

NASA

The
Journal
of the
North
American
Shortwave
Association

Volume XXXI, Number 6
June, 1991

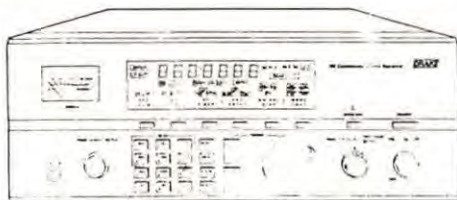
Drake R-8 Communications Receivers

DRAKE

R-8

SPECIFICATIONS

Dimensions	13.2"W x 5.25"H x 13"D	
Weight	13 Lbs. (16 Lbs. ship)	
Frequency Range	100 - 30000 kHz	
AC Power	100/120/220/240 VAC 50 or 60 Hz 42 Watts	
DC Power	11 - 16 VDC @ 2A	
Antenna 1, Converter	50 ohms unbalanced	
Antenna 2	50 or 500 ohms unbal.	
Selectivity	@ -6dB	@ -60dB
All modes except FM	6.0 kHz 4.0 kHz 2.3 kHz 1.8 kHz 1.5 kHz 12.0 kHz	<12.0 kHz <8.0 kHz <4.5 kHz <3.6 kHz <1.5 kHz <25.0 kHz
FM mode only		
Ultimate Selectivity	>95 dB	
Image Rejection	>60 dB	1-1.5 MHz >80 dB 1.5-30 MHz
I.F. Rejection	>80 dB	45 MHz >100 dB 50 kHz
Intercept Point	> +5dBm 20 kHz spacing > -20dBm 5 kHz spacing	
Notch Filter Attn.	40 dB min Depth (500-5000 Hz)	
Sensitivity	10 dB S+ N/N	
SSB/CW	<1.0µV	1-1.5 MHz <0.5µV 1.5-30 MHz <0.5µV 5-30 MHz
AM	<3.0µV	1-1.5 MHz <1.5µV 1.5-30 MHz <0.8µV 5-30 MHz
FM (12dB S/N)	<0.5µV	1.5-30 MHz
Freq. Stability	±10 ppm -10° to 50° C.	
Freq. Accuracy	±100 Hz -10° to 50° C.	
Intermediate Freqs.	1st IF = 45 MHz 2nd IF = 50 kHz	
Ext. Speaker Output ...	2.5 Watts, 4 Ohms. <10% distortion	
Recorder Output	300 mV, 4.7K Ohms.	
Demodulator Output ...	300 mV, 4.7K Ohms.	
Operating Temp.	-10° to 50° C.	



The R.L. Drake Company has been a leading name in American electronic communications since 1943. The new Drake R-8 is a microprocessor controlled, synthesized, all mode, world band receiver offering excellent sensitivity, high dynamic range and other features for the most demanding listener. It has been designed as a "complete package." You get many items as standard equipment, that would be extra on other receivers. Multi-mode reception (AM, FM, USB, LSB, RTTY and CW) is featured throughout the range of the receiver (100 kHz to 30 MHz). A high-Q, 8-pole, electronically switched IF filter provides a range of five bandwidths. These bandwidths are automatically selected by mode, but can also be manually selected. The front panel liquid crystal display provides visual feedback to the operator of the current status of the receiver. In the AM mode, a selectable synchronous detector (SYNCHRO) allows for enhanced reception by eliminating or reducing distortion due to fading signals. A Passband Offset control also aids in reducing or eliminating interfering signals by electronically shifting the receiver's IF frequencies without disturbing the operating frequency. This action allows the operator to electronically move interfering signals out of the receiver's passband thus utilizing the degree of selectivity provided by the high-Q, 8-pole IF filter. The Passband Offset is also coupled to the synchronous detector (SYNCHRO) allowing the passband to be altered while the detector is in use. Other reception aids include selectable AGC, wide/narrow noise blanker, RF preamplifier for enhancing weak signals, RF attenuator for further improvement of strong signal handling capabilities and an adjustable RF gain. A Notch filter is also supplied as an effective tool to eliminate offending tones (heterodynes).

Two VFOs (tuners) called A and B, are provided on the R-8. Selection is made with the VFO function key. Frequencies can be directly entered through the keypad. A programmable memory area allows for 100 non-volatile memories segmented into blocks of ten. The following may be stored in any memory location: frequency, mode, bandwidth, AGC setting, RF setting, antenna, notch on/off, noise blanker setting and synchronous detector on/off. As a result of three scan methods and three scan modes, nine distinct scan functions are supported in the R-8. The three methods are: Stop at carrier detect, Pause 5 seconds on carrier and Pause at carrier until carrier drops for 5 seconds, then resume scan. The three modes are: Scan all memories, Scan all unlocked memories of user-selected list and Scan from VFO A to VFO B.

A built-in 24 hour clock-timer allows the R-8 to turn on and off at preset times. In addition, the rear panel Timer connection (5 pin DIN), allows control of small recorders, etc. to record a favorite program. The R-8 rear panel provides a common DB-9 connector for standard RS232C data communications with a terminal or personal computer (9600, 1,7, 1, even). This interface provides complete control and programming capability of the R-8. Only the analog controls such as volume, RF gain, etc. are not controllable. In terms of performance and features, the American-made R-8 is absolutely state-of-the-art!

OPTIONS

- ◆ **Drake VHF Internal Converter**
Internally mounted covers from 35 to 54 MHz and 108 to 174 MHz in all modes.
- ◆ **Drake MS-8 Speaker**
Matching speaker for improved fidelity.
- ◆ **Drake Control Software for PC**
Run the R-8 from your terminal or PC.

◆ HUGE NEW CATALOG ◆

Universal offers a huge 92 page communications catalog covering all types of shortwave, amateur and scanner equipment. Radioteletype and facsimile gear is also shown. An unbeatable selection of books, parts and accessories is also featured. Very informative. FREE in the U.S.A. by 4th class mail, or \$1 by first class mail.

PRICING

Drake R-8 List Price	\$979.00
Drake R-8 Discount Price	
Order #0008	\$959.95
Shipping/Handling/Insurance	\$10.00

☛ **R-8 Availability:** We are currently accepting orders for this receiver. We will begin shipping before June 1, 1991.

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

NASWA Notes

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



Welcome to the June issue of *The Journal*. Here in Philadelphia it's hot, humid, and the bands are noisy. I heard on the news last night that we have already had 5 days during May where the temperature reached 90° F. What the heck happened to springtime?

As you flip through the pages of this *Journal* you'll notice that there is no DXer's Forum. Because of personal obligations, Kevin was unable to put together his column this month. He said that he'll be back with us in July. I have two features that were submitted by members but because of my time constraints I was unable to get them pasted up in time. I'll prepare them for future issues.

This is as good a time as any to discuss club participation. NASWA has been very fortunate to have a group of dedicated editors and staff who somehow pull it all together every month and produce *The Journal*. Many of us devote a good deal of our personal time to support NASWA. In addition to the staff, we have members who are participating by making contributions to the various columns. I would personally like to thank each and every one of you for the time you put in to help make NASWA the club that it is.

With the praise and thank you's aside, here's the facts. NASWA needs your help. Here is what we need -

(1) Editors. There comes a time when editors either get burned out, or cannot continue a column for whatever reason. If you have a particular interest in a certain column in *The Journal* and would like to get on the list to fill the shoes of a current editor when they want to call it quits or take a break, please let me know. We have just under 2000 members now and I know there are members out there who can help us.

(2) Features. We need 'em. Put on your thinking cap and think about what you could write that would be of interest to other members. It doesn't have to be a multipage document either. A couple of paragraphs can be used also. Before you put in a lot of time on a feature, contact Harold Cones and discuss

Calendar Of Events

- June 15** - Assoc. Of Southern Radio Monitors. Wingate College, Wingate, NC. Contact: Mike Hardester, P.O. Box 8159, Camp LeJeune, NC 28542-8159 Enclose SASE please.
- June 18** - N.E. Ohio SWLs. Cuyahoga County Library, 9089 Brecksville Rd., Brecksville, OH (Rt. 21, just South of Rt. 82). 7:00 PM. Mike Fanderys (216) 661-2443
- June 21** - Meeting of the Boston Area NASWA Chapter, GTE Labs, Waltham, Mass. Topic: Antennas. Please contact Paul Graveline (508) 470-1971 for additional information.
- July 12** - Minn DX Club. Hennepin Co: Gov't Center, between 5th-6th St., 3rd-4th Ave. S., Minneapolis. 7-10 PM. Downstairs through doors to right, room A. Contact George Sherman (612)432-7975
- July 27** - Washington DC Chapter meeting at EEB in Vienna, VA 1:00 PM. Contact Mike Stone (703)534-0342
- July 27** - Philadelphia Chapter Picnic. Ridley Creek State Park, Media, PA. Details next month. Contact Dan Cashin (215)446-7831
- August 10** - Minn DX Club. Annual Picnic, Kodiak Park in Columbia Heights, 49th Ave NE, E from Central Ave. (Hwy 65) Contact George Sherman (612)432-7975

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

your idea with him.

(3) Contributions. Your editors rely heavily on member input. Don't assume that because they crank out a great column every month that they don't need help. Please write directly to them and provide some input.

How many of you have any background or skills in publishing or printing? I'd like to hear from you if you do. Do you have a skill that I haven't mentioned here that could be beneficial to the club? Let me know!

Chapter News

The Philadelphia Chapter will be suspending meetings during the summer months. We'll resume in September and the meeting place and time will be mentioned in the Calendar of Events. On Saturday, July 27, we will be having a picnic at Ridley Creek State Park near Media, PA. Fred Kohlbrenner has arranged for a covered shelter with a seating capacity of 80 people. More details will appear in the July NASWA Notes. All SW hobbyists and their families are invited to this picnic, so please pass the word to anyone who might be interested.

Rich D'Angelo is looking into putting together the 1st Annual NASWA Golf Outing. The course will be located somewhere in the Reading, PA area. A few of us have expressed interest and it would be great for some fun and a few laughs. No particular golf skills required. Contact Rich if you are interested.

Mike Stone wrote to tell me that the second quarterly meeting of the Washington DC chapter went great. Ex-broadcaster Lee Shepard of WTOP/WMAL gave a talk on old broadcasting microphones. About 20 members attended. Mike turned the post of CEO, director, president, treasurer, secretary, sgt-at-arms etc. to Sally Ward of Alexandria, VA who will give some guidance to the group.

George Sherman of the Minn DX Club writes inviting NASWA members to monthly meetings being held in the Minneapolis area. They currently have about 38 attendees. Check the calendar for details.

Paul Graveline showed slides from his recent visit to Bonaire at the Boston area meeting. There was also an interval signal

ANARC SWL Ham Net

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

contest. The topic for the June meeting will be Antennas.

If you are interested in forming a group in your area write to me and I'll print off a list of members near you. If for some reason you don't want your name included on such a list, please let me know.

Shortwave Radioguide Now Available

I am happy to report that The Shortwave Radioguide is now available through the Company Store. Compiled by NASWA member John Figliozzi, the SW Radioguide primarily contains daily listings of regular English language programs broadcast to the North American audience. In addition, 24 hour schedules are included for some major broadcasters (BBC, RCI, R. Australia, Christian Science Monitor, VOA and R. New Zealand International) who are likely to be well heard in North America and whose schedules would also be of interest to listeners around the world in general. While the Radioguide has largely not been prepared with listeners outside of North America in mind, much of the information in it can be extrapolated for broadcasts to other areas of the world.

The Shortwave Radioguide is available from the NASWA Company Store, 2216 Burkey Dr., Wyomissing, PA 19610. The cost is \$13.75 postpaid. The guide is published twice a year in June and December.

John has done a great job putting the Radioguide together. It is very accurate and can be likened to a TV Guide for SW. Over two years have been invested in contacting

stations and monitoring stations in getting to this point with the publication. If you enjoy listening to programs on SW you should order a copy of this guide.

What is NASWA Notes?

