton 7170 f/d cd. in 20 ds. (Trummel).

**EUROPIRATE:** Radio Fusion International 7417 f/d pink cd. in 6 mo. from Jolly Jake for a relay by NAPRS.

**EUROPEAN RUSSIA:** Radio Moscow 15155 (Lobdell-MA) via Volgograd f/d cd. in 102 ds. (Sweitzer-FL).  
15280 via Serpukhov cd. in 103 ds. (Sweitzer-FL).  
17645 via Ryazan and 17670 via Moscow f/d cd. in 102 ds. (Sweitzer-FL).

**VERIFICATION SIGNERS:** Estacion Tarapoto 5015 Luis Hidalgo Sanchez, Gerente. La Voz de la Selva 4825 Marcelino Estba Benito, Director. Radio Ancash 4990 Armando Moreno Romero, Gerente General. Radio Cuzco 6203 Raul Siu Almonte. Radio La Hora 4855 Edmundo Montesinos G., Gerente General. Radio Naylamp 4300 Dr. Juan Jose Grandez Vargas, Gerente.

\* Radio Rossly 7320 and 5940 via Magadan p/d cd. w/ sticker and schedule in 3 mo. (Barto-CT).

**FRANCE:** China Radio International 9845 f/d cd. w/ sticker and magazine in 54 ds. (Humenyk-ONT).

**FRENCH GUIANA:** RFO 5055 n/d cd. w/ stickers in 1 mo. (Trummel).

**GERMANY (West):** Radio Free Europe 7255 via Biblis p/d cd. in 8 ds. (Trummel). 7155 via Lampertheim p/d cd. in 8 ds. (Trummel). VOA Munich 3980 f/d "Sunrise" cd. in 15 ds. v/s John Vodenik. (Sweitzer-FL). 11965 via Wertachtal f/d cd. in 20 ds. (Trummel). Deutsche Welle n/d "Reunification" cd. in 1 mo. (Humenyk-ONT). Sudwestfunk 7265 p/d cd. in 27 ds. (Sweitzer-FL).

**GREECE:** VOA Kavala 9700 f/d cd. in 51 ds. (Sweitzer). 6140 and 11805 f/d cd. in 20 ds. (Trummel).

**GUATEMALA:** Radio Maya 3325 f/d cd. in 1 mo. for a SP rpt. v/s Jose Castaneda, Gerente. Personal ltr. and postcard rcvd. (Field-MI).

**HOLLAND:** Radio Nederlands 6020 f/d cd. in 28 ds. (McGuire-MD).

**HONGKONG:** BBC 11820 f/d ltr. in 16 ds. for \$1.00. v/s Philip Sandell. (Trummel). VPS60 13020.4 f/d ltr. w/ schedules in 22 ds. for \$1.00 (returned). (Trummel).

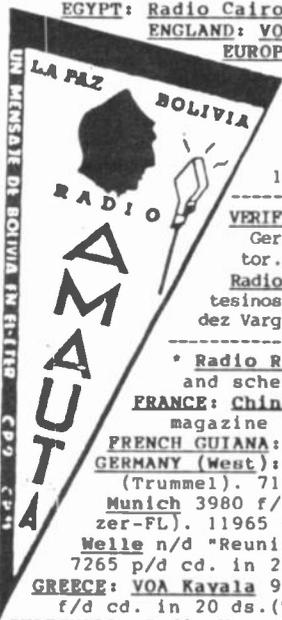
**HUNGARY:** Radio Budapest 11910 f/d cd. w/ sked. in 7 wks. for 2 IRCs. (Pankake-MN). f/d cd. in 24 ds. (Lane). f/d "19th Century Parliament" cd. in 37 ds. (Humenyk-ONT).

SOCIALIST REPUBLIC OF VIETNAM  
THE VOICE OF VIETNAM

Verification

To: 1/2 Honey St. Heli  
Thank you for your Reception of 15.611 MHz on 4336-2-CA on 11/11/1992. All details of your Report of Reception correspond well with our station log, with the compliment of the Director of the Overseas Service of the Voice of Vietnam.

Hanoi 2/1/93  
OVERSEAS SERVICE, VOICE OF VIETNAM



Radiodiffusion de la  
République Rwandaise



B.P. 03. Kigali  
Tél. 75665-75666  
Télégrammes. Radio Rwanda

Q.S.I. Card



via Wendel Craighwad

ICELAND: INBS 13855 and 15770  
f/d cd. in 1 mo. for \$1.00.  
(Trummel).

INDIA: All India Radio 3355 via  
Kurseong f/d "Kesav Bhawan"  
cd. in 227 ds. for a rpt. dir-  
ect to station...reply came  
from Delhi. (D'Angelo-PA).  
9910 and 11620 f/d cd. w/ sked.  
in 102 ds. (Humenyk-ONT).

ISRAEL: Kol Israel 15640 f/d cd.  
w/ schedule in 37 ds. (Hume-  
nyk-ONT).

ITALY: RAI 11800 f/d "Gian Lor-  
enzo Bernini Statue" cd. in  
396 ds. (Martin-CA).

JAPAN: Radio Tanpa 3925 and 6055 f/d cd. in 10 ds.: I still can't  
believe that! (Trummel). JJY 8000 f/d "50th Anniversary" cd. w/  
sticker and info. sheet in 11 ds. (Trummel).

KIRIBATI: Radio Kiribati T3K1 17440 f/d "Classic photo of Native Fisher-  
man w/ Shark" in 35 ds. for \$1.00. (Martin-CA).

VERIFICATION SIGNERS: Radio Maya 3325 Jose Castaneda. Radio Miskut 5770 Mercado Perez,  
Director. Radio El Mundo 6015 Freddy Banegas C., Gerente. Radio Fides 4845 Eduardo  
Perez Juilano, Director. Radio Juan XXIII 4965 Elias Cortezon, Director. Radio Nac-  
ional Sao Gabriel de Cachoeira 3375 Luiz dos Santos Fransa, Gerente. Radio Super  
6065 Juan Carlos Pava Camelo, Gerente. Radio Buenaventura 4835 Mauricio Castano An-  
gulo, Gerente.

KUWAIT: Radio Kuwait 13620 f/d cd. in 73 ds. (Dukes-SC). same in 393 ds.  
for 2 IRCs. Schedule and sticker rcvd. (Martin-CA).

LEBANON: Wings of Hope 11530 via Marjayoun personal ltr. w/ schedule in  
199 ds. (Humenyk-ONT).

LESOTHO: LNBS The Voice of  
Lesotho 4800 f/d "Flag"  
cd. in 113 ds. for 2 IRCs.  
(Martin-CA).

LITHUANIA: Radio Vilnius  
12070 f/d cd. w/ schedule  
in 35 ds. (Lane).

MALAGASY REP: Radio Neder-  
lands 9890 f/d cd. in 70  
ds. for 1 IRC. (Clar-NY).

MEXICO: XEPPM Radio Educacion  
6185 p/d cd. w/ sticker in  
42 ds. for a SP rpt. and  
\$1.00. (Trummel). p/d cd.  
in 343 ds. for a SP rpt.  
and \$1.00. v/s Lic. Luis  
Ernesto Pi Orozco, Direc-  
tor General. (Clar-NY).  
f/d cd. in 129 ds. for a  
SP rpt. and \$1.00. Pro-  
gram schedule was rcvd.  
(Martin-CA).

MOLDOVA: Radio Moscow 17760  
and 17815 via Kishinev  
f/d "Fountain" cd. in 102  
ds. (Sweitzer-FL). 11790  
f/d "Kremlin" cd. in 5 wks  
w/ schedule. (Sgrulletta).  
17815 f/d "Arbat Square"  
cd. in 5 wks. (Sgrulletta).  
15290 f/d "Peoples Friend-  
ship House" cd. in 5 wks.  
(Sgrulletta). 17780 same  
cd. in 5 wks. (Sgrulletta-  
NY).



