



# the JOURNAL

NORTH AMERICAN SHORTWAVE ASSOCIATION

VOLUME XXXVII NUMBER 7

JULY 1997

## RADIO AUSTRIA INTERNATIONAL

Through us you have a world-wide link to Austria. We report objectively and comprehensively on the latest events in politics, economics, the arts, as well as on human interest stories and sport. In our news and news magazine REPORT FROM AUSTRIA we also keep you up to date with international events. This broadcast includes a review of listeners' letters in the weekend edition starting Saturday at 1230 UTC.

Radio Austria International is the voice of Austria around the world. Our service is operated at the request of the Austrian government and funded by the federal budget. Our editorial independence is guaranteed by law.

	UTC		Frequencies (kHz)	
Europe	0430	0730	6.155	13.730
	1230	1630	6.155	13.730
		2130	6.155	5.945
North America	0030	0230	9.655	
	0530		6.015	
	1230		13.730	
Latin America	0230		9.870	13.730
Middle East	0730		15.410	17.870
	1630		11.855	
Africa	1630	2130	13.730	
Asia	0930*	1030**	15.455	
		1630	13.710	
Australasia	0930*	1030**	17.870	

\* Monday to Saturday

\*\* Sunday only

For the best reception of our programmes via shortwave we recommend that you try all of our frequencies being used at the time of listening. You might also be able to hear some transmissions directed to other parts of the world.

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COMMUNICATIONS CATALOG

Universal's free 1997 100 page catalog covers everything for the shortwave, amateur and scanner enthusiasts. With informative photos and full descriptions. To request your copy please call toll-free:

1 800 431-3939

Richard A. D'Angelo

2216 Burkey Drive  
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Internet: r.dangelo3@genie.com

The latest editions of the Tropical Band Survey ("TBS") and Clandestine Station Lists ("CSL") are now available from the Danish Shortwave Club International (c/o Bent Nielsen, Egekrogen 14, DK 3500 Værløse, Denmark). Edited by Anker Petersen, the 25th edition of the annual TBS covers active stations on the frequency bands between 2000 and 5800 kHz. The clubs monitoring network of experienced DX'ers spread over 40 countries share their observations in this classic hobby publication with more than 60% of the stations listed have been updated since last year's edition. The 13th edition of the CSL is edited by Finn Krone. It is a unique publication containing all available information on these stations. It is compiled in frequency order and broadcasting time. This 23-page edition is the largest ever! These publications are available directly through the DSWCI for US\$10.00 or 10 International Reply Coupons each.

A brief update to George Maroti's Musing in last month's Journal. He is looking for fellow DX'ers in the New York City metro area to form a NY Chapter of NASWA. Those who are interested can contact him at (212) 460-2123 (daytime only) or via e-mail at <curious.george@worldnet.att.net>. George, keep us posted on developments!

Ken MacHarg, host of the popular DX Partyline program over HCJB, has written a new book that includes several chapters about the station. *Don't Rush The Lord: A Pilgrimage to God's Purpose* is 104 pages and costs US\$9.95 plus US\$2.00 shipping from HCJB, P. O. Box 39800, Colorado Springs, CO 80949. The book contains the history of the Voice of the Andes, a walk through the stu-

### ANARC SWL Ham Net

Tune in Sunday mornings at 10 A. M. Eastern Time on 7240 LSB for the latest in shortwave, medium wave and longwave 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. Contributions are also accepted via the Internet Relay Chat (IRC) channel #swl while the net is in progress. Net Controls Dave Kirby N1DK, Hausie WB4JSP, and Bob Curtis WIEXZ host an always lively gang of DX monitors. (Best heard in the eastern half of NAM) Net info is also available at <[http://www.trsc.com/swl\\_net.htm](http://www.trsc.com/swl_net.htm)>.

dios and transmitter site, a discussion of shortwave broadcasting philosophy, and a look at how listeners respond to HCJB's programs. Although targeted to a church audience, Ken feels the book will be of interest to anyone involved in shortwave radio as a hobby.

We are suffering through the infamous summer doldrums period of our hobby. However, there is still lots of good stuff to listen to so don't give up entirely—and continue to report! As the summer moves along, a number of our members will be attending conventions and DX gatherings. We would like to receive musings from our members attending such gatherings.

That's it for this month. Enjoy this month's edition of the JOURNAL; it's another good one.



Our Motto is - "Unity and Friendship"

## Calendar Of Events

- Jul 18 Meeting. Philadelphia Area NASWA Chapter.** Kulpsville Holiday Inn, Kulpsville, PA at 7:30 PM. For more information contact Dan Cashin at 215-446-7831.
- Jul 18 Meeting. Boston Area NASWA Chapter.** The Lexington Club, Rts. 4 & 225, Lexington, MA at 7:30 PM. The location is 1/4 mile west of Rt. 128, Exit 31. For more information contact Paul Graveline at 508-470-1971 or Internet: 74007.3434@compuserve.com. Check the BADX Web Page: <<http://www.grove.net/~badx/>>.
- Jul 19 Meeting. The Miami Valley DX Club** (all band orientation) meets at 1:00 PM. For more information plus this months meeting location contact Dave Hammer at 614-471-9973 or write to MVDXC, Box 292132, Columbus, OH 43229-8132.
- Jul'97 Convention. IRCA Convention** will be held in Costa Mesa, CA on July 25-27 at the Holiday Inn Bristol Plaza. Registration is \$35.00 which includes the banquet. Contact Mike Sanburn, P. O. Box 1256, Bellflower, CA 90707.
- Aug'97 Convention. WTFDA Convention** has been tentatively set for August 1-3. Convention host John Broomhall is exploring two sites: North Georgia mountains (about 75 miles from Atlanta) and in or near Metropolitan Atlanta. Activities include station tours, amateur TV demonstration, FCC Regional Field Office visit, guest speaker(s) and informal Q&A panel discussion. Further details when received.
- Aug'97 Convention.** The annual DX summer meeting of the **Finnish DX Association** will be held in Oulu, in Northern Finland. The meeting is being arranged by DX-Club of Oulu, a local branch of FDXA, on 1-3 August 1997. Further information is available from Ari Kilponen, Annantie 7 G, FIN-90560, Oulu, Finland or e-mail: [ark@pp.netpl.fi](mailto:ark@pp.netpl.fi)
- Aug 10 Meeting.** The **Tidewater SWL's** meet at 6:30 PM. For more information plus meeting location contact Joe Buch at 804-721-2782 or Internet: [joseph.buch@dol.net](mailto:joseph.buch@dol.net)
- Aug'97 Convention. NRC Convention** will be held Labor Day Weekend (Aug. 29-Sep. 1) in Delaware. Further details and information will appear when received.
- Oct'97 Contest. 1997 Adventist World Radio Contest.** Further information will be published in the Journal or you can send a self-addressed stamped envelope to 1997 AWR Contest, c/o Dr. Adrian Peterson, Box 29235, Indianapolis, IN 46229.
- Feb'98 Convention. New Zealand Radio DX League** will hold its 50th anniversary convention sometime in February 1998. Exact dates and venue have not been established. Information from NRZDXL, P.O. Box 2956, Wellington, New Zealand. Further details and information will appear when received.
- Mar'98 Contest. 1998 North American DX Championships.** Further information will be published in the Journal or you can send a self-addressed stamped envelope to 1998 NADXC, c/o Dr. Harold Cones, 2 Whits Court, Newport News, VA 23606.
- Mar'98 Convention. The 11th Annual Winter SWL Festival** will be held at the Kulpsville Holiday Inn (Exit 31 on the Northeast Extension of the Pennsylvania Turnpike) on 13-15 March 1997. Organized by the infamous "gang of three" (Messrs. Brown, Cones, and Field) this all wave gathering attracts about 200 hobbyists each year.
- Apr'98 Convention. The 35th Annual International World Wide Continental DX Association (IWWCDXA)** will be held in Tahiti at the Charlie Loudenboomer Estate on April 1, 1998 from noon until midnight. Charlie will lecture continuously during this 12-hour period on a variety of boring subjects some of which may actually pertain to shortwave radio. Registration fee is a modest \$150.00 with an extra \$50.00 charge for the traditional hamburger helper banquet. More information is available from Charlie at <[cl@sucker.com](mailto:cl@sucker.com)>.

Members are invited to submit items to be included in this calendar to Rich D'Angelo (Internet: [r.dangelo3@genie.com](mailto:r.dangelo3@genie.com)) or Ralph Brandi (Internet: [ralph@mcs.com](mailto:ralph@mcs.com)).

## Contribute!

Send your loggings and QSL information off to our Distributing Editor, **Fred Kohlbrenner** (2641 South Shields Street, Philadelphia, PA 19142). He will forward them to the appropriate editor. Remember, Fred has now expanded his business to include QSL report information and totals for the **Scoreboard** column. He can also be reached through the Internet at: [fkohl@ix.netcom.com](mailto:fkohl@ix.netcom.com).

## Musings

*This column provides a forum wheras 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 are soley those of the submitters. Please submit all Musings to Richard A. D'Angelo, 2216 Burkey Dr., Wyomissing, PA 19610 or via email - [r.dangelo3@genie.com](mailto:r.dangelo3@genie.com)*

**Pedro M.C. de Castro** <[pmcc@easygold.com.br](mailto:pmcc@easygold.com.br)>, Av. Oswaldo Aranha 1324, 12600-000 Lorena SP, Brazil

I've just finished a letter to Bill Oliver, renewing my NASWA membership. The only thing that I regret after joining NASWA is that I didn't join before. At least 25 years before.

Radio Sweden was my first DXing professor. I discovered that I could write reception reports and receive QSL cards when I casually tuned on the old "Sweden Calling DX'ers" program in 1971. Some time later, I started to send logs and news to Radio Sweden, and they published some of them on the bulletin.

Unfortunately these bulletins disappeared when I left my parents's house in 1981.

Perhaps some of the veteran NASWA members still have these old bulletins and can provide me a copy. My reports were published between June 1972 and August 1973, when Arne Skoog, followed by Bengt Dallmar, were the editors.

If there is someone able to help me, please write to [pmcc@easygold.com.br](mailto:pmcc@easygold.com.br) to combine trading conditions. I can reply this kind favor by sending mint Brazilian stamps or some dollars.

With best regards for all,

**Dave Marshall**, N8OAY <[n8oay@sprintmail.com](mailto:n8oay@sprintmail.com)>, 20 Philip Drive, New Carlisle, OH 45344

I bought what is apparently a very unusual old radio at the Dayton Hamvention this year. It appears to have been manufactured by Jefferson Travis Corp., 245 East 23rd St., New York, NY. It covers 540-1600 Khz MW Broadcast and 1600-4800 HF Marine Bands. It is a portable that can run on AC or battery. The case is covered with a black material similar to what was used on many Zenith Trans Oceanics, and has a brass faceplate with a slide-rule dial and a 5 inch round brass speaker grille with "JT" stamped into the grille. It has 4 knobs for volume, band, tuning and fine tuning. It has a brass handle and 2 brass feet. I would greatly appreciate it if someone can help me identify this radio and give me some information on its heritage.

**Mark J. Fine** <mfine@crosslink.net>, 11252 Cardinal Drive, Remington, Virginia  
22734-2032

First, I would like to publicly thank the many who provided me feedback and kind words on the May's Schedules column. I wanted my first time "out of the box" to be kind of special. Judging from the response, I feel that I had accomplished that goal: To produce a simple, useful and readable listing for the general shortwave listener. Hopefully, I will be able to continue to generate that kind of response twice annually.

My only regret is that the listing was so large, bumping some of the other staff's monthly columns. However, without the superb desktop publishing talents of Ralph Brandi, the 24 pages of frequencies could have easily been twice as much. As Ralph and I discussed during the process: The page count could have been less, but I'm not sure the Journal's publishing and mailing budget could have withstood the inclusion of a magnifying glass with every issue.<G>

As is not feasible to produce such a column of that size on a monthly basis, people have repeatedly asked about the fate of the regular monthly Schedules column. From a time-management perspective I originally felt that I could not provide the required attention to a monthly column in order to do it justice. I'm also not sure there is enough material to justify it without being redundant to AIQ's Listener's Notebook. However, because of the response and subsequent requests to the May issue, I will try to provide one-page columns as time and material (and space <G>) allow.

**Greg Harris, WDX9KHY, 262 Juniper, Forest Park, IL 60466**

Hello, I enjoy the Journal and Musings. I've been an SWL and DX'er for 27 years now. I would enjoy sort of reviving an activity I enjoyed years back. I enjoy SWL card swapping with anyone who would care to swap cards with me.

#### **FRENDX: Twenty Five Years Ago....**

Don Jensen encouraged members to attend the 7th annual convention of ANARC in Wakefield, MA on July 14-16. New members included Harry Helms. Renewing members included Steve d'Adolf and Al Miller (2nd year), John Callarman (4th year), Dr. Thomas Williamson (5th year), and Cesar Objio (7th year). Awards Chairman Warren Nordgren issued WorldWide DXer awards to Frank Peters and Gerry Dexter (200 countries verified), and Bill Plum (50 countries). A new governing organization was under consideration by the Board of Directors. Corresponding Secretary Ed Shaw began editing a new column, called Mail Call, dealing with mail from members. In the Shortwave Center, the "spotlight" was on Radio Tanzania while Ed Shaw presented Part IV of his series about the Phenomenon of the Darkness Pattern. In Gregg Calkin's QSL Report column, Danny Jamison reports a verification from Thai TV on 7,105 kHz. Frendx Fotos featured Alan Roth, "Ralphus" Perry, and a Mystery DX'er—a baby picture with headphones—which inspired Ed Shaw to run a contest to name the famous NASWA DX'er.

**NASWA**

Visit our club home page on the World Wide Web at <http://www.anarc.org/naswa/>

**William "Wild Bill" Crookham, P.O. Box 520, Caldwell, ID 83606-0520**

Can you believe the following. Me thinks that someone at USIA is going to lose their job over this stupid new policy.

"Dear Mr. Crookham:

"This is in response to your May 2 Freedom of Information Act (FOIA) request for a schedule of the Voice of America's (VOA) broadcasts. Your request has been referred to this office because of my responsibilities under the FOIA.

"I am sorry, it is no longer possible for VOA to send out program guides to people in the United States. It has been determined that under Exemption (b) (3) of the FOIA, the U.S. Information and Educational Exchange Act of 1948 (22 U.S.C. 1461) prohibits USIA from releasing within the United States information about the U.S., its people, and its policies when information has been prepared for audiences abroad. This includes radio scripts, broadcasting schedules and similar materials produced by USIA.

"This law does provide, however, that upon request the information can be made available at USIA, but only for examination. If you will be in Washington, D.C. area in the future, you may wish to call the office to set up an appointment to view the program schedules ((202) 619-5499).

"When you are in a foreign country and write to the VOA from that country, however, you will be able to receive a VOA schedule; or you could contact the American Embassy in that country and it may be able to provide you with a copy.

"You have the right to appeal this decision to deny you a program schedule. Should you wish to do so, please send your appeal within 30 days from the date of this letter to the Chairman, Access Appeal Committee, USIA, Office of Public Liaison, Room 602, 301 4th Street, S.W., Washington, D.C. 20547.

"Sincerely yours,  
Lola L. Secora, FOIA/Privacy Act Officer  
Office of the General Counsel"

### **Welcome to the following new NASWA members**

Guy Atkins, Bonny Lake, WA	John A. Puchot, Seguin, TX
Larry Auksel, Lafayette, IN	Gerald Readore, Houston, TX
David Baird, Catlin, IL	Cary Y. Robinson, Fort Collins, CO
Michael Busch, Hanamigawa, JAPAN	Diane M. Scanlan, Daphne, AL
Owen George Dauphinee, Ingonish Beach, NS, CANADA	Frank B. Selders, Redondo Beach, CA
Kevin A. Granat, Gladstone, OR	Mr. Lynn Springer KB2TGR, Missoula, MT
Mr. David Kolat, Elizabeth, NJ	Randy Stewart, Springfield, MO
Paul Krause, Trevoise, PA	Billy W. Troy, Glendale, AZ
George H. Lorenz, Pontiac, MI	B. Michael Turner III, Forest Hill, MD
Charles McKinney, Stephens City, VA	Terry Wolf, Bellville, OH

# Easy Listening

John Figliozzi  
45 Algonquin Road  
Clifton Park, NY 12065-7703  
America Online: JFigliozzi  
Internet: johnfig@earthlink.net

This month, we try out a few minor format changes to this column.

Specific programming details are difficult to come by. About the only station that publicizes its full schedule in advance is the BBC World Service. Another handful (and that's all it is) of stations like Radio Netherlands, Deutsche Welle, Radio Canada International, China Radio International and occasionally one or two others, offer some details on selected programs. The rest offer either no information or only general descriptions. But the objective of this column is to provide shortwave *programming* information in a way that helps the reader/listener find programs of interest.

Consequently, we'll try this. The column will be divided into three sections. Up front will be BBC World Service Highlights, as has been the case for some time. Now, though, we'll divide this section between a detailed rendering of new series ordered by premiere date and a brief notation of series continuing from the previous month. We hope this will save some space as well as make it a little easier for the reader/listener to plan his or her listening. Part two will offer whatever advance program details from other stations we can obtain in a timely manner and will spotlight some general program line-ups either by station or type. (You will recall that Rich Cuff had offered a series like this some months back.) Finally, the third section will offer opinion, reviews, calendars and other related information likely to be of interest or use to program listeners, on a space available basis.

As usual, nothing here is written in stone (paper is a lot cheaper and using a chisel is tiring). So, tell us what you like; tell us what you don't like. But tell us something! Since

I've been serving as interim editor of this column, I've received five (count 'em—5!) comments. And two of those were from Rich!!! So, let's hear from YOU! Otherwise, we'll have to assume that you like *everything* you see. Now, THAT just can't be true...

## BBC World Service Highlights

Listings are for the Americas/Europe stream. Days and times are in UTC. Frequencies for North America include 5965, 5975, 6175, 6195, 9515, 9590, 9895, 11750, 11865, 15220 and 17840. In a few cases, programs can be heard via the Americas/Europe stream only on frequencies intended for Europe. These are denoted with an \* and these frequencies usually are listenable in parts of North America: 15485, 12095 and 9410. Times marked with an # means that the program also can be heard in western North America via the Asia stream on 9740.

### New Series Starting This Month

*Beginning July 5, 7 and 8, The Lab* is a new magazine program consisting of a series of ten quarter-hour programs that casts a youthful eye over the latest developments in science and technology. (Sat. 1945\*; repeated Mon. 1445 and Tue. 0745)

*Starting July 12 and 13*, in one hour installments over four consecutive weeks, *Play of the Week* will present a production of *Anna Karenina*, Leo Tolstoy's masterpiece study of family relationships and obsessive passion. Anna, married without love to a high-ranking civil servant 20 years her senior, falls in love with young Aleksei Vronsky, who possesses all the qualities her husband lacks. But Anna is torn between her lover and her son, Serezha, whom she must never see again if she divorces her husband. (Sat. 2230; repeated Sun. 0530 and 1830\*)

*Beginning July 13 and 15, A Question of Science* is a six week series of 45 minute programs exploring the ethical dilemmas raised by our expanding scientific knowledge. Presented by John Wilson, World Service science unit editor, each program will feature an international panel of experts, including scientists and politicians. (Sun. 1401, repeated Mon. 0815\*)

*Starting July 13 and 15, India—A People Partitioned* looks back fifty years to the end of British rule in South Asia and the birth of India and Pakistan as independent nations as seen through the eyes of ordinary people who lived through the violence. The five part series begins with the Hindu-Muslim riots which broke out in Calcutta one year prior to partition. Part two focuses on the escalation of violence among Muslims, Hindus and Sikhs in the Punjab in early 1947. The third program examines the plight of the thousands of women who were abducted from their homes, while part four reports on the mass migrations caused by partition. The series ends in Kashmir with a look at the legacy of partition and the shadow it casts over the region. The BBC's former Delhi correspondent, Andrew Whitehead, reports. (Sun. 1701; repeated Tue. 0630, 1130)

*Starting July 19, 21 and 25, Code Breakers* is a series of five quarter-hour programs on the archaeological processes involved in the deciphering of ancient scripts. (Sat. 0130; repeated Mon. 0615 and Fri. 1515)

*Starting July 19 and 21, The Story of Football* is a seven part series tracing the history and development of modern football (soccer). The opening program traces the century old origins of the modern game in Britain and its spread throughout the world via the British Empire. Program two visits FIFA, the sport's world governing body in Zurich.

Part three profiles the World Cup, football's showpiece event, and the sport's Olympic history. The fourth program discusses playing tactics with leading players and coaches and considers the role of spectator. The fifth week profiles great football clubs around the world, past and present and part six pays trib-

ute to great players and managers. The series concludes with an examination of the role of television, sponsorship and commercialism in modern football. (Sat. 1030, repeated Mon. 0430, 2130)

*Premiering July 19 and 20, The 1997 Henry Wood Promenade Concerts* series begins its 103rd season with a live broadcast featuring Swedish soprano Hellevi Martinpelto and the Orchestra of the Age of Enlightenment conducted by Nicholas McGegan performing four works by Mozart. The following week is a feast of British music when the BBC Philharmonic Orchestra conducted by Richard Hickox play Britten's *The Young Person's Guide to the Orchestra* and Percy Grainger's *The Warriors*—a musical vision of war. (Sat. 1830\*, repeated Sun. 0315; Mon. 1830\*, repeated Tue. 0315)

*Starting July 21 and 25, Voting for Britain* examines British democracy from an international perspective. This three part series begins with a panel of journalists from the Balkans putting the recent British election in a South European context. Part two compares the experiences of women parliamentarians in Britain with those from Africa. The series concludes by considering India's changing attitude toward British democracy. (Mon. 0130 repeated Fri. 0630, also Mon. 1430# via Asia stream only)

*Starting July 21 and 25, The Jools Holland Collection* features one of Britain's finest piano players and big band leader who, in a six week series of 30 minute programs, will present a personal choice of music from 1930's boogie-woogie to the latest sounds of the '90's. (Mon. 1530; repeated Thu. 0830\*; also Sun. 1530# beginning 20th via Asia stream only)

**Series Continuing from June**  
*Dying Notes, The Hong Kong Holding Company, two Learning Zone series—Body of Knowledge and The World of Television, Brain of Britain, Encyclopaedia Historica, It's Your Verdict, Red Hills of Home, Stories for Life, The Four Caliphs, Wimbledon Live and Youth Debate* all continue into July. Please consult June's EZL for details.

## Radio Netherlands Documentaries

3rd/4th–50th Anniversary Celebration continues with broadcast highlights from the '60's

10th/11th–Albania (Eric Beauchemin looks at how Albania is rejoining Europe)

17th/18th–Beyond the Broad Axe (Michele Ernsting investigates Viking cultural influences from Ireland to Russia)

24th/25th–To Be Announced

31st/Aug. 1st–50th Anniversary Celebration/ Highlights from the '70's

Here's Radio Netherlands' daily program lineup:

2330–0030 on 6020/6165/9845

:30–*News* (daily)

:39–*Wide Angle* (one issue examined-Sun.); *Newsline* (correspondent reports-Mon. to Sat.)

:54–*Siren Song* (leisurely look at life-Sun.); *A Good Life* (development issues-Mon.); *Music 52/15* (eclectic selections-Tue.); *Sounds Interesting* (sights/sounds of Holland/Europe-Wed.); *Research File* (science-Thu.); *Documentary* (Fri.); *Roughly Speaking* (youth magazine-Sat.)

:25–*Four Minuter* (random notes-Sun.); *Dutch Press Review* (Mon. to Fri.); *Insight* (one issue-Sat.)

0030–0125 on 6020/6165/9845 and 0430–0525 on 6165/9590

:30–*News* (daily)

:39–*Sincerely Yours* (listener letters-Mon.); *Newsline* (Tue.–Sun.)

:54–*Weekend* (European current affairs magazine-Sun.); *Sounds Interesting* (Mon.); *Research File* (Tue.); *Mirror Images* (European arts magazine-Wed.); *Documentary* (Thu.); *Media Network* (communications magazine-Fri.); *A Good Life* (Sat.)

## Deutsche Welle Highlights

How does the younger generation see the prospects for a united Europe? Do they see themselves as "Europeans"? Would they vote for a European Union if they had the chance? These are some of the questions Irene Quaille will be looking at in a special feature produced in conjunction with BBC Scotland. *Tune into Feature of the Month on the first Mondays in July (7th) and August (4th) at 0115, 0315 and 0515 for this two-part.*

The July 29th edition of *Man and Environment* will feature a report considering the success or failure of the United Nations Framework Convention on Climate Change, whose Secretariat is located in Bonn. The Convention was adopted in 1992 and is designed to cut global emissions of climate changing gases.

Here's DW's daily program lineup:

0100–0150 on 6040/6085/6145/9640/11810;  
0300–0350 on 6085/6185/9535/9615/9640;  
0500–0550 on 5960/6045/6185/9615.

:00–*News*

:05–*Sports Report* (Sun.); *Commentary* (Mon.); *Newslink* (current affairs magazine-Tue. to Sat.)

:10–*Inside Europe* (European perspective on week's events-Sun.); *Feature of the Month* (1st Mon. only) or *Arts on the Air* (German arts/culture magazine-Mon.)

:30–*Mailbag* (listener mail-Sun.); *German by Radio* (language lesson-Mon.); *Man and Environment* (ecology-Tue.); *Insight* (background to major political event or development-Wed.); *Living in Germany* (German social/political life-Thu.); *What's New* (rotating science magazines\*-Fri.); *Economic Notebook* (economic trends-Sat.)

\* *Headcrash* (computers-1st Fri.); *Science and Technology* (research-2nd Fri.); *MediaMag* (communications-3rd Fri.); *Made in Germany* (innovations-4th Fri.)

## In Brief...

The **BBC World Service** will have unveiled a new morning news program for the United States on June 30, but it will not be available on shortwave. *World Update* is a 50 minute program distributed by Public Radio International that is intended to fill the gap left by the demise of *Monitor Radio's Morning Edition*....Since *Morningside* had its last program on May 30, **Radio Canada International** has altered its weekday programming blocks at 0200 Tue. to Sat. and 1300 Tue. to Fri. and Mon., as it did last summer, to include past highlights from five of the CBC's more popular programs. After the news, the lineup is: Tue.-*Prime Time Quirks* (highlights from science magazine *Quirks and Quarks*); Wed.-*Sunday Morning on Tuesday Night* (the best from the past season's programs. *Topics for July*: 1st-Cooking School/Canadian Constitution panel/Galoshes essay; 8th-Neil Simon/Pedophile Release/Elizabeth Brewster poem/Ads on brain essay; 15th-Promise Keepers/Nancy Houston/Dalmatians/Art film essay; 22nd-Child protection/Chamber music/Anne Michaels poem/Brussels Sprouts essay; 29th-Formal Poets/Barrel Kids/Books on tape essay; Aug. 5th-Tobias Wolfe/Floods/Toboggans/Hong Kong musician/Oscar essay); Thu.-*Best of Tapestry* (Canadian spiritual life); Fri.-*Best of Writers and Company* (Canadian books and authors); Sat.(0200)/Mon.(1300)-*This is Art* (a quirky, eclectic mix of music somehow tied together thematically—unique show, give it a try!).

## Whither Shortwave Radio?

Or is it "wither"? For those of us who value and enjoy listening to shortwave radio for its content, the current trend toward downsizing international broadcasting services is, in many ways, a bitter pill to swallow. But there are many good reasons—as well as a few bad ones—why international broadcasting and its close compatriot shortwave radio are going through these changes. For some months now, I have been attempting to organize my thoughts about them. I share my observations here only in the spirit of prompting a useful dialogue.