One of my obligations as Executive Director of NASWA is to be head cheerleader. I try to

do that in this column in one form or another. As I have input from members, or ideas and thoughts about NASWA, I piece together a column. This is not just my column, it's your column too. It's supposed to be a place where you can sound off your likes and dislikes about what's going on in the hobby and the club. Please write!

Welcome to the following new NASWA members -

- Bruce Anderson, Portland, ME
Mr. James E. Armstrong, Arlington, VA
Robert N. Arnold, Columbus, MS
Bert T. Batchelor, Sondheimer, LA
Paul M. Baxter, West Monroe, NY
Allen Benjamin, Mesa, AZ
Holly Beuret, Dallas, PA
Jim Boddy, San Francisco, CA
Frank F. Brannan, King Cove, AK
Robert M. Britton, Miami, FL
James A. Brown, Washington, DC
Vincent Carosella, Eastchester, NY
Robert Christensen, Calgary, ALBERTA
Brad Cobo, Dencanville, TX
Curtis M. Colopy, Mayaguez, PR
Ross Comeau, Andover, MA
Salvatore J. Cucinotta, Wynnewood, PA
Robert Dave, West Newton, PA
Charlie Diamond, Toronto, ONTARIO
Eugene Dow, Mt. Clemens, MI
Frank Fascione, Manchester, CT
Martha J. Fleischman, New York, NY
A. Scott Helm, Kansas City, KS
Pete Hinrich, Clifton, IL
Michael Hodder, Wolfeboro, NH
Charles R. Hoole, Canton, MI
J. A. Jacobs, Fremont, OH
Charlene James, Chamblee, GA
Richard M. Jenneman, Stanley, WI
Albin Kampfer, Ranier, OR
James C. Kerns, Toledo, OH
Jack Kerwin, Marysville, WA
Arthur Knowlton MD, Branford, CT
Flemming Larsen, Berkeley, CA
Raymond J. Loeper, Albany, NY
Rev. George Lukaczyk, Terryville, CT
J. E. Matthews, Ellicott City, MD
Tom Merry, St. Louis Park, MN
Michael Nash, Ft. Worth, TX
Raymond A. Nelli, Clifton, VA
Terry E. Netzley, Troy, OH
David Noreen, Brighton, MA
Thomas Nowak, Chicopee, MA
Albert F. Peter, Cincinnati, OH
Mark Pilskin, Canadensis, PA
Phillip Pruitt, Tulsa, OK
Paul Radzillowski, Southfield, MI
Lawrence Schneider, Chatsworth, CA
R. Patrick Sheehy, Forest Hills, NY
Stephen M. Simons, Mattituck, NY
Ed Smith, Anderson, SC
David Sprouse, Wilson, WY
Gene M. Stockdale, Portland, OR
Larry Stolberg, Chanhassen, MN
Kal Thomas MD, Detroit, MI
Mr. M. Trikosko, Arlington, VA
Wm G. Uhl, Dayton, OH
Tim Ventloner, Gridley, CA
Linda R. Wagner, Cottage Grove, OR
Gene Walkley, Hagerstown, MD
Terry A. Ward, Redmond, WA
Steve Weber, Charleston, SC
Steve Weber, Laguna Hills, CA
Sid Wedderspoon, Kettering, OH
William K. Wentworth, Paxton, MA
Anthony Wermuth, Shelburne Falls, MA
Ted Williams, Cotati, CA
Karl Wordrack, North Bergen, NJ

Easy Listening

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

Every few months, I plan to include an extended feature profiling a single broadcaster. I have always enjoyed "behind the scenes" looks at broadcasters, where their philosophies are discussed, histories are revealed, and future plans shared. I hope you enjoy this feature, too. Jonathan Marks provided the information which follows as part of a 16-page (!) letter.

European Talk Radio - Radio Netherlands

The Netherlands was the first country in Europe to start regular shortwave broadcasting. After a series of tests, the Philips company started regular transmissions to the Netherlands East Indies (now Indonesia) in 1927. The company hoped that by supplying programs, sales of their radios would be boosted. A year later, Philips started a second multilingual service with the callsign "PCJJ." Edward Startz founded the "Happy Station" program which enjoyed instant world-wide success. He adapted the callsign to stand for "Peace, Cheer and Joy."

In May 1940, the PCJJ transmitters fell into the hands of the Nazi occupying powers and were used for German propaganda broadcasts to Asia. Meanwhile in London, the Dutch government in exile was granted airtime on BBC transmitters to broadcast back to The Netherlands. It broadcast daily as "Radio Oranje" (Radio Orange), orange being the color associated with the Dutch House of Orange.

In September 1944, several Philips employees had succeeded in constructing a radio transmitter which went on the air on October 3, 1944. It broadcast as "Radio Herrijzend Nederland," especially aiming its programs at the northern part of The Netherlands still under German occupation. On April 15th, 1947, the Radio Netherlands foundation was officially inaugurated to fashion a proper external service in several languages.

Radio Netherlands' Goals

The goals of the Dutch International Service, found in the station's statutes, are:

--- To present the broadest and fairest possible picture of The Netherlands in all aspects of life.

--- To preserve links with Dutch nationals abroad, and with the populations in overseas parts of the realm.

--- To promote peaceful international relations and cooperation.

To achieve its goals, Radio Netherlands is funded by the annual license fees paid by radio and TV owners, along with a portion of advertising revenue from domestic radio and TV. Unlike the USA's Voice of America, Radio Netherlands is an independent institution, not directly administered by the government.

Radio Netherlands' Services

Daily broadcasts are in seven languages: Dutch, English, Spanish, French, Portuguese, Arabic, and Indonesian. Weekly programs are broadcast in Sranan Tongo and Papiamentu. An hourly news bulletin is produced by the Newsroom and is translated into the languages in use at the time. 420 permanent staff, supplemented by freelance contributors, are based in Radio Netherlands' Hilversum studio center. The Hilversum facility has 10 production studios. Approximately 160 of the full-time staff are directly involved in program production or direct transmission.

Radio Netherlands also exports television and radio programs for broadcast by other stations. Programs are produced for, or in cooperation with, radio stations in more than 100 countries. Radio Netherlands Television produces a weekly contribution for the Cable News Network's "CNN World Report." The Radio Netherlands Training Center trains broadcasters from developing countries, with more than 50 students annually participating in its English language training sessions.

Radio Netherlands' English Language Schedule

Daily Features - With the 0830 UTC Pacific broadcast as the sole exception, English language broadcasts run 55 minutes. From Monday through Saturday (local days), world news is followed by *Newsline*, a 14-minute current events review. The *Newsline* team includes Ginger da Silva, Herrie ten Cate, Robert Green, Harry Kliphuis, Marijke van der Meer, and Luc Lucas.

Mondays (UTC Tuesdays in 0030/0330 North American releases) - *Research File*, produced and hosted by Anne Blair Gould, is a weekly science and technology program investigating such matters as space exploration, medicine, the environment, archeology, psychology, and sociology.

Tuesdays - *Images* investigates the arts and culture in Europe. Nevil Gray produces the program with assistance from reporters in Holland and elsewhere in Europe.

Wednesdays - A variety of musical and documentary features are presented; June sees a four-part documentary series on the plight of the African Elephant.

Thursdays - Jonathan Marks hosts the venerable *Media Network*, a weekly survey of communications and media developments. More than 180 monitors worldwide assist Jonathan in his efforts. Jonathan says *Media Network* "...runs on enthusiasm, building on more than 30 years of experience in this field of programming." *Media network* celebrated its 10th anniversary in May.

Fridays - *Sounds Interesting* replaces *Over To You* as Radio Netherlands' listener participation show. *Sounds Interesting* profiles the sights and sounds of Holland, and answers listeners' questions. Correspondents are encouraged to include their phone numbers when they write or phone, as your comments may be taped for airing on the program.

A music series will replace *Sounds Interesting* during July through September, hosted by Pete Myers. New Dutch Rock music talent will be examined on this series, based on current plans.

Saturdays - Caribbean, Pacific, and North American targeted broadcasts feature *Rembrandt Express*, a look at the social aspects of life, plus a glimpse of the entertainment scene.

English broadcasts targeted to Asia will substitute *Asiascan*, a news and features show focusing on Asia and Europe. Carl Josephs produces *Asiascan*.

English broadcasts targeted to Africa will substitute *Airtime Africa*, hosted by Veronica Wilson. Events concerning Europe and Africa are featured.

Sundays - Tom Meyer's *Happy Station* features family entertainment with music, birthday mentions, and competitions. Dating from 1928, *Happy Station* is international radio's longest running program.

Transmitter Capabilities

Radio Netherlands' principal transmitter site is called "Flevo", on reclaimed land in the province of Flevoland. The site is 6 meters below sea level. (A possible trivia question someday... ed.) Four 500 kW transmitters are supplemented by one 100 kW reserve transmitter. Flevo has seventeen directional antennas and two non-directional antennas for regional coverage. Flevo was commissioned in 1987.

The Bonaire facility was opened in 1969, with two 250 kW transmitters and one standby older 300 kW transmitter. There are 21 directional antennas and one non-directional antenna. The Bonaire facility is used for broadcasts to the Americas, West Africa, Australia, and New Zealand. A new digital satellite link became operational in 1990 to transmit programming from Hilversum to Bonaire, with a 7 kHz bandwidth and a 56 dB signal-to-noise ratio.

Bonaire is currently transmitting the 15560 kHz 0030 UTC North American release using reduced-carrier "compatible" SSB, and is offering a limited-edition QSL card for reception reports and comments on the quality of the broadcast. Use the address below to receive your QSL card, with "Bonaire Single Sideband Test" as the first line of the address.

One writer on GENie suggested including the Hilversum weather information given at the end of the newscast, just before "Newsline", to prove you were listening specifically to the 0030 release. Here in Eastern PA, I've found the SSB transmission is as good as the previous full AM transmission at 0030.

The Madagascar relay facility resembles Bonaire, and was started up in 1972. Two 300 kW transmitters feed 18 antenna arrays. Africa, Asia, and Western Australia are the principal targets.

The Future...

Jonathan Marks predicts Shortwave Radio will remain an important distribution medium for international broadcasters for the next two decades. According to Jonathan, shortwave offers a relatively low-cost link between the broadcaster and its listeners without third-party intercession.

That's not to say satellite technologies won't play an increasing role for program distribution. To some target areas, direct satellite broadcasting is becoming a viable distribution alternative. Satellite broadcasting would require some means of intermediate distribution, as Jonathan believes direct reception of satellite broadcasts is beyond most listeners' budgets. The potential for government prevention or hindrance of program distribution or direct satellite reception is a concern. A third shortwave relay station is planned, but funds haven't yet been approved for the project.

Sooo, don't turn in those 2010's just yet...

Input on the Output

According to Jonathan, "Feedback from listeners is the lifeline of any international broadcaster." Comments on Radio Netherlands programming can be forwarded in four different ways:

By mail - Radio Netherlands, PO Box 222, 1200 JG Hilversum, The Netherlands

By fax - +31 35 724352

By phone - +31 35 724211

By phone - +31 35 724222 (24-hour answering machine - 90 second limit)

You can also request a copy of Radio Netherlands' catalogue of booklets aimed to enhance your listening enjoyment. Antenna design, receiver reviews, and QSL preparation are example subjects. The catalogue and booklets are all free.

BBC World Service - June Highlights

With the thirtieth anniversary of the Antarctic Treaty occurring on June 23rd, many BBC World Service special features and regular programs will focus on the past, present, and future of this larger-than-the-USA continent.

Antarctica is a special three-part feature, Sundays starting June 9th at 2330, repeated the following Mondays at 0630 and 1001. Antarctica will explore both the natural and human history of the continent, and will also analyze the current political debate on the future of the continent. Grant Sonnex hosts.

Science in Action, Fridays at 1615, repeated at 2030 and Sundays at 1001, and [bold] Discovery, [end bold] Tuesdays at 1001, repeated at 1830 and Wednesdays at 0330, report on the work of the scientists who have made Antarctica their huge natural laboratory.