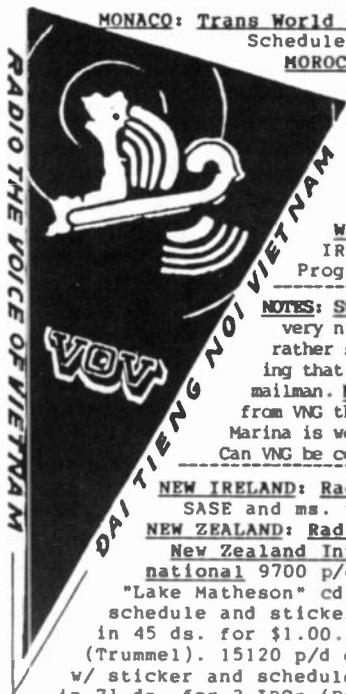
PLEASE YOU THUS, FOR LISTENING, AND EXPECTING THE  
CASE THAT ABOVE ARE WILL AGAIN  
via Lobdell

*John P. Kelly*

30 July 1992

Freq.

11.5



**MONACO:** Trans World Radio 9480 f/d "Map" cd. in 70 ds. for 1 IRC. Schedule was rcvd.(Martin-CA).

**MOROCCO:** VOA 15410 f/d "Antenna" cd. in 20 ds. My QSL was hand-delivered by John Vodenik who was vacationing in FL: (Switzer-FL). f/d "Sunset at Greenville" cd. in 43 ds.

**NEW BRITAIN:** Radio East New Britain 3385 p/d ltr. in 7 wks. after a f/u rpt. for 2 IRCs. and \$1.00. v/s O. Malatana, Provincial Program Manager.(Carter-WA). Radio West New Britain 3235 p/d ltr. in 6 wks. for 2 IRCs. and \$1.00. v/s Esekia Mael, Provincial Program Manager.(Carter-WA).

**NOTES:** Stephen Jarvis checks in from Long Beach, CA with some very nice QSLs from PNG. Other than that the summer has been rather slow. Mark Anderson echoes the same sentiments by saying that he is in need of some positive reinforcement from his mailman. Marina Pappas says that in a recent letter received from VNG that the Llandilo site may be uncertain in the future. Marina is working towards the seven (7) station Australian Award. Can VNG be counted? Don't know.

**NEW IRELAND:** Radio New Ireland 3905 p/d ltr. in 23 ds. for SASE and ms. v/s Ruben Hale.(Jarvis-CA).

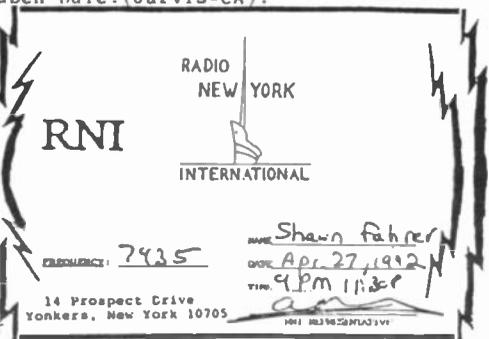
**NEW ZEALAND:** Radio New Zealand International 9700 p/d "Lake Matheson" cd. w/ schedule and sticker in 45 ds. for \$1.00. (Trummel). 15120 p/d cd. w/ sticker and schedule in 71 ds. for 3 IRCs.(Poston-IA). same in 2 mo. w/ schedule.(Field-MI). ZLXA 3935 f/d cd. w/ personal ltr and schedule in 2 wks. for \$1.00.(Trummel).

**NORWAY:** Radio Norway International 11795 f/d cd. w/ sticker and schedule in 44 ds.(Lane). 15365 f/d cd. w/ schedule and decal in 45 ds.(Dukes-SC). mmel).

**PALAU:** KHBN 9830 f/d "World Radio Network" cd. in 1 mo. for \$1.00.(Truppau).

**PAPUA:** Radio Southern Highlands 3275 p/d ltr. in 1 mo. for \$1.00. v/s Andrew Meles, Provincial Station Manager.(Trummel). p/d ltr. in 3 wks. for 2 IRCs. and \$1.00.(Carter-WA). Radio Sandaun 3205 f/d "Map" cd. w/ personal ltr. in 1 mo. for 2 IRCs. and \$1.00. v/s Paia Ottawa, Technician.(Carter-WA). p/d ltr. in 49 ds. for \$1.00. v/s Elias Rathley, Provincial Program Manager.(Lawrence-NY). Radio Eastern Highlands 3395 f/d ltr. in 3 wks. for 2 IRCs and \$1.00. v/s Kiri Nige, Technical Manager.(Carter-WA). Radio Western Highlands 3375 f/d cd. w/ nice personal ltr. and postcard in 3 wks. for 2 IRCs and \$1.00. v/s Esau Okole, Station Technician.(Carter-WA).

**PARAGUAY:** Radio Nacional de Paraguay 9735 f/d "Map" cd. w/ personal ltr. in 241 ds. for a SP rpt. and \$1.00. v/s Filemon Arguello M., Jefe de Recursos Humanos. Rcvd. via registered mail. (Comeau-MA).



Mr. Robert Christensen  
Sir,

Date: Nov 23, 1991

We acknowledge receiving your reception report about our broadcast dated 23-24-91..... on .....short..... Wave.....in.....the.....16..... Meterband.....on.....17855..... KHZ. Our engineering department has verified your report's details and found them correct / wrong. Many thanks for your interest in our .....lab..... service and we are pleased to send you this QSL Card for your reference and record. We confirm your reception on 10th and 11th November 1991 on 11965 KHZ of our broadcasts.

Sincerely Yours  
Director,

*[Signature]*  
U.A.E. Radio from Abu Dhabi

**PERU: Radio Vision 2000** 5131 f/d cd. in 3 mo. for a SP rpt. via Heim

Pennant was rcvd. (Field-MI). **Radio Madre de Dios**

4953 f/d "Map" cd. w/ xeroxed info. sheet in 56 ds. for a SP rpt. and \$1.00. (Durden-GA).

**Radio Tarma** 4775 f/d "Constancia de Recepcion" form ltr. in 89 ds. for a SP rpt. and \$1.00.

v/s Mario Monteverde Pomareda, Gerente General. (Durden-GA). **Radio Tacna** 9505 f/d personal ltr.

in 133 ds. for a SP rpt. and \$1.00. Small pennant was rcvd. v/s Yolanda Vda. de Caceres, Directora-Gerente. (D'Angelo-PA). f/d ltr. w/ pennant and decal in 234 ds. for a SP rpt. (Durden)

**VERIFICATION SIGNERS: Radio Mashhad** 9640 J. Ghanbari, General Director. **Radio Station Nadezhda** 7280 Miss Tatiana Zeleranskaya, Editor in Chief. **Slovak Radio** 5915 Richard Guga. **La Voz del Guaylare** 6035 Fernando Roman, Director and Jairo Hernan Benjumea, Gerente. **Radio Inconfidencia** 6010 Addr: Avenida Raja Gabaglia 1676, Bairro Luxembourg, Belo Horizonte, MG 30350-540. **Radio Ropa Info** 5980 Miss Sabine K. Thome. **Radio Cima Cien** 4961 Roberto Vargas. **Radio Quispeya** 6205 Lic. Gregory Castellanos Ruano, Director.

**PERU: Radio Navlamp** 4300 p/d "Logo" cd. w/ prepared cd. in 19 ds. after a f/up rpt. in SP for \$1.00. v/s Dr. Juan Jose Grandez V., Director. (Wilkins-CO).

**PHILIPPINES: VOA** 15160 and 15425 f/d cd. in 15 ds. (Sweitzer-FL). 12040 f/d cd. in 1 mo. (Barto-CT). 9760 and 15160 via **Tinang** f/d cd. in 20 ds. (Trummel). **FEBC** 11690 f/d "Hibiscus in Bloom" cd. in 86 ds. w/ sticker. v/s Janie Reid. (Millard-TX).

**POLAND: Radio Polonia** 11840 f/d "Gorzow Wielkopolski" cd. w/ personal ltr. in 56 ds. for 2 IRCs. Also rcvd. postcard and schedule. v/s Rafal Kiepuszewski. (Martin-CA).