## The Cold War Factor

Especially after the fact, it's hard to overestimate the influence the Cold War held in nearly every aspect of political and economic decisionmaking until very recent times. The near singlemindedness prompted by its bipolar ideological imperatives caused many practical and economic realities to be submergled, if not ignored altogether, in all out effort to bolster one's own side and weaken the other. This was as true of international broadcasting efforts as it was in other spheres, with kilowatts and kilotons growing almost exponentially side by side. The end of the Cold War inevitably has brought re-evaluations to every sphere it touched—international broadcasting no less among them.

## The Alternative Technology Factor

Until quite recently, shortwave has been "the only game in town". During the Cold War period, nothing more was necessary (or perhaps useful) as efforts were principally directed toward getting "hard" information to listeners. The fact that the shortwave receiver technology was relatively simple served as an advantage to receiver owners who often lacked resources or services to repair and maintain them. Listeners were highly motivated and the fact that the signal was hampered by both natural and man-made interference was of almost no importance to them.

The world just a decade after the Cold War is much different. Satellite delivery, digital electronics and the Internet all offer certain advantages over traditional shortwave broadcast technology. Entertainment is much more important—due both to economic as well as social reasons. And audiences are much less self-motivated to listen. In large measure, they would rather watch (television) than listen and technical quality is increasingly a prime, if not paramount, concern.

International broadcasters have attempted to respond a number of levels. They have erected or concluded cooperative agreements with shortwave transmitting facilities closer to their target audiences. They have used satellite technology to feed those facilities. And now they are experimenting with a number of program delivery methods in the quest to

both reach their existing audiences and entice new one. These efforts are further driven (and sometimes are threatened with distortion) by a third factor.

### **The "New Economics" Factor**

The end of the Cold War left us with one largely triumphant (at least for the present and foreseeable future) economic model. One result is that private market solutions to questions have been elevated in importance vis-a-vis governmental or public (these two are sometimes identical, often distinct) institutions and efforts. Another is that there is almost a preoccupation with measurement. Everything must lend itself to some form of measurement and those things which are either difficult or impossible to measure in any conventional way are deemphasized until some means of measurement can be devised. In this reality, international broadcasting is presented with two very serious problems. First, most international broadcasting has traditionally been undertaken by government or public organizations. Second, international audiences sizes and preferences are difficult to assess via any existing conventional system of measurement, especially to the satisfaction of advertisers, the primary source of revenue in commercial media.

### **The Result**

The bias (and that is all it is) against public media combines with the current decrease in interest on the part of the general public in international affairs and concerns, along with the novelty of new media and real and contrived financial pressures. A squeeze ensues and we (or, more precisely, some grand old broadcasting structures) are experiencing the pain that results.

### **What Happens Next: A Plan?**

The one constant in life is change. Shortwave technology is now but one technology capable of delivering programming to an international audience. It still carries some advantages over the others at present (portability, inexpensiveness, can bypass a "gatekeeper"). On the other hand, it can sound—well...lousy in comparison to some of the alternatives and, in the competition over restricted resources, it can be damn expensive to deliver.

But don't forget that shortwave technology, itself, has changed and improved over time (receiver digital readout and ECSS are two that immediately come to mind) and will likely continue to do so into the future. (For example, there are at least three different efforts underway to assess the potential for and viability of digital terrestrial broadcasting via shortwave.) So, too, the post-Cold War factors that make shortwave's advantages less crucial today may prove to be less influential down the road. Experience shows that new technologies rarely eliminate old ones. FM didn't eliminate AM; television didn't eliminate radio; cable television has not eliminated broadcast television. Rather, new technologies simply reorder the dominance of the old and force some re-evaluations and changes in the ways the older technologies are used. This is and will all be true of shortwave as well.

Let's not forget that the name of the game for international information providers is to deliver that information to audiences. The good news is that most nations and their broadcasting organizations have come to the conclusion that transnational broadcasting is something of value and does have an influence on its audience that accrues real benefits to the sponsoring nation and broadcaster. The only question is how best to deliver it.

Put another way, I love opening up one of my old Trans-Oceanics from time to time and listening to it. But I would no more trade it in for my 150 or 2010 or YB-400, than I would trade in my car for a horse. If another technology can do all that shortwave does with better quality at a low price with the same portability and freedom of access, then bring it on!

But the contest has to be fair—and that's where you and I and NASWA and ANARC come in. Where pressure is brought to bear on our old friend shortwave by legitimate experimentation and exploration of new media, as well as some of the social and economic factors discussed earlier, one must stop aside and acknowledge the inevitability of change. However, where people would use these legitimate factors as a means to reach

some preconceived and ill-considered objective, the facts must be brought to bear. The recent travesty over Radio Australia, which was notable in some Australian governmental corners for its specious research and rather poorly disguised and dimwitted bias against public media and international broadcasting in general, must not be countenanced.

I say it again—the name of the game is how best to get information to an international audience. For a variety of reasons too numerous to enumerate here, but rather obvious to anyone giving it consideration, this question must be seen as nothing less than vital to the futures of all of us! Consequently, all of us must get involved in the debate—in the contest, if you will, rather than simply allow others—whether they be governments or entrepreneurs or media magnates—to dictate to us how the future will look.

We can continue to move from crisis to crisis, letter writing campaign to letter writing campaign. But this will soon (maybe already has) prove frustrating and largely fruitless. Rather I suggest we take a more active approach. I suggest we begin to utilize the structures of our clubs and ANARC to consider how and to what extent we should get actively involved in this grand debate.

Should ANARC make representations on behalf of its membership—international information users, the international listening audience—to try and help shape the debate and its outcome in ways that will be beneficial to the one group all claim to be trying to reach—the international audience? I think the time has come. What do you think? ~~SW~~

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**FOR SALE:** Hammarlund 100A from the estate of Ken Cornell. \$100.00 or best offer. Please contact NASWA, 45 Wildflower Road, Levittown, PA 19057. Phone (215) 945-0543. Email <boliver@philly.infi.net>.

**WANTED:** Grundig Satellit 500. Contact Kathy Barrick, 711 Sandbank Road, Mt. Holly Springs, PA 17065. Phone (717) 486-3443.

**FREE STUFF:** A pile of 1980-90's International Radio, Monitoring Times, and 1990 to present NASWA Journals all for free. You pay shipping, please. Will give away separately, but all must go. Stephen J. Price, c/o 1351 Oliver Avenue, Conemaugh, PA 15909-1427. Email <ullera01@ctcnet.net>.

**FOR SALE:** Drake R-8 receiver. \$700.00 U.S. or \$1000.00 Canadian plus shipping and C.O.D. charges. Phone David at (519) 672-6433 or email <d8wesley@sms.ivey.uwo.ca>.

**FOR SALE:** Customized Beam Headings (from/to) and Distances (MI/KM) to more than 480 WRTH transmitter sites including Russian republics. ITU Country Codes included. Send your location or coordinates, \$8.00. 1996 NASWA Journals complete, \$16.00. 1996 "Passport to World Band Radio", \$10.00. WRTH '91, \$5.00; '96, \$10.00. All items include shipping (overseas shipping extra). Cashiers check or money order only, please. Al Drehmann, Route 2, Box 3-B, Tryon, NC 28782. Email <ADrehman@juno.com>. Phone (704) 894-3398, not collect, please.

**WANTED:** I'm looking for a Yaesu FRG-7, preferably with a digital read-out. Kenneth J. Villone, P.O. Box 185, Conesus, NY 14435. Email <k3861@aol.com>.

## The Asian Shortwave Summer Mode

by Bob Padula, Melbourne, Australia.  
Note: All times are expressed in UTC!

### Introduction

For as long as I can remember, shortwave reception during the Eastern Australian mid-summer period has traditionally been characterized by enhanced propagation on frequencies as low as 4 MHz from transmitters in Asia and the Far East during our late morning and early afternoon periods, for distances of up to 10000 km over all-daylight paths.

Many years ago some of us designated this annual event as the "Midday Asian Mode", and its seasonal recurrence has always been awaited with great interest. The Mode was first "discovered" in the early 1970's, but of course it may have been there ever since radio was invented! Those of us with technical inclinations have advanced innumerable, but unvalidated, hypotheses attempting to explain the mechanics of this form of propagation, which appears inexplicable in terms of generally accepted fundamental radio transmission theory.

This present paper summarises reception observations made over the five hour span from between 0000 to 0500, during the December 1996-February 1997 period, corresponding to mid-summer in Eastern Australia, where substantial data was generated from daily monitoring over several weeks. This data is used in the postulation of a new hypothesis; however, no hypothesis can be proven unless the events can be replicated, and tested by independent observations! The time segment chosen is 10am to 3pm Eastern Australian Standard Time.

### Geographical and Historical Perspectives

The Mode is observed predominantly from the eastern and south eastern States, each summer, appearing during late November, and disappearing by mid February.

Over the years, detailed observations of the Mode have generally been confined to the Victorian and New South Wales reception areas. The Mode was in fact observed in Western Australia during the early 1970's, but negligible data is available since then. Similarly, no long-term data exists for reception (if any) in Queensland. Minimal data is available for ad-hoc reception during the 1996/97 summer in South Australia, with similar patterns to those observed in Victoria and New South Wales. Reception data for Tasmania is confined to scanty observations made several years ago.

Prior to this present Study being undertaken, I wrote to all DXing groups in Australia seeking their participation, but no responses were forthcoming.

This present paper, therefore, focuses on reception in Victoria, both historically and also for the 1996/97 summer, and is based on reception patterns observed in Melbourne, and the nearer-Melbourne areas.

The summers of 1973-1977 and 1984-1988 revealed some astonishing midday reception on 60 and 49 metres, which corresponded to solar minima, at the beginning of solar cycles 21 and 22 respectively. No reception data exists for the solar minima of 1953-1956 (at the beginning of solar cycle 19) or 1963-1966 the start of solar cycle 20). In August

1992, I wrote a paper, published in the Australian DX News, incorporating graphical data of reception year by year since 1970, compared with solar activity. At that time, the conclusions drawn suggested that:

- (a) The Asian Mode is present every summer, irrespective of the point of the solar cycle
- (b) The time-window is maximum during solar minima
- (c) The lower frequencies (ie, 4.5, 6 MHz) are more prevalent during solar minima years

The Mode is observed in the reception region corresponding to latitudes of 30 to 45 degrees south, and extending from 140 to 150 degrees east. These latitudes correspond broadly to the areas of Victoria, southern New South Wales, southern South Australia, and northern Tasmania. These southern latitudes are broadly analogous to the southern part of South Africa, and to Uruguay and the Buenos Aires regions of South America.

Study of available literature had failed to reveal any comparable daytime propagation modes observed from similar latitudes in South America or Southern Africa. This is not to suggest that an equivalent Mode does not exist, but rather that no data is available. It may well be that the Mode, in terms of distances and spectrum, is unique to Australia, and to the south-easterly reception locality.

## Characteristics

From my location in Melbourne, during our midsummer, most long distance reception on 60 metres has disappeared by about 2130 (7.30 am Eastern Standard Time) and 49 metres has virtually gone by about 2200 (8am). 41 metres remains open until about 2230 (8.30am), and 31 metres disappears by around 2330 (9.30am). Those bands are normally devoid of any form of long distance signals until the first glimmerings of audio at around 0400 (2pm) on 31 metres, mainly from powerful North American stations, and long-path Europeans. In the past year, the

powerful suite of Indonesian transmitters opened up on 31 metres, and these are generally audible here throughout the day.

The above times should be considered in context: during late December, sunrise in Melbourne is at 1800 (4.00am) and sunset occurs at 1100 (9pm). We have only seven hours of darkness, and long twilights.

The Mode may appear at any time after 0000 (10am), with signals becoming audible quite suddenly, often increasing to near-local strengths, with no fading. On occasions, some signals may remain audible for up to 30 minutes or longer - at other times, they disappear abruptly after appearing for only a few minutes.

Audio quality is peculiar, and distinctive, with negligible atmospheric noise. Signal strength can be super strong at times, overpowering high level power line noise. The lack of atmospheric noise gives one the impression that the station is nearby, with reception via ground-wave!

The Mode may be present on 5 MHz at a given time, but not audible on 6 MHz at that same time, for the same transmitter site, and conversely. Furthermore, signals from a particular transmitting locality may be audible on one frequency, but not on another even within the same band!

Another peculiarity is that reception may be apparent at one location at a given time, but not at another, even though the receiving locations may be separated by only a few km!.

## Propagation

Table 1 lists the locations of all transmitter sites heard, with short-path distances from Melbourne. Long-path distances are also shown, for comparison purposes, for some circuits. The Table also includes entries for transmissions from countries in western Asia, the Middle East, and Africa, which were audible during the monitoring span, of distances from 11000 km to 17000 km. Those

signals are also believed to propagate in an easterly direction towards Australia, by a combination of night-time and Asian Modal mechanisms. The first "legs" of those transmissions progress in a darkness zone, picking up the Asian Mode on their way. I suggest that the major component of those signal paths is via the Asian Mode.

Observations reveal that propagation over totally daylight paths occurred for distances of:

- (a) 60 metres: up to 6000 km
- (b) 49 metres: up to 7700 km
- (c) 41 metres: up to 8400 km
- (d) 31 metres: up to 10000 km

The 10000 km vector, from Melbourne, represents the approximate maximum shortpath distance to Asian transmitters, for a substantially daylight path between 0000-0500. Some western Asian transmitters are shown, at distances greater than 10000 km (eg: Dushanbe, Tehran, Yerevan, and Tashkent), but parts of their transmission paths are in darkness or semi-darkness, between 0000-0500 not truly representative of an "all daylight" route.

The enigma is this: what mechanism exists to support propagation on 4 MHz over a totally daylight path of distances of up to 6000 km, for a time at the Australian reception location between 10am and 3pm, in mid-summer? This is about the same distance as from New York to Western Europe, or from Tokyo to Honolulu.

Classical electromagnetic theory tells us that propagation on 4 MHz for distances up to 6000 km, during daylight hours, is impossible, or extremely unlikely. However, the data in our Study refutes this, as it has done for a great many years! Many theories have been advanced over the past three decades in attempting to explain these bizarre events, without success.

Let us examine one particular transmission path, for the Melbourne-Kuching route,

which is just on 6000 km, for reception on 5005 kHz at 0200, noon here in Melbourne, 10am in Sarawak. That's about four hours AFTER sunrise in Sarawak, and about six hours after Melbourne sunrise. We would expect that D layer absorption would knock out everything down to about 10 MHz at that time.

Theory also reminds us that the Absorption Limiting Frequency is influenced by antenna efficiency, noise levels, transmitter power, and receiver sensitivity. Powers of most of the Asian transmitters observed are relatively small, generally of the order of 10-20 kW, and antennas would most likely be non-directional. Noise levels are very high, as a consequence of power line radiation, and receiver sensitivity is high. Reception on 4 MHz at noon over 6000 km in broad daylight should NOT happen, based on the parameters just mentioned!. In fact, I might suggest that reception COULD have occurred on even LOWER frequencies, such as in the 75 and 90 metre bands—I don't think that anyone has ever bothered to look there at noon!

The conclusions given in my paper of 1992 have held up rather well; in the last four summers, the observed reception window for the Mode has increased year by year, for the 4 and 6 Mhz bands, signified by a strong correlation with solar activity. This may be influenced by reduced D layer absorption during periods of minimal solar activity, which would tend to decrease the ALF.

Attempts to explain the Asian Mode using conventional propagation models has not been successful, as such theories rely on "simple" multi-hop propagation mechanisms, represented in the text-books by 1E, 1F, 2E, 2F, or 1F/1E, etc. IPS predictions are usually valid only for these "simple" modes.

The principal feature of the Asian mode is that absorption, for whatever reason, is very small, allowing long-haul transmission to occur on frequencies which would otherwise be absorbed in the D layer. The D layer exists, and we cannot dismiss it easily! Simple multi-hop modes require multiple excursions through the D layer—a simple one-hop E layer journey is around 2000 km—to achieve

6000 km we would need three hops, with six passages through the D layer! A simple F layer excursion is usually between 3700–5000 km and we would need at least two hops to support our Asian mode, resulting in four passages through the D region. For every hop, there are two corresponding excursions through the D layer, where each passage is associated with absorption!

It is my belief that the Mode is linked to Sporadic-E. We usually think of Sporadic-E in terms of long distance transmission above about 50 MHz, up into the VHF regions where these intensely ionised clouds form below the normal E region. The Sporadic-E layer appears “sporadically”, forming just below the E region, and above the D layer, allowing reflection of HF signals on frequencies which would otherwise be too high for normal E or F propagation.

Es clouds tend to be about 80–160 km in size: they occur randomly, are relatively short lived, and tend to disappear within a few hours. Es clouds drift at around 200–400 km/h in a westerly direction. Studies over the years show that in the mid-latitudes, the diurnal variations in Es occurrences tend to peak in the late morning hours; in the summer months, available data suggests that Es is widespread, and peaks between 10am and noon. It is known to be a summer phenomenon, and in the southern hemisphere is maximum between November and March.

I suggest that it is Es which is the culprit (!) behind our Asian Mode, but NOT for direct refraction! I believe what we have is reflection from the TOPSIDE of Es clouds; the outgoing transmitted signal hits the F2 layer (as normal) then returns. In its return, rather than travelling through the D layer, it strikes the TOPSIDE of an Es cloud, which reflects it UPWARDS again to the F2 region. It then returns to earth through the D layer. Thus, we have only TWO passages through the D layer, instead of four, with a consequent reduction of absorption.

Furthermore, the Asian mode may be combination of both E and F propagation, each linked to a TOPSIDE reflection from an Es cloud.

This theory is plausible, and would account for:

- (a) The greatly enhanced signal strengths observed
- (b) The sudden buildup of signals and their abrupt disappearance
- (c) The Mode being apparent only during the summer months
- (d) The Mode not being observed simultaneously at multiple reception points throughout Eastern Australia
- (e) The lack of signals prior to the late morning period
- (f) The lack of selective fading, which usually occurs where the received signal is a mixture of multiple-path propagation modes, with varying transmission paths
- (g) The strange audio quality of Mode signals, very similar to VHF DX reception via conventional Es

I have given some thought as to the possibility that the Mode may be “ordinary” E region propagation. I have rejected that, for the simple reason that predicted ALFs for E propagation between 0000–0500 are not less than 10 MHz, for three-hop transmissions covering 6000 km. The corresponding ALF for two-hop propagation, via F region refraction is about 14 MHz. For longer distances, such as New Delhi–Melbourne, about 10000 km, E propagation is not usually apparent, which would require up to five hops, and ten passages through the D layer!

I have also considered the possibility that the mode may be some form of long-path propagation. That would be really outlandish, as signals would need to travel for vast distances on both legs of the route, in daylight! Study of reception data has failed to reveal any reliable occurrence of south east Asian signals on 4.5, or 6 MHz at 0200 in the November–February period, in Europe and North America. If such signals were audible there, I would be tempted to believe that some kind of extraordinary long-path mode

existed for Australia. Indeed, I have travelled in south east Asia and monitored these signals "on site" in the January period, and on some occasions they are not heard very well even in nearby countries, only a few hundred km from the transmitters!

Data secured for reception in the early 1970's in Perth, Western Australia, revealed that the Mode was prevalent there, but appearing at 10am local time, corresponding to 0200. Telephone hook-ups between Melbourne and Perth, at the time revealed that signals audible in Melbourne at 0130 were NOT audible in Perth at the same time. Fade-out of the Asian Mode occurred around 0500 in Melbourne, but NOT until about 0700 in Perth. This suggested that the Mode was "receiver location specific", and not "transmitter location specific". In other words, the propagation mechanism was linked to SOMETHING occurring on the receiving end the path, and not the sending end.

Data has been gleaned mainly from observations of commercial shortwave broadcasts. Little work has been done on examining non-commercial transmissions, such as might occur in the amateur or utility bands, located in Asia, between 0000-0500 in the 4-9 MHz region! The problem is fundamental: amateur and utility operators tend not to use those relatively low frequencies, except for rather short distance circuits of up to 600 km or so, during daylight hours; common sense dictates the use of frequencies ABOVE 12 MHz or so for the Australia-Asia track at those times!

The issue of reciprocity has also been examined, that is, if reception is apparent of Asian transmitters at 0200 on 4 MHz in Melbourne, does the converse apply, where reception may be noted in Asia of a Melbourne transmitter at that time, on that same band? Again, we have the problem: there aren't many, if any, transmitters of any form operating from Melbourne on 4 MHz at 0200!

Also, can two-way communications occur? Thus, if reception of a 10 kW commercial SW transmitter in Sarawak is apparent at 0200 on 4 MHz, can two-way working take

place if a Melbourne transmitter is fired up on that band, at that time, with similar power and modulation characteristics??? Remember—we are discussing double-sideband, full carrier operations here, NOT SSB reduced or suppressed carrier transmission. Neither are we talking about exotic spread-spectrum modulation communications, where very low power levels are used for reliable transmission over long distances

Table 2 shows frequency occupancy for the period 0000-0500, formed from monitoring made from Melbourne and nearer-Melbourne, from early December 1996 until early February 1997. I should point out that this is an aggregation of monitoring data: this means that reception was no necessarily observed on every day, and neither was reception apparent for the full time span on any given day.

## Summary

Study of the Asian Mode has now become a part of the annual reception cycle for serious monitors located in the south eastern area of Australia. The theory I have advanced is subject to refutation, that's if anyone has a better one, and it is my belief that similar reception will continue to be observed in the summers of 1997/98, 1998/99, and 1999/2000, as we move into the next solar cycle, number 23.

I would be interested in comments from any "old timers" (more senior than me!) who may be reading this, and who may have recollections of mid-summer reception in southern Australia at around noon, on 4,5,6,7, and 9 MHz in years gone by. I am particularly interested in any data for the summer periods of 1953-1955, and 1964-1966.

Studies of radio propagation, such as this, can provide useful input into the body of scientific knowledge on the subject, which for the subject under discussion is quite insubstantial. Little structured research appears to have been made, within Australia, or elsewhere, into investigations of Sporadic-E enhancement of LOW FREQUENCY propagation over daylight transmission paths.

As a practising Professional Communications Engineer, I am publishing this paper in the public domain for informed analysis and discussion. I have long been mystified by this Mode, both at the professional and hobby level, and there is negligible formal information or documentation available in learned Australia-

lian engineering texts on the subject. It is my hope that this present paper might provide the stimulus for further research, by others, into a fascinating, but largely ignored, field of long distance radio transmission.

(Bob Padula, February 1997).

Table 1

Transmitter sites heard between 0000–0500 UTC, November 1996–February 1997. Short-path and long-path distances from Melbourne.

60mb	49mb	41mb	31mb	SPkm	LPkm	Country	Location
			X	1800	--	Australia	Brandon
X				2200	--	Australia	Alice Springs
X				2569	--	New Zealand	Levin
X				2800	--	Australia	Tennant Creek
			X	3144	--	Papua NG	Port Moresby
X				3191	--	Vanuatu	Vila
X				3200	--	Australia	Katherine
	X			4334	--	Indonesia	Cerui
			X	4334	--	Indonesia	Sorong
			X	4446	--	Indonesia	Ujung Pandang
	X			4480	--	Indonesia	Palu
	X			4600	--	Indonesia	Menado
			X	5215	--	Indonesia	Bonto Sunggi/Cimanggis
X	X	X		5630	--	Malaysia	Kuching/Sibu/Miri
X				5681	--	Malaysia	Kota Kinabalu
	X	X	X	6061	--	Singapore	Kranji
X				6116	--	Indonesia	Pakenbaru
	X	X		6071	--	Malaysia	Kajang
			X	6332	--	Philippines	Manila/Palauig
	X	X	X	7360	--	Thailand	Bangkok/Udorn/Nakham
		X		7612	--	Laos	Vientiane
X				7400	--	Cambodia	Phnom Penh
X	X	X		7407	--	Taiwan	Taipei
X			X	7700	--	Vietnam	Hanoi/Ho Chi Minh City
			X	7930	--	Myanmar	Yangon
			X	8228	29772	Japan	Yamata/Tokyo
		X	X	8359	29641	Sri Lanka	Colombo/Trincomalee
			X	8749	29251	DPR Korea	Pyongyang
			X	9099	28879	China	Beijing
		X	X	9296	28704	Madagascar	Tananarive
			X	9644	28356	Seychelles	Victoria
			X	10083	27917	India	Delhi/Aligarh
			X	10241	27759	Mozambique	Beira
		X	X	10287	27713	South Africa	Meyerton
			X	11054	27713	Oman	Masirah
			X	11420	27412	Tajikistan	Dushanbe
		X		11656	26946	Uzbekistan	Tashkent
			X	11677	26313	UAr Emirates	Abu Dhabi
		X	X	11968	26032	Qatar	Doha

60mb	49mb	41mb	31mb	SPkm	LPkm	Country	Location
			X	12018	25982	Rwanda	Kigali
			X	12553	25647	Saudi Arabia	Riyadh
			X	12609	25391	Iran	Tehran
			X	13480	24520	Armenia	Yerevan
			X	13702	24298	Israel	Jerusalem
			X	13800	24200	Cyprus	Limmasol
			X	13852	24148	Gabon	Libreville
			X	13953	24047	Egypt	Cairo
	X		X	14436	23654	Turkey	Ankara
			X	14485	23515	Ascension	English Bay
			X	14499	23500	Greece	Athens/Kavala
			X	16129	21871	Mali	Bamako
			X	17328	20672	Morocco	Briech/Nador

Table 2: Transmissions monitored between 0000–0500 UTC, in Victoria, November 1996–February 1997. The last column indicates shortpath distances from Melbourne, in km.