Terra Nova is the two-part **Play of the Week** on June 16th and 23rd, telling the story of Robert Scott's unsuccessful attempt to be the first man to lead an expedition to the South Pole. In addition to examining the motives and aspirations of its leading characters, Terra Nova speculates what might have happened had Scott been successful. Terra Nova has been adapted for radio by Martin Williamson. Sundays, June 16th and 23rd, 0101, 1201, and 1901.

Off the Shelf reads from 'The Worst Journey in the World', Apsley Cherry-Garrard's chronicle of Scott's Antarctic journey. Cherry-Garrard was a member of Scott's first Antarctic expedition, but was considered too short-sighted for the polar expedition. Daily from June 3rd through the 14th, Mondays through Fridays at 0430, repeated at 1430.

Feedback

Alex Batman of Boone, NC advises that Radio New Zealand International's program for young people is Ears, not Echoes, as was listed last month. Alex says it's an excellent program for younger children - more so than BBC's MegaMix. Thanks also to Paul Baxter, a new NASWAN, for his E-mail on Genie. As always, this column prospers with your comments - good and bad. Until next month,

73 DE Richard

African Destinations

Dr. Harold Cones
2 Whits Court
Newport News, VA 23606
Compuserve 71570,411



Perhaps you DX like I do. When I sit down for an early morning or late evening session, I always have two things with me: Daisy, the DX Dog, and a good cup of coffee. Sometimes the coffee is the only reward I get from several hours of DXing, so I tend to choose my coffee almost as carefully as I choose my beer. As the shortwave hobby makes me more international, my tastes in music, food and drink have become more international also, and I find it increasingly interesting to find out more about world customs and foods (are you beginning to feel like you are lost in an Uncle Skip column?). This month in African Destinations, we will visit the coffee producing countries of Africa and learn something about most DXer's favorite (or second favorite) beverage.

The earliest report of coffee comes from Africa. It was reported in the 6th century that the tribesmen of Abyssinia (now Ethiopia) chewed and ate the beans as a stimulant. This property was discovered, as the story goes, after Kaldi, a herdsman, noticed that his goats became unusually lively after eating the berries of a local shrub; he tried it and felt the same (it is suspected, by the way, that coffee is native to Ethiopia, Kenya, and nearby Arabia). The first record of its cultivation was in 575, when a Persian invasion of Ethiopia made mention of coffee as a crop and reported something of its culture.

Arabs Discover Science Of Coffee Culture

The Arabs quickly discovered the science of coffee culture and the benefits of boiling the beans to make a drink. They guarded their secrets carefully but a few seeds left Mecca around 1600 with a pilgrim and were planted in the mountains of Mysore. As the world found out about coffee, the Dutch became interested in coffee as a trade product and "liberated" a coffee tree from the town of Mocha. The tree was transported to Holland and its offspring to Ceylon and then the Dutch Indies (Java, to be exact, which

gave the drink one of its most popular nicknames).

The French decided to get in on the act in 1719 and planted a coffee plantation in Dijon. The attempt failed, but a later attempt with mustard was successful. The French took their coffee to the New World and by 1719, coffee was growing on Martinique. Soon it appeared on Haiti and Santo Domingo. The first Brazilian coffee came from French Guiana, and from there coffee spread rapidly throughout Central and South America, and the rest, as they say, is history.

There are three recognized commercial coffee species, *Coffea arabica*, the largest producer, considered to be native to Ethiopia and Kenya, but now grown worldwide; *Coffea robusta*, discovered in the Belgian Congo, which is less "tasty" but much more hardy; and *Coffea liberica*, native to Liberia, but even less "tasty" and a poor producer to boot. The great variety of tastes, although dependent on botanical differences, is much more dependent on the variations in soil, climate, and growing altitudes.

Coffee does best where the mean annual temperature is 70° F. The plant grows from sea level to 7,000 ft; *C. arabica* claims the cooler highlands and *C. robusta* thrives in the warmer and wetter lowlands. Coffee plants need sunshine, but not more than a few hours a day to develop maximum taste, which is why hilly highland coffee is most coveted. Equally good coffee comes from equatorial regions where cloud cover occurs most of the day, and in some cases, shade trees are planted over coffee groves to provide the necessary shielding from the sun. The amount of water received by the plant is also a factor, too much water encouraging woody plant growth rather than full flower and fruit development.

Coffee is hand picked, often by whole families, and forms the basis for the economy in many African regions. The fruit (called a cherry) ripens in about eight months, but the tree does not ripen uniformly and

may have to be visited a dozen times to finish the picking. Picking timing is critical because when overripe, the beans dry out and lose their flavor (you have, no doubt, seen the commercials of Juan Valdez, sitting on his ass in the coffee groves, waiting for the coffee cherries to ripen).

All commercial African coffees are grown in highlands of their respective countries and, because of the closeness to wild stock and soil and altitude factors, are the world's winiest. They are also mostly heavy and very aromatic. Commercial coffee production in Africa occurs in Ethiopia, Kenya, Tanzania and Zaire. There is also some local (and limited) coffee production in Angola, Cameroon, Cote D' Ivoire and Liberia, but you will hardly ever see pure coffee from these countries in the market place.

Brew A Pot And Listen For These

Ethiopian Harar (or Harari) is one of the world's strongest coffees and one of the most difficult to obtain in the US. It is grown between 5,000 and 6,000 ft near the old capital city of Harar. If you can find it, brew up a pot while you listen to the Voice of Ethiopia on 5990, 7110, and the newly reported 9076 kHz between the 0328 UTC sign-on until 0600. At times Ethiopia can be heard broadcasting in English on 7165 or 9560 kHz between 1500 and 1600 UTC. As you sip your Ethiopian Harar, be thankful you have this rather than the "native" variety, which is a *C. robusta* variety and, according to a friend who lived in Ethiopia for several years, tastes like goat droppings (I did not ask him the obvious question).

You will have better luck finding coffee from Kenya. Most "gourmet" coffee stores have Kenya AA (the highest grade), which is a winy, strong, heavy bodied and aromatic coffee much enjoyed by "real coffee drinkers." Your cup of Kenya AA will have to be an after-dinner treat, however, since the Kenya Broadcasting Corporation (formerly the Voice of Kenya) is best heard between its 0200 sign-on until around 0400 UTC. The most reported frequency is 4934 kHz. There has

been a recent report of Kenya being heard on 6150 kHz between 2000 and 2114 UTC and it might be worth a try. But you better not reheat your coffee from the night before if you want to try this frequency—coffee loses its taste when aged after initial making and your Kenya AA will just not be the same.

Tanzanian coffee is another hard-to-find coffee. The best flavored Tanzanian coffee grows on the slopes of Mount Kilimanjaro, in Moshi, and is, therefore, the most sought after; it is marketed as Tanzania Kilimanjaro. Another variety sometimes encountered is Tanzania Peabody, which is spicy as opposed to winy; a "peabody" is a mutant rounded bean that results when the bloom produces a single seed rather than the typical flat-sided pair. You had better save your Tanzanian coffee for a celebration drink for after you have heard Tanzania, however, since it takes a bit of DX ability to hear them on 4785 Khz between 0300 and 0430 UTC broadcasting from Dar es Salaam, and even more ability to QSL them. There has been a report that they may also be heard on 7280 kHz between 2030 and their 2100 UTC sign-off.

Coffee from Zaire is a winy, medium-bodied affair and is usually blended with other coffees—it is very tame compared to the other African coffees. It is sometimes available in the marketplace as *Zaire arabica* and worth a taste as you attempt to hear La Voix du Zaire broadcasting from Lubumbashi at its 0357 sign-on on 7203 kHz. And you might want to try for the university run Radio Candip, heard infrequently around 0330 UTC on 5066 kHz.

Now that you are set for some real African listening with some real African beverage, your new knowledge should help you better understand your DX target, which is what African Destinations is all about. Oh yes, now that summer is upon us, you might want to try this variation: to one quart first-class quality vanilla ice cream add 4 cups of good strong Ethiopian Harar (or Kenya AA) coffee, settle back, tune up some good African music and have a pleasant summer.

Listener's Classroom

Dr. Charles A. Wooten
11424 Great Branch Drive
Chester, VA 23831-1663
CompuServe 76476,1556



Several letters received here are from the newer members of NASWA. Many bought short wave receivers at the height of Operation Desert Storm. Several have asked about antennas for their particular type of receiver and I have forwarded them on to the appropriate department.

The Logbook And The Logging Scale

Tuning into shortwave stations is not particularly difficult. On those receivers without digital readout sometimes it is difficult to find them again.

We suggest that you develop a small logbook, or compile a table. Some receivers have a log scale - usually ranging from one end of the dial to the other and divided into 100 (or so) equal parts. If your dial has no log scale you can easily make one from a strip of graph paper and stick it on the dial.

The logbook should contain several columns: one for the date, time (in UTC), month and year, one for the scale-position of the pointer, one for the frequency identified by the station, the station identification, remarks, SINPO reading, meter wavelength (just for fun), power output of the transmitter heard if you have a copy of the WRTH or PASSPORT, ending time of the transmission (or when you stopped listening) and the language of the transmission. We'll touch on more of these later.

A glance at my own logbook from 1972 shows those same columns. Here is an example: 201630 Oct 72 216519 21690 VOA Monrovia 44233 13.83 250 1634 Eng.

This means that on the receiver I used then (Zenith TransOceanic D7000Y) I heard the Voice of America relay station from Monrovia (Liberia) at 1630 UTC on the 20th of October 1972 on the frequency of 21690 kHz, 13.83 meters, 250 kW, in English and tuned out at 1635 UTC. The "216519" was the reading on the graph paper base on using the left hand side of the tuning indicator.

The logbook will help you find the stations you want to hear again and help in a record of

your listening for contest purposes, QSL hunting, and many other purposes.

Man-Made And Natural Interference

While tuning around you will undoubtedly encounter QRM or QRN. QRM is Man-made interference; QRN is Natural interference. Usually inexperienced SWL's tend to turn up the volume trying to bring the station's audio to a higher level. Experience has shown this to be defeating because the interference level also will be correspondingly louder. This makes it harder to distinguish the intended signal.

An effective method is to decrease the volume. This will have a tendency to decrease the QRM/QRN and you can rock the dial slightly to pick up the better portion of the signal.

Headphones are the best means of listening to your shortwave receiver. There are many kinds on the market. You need to find one that is compatible with your receiver's output. These soft-cushioned headphones eliminate most distracting noises around your listening post. This will allow you to concentrate on the exciting signals coming from far away.

Where's The Station?

The novice SWL will soon find, much to his consternation, that all the logging he did in the logbook will not help find the wanted station. An often overlooked fact in shortwave broadcasting is that the stations change frequencies on the traditional first Sundays in March, May, September, and November. Shortwave broadcasters have a tendency to switch frequencies coinciding with the so-called radio season.

There are two long ones of four months with the other two being only two months in length. The long seasons can be called the "summer" and "winter" seasons, but the March/April and September/October seasons are identified as "equinox" as that is when the sun crosses the equator.

The position of the sun with respect to the earth has something to do with frequency usage at various times throughout the year.

More next time!

73's!

Listener's Library

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



Welcome back to the Library! It's June, and the thunderstorms and static are running S-9 many mornings here on the Southern Prairie. For most of us NASWans, the next-best thing to listening to the radio is reading about it. Now is the time to kick back and read a book! There is no static and the author's signal levels are usually quite strong.

Last month we promised to "do Moons" in June, so here goes.