**PORTUGAL: Radio Portugal International** 17745 f/d "Old World Map" cd. in 31 ds. w/ sticker and schedule (Humenyk-ONT). 9570, 9635, 9705, 9600 and 11840 p/d "Map" cd. in 7 wks. w/ schedule and sticker. v/s Winnie Almeida, Producer and Host of the English Service. (Barto-CT). **RFE** 9725

**RADIO HORIZONTE** OCX-17-770 K1  
Jr. Próceres 745 - Urb. Latina José L. Ortiz - Chiclayo

via **Maxoqueria** p/d cd. in 8 ds. (Trummel). 11725 via **Gloria** p/d cd. in 8 ds. (Trummel).

**QATAR: Qatar Broadcasting Service** 9715 f/d "Map" cd. w/ station booklet in 255 ds. for an AR rpt. & \$1.00. v/s Jassim Mohamed Al-Qattan, Head of Public Relations. (Hardester-NC).

**ROMANIA: Radio Romania International** 9570 f/d cd. w/ personal ltr. in 99 ds. w/ sticker and guide book. (Rodriguez-MI). f/d "Romanian Athenaeum" cd. w/ schedule in 90 ds. (Levi-son-PA).

**SAIPAN: KHBI** 17865 f/d cd. in 75 ds. (Humenyk-ONT). 13625 f/d "Antenna Array" cd. in 43 ds. v/s A. Hgisaio, KHBI Staff. (Humenyk-ONT).

**SINGAPORE: BBC** 15380 f/d cd. in 22 ds. for \$1.00. (Com-eau-MA).

**SLOVAKIA: Slovak Radio** 9810 f/d form ltr. w/ schedule and sticker in 24 ds. (Poston-IA). f/d cd. in 37 ds. for \$1.00. (Laurence-NY).

Chiclayo, 13 de Junio de 1992

Señor  
Adie Durden  
207 Neoca Drive  
Albany, Georgia 31705  
Estados Unidos.

Apreciado amigo:

Nos es grato dirigirnos a Ud. dándole nuestro más sincero y cordial saludo, al mismo tiempo agradecerle por su atenta carta de fecha 05/04/92. Con respecto a esta carta le manifestamos que no fue recibida por nosotros; quizás se extravió en el correo.

sin embargo, nos permitimos informarle, que su informe de recepción es la correcta. Asimismo, le manifestamos que nuestra radio se fundó el 1ero. de Marzo de 1992, por lo tanto, somos una emisora joven; con apenas 4 meses en el aire y la única escuchada en el extranjero. Así también tenemos informe de recepción de; Finlandia, Italia, Jueca y KR.UU.

Esperamos siga manteniendo nuestra sintonía, como también seguir comunicándonos por medio de alguna tarjeta o carta que será siempre la portadora de una amistad duradera y sincera.

Desde Chiclayo-Perú, recibe un cordial saludo de todos los que laboramos en esta estación.

Cordialmente,

JVR/epo

Empresario de Radiodifusión  
Militarmente RESERVADO  
*[Signature]*  
Juan Valdez Rojas  
Director de Radiodifusión



**SLOVAKIA:** Slovak Radio 5930 and 9810 f/d cd. w/ postcard signed by staff members in 32 ds. (Lane). Radio Slovakia International 5930 f/d cd. in 18 ds. for \$1.00. Also rcvd. 4 station pins, schedule and sticker. (Comeau-MA).

**SOUTH AFRICA:** ZSC Time Station 17018 f/d cd. in 49 ds. for \$1.00. (Trummel). Channel Africa 9695 f/d "Tabletop Mountain" cd. in 92 ds. w/ sticker. (Millard-TX). f/d cd. w/ schedule and sticker in 3 1/2 mo. for \$1.00. (Pankake-MN). f/d "Karoo" cd. w/ sticker and schedule in 123 ds. for \$1.00. (Poston-IA).

**SPAIN:** Spanish Foreign Radio 9530 f/d cd. w/ schedule in 74 ds. (Dukes-SC). same w/ sticker and schedule in 134 ds. (Lane). Radio Free Europe 7220 via Playa de Pals p/d cd. in 8 ds. (Trummel).

**SRI LANKA:** VOA 15250 f/d cd. in 29 ds. (Humenyk-ONT). Sri Lanka Broadcasting Corp. 15425 f/d cd. in 100 ds. w/ schedule and a personal ltr. v/s J.A. Lal Herath, Deputy Director General Engineering. (Comeau-MA).

**SUDAN:** National Unity Radio 9435 n/d cd. in 2 mo. v/s Mohammed El Fatim. (Field-MI).

**VERIFICATION SIGNERS:** Poland Scout Radio 7205 Andrew Borodzicz. Adventist World Radio - Gabon 17890 Daniel Grisier. Zambia National Broadcasting Corporation 4910 William Lukozu. Radio Alpha and Omega 9795 Elena Yasnova, Executive Manager. Radio Nadezhda Tatiana Zeleranskaya, Editor-in-Chief. Radio Veritas Asia 15140 Ms. Cleofe R. Labindao. Qatar Broadcasting Service 17825 Jassim Mohammed Al-Quattan.

**SUMATERA:** RRI Jambi 4925 f/d ltr. in 3 mo. for an IN rpt. (Barto-CT).  
**SWITZERLAND:** Swiss Radio International 21820, 17670, 13635 and 15505 p/d "Merry-Go-Round" cd. in 2 mo. (Barto-CT). (Pankake-MN).

**TAIWAN:** WYFR 11550 via Voice of Free China f/d cd. in 10 ds. for \$1.00.

**TANGIER:** VOA 15205 f/d "Sunrise at Greenville" cd. w/ personal ltr. in 3 yrs. for ms. (Eckert-PA). f/d cd. in 20 ds. (Trummel). f/d cd. in 2 mo. v/s John Vodenik (Carter-WA).

**THAILAND:** VOA 11785 via Udorn f/d cd. in 1 mo. w/ personal QSL cd. and note. (Barto-CT). same in 32 ds. after a f/up rpt. v/s Dan Ferguson. (Wilkins-CO). 11820 f/d "Thai Transmitter Test" cd. in 20 ds. (Trummel). 9615 same in 1 mo. after a f/up rpt. (Carter-WA)...C/V #100!!!...Great! 7215 cd. in 9 ds. (Martin-CA). Radio Thailand 11905 f/d "Stamps of Thailand" cd. w/ schedule and pennant in 49 ds. (Millard-TX). same in 2 mo. w/ schedule. (Barto-CT).

**TIBET:** Xizang PBS 4035 f/d cd. issued by the "PTT of Tibetan Autonomous Region" in 226 ds. Also rcvd. stamps. v/s Lobsang Chompel. C/V #215: I sent a thank you note. It was worth it. (Flynn-OR).

**TURKEY:** Voice of Turkey 9445 f/d cd. w/ sticker and schedule in 60 ds. (Lane). f/d "Chest" cd. w/ schedule and sticker in 2 mo. (Poston-IA).

**RT Radio TARMA E.S.L. Ltd.**

OC44: 1510 AMZ OMSA UNDA  
 OC44: 4310 AMZ OMSA COM7A  
 OC44: 263 AMZ 5 IN SILBRO

TARMA 30 DE JUNIO DE 1963

CONSTANCIA DE RECEPCION DE RADIO TARMA E.S.L. Ltd.

Mr. JERRY KLINCK  
61 LEIS ROAD  
WEST BERGEN N.J. 07091  
U.S.A.

ESTIMADO AMIGOS:  
 Por constancia de la recepción, confirmamos por el presente que el día 17 de Junio de 1963 recibimos la señal de RADIO TARMA de propiedad de E.S.L. Ltd. de 17 de Junio de 1963 a través de 10.00 G.M.T.