4835	AUS	NT R. Service, Alice Springs		0000–0500	English and Aboriginal	2200
4960	VTU	R. Vanuatu, Vila		0410–0430	English & French	3191
4910	AUS	NT R. Service, Tennant Creek		0000–0500	English and Aboriginal	2800
4970	MLA	RTVM, Kotakinabalu		0130–0200	Malay	5681
5005	MLA	RTVM, Sibul		0125–0210 0414–0430	Iban	5630
5025	AUS	NT R. Service, Katherine		0100–0500	English and Aboriginal	3200
5040	INS	RRI, Pakenbaru		0130–0200	Indonesian	6116
5925	VTN	V. of Vietnam, Hanoi		0300–0420	Vietnamese	7700
5965	MLA	RTVM, Kajang		0130–0500	Malay	6071
5987	INS	RRI, Menado		0413–0420	Indonesian	4480
6000	SNG	SBC, Kranji		0130–0500	Chinese	6061
6025	MLA	RTVM, Kajang		0130–0500	Chinese	6071
6050	MLA	RTVM, Sibul		0130–0410	Iban	5630
6060	MLA	RTVM, Miri		0200–0445	Iban	5630
6070	THA	R. Thailand, Pathumthani		0405–0500	Thai	7360
6080	SNG	BBC, Kranji		0030–0045*	English	6061
6090	CBG	National Radio, Phnom Penh		0130–0200 0345–0400	Cambodian English	7400
6130	LAO	Lao Radio, Vientiane		0358–0500	Lao	7612
6155	SNG	SBC, Kranji		0125–0445	English	6061

6175	MLA	V. of Malaysia, Kajang	0440-0505	open carrier to 0455, then English	6071
6195	SNG	BBC, Kranji	0000-0030 0130-0200*	English	6061
7110	SNG	BBC, Kranji	0000-0045*	English	6061
7115	THA	R. Thailand, Pathumthani	0300-0430	Thai	7360
7130	MLA	RTVM, Kuching	0125-0300	Iban & Bidayuh schools program	5630
7130	TAI	VOFC, Taipei	0400-0430	Chinese	7407
7135	AFS	RFI, Meyerton	*0300-0400	French	10287
7160	MLA	RTVM, Kuching	0125-0430	Chinese	5630
7170	SNG	SBC, Kranji	0000-0500	Indian lang	6061
7173	INS	RRI, Cerui	0020-0200	Indonesian	4334
7210	QAT	QBS, Doha	*0343-0500	Arabic	11968
7225	SLK	DW, Trincomalee	0000-0200	German	8359
7235	INS	RRI, Palu	0030-0100	Indonesian	4480
7250	TAI	CBS, Taipei	0253-0338	Chinese	7407
7250	SNG	SBC, Kranji	0230-0500	Malay	6061
7270	MLA	RTVM, Kuching	0030-0500	Iban	5630
7285	MDG	RN, Tananarive	0000-0025*	Dutch	9296
7290	NZL	R. Reading, Levin	0000-0500	English	2569
7295	MLA	RM, Kajang	0030-0500	English	6071
7300	TUR	VOT, Ankara	0400-0500	Turkish	14436
7375	UZB	BBC, Tashkent	*0030-0130*	Indian langs	11656
7430	UZB	IBRA Radio, Tashkent	0000-0030*	Indian langs	11656
9280	TAI	BCC, Taipei	0200-0515	Chinese	7407
9425	GRC	V. of Greece, Athens	0400-0500+	Greek	14499
9440	CHN	CRI, Beijing	0000-0300	Chinese	9099
9460	TUR	V. of Turkey, Ankara	0400-0500	Turkish	14436
9505	CHN	V. of the Strait	0200-0404	Chinese	9099
9505	THA	VOA, Udorn	*0100-0130*	Urdu	7360
9510	OMA	R. Oman, Muscat	*0400-0500	Arabic	11054
9525	INS	V. of Indonesia, Cimanggis	*0030-0500	various	5215
9525	AFS	Channel Africa, Meyerton	*0400-0500*	French	10287
9530	CHN	CNR-1, Beijing	0240-0300*	Chinese and English	9099
9535	PHL	R. Veritas, Palauig	0000-0100	Kachin and Karen	6332
9545	PHL	VOA, Tinang/Poro	0000-0200*	Chinese	6332
9551	INS	RRI, Ujung Pandang	0000-0500	Indonesian	4446

9555	THA	VOA, Udorn	*0000-0100*	Tibetan	7360
9560	J	NHK, Yamata	0000-0030*	Japanese	8228
9565	SLK	DW, Trincomalee	*0000-0100*	Russian	8359
9565	CHN	CRI, Beijing	*0100-0200*	Spanish	9099
9565	INS	RRI, Bonto Sunggui	0200-0500	Indonesian	5215
9565	RRW	DW, Kigali	*0300-0500	Swahili & English	12018
9570	QAT	QBS, Doha	0500+	Arabic	11968
9575	MOR	R. Medi, Nador	0000-0100*	Arabic	17328
9575	IRN	VOIRI, Tehran	*0030-0130*	Bengali	12609
9575	I	AIR, Delhi	*0100-0130	Hindi	10083
9580	THA	BBC, Nakhan	0000-0100*	English	7360
9580	IRN	VOIRI, Tehran	0400-0500	Farsi	12609
9585	THA	RL, Udorn	*0200-0300*	Tajik	7360
9585	AFS	Channel Africa, Meyerton	*0400-0500	English	10287
9590	MDG	RN, Tananarive	0000-0025*	Dutch	9296
9595	J	NSB, Tokyo	0000-0406	Japanese	8228
9595	MOR	RL, Briech	*0400-0500*	Azerbaijani	17328
9595	I	AIR, Delhi	0320-0400	Urdu	10083
9600	THA	BBC, Nakhan	*0200-0215*	Burmese (Sat/Sun)	7360
9600	SNG	BBC, Kranji	0000-0045*	English	6061
			0200-0215*	Burmese (weekends)	
9600	ASC	BBC, English Bay	*0300-0500	English	14485
9605	OMA	BBC, Masirah	0200-0300	English	11504
9605	UAE	Abu Dhabi	*0345-0500	Arabic	11677
9610	TJK	R. Dushanbe	*0400-0415	Arabic	11420
9610	TAI	BCC, Taipei (relay HS)	0000-0500	Chinese	7407
9615	SLK	DW, Trincomalee	0214-0250*	English	8359
9625	MOR	RL, Briech	*0400-0500*	Belorussian	17328
9630	INS	RRI, Bonto Sunggu	0000-0500	Indonesian	5215
9635	MOZ	RM, Beira	*0248-0330	Portuguese	10241
9650	GRC	VOA, Kavala	*0030-0100*	Hindi	14499
9650	THA	VOA, Udorn	*0200-0215*	Dari	7360
9655	THA	R. Thailand, Pathumthani	0000-0130	various	7360
			0400-0430		
9660	AUS	RA, Brandon	0000-0500	English and French	1800
9665	MOR	VOA, Briech	*0400-0500	Arabic	17328
9665	KRE	KCBS, Pyongyang	0340-0400	Korean	8749
9670	GRC	VOA, Kavala	*0200-0215*	Dari	14499

9670	PHL	R. Veritas, Palauig	0000-0100	Sinhala & Tamil	6243
9675	PNG	NBC, Port Moresby	0000-0500	English	3157
9680	INS	RRI, Cimanggis	0000-0300*	Indonesian	5215
9680	THA	R. Thailand, Udorn	0000-0030	English	7360
9685	IRN	VOIRI, Tehran	*0030-0130* 0200-0330	English Spanish & Arabic	12609
9690	RRW	DW, Kigali	0000-0200*	German	12018
9695	AFS	Channel Africa, Meyerton	*0400-0500*	Portuguese	10287
9705	IND	AIR, Delhi	0000-0045*	English	10083
9710	MLI	CRI, Bamako	0000-0100 0100-0200 0200-0300 0300-0400 0400-0500	English Cantonese Chinese English Chinese	16129
9727	VTN	V. of Vietnam, Hanoi	0000-0055*	various & Lao	7700
9730	MYA	R. Myanmar, Yangon	*0200-0300 0300-0500	English Burmese	7930
9730	SLK	SLBC, Colombo	0100-0115	English	8359
9741	INS	RRI, Sorong	0000-0400*	Indonesian	4334
9740	GRC	VOA, Kavala	*0100-0300*	English	14499
9740	ARS	BSKSA, Riyadh	0400-0500	Arabic (Koran)	12553
9750	MOR	VOA, Briech	*0400-0500	Romanian	17328
9755	CHN	CNR-2, Beijing	0000-0200	Chinese	9121
9760	J	R. Tampa, Tokyo	0000-0400	Japanese	8228
9765	RRW	DW, Kigali	0000-0200	German	12018
9785	SEY	FEBA	*0215-0245*	Sindhi, Hindko, Siraiki, Baluchi	9644
9790	GAB/F	RFI, Moyabi/Issoudin	0400-0415	French	13852
9805	SEY	FEBA, Mahe	*0215-0245* 0300-0330	Urdu and Punjabi, unidentified language	9644
9820	SEY	FEBA, Mahe	*0315-0415*	Swahili	9644
9850	EGY	R. Cairo	*0300-0500	Arabic	13593
9860	MDG	RN, Tananarive	0200-0325*	English	9296
9900	EGY	R. Cairo	0230-0500	Arabic	13953
9905	TJK	R. Dushanbe	*0345-0415	Arabic & English	11420
9910	IND	AIR, Delhi	*0215-0300 0300-0345*	Pashto Dari	10083
9950	IND	AIR, Delhi	0100-0200	Burmese	10083
9965	ARM	R. Yerevan	0200-0300	Arabic & Spanish	13480



# Listener's Library

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When we talk about Pirate Radio one name that almost immediately comes to mind is Andy Yoder. We have two of Andy's books to take a look at this month. First we will take a look at a submission by Kris Field and then I'll take a crack at the next one.

## **PIRATE RADIO**

*The Incredible Sage of America's Underground, Illegal Broadcasters*

by Andrew Yoder

326 Pages

Hightext Publications, Inc.

PO Box 1489

Solano Beach, CA

ISBN 1-878707-29-9

Reviewed by Kris W. Field

Well, Andrew Yoder's done it again!

His newest book on pirate radio activity take you inside the pirate scene. Mr. Yoder has in 326 pages given his readers a firsthand account from a perspective only he may be able to provide.

Andrew has admittedly been "involved" in the pirate scene since his thirteenth birthday when he picked up a copy of *S9* and read a column on pirate radio. Since then he's spent untold hours listening for pirate broadcasts and verifying them. He's run a mail-drop for pirates and published *The Pirate Pages* which tracked pirate loggings; and been an enthusiastic member of the Association of Clandestine radio Enthusiasts (A.C.E.). He's co-authored other books on this subject with George Zeller and co-presented forums on pirate radio with George at several Winter SWL Fests.

To say that Mr. Yoder has an inside track on all of this activity would seem an understatement! His newest book chronicles the very

beginnings of Pirate Radio and brings us right up to the present. Some of my favorite chapters were on the European pirates, Off-shore Pirates, and the chapter on verifying pirates (including Inside A Mail-drop). The appendix includes 10 pages filled with addresses of the best known mail-drops listing all of the pirate broadcasters known to verify via each. The bibliography is eleven pages containing a list of other books and articles written about pirates. And most uniquely, a CD-ROM comes with this book containing 14 tracks or segments from twenty-plus pirate broadcasts!

This book is an easy to read compilation of almost anything you'd ever like to know about the pirate radio scene! From station profiles, to tips on "how to listen to pirates?", "What do I do when I hear them?" to info about the FCC, "what kind of equipment do I need to listen to a pirate?"; this book has it all. Fun to read and illustrated with copies of QSL cards from pirates, photos of their equipment and even some photos of former pirates themselves.

If you've wondered what this part of the hobby is all about, this is a great source of information!

Over the years, I've gone from rabid QSL-collecting pirate hunter to a casual listener of pirates and this book was fun to read for me! I have no problem recommending it to other NASWA members at all. Nicely done, Andrew!

Thanks for the review Kris. Well, what about the rest of you folks? If you've read a good radio book recently, why not send in a few line about it for the rest of us? Now it's my turn to take a look at another new Andy Yoder product.

**PIRATE RADIO OPERATIONS**  
by Andrew Yoder & Earl T. Gray  
364 Pages  
**\$19.95**  
Loompanics Unlimited  
PO Box 1197  
Port Townsend, Washington 98368

Well Kris really said something when he pointed out that the above book was a "compilation of almost anything you'd ever like to know about the pirate radio scene!" What most of Andy's works up to this point have left of was detailed information on how to BE a pirate!!! Then one day, in a plain brown wrapper, came Andy's even newer newest book, from Loompanics Unlimited no less, **PIRATE RADIO OPERATIONS**. Andy's past writings have drawn the attention of certain authorities over the years but this book should earn him a permanent wiretap at least. After years of prodding by friends and fans, including myself, Andy with the help of Earl T. Gray puts it all on the table in a complete presentation of how to build and operate a pirate radio station of your very own.



**The free radio movement  
has had a  
fascinating history.  
Now there is a book that  
writes  
the next few chapters  
in that history.**



As we in the radio hobby all know, the free radio movement has had a fascinating history. Now there is a book that writes the next few chapters in that history. With the information in this book, anybody who is willing to face the realities of broadcasting without the benefit of recognized credentials can get a practical station on the air. This amounts to the first true "hands-on" manual for the pirate radio hobby.

The team of Yoder and Gray create a full and complete explanation of how to do pirate radio. Areas of comprehensive study include how to outfit a pirate-radio studio—cheap, studio techniques and production, public relations, how to build transmitters and antennas, when and how to broadcast, best pirate frequencies, the FCC and pirate radio, unobtrusiveness, safety issues and most importantly if you plan to play this game, what to do if "the knock" comes on your door.

What I especially like about the way this book is set up is its emphasis on production techniques. Anybody who monitors pirate signals can remember stations (WPIG comes to mind) with very low production quality, little more than ranting into a microphone on an abused amateur radio transmitter. However, those of us who monitor have also heard commercial quality broadcasting (Radio Azteca comes to mind). Andy and Earl teach the prospective pirate the right way to put a program together so that this form of relatively inexpensive broadcasting can rival the quality of the big buck commercial operations.

The book is the same high quality production that we have come to expect from Andy and any of his collaborators and it belongs on the shelf of any pirate radio enthusiast regardless of if they plan to put a signal on the air or just listen to the folks who will. By the way I WANT to meet the woman who posed for the cover art!!!

Now for the editorial comment. I've enjoyed pirate radio since the days of Voice of the Voyager. What has developed over the years is what amounts to more or less a community. The pirate operators and the pirate monitors have shared a relationship that has grown close over the years. While I applaud Andy's efforts to bring this information out I must also wonder if this project won't attract people to the bands who won't be as "collegial" as we have become used to. But then, anarchy abounds in the free radio movement so we may find these new entries into the pirate radio realm exciting as opposed to shouting "There goes the neighborhood." All this said, I concur with Kris Field. Nicely done, Andrew!!!



# Equipment Reviews

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## The Drake SW2 Shortwave Receiver

Although the major Japanese receiver manufacturers (Kenwood, Icom and Yaesu) seem to have given up on the shortwave receiver market (the Yaesu FRG-100 was the last new HF-only receiver from them and it appeared in late 1993), the United States' R.L. Drake Company keeps marching along. Drake now has a complete line of SW receivers at a range of prices and features. The new SW2 receiver fills the gap between the barebones SW1 and the transportable SW8. The SW2 adds SSB reception and better filtering to the SW1 and adopts the selectable sideband synchronous detector found in the later versions of the SW8. The SW2 also provides more memory channels, 100 vs. the SW1's 32 and the SW8's 70.

The SW2 sells for under \$500, not including accessories, such as the infrared remote control, MS8 external speaker, carrying handle or a mobile mounting bracket—a receiver option that I haven't seen offered for quite some time. The carry handle would be useful even if the radio never leaves the table, since it can be used as a tilt bail to elevate the set's front panel and it only adds \$4.95 to the cost of the radio. The remote control sells for \$48.95 and the mobile mounting bracket goes for \$14.95.

### Look Familiar?

The SW2 uses the same packaging as the SW1 and only close inspection will reveal the differences in the radios. It is a compact 10-7/8 x 4-3/8 x 7-5/8 inches (WxHxD) and weighs in at 5.8 pounds, including the external power supply. The radio can be powered

from any 12 volt DC supply capable of supplying 1.5 amps, but there is no provision for inboard batteries, as in the SW8. The multi-color LCD display offers more information than the SW1; for example, mode and meter band display, as well as an S-meter. Either screw terminals or a SO-239 jack may be used to connect a nominal 50 ohm antenna, a 1/8 inch jack is provided for either stereo or mono headphones and a 1/4 inch jack can be used for an external speaker. There is no line level output for things such as a tape recorder and, due to the design of the audio amplifier, neither the external speaker or headphone outputs can be grounded without damaging the set. This precludes the use of outboard accessories, such as audio filters and data decoders.

### The Specs

The SW2 covers 100 kHz to 30 MHz without gaps. It is a dual conversion design with the first IF at 55.845 MHz and the second at 455 kHz. The frequency synthesizer tunes in 50 kHz steps and the resolution of the frequency display is to 0.1 kHz. Tuning can be accomplished by tuning knob, direct keypad entry (in kilohertz format, i.e. no decimal) or in 5 kHz steps via the Up/Down step buttons. When using the keypad, frequencies of 10 MHz or higher are tuned directly when the one kilohertz digit is entered. Below this point, the selected frequency is loaded into the receiver's VFO when either the Up or Down button is pressed. This protocol is used since there is no separate "Enter" button on the keypad. This is a somewhat non-intuitive control feature—I had to read the manual to figure it out!

The 100 memory channels store both frequency and mode. When in memory recall mode, the memory channels can be scrolled through using either the tuning knob or Up/Down buttons or a channel can be directly accessed by entering the channel number on the keypad. When programming a memory channel, the frequency to be stored is scrolled across the display a digit at a time, which is fun to watch. The memory channel display does double duty as a meter band indicator when the radio is in VFO mode. If the receiver is in a SSB mode, the meter band indicator shows the amateur band designation (80 meters and above) if the tuned frequency lies within one of those bands. If the radio is in AM or sync modes the display indicates the designated international broadcasting band.

Besides the tuning keypad, there are pushbuttons for mode control, VFO/Memory control and a two-step dimmer. The SW2 retains the SW1's rotary controls for volume and RF gain and the front-mounted speaker. The SW2 incorporates two IF bandwidth filters, which cannot be selected independently of mode. The AM/synchronous detector filter is specified as a 6 kHz bandwidth at -6 dB and less than 12 kHz at -60 dB. The SSB filter is rated at 2.3 kHz and less than 5 kHz at the -6/-60 dB points. The AM filter used is a higher quality unit than that in the SW1.

The SW2 lacks a clock/timer as well as a line level audio output for a tape recorder. Therefore, unattended recording is not possible. I would like to see a sleep timer feature, since the radio is small enough to serve as a bedside radio.

## Operation

Since the SW2 offers only basic features, it is quite easy to operate. I had to refer to the manual only to learn how to enter frequencies below 10 MHz and how to use the memory features. The radio is toggled between AM and sync modes by the "AM SYNC" button. When in sync mode the desired sideband is selected via the "SSB"

button. In SSB mode, the "SSB" button toggles between USB and LSB modes. Tuning is smooth, although the knob lacks weight. The tuning rate is 1.5 kHz per revolution which is good for slowly scanning through a band. For wider frequency jumps, it's better to use the keypad. The Up/Down buttons step the radio in 5 kHz increments, which is nice for stepping through the international broadcast bands. Holding the Up/Down buttons in increases the tuning rate (but still in 5 kHz increments).

The most interesting feature of the SW2 is its synchronous detector. It locks quickly and holds sync well. It will lock if the radio is tuned to within one kilohertz of the carrier frequency. The ability to select either sideband greatly increases its utility. I checked the degree of rejection of the opposite sideband relative to the selected sideband by listening to the Canadian time station CHU, which transmits an upper sideband plus carrier signal. The signal was just audible when the lower sideband was selected in sync mode, when CHU was being received with a strong signal. The opposite sideband rejection was better in regular SSB mode. The sync mode proved very useful in eliminating the heterodyne that occurred when there was a strong station on one side of the desired signal. I noticed a slight degree of passband asymmetry in sync mode—the upper sideband sounded somewhat "brighter" than the lower.

I had no complaints about the SW2's sensitivity or the ability of its front-end to handle strong signals using my usual outdoor antennas with a MW filter. A 30 feet length of wire is supplied with the radio for use as an antenna, but an outdoor antenna will provide better rejection of electrical interference from electrical equipment inside the house. The selectivity was good overall, with the filters chosen representing a reasonable compromise between interference rejection and audio quality. It would be nice to be able to select the narrower SSB filter for use in AM/Sync modes, but if the narrower filter is required the station can be tuned in ECSS mode. Since the smallest tuning step is only

50 Hz, it is sometimes impossible to get exact "zero-beat", but 50 Hz is usually close enough for voice signals. Since the second IF is 455 kHz, the filters can be replaced with narrower units, such as the Kiwa filter modules, if tighter selectivity values are desired. The overall sound quality is quite pleasant, although the audio is somewhat "clipped" relative to that of the SW1, since the SW2 uses higher quality filters with tighter skirt selectivity. Given Drake's heritage as a manufacturer of amateur radio receivers, the SSB reception quality is very good.

## Summary

The Drake SW2 is a basic receiver that offers solid performance at a very reasonable price. It lacks a lot of the bells and whistles of other

communications receivers, but that's what keeps the price down. It would make a great "first receiver" or would be appropriate as a step-up for someone using a less-expensive portable. Its performance capabilities are such that it would not be quickly outgrown. The SW2 would also be useful as a second receiver for program listening, due to its pleasant audio. My only major complaint is that the design of the audio amplifier precludes the use of outboard accessories (i.e. audio filters and digital decoders) that could be used to enhance the radio's performance and capabilities. The R. L. Drake Co. can be reached at 230 Industrial Drive, Franklin, OH 45005; (513) 746-6990. Their Website is at [www.rldrake.com](http://www.rldrake.com). Thanks to Universal Radio for loaning me the review receiver.



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## Hardware Bits by Alan Johnson

**AOR AR-7030 REVIEW**—For those who are interested in obtaining more information from a user's perspective on this radio, there is a detailed review from Guy Atkins available on the World Wide Web at the Radio Graffiti Board site (<http://espresso.ts.uvic.ca>). This review has appeared in DX Ontario and in the National Radio Club bulletin and is very thorough.

**RF SYSTEMS ACCESSORIES**—Johns Wagner sent me samples of some new goodies from the Dutch firm, RF Systems. These include the MT Isolator and the DPX 30 antenna duplexer.

The MT Isolator is designed to isolate the receiver from the feedline and provide a direct DC current path from the antenna to ground. This provides protection from static discharge and lightning. The radio signal is coupled from the antenna to the receiver magnetically via a specially designed ferrite core transformer. The manufacturer states that this feature may help in reducing received noise. The MT isolator is usable over the frequency range of 50 kHz to 50 MHz with input and output impedances of 50 ohms. It can even be used with transceivers with a maximum power output of 100 watts. I didn't notice any significant noise reduction when I tried the MT Isolator on my dipole, but I'm already using a balun on the antenna that provides a DC path to ground.

The DPX 30 is designed to allow for the use of separate antennas for the HF range and the VHF/UHF range with the new wideband receivers that only have a single antenna input. This permits using antennas that have the characteristics that are best suited for each frequency range, i.e., a directional antenna for HF and an omnidirectional antenna for the higher frequencies.

Price and availability information can be obtained from Universal Radio, Inc., 6830 Americana Parkway, Reynoldsburg, OH 43068; (614) 866-4267.



## Mobile SW Listening (Part 4)

Previous installments explored the use of converters, in-dash radios, and mobile antenna choices. This month I will discuss how to use your portable radio in your vehicle. Let's first look at portable radio characteristics that can improve your enjoyment of mobile SW radio.

The most important feature you should have on your portable radio is an external antenna connector. I have used a portable radio with a built-in whip with poor results. Noise from the vehicle ignition and fuel systems coupled with the car's computer limited reception to only the really big signals like RCI, BBC, Radio Netherlands, and WWCR. Use a good-quality, well-shielded, coax cable between the radio and the antenna.

The second most important feature is a large number of easily selectable memories. You do not want to be looking at a radio dial while hurtling down the highway. Load your frequently used frequencies into memory and just count clicks as you change frequency.

Good audio power level is important to overcome acoustic road noises. Most portables do not have much audio output power. Designers deliberately keep audio power low to conserve battery power. Your car, however, probably has a fine radio and or tape player that provides high quality audio at ear splitting levels. The problem is finding a way to get the audio signal into your vehicle's audio system.

The easiest way to couple audio, if you have a built-in tape player, is to purchase a magnetic coupler. Personal electronics stores sell these devices as a way to patch the output of

portable CD players into your car's tape player. The adapters need no external power or batteries. They look like a cassette tape with a wire coming out of one end. The wire has a miniature stereo connector on the other end that fits the earphone jack on your portable radio. The cassette-like device plugs into your tape player just like a cassette. A small tape head in the device generates a magnetic field that couples into the head of the tape player. The magnetic field varies with the audio from your portable SW receiver. The varying field generates a current in the playback head similar to the variation caused by a tape moving past the head. The amplifier boosts the level to listenable levels. The audio power comes from your car's electrical system, not from the radio's batteries. Major discounters and Radio Shack sell these devices for less than \$20. The Radio Shack part number is 12-1951.

If your vehicle does not have a tape player, do not despair. Use a small transmitter that sends the audio output of the portable radio to the FM radio in your vehicle. WalMart markets such a device called the Sound Feeder SF120 for less than \$20. It runs on 10 milliamperes from a single AA battery. I have also seen this device advertised in yuppie mail order catalogs at \$35.

Notice, I do not recommend running your portable from the car's electrical system. These radios usually do not have any filtering on the external power connector. The noise on your car's electrical system will easily couple into your radio to obliterate SW reception. Instead you should power your SW portable from its internal batteries or from a rechargeable external battery.

Camcorder batteries are good candidates. If you are familiar with electrical circuits, you can rig up a way to recharge the battery from the vehicle's accessory socket when the SW radio is not being used.

Many SWL's have their portable radios sitting on the seat next to them. I do not recommend this practice. In a quick stop or accident the radio can become a ballistic missile hurtling around the passenger compartment. This is not good for your radio nor for you or your passengers. I suggest use of double-stick tape, Velcro, or bungee cord to securely hold your radio in place. Because each vehicle and radio is different, it is difficult to provide generalized guidelines for mechanically mounting your radio safely.

Consider too whether or not you want to remove your radio from the vehicle to avoid theft. A Velcro or bungee cord solution permits you to uninstall the radio quickly when you leave. You can take your radio with you or you can hide it under a seat or in the glove compartment. Remember though that the ability to remove the radio easily aids the would-be thief if you decide not to sequester the radio when you leave.

You might consider a piece of light-colored cloth to cover the radio when you are not looking at it. Sunlight and heat can do nasty things to some plastics over time. Keeping the radio covered will inhibit deterioration due to sunlight and keep dirt and pollen out of your radio. The cloth also hides the radio from prying eyes making it less likely that somebody will see your radio and mark you for a rip-off at a later time.

Earphones are a good way to listen to SW radio when there are other people around. In the automobile environment they can also cut down some of the road noise. But be careful. Most US states have laws making it illegal to wear earphones while driving. Consult your local Department of Motor Vehicles for the applicable regulations in your area. Keeping one ear open may be suffi-

cient. These laws ensure that drivers are able to hear warning sirens from emergency vehicles and railroad crossing signals. The rules are meant for your safety and should be observed not just because they are the law but because they make sense.

The information presented in this series is summarized as follows:

1. The choice of mobile receiver is a very personal decision. If you are not sure you would enjoy mobile SW listening, buy a digital portable with at least 30 memories. If you find you don't like to listen to SW in the car, you can easily sell the portable radio. The same cannot be said for a converter or an in-dash radio.

2. To minimize noise, power your radio directly from the car battery or from a separate battery that you recharge from the car's electrical system when you are not listening.

3. Keep your antenna simple, high and as long as legally possible. A \$15 stainless steel CB whip is a best buy for most uses. Mount it as far as possible from the engine and use good quality double shielded coax to keep noise out of the feedline. A twenty-dollar helical whip tuned to the 40 meter band may provide improved reception in the 49, 40, and 31 meter bands.

4. Stay safe. Use memories to select the stations you want. You will find your listening habits will repeat on a daily cycle. Put the stations into memory in the order you listen to them. A single punch of the memory tuning function will set you up for the next program. Do not wear earphones while driving. Solidly fix your radio to the vehicle to prevent secondary collisions in case of a sudden deceleration.

Thanks to John Wagner for his help on this series. Next time I will begin a multipart series on digital SW broadcasting. It's coming sooner than you think. Until then, stay tuned. 

# Listener's Notebook

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**WELL, HERE IT IS JULY**, and those Summer 97 skeds that all should've been in my hands two months ago continue to trickle in. Simply amazing. Even on web pages, many stations have outdated schedules. It's one heckuva way to run a railroad.

Anyway, the usual mid-summer DX "lull" here in the Northern Hemisphere usually means a smaller-than-usual column...but considering the ink we've spilled (and the columns we've bumped) here over the past few months, I don't think any of the NASWA editorial staff will be complaining...

As ever, thanks to all our generous news contributors for making this column possible.