MOONBEAM OVER BRIARCLIFF

Moonbeam Press of Briarcliff Manor, NY is part of a burgeoning multi-media empire developing out of a group led by "Havana Moon" and NASWAN Christine K. Paustian. If you are not familiar with "Havana Moon", that moniker is a pseudonym used by a longtime active member of the hobby who is a former U.S. intelligence officer and who is well known for his expertise in covert radio. Over the years, Havana's in-depth research into covert radio has resulted in major revelations and insights in this arcane but fascinating field. He is also the author of the highly regarded book *Uno, Dos Cuatro: the Guide to the Spy Numbers Stations*. Havana's associate Chris Paustian has been the author of *Bits, Bytes and BBS*, a newsletter focusing on computers as they relate to radio. Chris and Havana have developed quite an array of resources for radio hobbyists. Moonbeam Press publishes hobby-related books and newsletters, primarily in the areas of clandestine radio, covert radio and computer applications in radio. They also now publish a growing series of educational pamphlets known as the *Radio*101* series. In the last 18 months, they have also developed a unique radio book and memorabilia store, and they continue to produce *Los Numeros Online*, the online electronic magazine.

I have delayed reviewing the more recent offerings from Moonbeam Press until we could devote enough column space to give you an overview of their entire operation. I am fascinated by it! They are breaking new ground in using almost every educational and entertainment medium known to provide enrichment experiences for radio hobbyists... from media as old as Gutenberg (books, pamphlets, newsletters) to an innovative mail and phone order bookstore (known as The

Radio Collection) to an online electronic magazine and even live nation-wide DXing sessions linked up via the Portal computer network. About the only media they haven't put to use yet are cable TV channels on a satellite and feature length Hollywood films about shortwave radio.

Having perused many of the current offerings from Moonbeam, I think it is fair to say that the strength of their operation is in the large non-broadcast segments of shortwave radio mentioned above, though they definitely serve SWBC interests, too. It is also fair to say that their prices are very reasonable for the value that you receive.

MORE MOON NEWS

I'd like to review several Moonbeam offerings in more detail. The latest news out of Moonbeam Manor is that several of the best newsletters in the hobby have been combined. For just over a year, Havana Moon has edited the quarterly *The Numbers Factsheet*. I recently received the Spring (April) 1991 edition of this publication and found that it had absorbed two other popular newsletters--Harry Helms' always enjoyable *Umbra et Lux* and Chris Paustian's own *Bits, Bytes and BBS*. Harry is coming aboard *Numbers* as Associate Editor, Chris is Managing Editor and Havana Moon himself is Executive Editor of this new enlarged publication. Harry will be writing a periodic column called "Covert Corner" and Chris will author "RF Bits." Besides several very good feature articles, the Spring 1991 issue of the new *The Numbers Factsheet* also contains the following columns: "The Crypt," "Current Intelligence," "The Numbers Update," "Off the Shelf," "SIGINT Tales," "Spies on Stamps," and "Utility Intrigue." Subscriptions to the quarterly *The Numbers Factsheet* are \$20/yr. Sample copies are \$6 postpaid from Moonbeam Press.

*RADIO*101*

This is a series of pamphlets from Moonbeam that is organized similarly to Larry Magne's *RDI White Papers*--that is, a series of separate publications on specific subjects which may be purchased individually. As the name implies, *RADIO*101* offers an easy to read (and fun) introduction to various aspects of shortwave radio. The titles are clear and straight-forward regarding both the subject

matter and the level of sophistication of the information offered. The current series titles are:

- The Newcomer's Guide to *Radio*Talk**
- The Jolly Roger Flies Again--A Pirate Radio Primer*
- An Antenna Primer*
- The Basics of HF Aeronautical Radio*
- <Very, Very Basic> Propagation Basics*
- How to Select a Receiver*
- Come Chase Time Signals*
- DXing the Maritime Bands*
- SIGINT--Signals Intelligence Explained*
- A Once-and-for-All Definitive Cure for Computer RFI*

Frankly, some of these are too elementary for all but the newest NASWans. The papers dealing with introductions to antennas, propagation and *How to Select a Receiver* would, however, be very useful to recommend to friends just getting curious about the wonderful hobby of shortwave radio. The neat thing about the ***RADIO*101*** series idea is that "you only have to buy what ya need." If you are like me and are fairly unfamiliar with utilities, military communication or aero, these pamphlets offer a very readable introduction authored by real experts. Each of these is available from **The Radio Collection** for \$4.95 post paid.

One of the newest titles in the ***RADIO*101*** series, *A Once-and-For-All Definitive Cure for Computer RFI* is just what it implies. It is a beautifully published and well researched and written paper which answered all of my questions about computer generated RFI. Computer expert and radio freq Tom Kashuba starts with a thorough but very understandable discussion of the computer generated RFI problem. Then he follows with what he (and now I) call "The Method." It consists of a detailed four step process to solve this sometimes vexing problem:

- A) Eliminate the obvious
- B) Identify and map the RFI
- C) Locate the RFI source(s)
- D) Reduce or eliminate the RFI

Tom then takes the next ten pages detailing each step of *The Method* as only a combat veteran can do. If you have or fear having a computer related RFI problem, Tom gives ya *The Method* and the weapons to eliminate the darn stuff. Although I have seen snippets of "fixes" for this sometimes very difficult problem published over the last 18 months, Tom's pamphlet is the first good treatment that I have seen for very thorough means of tracking down the SPECIFIC sources of computer generated radio interference... That's

usually the tough part of the problem, in my experience. This 14-page pamphlet should be a very real help to neophytes and old radio guys alike. The price is \$4.95 post paid from **The Radio Collection**.

THE RADIO COLLECTION

Like the rest of the Moonbeam operation, the mail and telephone order radio book and memorabilia store, **The Radio Collection**, takes a somewhat unique approach to their business. They do not have an 800 number nor do they accept credit cards. Instead, if you call their 24-hour voice mail order number, they will bill you by return mail and ship upon receipt of your payment. If you are in a hurry, they will ship UPS COD. As you may not be aware, both 800 phone number service and handling credit card telephone orders costs the participating merchants quite a bit of money for each order serviced. The Moonbeam bunch decided to forego both of these services and to pass along their savings in the form of discounts. Comparing their prices to those of other hobby outlets indicates that they tend to offer a savings of \$1.00 to \$2.00 per book on many of the common hobby-oriented books. They discount other items, as well.

Because of their interest in intelligence, the military, covert radio and computers, they tend to offer many more items in these specialized areas than do most other hobby outlets. They also carry a number of the better software packages of interest to radio hobbyists. Further, they offer a number of VERY unique items. Where else can you get a Zippo Lighter with the Air America logo on it? Heck, I rode in several Air America DC-3's in Viet Nam and if I smoked, I couldn't live without one of those Zippos! Would you like a baseball cap with the official KGB logo on it?! How about a polo shirt with your choice of KGB, CIA or Air America logos??? There's even a Memphis Belle Collection! How about a t-shirt that sez "Shortwave Listeners Do It with Frequency?" Let's see now, if the Old Librarian could just remember what "it" was... or used to be! The Moonbeam bunch bills **The Radio Collection** store as "The Place Where Radio is Fun Again!"

Radio has always been fun to me, but their catalogue is the "fun.ist" radio catalogue that I've ever seen! Write for your copy today: **The Radio Collection**, PO Box 149, Briarcliff Manor, NY 10510, or call their order line 914-923-1862. The catalog is \$1 or free with any order. If you purchase the catalog, you receive a \$2 discount certificate.

Well, although we had promised to review all the interesting activities of that other group of

"Moonies," Moon Publications of California, I think that we will save them for another session of MoonMadness, maybe in another month with lunar associations.... say September... naw, that is September MORN, not Moon... maybe later for Harvest Moon.

TO THE STACKS!

NASWAN Alan Johnson of Bethesda, MD sent us a recent CompuServe message about a new basic technical book on electronics:

"I came across a book in the local library that some of your readers who are of a more technical bent may be interested in. I liked it so much that I bought a copy for myself. It is Electronic Communications by Robert L. Schrader, 6th ed., Glencoe Division of Macmillan/McGraw-Hill, 1991 (ISBN 0-07-057157-0). The price is \$43.95. It is a textbook of electronic theory in general, and is specifically directed towards radio and TV communication. It covers the basics of voltage, current, inductance, capacitance, etc., and then examines the basic building blocks of communications systems such as oscillators, amplifiers, antennas, and so forth. It is eminently readable and offers more depth than the ARRL Radio Amateur's Handbook. I feel that it's definitely worth a once-over the next time you're at the public library!"

Thanks very much, Alan. *Electronics Communications* sounds like a superb reference book many NASWANs.

David Clark also noted that The Toronto Globe and Mail recently reviewed *Adventure Vacations: from Trekking in New Guinea to Swimming in Siberia*, edited by Richard Bangs (Raincoast Books of Vancouver, 241 pp. \$23.50 Canadian). "Richard Bangs is president and chief explorer for SOBEK Expeditions, a California firm offering adventure vacations to unusual locales that range from the Amazon basin and Siberia to Costa Rica and Madagascar. In *Adventure Vacations* he has collected descriptions of more than 200 exotic vacations offered by his firm and other similar outfitters. The book begins with some general advice for those seeking adventure travel, and nine brief (and often hilarious) stories of trips by" veteran travel writers/authors.

Each vacation is summarized with highlights, a day-by-day itinerary, cost, the best months to go, and which guide/outfitter to contact. Each vacation is also rated for level of difficulty, ranging from class I (emphasizing the scenic and cultural, with the possibility of short hikes and gentle river floats) to class V (exploratory trips in sparsely populated areas, with treks of long duration often reaching altitudes of over 5,000 meters.

ORDERING BOOKS

The Listeners Library just received a request for the complete address of the publisher of a "general reading" book that we recently reviewed along with specific details as to handling charges, methods of payment, etc., for use in ordering that book. The NASWAN who wrote assumed that it is possible to order general books directly from publishers. In a very limited number of cases, this may be true with hobby books (Tiare or Moonbeam Press, for instance). However, virtually all commercial publishers are "wholesale only." The normal procedure for ordering most general reading books is to contact your local bookstore. They normally have something called "Books in Print." This volume used to be a real book. Now, most stores have a CD ROM version. The bookstore people can access "Books in Print" by author, title, subject or ISBN number. Many bookstores will even take orders by phone. So, if the book is a new general circulation book, give your local bookstore a call.

HOBBY BOOK SOURCES

The very best advice that I could give each of you about purchasing hobby related books is to **COMPARISON SHOP**. Most of us don't have time to check with two or three hobby book outlets every time that we order an item with a \$10 to \$20 price tag... I certainly don't. What I do is collect and carefully file the catalogues of the larger hobby outlets. Then about once a year, I sit down and figure out which one of these outlets is generally offering the lowest TOTAL price on a group of four or five commonly stocked current books. I cannot emphasize enough that you must look at the TOTAL price. As we discussed above, offering 800 service and/or taking credit cards does add significantly to the cost of doing business. Of course, these charges are passed on to us. On the other hand, no matter how innovative a business is, there is no way to quite match the ease and convenience of 800 service and credit cards. You should also be VERY very careful to check out the HANDLING charges that will be (very legitimately) added to your bill.

Before I order, I carefully check The Radio Collection catalogue and Great Radio Reads, the catalogue from Gerry Dexter's Tiare. If I make a phone order, it is usually through Universal Shortwave (800-431-3939) or Gilfer (800-445-3371). EEB (800-368-3270) also carries a limited number of popular titles.

In the early fall, we will check out more good sources for hobby related books. I hope that you and yours have a super summer! john

NASWA Portraits

Jerry Klinck

43 Lein Road
West Seneca, NY 14224



Before we visit a neighbor to the north, let's stir some nostalgia in the dusty cobwebs of time...

"I think all the fellows who edit the columns do a fine, great job. I use two receivers, an HQ-129X and an HQ-150 as a standby, with a 100' #12 longwire antenna. Two tape recorders are on hand, a Wollensak T-1500 and a Concord 220. A DB-22A preselector matches up with the two receivers. I have been associated with NASA, ASWLC, DSWIC, DWDXB, UDXC and ISWC when it was in the U.S.A."

These words, penned in the mid-60s by one of the hobby legends, August Balbi, were indicative of his activity level. "Mr. DX" as he was often called, had all his loggings dating back to 1933. He was an incredible man and a credit to our hobby!