INFORMACION GENERAL DE RADIO TARMA

Radio Tarma es un programa que inició sus emisiones el 17 de Abril de 1954. Actualmente transmite por 19 frecuencias. Operamos en ciudades de diversas regiones de Chile, México y Corea y una gran cantidad más en el Mar Negro. Asimismo mantenemos de transmisión en:

DE LINDSEY A BARBADOS	17 0000 10000 Hz. On 10 00 G.M.T. y 01 00 G.M.T.
	18 0000 10000 Hz. On 10 00 G.M.T. y 14 00 G.M.T.
	19 0000 10000 Hz. On 20 00 G.M.T. y 04 00 G.M.T.
	20 0000 10000 Hz. On 12 00 G.M.T. y 02 00 G.M.T.
DE LAS DOMINGOS	17 0000 10000 Hz. On 11 00 G.M.T. y 01 00 G.M.T.
	18 0000 10000 Hz. On 11 00 G.M.T. y 01 00 G.M.T.
	21 0000 10000 Hz. On 11 00 G.M.T. y 01 00 G.M.T.

INFORMACION TECNICA

Operamos mediante ondas ultracortas en el punto México del Área 167 Tarma, y nuestro personal constituido de 4 M.S. más 4 A.S. de día, de noche, funciona en un sistema de 8 000 vatios radiados a 10000 Hz. Radio Tarma es una de las pocas estaciones de onda corta de América Latina que de día transmite en onda corta de 17 metros de longitud, es operada por dos grupos de 11 personas de turno. Se le otorgan a cada grupo de trabajo un día libre, un día de 4 horas continuas en una semana de 21 horas de trabajo, además de un día de descanso y un día de vacaciones.

SOLOMON ISLANDS BROADCASTING CORPORATION

QSL CONFIRMATION Date: 21 Jun 63

This confirms your reception of:-  
 9545 kHz: on 21 Jun from SEA (G.M.T.)  
 5020 kHz: on \_\_\_\_\_ from \_\_\_\_\_ (G.M.T.)  
 1012 kHz: on \_\_\_\_\_ from \_\_\_\_\_ (G.M.T.)  
 : on \_\_\_\_\_ from \_\_\_\_\_ (G.M.T.)

The transmission had a serial power of \_\_\_\_\_ kW. Thank you for your report, and we wish you good DX'ing.  
 S.I.B.C.  
 P.O. Box 654, HONIARA, S.I.  
 SIBC/720.

To Kevin Murray  
1790 Suncrest Drive  
West Linn, Oregon 97068  
U.S.A.



STAMPS OF THAILAND



*Radio Thailand*

**WJCR** 7490 f/d cd. in 18 ds. (Trummel). **WHV** 15000 f/d cd. in 17 ds. v/s John B. Milton, Engineer-in-Charge. (Comeau-MA). **WVCR** 7435 f/d cd. w/ schedule in 24 ds. (Trummel). **La Voz del OAS** 9565 p/d cd. in 20 ds. ZIP is 20006-4499 not in 93 WRTH. (Trummel). **WEWN** 9350 f/d cd. w/ ltr. and schedule in 26 ds. (Trummel).

**VERIFICATION SIGNERS:** **RRI Tanjung Karang** 3395 R. Djarot Nursinggih, Engineer. **RRI Sorong** 4875 Mrs. Tien Widarsanto. **RRI Pontianak** 3995 David Hamzah. **RRI Pak-Pak** 4790 Richart Tan. **RRI Jambi** 4925 A. Tjang Abbas. **RRI Nabire** 5055 Muchtar Yushaputra, Station Manager. **Radio Thailand** 9655 Bubpa Laemluang. **VOA Thailand** 7215 John Vodenik, Engineer. **Radio Satelite** 6724 Sabino Llamo Chavez, Gerente. **Radio Santa Rosa** 6045 P. Juan Sokolich A. **Radio Nuevo Cajamarca** 5800 Aladino Gavidin Huaman.

**USA: VOA Greenville** 9455, 15330 and 15410 f/d cds. w/ schedule and poster in 30 ds. (Humenyk). 5995 f/d cd. in 63 ds. (Dukes-SC). 15580 f/d "Sunrise" cd. in 15 ds. (Sweitzer-FL). 6035 f/d cd. in 20 ds. (Trummel)  
 \* **Travelers Radio** 1610 via **Kenosha, WI** f/d cd. in 1 wk. on my second try. (Field-MI). **Radio Bosnia-Herzegovina** 7315 via **WHRI** f/d ltr. in 2 wks. (Field-MI).

**USA (Pirates): The Ground Level Network** 7465 f/d cd. w/ data sheet in 19 ds. (Arey-NJ). **Altered States Radio** 7415 f/d "Dead Rock Star" cd. w/ info. sheet in 18 ds. v/s William Hurt. (Arey-NJ). f/d cd. #18 of Bob Marley. in 2 mo. (Lobdell-MA).

QSL Verification

**Solid Rock Radio** Radio **RADIO REPUBLIK INDONESIA NUSANTARA IV UJUNG PANDANG** 7465 f/d cd. in 10 ds. for \$1.00. Kepada Yth. Tuan **JOHN L. SCRULLETTA**

Ini membenarkan laporan tuan dari Radio **RRI MUS. IV UJUNG PANDANG** siaran pada gelombang 63,15 meter atau frekwensi 4750 kHz., pada **PEMABATAN** 19 56 dari \_\_\_\_\_ sampai **SEKARANC** waktu Indonesia Bagian **TENGAH** Pemancar kuasa studio kami 20 kw. dengar **DELTA MATCH** antena.

Banyak terima kasih untuk laporan tuan.