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**ALBANIA** *Norea Radio* via TWR, observed on 9904.9v, \*1930-2030\*. TWR Electric Piano IS, Finnish and Swedish anmts, incl. ID in Swedish as "Norea Radio Sverige." Then a religious prgm in Finnish called "Raamattu kannesta kanteen" (Bible from beginning to the end). (29-May/Novello) [Jay originally presumed this from Monaco, but Kai Ludwig-FRG speculated varying freq+modulation=Albania; confirmed by Chuck Roswell-TWR.—via NU/Padula/EDXP]

*Radio Tirana* at 0230-0300 in English, ex 6140.//7160 kHz. Also at 0145-0200. (25-May/Fine/WWDXC TopNews/Bueschel-FRG)

**ANGOLA** With the end of two decades of civil war, UNITA radio—*Voice of the Resistance of the Black Cockerel* (VORGAN)—appears intent on retaining its place in the new Angola, despite apparent government noises in favor of silencing it. Per a recent broadcast, "Vorgan is the voice of the indigenous people who represent a considerable portion of the national fabric. However, a minority, supported by mercenaries of the press...is trying to hold down, belittle and even smother our radio station. Let us not forget that in the past it was intolerance, much like what we experience today, that led to force being used to silence Vorgan. In fact, we would not be surprised if other plans were in the pipeline to achieve this, even though Vorgan's sacred mission is to tell the truth. We have always supported a pluralist democracy, so we see it as a crime when our freedom is threatened, just as we would see it as a crime to threaten other people's freedom." (3-Jun/VORGAN/BBCM)

**ARGENTINA** Here is the new schedule from *RAE, Radiodifusion Argentina al Exterior* valid from 30 June:

0100-0200	Spanish	15345
0100-0200	Portuguese	11710
0200-0300	English	11710
0300-0400	French	11710
1000-1100	Portuguese	11710
1100-1200	Japanese	11710
1200-1400	Spanish	11710
1800-1900	French	15345
1900-2000	English	15345
2000-2100	Italian	15345
2100-2200	German	15345
2200-2300	Spanish	15345
2300-0100	Spanish	9690 15345

LRA1 *Radio Nacional* program "Panorama Nacional" in Spanish is broadcast at 0900-1200 on 6060 & 15345 khz and at 1500-1600 on 15345 khz. Sat & Sun connection with LRA1 *Radio Nacional Buenos Aires*. (Barrera-ARG) R. Nacional observed on 6059.94, \*0911 May 23, popping on in mid-sentence with nx, almost fully blocking the Brazilian that was here. (23-May/Berg/EDXP/Padula-AUS)

8098.0L, *Radio Rivadavia*, 2335-2345, sports programming in Spanish, Copa America, program sponsored by Loteria Nacional (21-Jun/Kuhl/DX Window/DSWCI/Krone)

**ARMENIA** *Voice of Armenia*, Z97:

0000-0045	Arm/SS	7480 9965
0800-0900	FF/EE	15370 15270 Su
1500-1530	Azeri	4810 4990 7480 Mo-Fr
1530-1545	Georgian	4810 4990 7480
1545-1600	Kurdish	4810 4990 7480
1630-1700	Farsi	4810 4990 7480

1700-1730	Russian	4810 4990 7480
1730-1830	Armenian	4810 4990 7480
1830-1845	Turkish	4810 4990 7480 Mo-Fr
1830-1900	Turkish	4810 4990 7480 Sa-Su
1845-1900	English	4810 4990 7480 Mo-Fr
1900-2000	Arabic	4810
1900-2000	Armenian	9965 7480
2000-2100	FF/EE	7480 9965
2100-2145	Arm/SS	7480 9965

**Radio Intercontinental:**

0900-0930	German	15270
1800-1825	German	9965 Mo-Fr
1800-1830	German	9965 Sa-Su

(NDXC/EDXP/Padula-AUS)

**AUSTRALIA** Negotiations are under way to lease Australian shortwave transmitters in Darwin to international broadcasters. The communications minister, Richard Alston, told parliament that the major shortwave transmitters at the Cox Peninsula near Darwin would be shut down on 1st July. But Senator Alston said the transmitters currently used by Radio Australia could be reactivated at short notice if international broadcasters, such as the American *Radio Free Asia*, want to lease time. (17-Jun/R. Australia/BBCM)

**BELARUS** *Radio Belarus*, Z97:

1800-1830	Belorussian	11960/7210 (Minsk), 9905/7410 (Kiev)
1830-1900	Belorussian/GG	11960/7210 (Minsk), 9905/7410 (Kiev)

(NDXC/EDXP/Padula-AUS)

**BOLIVIA** 4552.4 *R.Dif. Tropico*; Trinidad (t), 4jun, 0020-0050, with extended schedule mostly og talks in Spanish. (4-Jun/Petersen/DX Window/DSW-CI/Krone)

6194.60 *Radio Carlos Palenque*, La Paz; \*0903-0930 p on 01/06/97. S/on with can ned opening anmt, then into CP folklore px. (1-Jun/Nozaki-JPN/Relampago DX)

**BRAZIL** 2460.0 "A Super R. Alvorada", Rio Branco, unusual catch here; 0100, starting "A Show da Cidade". (I was checking for Colombian R. Viva harmonic, which now seems to have gone). (17-Jun/Klemetz-COL/Dateline Bogota)

3245.11 *R. Clube*, Varginha, 0000-0005, P ID, pop songs, LSB clear 23333 (14-Jun/Phillips/DX Window/DSWCI/Krone)

9615.05 *R. Cultura*, Sao Paulo, 2215+ Melodic Brazilian popular music of the '70's and '80's, hosted by laid-back female DJ. Still going strong at 0215 check. (14-Jun/Novello)

11724.7 Canned ID 2030, "Transmitindo: ZYJ208 onda media 730 kHz, ZYD453 Frecuencia Modulada

88.5 MHz, *Radio Marumby*. Ondas curtas, Radio Novas de Paz, ZYE726 49 metros 6080 kHz, 31 metros 9515 kHz, 25 metros 11725 kHz. Curitiba, Parana, Brasil. Organizacao Mateus Jensen". From this ID one must conclude that the QTH is Curitiba, and not Florianopolis as listed in the WRTH. Additionally, WRTH users will be confused to find two separate entries for what is believed to be one single organization, albeit with two names and perhaps two programs. (17-Jun/Klemetz-COL/Dateline Bogota)

**BULGARIA** *Radio Bulgaria* noted: 7115 \*0430 Albanian, 8 June; 9475 \*0630 Serbo Croatian, Sundays, 8 June; 7345 Turkish 0400-0430, 9 June. (Padula-AUS/EDXP) R. Bulgaria in Turkish now on 5900 kHz (x6040) Mo-Fr 0415-0500, Sa/Su 0500-0630. (3-Jun/PanView-BUL/WWDXC TopNews/Bueschel-FRG)

**CANADA** acc to *Radio Canada International* Montreal schedule, bc in English/French 1330-1459 to Europe from Sines-POR observed on 15535 (ex 15325) kHz. (8-Jun/Kubiak-FRG/WWDXC TopNews/Bueschel-FRG)

**CHINA (PRC)** *CNR* Network 4 (Minorities Service) from 2 June:

0000-0027	Tibetan	15670 11630 11375
0030-0057	Uighur	15670 11375 10260
0100-0127	Kazakh	15670 11375 10260
0430-0457	Korean	9920 9775 8566
0500-0527	Mongolian	9920 9975 8566 4800
0530-0557	Tibetan	15670 11630 11375
0600-0627	Uighur	15670 11375 10260
0630-0657	Kazakh	15670 11375 10260
1000-1027	Korean	9920 9775 8566
1030-1057	Tibetan	15670 11630 11375
1100-1127	Uighur	15670 11375 10260
1130-1157	Kazakh	15670 11375 10260
1200-1227	Korean	9775 5420 4190
1230-1257	Mongolian	9775 5420 4800 4190
1300-1327	Tibetan	15670 11630 11375
1330-1357	Uighur	15670 11375 10260
1400-1427	Kazakh	15670 11375 10260
1430-1457	Mongolian	15670 11375 10260
2130-2157	Korean	9775 5420 4190
2200-2227	Mongolian	9775 5420 4800 4190

(Jun/NDXC/EDXP/Padula-AUS)

**CNR** Network 6 (To Chinese World)—Chinese:

0353-1130	15880 11000
1130-1804	11000 9170
2053-2200	9170 6790
2200-0104	11000 9170

Daily span is 2053-0104, 0353-1804, excepting Tuesdays 0603-0955). (Jun/NDXC/EDXP/Padula-AUS)

**CLANDESTINE-AFRICA** *Voice of Free Nigeria* [movement] scheduled Sat at 1900-2000 on 11680

kHz. Noted also on test bc 7180 kHz at Thurs night lately. Address: VoFree Nigeria, P.O.Box 441395, Indianapolis, Indiana, 46244 U.S.A. tel. 1-317 216 45 90 (19-Jun/RNMN/WWDXC TopNews/Bueschel-FRG) [all CIA sponsored Clandestine Radio Stations which bc in the past, had a box number at Indianapolis! Coincidence? -Bueschel-FRG] Voice of Free Nigeria, 11680, carrier on 1853, s/on 1900 in English. Listener show/call-ins. Fair signal, s5-7. The Web site at <http://pw2.netcom.com/~fnm/> does not have any broadcast information, just news about the movement. Carrier off after 20 UT. (21-Jun/Sundstrom)

**CLANDESTINE-ASIA** Current schedule of clandestine stations are as follows:

*The Voice of the National Salvation* (from North Korea)

0030-0100	English	3480 4450 4557
0300-0700	Korean	3480 4450 4557
1000-1700	Korean	3480 4120 4450 4557 (& 6010kHz until 1400)
2000-0030	Korean	3480 4450 4557

*Radio Echo of Hope* (from South Korea)

0300-0600	Korean	6348
0900-1200	Korean	3985
1200-1500	Korean	3985
1500-1800	Korean	3985
2000-2300	Korean	3985

*Voice of the People* (from South Korea)

0300-0500	Korean	6518 6600
0900-1700	Korean	3912
2000-2200	Korean	3912
2300-0100	Korean	6518 6600

(Yamashita/DX Window/DSWCI/Krone)

**CLANDESTINE-MIDEAST** *VO Free Tajikistan* now sked at 0230, 0330, 0530 and 0630 on 5965 and 7100 kHz. (BBCM)

**COLOMBIA** As of Jun 9, Caracol main network was renamed "*Caracol Colombia*". Programming remains unchanged. Caracol "R. Reloj" outlets (MW only) have been renamed "Caracol + QTH" and will specialize in covering local news. Additionally, they will relay the top of the hour "Cuarto de hora Caracol" newscast from the "cadena basica" (main network). In Bogota, 1100 kHz is thus "Caracol Bogota", in Cali, 1110, is "Caracol Cali" etc. (9-Jun/Klemetz-COL/Dateline Bogota)

**COSTA RICA** *RFPI* has dropped 6205U after QRM complaints from the Australian Maritime Safety Authority. (RFPI/rec.radio.shortwave) New 24h on 22050kHz, per their newsletter. (12-Jun/Ohlsson/EDXP/Padula-AUS)

**CUBA** *Radio Havana Cuba* latest sked:

0000-0030	Creole	6180
0000-0030	Quechua	15340
0000-0100	Spanish	5965 6000 6070 9505 9550 11760 11970 13715
0030-0100	French	6180
0030-0100	Portuguese	15340
0100-0130	Creole	6180
0100-0200	Spanish	5965 6070 9505 9550 11760 11970 13715
0100-0500	English	6000 9820 9830U
0130-0200	French	6180
0200-0300	Spanish	5965 6070 6180 9505 9550 11760 11970 13715
0300-0500	Spanish	5965 6070 6180 9505 11760 13715
0500-0700	English	9820 9830U
0700-0730	Esperanto	9820 Su
1100-1200	Spanish	6180 9550 11760
1200-1400	Spanish	6070 6180 9550 11760 15340
1400-1500	Spanish	6070 6180 11760
1500-1530	Esperanto	11760 Su
1930-2000	Esperanto	13715 Su
2000-2030	Portuguese	11760 13680
2000-2030	Arabic	11760
2000-2030	French	13715 13725U
2030-2100	Arabic	13680
2030-2130	English	13715 13725U
2100-2300	Spanish	9830U 11760 13680
2130-2200	Creole	6000
2130-2200	French	13715 13725U
2200-2230	Portuguese	15340
2200-2230	French	6000
2200-2230	Esperanto	13715 Su
2230-2300	Guarani	15340
2230-2330	English	6000
2300-2330	Portuguese	15340
2330-2400	Esperanto	6070 11760 Su
2330-2400	French	6000
2330-2400	Guarani	15340
2330-2400	Portuguese	11970

(NY Transfer News Collective/DX-Antwerp)

**CZECH REPUBLIC** *Radio Prague* observed on 6200, SS \*0230-0300\*, not on listed 5930, // 7345. (8-Jun/Padula-AUS/EDXP).

**DEMOCRATIC REPUBLIC OF CONGO** Former Voix du Zaire now calls itself "*RTNC, Radio-Television Nationale Congolaise*, emettant de Kinshasa," also at times "la voix du peuple." Station continues to be observed on 15244.5 kHz between approximately 0500 and 1830. (BBCM)

**GEORGIA** 11910 \*1830 *Radio Georgia* with IS twice and beginning EE prgrm W anncr says "This is Gheeorghesa" twice, then longer IS, then reads list of times and frequencies when EE can be heard, and station address (68 Kostava St), and phone number

(328238). Audio from station seemed attenuated above 2500 Hz, which along with accompanying distortion rendered W anncr's voice almost unintelligible. Scheduled until 1900, but just caught the end of the program and subsequent carrier cut at 1845 after trying to decipher tape of signon. (1-Jun/Nov-ello)

**Voice of Abkhazia**, Sukhumi, 9494.80, 1632 male and female talks in presumed Georgian, typical Georgian folk music. (24-Jun/Schaay-HOL)

**GERMANY Radio Liberty**—Holzkirchen (presumed) on NF 6115, 2300-0000 Russian, not audible on listed 5985, // usual 5955, 8 June. (Padula-AUS/EDXP).

**GUAM** Sked change for **KSDA**: add 7455 1600-1700UT 100kW 165 degrees to zone 41. (4-Jun/Jacobs/EDXP/Padula-AUS)

**HUNGARY Radio Budapest** noted on new 6090 in Uk \*0500-0530, QRMing University Network; also on new 6130 with Hu \*0500-0530\* (30-May/Padula-AUS/EDXP). Radio Budapest observed on 7135, NF \*0330-0400\* Ukrainian, // 5915. (8-Jun/Padula-AUS/EDXP).

**INDIA** Here's the latest from **AIR**. All programs without asterisk (\*) are External Services. Transmitter sites: a=Atigarh, b=Bombay, ba=Bangalore, d=Delhi, g=Gorakhpur, gu=Guwahati, m-Madras, p=Panaji.

0000-0045	Tamil	4790m 9835d 9910a 11740ba 13795ba
0015-0430	Urdu	6155d 9595d
0025-0430	Vividh Bharati*	10330b/gu/d
0030-0035	Hindi*	7110d 11870d
0035-0040	English*	7110d 11870d
0100-0130	Burmese	9950d 11620d
0100-0200	Sindhi	5990a 7125d
0100-0430	Vividh Bharati*	10330m
0125-0130	Sanskrit*	11830d 15135d
0130-0135	Hindi*	11830d 15135d
0130-0200	Tibetan	9565p 11900ba 13700ba
0130-0228	Nepali	6045d 7250p 11715ba
0135-0145	Assamese*	15135d
0135-0145	Telegu*	11830d
0145-0155	Oriya*	15135d
0145-0155	Tamil*	11830d
0155-0205	Bengali*	15135d
0155-0205	Malayalam*	11830d
0205-0215	Kannada*	11830d
0215-0225	Kashmiri*	7110d
0215-0300	Pushtu	7225d 9910a 13620a
0230-0245	Hindi*	6045d 7110d 11830d 15135d
0245-0300	Hindi*	15135d
0245-0300	English*	6045d 7110d 11830d

0300-0310	Punjabi*	6045d
0300-0310	Marathi*	11830d
0300-0310	Dogni*	7110d
0300-0345	Dari	7225d 9910a 13620ba
0310-0320	Sindhi*	7110d 11830d
0315-0415	Hindi	11855p 15075b 15180d 17387a
0320-0335	Urdu*	11830d 15135d
0330-0335	Hindi*	7110d
0335-0340	English*	7110d 11830d 15135d
0340-0400	Network program*	7110d 11830d 15135d
0400-0430	Persian	13620ba 15050a 17785ba
0415-0430	Gujarati	15075b 17387a
0430-0530	Arabic	15050a
0430-0530	Swahili	15075b 17387a
0430-0530	Arabic	13620ba 17785a
0630-1200	Vividh Bharati*	10330d
0630-1200	Vividh Bharati*	10330b/d/m/gu
0630-1200	Vividh Bharati*	10330b
0700-0710	Telegu*	15260d
0700-0800	Nepali	9595d 11850d
0710-0720	Tamil*	15260d
0720-0730	Malayalam*	15260d
0730-0735	English*	15185d 15260d
0730-0830	Nepali	7250g
0735-0740	Hindi*	15185d 15260d
0740-0750	Kannada*	15260d
0750-0800	Gujarati*	15260d
0800-0810	Marathi*	15260d
0800-0810	Bengali*	15185d
0810-0820	Assamese*	15185d
0810-0820	Punjabi*	9595d
0820-0830	Urdu*	9595d 15260d
0820-0830	Oriya*	15185d
0830-0840	English*	7250g 15185d 15260d
0830-1130	Urdu	9595d 11620d
0840-0850	Hindi*	7250g 15185d 15260d
0845-0945	Indonesian	15050a 17387d
1000-1100	GOS-II	11585a 13700ba 15050a English 17387d
1115-1130	Arunachal*	11710d 15185d
1115-1145	Thai	15340ba 17895a
1115-1215	Tamil	13710ba 15075d 15770a 17860d
1130-1135	Hindi*	9595d 11620d 11710d 15185d
1135-1140	English*	9595d 11620d 11710d 15185d
1145-1315	Chinese	11840ba 15050d 17705ba
1200-1730	Vividh Bharati*	10330gu
1215-1245	Telegu	13710ba 15770a
1215-1315	Burmese	11620d 11710d
1215-1330	Tibetan	7410a 9565d 11695ba
1220-1230	Network program*	6150d 17860d
1230-1235	English*	4860d 6150d 17860d

1230-1500	Sindhi	6165d 11585ba	2300-2400	Hindi	11740ba
1235-1240	Hindi*	4860d 6150d 17860d	2300-2400	Hindi	9910a 11740ba 13795ba
1240-1245	Sanskrit*	4860d 6150d 17860d	<b>AIR Regional stations (UTC/location/power)</b>		
1245-1255	Sindhi*	6150d	<b>3223 kHz</b>		
1245-1330	????*	4860d	0045-0200	Shimla	50.0
1245-1730	Vividh Bharati*	10330b/d/gu/m	1300-1710	Shimla	50.0
1255-1310	Kashmiri*	6150d	<b>3245 kHz</b>		
1315-1415	Dari	7140d 9910a	1415-1740	Lucknow	50.0
1330-1335	Hindi*	6150d 9565d 9835d	<b>3305 kHz</b>		
1330-1430	Nepali	4860d 6045d 7410a 11695ba	0045-0200	Ranchi	10.0
			1130-1740	Ranchi	10.0
1330-1500	Sinhala	15020d	<b>3315 kHz</b>		
1330-1500	GOS-III English	9545d 11620ba 13710ba	0025-0215	Bhopal	50.0
			1200-1740	Bhopal	50.0
1335-1340	Hindi*	6150d	<b>3345 kHz</b>		
1335-1345	Assamese*	9565d	0025-0215	Jaipur	50.0
1335-1345	Telegu*	9835d	1430-1740	Jaipur	50.0
1345-1355	Tamil*	9835d	<b>3365 kHz</b>		
1345-1355	Oriya*	9565d	1230-1840	Delhi	50.0
1345-1400	Dogri*	6150d	<b>3390 kHz</b>		
1355-1405	Nepali*	9565d	0030-0330	Gangtok	50.0
1355-1405	Malayalam*	9835d	1200-1730	Gangtok	50.0
1405-1415	Network program*	6150d	<b>4760 kHz</b>		
			0000-0300	Portblair	20.0
1405-1415	Bengali*	9565d	0125-0430	Leh	50.0
1405-1415	Kannada*	9835d	1030-1630	Portblair	20...0
1415-1420	Network program*	9565d 9835d	1130-1600	Leh	50.0
			<b>4775 kHz</b>		
1415-1530	Pushu	7140d 9910a	0100-0215	Imphal	50.0
1420-1430	Gujarati*	9835d	1030-1730	Imphal	50.0
1430-1435	English*	6150d 9565d 9835d	<b>4800 kHz</b>		
1430-1930	Urdu	4860d 6045d	0025-0215	Hyderabad	50.0
1435-1440	English*	6150d 9565d 9835d	1145-1745	Hyderabad	50.0
1445-1515	Network program*	6150d 9565d 9835d	<b>4820 kHz</b>		
			0025-0215	Calcutta	50.0
1500-1600	Baluchi	6165d 11585ba	1230-1830	Calcutta	50.0
1515-1530	Hindi*	6150d 9565d 9835d	<b>4840 kHz</b>		
1515-1600	Gujarati	11620ba 15175ba	0015-0400	Bombay	50.0
1515-1615	Swahili	9950d	1230-1730	Bombay	50.0
1530-1545	English*	6150d 7140d 7410a 9565d 9835d 11740ba	<b>4850 kHz</b>		
			0000-0415	Kohima	50.0
1545-1600	Urdu*	6150d 9835d	0930-1630	Kohima	50.0
1600-1730	Network program*	6150d 7140d 9565d 9835d	<b>4860 kHz</b>		
			0025-0400	Delhi	50.0
1615-1715	Russian	11620ba 15140ba	<b>4880 kHz</b>		
1615-1730	Hindi	7410a 9950d 13770ba	0025-0400	Lucknow	50.0
1615-1730	Persian	7265d 9910a 11585ba	1130-1415	Lucknow	50.0
1730-1735	English*	6150d 7140d 9565d 9835d	<b>4895 kHz</b>		
1730-1945	Arabic	9910a 13620ba	0100-0345	Kurseong	20.0
1735-1740	Hindi*	6150d 7140d 9565d 9835d	1130-1740	Kurseong	20.0
1745-1945	GOS-IV English	7410a 9950d 11620ba 11935b 13780ba 15075b	<b>4910 kHz</b>		
			0230-0415	Jaipur	50.0
1945-2030	French	9910a 13620ba	1130-1415	Jaipur	50.0
1945-2045	Hindi	7410a 9950d 11620ba	<b>4920 kHz</b>		
2015-2045	GOS-V English	9910a	0015-0245	Chennai	50.0
			1200-1740	Chennai	50.0
2045-2230	GOS-V English	7150d 7410a 9910a 9950d 11620ba 11715ba	<b>4930 Unconfirmed reports of AIR Shimla here</b>		
			<b>4940 kHz</b>		
2245-0045	GOS-I English	9705a 9950d 11620ba	0015-0400	Guwahati	50.0
			1200-1700	Guwahati	50.0

<b>4950 kHz</b>		
0030-0200	Srinagar	50.0
1130-1745	Srinagar	50.0
<b>4970 kHz</b>		
0000-0400	Shillong	50.0
1045-1700	Shillong	50.0
<b>5010 kHz</b>		
0020-0215	Thiruvananthapuram	20.0
1145-1740	Thiruvananthapuram	20.0
<b>5050 kHz</b>		
0025-0400	Aizwal	10.0
1200-1630	Aizwal	10.0
<b>6000 kHz</b>		
0530-1100	Leh	50.0
<b>6020 kHz</b>		
0215-0400	Shimla	50.0
0700-1000	Shimla	50.0
1130-1230	Shimla	50.0
<b>6065 kHz</b>		
0630-0915	Kohima	50.0
<b>6085 kHz</b>		
0700-0930	Gangtok	50.0
<b>6110 kHz</b>		
0215-0430	Srinagar	50.0
0630-1115	Srinagar	50.0
<b>6140 kHz</b>		
0215-1000	Ranchi	10.0
<b>6150 kHz</b>		
1030-1630	Itanagar	50.0
<b>6190 kHz</b>		
0730-1100	Delhi	50.0
<b>7105 kHz</b>		
0630-1000	Lucknow	50.0
<b>7115 kHz</b>		
0315-0345	Portblair	20.0
0700-0850	Portblair	20.0
<b>7120 kHz</b>		
0700-1000	Jaipur	50.0
<b>7130 kHz</b>		
0645-0930	Shillong	50.0
<b>7140 kHz</b>		
0228-0430	Hyderabad	50.0
0610-0915	Hyderabad	50.0
<b>7150 kHz</b>		
0230-0445	Imphal	50.0
0700-0945	Imphal	50.0
<b>7160 kHz</b>		
0300-0415	Chennai	50.0
0605-1145	Chennai	50.0
<b>7180 kHz</b>		
0228-0405	Bhopal	50.0
0700-0945	Bhopal	50.0
<b>7210 kHz</b>		
0230-0400	Calcutta	50.0
0730-1015	Calcutta	50.0
<b>7230 kHz</b>		
0630-1000	Kurseong	20.0
<b>7240 kHz</b>		
0530-1035	Bombay	50.0
<b>7280 kHz</b>		
0630-0940	Guwahati	50.0
0945-1215	Guwahati	50.0

<b>7290 kHz</b>		
0230-0400	Thiruvananthapuram	20.0
0630-0930	Thiruvananthapuram	20.0
<b>7295 kHz</b>		
0700-0930	Aizwal	10.0
(Dasgupta/DX Window/DSWCI/Krone)		

*All India Radio* is going to have a relay stn in either West Africa the West Indies. This will enable AIR to reach the Americas where there is a large concentration of Indians. Negotiations are under way with friendly countries of these areas.