Now, back to 1991 and a visit in Canada with Mr. Ernie Behr....

"Looking back over more than 37 years of DXing, I sometimes wish I had discovered SW radio ten years earlier. Strangely enough, I had no interest in radio or electronics until age 17, even though my father had been an SWL since the mid '30s. He listened to SW radio all his life but never regarded it as a hobby. He used shortwave for news and entertainment. DXing and QSLs never made much sense to him.

"During the '50s we had several old radios in our home, including a huge DeForest-Crosley 6-band floor model, a classic masterpiece which was in daily use till it was sold in '75. I had other interests in my school years and paid no attention to radio until 1953 when I happened to tune the AM band one night and discovered the Mexican border stations such as XEXO, XEDM, XELO, XEG which were booming into northwestern Ontario in those days. I listened to Paul Kallinger selling baby chicks and rat poison on XERF.

"It was almost by accident that I switched one of the old radios to SW one day in 1954. I was amazed to hear R. Australia, BBC and other distant stations, and became an instant DXer soon

learning that others were doing the same thing. I ordered a copy of the 1954 WRTVH for \$1.50 (yes, that was the price) and began writing reception reports. My first QSL cards soon arrived from R. Australia, R. Brazzaville and BFEBs in Malaya.

"By the end of 1955, I had QSLed about 50 countries and bought my first new receiver, a National NC-98. This was later followed by an HQ-180, an NC-400, an SPR-4 and, since 1987, an R-5000. (nice choices - ed.) The '50s and '60s were great years for Latin American DX. My old logbook lists dozens of Guatemalan and Honduran stations as well as at least 7 from Panama, 12 from Nicaragua, 22 from Mexico, and 75 from Ecuador.

I began working for the Canadian Pacific Railway in 1956 and obtained a commercial radiotelegraph license in 1964.

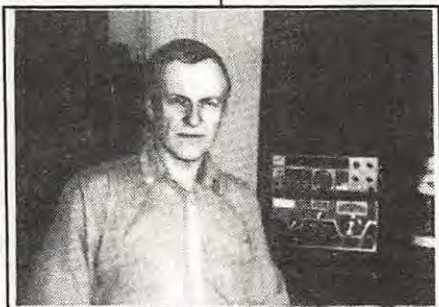
I also held an Ontario amateur license for a few years, but ham radio didn't interest me for too long. I soon returned to SWBC DXing and became a member of NASWA in 1968.

"I rarely used outdoor antennas, even though plenty of space was available. At this point, I have

QSLed 220 SWBC countries, about 90% of them using simple, indoor wires. It beats climbing trees but it took several decades to log and verify some of the rarest countries, at least 28 of which are no longer on shortwave. I missed what were probably the most exciting years on SW radio, the '40s and early '50s, but there is always something new and interesting on the shortwave and DXing continues to be my favorite hobby."

Thanks, Ernie, for the interesting story of the evolution of one DXer from our good neighbor to the North.

I hope everyone enjoyed the recent convention which I will make every attempt to attend next time. Even though I wasn't there, I will remember it as the one that brought me my HQ-180, thanks to Steve Bohac and about the best buddy you could have - Frank Orcutt. And thanks for the postcard, Harold - little things mean a lot! Till next time, have a happy springtime, send us YOUR profile soon and GREAT DX to all!





Everything You Always Wanted To Know (But That Wouldn't Fit Into One Column)

Every month (well, almost every month) I get mail from NASWA members containing interesting questions, yet the questions don't lend themselves to a full column. And so, I collect the questions, and when I have enough to add up to a full column I present them to you. Hopefully you will find at least one "Ah-Ha" answer of value in the list.

"...like someone blowing his nose."

Based on the number of readers who ask about this phenomenon, shortwave packet transmissions must be on the increase.

Packet radio is a rather new technique (newer than SSB at any rate), and one that is catching on like wildfire. There can be little doubt why when you understand how packet works. Packet is a digital mode of transmission, functioning somewhat like a modern version of Teletype®. The difference, however, is in the speed and accuracy of packet.

Packet is a very appropriate name for this mode of transmission. When a message is written on a computer terminal, the packet software converts the messages into very short (generally less than a few seconds) packets of digital data, complete with synchronizing information, and then the packets are transmitted in short bursts. The actual transmission sounds like someone with a horrible cold sneezing or blowing their nose.

The beauty of packet is not just that transmissions are short. Because the data is in digital mode, large amounts of information can be sent quickly. Even more fascinating is the fact that packets can contain "addresses," allowing

automatic message routing and altering of the recipient. Group as well as individual addresses can be specified, making for quite a versatile message system.

Who uses packet? It would be easier to say who doesn't use packet. One of the earliest users were amateur radio operators, who actually pioneered much of packet technology. It seems that "hams" are always having to find novel ways to better use the feeble frequency allocations given to them by the government. You are likely to hear packet transmissions throughout the amateur radio bands.

The U.S. Government has long used packet in secure applications, including enforcement and military service. The GWEN (Ground Wave Emergency Network) system of nuclear survivable (there's a contradiction in terms) radio uses packet in the L.F. bands.

Marine stations are now using packet regularly as an adjunct to other traffic handling systems. A scan through the marine bands should yield some packet activity.

How To Hear Packet

Thanks in part to the inventiveness of the hams who pioneered packet, many inexpensive packet decoders are available on the market today. Although some are packet-only, most combine packet with CW, RTTY, and even FAX. Add a personal computer, and you will have a very powerful receiving system. And don't worry about individual addressing keeping you from listening in. You can select the "Monitor Mode" to hear all traffic on a network (assuming it isn't encrypted).

Exalted Carrier Sideband

Sometimes referred to as "ECSS" reception, this is a fascinating breakthrough in the reception of SSB, or single sideband signals.

As explained in last month's column, SSB operates by removing the carrier and one sideband from a full AM signal before it is transmitted. Nothing is perfect, however, and some of the original carrier usually slips through and out the transmitting antenna. This is good, because this "vestigial" carrier can be used in ECSS reception.

In normal SSB reception, the BFO (Beat Frequency Oscillator) is used to replace the missing original carrier. The problem is that is not easy to put the artificial carrier exactly where the original was, nor is it easy to keep the artificial carrier perfectly stable with respect to the incoming signal.

With ECSS the receiver actually finds and enhances the original carrier in the signal, and then detects the signal as though it were an AM signal. The stability and fidelity of this method of SSB reception makes the added cost well worth it.

Woody The Woodpecker

OTHBR (Over The Horizon Backscatter Radar) seems to be a continuing problem. Sometimes referred to as the Woodpecker because of the noise it makes, it can show up almost anywhere. Until recently the woodpecker appeared only sporadically, leading many to believe that it was still in the testing mode. Lately, though, the Woodpecker has been showing up in the middle of international broadcasting bands (despite world power agreements not to do so) and once it appears it seems to stay put longer than before. All this adds up to a big headache if the Woodpecker "lands" near your favorite station.

There is, at last, something you can do about the Woodpecker. Several suppliers now carry outboard Woodpecker filters, and a few manufacturers supply them as a standard, built-in feature (the Kenwood R-5000 is a good example). The Woodpecker is surprisingly easy to

filter, because of its slow repetition rate and waveform.

I.F. Versus Audio Filtering

We're all trying to save a buck these days, and one area in which we can economize is that of passband filtering. In the past, before the days of cheap op-amp chips, the only way to tailor a passband to suit our requirements was to buy an expensive I.F. filter, and install it in our receiver. We had a choice between a rather broad crystal filter (not cheap) or a very selective (and VERY expensive) mechanical filter that was prone to "ringing."

Enter the I.C.. With the advent of the op-amp I.C. it is now very easy to design an adjustable filter that affects the audio section of your receiver, rather than the I.F.. This means that there is no installation to worry about - the "active audio filter" connects between the receiver's audio output and the speaker or headphones. You can then electronically adjust the shape and width of the audio passband, and with some models even insert a notch to eliminate a tone or heterodyne. Note that this is not as effective as a true I.F. filter, but one heck of a lot less expensive - and you don't need one for EACH bandpass you desire. Several sources sell active audio filters in kit form, as well as pre-built form. Try Heathkit, MFJ (my favorite), and A.E.A. for some excellent performers.

Front End Overload

A lot of confusion surrounds front end overload. If you hear stations where they don't belong, or at periodic intervals, that is not front end overload. Rather, that is either intermod taking place inside your receiver, or true harmonic radiation from the transmitted source. If, on the other hand, you hear a station no matter where you tune, or if your receiver acts as though it is receiving a dead carrier at all times (and you know it and the antenna are OK) then you are experiencing front end overload.

As mentioned before, trying grounding the receiver well, and second try a front end attenuator. I have experienced cases in which I added increasing amounts of attenuation until suddenly the radio came alive. At that point a had eliminated enough of the offending strong local signal to allow the receiver to function normally.

Unlicensed Transmitters

I have discussed previously how computers, scanners, and even TVs can radiate RF for a surprising distance under the right circumstances. Recently a reader told me of an unusual experience he had.

It seems that this young man had purchased a semi-antique shortwave receiver at a flea market. The unit in question was a so-called "super-regenerative" receiver. This is the type of receiver popular until one of my heroes, Major Armstrong, perfected the super-heterodyne receiver.

In the regenerative receiver, feedback is intentionally introduced in the mixer to provide detection and amplification of the received signal. The amount of feedback is adjustable, and the ideal point is just below the place where oscillation occurs. Too much feedback causes the receiver to howl with indignation - giving rise to the derisive name "howler" or "blooper" often given to regenerative receivers.

One other side affect of the regenerative receiver scheme is that some of the RF generated in the receiver (and it can be considerable) can get back out of the antenna. In effect, the receiver becomes a small AM broadcast transmitter. This problem was well known in World War II, resulting in frequent bans on operating receivers on submarines and convoys. It seems that both sides were very adept at direction finding a receiver's signal for up to 100 miles!

Well, the F.C.C. didn't have to travel 100 miles to find our reader's receiver. Following numerous complaint from neighbors, F.C.C. engineers had only to drive a few blocks from their field office to find the "unlicensed transmitter." Following

some quick talking, the reader avoided a large fine, but also lost his recently acquired treasure. The moral: if you buy something obviously very old, test it carefully before you use it. This doesn't only apply to spurious radiation, but also to safety hazards like wire insulation (remember, they used to use rubber - it's good for a few years tops, and by the time you have gotten your hands on it it's gone) and filter section capacitors (old electrolytics short out, causing tubes to give new meaning to the term "cherry-red").

AC-DC Receivers

No, these are not radios with unusual life-style preferences. They are receivers that operate with no power transformer. Most of the AC-DC receivers today are tube-operated relics from the 40's and 50's, and as such often appear as inexpensive "bargains" at swap meets. Unless you are careful with these receivers they can literally kill you!

AC-DC radios were designed with two goals in mind - cheap and small. Instead of power transformers (which for tube sets were quite large) these sets strung all their tube filaments in series so that it took all 115 volts of the line current to run them. The plate supplies likewise ran directly from the line. The obvious problem is that full line current floated all around these receivers, and in many cases one side of the line was connected DIRECTLY to the chassis! As long as this side of the line was always connected to the neutral side of the line things were fine. But many homes of the day (and even today) didn't have true polarized plugs, with the result that you could (and can) have a receiver with 115 VAC present ON THE CHASSIS! Add wet feet to this equation and you have a potentially fatal situation! If you have one of these receivers, and insist on using it, buy an "isolation transformer" and plug the receiver into it. Isolation transformers are 1:1 power transformers - often with an AC line cord and outlet built in - which provide current limiting and isolation from the AC line. They have been known to save lives, and are reasonably priced at electronic supply houses.

Antenna Orientation

The debate about antenna types will rage on unabated until the end comes. But one fact will remain universal: horizontal antennas generally collect less noise than do verticals. This doesn't always make horizontals a better choice (vertically-transmitted signals are better received by vertical antennas, and horizontal antennas should be "high and wide") but it is a good rule of thumb to use a horizontal antenna where noise is a problem.