**VATICAN: Radio Vatican** 11620 f/d cd. in 77 ds. (Dukes-SC).

STAF ADMINISTRASI SURAT MENYURAT

L.A. MACHIM GANTE



Good QSLing till next month...Sam

# Tropical Band Loggings

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



- 2340 CHINA Fujian PBS, 9/13, 1354 advanced EG lesson, all EG.  
1400 TP, theme mx, CH nx, poor (Flynn-OR)
- 2390 GUATEMALA LV de Atitlan 10/3 0156 lang tlk, 0201 ID  
(Valko/Johnson-PA)
- 2490.8 BRAZIL R Oito de Setembro 10/7 2337 lcl nx, sev ments of  
OTH, 2359 ID, pops (Orr-VA)
- 2500 AUSTRALIA VNG 9/18 1123 w/ID, freq, addr during 25th minute  
fair, xmtr uses compatible USB (Clark-ON)
- 3220 UNID 9/24 1050 suspect CPBS-1, CH mx, YL tlks, buried in  
QRN 1100, no sign of Morobe (Rippel-VA)
- 3230 SOUTH AFRICA SABC 9/29 0300 TP, ID, anthem, AK nx, Amer.  
CEW 7/4810 (Lawrence-NY) Afrikaans Stereo--sp.
- 3255.1 BRAZIL R Educadora 10/3 0127 instl, 0131 jingle ID  
(Valko/Johnson-PA)
- 3264.8 SUMATRA RRI Bengkulu 10/7 2245 choral mx, poss rel pgm,  
2258 instl theme, SCI, tlk, anthem (Orr-VA) 10/3 2250  
had been at better lvl but kept trying for ID. Best we  
could do was SCI 2300, so presumed (Valko/Johnson-PA)
- 3266.5 SULAWESI RRI Gorontalo 1227 echo anmt, jingles (Brown-MO)
- 3279 ECUADOR LV del Napo 10/10 0930 "Estudio la Voz del Napo. .  
domingo. ." church bells, SP/quechua, good (Robinson-TN)
- 3300 GUATEMALA R Cultural 0330 EG ID, rel pgm from Pasadena, CA  
(Bilec-PA)
- 331.6 NIGERIA LEONE SLBS 10/6 0559 EG NA, ID, Koran, 0605 Christian  
pgm (Orr-VA) 9/18 0657 EG tlk, drums, pop mx, IDs  
(Lawrence-NY) 10/5 2205 EG intl nx, "This nx comes to you  
from the SLBS in Preetown." cmtry on ANC, Stevie Wonder mx  
fair to 2230\* (Rausch-NJ)
- 3325 NEW BRITAIN R North Solomons 9/19 1115 unusually good w/  
"Everytime you Go," no sign of Palangkaraya (Clark-ON)
- 3326 NIGERIA R Nigeria 9/29 2205 EG jazz pgm //4990 (Lawrence-NY)
- 3335p SWAZILAND TWR 9/27 0310 lang, rel sounding tlk, organ,  
tlk in probable Afr. lang (D'Angelo-PA)
- 3366 GILANA GBC-2 10/5 2240 EG reggae mx, "This is Radio 2 of  
the GBC," 2300 nx (Rausch-NJ)
- 3375 BRAZIL RN Sao Gabriel 8/21 0918 heavy echo anmts, ads,  
RN jingle, full IDs, Brasopop ballads (Orr-VA)
- 3385 NEW GUINEA R Morobe 9/24 1105 PD nx cmtry, good sig  
(Rippel-VA) Chuck, did you mean R East New Britain?--sp.
- 3395.1 SUMATRA RRI Tanjungkarang 10/3 2225 tlk, AR mx, 2228 strange  
mx, couple IDs (Valko/Johnson-PA) 10/7 2231 poss lcl nx,  
2239 w ID, Indian sounding mx (Orr-VA) 9/18 2305 peak  
lvl w/Jak nx but poor/Noisy overall (Clark-ON)
- 39C5 IRIAN JAYA RRI Merauke 9/19 1057 fair thru somewhat stronger  
PNG w/Muslim mx, vcls, 1202 Jak nx (Clark-ON)
- 3955 ENGLAND BBC 0600 EG intl nx (Bilec-PA)
- 3985 SWITZERLAND SRI 0600 EG nx, ID, freq, TC, addr (Bilec-PA)
- 3987.2p IRIAN JAYA RRI Manokwari 9/26 1058 IN anmts, lcl IS, 1100  
not 7/9680 Jakarta, poor, 1158 EZL, SCI, Jak nx now //9680  
(Clark-ON)
- 4299.8 PERU R Naylamp 8/21 0846 guitar ballads, huaynos, TC, ID  
sev ads, IDs (Orr-VA)
- 4510.2 PERU R Paucartambo 9/15 1023 duet huaynos, rapid fire tlk  
1029 clear ID, tnx Valko (Orr-VA)
- 4600.1 BOLIVIA Perla del Acre 10/6 0229 evening pop ballads, 0301  
s/off anmts, ID, no NA (Orr-VA)
- 4605.1 IRAQ Baghdad 9/5 \*0155 bird IS, anmts, NA, Koran (Alexander)
- 4610 ASIATIC RUSSIA Khabarovsk R 9/23 1318 RS pop/rock, 1400  
6 TP, nx, on-scene rpts, fair (Flynn-OR)
- 4725 MYANMAR Vo Myanmar 1254 minorities pgm, YL & folkloric mx  
weak & fading (Brown-MO)

- 4740 TADJIKISTAN R Yunost 10/6 0015 RS pop mx pgm, W IDs, tlk, mx bridges (Orr-VA)
- 4747 PERU R Huanta 2000 10/1 1000 NA, anmts, full ID, devotional folk mx, msgs in Quechua, slogan "La Bella Esmeralda de los Andes." (Durden-GA)
- 4753.4 SULAWESI RRI Ujung Pandang 8/21 1120 pops, anmts, mx w/ Oriental touch, poor mod (Newbury-NE) 10/7 2148 tlk, lagu pops, 2159 full ID, SCI, 2200 nx (Orr-VA) 10/3 2157 mx deep fade, ID, SCI, Clark's info appreciated (Valko/Johnson) 9/18 2200 Jak nx, lcl IS 2230, slow fade down (Clark-Oh)
- 4753.8 BRAZIL R Educacao Rural 9/11 0155 lively pops, ads, anmts (Davenport-TN)
- 4760p INDIA AIR Imphal 9/27 1130 Hindi tlk mixing w/China, no EG nx 1130 but subcont mx, tnx India Broadbase & Clark. Gone by about 1143 (Johnson-MD)
- 4760 LIBERIA ELBC 8/21 0727 EG w/afropops //7275. (Orr-VA) ELWA 10/5 2139 EG rel, hymns, prayer, 2159 s/off anmts, full ID, QTH, freq, NA (Orr-VA) 9/10 2145-2200\* EG rel w/choral mx, ID, NA (Alexander-PA)
- 4775 PERU R Tarma 9/3 1021 anmts, TCs, ID/slogan, LA pops & Andean mx, fair (Clar-NY)
- 4777 GABON Rdf Gabonaise 9/21 2155 FR hilife mx, "Ici Gabon," regional nx (Rausch-NJ) 9/8 to 2301\* hilife, chatter, 2230 nx, ID, orch NA (D'Angelo-PA) 2230 hilife mx, FR YL, rising above CW QRM (Brown-WI)
- 4779.7 ECUADOR R Central, Tena, 10/3 0940 carrier, 0956 NA, full ID giving MW freq, "Bienvenidos oyentes Oriental," TC, LA mx, addr Casilla 260. (Berg-MA) 10/4 \*0957 NA, anmts, LA mx (Rausch-NJ) 9/20 0958 NA, ID, salsa mx, TCs (Orr-VA) 9/26 1002, IDs, TC-5 y 8 minutos en Oriental (D'Angelo-PA) 9/24 1020 "Oriental tropicalisima," ads, comunicados, "Alegria Ecuatoriana." (Durden-GA)
- 4779.9 DOM REP Onda Musical probably the one I hrd 9/23 after reviewing my tape (Johnson-MD)
- 4785.5 COLOMBIA Ecos del Combeima 9/2 0226 futbol coverage, sev ments Colombia, ad string, ID 0230 (D'Angelo-PA)
- 4790 PERU R Atlantida 10/3 1030 IDs, "Jealousy" nx, fair (Robinson-TN)
- 4795 ECUADOR LV de los Caras 9/12 0514 TCs, IDs, ment Bahia de Caraquez, pops, ballads, fair (Clar-NY)
- 4795 UKRAINE RMWS 9/29 to 2300\* EG Mailbag pgm, ID, theme mx before carrier cut (D'Angelo-PA)
- 4799.8 GUATEMALA R Buenas Nuevas 9/25 to 0331\* SP tlk, ranchera mx lcl rel choral mx, IDs, s/off w/instl tune (Alexander-PA) 9/17 1130 singing w/guitar, tlk, gospel mx, good (Newbury)
- 4801 PERU R Onda Azul 10/3 1005 Quechua NA, s/on anmts in SP, morning mx pgm, YL in Quechua (Durden-GA)
- 4804.6 PERU R Villa Rica 9/24 1026 huaynos, TCs, IDs ment QTH (Orr)
- 4810 ASIATIC RUSSIA Vladivostok 10/9 0045 RS Mayak pgm //4485 RS ballads, Kremlin bells, Mayak ID (Orr-VA)
- 4810 SOUTH AFRICA R 2000 9/27 0102 continuous pops & EZL, fair, no ID so presumed (Clar-NY) 9/27 0230 AK EZL, TP, into Afrikaans Stereo ID, nx (Rausch-NJ)
- 4813.8 UNID 9/19 1115 rather weak but steady carrier here, poss Vietnam or who?? (Clark-Oh)
- 4815 BURKINA FASO RTV Burkina 9/19 2230 FR & lang, W afr pops, poor but no QRM (Brown-WI)
- 4820 HONDURAS HRVC 10/8 1100 IDs, prayer, "Buenos dias hermanos y hermanas" (Robinson-TN) 9/17 1145 ID, promos, secular mx, salsa, exc (Newbury-NE)
- 4820.9 PERU R Atahualpa 8/19 0910 wild huaynos, ID, TC "R Atahualpa en Santa Cruz, Cajamarca," canned ID, pops (Orr-VA)
- 4824.5 PERU LV de la Selva 9/24 0955 NA, 1000 dance mx, mensajes, TCs, 1010 ID (Orr-VA)
- 4825 GUATEMALA R Mam 9/23 1210 SP/vern discuss on Acts, Christian mx, ID, reflections on govt corruption, good (Durden-GA)
- 4826.2t PERU R Sicuani 10/3 1019 Quechua huaynos, poss ment Sicuani TC, faded out (Durden-GA)