In Doddaballapur (a place 45 km from Bangalore in SoIndia) *All India Radio* has installed six 500 kW SW txs. The area of the antenna farm is 260 hectares and has 35 remote controlled antennae using 21 towers. Using them, programs can be beamed in eight different directions. Programs are fed via satellite link from Delhi, but in case of failure a local studio will step in with 'canned' programs which will be updated every week. (19-May/Ghose-IND/WRTH/DXW/EDXP/Padula-AUS)

**INDONESIA 3124.5 RSPD22 Halmahera Tengah.** 1200 Jakarta nx relay. 1212 instrumental mx. 1216 telephone conversations and local pops. Poor. (7-Jun/Yamada-JPN/Jembatan DX)

3214.7 **RRI Manado.** 1355 Local pops. 1400 IS. 1401 Local nx entitled "Ikhtisar Berita." 1405 Closing anmt by M including ID "...siaran Radio Republik Indonesia Manado, Programa Satu, melalui..." with mx. Fair. (3-Jun/Yamada-JPN/Jembatan DX)

3231.8 **RRI Bukittinggi.** 1542 local pops. 1559 SCI. 1600 Jakarta nx relay. Reactivated. (11-Jun/Yamada-JPN/Jembatan DX)

3249.8 **RRI Banjarmasin.** 0931 EE px. Listeners letters, talk about visiting Australia from Indonesia, Indon pop mx, suffers badly from c/c QRM, changes back to BI programming at 1000. (7-Jun/Kecskes-AUS/Jembatan DX/Yamada-JPN)

3264.6 **RRI Bengkulu.** 0946 Koran chants, 0954 ID by W, then back to a religious message, a huge signal. (7-Jun/Kecskes-AUS/Jembatan DX/Yamada-JPN)

3265a **RRI Gorontalo,** 1136-1143, Indonesian, Pop music. Smooth voiced lady with ID (14-Jun/Boogert/DX Window/DSWCI/Krone)

3325.0 **RRI Palangkaraya.** 1005 local news, ID followed by short music piece and another ID and prg information. (7-Jun/Kecskes-AUS/Jembatan DX/Yamada-JPN)

3344.9 **RRI Ternate.** 1014 lengthy talk by W, sounds like part of the news from Jakarta. Very bad QRM from PNG. (7-Jun/Kecskes-AUS/Jembatan DX/Yamada-JPN)

3384.9 **RRI Kupang**. 1020 local pop mx, 1024 ID and mention a Timor address. (7-Jun/Kecskes-AUS/Jembatan DX/Yamada-JPN)

3904.8 **RRI Banda Aceh** 2338 Here again with woman in Indo till 2344, when audio abruptly dropped below readability, perhaps switching from RRI relay to local programming. Weak via long path. Missing since this date; operation is very erratic. (1-Jun/Hill)

3904.9 **RRI Merauke**. 1109 Tlks, ID, mx bridges. (1-Jun/Schulze-PHL/Jembatan DX/Yamada-JPN)

3976.0 **RRI Pontianak**. 1318 Ending mx of Jakarta nx. 1319 IS, then pgm of bahasa daerah (local language) including "Warta Berita Daerah". Fair. (26-May/Yamada-JPN/Jembatan DX)

3996.1 **RRI Kendari**. 1901 Jakarta nx relay. 1905 ID by M "Radio Republik Indonesia Kendari", then EE pops. Poor. (1-Jun/Yamada-JPN/Jembatan DX)

3905.0 **RRI Merauke**. 1024 Country music, 1030 ID, short talk by a woman, more mx the more talk, sounds like prg information, 1100 local news, power house signal, sounds like an improved txer, even uses a different IS and has a time pips on the hour. (8-Jun/Kecskes-AUS/Jembatan DX/Yamada-JPN)

3959.8 **RRI Palu**. 1051 local pop mx, 1056 ID by W, she also FM frequency. (8-Jun/Kecskes-AUS/Jembatan DX/Yamada-JPN)

4003.2 **RRI Padang**. 1532 Local nx by M. 1547 ID by M "Radio Republik Indonesia Padang", then local pops. The station moved to 4000.0 on May 26, and returned this frequency today. Fair to poor. (30-May/Yamada-JPN/Jembatan DX)

4606.4 **RRI Serui**. 1458 Local pops (Not relayed Jakarta nx at 1500.). Fair. (30-May/Yamada-JPN/Jembatan DX)

4696.9 **RKIP Surabaya**. 1545 Tlk by men and Japanese traditional mx. Not relayed Jakarta nx at 1600. Poor. (11-Jun/Yamada-JPN/Jembatan DX)

4777.1 **RRI Jakarta**. Kebayoran. 1105 Nx, mx with muslim style. (1-Jun/Schulze-PHL/Jembatan DX/Yamada-JPN)

4789.1v **RRI Fak Fak**, 0945-1000 signing-off, high QRN, active again. (3-Jun/Schulze-PHL/WWDXC TopNews/Bueschel-FRG)

4925.0 **RRI Jambi**, 2215-2230, Indonesian, local mx, ID 34323 (10-Jun/Phillips)

5040.0 **RRI Pekanbaru**. 1835 All night wayang kulit. 1858 RPK. 1900 Jakarta nx relay. Poor. (31-May/Yamada-JPN/Jembatan DX)

5059.0 **RRI Yogyakarta**. 2106 Gamalan play, sounds over modulated and distorting. (7-Jun/Kecskes-AUS/Jembatan DX/Yamada-JPN)

6024.7 **RRI Banjarmasin**. 0740 lagu hiburan. 0800 Jakarta nx, quite strong het. (7-Jun/Foster/Martin-Jamieson/NU/Jembatan DX/Yamada-JPN)

6069.85 **RRI Jayapura**. 0835 Koran chants, 0839 local indon music, mixing with R. Japan. (7-Jun/Kecskes-AUS/Jembatan DX/Yamada-JPN)

7173.2 **RRI Serui**. 0834 pop music, sounding like a music request prg with phone in number presented by M&W. (7-Jun/Kecskes-AUS/Jembatan DX/Yamada-JPN)

9552.5 **RRI Ujung Panadang**. 0802 Jakarta nx relay. 0807 "Siaran Terpadu" relayed by RRI Jakarta. When I checked this at 0905 again, the station was already s/off. Poor. Usually s/off at 0800. (24-May/Yamada-JPN/Jembatan DX)

9741.85 **RRI Sorong**, 0720, noted solid het (in the clear with no HCJB-9745) but missed probable looming audio fadeup as I pulled my antenna due to rapidly approaching thunderstorm! June 8 \* Looked for this again after noting high freq signals from R. Australia holding up extremely well and good signal after 0600 from R. Kiribati: solid carrier faded up into weak audio at 0725 (transmitter SS = 0916) with Indo talk by woman which continued, right up to typical shutdown time at 0758:30. Splattered just before closing at 0758 when R. Nacional, Ascension, popped on-air with music—very strong on 9737.27. (8-Jun/Clark-CAN/DX Window/DSWCI/Krone)

9565.0 **RRI Jakarta**, Bonto Sunggu. 2105 "Lintasan Berita". 2108 ID by M "Inilah Radio Republik Indonesia Jakarta," then wayang kulit. 2124 local instrumental pops. Poor. (14-Jun/Yamada-JPN/Jembatan DX)

11885.0 **RRI Jakarta**, Bonto Sunggu. 0150 "Siaran Pendidikan". 0159 Love Signed off at 0200. This was Programa Nasional Dua. Poor. (15-Jun/Yamada-JPN/Jembatan DX)

**RRI Kupang** on 3384.9kHz is now signd off at 1430 (ex-1410). First noted on May 29. (Yamada-JPN/Jembatan DX)

**RRI Sorong** on 4874.3kHz reactivated on June 2. (Yamada-JPN/Jembatan DX)

**RRI Jakarta** 15125 operates from local morning to 1300\* (Yamada-JPN/Jembatan DX)

The evening program of **RRI Samarinda** 3295.3 unheard since June 2. (Yamada-JPN/Jembatan DX)

**IRAN VOIRI** observed on 6030 with FF, \*2230, terrible QRM from co-channel from Radio Marti from 2300, and Muhlacker. Parallel 9022 and 7260 all heard. Morning EE svce to Australia observed on 6165 and 6175 \*2130-2230\*; 6165 continues in Farsi from 2230-2300+. (30-May/Padula-AUS/EDXP). VOIRI observed 6175 nSS \*0130-0230, no sign of co-channel BBC! 8 June. (Padula-AUS/EDXP). VoIRIB Te-

hran changes: Hausa 1945-2027 11750 replaced by 11720 kHz. Bosnian, Albanian, Italian 1730-1927 new 5925 kHz, and//7340 & 9615 kHz. (3-Jun/Paniview-BUL/WWDXC TopNews/Bueschel-FRG)

**ISRAEL KOL Israel** in Russian 1730-1855 addit 9365 kHz (co-channel QRM CRI in Russian!), // 7465, 9435 kHz. (3-Jun/Paniview-BUL/WWDXC TopNews/Bueschel-FRG)

**ITALY RAI** noted on new 6110 \*2110-2155\* in Pl, SS, AA. Also on NF 7240 in Romanian \*0510//5975. (31-May/Padula-AUS/EDXP).

**R. Maria** 7138.8v 2232 Probably this one with boring melange of man-talk-woman-talk plus non-descript vocals past 2240. Audio was so horribly distorted that I couldn't be sure of the language, but it could well have been Italian. This on May 30; noted again next day, this time down to 7138.7, with the same awful modulation. (30-May/Hill)

**KAZAKHSTAN** 11721.0, **Radio Kazakhstan**, 0900-0919, in German with news and features, // 9620; while announcing the new time of 1000-1020 for their German transmissions on mon, wed, thu and sun, at least this sunday they started at 0900; they send out their own QSL card if return postage is provided (22-Jun/Kuhl/DX Window/DSWCI/Krone)

**KENYA** 6990 kHz, **KBC**; Nairobi, Jun 10, 1640-1800, booming in on this freq. Unknown vernacular language, but good ID's. Nice African mx played. Checked 4915 and 4935 for //, but there they had other pxs. Nothing on 4885. New freq, but site unknown. 6990, KBC Nairobi; Jun 11, 1515-1605, Swahili. Request progr. Mix pop, afropop and western mx played. 1600 I/D Anthem T/S followed by nx. Excellent signal. (11-Jun/Clemitsen-RSA/Fransson-SWE/DXW/WWDXC TopNews/Bueschel-FRG) You can now listen to recordings of the news from the Kenya Broadcasting Corporation in Real Audio format at <http://www.africaonline.co.ke/AfricaOnline/netradio.html>. (Sennitt/DX Window/DSWCI/Krone) [As of 25-Jun, service has been down for a week "due to a technical problem which we are working on." Koma Rock all over again! -ed.]

**LITHUANIA Universelles Leben**, the German missionary radio program, is now scheduled:

1100-1200	German	9710 Su
1200-1230	English	9710 Su
1300-1330	Russian	9710 Su

Reception reports, especially for the new Russian half-hour broadcasts, are highly welcome. Reports should be sent to: Universelles Leben, SANTEC-Studio, Marienstrasse 1, DE-97070 Wurzburg, Germany. (Zilionis/DXW/EDXP/Padula-AUS)

**MEXICO** XEOI 6010, hrd with ID at 0833 May 25 (WRTH says \*0800 Sundays), "Nucleo **Radio Mil**, traduccion de excelencia en radio", ment. of 55th anniversary. Then into romantic vocals. (Berg/EDXP/Padula-AUS)

**XEQM**, Merida, Yucatan, 1115 6104.85. This frequency active from Mexico once again. Heard with SS pop, nortenas, and banda selections, rapid-fire SS talk. (10-Jun/Novello)

**Radio Transcontinental de America** is a planned station on 4800 with 5kW. The address is Torre Latinoamericana piso 37, 06007 Mexico D.F. (Ap. Postal 653, 06002 Mexico D.F.). Tel: +52 (5) 5109896. Fax: +52 (5) 5103326. (19-May/Bojorge-MEX/WRTH/DXW/EDXP/Padula-AUS)

**Radio Mexico Internacional** currently only active on 5985 with 10kW and 9705 with 5kW. Scheduled April-Oct 97:

0300-0400	English	9705 Sa
0300-0500	English	9705 Mo-Fr
1200-1400	Spanish	5985 9705
1400-1600	English	5985 9705
1800-1900	Spanish	5985 9705
1900-2100	English	5985 9705
2100-2300	Spanish	5985 9705
2300-0300	Spanish	9705 Mo-Sa
2300-0400	Spanish	9705 Su

(19-May/Bojorge-MEX/WRTH/DXW/EDXP/Padula-AUS)

**NETHERLANDS RN** Indonesian morning service now observed \*2130-2330\* on new 7280 (via Madagascar) ex 7285, and parallel with 9590, also Madagascar. From \*2130-2230\* on 5905 (Tashkent), and \*2230-2330\* on 12065 (Khabarovsk). Strangely, also observed on what appears to be an additional relay channel of 7290, \*2230-2330\*, slightly delayed as compared with Madagascar on 7280/9590 (30-May/Padula-AUS/EDXP).

**PERU** 3250.2 **R. Qollasuyo**; Juliaca, 0243, with slow S tunes/songs (15-Jun/Steyn/DX Window/DSWCI/Krone)

3283.6 **Estacion Wari**, 2345, ballads. Poor. (6-Jun/Klemetz-COL/Dateline Bogota)

3870.0 UNID something reminiscent of R. Adventista Mundial is audible on this channel; poor signal after midnight; no ID heard so far. (Jun/Klemetz-COL/Dateline Bogota)

4826.2 **Radio Sicuani**; Sicuani (tentative), 0112-0201, Male speaker in Spanish, Peruvian music, "Atencion...". Several IDs were given, but I couldn't get a good copy. Only the word "Radio" was clear. (2-Jun/Veldhuis/DX Window/DSWCI/Krone)

5636.74 **Radio Peru**, San Ignacio, Cajamarca. 0230 small guitar group selections with male group

vocals. Male DJ yelled out a very clear "Radio Peru, La Voz del San Ignacio". I've seen plenty of loggings of this one on 5926.5v, but never in this vicinity. Musical selections of this sort continued until 0301; man gave s/off routine with a couple of ID's and "territorio nacional del Peru" included, then anthem and off 0305. (1-Jun/Novello) 5636.7 New freq for R. Peru, San Ignacio, May 31, 0030 and later. Stronger than competitor on 5700, R. Frecuencia San Ignacio, and much better than on previous 7032. (31-May/Klemetz-COL/Dateline Bogota)

5775.2 R. *San Juan*, Lonya Grande, back on the air Jun 4, 2355 "en sus dos frecuencias". (The other fqy is MW 1150). 5-Jun/Klemetz-COL/Dateline Bogota)

6096.3 "R. *Interoceanica* irradiando su senal (...) desde la provincia de Azangaro, departamento de Puno" says a canned ID preceded by a flute cue (which is not "El condor pasa"). On May 31 noted with ads for ceveza Cusquena and an invitation to a live performance by Grupo Alegria, one of the main Peruvian "chicha" groups. At 2215, and for a half-hour, esoteric prgr run by herbalist located on Azangaro's Jiron Arequipa. Poor signal. (31-May/Klemetz-COL/Dateline Bogota)

6188.2 R. *Oriente*; Yurimaguas, 2200, relaying "Radio Programas del Peru" with a play to play occer match "Alianza Lima" vs. "Asociacion de Futbol Profesional". IDing as "La Rotativa Deportiva de Radio Programas del Peru." (1-Jun/Nigro/DX Window/DSWCI/Krone)

6250.6 "R. *La Voz*", believed to be at Andahuaylas, Jun 9/10, from 2349 to sudden pull of plug 0029, thus concluding a selection of several merry huaylas. Heard saying "en sus dos frecuencias", which is news, perhaps bad news, who knows. (9-Jun/Klemetz-COL/Dateline Bogota)

6535.75 R. *Huancabamba*, Huancabamba, Piura 0145 with male group vocals with echo chamber effect over simple acoustic guitar strumming. M DJ with multiple ID's in passing. Occasional SSB QRM from aero traffic on on 6535.00 Programming continued in this vein until 0200, when a song ended and there was nothing more transmitted. Carrier cut 0203. (5-Jun/Novello)

6676.3 R. *Huamachuco*, Jun 16, 2330, back on the air after several days of silence. Canned ID at 2359, Jun 2, said "OAX2H 910 AM", but there was no mention of a SW fqy. Another echoing and canned ID says, "Somos Huamachuco, el poder de la musica." (16-Jun/Klemetz-COL/Dateline Bogota)

6676.25 UNID Peruvian at 0145 (1-Jun/Novello) [There's your answer, Jay...-ed]

7040.4 Many reporters are hearing a Peruvian on this channel. This is R. *San Ignacio*, ex-6997.6, first observed Jun 2, announcing "7015 kHz" and "frecuencia internacional". (2-Jun/Klemetz-COL/

Dateline Bogota) Signal poor before my sunset 2325, best s5-7 around sunset; at this time of the year, we [in NA] have about a 20-minute window to hear this. (8-Jun/Sundstron)

9674.77 R. *del Pacifico*, Lima 1615 SS-speaking W anncr talking about a festival to happen in Lima on the 13th of June, doing phone interview in conjunction with this, also talking about a blood drive. Religious talk by W. 1657 M with "Radio del Pacifico presenta El Magazin Social...de onze a uno de la tarde. Gracias por tu sintonia." Another ID gave ID as "Pacifico Radio". Signal faded numerous times during listening period from undetectable to S9+10, although most reception was just above the noise level. (Novello-NC Jun 9)

4790.01 *Radio Atlantida* will celebrate its 40th anniversary, on July 16. It was on July 16, 1957, *Radio Atlantida* "la fabulosa" went on the air for the first time, under the direction of Julio Reategui Burga, with two collaborators/an nouncers: Artidoro Garcia and Manuel Iwamoto Pacaya. They commenced the first transmission from the 2nd floor of "La Peruanita" building, situated at Calle San Martin in front of Plaza 28 de Julio. At that time, the station was on the air on 1460kHz and 9625kHz. (Nozaki-JPN/Relampago DX)

**PHILIPPINES** *Radio Mindoro*, using 3345 broadcasts a total of 6 hours per week on Wednesday and Saturday mornings, and Sunday afternoons. Limited hours due to expensive, self-provided diesel power. (Richards-PHL/Biener-FRG/10-Jun/BCDX/EDXP/Padula-AUS)

**POLAND**— see "*Radio Maryja*" under **RUSSIA**

**QATAR QBS** Doha in Arabic:  
0200-0705 & 11785 (x7210).  
1705-2130  
0705-1305 17770 (x15395)  
1305-1705 11785 (x11750)  
0200-2130 v9570.2 kHz.

(3-Jun/PanIview-BUL/WWDXC TopNews/Bueschel-FRG)

**RADIO FREE ASIA** *Radio Free Asia*, from 3 June:  
0030-0130 Burmese 13710 11600/115900DU  
11580  
1300-1400 Tibetan 11590/11575-DU  
1400-1500 Vietnamese 11590-DU 11549-KWHR  
9455-KHBI  
1500-1600 Burmese 11590-DU 11530  
1500-1600 Chinese 11955-DEL 11615 11565-DU  
9910-KHBN 9455-KHBI  
1530-1630 Korean 15660 9980-KHEN 5855  
1600-1700 Chinese 11955-DEL 11615 11565-DU  
9910-KHBN 9455-KHBI  
1700-1800 Chinese 11955-DEL 11945/9455-KHBI

2100-2200 Chinese 15515 11785-DEL 11615  
9910-KHBN 9455-KHBI  
9420-DU, 9395

2200-2300 Korean 11765-DEL 9455-KHBI  
9420 9365 7460

2300-0000 Chinese 15515 13800-KHBI 11785-  
DEL 9910-KHBN 9420-DU  
9395

2300-2400 Tibetan 9365/7410-DU

2330-0030 Vietnamese 13710 11580 9980-KHBN  
9975-Kamo

(Jun/NDXC/EDXP/Padula-AUS)

**ROMANIA** *Radio Romania International* noted on new 9750 with Po, \*2200-2300\*, ORMing co-channel Kuala Lumpur. (31-May/Padula-AUS/EDXP).

**RUSSIA** *Voice of Russia* in Serbo Croatian replaced 9865 by 15455 kHz, 1800-1900.

GPR-3 Samara 1700-2100 7300 (x7400) addit  
1500-1600 & 1700-1800 15490

GPR-2 St. Petersburg addit 1700-1900 11920

**Radio Islamskaya Volna** (Islamic Wave) (in RR/  
AA/Tatar):

1500-1530 9865 Tu-Fr (via Moscow)  
1530-1600 7325 Tu-Fr (via Krasnodar)

**Radio Kala Aturaya** (Voice of the Assyrians) (in  
Assyrian/RR/EE/Persian/AA):

1500-1600/7325 Hz (via Moscow)  
1530-1600/7325 Hz (via Krasnodar)

The following regional stns are active on SW, as  
of May 1997:

kHz	kW	UTC	location
4040	5	2100-1900	Tura
4485	17	2300-2100	Ufa
4520	2	1700-1500	Palana
4820	50	2300-2100	Khanty-Mansiysk
4825	50	1900-2100	Yakutsk
4860	80	1900-2100	Chita
4895	50	2300-2100	Tyumen
5015	100	0700-1300 & 1800-2200	Vladivostok (Ussuriysk?)
5290	5	2300-1430	Perm
5290	50	2100-1900	Krasnoyarsk
5930	50	0100-2300	Murmansk
5940	100	1700-1500	Magadan
6160	40	0100-2300	Arkhangelsk
7140	50	1900-1700	Yakutsk
7200	5	0100-1500	Yoshkar-Ola
7200	100	1900-1700	Yakutsk
7210	100	1900-1700	Khabarovsk
7320	100	1700-1500	Magadan
7345	50	2000-1800	Yakutsk
9530	100	1700-1500	Magadan
9600	100	1700-1500	Magadan
11650	5	1500-2100	Perm
11840	15	1700-1500	Yuzhno-Sakhalinsk
15165	5	1530-2300	Yoshkar-Ola

All transmissions are one hour later in winter season Nov-Mar. All regional stns relay Radio Rossii, when they don't bc their own progrs. (26-May/Rudnev-RUS/WWDXC TopNews/Bueschel-FRG)

**Radio Maryja** reactivated on SW. Heard today at 1755-1959 abruptly off, 6255 in Polish with usual program format, including R. Vatican relay 1800-1820, which was not in // with 5882 outlet. Powerful signal S9+40db in Moscow, perhaps via a transmitter somewhere in the European part of CIS. (8-May/Pashkevich-RUS/EDXP/Padula-AUS) Broadcasts via Samara: 1500-2000 on 12010, 2000-2200 on 7400. (12-Jun/Ludwig-FRG/EDXP/Padula-AUS) Radio Maryja carries on SW it's usual (otherwise via FM transmitters distributed) program. That means there are no identifications at s/on and s/off, the transmitters switches (after the usual open carrier run-up) into the ongoing program. Radio Maryja also relays Radio Vatican's Polish service and so the 1800-1820 edition also on 12010 (with heavy feeder delay). (Ludwig-FRG) Killer signals on boths freqs reported in Holland (Schaay)

**Voice of Russia**, Russian see Z97, update:

Moscow GPR-1

1700-1800 add 9675  
1700-1900 add 11775  
1700-2100 9795 (x9810)

St. Petersburg GPR-2  
1700-1900 add 11920

Samara GPR-3

1500-1600 add 15490  
1700-1900 add 15490  
1700-2100 7300 (x7400)

Yekaterinburg Z97

7220 2100-1900  
7330 1600-2000  
7370 2030-2200  
9610 1700-2100  
9790 1030-1300 2200-0200  
9795 0400-0500  
9865 2030-2200  
11675 1200-1400  
11695 0230-1000  
12020 1600-2000  
15455 (alt 9865) 1500-2000  
15465 (alt 7370) 1600-2000  
15545 (alt 7380) 1600-2000

Petropavlovsk-Kamchatskiy Z97

5895 1330-1400  
5930 1330-1430  
7300 1900-2200  
7315 1000-1100  
7345 1500-1800  
9450 1000-1100  
9825 0700-0800 1800-1900  
9895 1200-1400  
11970 1000-1100

12010 0100-0700  
 12015 1000-1300  
 12045 0000-0100  
 12050 0100-0700 1900-2000  
 12065 0930-1430 2130-2200  
 13605 0100-0300(-0430 Mon)  
 13645 0130-0700  
 13665 0100-0700

**Radio Station Tikhii Okean Z97**

0715-0800 7185 7210 7490u 9670 9825 10344u  
 12055 12070 15490 daily  
 5940 7320 9530 960 Sat & Sun only  
 1115-1200 5015 daily  
 1800-1845 5015 5960 7170 7240 9735 9825 9895  
 11655 11755 daily

Special program for fishermen from Petropav-  
 lovsk-Kamchatskiy "Kamchatka Rybatskaya" Z97  
 1900-2000 7300 12050 Tu/Th/Sa

**GPR-11 Novosibirsk Z97**

7140 2200-2300  
 7340 2200-2400  
 7420 2200-2300  
 7440 1630-1900  
 9450 1130-1230  
 9450 1330-1500  
 9480 1000-1100  
 9480 1130-1500  
 9705 1730-2000  
 9815 1030-1700  
 9815 1900-2200  
 9835 1000-1500  
 9845 1130-1500  
 9870 2230-1000  
 9875 1430-1700  
 11845 1330-1600  
 11970 1130-1300  
 11990 1300-1500  
 12000 1000-1400  
 12035 1000-1500  
 12045 0100-0200  
 12075 1200-1300  
 15375 1000-1100  
 15535 1000-1100  
 15550 1500-1700  
 15610 1000-1100

**TCR-6 Vladivostok-Ussuriysk, GPR-8 Khabarovsk,  
 Komsomolsk-Amur Z97**

5960 1800-1900  
 6080 1200-1600  
 7170 1800-1900  
 7185 0700-0800  
 7205 1200-1500  
 7240 1230-1400  
 7240 1800-2200  
 7245 1000-1500  
 7330 1000-1400  
 7390 1000-1400  
 7490u 0700-0800 & 1000-1200

9670 2230-1200  
 9735 1800-1900  
 9800 1000-1500  
 9810 0830-1100  
 9830 2200-2300  
 11660 0100-0300  
 11775 1800-1900  
 11800 0830-1100  
 11860 1230-1400  
 11960 1000-1500  
 11990 1000-1100  
 12000 0100-0700  
 12005 2300-2400  
 12055 0700-0800  
 12065 0000-0100  
 12070 0530-0800  
 15180 0100-0500  
 15435 1000-1200  
 15455 0100-0700  
 15470 0600-0900  
 17595 0100-0700 Mo-Sa  
 17570 0200-0530 Sun 0600-0800

**GPR-10 Irkutsk, TCR-12 Chita Z97**

7150 2200-2300  
 7255 1900-2100  
 7315 1200-1400  
 9655 1030-1700  
 9655 1900-2200  
 9875 1000-1100  
 9860 2200-2300  
 9890 2200-2300  
 9895 1800-1900  
 10344u 0700-0800  
 11640 1300-1530  
 11655 1800-1900  
 11685 1500-1900  
 11695 1000-1500  
 11870 1330-1500  
 12005 1130-1600  
 12025 0930-1030  
 12025 1100-1300  
 12025 1400-1800  
 12015 2300-0100  
 12035 0030-0200  
 12055 0900-1000  
 12055 1230-1300  
 13695 2330-0030  
 13710 0930-1130  
 15470 1200-1300  
 15475 2230-1000  
 15490 0600-0900  
 15550 0200-0500Sun  
 15560 0600-0900  
 15580 0600-0800  
 17580 0600-0800

(9-Jun/Rudnev-RUS/WWDXC TopNews/Bueschel-  
 FRG)

R. Mayak on new 3965 between 0200-2200, re-  
 portedly via Archangelsk.

**Special News For Polar Regions** is broadcast 1515-1545 Mondays only on 9490 via Samara; beamed to Antarctica.

**VOA via Russia Z97:**

1300-1500 Chinese 11990 Novosibirsk  
 2130-2200 Korean 12065 Petropavlovsk  
 2200-2300 Chinese 7150 Irkutsk

**BBC via Russia Z97:**

0400-0500 Ukrainian 9795 Mo-Fr Yekaterinburg  
 1000-1100 Chinese 11990 Vladivostok  
 1300-1530 Chinese 11640 Chita  
 1600-1630 Ukrainian 7330 Yekaterinburg  
 1700-1800 Uzbek/RR/EE 12045 Moscow

1700-1800 Azeri/RR/EE12015 St. Petersburg  
 1900-1930 Ukrainian 7330 Yekaterinburg  
 1930-2000 Ukrainian 7330 Sa/Su Yekaterinburg  
 2200-2300 Chinese 9860 Chita  
 2200-2300 English 9890 Irkutsk

(Rudnev-RUS)

**SAUDI ARABIA BSKSA**, Riyadh: MAP=Main Arabic Program, SAP=Second Arabic Program, HK=Holy Koran (AA), COI=Call Of Islam (AA)

0300-0600 HK 17895 11870 9720 9665 9555  
 0400-0500 Somail 15335  
 0400-0600 Turkish 15060  
 0500-0600 Swahili 17760  
 0600-0900 HK 9530  
 0600-0900 MAP 11820 11710 9720  
 0900-1200 HK 21495 17880  
 0900-1200 MAP 15060 11820  
 1000-1200 Indonesian 21670  
 1200-1400 Urdu 15345  
 1200-1500 MAP 15380 15230 15060  
 1200-1600 HK 15280 15165  
 1400-1500 Bengali 15345  
 1400-1600 Farsi 11730  
 1500-1600 Turkestini 9730  
 1500-1700 COI 11965 11950 11780  
 1600-1700 Bambara 17775  
 1600-1800 HK 11835 11710 9730  
 1700-1800 MAP 11965 11950 11780  
 1700-2100 SAP 9580 6020  
 1800-2100 HK 11935 9705  
 1800-2300 MAP 9870 9555  
 2100-2300 HK 11935

(Padula-AUS/EDXP)

**SWEDEN Radio Sweden** noted on new 7290 with Sw to NA \*0100-0130, QRming co-channel Radio Reading (New Zealand) (31-May/Padula-AUS/EDXP).