Signal From Space?

A popular science fiction movie from the 1950's admonished us to "Watch the skies - and keep watching the skies!" Radio signals from outer space are anything but fantasy, though. The entire science of radio-astronomy is based upon these naturally occurring extra-terrestrial radio signals.

The signals were discovered quite by accident in the early part of this century by telephone engineers, who were attempting to locate the source of radiotelephone circuit interference. To their utter shock they discovered that the signals were coming from overhead. After initial speculation about contact by intelligent life from other worlds, radio-astronomy began in earnest.

How Do I Get In On This?

I'm glad you asked that question (and several of you actually did). Signals from space have been detected from DC to daylight. Though most current radio-astronomy efforts are centered in the microwave spectrum, much early work (and even present day work) involves the upper shortwaves. Starting at about 20 Mhz you can "hear" Jupiter - the most active natural radio source in our solar system. This gas giant, like most others, emits radio waves as the intense pressure of its atmosphere squeezes gas molecules into constant friction (which is quite the opposite of the friction married folks get from their spouses, causing them to cease emitting radio waves).

Many discrete frequencies have been logged for cosmic radio sources.

These signals can be detected with even modest receivers and antennas. By constructing special antenna systems it is possible for even the hobbyist to pinpoint the source being received, and measure changes from day to day. The easiest to measure is the Sun, which emits enormous radio energy. For a fun project, how about measuring daily radio emission energy, and correlating this to WWV A and K indices?

Tell Me More

There is so much to tell about amateur radio-astronomy that there isn't room for it all here. You may see a future column about the subject, but in the mean time there are a lot of excellent sources of equipment and information. Several ham radio magazines carry advertisements for radio-astronomy clubs and kit manufacturers. In addition, most libraries carry books about the subject. And don't forget my favorite source of hard-to-find books about scientific subjects: your local science museum.

Weird Science

Speaking of strange, extra-terrestrial radio signals, Nikola Tesla first suggested that the natural radio signals were attempts by extra-terrestrials to communicate with us. Apparently the scientific community is now ready to accept the possibility of this theory. Millions of dollars are being spent to listen to millions of frequencies, and with the aid of a computer these signals will be analyzed to find a possible intelligent pattern. It's going to be like trying to find a needle in a haystack. But did you know that Thomas Edison proposed a different cause of some of the signals? Dead people. That's right, Tom claimed that the spirit world was capable of sending us *real* DX! I can't claim to have heard them, but the QSL card would be worth a fortune, not to mention the stamp! If any of you have information about related research I would appreciate hearing from you and sharing information.

Until Next Month...

73's
Ted Benson

Company Store

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



We are back after a one month vacation!

Greetings to our Japanese member Tsunaaki Ashimori. I hope the trip to India and Sri Lanka was successful. Keep in touch. I received a nice postcard from our German member Frank Starrost while vacationing at Val Claret, France. Glad the NASWA mug arrived safe and sound for the holidays. A ski vacation without a shortwave radio is really roughing it.

WINTER SWL FESTIVAL

We had the usual great time at the Fourth Annual Winter SWL Festival. It was good to see so many hobbyist under one roof. The official NASWA Royal Blue uniform could be spotted in all the right locations. The best dressed hobbyists were wearing NASWA Sweatshirts and T Shirts.

Thanks to the able assistance of Jon Schmid and Mike Fanderys, Dave Turnick and I were able to loaf more than usual at this years FEST. It was a welcomed respite. Thanks guys, and we look forward to your able assistance next year.

REMINDER: NEW PRICES FOR CLOTHING LINE

Effective 1 March 1991 new prices went into effect for the entire clothing line available through the Company Store. Once again, here's the complete story:

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

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

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

NEW REPRINT SERVICE CATALOG

Hobbyists attending the Winter SWL Festival had an opportunity to see the new, expanded Reprint Service Catalog. It's a beauty!

Prepared by Don Moore, Edition #2 of the Reprint Service Catalog adds 69 new titles to the existing inventory of reprints available through the Company Store. Total reprints are now at 169. The total page count of available reprints has jumped to 793 from 364. The following areas are covered: Antennas (15); Broadcasting Stations (20); Computers (1); General DXing (36); Humor (6); History (12); Latin America (14); Miscellaneous (14); Propagation (4); Other Equipment and Miscellaneous Technical (11); and Receivers (36). Special thanks to members Kevin Atkins, Jerry Berg, John Fisher and Don Weber for making their archives available to Don. Your copy of Edition #2 of the Reprint Service Catalog is available from the Company Store for only US\$1.00 worldwide.

73 - RAD

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

Awards Tidbits

This month we had twelve (12) different participants earning twenty five (25) awards in fifteen categories. Welcome to first time award program participants Paul Blumstein, Pete Grenier and Richard Wallace. Steve Lare made good on his promise to file additional award applications if a couple of QSL's arrived. His Radio St. Helena verification enabled him to upgrade his QRP DXer, Master British Commonwealth DXer and Senior DX Centurion awards. One QSL generated three upgrades - not bad! Sheryl Paaskiewicz lowered her "QRP" total with Radio St. Helena. Not surprising since there are very few low powered outlets broadcasting on shortwave from Africa today. Fred Kohlbrenner wins this month's "big haul" award for his 8 awards. His North American Continental DXer award is the first one of those issued by me. John Herkimer's award is the first for him in 10 years! For those members that are new to the club, John has been NASWA's resident award designer for many years. Most DXers start with relatively easy awards. However, Pete Grenier decided to start with a tough one in the Maple Leaf DXer award. Of course Pete isn't a newcomer to the hobby either. Some of his QSL's for this award go back to the early 1960's.

Greg Hart sends along some interesting stuff this month. As mentioned in a previous column, he corresponds with Luis Gamboa at Radio Centro in Ecuador. Greg received a 24 page newspaper that featured a full color ad for the station which featured reception reports from John Fisher, Brent Allred, Geoff Cosier and yours truly. Wow! Thanks for the copy Greg.

I enjoyed presenting a forum about awards programs at the Winter SWL Festival in March. In addition to our own program, I covered the SPEEDX and A*C*E award programs. A number of hobbyists attended the session and sales of the new Country List and Awards Program booklets were brisk. I hope to see many more NASWANS involved in the club's Awards Program over the coming months.

How many NASWANS were able to log the Northern Island Shortwave Relay Service from Northern Ireland? Special thanks to NASWA's Jerry Berg who made the arrangements, on behalf of the Numero Uno / Fine Tuning Special Transmissions Committee, and Andy Craig from the station for making this happen. It was another opportunity to log, and hopefully verify, a rare DX country.

NEW AWARDS

The 1991 edition of the NASWA Country List and Awards Program booklet introduces four new awards. Among the awards is NASWA's first award that doesn't require collecting verifications. Development of future "heard" awards are dependent upon the support shown for this award. Here is a brief rundown of the four new awards:

Round The Clock Continental DXer: For verification of at least one shortwave broadcast station in each continent, excluding Antarctica, within a 24 hour period.

All American DXer: For verification of at least 15 different licensed shortwave broadcast stations located in the United States of America, including Alaska and Hawaii.

Pirate DXer: For verification of at least 10 unlicensed hobby pirate shortwave broadcast stations. Endorsement stickers are available for 25, 50, 75, and 100 stations.

International DX Listener: For having heard at least 50, 100, 150 or 200 countries within the international shortwave broadcast bands.

The above awards were developed after considerable time and effort was expended by an Ad Hoc Awards Committee which consisted of: Kirk Allen, Kevin Atkins, Jerry Berg, David Clark, Gerry Dexter, John Herkimer, Don Jensen, John "Kap" Kapinos and yours truly. A number of award possibilities were considered. A permanent committee will be formed soon and new awards will be added to the program periodically. If you have suggestions for an award please write to me. All fully developed ideas will be considered by the Awards Committee in its deliberations.

Remember, each award costs only US\$2.00 in North America and US\$3.00 overseas (additional overseas awards applied for at the same time cost only US\$2.00 each). Endorsement stickers are available for US\$0.50. International Reply Coupons (IRC's) at a rate of US\$0.50 are also acceptable.

73 - RAD

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

the CPRV page

COMMITTEE TO PRESERVE RADIO VERIFICATIONS

JERRY BERG, Chairperson • 38 Eastern Ave. • Lexington, MA 02173 • (617) 861-8481



Well, I don't know if it truly was "The World's Paradise," as shown on the back of the 1933 card from Transradio Columbia, but it certainly seems like it was a DXer's paradise. When you look back at the QSL's and hobby publications of years ago you can't help but be impressed with the large number of Cuban stations that were on SW. Most carried the programs of their MW outlets, and many operated on channels that we would consider out of band today. The QSL's shown here are just a few of many in the CPRV holdings. Note the line through "La Voz del Radio Philico" on the COCX card, signifying a change in their ownership. We'll have more examples of vintage Cuban veries in the future. +++ A reminder that full details on the Committee to Preserve Radio Verifications can be obtained by sending a large size SASE to JB at the address shown above. We're especially interested in

hearing from DXer's who were active years ago. If you were around "way back when," give us a shout. Till next time, *J*

COCW RELAY STATION 650 KC 27.5 Mc	THE VOICE OF ANTILLAS HAVANA, CUBA	C M W BROADCASTING STATION 800 KC. 800 Mc.
---	---------------------------------------	--

Dear Radio Friend:

This will verify your reception of our Short Wave Station COCW at 11:51 to 12:00 p. m. on March 7 / 1938

Thanking your report, we are yours truly,

THE VOICE OF ANTILLAS

Message

CUBA: THE WORLD'S PARADISE

1933
7933

C M C M Onda Larga, Long Wave 850 KC.	CALLE 23 No. 482, Vedado Apertura (P. O. Box) 32 Habana, Cuba	C O C M Onda Corta, Short Wave 843 KC.
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2-3-38

Su reporte es correcto. Gracias.
Your report is correct. Thank you.
Votre notification est correcte. Merci.

Do I C M

Mr. B

et



A Committee of the Association of North American Radio Clubs

the CPRV page

COMMITTEE TO PRESERVE RADIO VERIFICATIONS

JERRY BERG, Chairperson • 38 Eastern Ave. • Lexington, MA 02173 • (617) 861-8481

ПОЧТОВАЯ КАРТОЧКА
POST CARD - RTD

DEAR LISTENER:
We are glad to verify reception of our broadcast on **QTH: R.S. 1938, 418 SOUTH ST** on a wavelength of **6.4**..... metres/1600.....kcs, through Radio station **KOLA**.....

We shall always be glad to hear from you and have your reports on reception, be welcome comments on our program and would be pleased to have suggestions for same.

With radio greetings,
RADIOMOSCOW

Your scientists, Papanin, Krenkel, Fedorov and Shirshov, who spent 9 mths on a drifting ice floe at the North Pole.

E-6672

НЬЮСЫН ТРАНЫ СОЦИАЛИЗМА

QRA 47°09'40" N 18°24'00" E
SZEKESFEHÉRVÁR HUNGARY
STATION OF THE ROYAL HUNGARIAN POST

HAT

TO RADIO 26
UR CRD RECD 19 34

TRANSMITTER: CUPIT
ORG 2622 AM/AM/AM/AM/AM

PSE QSL VIA: BUDAPEST
RADIOLABOR, HUNGARY

REMARKS: MANY THANKS FOR YOUR REPORT!

1938

1938

1938

RIKISÚTVAÐIÐ
(Iceland State Broadcasting Service)
Reykjavik - Iceland

Dear listener

We are pleased to verify your reception of our Broadcast on **12175 kHz** on a wavelength of **24.67 m** on **12175 kHz**.