4830 VENEZUELA R Tachira 9/10 0200 SP sports event, maybe futbol, fiery anncr, ID, good (Newbury-NE)

4835 GUATEMALA R Tezulutlan 9/17 1150 ID, mucho marimba mx, exc (Newbury-NE)

\*4835 PERU R Maranon 10/7 1000 NA, full ID, addr, devotional, rooster crows, huaynos "La Voz y el Sentir de nuestros Pueblos" (Durden-GA)

4837 AURITANIA ORTM 9/5 0632 Koran, Afr mx, in 30 min they drifted to 4830.3 (Alexander-PA)

4838.5 BRAZIL R Bandeirantes 10/3 0845 IDs, tlk // but slightly ahead of 6090, not sure of exact site (Valko/Johnson-PA)

4845 GUATEMALA R Kekchi 9/12 0345 salsa, ment Las Casas, SIO=442 in heavy static (Newbury-NE)

4845 MALAYSIA RTM Kuala Lumpur 9/26 1140 Tamil pgm, rel, poss koran, no sign of Guatemala (Clark-ON)

48E0 ASIATIC RUSSIA RM 9/30 2205 EG intl nx, Focus on Asia & the Pacific (Rausch-NJ)

48E3.9 MCJUCAS RRI Ambon 9/18 past usual 1130\* muddy audio, also at 2200 strong carrier peak (Clark-ON)

48E4.4 BOLIVIA R 16 de Marzo 9/24 0922 huaynos, IDs, mx, tlks, poor mod, killer sig! No HJ today (Orr-VA)

48E5 COLOMBIA LV del Cinaruco 9/12 0330 anmts, pops & salsa, fair (Newbury-NE)

4874.6 IRIAN JAYA RRI Sorong 10/4 1131 EG pgm which had been on Sundays, EG lesson (Valko/Johnson-PA)

4875 BRAZIL Rf Roraima 9/6 to 0325\* s/off ID, freq, no NA (D'Angelo-PA)

4875 CHINA Vo Jinling 9/17 1203 faint w/M in CH (Newbury-NE)

4879.7 ECUADOR RN Espejo 9/15 0225 full ID, anmts, drama pgm, fair (D'Angelo-PA)

48E0 ENGLADESH RB 1237 faint w/subcont mx (Brown-MO)

48E1.2 IRIAN JAYA R Suara Kasih Arung 9/18 1115 mx, anmts, 1159 SCI, faded away during Jakarta nx (Clark-ON)

48E8.6t PERU R Huanta 9/15 1002 anmts, vcls, too weak (Orr-VA)

48E4.6 VIETNAM HS 10/3 2237 lang that didn't sound like VT, ID'd after 2300 when //10059 (Valko/Johnson-PA)

48E5t BRAZIL R IPB-AM 9/23 0445 emotional rel tlk, chorus, heavy static, poor (Flynn-OR) Hi Bill--sp.

49C0 PERU R La Hora 9/13 1035 ID, huaynos, ads for "Quiruriga de Agropecuaria Cusco" & "Distribuciones Rubandi" (Durden-GA)

49C4.1 BRAZIL R RelogioFederal 10/6 0717 TPs, IDs, tlk (Orr-VA)

49C9.8t ZAMBIA ZNBC 9/27 0330 lang Afr vcls, tlks, ute QRM (Lawrence-NY)

4915 GHANA GBC-1 9/24 0000 EG nx, into lang, mx (Bickus-VA)

9/20 0045 EG nx, heavy static (Boulden-CA) 9/25 0041 Afr mx, EG nx, closing anmts, NA to 0100\* (Davenport-TN)

4920 AUSTRALIA ABC Brisbane 9/17 1215 EG tlks, weak (Newbury-NE)

4920 ECUADOR R Quito 9/10 0046 folk mx, tlk, TC (Davenport-TN)

4924.7 BOLIVIA R San Miguel 9/25 to 0301\* SP tlk, Andean mx, ID, NA, weak (Alexander-PA)

4935 KENYA KBC 10/3 2107 tlk in lang, EG ID, anthem 2109 and off. Weak compared to other Africans, xmtr problem? (Valko/Johnson)

4940 ASIATIC RUSSIA Yakut R 10/6 0020 RS piano mx, freq dead air, TP to 0200 ID, nx (Rausch-NJ)

4950 ECUADOR R Bahai 9/15 \*0855 flute/guitar instl, NA, instl, inspirational tlk, ID, 0909 quechua, tnx Johnson (Orr-VA)

9/11 \*0858 NA, anmts, rel tlk, guitar/flutes, many IDs sprinkled into format (D'Angelo-PA) 9/13 \*0905 NA, rel soft instls, xylo (Orr-VA) 9/18 0920 IDs, PSAs, hymns, class piano mx (Rausch-NJ) 9/14 1010 ID, Quechua sermon, solemn mx, HC mx, ads (Durden-GA)

4953 PERU R Madre de Dios 10/8 0010 Catholic mass, poss drama, 0030 ID after instl themes (Orr-VA)

4959.6 VIETNAM Hanoi-HS 1430 nx or cmtry //10059, 1500 Hanoi ID 10059 barely audible but 4959.6 at good strength (Treibel-WA)

- 4965 BOLIVIA R Juan 23 9/13 0940 tlc, flutes, turntable problems, clear IDs (Orr-VA)
- 4965 COLOMBIA R Santa Fe 9/12 0022 ID, rapid tlc, poss nx, freq ments Colombia, weak (Davenport-TN) 9/9 0458 LA mx, IDs, jingle, ads, complete ID w/call ltrs (Flynn-OR)
- 4975 CHINA Fujian PBS 9/17 1220 CH tlc, fair (Newbury-NE)
- \*4970t SABAH RTM Kota Kinabalu 1239 Malay sounding OM on 10/10 regional mx, faded out 1249, same time as Sarawak faded out (Brown-MO)
- 4970 VENEZUELA R Rumbos 0012 small tlc, promos, ballads, weak (Davenport-TN) 9/10 0220 SP pop mx, fair (Newbury-NE)
- 4980 VENEZUELA Ecos del Torbes 9/10 0001 mx pgm, ads (Davenport-TN) 9/10 0210 EZL, ID, good (Newbury-NE)
- 5000 USA WV 0600 TCs, freq, addr (Bilec-PA)
- 5010 SINGAPORE SBC 1212 pops, //5052 (Brown-MO) I have yet to hear this one--sp.
- 5020 COLOMBIA Ecos del Atrato 9/5 0200-0400\* irregular. SP anmts, IDs, TCs, Caracol promos, pops, NA (Alexander-PA) 9/7 1010 anmts by Hipolito Cordoba, pgm lineup, listener greetings, ads, invit. to mass "Madrugando con Caracol" (Durden-GA)
- 5025 AUSTRALIA VL8K 8/21 to 0829\* EG //4835 best ever lvls, pop mx, nx cmtry, ABC IDs, mx, sports (Orr-VA)
- 5025 CUBA R Rebelde 9/24 0030 salsas, ID, sports (Bickus-VA) 9/7 0240 M/W DJs, soft rock, fair (Newbury-NE)
- 5034 CENT AFR REP RTV Centafricaine 9/17 2159 TP, hilife mx, ID, brief tlcs, (Clar-NY) 2259 FR, NA (Brown-WI)
- 5035 USA KVOH 0600 EG tlc abt SP lang, Psalm 84, phone no. (Bilec-PA)
- 5039.2 PERU R Libertad 9/15 \*0935 NA, anmts, ID in echo (Orr-VA)
- 5043 ANGOLA EP de Benguela 9/25 0510 PF tlc, Afr folk mx, weak, slightly off 5041//6154 (Alexander-PA) 10/6 0510 RN pgm //11954.8, ballads, IDs (Orr-VA)
- 5044.9 UNID Latin in UTC-5 time zone 10/5-7 0955 canned anmt, are on FM, AM & SW, non-descript LA tunes, nx covers lots of foreign items like Russia, TCs. Either no ID or too fast. This is a react or new station (Valko/Johnson-PA)
- 5045 BOLIVIA R Altiplano 10/5 1010 nx alternating SP/Aymara, CP mx, full ID 1030, "Actualidades," wx, QRN (Durden-GA)
- 5050.1 COLOMBIA LV de Yopal 9/5 to 0458\* irregular SP anmts, pops, US pops, IDs, Caracol promos, TCs, no NA (Alexander-PA)
- 5050 ECUADOR R Jesus del Gran Poder 9/2 1000 IDs, chorus, pgm abt Mary & rosary, exc (Robinson-TN)
- 5055 SWAZILAND TWR 8/20 to 0428\* GM rel, choral mx, tlc, TWR chimes, strong (Orr-VA)
- 5060.6 ECUADOR RN Progreso 9/5 to 0403\* anmts, ID, LA pop mx, NA (Alexander-PA)
- 5090 CHINA CPBS Taiwan-2 10/5 2208 CH pop vcls, 2220 ID, flute mx, on past listed 2230 s/off (Orr-VA)
- 5856.2 USA WWCN 9/19 0440 & on 5871.6, weak spurs from the new xmtr #3 on 5810, hrd on 2 diff rcvrs (Alexander-PA)