**TAHITI** 15167.55, **RFO** Papeete, 0520, still on the air and amazingly strong S9 carrier this day; hardly any audio modulation left, however, although very low level talk in French by both man & woman as well as music, could be detected at times. (12-Jun/Clark/DX Window/DSWCI/Krone)

**TAJIKISTAN Tajik Radio**, Z97 new freqs: 1630-1800 9905 7510 5800 4635. (NDXC/EDXP/Padula-AUS)

**THAILAND VOA-Udorn** observed on NF 6090 \*0000-0030 in Tibetan. (15-Jun/Padula-AUS/EDXP).

**USA** Latest info I have as of press time is that **Monitor Radio**, the broadcast service of the Christian Science Church supplying in-depth news to US public radio listeners, will have left the air for good as of 27 June. An effort to sell it fell through. World Times, the publisher of an international news supplement, had said earlier this month that it would buy Monitor Radio if enough public radio stations agreed to sign on to its service. (BBCM)

**VOA** English is now on 15135, via Greenville to Europe, 1700-1800, replacing 792 Kavala. This should allow reception of Talk to America on weekdays, and Communications World Saturday at 1730, in the Americas. (Elliott-VOA)

Following up on the May LN report of ol' Charles Josey's soon-to-be shortwave station/retirement hobby, word comes that he's applied for the callsign **WWBS**. The callsign, says Josey, stand for "nothing in particular" (although the possibilities are readily apparent). WWBS has scavenged up a surplus power line tower, which he'll be mounting on a building in downtown Macon, GA. A 4-element Yagi cut for 11910 kHz and beamed toward Canada will sit proudly atop the tower. Josey is constructing the transmitter using parts from the old WWCR transmitter that was wrecked by fire several years back. In other words, the U.S.A. will now proudly sport yet another non-essential international radio service which is less well-equipped than many CB stations. (Info from VOA Communications World/BBCM, in the words and sensibilities of ye editor-AQ)

**UZBEKISTAN Radio Tashkent**, Z97:

0100-0130 EE 7285 5975 5955  
 0130-0200 Dari 7285 5975 5955  
 0200-0230 Pashto 7285 5975 5955  
 0230-0330 Uz 9545 9540 7285 5975 5955  
 0400-0430 Tu 15200 15165  
 1130-1200 Uighur 5060  
 1200-1230 EE 15295 9715 7285 7190  
 1230-1300 Urdu 15295 9715 7285 7190  
 1300-1330 Hindi 15295 9715 7285 7190  
 1330-1400 CC 5060  
 1330-1400 EE 15295 9715 7285 7190  
 1400-1430 Urdu 15295 9715 7285 7190  
 1430-1500 Uighur 5060  
 1430-1500 Hindi 15295 9715 7285 7190  
 1520-1550 Dari 9715 9540 7285 6190  
 1550-1630 Uz 9715 9545 9540 7285 6190  
 1630-1700 Fa 9715 7285 6190  
 1700-1730 AA 9715 7285 6190  
 1700-1730 Tu 9545 9540

1730-1830	Uz	9715 9545
1830-1900	Fa	9540 7285
1900-1930	AA	6190
1935-2030	GG	11905 9545 9540 6230 5060 5035
2030-2100	EE	9545 9540
2130-2200	EE	9545 9540
2230-2300	CC	5060
2230-2400	Uighur	5060

**Uzbek Radio:**

0000-0430	Uzbek-2	4850
0000-2100	Uzbek-1	5995
0430-1230	Uzbek-2	15200 15165 4850
0930-1000	Local	4510
1200-1230	Local	4510
1230-1300	Uzbek-2	15200 4850
1300-1400	Uzbek-2	15200 9545 4850
1400-1530	Uzbek-2	9545 4850
1530-1630	Uzbek-2	4850
1630-1700	Uzbek-2	9545 9540 4850
1700-2100	Uzbek-2	4850
2100-2130	Uzbek-2	9545 9540 4850
2130-2200	Uzbek-2	4850
2200-2300	Uzbek-2	9545 9540 4850

(NDXC/EDXP/Padula-AUS)

**VATICAN** 11715, per BBCM rpt, the Lebanese Catholic radio stn, *Voix de la Charite*, is here via Vatican Radio xmtrs in AA at 0430-0500. According to BBC, anncs that the prgm is also carried on 96.3 FM for listeners in Rome. It follows VR's own AA prgm to the ME at 0400-0430, same frequencies. The prgm IDs as "Voice of Love, Voice of the Humanitarian Catholic Message from Lebanon" (AA: "sawt al-mahabah, sawt al-risalah al-masihyah al-insaniyah min lubnan"). (Berg/EDXP/Padula-AUS)

**ZAMBIA** 6265 kHz, *Radio One*, 0547-0603, local language, Interval Signal from 0557 ID by woman "Radio One...Zambia". (9-Jun/Eramo/DXW/WWDXC TopNews/Bueschel-FRG)

**DANGERS OF SWL'ING—or, SO THAT'S WHO'S LISTENING TO RDP** The Indonesian authorities are persecuting people who listen to *RDP Internacional* and who watch RTP Internacional. Yesterday [4th June] several Timorese were caught committing this crime—as Indonesia sees it. It is believed that at least 23 people were arrested in Los Palos, Dili and other areas of East Timor. RDP[I] can be heard on shortwave in East Timor. It is the most popular station after Australia's ABC and America's Voice of America. (5-Jun/RDP Antena 1, Lisbon/BBCM) (5-Jun/RDP Antena 1, Lisbon/BBCM)



## Hardware Bits

by Alan Johnson

**AKD HFC1/BNC CONVERTER**—This is a converter that shifts the frequency range of 100kHz to 60 MHz up to the range of 100 MHz to 160 MHz, to permit reception of the shortwave spectrum on a scanner. This is a 1 x 1 x 2 1/4 inch box which connects to the scanner's BNC antenna input. Power required is 11-14 volts DC, which can probably be obtained from the scanner circuitry. The HF antenna input to the converter is through a BNC jack. The converter has a 65 MHz lowpass filter to prevent breakthrough of VHF signals and there is no RF amplifier, in order to minimize problems from RF overload. Reception mode, tuning step, selectivity, etc. are, of course, dependent on the particular scanner used. I tried it with an PRO-2005 and it worked, but I'd prefer a dedicated HF receiver for serious listening. There did seem to be some intermodulation from local MW stations at my location. It could be used with a handheld type scanner for a compact portable shortwave setup with a suitable whip antenna. The price is in the \$75 range. AKD's address is AKD, Unit 5, Parsons Green Estate, Boulton Road, Stevenage Hertsfordshire SG1 4QG, United Kingdom. Telephone is (1438) 351710 or (1438) 357591.

# Pirate Radio Report

**Chris Lobdell**

P.O. Box 146

Stoneham, MA 02180-0146

Internet: piradio@usa1.com

Hi and welcome to the July edition of the PIRATE RADIO REPORT. What some have dubbed as "Shortwave Liberation II" has seen a period of over 40 straight days of pirate activity on the 43 meter pirate band. What is usually a weekend phenomenon has now spread to weekdays as well, so don't forget to check 6955 kHz during the week as well.

## Radio Metallica Worldwide Announces Maildrop

Dr. Tornado, the operator of this alleged 10 kw pirate powerhouse is now announcing that reception reports for him can be sent to Box 109, Blue Ridge Summit, PA 17214. This station is stronger than WRNO and WRMI at my location!

## Pirate Profile: Down East Radio

We were happy to get a nice letter from Oscar Guggins of DOWN EAST RADIO who fills us in on his operation.

"Down East Radio began it's broadcasting career in late 1992. Our announced location is up in Slab City, Maine. This town got its name because all the trees were cut for logging and all that was left were the slabs of the tree trunks. Blueberries and poultry are the current occupations of our town residents today.

Our programming is mostly recordings of Down Maine Yankee humor by Bert and I and Joe Perham. We feel that our radio station acts something like a promotion for tourism. We at Down East Radio want everyone to come up and visit Maine to enjoy the sights, the people and the food.

The current staff includes myself, Oscar Guggins and my 19 year old son, Oscar Jr.

We use an old tube type transmitter which runs about 50 watts on AM and about 125 in sideband. Although we made no transmissions in 1996, we hope to be back on the air in the next few weeks.

We at DOWN EAST RADIO will be glad to send you a QSL card for your correct reception report. Write to us at Box 109er, Blue Ridge Summit, PA 17214

[Thanks Oscar, for the nice profile. We are always looking for these, so if you want your station profiled, just send it along!]

## Loggings

HE MAN RADIO was heard testing his transmitter and announcing the Blue Ridge Summit maildrop on May 31<sup>st</sup> at 2306 UTC on 6955 USB.

RADIO TITANIC INTERNATIONAL, a German pirate was relayed here in North America. They were heard on 6955 kHz USB at 0000 UTC on the 9<sup>th</sup> of June. Lots of interesting information on the sinking of the ship was mentioned

The VOICE OF JULIET, a pro-feminist pirate was heard on June 15<sup>th</sup> at 0120 UTC on 6950 kHz. Programming included the reading of a newspaper article about child prostitution in Asia. You can write to this station via Box 293, Merlin, Ontario NOP1W0, Canada

WMFQ, a newcomer to the pirate airwaves was heard here at 0105 UTC on June 2<sup>nd</sup> on 6955 kHz USB. They announced the Box 28413, Providence, RI maildrop.

Until next month, when we will announce the winners in the pirate popularity poll, good pirate DX!



# QSL Report

Sam Barto  
47 Prospect Place  
Bristol, CT 06010

## Radio INTERNACIONAL EN ONDA CORTA QSL

### LA COLIFATA

S/a. GABRIEL IVAN BARRERA..

Los Colifatos tienen el agrado de confirmar su informe de recepción de acuerdo a los siguientes datos:

Fecha:	18/4/97.-
Hora UTC:	02:30-03:00
Frecuencia:	9955 KHz.
Vía:	(WRMI)

*M. Oliviera*  
Director General

*N. Pugliese*  
Producción emisión OC

**ALASKA: Radio Free Asia 7355** (via KNLS?) p/d ltr. w/ note and sticker in 3 wks. w/ statement that transmitter sites will not be devulged. (Barto-CT).

**ANGUILLA: The Caribbean Beacon**  
\* 6090 f/d cd. in 4 mo. for \$1.00. (Pitts-MN). same in 4 mo. w/ note v/s B. Monsell Hazall, Chief Engineer. (Berg) same in 4 mo. (Maroti-NY). in 4 mo. (Paszkwicz). f/d cd. in 117 ds. for 1 IRC. (Neal-TX). f/d cd. in 5 mo. (Lob-

**SPECIAL OFFER:** Your QSL Editor is offering used and mint foreign postage stamps to use as enclosures (or for your collections) with reception reports. We are offering 600 stamps for \$5.00; 1300 stamps for \$10.00; or 2000 stamps for \$15.00. With each \$5.00 order I will include absolutely free at least 300 additional stamps from the US - most of which will be older and commemoratives. That's a total of 900 stamps for only \$5.00; 1900 stamps for \$10.00; or 2900 for \$15.00. If you are interested in specific areas such as Asia, Africa, etc...I will try to send you a concentration of stamps from that area. Please try to include \$3.00 for postage on large orders. We have had several reorders from satisfied customers and DXers such as Henry Lazarus, Jack Jones, Marie Lamb, etc..... This may increase your QSL return rate.....Sam.

dell-MA). f/d prepared cd. in 2 mo. for \$2.00

**ARGENTINA: Radiodifusion Argentina Al** (Lare-MI).

**Exterior 11710 f/d "Logo" cd.** in 6 mo. w/ schedule.

(Vaghjee). same in 17 ds. v/s Rodrigo Caldezon. (Brow-

\* own-IL). **Radio La Colifata 9955 f/d cd.** in 17 ds. v/s

\* A. Oliviera, Director. (Barrera-ARG). **Radio Cochiquaz**

6925.5 f/d ltr. in 25 ds. for \$1.00. (Kusalik-ALB).

**ARMENIA: Voice of Armenia 9965 f/d "50th Anniversary" cd.** in 5 mo. after 9 reports over 5 yrs! (Myers-VA).

**ASCENSION ISLAND: BBC 11750 f/d ltr.** in 55 ds. v/s Mrs. Nicola

Nicholls, Transmitter Engineer. (Humenyk-ONT). 17805 and

17755 f/d cds. w/ sticker and calendar in 60 ds. (Vaghjee).

**AUSTRALIA: Radio Australia 9860 via Shepparton f/d "Shepparton**

Sunrise" cd. w/ schedule and calendar in 141 ds. (Humenyk).

**VLB11 11880 via Shepparton "Southbank Centre" cd.** w/ calendar &

schedule in 52 ds. (Bueneman-MO). 12080 f/d "Home of R.A." cd. w/

schedule in 6 mo. (Vaghjee-MAUR).

**AUSTRIA: Radio Austria International 9870 via Moosbrun**

f/d "Franz Schubert" cd. in 10 ds. (Humenyk). 7325

same cd. w/ schedule in 35 ds. (Humenyk). 13730

f/d cd. in 45 ds. (Humenyk). 7325 and 9879 f/d

cd. w/ report forms in 40 ds. (Humenyk).

**BELGIUM: Radio Vlaanderen International**

9925 and 13785 f/d "Constant Perme-

ke" cd. in 45 ds. (Humenyk). 5910

and 9925 f/d "Rene Magritte"

cd. in 60 ds. (Humenyk).

5910 and 9925 f/d cd.

in 70 ds. (Humenyk).

9850 and 11850





f/d "Eugene Laermans" cd. in 55 ds. (Humenyk-ONT).  
**BONAIRE: Radio Nederlands** 5965 f/d "Flevo" cd. in 90 ds. w/ calendar and sticker. (Humenyk). 6165 f/d "40's Anniversary" cd. in 17 ds. (Brown-IL).

**BRASIL: Radiodifusora Londrina** 4815 f/d statement typed on an Expositao 6 brochure. in 35 ds. for a taped rpt. and 2 IRCs. (Vaghjee). **Swiss Radio International** 9905 f/d "liestal" cd. in 61 ds. v/s Dave zanotti. (Brown-IL). **Radiodifusora Roraima** 4875 f/d cd. in 53 ds. for a PT rpt. and \$1.00. v/s Marcia Seixas, Directora Geral. (Brouillette-IL).

**Radio Marumby** 9665 n/d cd. w/ 1tr. in 32 ds. for a PT rpt. and \$1.00. v/s Jair Albano. Also rcvd. request for a donation to their mission. (Brouillette-IL). **Radio Cancao Nova** 9675 f/d "Clock" cd. in 85 ds. for a taped rpt. and \$1.00. (Pasquale-PA). **Radio Cultura Araraquara** 3365 f/d cd. in 18 ds. for \$1.00. v/s Antonio Carlos Rodrigues dos Santos. (Paszkievicz).

**CANADA: Radio Japan** 6110 via **Sackville** f/d "Tokyo" cd. w/ sticker, sked. and calendar in 30 ds. (Humenyk). **Radio Korea International** 9650 via **Sackville** f/d cd. in 2 mo. (Barto-CT).

**VERIFICATION SIGNERS: Radio Union** 6115 Juan Zubiaga S., Gerente. **Radio Moldova International** 9400 Daniel Lacky, Editor. Addr: Str. Miorita 1, 277028 Chisinau, Moldova Republic. **Missionwerk Werner Heukelbach** 7360 via **Voice of Russia** Manfred Paul. Addr: DE-51702 Bergneustadt 2, Germany. **Emissora Ciudad de**



**Montevideo** 9650 Aramazd Yimeyan, Director General. Addr: Canelones 2061, Montevideo, Uruguay. **Radio Mundial Los Andes** 6011 Celso Pacheco, Director. Addr: Calle 44 con Avenida Urdaneta, Merida, Edo., Merida, Venezuela.....  
 .....via PLAY DX.....Sam.

**CHILE: Radio Esperanza** 6080 p/d cd. w/ 1tr. in 6 wks. after a f/up rpt. for a SP rpt. and \$1.00. v/s Ramon P. Woerner K.

**CHINA, PEOPLES REP. OF: China Radio Inter-** national no QSL but I did receive a silk scarf as a 3rd place finish in a contest. (McCarthy-GA).

**DOMINICAN REPUBLIC: HIMI Radio Cristal Internacional** 5010 f/d "logo" cd. in 10 wks. Addr: P.O. Box 894, Santo Domingo. (Berg-MA).

**ECUADOR: HCJB** 9745 f/d "Sweet Bread" cd. in 26 ds. for ms. (Brown-IL). in 22 ds. w/ f/d "Hummingbird Statue" cd. (Brown-IL). same in 27 ds. for \$1.00. Also rcvd. schedule. (McCarthy). same in 3 wks. for ms. (Loudell) f/d "Village View" cd. in 65 ds. (Humenyk). 11960, 15140 and 21455 f/d "Quito Buildings" cd. in 235 ds. w/ sked. and calendar. (Humenyk). 5865 "Ravine of Guapulo" cd. in 29 ds. for 1 IRC. v/s Glen Volkhardt, Director of Broadcasting. (Bueman). 9745, 11615 and 12005 same cd. in 146 ds. (Humenyk). 9645 "Pulling to Win" cd. in 27 ds. for 1 IRC. (Bueman-MO).

**ENGLAND: Radio Japan** 6140 via **Skelton** f/d cd. w/ schedule and stickers in 5 wks. (Barto). **VOA** 15205 via **Woofferton** f/d "Mount Rainier" cd. in 46 ds. w/ pennant and sticker. (Humenyk). **United Christian Broadcasters** 6202.3 f/d cd. w/ guide and bookmark in 1 mo. v/s Graeme Wilson, Technical Manager. (Barto). **West Coast Radio** cd. in 6 mo. (Otteson-PA).

**ETHIOPIA: Radio Ethiopia** 7110 f/d cd. in 2 mo. for a taped rpt. and 2 IRCs. v/s Miss Wolshet Woldeyes. (Rausch-NJ).

**KJES**  
 INTERNATIONAL SHORTWAVE RADIO STATION  
 "The Lord's Ranch"  
 Star Route Box 360  
 Mesquite NM 88046  
 Phone 505-233-2656  
 Fax 505-233-3619

May 31, 1988

Bear Mr. Henry J. Velschard

Thank you for your letter. We really do appreciate when we hear from the USA even though we're international. We sure are heard here in our own country.

I pray all goes well with you. God bless you and keep you.

Michael Houston

*Michael Houston*

**EUROPEAN RUSSIA: Voice of Russia** 17860 via **Krasnodar** f/d cd. in 2 mo. (Barto). 4920 via **Moscow** f/d cd. in 2 mo. (Barto). 11655 f/d cd. in 2 mo. w/ schedule. (Barto).

# CARTE POSTALE - QSL

Nous avons le plaisir de confirmer votre  
 rapport d'accusé de réception de votre émission du 22 03 1997  
 à 22 03 1997 heure GMT + 03.00  
 Nous remercions vous pour votre émission.

Lieu: St. Pierre et Miquelon  
 Date: 22 03 1997  
 Heure: 22 03 1997  
 Jour: Mercredi  
 Vents: 22 03 1997  
 Samedi: 22 03 1997  
 Dimanche: 22 03 1997

LANGUES EMPLOYEES  
 Français  
 Anglais  
 Arabe  
 ou  
 Langues nationales  
 Vernaculaires

MARY R. NEEL  
 140 JONAS HILLS  
 LAKE SWISS, CANA  
 TX 77479-6122  
 USA

\* Voice of the Assyrians 12075 via Balashika f/d prepared cd. w/ Radio Moscow cd. in 37 mo. for a RS rpt. and 2 IRCs. v/s Marona Arsanis, Head Editor. (Kusalik-ALB).

FRENCH GUIANA: Swiss Radio International 9885 via Montsinery "Appenzell Shops" cd. in 48 ds. (Bueneman). Radio Japan 11895 f/d "Osechi" cd. w/ schedule and calendar in 36 ds. (Humentk-ONT).

GEORGIA: Voice of Hope 9310 f/d \* "Map/Transmitter" cd. in 1 mo. for 2 IRCs. Addr: Box

**NOTES:** Jim Fedor in Wells, NV (formally of CT) says the band conditions have not been too favorable. His bright spot was Radio Saint Helena, He sat out in the west 40 strung a wire cut for 11092 until he caught them on a heading of about 10 degrees NE. Whatever it takes! Hi! Denis Pasquale has had a hard time trying to QSL the Voice of Armenia so he sent a copy of his report to their DC Embassy. We'll see what happens. He is still waiting for Paraguay so maybe he might try the same with them. Mark Humenyk sent in quite a few reports for the QSL Column - mainly because his membership lapsed. We'll get them all in sooner or later. Thanks for the info on WLO (via Terry Jones)...Sam.

## VERIFICATION CARD

Dear Henry Weissborn

Thank you for your reception report on our broadcast. Your information has been checked with our schedules and found to be correct. We will continue to encourage us with your informative comments and views on our programs.

Frequency: 9.670 kHz  
 UTC(GMT): 11:30-12:00  
 Date: 07.01

### Hanbok



Hanbok is the Korean traditional costume. Look at the harmony of the curved and straight lines of the Hanbok. This reflects the gentleness and tenacity of the Koreans.


 Emblem of The Year of Cultural Heritage

109, Hereford HR4 9XR, England. (Lobdell). same cd. in 3 wks. for \$2.00. (Myers-YA). in 1 mo. for 2 IRCs. (Krepp).

GERMANY: West Coast Radio Ireland 5910 via Julich f/d "Kylemore Abbey" cd. in 24 ds. for \$1.00. Sked. and tourist brochure rcvd. Requested \$2.00 or 2 IRCs w/ reports. (Buer). Deutsche Welle f/d cd. in 1 mo. (Humenyk). Radio Vilnius 5890 via Julich f/d "Land of Amber" cd. in 58 ds. w/ schedule. (Humenyk). same cd. in 37 ds. (Buer). 6120 in 29 ds. w/ schedule. (Humenyk). Advertiser World Radio 9830 via Julich f/d "Transmitter" cd. in 20 ds. for \$1.00. Sked. rcvd. (Buer-FL).

GREECE: VOX 15205 f/d "Rafting" cd. in 52 ds. (Brown-IL). Voice of Greece 6260 f/d "House of Parliament" cd. w/ schedule in 25 ds.

GUAM: Radio Free Asia n/d ltr. in (Humenyk). 4 1/2 mo. w/ sticker. (Kusalik-ALB).

GUATEMALA: TGNC Radio Cultura 3300 "Quetzal" cd. in 29 ds. w/ schedule. v/s Wayne Berger, Chief Engineer. (Bueneman). TGMI Radio Buenas Nuevas 4800 cd. in 59 ds. for a SP rpt. v/s Israel G. Rodas Merida, Gerente. Also rcvd. pennant and personal ltr. (Bueneman-MO).

HAWAII: KWHR 13625 f/d cd. w/ schedule in 98 ds. (Humenyk).

HONDURAS: La Voz Evangelica de Honduras 4820 n/d ltr. in 191 ds. v/s Mo-desto Palma. (Brown-IL). HRMI 5890 cd. in 61 ds. for a SP rpt. and \$1.00. (McCarthy-GA)?

HUNGARY: Radio Budapest 5915 and 11660 f/d cd. in 27 ds. (Humenyk). 6195 cd. in 57 ds. for \$1.00. (McCarthy). 9840 f/d "Fisher Bastion" cd. w/ sticker, personal note and a postcard in 85 ds. for 1 IRC. v/s Agnes Kevi, English Section. (Brouillette-IL). cd. in 32 ds. w/ copy of Budapest Intl. Magazine. (Strain)

## The Caribbean BEACON, ANGUILLA

### LISTENER VERIFICATION REPORT

DATE: April 22, 1997  
 TIME: 1110

COMMENTS: Thank you for your reception report. We are pleased to study you were one of the first to receive 6090 kHz with a power of 75 kw on 12-29-96 at 0100-0130 UTC hours.  
 SIGNED: [Signature]



Christopher R. Lobdell  
 P.O. Box 146  
 Stonham, Mass.  
 USA 02180

**NASIONAL STATION OF RADIO REPUBLIK INDONESIA**  
VERIFICATION CARD

Pedro M.C. de Castro  
Des. ....  
This is to verify your report of 19 Mei 1996  
On our Indonesian language broadcast  
On a frequency of 3.680 KHz  
Thanks for listening and for staying  
Station Manager

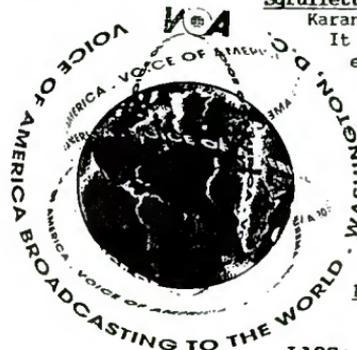
RRR  
Drs. M. Mungil Muin Harahap

Language	Transmission Time	Frequency
Indonesia (Nation Wide)	24 Hours/day	15150 KHz 9.680 KHz 4.775 KHz 999 KHz

**INDIA: All India Radio** 9595 f/d "Gopal Bhawan" cd. in 6 mo. (Vaghjee-MAUR).  
**IRAN: Voice of the Islamic Republic of Iran** 9022 "Khomeni" cd. in 115 ds. w/ sticker and flag. (Vaghjee).  
**ISRAEL: KOL Israel** 15615 f/d cd. w/ schedule in 42 ds. (Humenyk). 7465 blue "Logo" cd. in 88 ds. (Brown-IL) same in 1 mo. w/ schedule. (Humenyk).  
**ITALY: RAI** 11800 n/d "Carlo Carra" cd. in 1 mo. (Brown). "St. Teresa Statue" cd. in 80 ds. (Humenyk). n/d cd. in 1 mo. (Humenyk). **Radio Maria** 7139.9 f/d \* cd. in 9 wks. (Barto-CT). **Verein Jugendradio** 3985 via **IRRS** computer generated ltr. w/ f/d in 5 mo. for a taped rpt. Addr: Reutlingerstr. 91,

D-72800 Eningen, Germany. (Berg-MA).  
**JAPAN: Radio Japan** 11910 f/d "Cherry Blossoms" cd. in 41 ds. (Brown-IL). 9535 f/d "Osechi Dishes" cd. in 45 ds. w/ schedule. (Humenyk). 13630 "Okinawa Castle" cd. in 29 ds. (Humenyk). 11850 f/d "Tokyo Metropolis" cd. w/ stickers and schedule in 5 wks. (Barto). 9825 f/d "Urban Architecture" cd. w/ schedule and stickers in 2 mo. (Barto-CT).

**NOTES: George Maroti** says that he plans to start developing a QSL Compilation Report at the end of the year. It sounds like a tremendous task. Good luck... Sam. **John Sgrulletta** was very pleased with his recent QSL from Tanjung Karang but a bit confused with their mailing procedures. It seems the station stamped everything with their seal even the return receipt and sent it all back.



**JAVA: Voice of Indonesia** 4775 f/d cd. in 50 ds. v/s Drs. Syamsul Muin Harahap, Station Manager. 1 IRC. (Vaghjee-MAUR).  
**JORDAN: Radio Jordan** 11690 f/d cd. w/ schedule and stickers in 78 ds. v/s Javad Zada. (Ziolkowski).  
**KOREA, PEOPLES DEM. REP: Radio Pyonqyang** 2850 f/d cd. in 60 ds. w/ schedule and pennant. Also rcvd. Kim Jong Il booklet.  
**KOREA, REPUBLIC OF: Radio Korea** (Vaghjee).  
**International** 15575 via **Kimjae** f/d "Chabum-Suk" cd. in 2 mo. w/ schedule. (Barto).

**LAOS: Lao National Radio** 6130 f/d certificate in 2 mo. after a f/up rpt. and SASE(used) for \$1.00. v/s Ms. Simanithone Malivarn, Vice Head of the English Section. (Lazarus-LA). 4659 via \* **Houa Phan** f/d prepared cd. for an 88 reception after a f/up rpt. for \$1.00. Same v/s as above except that name is reversed. (Kusalik-ALB). \* 7383 via **Savannaket** f/d prepared cd. in 73 ds. after many attempts for an 89 reception. (Kusalik)... Henry Lazarus comments that he and other DXers have noticed that the v/s seems to be signing her name both ways... Interesting... Sam.