Thank you for your interest

Sincerely yours
Jón Þorbergsson

To Europe this month. The card at the top (left and right) is from Radio Centre, precursor of today's Radio Moscow. All the Soviet stations had "R" call letters in those days (1938), and 12,000 kHz. was station RNE. Note the photo of Uncle Joe in the bottom flag. +++ The cards from HAT-Hungary, and its sister station, HAS, are among the most unusual I have seen--real prize winners. The HAT and HAS cards, printed in red, black and green, each had a small photo pasted in the center of the card, making the cards quite distinctive. This one is from 1938. +++ And you have to wonder whether things change all that much when you see that, in 1945, Iceland (bottom) was broadcasting just 60 kHz. from their long time frequency of 12175 kHz.

I would like to offer thanks to the clubs that carry The CPRV Page each month. Our goal is not only to keep all of this interesting material from the trash heap, but also to display it for the enjoyment of hobbyists everywhere. If you like seeing it, let us know. And if you would like more information on CPRV, a large SASE will do it. See you next time --

A Committee of the Association of North American Radio Clubs

Listener's Notebook

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

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

AFGHANISTAN - *R.Afghanistan's* bcsts to Europe have been rescheduled 30 minutes earlier since 5/5: On 11845 & 15510 in GG 1730-1800, EE 1800-1900, FF 1900-1930. (WBI 5/10)

ANTARCTICA - *R.Nacional Arcangel*, Base Esperanza, Antarctic Territory, has been off for a long time because of transmitter problems. A new transmitter will be provided by R. Nacional [the government network] in Buenos Aires. The most recent frequency was 15474. (Gabriel Ivan Barrera via Play-DX on DXPL 4/27 via Mike Fern)

ARGENTINA - *R.Continental*, Buenos Aires, sked on 9115 and 4588, both USB, Mon-Fri from 2200-0400; Sa/Su from 1800-2400; also irreg on 4600 LSB. Negotiations over continued rental of the frequencies from General Pacheco Radio [Argentina has lots of cities named for army and navy officers--mf] are in progress. New QSLs will be printed if the outcome is favorable. R.Belgrano remained on 11781 through March from 1500-1800; may still be active. (Gabriel Ivan Barrera via Play-DX on DXPL 4/27 via Mike Fern)

AUSTRALIA - Refurbishing of the transmitter site and aerials at Shepparton is under way. Telecom Australia feels that the aerial beamed to Europe and the New Zealand area is not necessary. That aerial is beamed 118 degrees, and that could be the ending of R. Australia's transmissions in that direction. RA is concentrating at the moment on Asia and broadcasts to the Pacific. ... The Australian government's parliamentary relay, heard about 1000 UTC, is gradually increasing as the network takes shape. New outlets are: 2PB, Newcastle, 1458; 5PB, Adelaide, 1539; 3PB, Melbourne, 1593. (Arthur Cushen on RNMN 4/4 via Mike Fern)

BANGLADESH - Dacca seems to have dropped the 0800-0830 Voice of Islam. The 1230-1300 xmsn formerly ancd as GOS now ancd to SEA & is on 17750 & 15600-15660V, tho ancd as 15200. Eur svc ancd as 1815-1900 on 9575 & 12030. Also hrd on 11747 & 13615 1600-1800 in AA & Bengali. (GVG via UADX) But heard 5/6 on new 15208 in EE 1230-1300* w/talk abt recent disaster; no // traced. And on new 15258 at 1515-1545 in Hindi. Both with weak audio. (Ernie Behr, Ont) R.Bangladesh is now back on the air after those terrible storms earlier this month. At 1230, the frequency is 15208 (much closer to the announced 15200 and ex-15607, ex-15647). Reception is

relatively decent here. 17750 is covered by, among others, WYFR but I can hear the IS under the other audio. (Tom Sundstrom)

BELGIUM - The *RTBF* External Svc is back on the air with a relay of the RTBF domestic Radio-1 service in French: 0500-0630 on 7140, 17680; 1100-1130 on 9925, 25645; 1600-1715 on 15540, 17675. The early morning sked appears altered on weekends to 0600-0630. (WBI 5/3)

BOLIVIA - R. Panamericana, La Paz, *1030 on 6105. (AC on RNZI 4/28 via Mike Fern-CA)

BRAZIL - R. *Bandeirantes*, Sao Paulo, on 11925 heard in New Zealand at 0300 signoff. (Arthur Cushen, RNZI Mailbag 3/31, via Mike Fern) [WRTH 91 says 0700-0500.--mf]

Radio Bras carries the Spanish language transmission of Radio Beijing from 0300-0355 on 11840 and 15445. (Arthur Cushen on RNMN 4/4 via Mike Fern)

R. Inconfidencia, Belo Horizonte, 6010, *0855. (AC on RNZI 4/28 via Mike Fern) [He says 6010 NF, which it's not; WRTH 91 says 24H.--mf]

CANADA - *RCI* on new 15445 from *0358 IS, EE news & "As it Happens" to 0429; vy strong 4/24, //15275 via Austria weaker, but 15445 not ancd. Perhaps R.Beijing on 15445 in SS at 0300-0356 is also via RCI, not Brasilia. RCI also on 17745 *0430-0458* in AA via unknown site, //15275 via Austria, both good 4/24. Any info on sites for 15445 & 17745? (Ernie Behr, Ont)

CANARY ISLANDS - JM: Up until a few years ago, Spanish Foreign Radio used shortwave transmitters in Tenerife on the Canary Islands to broadcast to Venezuela. So what ever happened to those transmitters?

V: For some time now we have been using them on Saturdays and Sundays only to broadcast to the Spanish maritime fleet. The site is now obsolete, and our engineers are looking into the possibility of building another site somewhere else on the Canary Islands, with more favorable propagation conditions. Our current location in Tenerife is quite good for medium wave transmissions, but not for shortwave. That's why we really haven't been using the site very much. It also explains why the broadcasts from our Atlantic relay station in Tenerife aren't included in the broadcast schedule of Spanish Foreign Radio. (JM and Homero Valencia B., director general of Spanish Foreign Radio, on RNMN 5/16 via Mike Fern) [No times or frequencies given--mf]

CHAD - Rdiff Nationale Tchadienne, N'djamena, operates 0430-0600 and 1830-2200 (Sun to 2300) on 4904.5 and 7120 kHz. Since the troubles of December 1990, operation has been irregular, with morning sign-on as late as 0559. The current schedule of Radio Moundou on 5286 kHz is 0500-0800 and 1400-1830. R. Abeche, on 5900 kHz is sked 0500-0600 & 1630-1800. [N'djamena and Moundou skeds differ from WRTH 91.--mf] (DXPL Country Survey 4/20 via Mike Fern)

CHINA - Current schedule of *R.Beijing* relays via R.Moscow transmitters was established by monitoring in mid-April as follows: Arabic, 1600-1700, 21750; 1830-1930, 11895. English, 2200-2300 on 9740. French, 2030-2130 on 15540. Persian, 1800-1830 on 12065. Turkish, 1400-1430 on 7130. (tentative). (Shigenori Aoki on RJDXC 4/21 via Mike Fern)

Gansu PBS, Lanzhou, sked: 0130-0540, 0750-1500, 2055-0030, all on 4865 & 6155 kHz.

Guangxi PBS, Nanning: 0855-1530 & 2150-0515 on 4915 kHz.

Yunnan PBS, Kunming: 0155-0500, 0835-1500, 2105-2400 on 2460, 4760, 7210.

Times for these three are 1 hour later in winter. (WBI 5/10)

- **Clandestine** A new clandestine opposed to the (PRC) Chinese govt was first confirmed in Japan 4/10. IDing as "Voice of China", it bcsts 2100-2200 on 15280 kHz. The xmsn in Chinese consists of two 30 min pgms. Reception in Japan is usually v. poor because of heavy jamming. Sometimes better near the end of the broadcast. It's taken the place of the "Voice of June 4" whose pgms were produced by Chinese students in the U.S. The "Voice of China" pgms seem to be produced in Taiwan. The staff of the V. of June 4 did not know that their programs had been replaced, but they were thinking of ending their programs by April 30 because of financial difficulties. (Tetsuya Kondo on RJDXC 4/28 via Mike Fern)

COLOMBIA - *Rdif Nacional de Colombia*; on new 17901.3v USB in SS 2130, past 0430, //11821.6 DSB; both good 5/2, but since 5/6 on 17902.3v USB. (Ernie Behr) RdNC is on the move again. Hrd on 17912v at 2056 with LA music with W anc. This is ex 17902v on May 16. The parallel is around 11820-11822 but not heard at this time. (Bruce MacGibbon, via Prodigy)

CONGO - *RTV Congolaise*, Brazzaville, on 4760 NF heard widely in South Pacific; no time given. (AC on RNZI 4/28 via Mike Fern)

COSTA RICA - Every one of the Costa Rican shortwave stations in WRTH 91 was heard in Boston in the 48 hours after the quake. (Lou Josephs, RNMN 4/25, via Mike Fern)

The Costa Rican earthquake 4/22 did not cause any serious damage at RfPI, but stn was off the air the day of the quake because of repeated interruptions to coml power. Some of the money earmarked for a more powerful xmtr has had to be put into studio construction because of last December's quake. Stn has one 5 kw & two 2.5 kw xmtrs. 15030 and 13630 kHz are on 24 hrs in AM. Third xmtr on 21460 2000-0030, and 7375 0030-2000. These fqys use SSB Mo-Fr, AM weekends. SSB was initiated to improve reception in Europe where listeners had complained about poor signals on AM. RFPI has about 4 1/2 hours a day of original pgmg, repeated throughout the night. (James Latham, RFPI, and JM on RNMN 4/25 via Mike Fern)

CUBA - *RHC*'s much publicized "SSB test" on 5965 at 0400-0600 4/28 was actually in standard AM mode, not SSB. Both sidebands were audible at full strength on my R-5000, just like any other AM station. Second test 5/5 was exactly the same, but at 0508 the xmtr suddenly went off the air. When the audio returned at 0514, both sidebands were still there, but the lower one was somewhat distorted, while the upper was clear. A technical foul up? (Ernie Behr) RHC SSB tests on 5965 extended, now every evening 0300-0600; 0300-0400 French, 0400-0600 English. (Arnie Coro, DXers Unlimited 5/11, via Mike Fern) Just tuned it before & after 0300, 5/21. Had an S9 carrier before s/on. Still there after s/on, a symmetrical signal with both sidebands somewhat distorted. (df)

CZECHOSLOVAKIA - *R.Prague Intl* EE from 3/30 to at least 5/5 is: As/Pac 0730-0800 on 17840 & 21705; Eur 1700-1727, 2000-2030, 2100-2125 on 5930, 6055, 7345 & 9605; Eur 1830-1857 on 6055 & 9605; NA 0000-0027 on 7345, 9540 and 11990, 0100-0130 on 5930, 0300-0330 on 7345, 0400-0430 on 9540 kHz. (RNE DX Spot 3/20 via Mike Fern) [The DX Spot format is one station schedule and one or two features--mf]

DOMINICAN REPUBLIC - The new stn planned in La Vega is HIVP, R.Olimpica Internacional, not "R.Unifica"; new stn was mentioned a few years ago, to bcst on 3205,

4860, 4980, 6190 or 6205. Another one is R. Alfa Omega, in Santo Domingo, on 4750, planned since 1984. (Ernie Behr)

ECUADOR - *HCJB* has its Spanish regional pgm on 15230, //6050 & 6080 at *0200-0500. Sever co-channel QRM from RHC in SS (not always //11760) at times, particularly near 0500. But if you want to hear Ecuador's Himno Nacional under good conditions, try 15230 or 6050 at 0455-0500. (Mike Fern 5/13)

Escuelas Radiofonicas Populares, Riobamba, s/on 0900 on 5011. (Arthur Cushen, RNZI Mailbag 3/31, via Mike Fern)

R. Rio Amazonas, Macuma, 4870, at 1125 with NA and opening anmts in an Indian language. (Ken MacHarg and Rich McVicar, QLB on DXPL 4/27 via Mike Fern) [WRTH 91 says 1100-1800, 2100-0400--mf]

R. Popular Independiente, Cuenca, 4799; talks, TC & ID; vy poor mod. 1211. (QLB on DXPL 4/27 via Mike Fern)

R. Centinela del Sur, Loja, on proper freq of 4890 kHz. at 1134 with a relay of HCJB SS nx; excellent signals. (QLB on DXPL 4/27 via Mike Fern)