CORRECTION: Last month's log on 3315 should have been Radio Manus. Sorry for any inconvenience. ADIE DURDEN is back after the summer static chased him away. DAVE VALKO and HANS JOHNSON were on a DXpedition near Dumbo, PA. 13 states & 1 province represented this time. Next deadline November 19. Happy Thanksgiving and a belated one to our Canadian neighbors.



# International Band Loggings

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

- 5915nf? CZECH REPUBLIC R Prague in EG 0111, IDs, jazz pgm, f (Clar NY 9/27)  
 5915rf FRANCE RFI in FR 2025, classical mx, tlks, //17620, 11995 (Alexander PA 9/12)  
 5930 SLOVAKIA RSI in EG 0101, fqys, tlk on democracy, ID (Tucker GA, Boulden CA 9/20)  
 59450v BOLIVIA R Pio Doce in SP 1000, ID, nx, tlk on elections, g (Durden GA 9/23)  
 59544 GUATEMALA R Cultural in SP 0953, ranchera mx, 6 TC's, f (Johnson MD 9/29) ID?  
 5968v BOLIVIA R Nacional in SP 0012, tlk, call-ins, mx, IDs, pipe, f (Clar NY 9/20)  
 5995 PERU R Melodia in SP 1035, nx, cholera vaccinations, IDs, ads, f (Durden GA 9/9)  
 6010 MEXICO R Mil in SP 0745, ID, Latin & US pop mx, TC (D'Angelo PA, Alexander PA)  
 6040 BRAZIL R Clube Paranaense in PT 0920, jingles, IDs, phone-ins, f (Lamb NY 9/23)  
 6050 UNITED KINGDOM R Japan relay in EG 2302, nx, ID, JP vocals, f (D'Angelo PA 9/29)  
 60698 INDONESIA RRI Jayapura in IN 1143, chorals, nx, Lagu pops, ID (Clark ONT 9/19)  
 6085 UNITED KINGDOM R Japan relay in EG/JP 0654, JP mx, IDs, nx re Russia (Lamb 9/26)  
 6110 ANTIGUA BBC relay in SP 0045, women composers & musicians (Bickus VA 9/24) ID?  
 6125 KAZAKHSTAN Kazakh R in RS 0913, RS mx, vocals, ID, kids pgm (Robertson CA 9/20)  
 6135 BOLIVIA R Santa Cruz in SP 2317, ID, anmt, f (Valko/Johnson DXpedition PA 10/3)  
 61538 ANGOLA ER de Benguela in PT 2120, Latin mx, //50429 (V/J DXpedition 10/3)  
 6160 CANADA CKZN St Johns in EG 2300, CBC nx, ID, "Open House", f (Anderson MI 9/20)  
 6160 ANTIGUA Deut Welle relay in EG 0935, "Science & Technology", g (Newbury NE 8/23)  
 61702v COLOMBIA LV de la Selva in SP 0327, Caracol IDs, soccer game live (D'Angelo 9/6)  
 6185 MEXICO R Educacion in SP/EG 0120-0530, LA mx, ID/fqys/sked in EG/SP, XEPPM call, (Clar NY 9/4, Boulden CA 9/27, Anderson MI 9/5)  
 6190 LESOTHO BBC relay in EG 0415, feature on refugees, interviews, p (Flynn OR 9/23)  
 6190 PERU R Oriente in SP 0125, LA pop mx, fanfare IDs, off 0400 w/NA (Alexander 9/5)  
 62038 PERU R Cuzco in SP 0121, Andean mx, TCs, IDs, f (Flynn OR 9/11) 1 kw per FWER!  
 62055 DOMINICAN REPUBLIC R Quisqueya in SP 2320-0007\*, irr xmns-not hrd daily, SP  
 pops, IDs, EG anmts each 20 mins, fqy, QTH, abrupt s/off (Alexander PA 9/10-11)  
 6210nf BULGARIA RB in lang? 2140-2245\*, lcl mx, IS, ID, nx, g //6220 (Alexander 9/26)  
 6220 BULGARIA RB in lang? 0610, lcl folk mx, IS, p, //11720 (Alexander 9/19)  
 64004 VIETNAM Hoang Lien Son BS(p) in VET 1200, tlk, mx fanfare, heavy QRM from Radio  
 Pyongyang on 63997 until 1200 (Johnson MD 9/27) tip from UADX via Dave Clark  
 65601 IRAQ Rep of Iraq R in lang? "0129, "chicken cluck" IS, NA, Koran (Alexander 9/6)  
 68033 PERU R Ondas del Rio Mayo in SP 1045, "El Madrugador", ID, ads (Durden GA 9/23)  
 71101 ETHIOPIA V of Ethiopia in lang 0359\*, "Jack-in-the-Box" IS, tlk in lang 0400,  
 lcl mx, //9705 - both fqys very weak (Alexander PA 9/26)  
 7125 GUINEA RTV Guineenne in FR 2315, hilife mx, ID, Ham QRM (Lawrence NY 9/18)  
 7190 EQUATORIAL GUINEA R Africa in EG 0515, relig pgm, songs, IDs, p (Pappas SD 10/3)  
 7265 GERMANY Sudwestfunk in GM 0230, pop/rock mx w/DJ, ID, f (Anderson MI 9/19)  
 7335nf LITHUANIA R Vilnius in EG 2300, ex 12040, M-F only, strong but co-channel QRM  
 from CHU Canada time stn (Alexander PA 9/17)  
 7370 BELGIUM R Vlaanderen Int in EG 0030, ID, nx, Brussels wx (Tucker GA 10/8)  
 7415 BOTSWANA VOA relay in EG 1924, "Newsline", ID, "World of Music" (Clar NY 9/3)  
 9380 GREECE FTH Athens in EG 0136, mx, cmnts on "Alexander the Great", f (Levison PA)  
 9505nf? UKRAINE RUI in GM 0208, pop mx, UKRA, //17605, 9860 & others, f (Lamb NY 10/5)  
 9525 POLAND Polish R in EG 1952, mailbag, M cmntng on his holiday, f (Levison PA 9/6)  
 9535v ALGERIA RTV Algerienne in EG 1900, IDs, nx, press review, lcl folk/pop mx, f  
 but mixing w/VOA s/on 1930, //11715, 17745 (Alexander PA 9/26)  
 9545 SOLOMON IS SIBC in EG/Pidgin 0730, ads, nx, ID (Jarvis CA, Boulden CA)  
 9545nf INDONESIA RRI Palankaraya in IN 1115-1223\*, tlk w/several ments of Palankaraya,  
 Jakarta nx, NA at s/off, co-channel QRM from Russ stn til 1200 (Clark ONT 9/26)  
 9560 JORDAN R Jordan in EG 1600, nx, ID, ezl mx, g (Anderson MI 9/3)  
 9565 RWANDA Deut Welle relay in EG 0402, nx, "Africa Rpt", site ID, f-g (Lamb 9/28)  
 9580 GABON Africa #1 in FR 0520, AF pops, reggae, IDs, nx, promos, f (Lamb 10/11)  
 9610nf RWANDA R Rwanda in EG/FR/lang \*0255, IS, NA, IDs in several langs, AF/reggae mx,  
 nx in FR, native chorals, anncd // fqy 3330, heavy QRM from R Moscow (Durden GA,  
 Lamb NY, Johnson MD, Berg MA, Alexander PA, Clark ONT) rptd from 9/23-10/6)  
 96144 INDONESIA RRI Samarinda in IN 1200, Jakarta nx, //9545, 9680 (Clark ONT 9/18)  
 9630 NETHERLAND ANTILLES RN relay in EG 0738, tlk on Poland, ID (Robertson CA 9/21)  
 9675 INDONESIA VOI in IN 1201, ID, IS, nx, f/w QRM from 2 co-channels (Clark 9/26)