**MALTA: Voice of the Mediterranean** 7440 "Auberger de Castille" cd. w/ schedule and stickers in 60 ds. for 2 IRCs. (Vaghjee-MAUR).  
**MOLDOVA: Radio Moscow** 15430 via **Kishinev** cd. in 35 ds. w/ ltr. from Olga Troshina. (McCarthy-GA). **Voice of Russia** 9550 via **Kishinyov** f/d cd. in 2 mo. (Barto-CT).  
**MYANMAR: Radio Myanmar** 5985.9 f/d cd. w/ schedule in 3 mo. (Barto).  
**NAMIBIA: NBC** f/d "Satellite Dish" cd. in 4 mo. for \$1.00. (Myers-VA)  
**NEW ZEALAND: Radio New Zealand International** 15115 f/d "Kiwi" cd. in 24 ds. for 3 IRCs. (Brown-IL). 9795 same cd. w/ schedule in 30 ds. for 2 IRCs. (Vaghjee).  
**NEW ZEALAND (Pirates): KIWI Radio** 7475 f/d cd. w/ 2 ltrs. and 2 decals in 31 ds. for \$1.00. v/s

# WRNO

WORLD WIDE  
DX CLUB MEMBER

P.O. BOX OFFICE 1038 110  
 NEW ORLEANS, LA 70188  
 UNITED STATES OF AMERICA



Graham Barclay. 350 watts. (Flynn-OR).

**NORWAY: Radio Denmark** p/d "Microphone" cd. in 15 ds. w/ ltr. and schedule. v/s Kate Sand. (Humenyk).

**PALAU: KHBN** 9985 f/d "World Map" cd. in 3 wks. for \$1.00. (Maroti-NY).

**PAPUA NEW GUINEA: Radio East Sepik** 3335 p/d ltr. in 7 mo. for \$1.00. (Myers-VA).

**PARAGUAY: Radio Nacional del Paraguay** 9735 p/d ltr. in 1 yr. w/ tourist brochure for \$1.00. (McCarthy)

**PERU: Radio Satellite** 6725 f/d "Logo Certificate" in 40 ds. for a SP rpt. and \$1.00. v/s Sabino Llamo Chavez.

**NOTES:** Allan Loudell says he didn't have much time to do any DXing this past season. He was busy working on news contest entries for his radio station which were all due in Jan., Feb. and March. He also conducted a DX test on his 1,000 watt AM station and is busy QSLing reports. Denis Pasquale was with his wife on a Caribbean cruise from March 15-22nd and I managed to sneak in a little DXing. Oddly enough he was able to pick up the Voice of Indonesia 9525khz at 1900 in French. I couldn't do this at my home QTH. The best reception was when we were out of sight of any land.

Gerente. Also rcvd. a very detailed 2 page ltr. (Brouillette-IL).

**RHODES: VOA** 6070 f/d "Hikers in the Badlands" cd. in 30 ds. (Vaghjee).

**ROMANIA: Radio Romania International** 11940 f/d "Bucharest" cd. in 6 mo. (Vaghjee). 7195 same in 44 ds. (Bueneman-MO).

**RUSSIA: Radio Moscow Internacional** 6145, 7300 and 7320 f/d cd. in PT w/o sites in 2 mo. (Barto-CT). 7330, 7310, 7300 and 7260 f/d cd. w/o sites in 2 mo. w/ schedule in PT. (Barto-CT).

**SAINT HELENA: ZHH Radio Saint Helena** 11092.5 f/d cd. in 187 ds. for 1 IRC. v/s Tony Leo. (Brown-IL). **ZD7RSD** cd. in 5 1/2 mo. for \$1.00. Form ltr. rcvd. (McCarthy). f/d cd. in 5 1/2 mo. w/ ltr. for 2 IRCs. (Pappas-SD).

**SAO TOME: VOA** 4960 f/d ltr. in 28 ds. for \$1.00. (Brown). 5970 f/d "Colorado River Rafting" cd. in 1 mo. after a f/up rpt. (Lare-MI). 11975 f/d "Mt. Ranier" cd. in 1 mo. for ms. (returned). (Brouillette-IL).

**SINGAPORE: Radio Corporation of Singapore** 6155 f/d "Harbour" cd. in 17 ds. w/ station pen. (Brown-IL).

**SLOVAKIA: Adventist World Radio** 9465 f/d "Transmitter Site" cd. w/ a pocket calendar in 7 mo. for 2 IRCs. (Vaghjee-MAUR).

**SOLOMON ISLANDS: Solomon Islands Broadcasting Corporation** 5020 f/d cd.

in 14 ds. for 1 IRC. (Brown) f/d cd. w/ ltr. and sked. in 1 mo. for ms. v/s John Babera. (Rippel).

**SOUTH AFRICA: Radio Sonder**

\* **Grense** 3320 f/d "SENTECH TV Tower" cd. in 32 ds. for 2 IRCs. v/s Kathy Otto. (Brouillette). cd. in 20 ds.

w/ schedule. (Vaghjee). cd. in 1 mo. (Barto-CT). **Radio Nederland** 11655 via **Meyerton** f/d cd. in 2 mo. w/ schedule and calendar. (Barto). **VOA** 5970 via **Meyerton** f/d cd. in 2 mo. w/ schedule and plastic ruler.

**SPANISH MOROCCO: VOA** 7195 via **Brieche** f/d "LeConte Glacier" (Vaghjee). cd. in 28 ds. (Bueneman-MO).

**SWEDEN: Radio Sweden** 7290 f/d "Lappstaden" cd. in 42 ds. (Brown). 7135, 9430, 11650 and 15240 same cd. in 20 ds. (Humenyk). 7135, 9430 and 5910 same cd. in 13 ds. for 1 IRC. v/s E. Adler. (Brouillette-IL).

Dear Mr. Mahendra Vaghjee,

we verify your reception report

Date: 27.01.1997

Time: 19.14 - 19.28 UTC

Frequency: 7105 kHz

Language: Belarusan

Sincerely



**SWITZERLAND: Swiss Radio International** 9905 f/d

"View from the Summit of the Landenberg" cd. w/ schedule and decal in 39 ds. (McCarthy-GA).

**TAIWAN: WYFR** 5275 via **Paochung** f/d cd. in 2 mo.

**TURKEY: Voice of Turkey** (Barto).

9655 f/d folder type cd. in 33 ds. Also rcvd. schedule and sticker.

**UGANDA: Radio Uganda** 4976 (Pasquale). cd. in 35 ds. for 2 IRCs. (Vaghjee).



**UKRAINE: Radio Ukraine International** 13720, 11720 and 15520 via **Kyiv** f/d plain white cd. in 3 mo. (Barto). 11705 via **Mykolaviv** same in 3 mo. (Barto-CT).

**USA: WYFR** 15130, 11725 and 6085 f/d cd. in 2 mo. (Barto). 11970 and 11830 p/d cd. in 6 wks. (Barto). 11580 p/d cd. in 1 mo. (Barto). 5890 f/d cd. in 6 wks (Barto). 15695 f/d cd. in 5 wks. (Barto) 11725, 9605, 9575 and 6085 f/d cd. in 7 wks. (Barto). 11970 and 11830 f/d cd. in 1 mo. (Barto). 5825 p/d cd. in 1 mo. (Barto). 5950 f/d cd. w/ schedule in 39 ds. (Humenyk) **KVOH** 17775 f/d "Map" cd. w/ sticker in 118 ds. (Humenyk). **Radio Free Asia** 9440 (site?) n/d ltr. w/ sticker in 3 wks. (Barto). **WJNB** 11740 cd. in 68 ds. for \$1.00. (McCarthy-GA). same in 65 ds. for 2 IRCs. (Vaghjee). 13790 f/d cd. in 23 ds. (Humenyk). **WSHB** 6095 f/d cd. in 8 ds. v/s Judy P. Cooke. (Brown-IL). 7535 same cd. in 72 ds. (Humenyk). **WRMI Radio Miami International** 9955 f/d certificate in 173 ds. for ms. v/s Jeff White. (Brown-IL). f/d "Everglades" cd. w/ schedule and sticker in 267 ds. (Humenyk). **Voice of Free China** 17750 via **WYFR** "Insects in Taiwan" cd. w/ schedule in 36 ds. (Bueneman-MO). **Radio Cochiguaz** 9955 via **WRMI** very

**VERIFICATION SIGNERS: Radio Nederland** 4965 Asbari N. Krisna, Indonesian Service. **Radio Tanzania Zanzibar** 11735 B.M. Kapin-ga, for Director of Broadcasting. **DUJA TECH KTO V MORE** 9450 via **Simferopol** Konstantin Lepin, Sound Director. Addr: Ul. Kiyevskaya d. 104, K-53, 333043 Simferopol, Ukraine. **Radio**

**Mauro Nunez** 6142 Raul Ledezma and Jose Penezranda. Addr: C.E.D.E.C. Calle Colon n. 350, Casilla 196, Sucre. **Radio A.N.D.E.S.** 4777.7 Francisco Quisbert Salinas, Secretario Permanente del Consejo de Administracion. Addr: Casilla n. 16, Uyuni, Potosi. **Radio Sentinela Do Amazonia** 4865 Edsergio De Moraes Pinto...via PLAY DX...Sam.

professional looking tan cd. w/ f/d in 1 mo. for a taped rpt. (Berg-MA).

**USA (Pirates): WLIS** 6955 sheet in 104 ds. for \$1.00. (McCarthy-GA). **Radio Garbanzo** 6955 f/d full color QSL sheet #163 in 6 wks. for ms. (Pappas-SD). **WAMP** 6955 QSL sheet #3 of an old NBS Time Station cd. in 5 1/2 mo. for ms. (Kusalik-ALB). **Mystery Radio** 6955 f/d cd. w/ design # 17 along w/ a program tape in 1 mo. for ms. (Pappas-SD). f/d cd. w/ design #16 in 3 wks. for a rpt. to ACE. (Kusalik-ALB). **KIWI Radio** 6955 via **NAPRS** cd. w/ sticker in 14 ds. for \$1.00 and a rpt. to the NZ addr. (McCarthy-GA). **Rock It Radio** 9955 via **WRMI** f/d cd. in 2 wks. for ms. v/s Bennie Dingo. (Pasz-kiewicz). in 2 mo. for a "PSE QSL" in ACE. Rcvd. "blue angel/earth" cd. w/ ltr. (Kusalik-ALB).

**VENEZUELA: Radio Amazonas** 4940 f/d \* cd. in 2 mo. for a SP rpt. and \$2.00. along w/ a taped rpt. (Rau-

**ZAMBIA: Radio Christian** sch-NJ). **Voice** 4965 p/d ltr. in 8 mo. after a f/up rpt. v/s B. Phiri. (Lare-MI).

More reports next month. Have a great QSL Summer....Sam.

**HUANUCO - PERU**

**ONDAS DEL HUALLAGA**

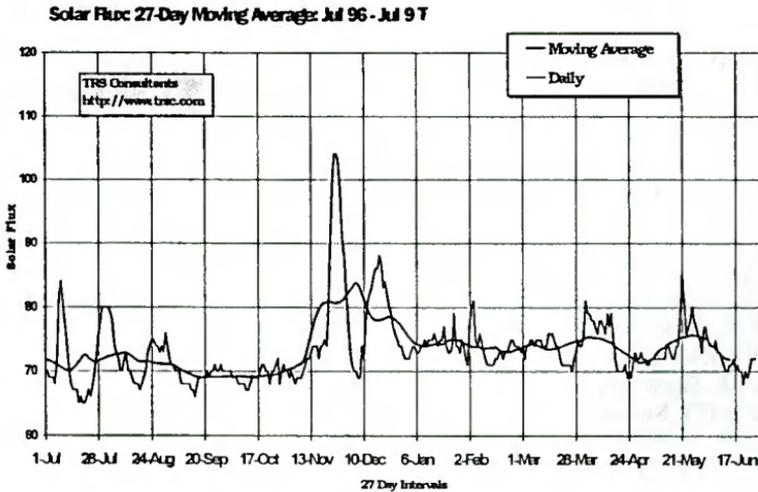
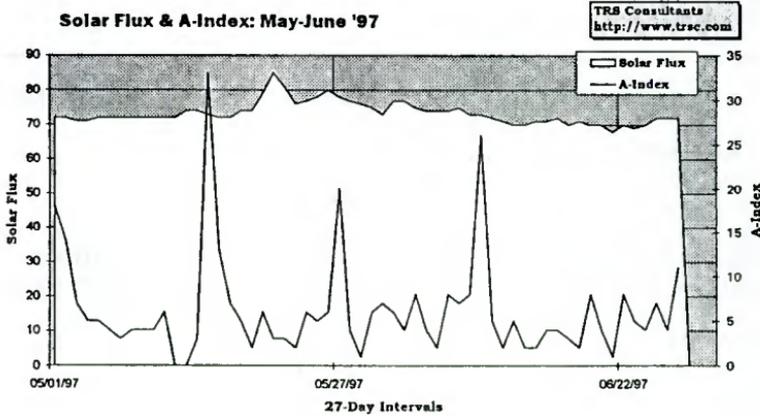
MARAÑON  
Hucaybamba  
LEONCIO PRADO  
HUAMALES  
HUANUCO  
PUERTO INCA  
OAX 3N  
1351 Kc  
OAX 3D  
1331 Kc

EN SU NUEVA DIMENSION AL SERVICIO DEL DEPARTAMENTO

*Sam*

# Propagation Charts

Thomas R. Sundstrom  
PO Box 2275  
Vincentown, NJ 08088-2275



Posted into the newsgroup rec.radio.shortwave by Cary Oler of the University of Lethbridge (<http://solar.uleth.ca/solar>), dated June 23:

## STATUS OF THE CURRENT SOLAR CYCLE:

Everyone now agrees that we have finally observed the birth of solar cycle 23. We have probably been immersed within this new cycle for some time. According to sunspots, the minimum occurred in May 1996 with an as yet unofficial smoothed sunspot number of 8.1. Since then, we have observed a steady increase in the number of new-cycle sunspots having the proper new-cycle magnetic polarities. At the time of this writing, most of the new sunspots which are appearing are new-cycle spots.

According to the number of days in which no sunspots appeared, the cycle minimum (or maximum number of spotless days) occurred in October 1996 when there were 26 spotless days. This month also corresponds with the lowest monthly observed sunspot number of 2.3 (reported by SEC) and 1.8 (according to the International Relative Sunspot Number [RI]).

In addition, butterfly plots showing the emergence of new solar sunspot regions according to solar latitude indicates a clear separation in formation latitudes from old cycle 22 and new cycle 23. There are also many other parameters which have shown that new cycle 23 is now firmly in-progress.

# Contributors' Page

**Fred S. Kohlbrenner**  
2641 S. Shields St.  
Philadelphia, PA 19142  
Internet: fkoehl@ix.netcom.com

## DEADLINE FOR CONTRIBUTIONS IS THE 10th OF THE MONTH

The following members contributed loggings:

Brian ALEXANDER, Mechanicsburg, PA  
Gabriel Ivan BARRERA, Buenos Aires, ARG  
Jerry BERG, Lexington, MA  
Erik BUENEMAN, Hazelwood, MO  
Pedro M.C. de CASTRO, Lorena, Brasil  
David CLARK, Thornhill, ONTARIO  
Ross COMEAU, Andover, MA  
Peter COSTELLO, Matawan, NJ  
William CROOKHAM, Caldwell, ID  
Jill DYBKA, Knoxville, TN  
Ralph FAMULARO, Hyogo-ken, JAPAN  
Bob FRASER, Cohasset, MA  
Bill FLYNN, Cave Junction, OR  
Greg HARRIS, Park Forrest, IL  
Bob HILL, Littleton, MA  
Mark HUMENYK, Weston ONTARIO  
Hans JOHNSON, Englewood, CO  
Fred KOHLBRENNER, Philadelphia, PA  
David KRAUSE, Eastlake, OH  
Ben KREPP, Chamberlain, ME  
Harold LEVISON, Philadelphia, PA  
Gigi LYTLE, Lubbock, TX  
George MAROTI, Mt. Kisco, NY  
William McGUIRE, Cheverly, MD  
Mark MOHRMANN, Coventry, NY  
Gary NEAL, Sugarland, TX  
Ed NEWBURY, Kimball, NE  
Jay NOVELLO, Wake Forrest, NC  
Gary OTTESON, Philadelphia, PA  
Denis PASQUALE, New Brighton, PA  
Stephen PITTS, Minnetonka, MN  
Bob RAYMOND, Nashua, NH  
Jim RENFREW, Rochester, NY  
Chuck RIPPEL, Cornland, VA  
Mike RYAN, Bangkok, THAILAND  
Giovanni SERRA, Rome, ITALY  
John SGRULETTA, Mahopac, NY  
Mitsuhiro TAKAYA, Osaka, JAPAN  
Mahendra VAGHJEE, Rose Hill, MAURITIUS  
Dan ZIOLKOWSKI, South Buffalo, NY

AOR AR-7030 100' LW  
NRD-525 32m dipole  
R8 165' LW  
ATS-803A MFJ-1778 G5RB antenna  
Sony ICF-2001D 20m LW MFJ-16010  
R8A ANC-4 Carolina Beam  
R8 325' LW  
AR3030 DX-390 70' LW

ICF-SW55 ATS-803A R5000 LW  
Sony ICF-2003 ICF-SW100S 2m LW  
R8 DX-Ultra inverted V  
Icom R-72 12m indoor wire  
Sony 2010/whip 120' dipole RW Loop  
Magnavox D-2935 AN-60  
R8 2-500' LW's  
R8 NRD-525 FL-3 ANC-4 Sloper

R8-A 2010 60m dipole 500' beverage  
R8 R70 YB400  
Lowe HF-225 LW  
Sony 2010 30' dipole MFJ-956 tuner  
DX-380  
NRD-535D 440' V beam @ 180 degrees  
Grundig YB-400  
WJ-1000 R8 60'Sloper 20' loop  
R8A LW's

Sony 2010 beverage antennas  
NRD-535D FRG-7 Eavesdropper RW Loop  
IC-745 40meter 1/2 wave vertical  
R8 2010 MJF-959B A/D Sloper  
R390A R8A R1051H SP-600 51S-1 LW's

NRD-525 AD Sloper  
NRD-515 AD Sloper Moseley trap dipole  
NRD-535D RF Systems antenna  
Lowe Europa 225E Sony 2010 LW ARA60  
R8 Sloper SPS NRF-7 SEM QRM Eliminator

Gabriel Ivan Barrera's logs this month were made while at a DX camp to a country farm in Colonal Vidal. Thanks to everyone who took the time to send in contributions this month.

Best wishes and 73's.



# Tropical Band Loggings

Sheryl Paszkiewicz  
P.O. Box 152  
Manitowoc, WI 54221-0152

- 2390 USA WWCR 4/1 1120 Brother Stair ridicules Bishop Tutu (Newb-NE)  
4/28 0930 preacher screaming "it's a done did deal" (Newb-NE)
- 2410 NEW GUINEA R Enga 4/30 1257 lang chants, anmts, fair (Flyn-OR)
- 2460h COLOMBIA R Viva 5/24 0301 ads, echo, ID, dance mx (Nove-NC)
- 2480.2h ECUADOR R Sonorama 4/29 0925 huayno, ID, ads (Mohr-VT)
- 2680h USA WHAR 5/26 0050 IDs, sports tlk show, f-g (Alex-PA)
- 3200.4h ARGENTINA R Armonia 4/17 0842 mx, anmts, ads, ID (Mohr-VT)
- 3210 USA WWCR 4/28 0933 right wing pgm (Newb-NE)
- 3222.1 TOGO R Kara 5/22 0520 chime IS, anthem, FR ID, rel  
also weak carrier on poss MW //1502.5 (Clar-ON)
- 3223 INDIA AIR Simla 5/26 \*0530 devotion mx, HD mx, requests (Vagh)
- 3305 PAPUA R Western 5/15 1235 mx hodgepodge, prayer, anmt (Famu-JP)  
tent 5/12 0955 Rock of Ages, anmt w/flute (Sgru-NY)
- 3316 SIERRA LEONE SLBS 4/13 2255-0000\* public mtg, reggae (Maro-NY)
- 3330 ZAMBIA Christian Vo 5/22 0425 rel msg, jingle ID (Clar-ON)  
6/1 0348 gospel mx under CHU (Sgru-NY)
- 3345 MOLUCCAS RRI Ternate 5/9 1405 rel svc? hymn, pops (Flyn-OR)
- 3345 NEW GUINEA R Northern 4/26 1202\* PD singing, ID, C&W, TC,  
orch mx (Pitt-MN)
- 3365 INDIA AIR Delhi 5/2 1746 instls, tlk, SC mx (Serr-IT)
- 3380 MALAWI MBC 5/22 0340 Afr mx, Chichewa anmts, EG ads & ID,  
lang nx, weak by 0415 (Clar-ON)
- 3385 NEW BRITAIN RENB 5/5 1145 PD pop mx, tlk, ID, anmts (Pitt-MN)
- 3395 SUMATRA RRI Tanjungkarang 5/4 1416 IN trad mx, poor (Flyn-OR)
- 3904.8 SUMATRA RRI Banda Aceh 2328 5/4 anmts, IS but not SCI, tlks  
mx bridges, weak & QRM (Hill-MA)
- 3925 JAPAN R Tampa 4/27 0958 JP class mx, IDs, anthems, tlk (Mohr)
- 3935 NEW ZEALAND ZLXA 4/25 1009 EG relay of Natl R, nx, ID, NZ wx  
drama pgm (Mohr-VT)
- 3945 VANUATU RV 4/25 0931 Tok Pisin C&W, ID, promos, jingle, read  
mail (Sounds long country mx) 1001 IS, lcl nx (Mohr-VT)
- 3976 KALIMANTAN RRI Pontianak 5/2 1410 lcl echo ID, chorus, nx,  
fair (Flyn-OR)
- 4010.1 KYRGYZSTAN KR 5/7 1410 RS opera, tlk, pan flute (Ryan-THAI)
- 4035 TIBET Xizang PBS 5/22 1500 mx, tlk in CH or TB (Vagh-MAUR)
- 4050 KYRGYZSTAN KR 5/12 \*2300 NA, anmts, vcls //4010.1 (Ryan-THAI)
- 4419.5 PERU R Bambamarca 5/5 0125 echo anmts, ment trabajo, instls,  
flutes, yipping, drum, ment Bambamarca & Peru, 0212 ID (Nove)
- 4450 BOLIVIA R Frontera 5/6 0120 vcls w/guitar & percussion, ads  
ment Pando, Blondie mx as bkgd, echo ID (Nove-NC)
- 4460.9 PERU R Norandina 5/5 0215 comunicados, ment Dia de la Madre  
sev TCs, Andean pop, 0250 ID, QRM from numbers stn (Nove-NC)
- 4515 BRAZIL unid, 5/17 0220 tlk, pop mx, poss ID, ment Brasil, TCs  
slogan, poss nx (Serr-IT)
- 4599.3 BOLIVIA R Emis Villamontes 5/3 1024 ads, mx, 1029 ID, ads  
(Barr-ARG)
- 4599.9 BOLIVIA Perla del Acre 5/8 0150 pops & dance mx, 0225 ID,  
mensajes, flutes, some ads. W said "bye bye" 0245\* (Nove-NC)
- 4730 RUSSIA VoR EG 5/22 1525 cmtry on China, nx, sports, Round  
Table Talk (Vagh-MAUR)
- 4739 VIETNAM Son La 4/16 1315 singsong, march mx, ID 1400\* (Ryan)
- 4753.3 SULAWESI RRI U-P 5/14 1043 tlk, singing w/drum & flute, folk mx  
(Newb-NE)
- 4765 CONGO RTV Congolaise 5/17 2129\* NA (Berg-MA) 5/22 0501 strong  
w/FR tlk abt Pt Noire & Brazzaville, ID (Clar-ON) 5/26 \*0350-  
0450+ NA, FR anmts, ID, tlk //5985 (Alex-PA) 5/13 \*0400 IS,  
ID, lion roar, ment Brazzaville, TCs (Sgru-NY) 5/18 1733 Afr  
pops, tlk abt Zaire, ID, interview (Serr-IT)
- 4775 SWAZILAND TWR 4/2 0415 GM rel song, chorus (Newb-NE)

4779.8 GUATEMALA R Cultural Coatan 4/1 1135 Indian tlk (Newb-NE)  
 4782.9 MALI RTM 5/18 2008 nx w/corres, IS, pop mx, ID (Serr-IT)  
 4790 INDIA AIR Itanagar 5/5 \*0000-0030\* Tamil //13795 & 9910 vy  
 strong via Chennai? must be 250 kW (Clar-ON)  
 4790 PERU R Atlantida 5/4 0331 (Newb-NE) 5/14 0214 ID (Sgru-NY)  
 4799.8 GUATEMALA R Buenas Nuevas 4/1 1137 Indian preaching (Newb-NE)  
 4800 INDIA AIR Hyderabad 5/12 \*0020 tone, IS, tlk. Guatemala QRM  
 is prob why this one doesn't make it very often (Hill-MA)  
 4815 ECUADOR R Buen Pastor 5/3 0305\* tlk, folk mx, ballads, NA,  
 poor in QRN but no ZY on freq (Alex-PA)  
 4819.2 HONDURAS HRVC 5/23 1050 anmts, gospel mx, marimbas (Newb-NE)  
 4830 VENEZUELA R Tachira 5/4 0335 rel ment Church, Christ, Spirit  
 (Newb-NE)  
 4835 GUATEMALA R Tezulutlan 4/1 1141 Indian tlk, guitar & zither  
 mx, marimbas (Newb-NE) 5/17 0158 marimbas, tlk, ment Guat.  
 Coban, fair (Serr-IT)  
 4850 CAMEROON Yaounde 5/3 2200 hilife mx, tlk, phone tlk, ment  
 Yaounde, Douala, Cotonou (Berg-MA)  
 4850.6t ECUADOR R Luz y Vida 5/8 0125\* tlk, ads, jingles (Alex-PA)  
 4870.1 ECUADOR LV del Upano 5/3 0103\* tlk, instls, ID 0100 (Alex-PA)  
 4877.5sh CANADA RCI 5/11 2340 interview (Hill-MA)  
 4879.7 ECUADOR RN Espejo 6/10 0320 SP IDs, ballads, LA mx (Kohl-PA)  
 4885 BRAZIL R Clube do Para 5/17 0208 IDs, fair (Serr-IT)  
 4890 PAPUA NBC 4/1 1127 lite rock mx, EG anmts (Newb-NE)  
 4900 CHINA Vo Strait 5/14 1049 CH singing, anmts (Newb-NE)  
 4910 ZAMBIA ZNBC 5/29 0505 EG nx abt Nigerian peacekeeping in  
 Sierra Leone (Kohl-PA)  
 4914.4 PERU R Cora 5/4 0342 LA mx, tlk (Newb-NE)  
 4919 ECUADOR R Quito 5/4 0344 salsa mx, anmts, drums, brass (Newb)  
 5/17 0304 nx, mx breaks, ID 0305 fair (Serr-IT)  
 4940 CHINA Vo Strait 5/14 1058 instls, TP, CH tlk not //4900 (Newb)  
 4945 BOLIVIA R Illimani 5/29 0220 futbol game //6025, flute IS(Flyn)  
 4955 COLOMBIA RN 5/17 0311 old LA songs, ment Colombia (Serr-IT)  
 4960 ECUADOR R Federacion 5/18 0120\* Indian tlk, exotic folk mx  
 NA & state anthem (Alex-PA)  
 4965 BOLIVIA R Juan 23 6/1 1022 ballad, ID, p-f (Famu-JP)  
 4965 BRAZIL R Alvorada 5/1 0935 ads, ID, low audio (Mohr-VT)  
 4974.8 COLOMBIA Ondas del Orteguaza 5/22 2300 Todelar promo, ID, nx  
 (Nove-NC) Sev good logs from you in FT these days--sp  
 4980 VENEZUELA Ecos del Torbes 5/4 0349 LA mx, tlk (Newb-NE)  
 4990.9p SURINAM R Apintie 4/29 0819 DT choral hymns, tlk, Western mx  
 0859 Ancash s/on (Mohr-VT)  
 4991 PERU R Ancash 5/6 0417 anmts, pops, folk mx (Newb-NE)  
 5003.5 RIO MUNI RN Bata 5/2 2200\* folk mx, NA (Barr-ARG)  
 5009.5 MADAGASCAR RM 5/15 1747 chants, lang tlk (Serr-IT)  
 5020 COLOMBIA Ecos del Atrato 5/23 0225 Limbo Rock, ID & ment  
 Caracol (Sgru-NY)  
 5020 SOL ISL SIBC 0956 Tok Pisin sports tlk, ads, ID, TC, nx (Mohr)  
 5/27 0950 tlk abt negotiations w/India, ID, nx (Sgru-NY)  
 5025 CUBA R Rebelde 5/17 0324 tlks, IDs, anmts (Serr-IT)  
 5030 COSTA RICA AWR 5/6 0424 EG anmt of rel pgm, hymn (Newb-NE)  
 5/17 0335 reading Bible, IS, ID, fair (Serr-IT)  
 5050.1 TANZANIA RT 6/10 0403 EG nx, ment Tanzania & Dar-es-Salaam  
 ID, poor (Kohl-PA)  
 5050.5 ECUADOR R Jesus 5/7 1110 tlk abt Quito (Newb-NE)  
 5077 COLOMBIA Caracol 5/4 0356 Louis Armstrong & Dixieland jazz  
 anmts, ID (Newb-NE)  
 5100 LIBERIA RL 4/20 0018 EG mx, ment Monrovia, moderate QRN (Levi)  
 5385.2 PERU R Huarmaca 4/19 0244 anmts, huaynos, ID, NA 0303\* (Mohr)  
 5/26 0100 anmts, folk mx, YL ancr (Alex-PA)  
  