9700 NEW ZEALAND RNZ in EG 0743, interview, kids mx, TP, ID, nx (Robertson CA 9/22)  
9725 BRAZIL R Clube Paranaense in PT 2335, futebol match, ads, //6040 (Alexander 9/18)  
9746 BAHRAIN R Bahrain(t) in AR 2000, AR mx, TP, tlk, more AR mx, p (Alexander 9/26)  
9760 PHILIPPINES VOA relay in EG 1506, "Newsline", ID, f w/QSB/QRM (Robertson 9/18)  
9780v YEMEN Rep of Yemen R in EG 2105-2133, nx, AR mx bridges, cntry, features, IDs,  
Into AR 2135, Koran, NA (Clar NY 9/17, Johnson MD 9/30, Ducharme MA 9/28-10/2)  
11710 UNITED ARAB EMIRATES Abu Dhabi in EG 2322, feature, cntry, ID, mx (Tucker 10/5)  
11750 SINGAPORE BBC relay in EG 1456, mx, ID, nx, soccer (Anderson MI, Lamb NY 9/26)  
11820 THAILAND VOA relay in EG/CH 1145, lang lesson, f/QSB & QRM (Clar NY 9/15)  
11840 SRI LANKA R Japan relay in EG 0132, IDs, "Media Roundup", DX nx, f-p (Clar 9/27)  
11860 SINGAPORE R Japan relay in EG 0114, nx, ID, fcy, "Tokyo Pop-In", p (Clar 9/11)  
11880 RUSSIA R Galaxy in RS/EG 2100, ID, pop/rock mx, promos (Clar 9/17, Anderson 9/3)  
12000 RUSSIA R Pamyat Siberia in RS 1448-1500\*, feature, organ theme, "R. Stansiya  
Pamyat" ID, IS w/horns, f (Flynn OR 9/18)  
12025 KAZAKHSTAN R Nederland relay in EG 0130, nx, "Media Network", ID (Anderson 9/9)  
12080 BOTSWANA VOA relay in FR 1928, jazz, nx, ID, country mx, pops, f (Lamb NY 9/26)  
13605 UNITED ARIAB EMIRATES Abu Dhabi in EG 2358\*, ex-11885, new freq for EG sked  
2200-2400, hrd also on // 9770, 11710 (Alexander PA 9/5)  
13615 BANGLADESH R Bangladesh in EG 1228, IS, ID, nx, audio fade by 1233 (Clark 9/19)  
13640nf CROATIA Croatian R in lang 2140, ex-13830, lcl mx, //5920, 9830 (Alexander 9/19)  
13660 ASCENSION IS BBC relay in EG \*2128-2144\*, IS, ID, target Falklands (Lamb 9/24)  
136799 IRAQ R Iraq Int in AR? 2040-2245, AR mx, IDs, Iraqi theme mx, f/o 2245, no EG  
hrd, irreg - not hrd daily, some QRM from Moscow s/on 2100 (Alexander PA 9-7/8)  
15009 VIENTNAM VOV in VT 0059\*, non-stop VT vocals, W anncr w/closing, ID (Lamb 9/23)  
15030 COSTA RICA RFPI in EG 1930, "New Dimensions Radio", ID, exc (Anderson MI 9/3)  
15090 VATICAN STATE VR in EG 2100, nx, relig mx, ID, African service (Anderson 9/3)  
15105 MALTA Deut Welle relay in EG 0130, GM lesson, ID & site ID, g (Anderson 9/19)  
15130 MALI China R Int relay in EG 1645, CH opera documentary, ID, g (Anderson 9/4)  
15155nf? NEW ZEALAND RNZI in EG 0433, local ads, sports coverage (Jarvis CA 8/29)  
15160 PHILIPPINES VOA relay in EG 1256, feature on NY subway system, ID (Tucker 10/7)  
152104 EGYPT R Cairo in Yoruba 2120-2158\*, AR mx, NA, poor audio (Alexander PA 9/8)  
15220 ANTIGUA BBC relay in EG 1300, "Newshour", problems in Russia (Newbury NE 9/22)  
15240 AZERBAIJAN R Deda Gorgud of the V of Azerbaijan in EG \*1700-1757\*, IS, ID, nx re  
Azerbaijan, class & folk mx, EG nx 1900, weak but mostly clear (Alexander 9/18)  
15270 KAZAKHSTAN Kazakh R in RS 1645, ethnic mx, IS, ID in EG, poor mod (Newbury 9/10)  
15315 NETHERLAND ANTILLES RN relay in PT 2240, songs, mailbag, ID (Bickus VA 9/26)  
15340nf RWANDA R Rwanda in FR \*1800-2100\*, s/on w/short instrum tone, FR nx, ID, lcl Afr  
folk mx, FR/US pops, NA (Lamb NY 9/24, Alexander PA 9/25, Durden GA 10/13)  
153448 ARGENTINA R Nacional in SP 2300, SP yak, L Am ballads, IDs, //96899, at 0058  
they switched from 96899 to 11710 but remained on 153448 (Alexander PA 9/18-19)  
15365 FRANCE RFI Paris in FR/EG 1225, to EG 1230, ID, nx, "Made in France" (Lamb 9/17)  
15395 UNITED ARAB EMIRATES Abu Dhabi in AR 1402, AR chants, tlk, //13675 (Tucker 10/10)  
15410 PHILIPPINES VOA relay in CH 1255, EG lesson, IS, ID, f (Lamb NY 9/17)  
15410 MOROCCO VOA relay in EG 1645, tunes from "My Fair Lady", ID, IS (Newbury NE 9/1)  
15475 GABON Africa #1 in EG/FR 1858\*, nx in EG, FR anmts 1855, ID (D'Angelo PA 9/21)  
15515 PHILIPPINES FEBC in Burmese(Shan) 2359\*, IS, EG ID at s/off, f (Treibel WA 10/16)  
15550 PAKISTAN R Pakistan in EG 1730, tourist info, ID, subcont mx, f-p (Clar NY 9/6)  
17635 SWITZERLAND SRI in EG 1720, items re SWL, QTH for questions (Levison PA 9/11)  
17815 BRAZIL R Cultura in PT 2306, bossa novas in PT/EG, ID, f (Lamb NY 9/17)  
17820 PHILIPPINES VOA relay in EG 2329, nx, "VOA Sat. Morning" (Lamb NY 9/17)  
17835nf CUBA RHC in SP 2115, nx re NAFTA, IDs, "Postale de America" (Lamb NY 9/24)  
21560 ITALY RTV Italiana in IT 1400, bird chirping IS, IP, nx, g (Bilec PA 9/2)

\*\*\*\*\*  
CLANDESTINE STATIONS  
\*\*\*\*\*

59051 Radio Patria Libre in SP 0050-0059\*, moved from 5835, usual SP yak by M/W,  
brief mx breaks, IDs, vp w/FAX & rtty QRM (Alexander PA 9/11) PWRB '94 lists  
this one in Colombia.

\*\*\*\*\*  
By the time you read this, the Winter DX season should be getting into high gear. Get your  
best DX catches into this column and add to the enjoyment of the rest of the NASWA member-  
ship. Thanks for all of the above items this month. If you send your stuff directly to me,  
please remember to get them to me no later than the 16th of the month. 7's  
\*\*\*\*\*

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