 5597 VIETNAM Lao Cai 4/14 1145 singsong, ID w/bkgd mx //6700 (Ryan)  
 5619.2 PERU R Ilucan 5/26 0245\* folk mx, ID, tlk, weak (Alex-PA)  
 5700 PERU R Frec San Ignacio 5/24 0215 ment San Ignacio, acoustic  
 mx, shouted Cajamarca, Peru, 0223 ID, mensajes (Clar-ON)  
 4/16 0115 up tempo huaynos, anmts, ads (Mohr-VT) 5/4 0213  
 rancheras, rapid tlk by W, TC, weak & QRN (Hill-MA) 5/26  
 0055 OA mx, long tlk, weak (Alex-PA)  
 5745 USA WHRI 5/17 0103 "Open Dialog" pgm (Hume-ON)  
 5824.9 CHILE R Triunfal Evangelica 5/2 2233 gospel mx, praises by  
 Bishop & stn director, Fernando Gonzalez Segura (Barr-ARG)

# International Band Loggings

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

- 5920 CROATIA Hrvatski R Zagreb in CR 0814, continuous pops, folk mx, //7165 (Serra ITALY 5/1)
- 5930 SLOVAK REPUBLIC RSI in EG 0105, pgm sked, political nx, feature , f-g (McGuire MD 5/15)
- 59524 BOLIVIA R Pio Doce in SP 0205, elec combo mx, drama, ID, fqys, QRM (Novello NC 5/17)
- 5965 GREECE VOA relay Rhodes in AR 0600\*, tlk, folk song, AR mx, nx, ID, IS (Serra ITALY 5/3)
- 5970 BRAZIL R Itatiaia in PT 0903, OM anc, jingle ID, taped rpts (Mohrman VT 5/3)
- 6010 MEXICO XEOI R Mil in SP 0833, ID, mention 55th anniversary, romantic vcls (Berg MA 5/25)
- 60251 NIGERIA RN Enugu in EG 2240, rock & African mx, muffled voice audio, TC & ID 2300 for Natl Service, almost wiped out by RHC s/on at 6030nf?, nx, choir, fqys (Berg MA 5/3)
- 6055 RWANDA RR Kigali in FR/EG/SH 2055, FR pop mx, EG ID, fqys, NA 2101\* (Novello NC 5/24)
- 60599 ARGENTINA R Nacional in SP \*0911, popping on in mid-sentence with nx, ID, f (Berg MA 5/23) in SP 1054 w/series of nx rpts, suffering from splatter from R Tampa 6055 (Famularo JAPAN)
- 60638 COLOMBIA Colmundo Bogata in SP 1150, nx pgm w/teletalk, ID "Informacion Colmundo", sports rpt, TC's, ads, fqys (Novello NC 5/21) in SP 0910, nx re Israel, folk/relig mx, ID (Berg MA 5/24)
- 6085 GERMANY Bayerischer Rundfunk in GM 0220, GM pop mx, OM w/ID, f (Pasquale PA 5/23)
- 60854 BOLIVIA R San Gabriel in Aymara 2201-2230, nx, ads, ID, messages (Barrera ARGENTINA 5/2)
- 6090 ANGUILLA Carrib Beacon in EG 0852, Dr Scott on UFO abductee, //KAUI 5810 (Famularo 5/25)
- 6095 PERU R Nacional del Peru in SP 1154, OM/YL nx rpts, ID 1200, 1st time hrd (Famularo JAPAN)
- 6100 ALBANIA RTV Shqiptar in AL 0836, pop song, ID during tlk, f (Serra ITALY 5/1)
- 6110nf CHINA Lhasa PBS Tibet in lang 1245, local string mx, //7195, 4035 (Ryan THAILAND 4/20)
- 6130 LAOS Laos National R Vientiane in Lao 1204, long tlk, nx, ads (Vaghjee MAURITIUS 5/22) in Lao 1425, YL w/nx, ment Pakistan and Britain, 3 min dead air, then mx & OM, f (Flynn OR 5/2)
- 6135 SWITZERLAND SRI in EG 0415, tlk re prostitution in Netherlands, ID, Archbishop sent to Budapest (Newbury NE 5/25) in GM 0038, YL w/tlks, piano mx, ID in EG, world nx (Levison PA 4/20)
- 6155 ROMANIA RRI Bucharest in EG 0200, political nx, fqys, sked, f with QRM (McGuire MD 5/21)
- 6165 NETHERLANDS ANTILLES R Nederland relay in EG 2348, feature on environment (Levison PA)
- 6165 ZAMBIA ZNBC Radio 2 in EG 2145-2205\*, Afro pop mx, DJ w/wx rpt, organ theme, ID as "Zed BC Radio 2", sked, muffled canned ancmnt over mx bed, NA at s/off (Novello NC 5/24)
- 6180 CYPRUS CBC Nicosia via BBC Limassol in GK 2245\*, non-stop GK mx, OM said a few words before s/off then short theme truncated by carrier cut, //9760 (Novello NC 5/9)
- 6185 MEXICO R Educacion in SP/EG 0815, lite mx, EG ID w/call letters/QTH (Famularo JP 5/25)
- 6195 ANTIGUA BBC relay in EG 1043, "One Planet", Asia most polluted spot on Earth (Fraser MA)
- 62037 PERU R Cuzco in SP 2150, melodic mx, ID at 2157, then into more mx (Barrera ARGENT 5/3)
- 6245 GREECE ERT Thessaloniki in GK 2150, tlks, GK mx, ex-7430, //9935 (Alexander PA 5/25)
- 6290 test SOUTH AFRICA World Music Radio in EG 2112-2200\*, pop mx, ID, jingles, and FAX & E mail addr for rpts, regular bcsts to start 5/31 (Alexander PA, Novello NC, Berg MA, Barrera ARG 5/8-10)
- 6329 PERU R Estacion C Moyobamba in SP 2355-0435+, OA mx, TC, ID, p under RTTY (Alexander 5/25)
- 63967v VIETNAM Lai Chau in lang 1130, tlks, tribal singsong by YL, ID over mx (Ryan THAI 5/13)
- 64798 PERU R Los Andes Huarmaca in SP 0212, OA mx, TC, pgm hosted by OM anc (Barrera ARG 5/4)
- 65329v VIETNAM Cao Bang in lang 1245, OM w/singsong, ID over background mx (Ryan THAI 4/16)
- 65358 PERU R Dif Huancabamba in SP 0055-0205\*, irreg SP ancmnts, ID's with many mentions of Huancabamba, TC 0112, s/off with NA, f w/some ute QRM (Alexander PA 5/31, Berg MA 5/24)
- 65419v VIETNAM Yen Bai in lang 1200\*, tribal singsong, tlks, ID w/background mx (Ryan THAI 5/28)
- 67978 PERU R Ondas del Rio Mayo in SP 0201\*, OA folk mx, ancmnts, ID's, NA, p (Alexander PA 5/18) in SP 0948, Andean flute mx, huaynos, TC's, full ID 1001, f w/cw QRM (Mohrman VT 4/19)
- 6840 CHINA CPBS Beijing? in EG/CH 1432, lang lesson, all Hohhot sites reportedly inactive, //6750 w/stronger signal, only fair on 6840 (Flynn OR 5/30)
- 69976nf PERU R San Ignacio in SP 2340-0312\*, ancmnts, rustic OA folk mx, ID's 0001 & 0259, ex-6753 tnx to H Klemetz tip on WOR (Alexander PA 5-23/24)
- 71025 usb BOSNIA HERZEGOVINA RTV Sarajevo in lang 2245-0200+, tlk by YL/OM, variety of mx, pips, ID on hr, apparently returned fqy (Alexander PA 5/26, Novello NC 5/19, Hill MA 5/11)
- 7110 ALBANIA R Tirana in EG 2107, nx re elections in Albania, politics, //9515 (Humenyk ONT 5/29)
- 7160 ALBANIA R Tirana in EG 0235, fqys, skeds, ID, political nx, f (McGuire MD 5/16)
- 7205 CYPRUS CBCC in GK \*2212-2245, IS, ID, "Our Cyprus" interview pgm (Maroti NY 4/19)
- 7230 YUGOSLAVIA RY in EG 1913, YL w/nx, tlk critical of Croatia, ID (Famularo JP 5/23)
- 7230 ITALY AWR Europe in IT 0846, relig pop song, sermon, fine mx, ID, QTH, IS (Serra ITALY 5/1)
- 7250 RUSSIA V of Vietnam relay in EG 0115, nx re Britain trade balance w/Vietnam (Pasquale PA 5/29)
- 7255 NIGERIA V of Nigeria in EG/Hausa 2000-2200+, nx, features, Afro pop mx, ID's, cmntry on Afr topics, into Hausa lang 2200 (Alexander PA 5/17, Hill MA 5/11)
- 7290 SWEDEN R Sweden in EG 0130, ID, pgm sked, political nx, ment Estonia, g (McGuire MD 5/30)
- 7305 VATICAN STATE Vatican R in SP 0312, IS, ID, into relig nx (Harris IL 6/9)

- 7335 VATICAN STATE Vatican R in EG 0145, nx re Pope & Vatican, QRM CHU (Krause OH 5/27)
- 7370 TURKEY TPR Ankara in TK 0901, lcl pop songs, tlk, ment Ankara, M East mx (Serra ITALY 5/1)
- 7440 CHINA CPBS 2 Xi'an in CH 1601\*, CH fine amx, tlk, pips 1600, ID?, NA, p (Serra ITALY 5/2)
- 7450 GREECE VOG Athens in EG 0343, GK ethnic mx, nx, PM's trip to Germany (Newbury NE 4/29)
- 7480 BULGARIA R Bulgaria in EG 2310, ID, rpt on French election, ment Natl holiday (McGuire 6/2)
- 7504 CHINA CPBS 1 Xi'an in CH 1542, pop songs, mx breaks, ancmt, f (Serra ITALY 5/2)
- 8098nf7 ARGENTINA R Rivadavia in SP 0200, soccer match, ID 0300, xmt irreg on LSB (Alexander 5/31)
- 9275 ICELAND Ríkisutvarpíð Reykjavík in IC 2303, nx with bridge mx, //11402 (Humenyk ONT 5/18)
- 9370 GUAM KSDA Advent World R in EG 1600, ID, gospel pgm by YL, f (Humenyk ONT 5/17)
- 9435 ISRAEL Kol Israel in EG 0405, political nx, QRM (McGuire MD 5/6) in Farsi 1356, IS, pips, ID, classical mx pause, fqys, nx (Serra 5/2) in EG 1905, rpt on Israel-Jordan meeting (Fraser MA 5/13)
- 9485 PAKISTAN RP in EG/Urdu 1403, nx, AR mx pause, ancmt, ID in Urdu (Serra ITALY 5/2)
- 9530 UZBEKISTAN R Tashkent in Turkic? lang 0143, Central Asian vcls, IS, long tlk, p (Hill MA 5/4)
- 9530nf7 SAUDI ARABIA BSKSA in AR 0821, Holy Qu'ran pgm, chants, tlk, ID, //17880 (Serra 5/3)
- 9535 JAPAN NHK Tokyo in EG 1515, tlk re rescued hostages in Lima, Peru, f (Newbury NE 4/23)
- 9550 UKRAINE RUI in EG 0300, IS, ID, sked, national nx, cmntry (McGuire MD 5/6, Levison PA 5/6)
- 9595 JAPAN R Tampa in JP 1115, pop & rock mx w/YL DJ, promos, ID, laughter (Ziolkowski NY 5/4)
- 9615 ALASKA KNLS in CH \*1400, IS, ID in CH, relig tlk, US pop mx, EG lesson (Maroti NY 5/6)
- 9630 BOTSWANA VOA relay in EG 0601, "Daybreak Africa", nx headlines, f (Bueneman MO 5/15)
- 9675 BRAZIL R Cancao Nova Sao Paulo in PT 1055, BR pop mx, singing ID 1100 (Novello NC 5/12)
- 9690 SPAIN China R Int relay in EG 0300, nx, food to Iraq, ID, nx re China (McGuire MD, Levison PA)
- 97042 ETHIOPIA R Ethiopia in Amharic? 0320, domestic mx, early s/on?, QRM, //7110 (Clark ONT 5/20)
- 97295 VIETNAM V of Vietnam in EG 1120-1127\*, cultural tlk, VT vocals, f (Famularo JP 6/5)
- 980996usb KIRIBATI R Kiribati Tarawa in lang/EG 0458-0616, upbeat island mx, tlk by YL, ID in EG, into EG nx 0600, EG ads, lcl nx, VOA spillover 9820 (Berg MA 5/22, 5/24, Clark ONT 5/22)
- 9840 HUNGARY R Budapest in EG 0233, cmntry on possible Euro Union aid, g (Pasquale PA 5/29)
- 9845 NETHERLAND ANTILLES R Netherlands relay in EG 0001, pgm on life of Brahms (Levison PA)
- 9885 SWITZERLAND SRI in EG 0108, world nx, cmntry on North Korean food shortage (Levison PA)
- 9925 BELGIUM R Vlaanderen in EG 2335, rpt on Zaire, wx, ment French election (McGuire MD 6/2)
- 9960 LEBANON V of Hope in EG 2222, preaching by OM, QRM from WRMI (Humenyk ONT 5/18)
- 9985 PALAU KHBN in JP/EG 1107-1215, gospel mx, ID, Bible reading (Maroti NY, Ziolkowski NY)
- 11100 CHINA China Nat R Taiwan Service in CH 1129, CH vocal by YL, weak (Ziolkowski NY 4/13)
- 11600nf7 SEYCHELLES FEBA in EG 1502, sermon, chant, prayer, QTH in USA, ID (Serra ITALY 5/18)
- 11620 INDIA AIR Bangalore in EG 2252, subcont mx, cmntry, QRM, //9950 (Humenyk ONT 5/29)
- 11660 AUSTRALIA RA in EG 1531, cultural pgm, interviews, ID, tlk, //9615 (Serra ITALY 4/29)
- 117048 BRAZIL R Nova Visao in PT 1120, canned relig pgm, ID as "R Transmundial" (Novello NC 5/22)
- 11710 UNITED ARAB EMIRATES Abu Dhabi in AR 1756, cmntry, mx by group, pips, ID?, brief nx, f //9770, 15265 (Humenyk ONT 5/30)
- 11715 CANADA R Korea Int relay in EG 1030, IS, ID, fqy, sked, political nx, f (McGuire MD 5/21)
- 11720 BULGARIA R Bulgaria in EG 1950, "DX Program", poor propagation continues (Fraser MA 5/16)
- 11730 SOUTH AFRICA TWR relay Meyerton in EG 0630, ID, Swaziland QTH, rel pgm (Bueneman MO)
- 11810 RWANDA D Welle relay in EG 1940, tape rpt by OM re new leader in Zaire (Humenyk ONT 5/20)
- 11815 ITALY RAI Rome in EG 2206, world & Italian nx, cmntry re French elections (Famularo JP 5/30)
- 11830 BRAZIL R Anhanguera Goiania in PT 2328, on-scene rpts by OM & YL, f (Flynn OR 5/2)
- 11940 ROMANIA RRI Bucharest in EG 0210, nx re lcl agricultural land reforms, f (Pasquale PA 5/23)
- 11940 CAMBODIA Nat V of Cambodia in Thai? 1232, loud YL anc, variety lcl mx, f (Lytle TX 5/12)
- 11960 MALI RTV Maliene in lang 1720, long tlk, song, nx?, cmntry, ID in FR 1759\* (Vaghjee MAUR)
- 11990 KUWAIT RK in EG 1815, world nx, relay of FM, western mx (Pasquale PA 6/1, Fraser MA 5/13)
- 12050 UKRAINE RUI in UK 1851, sports nx, ID, chime, tlk, fqy, nx, speech (Vaghjee MAUR 5/26)
- 12060 RUSSIA V of the Mediterranean Malta in EG \*1859-2000, s/on w/chimes, "VOM from Malta" ID at 1900, pop mx, f, //9765 weak, V of Russia prior to 1859 (Alexander PA 5/25)
- 13605 AUSTRALIA RA in EG 0002, local & worldwide nx, sports relays, ID, f (Levison PA 4/3)
- 13610 SYRIA R Damascus in EG 2105, AR mx, ID, nx, rock mx, //12085 (McGuire MD, Humenyk ONT)
- 13730 AUSTRIA R Austria Int in EG 2143, interview re Marshall plan, g (Humenyk ONT 5/18)
- 13750nf TURKEY V of Turkey in EG 1313, end of lang lesson, ID, TK mx, f-p (Famularo JP 5/24)
- 13760 NORTH KOREA R Pyongyang in EG 0018, cmntry by YL, mx, //15130 (Humenyk ONT 5/19)
- 13765 VATICAN STATE Vatican R in EG 0655, tlk on spreading the gospel thru Ugandan media outlets, Afr service ID (Famularo JP 5/15) in Tamil 1513, gospel mx, cmntry, g (Humenyk ONT 5/18)
- 13845nf7 ANGUILLA Caribbean Beacon in EG 0020, QTH and other info, //6090 (Sgrulletta NY 5/27)
- 13860 ICELAND Ríkisutvarpíð Reykjavík in IC 1433, tlk, lyrical song, nx? to 1438, brief mx, //11402 (Serra ITALY 5/3) in IC 1913-1930\*, tlks by YL & OM, nx?, cmntry (Barrera ARGEN 5/2)
- 150098 VIETNAM V of Vietnam Hanoi in EG 1331, nx, ID, tlk re Vietnam & Ho Chi Minh, patriotic songs ancmt for end of pgm and s/off at 1457, f (Serra ITALY 5/18)
- 15050 INDIA AIR Aligarh in IN 0928, continuous songs, ID, QRM splatter, //17387 (Serra ITALY 5/3)
- 15060 SAUDI ARABIA BSKSA in AR 1444, AR mx, ID, pop mx, tlks, //15230 (Serra 5/18) test tone at 0350 tune-in, IS 0359 recheck, short anthem, pips 0400, then into pgming in TK (Sgrulletta NY 6/1)
- 15120nf SWITZERLAND SRI in EG \*1300, IS, ID, nx, Iranian moderate wins presidential election, Taliban militia advances in Afghanistan, f (Famularo JP 5/24)

- 15115 NEW ZEALAND RNZI in EG 0303, YL w/nx items, wx rpt, sports cmntry, g (Levison PA 5/25)
- 15125 TAIWAN B/C Corp of China, Popular Net in CH 1315-1405, lively FM-1 pgme with fine mx and chatty OM & YL ancrs, //11885 under Romania (Clark ONT 5/19, Serra ITALY 5/18)
- 15125 INDONESIA RRI Jakarta in IN 1230+, different pgm than concurrently on 11750 & 11885, "programa nasional" ID by YL 1230, into SCI at 1258 but audio abruptly cut (Clark ONT 5/19)
- 151675 FRENCH POLYNESIA RFO Papeete Tahiti in FR 0315, pgm of vcl selections (Clark ONT 5/15) ED: Clark rpts lots of carrier but severe xmtr growl in later 1/4 (end of last remaining xmtr perhaps)
- 151858 EQUATORIAL GUINEA R East Africa in EG 2035, usual paid relig pgms & distorted audio, no ID hrd but inferred ID from past loggings (Novello NC 5/6)
- 15240 SWEDEN R Sweden in EG 1354, cmntry re women becoming priests in Sweden (Humenyk ONT)
- 15265 BRAZIL R Nac Brasilia in EG 1803, mx selections, some vcls, short nx items, ID (Levison PA)
- 15295 UZBEKISTAN R Tashkent in EG 1339, NA, topical nx re relationships between Italy & Uzbekistan ID 1343, sports cmntry, lcl mx, ancrmt for end of pgm at 1357 (Serra ITALY 5/5)
- 15295 MALAYSIA V of Malaysia in AR 1535, AR chants, pop song, ID, TC 1600 (Serra ITALY 5/18)
- 15315 NETHERLAND ANTILLES R Nederlands relay in EG 1900, hilites of 50 yrs of RN (Levison PA)
- 15320 TAIWAN CBCS Network 1 in CH 1400, short ancrmts w/mx beds (ads?), 6 pips with last one high on the hr, ID "...kuangpo tientai", this is commercial service to the mainland (Novello NC 5/5)
- 15440 FINLAND YLE R Finland in FN 1914, YL with nx, taped rpt by OM, //11755, g (Humenyk 5/29)
- 15445 BRAZIL R Nacional Brasilia in EG 1225, discussion of home loans, ID (Harris IL 6/9)
- 154504 TUNISIA RTV Tunisienne in AR 1255, instrum mx, tlks, ID, //177351, f (Novello NC 5/6)
- 15460 FRANCE R France Int in EG 1712, report on the fighting in Uganda, ID, g (Fraser MA 5/13)
- 15505 KUWAIT R Kuwait in AR 1520, AR chants/vocals, //9880, 13620, 15110 (Serra ITALY 4/29)
- 15540 SEYCHELLES FEBA in Malayalam? 0831, sub-cont mx, tlk, ID, IS, f (Famularo JP 5/18)
- 15640 CZECH REPUBLIC R Prague in EG 1706, nx re monetary exchange rates, ID (Humenyk 5/30)
- 15650 ISRAEL Kol Israel in EG 1402, nx re Israel's most wanted person, rpt on Jewish Education Seminar at Basel, Switzerland, //12080 (Humenyk ONT 5/17, Fraser MA 5/17)
- 17585 UNITED KINGDOM BBC Rampisham in AR 1210, AR song, tlk, pop mx, ID "Huna London", topical nx?, //13660, 15180, p (Serra ITALY 5/3) ED: Site confirmed by latest BBC listings
- 17605 NETHERLAND ANTILLES R Nederlands relay in EG 1855, interview & tribute, ID (Fraser 5/18)
- 17655 BELGIUM R Vlaanderen in DT 1400, sports marathon, //11995, 9925 (Humenyk ONT 5/18)
- 17680 UKRAINE R Ukraine Int in UK 1425, taped rpt, mx, //13590, 15520, 15550 (Humenyk ONT 5/19)
- 17795 AUSTRALIA R Australia in EG 2147, nx re new leader in Pakistan, exc (Humenyk ONT 5/24)
- 17800 RWANDA D Welle relay Kigali in Hausa 1324, tlk, mx interludes, ID (Famularo JP 5/31)
- 17860 FRENCH GUIANA R France Int relay in SP 1418, ID, mx, polit cmntry, major world nx at 1425, FR pop songs, IS 1427, into pgm in FR 1430, //21645 (Serra ITALY 5/3)
- 17870 ITALY RAI Rome in IT 1723, service to Africa, nx w/on-scene rpts, f-g (Flynn OR 5/14)
- 21660 ASCENSION ISLAND BBC relay in EG 1432, play-by-play of soccer game, exc (Levison PA 5/17)
- 21670 SAUDI ARABIA BSKA in IN 1055, AR singing/chants, OM tlk, martial mx (Famularo JP 5/22)

#### CLANDESTINE STATIONS

- 6250 COLOMBIA R Patria Libre in SP 2220-2225\*, L Am mx, SP tlk by OM & YL, ID, mentions of Colombia, fair sig but occasional rtty QRM (Alexander PA 5/25)
- 6890 SOMALIA V of the Somali People Mogadishu in Somali/EG 1958, Somali tlk, nx in EG from 2002 to 2010, distorted echo ID, f-p (Famularo JP 5/2)
- 97501v ANGOLA A Voz da Resistencia da Galo Negro VORGAN in PT \*0453-0515+, abruptly on 0453 w/choral anthem, Afro & Euro pop mx, ID 0509, f (Alexander PA 6/1)

#### TENTATIVE, PRESUMED, OR UNKNOWN

- 61201 BRAZIL R Globo Rio de Janeiro in PT 2245, typical ZY pgming, s/off times vary widely from around 2305 to past 2330- when carrying sports, too much QRM for positive ID (Hill MA 5/4)
- 6285nf? GERMANY D Welle in EG 0340, tlk on Montenegro development, //6085, 6185, latter fqy played IS 0350 but 6285 went off (Sgrulletta NY 5/17) ED: Could be a punch-up error by engr for 6185??
- 7170 SINGAPORE RCS Olikkalanjam Net in Jang 2357, most likely this w/subcont vcls & orch, tlk in Tamil? 2359, fanfare & more tlk, very choppy sig (Hill MA 4/21)
- 9620 UKRAINE? R Kazakhstan relay in GM/Kazakh? 1028-1106, continuous folk songs, fqy quote/TC? clear ID as R Kazakhstan at 1038, 1 min silence 1059, w/ID ...Almaty..IS, nx (Serra ITALY 5/1)
- 97748 BULGARIA R Varna(p) in BG? 2250, tlk by 2 YL's, piano theme, pop mx, no ID on the hr, teletalk at 2309, listed Fridays only 2100-2400 but still going past 0030 (Novello NC 5/23)
- 11715 VATICAN STATE Lebanese Catholic Radio(p) relay in AR 0430-0455\*, follows VR's own xmsn in AR 0430\* same fqy, ID as "Voice of Love, Voice of the Humanitarian Catholic Message from Lebanon" in AR, open xmsn w/trumpets, tlk & mx segments, relig songs (Berg MA 5/24)
- 12025 RUSSIA R France Int relay Irkutsk(p) in FR 0010, tlks by OM/YL, echo sig (Ziolkowski NY 4/13)
- 13710 INDIA AIR Bangalore(p) in EG? 1415, subcont mx on strings, ment New Delhi, p (Flynn OR 5/30)
- 152445 CONGO V of Congo(p) in lang? 1550, Kinshasa-style rumba/soukous rising out of the noise floor, clobbered by VOA Morocco s/on 1600, then RAI in AR 1630, positive ID hopeless (Novello 5/23)

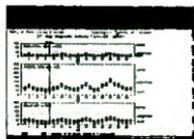
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