EGYPT - *Radio Cairo* ext svcs sked: 0030-0430 AA (Am) on 9900; 0045-0200 SS (LA) 9475, 9740, 11715; 0200-0330 EE (Am) 9475, 9675; 1100-1130 AA (Af) 17800; 1115-1215 AA (ME/As) 17745; 1115-1215 Thai (As) 17770; 1215-1330 EE (As) 17595; 1215-1315 Malay (As) 17770; 1320-1450 Indo (As) 17770; 1330-1430 Bengali (As) 17595; 1430-1545 AA (Af) 15220; 1500-1600 Hindi (As) 17690; 1500-1600 Pashto (As) 15175; 1530-1630 Afar (Af) 15155; 1530-1730 Swahili (Af) 11975; 1600-1730 Urdu (As) 17690; 1600-1645 Zulu (Af) 11875; 1615-1745 Turkish (Eu) 6230; 1630-1830 EE (Af) 15255; 1630-1730 Somali (Af) 15155; 1645-1730 Shona (Af) 11875; 1700-1800 Albanian (Eu) 9950; 1730-1900 Amharic (Af) 15155; 1730-1815 Ndebele (Af) 11875; 1745-1945 Persian (ME) 11560; 1800-1900 Italian (Eu) 9900; 1830-1915 Lingala (Af) 15255; 1830-1930 Wolof (Af) 15375; 1900-2000 GG (Eu) 9900; 1900-2100 Hausa (Af) 15210; 1930-2030 Bambara (Af) 15375; 1930-2030 Fulani (Af) 15335; 2000-2100 AA (Au) 9940; 2000-2115 FF (Eu) 9900; 2030-2200 EE (Af) 15375; 2030-2230 FF (Af) 15335; 2100-2200 Yoruba (Af) 15210; 2115-2245 EE (Eu) 9900; 2215-2330 PP (Am) 15420; 2345-0045 AA (Am) 15220 & 17770. (WBI 5/10)

EL SALVADOR - (Clandestine) - The El Salvador rebels' *R. Venceremos* and *R. Farabundo Marti* are still on the air, but on FM only. Current skeds are: *R. Venceremos*, 99.0 and 100.5 MHz, 0000-0200; *R. Farabundo Marti*, 90.2 and 90.8 MHz, 0000-0100. The FM xmtrs are well hidden on a mountain several miles from the studios, which were visited recently by a Reuter correspondent. The production center has equipment powered by car batteries in a primitive setting (no electric light, only candles). (Reuter and BBCM on DXPL 4/26 via Mike Fern)

FRANCE - *RFI* is to start a separate svc for sub-Saharan Africa, called "RFI Plus Africa," to be bcst daily 0500-0800 on all RFI freq [in France]. In order to provide listeners with a choice, regular RFI programs will be relayed from transmitters in Gabon and French Guiana. RFI reportedly has also asked several East European countries about leasing air time on unused xmtrs while its own equipment is being upgraded. (JM via RNMN 4/25 via Mike Fern)

Over the next six years *RFI* plans to replace the 12 100 kW transmitters in France with 500 kW units, and add 4 additional 500 kW units, bringing the total to 24. A fifth 500 kW transmitter will be added in uyana. Three 500 kw units will be installed in Jibuti. Work on a relay in Thailand will continue. (WBI 5/3)

GUAM - KTWR, Agana, sked: 0800-0915 EE (As) 15200; 0830-1000 EE (Au) 11805. Chinese (As) 0900-1100 on 9785, 11665; 1100-1200 on 9590, 9785, 11665; 1200-1230 on 9590, 9870, 11700; 1230-1500 on 9870, 11700; 1500-1600 on 9785, 11700. 0915-0930 Fri Indo (Madurese) (As) 11650; 0915-0930 Sa-Su EE (As) 15200; 0930-1100 Indo (As) 15200; 1000-1200 RR (FE) 11805; 1200-1330 JJ (As) 9785; 1330-1500 Mo-We Hakka/Cantonese (As) 11830; 1330-1500 Th-Su Swatow/ Cantonese (As) 11830; 1330-1445 Indian languages (Hindi, Nepali, Garhwali, Bhojpuri, Kurukh, Boro, Tibetan, Dogri, Gamit, Awadhi & Braj Bhasha) (As) 11895; 1445-1500 Assamese (As) 11895; 1500-1635 EE (As) 11650; 1500-1515 Santali (As) 11895; 1515-1535 Tamil (As) 11895; 1635-1700 Su (As) 11650; 2100-2300 CC (As) 11580; 2300-2345 CC (As) 15485, 17800; 2100-2200 JJ (As) 15485; 2115-2130 Th Indo (Madurese) (As) 11650; 2115-2145 Th-Sa Amoy/Satow (As) 11665; 2115-2145 Amoy/Hakka (As) 11665; 2130-2300 Indo (As) 11650; 2145-2300 Cantonese (As) 11665. (WBI 5/10) EE 0800-0927 on 15200, 0857-0957 on 11805. (AC/RNMN 5/16 via Mike Fern)

AWR Asia, Agat, sked: 0100-0200 Burmese (As) 15610; 0200-0300 Sa/Su EE (As) 13720; 0200-0300 Sa/Su CC (As) 15225; 0300-0800 Sa/Su (As) 13720, 15225; 0800-0900 CC (As) 15225; 0800-0900 Hakka.Minnan (As) 13720; 0900-1000 Cantonese (Shanghai dialect) (As) 13720; 0900-1300 CC (As) 11980; 1000-1100 RR (As) 13720; 1100-1200 Indo (As) 13720; 1200-1300 Mo/We Cebuano (As) 13720; 1200-1300 Su/Th Ilongo (As) 13720; 1200-1300 Tu/Fr/Sa Tagalog (As) 13720; 1300-1400 JJ (As) 11980; 1300-1400 KK (As) 9650; 1400-1500 Burmese (As) 13720; 1400-1600 CC (As) 11980; 1500-1600 Mo/Th Malayalam (As) 13720; 1500-1600 Tu/Fr Marathi (As) 13720; 1500-1600 Su/We/Sa Tamil (As) 13720; 1600-1700 Mo/We/Fr Telugu (As) 13720; 1600-1700 Sa/Su/Tu/Th Hindi (As) 13720; 1600-1700 EE (As) 11980; 1700-1800 Sa/Su EE (As) 13720; 1800-1900 Sa/Su Swahili (Af) 13720; 1900-2000 Sa/Su RR (As) 13720; 2000-0200 CC (As) 15225; 2000-2100 KK (As) 15310; 2100-2200 JJ (As) 15310; 2200-2300 Indo (As) 15610; 2300-0100 EE (As) 15610. (WBI 5/10)

KSDA is now operating 24 hours a day at the weekend. The English transmissions are: 0000-0100 on 15610, 0200-0300 Sa/Su on 13720, 1600-1700 on 11980; 1700-1800 SaSu on 13720; 2300-0000 on 15610. (Arthur Cushen on RNMN 4/4 via Mike Fern)

GUATEMALA - TGVC, *Radio K'ekchi*, celebrated its 3rd anniv in March. Stn has recd letters from Japan, China, Australia, Canada, most European countries. Target area is the K'ekchi-speaking part of Guatemala, 150 miles from east to west and 125 miles from north to south. SW is the preferred band in rural Guatemala, where 2 band Japanese rcvrs are in wide use. The greetings program, broadcast three or four times a day, takes the place of a local post office. Most letters are hand-carried to TGVC, which is the most efficient way to get a message to relatives or loved ones in an emergency or otherwise. The K'ekchi Baptist Assn., which had 170 congregations in 1987, wanted the radio station because guerilla violence had slowed the growth of the faith in 1983-84. TGVC has proved to be a real tool for church planning and evangelism as well as communication. Between 10/88 and 1/90, 15 new congregations were set up, all having ties to the radio station. Elias Kuk'keem, president of the K'ekchi Baptist Assn., says the stn is a missionary everywhere all the time. Xmtr is a 25 yr old Gates BP-5, modified for SW use; capable of 5 kw output, but only using 1.2 kw because of some problems. Antenna is a folded dipole with a reflector, designed by Wayne Berger of the C.Am. Mission. Sked is Mo-Sa 1100-1700 and 2100-0300, Su 1200-1500 and 2100-0200, on 4845 kHz. Addr: TGVC, 16015 Fray Bartolome de las Casas, Alta Verapaz, Guatemala. (The number is the postal code.) Spanish ltrs preferred. Stn mgr, Gilberto Sun Xicol, speaks Bocom, K'ekchi and Spanish, but is just getting a start in English. IRC's are not accepted [sic] in Guatemala, so dollar bills or mint stamps are requested. (David Daniel of TGVC and Ken MacHarg on DXPL 4/20 via Mike Fern)

HONG KONG - Sunday Telegraph 4/21 rptd BBC will close Hong Kong relay in 1997, when H.K. reverts to Chinese sovereignty. One reason is said to be China's insistence that nothing unfavorable to the PRC be bcst. BBC is looking at an alternative site in northern Thailand. (RNMN 4/25 via Mike Fern)

ICELAND - Sked sw rlys of Ríkisutvarpid's dom svc in Icelandic, published in the "Dagskra" pgm guide for 4/22-28: To Eu at 1215-1245 on 13830, 15790; 1855-1930 on 11402, 13855; and 24 hrs on 3295, 6100, 9265. To NA 1225-1245, 1410-1440, 1935-2010, 2300-2335, all on 13855 & 15770. (WBI 4/26) *INBS* hrd 4/21 w/election coverage in Icelandic 0300 past 0600 on 9265, 11402, 13855, 15770, all USB w/good signals; daily on 9265 w/IC tlk & mx 0200-0600+, but no longer on 6218. (Ernie Behr)

INDIA - *AIR Shillong* 1740* on 3256. 2nd *AIR* xmtr on 3268 1600*. (AC/RNZI 4/28 via Mike Fern)

INDONESIA - *RRI Palangkaraya* audible 1100 w/Jak nx rly, while co-channel R.N.Solomons still off 3325. (AC/RNZI 5/12 via Mike Fern)

Voice of Indonesia is 11752 at 0030-0400, 0800-1300 (langs as in WRTH); 9675 & 11752 at 1730-2100 (langs as in WRTH). 7125, 7225 & 11785 are not in use.

RRI-Jakarta: 15155 is inactive for the HS. 3277 & 4775 still operating on sked in WRTH, and 9680/11760 is 0500-1600. Other RRI notes: *RRI Cirebon*: 2390 is now 0900-1800 (ex 1700-2145). *RRI-Ambon*: 3241 is now 1145-1400. *RRI-Dili*: 3306 now s/off 1645 (ex 1600). *RRI-Kupang* on 3385 no longer has EE Sat 1330-1400 or 2200-2230. *RRI Pontianak* is now 1000-1630 (ex 1615) on 3447 kHz. *RRI Banda Aceh* is now 1100-1610 (ex 1715) on 3905. *RRI Sorong*, 4875, is now 0800-1245 (ex 1310). *RRI Yogyakarta* is now 0930-2100 (ex 1200 s/on) on 5047 kHz. *RRI-Sibolga* is 1000-1530 (ex 1700) on 5256. *RRI Pekanbaru* is now 1000-1600 (ex 1400) on 5984 kHz. *RRI Ujung Padang*, 9552, is still 0000-0700, despite WRTH sked. (Craig Tyson in ADXN 4/91)

IRAN - (Clandestine) -- *V.Iranian Communist Party* on 3895 has been putting good signals into Sri Lanka between 1800 and s/off at 1900. The transmitters are believed to be in Afghanistan. (Victor Goonetilleke on RNMN 4/25 via Mike Fern)

IRAQ - *R.Baghdad's* Arabic Service on 3980 and 4600 is heard well in Sri Lanka despite jammers. The Kurdish service on 7350 heard to s/off 2030. No language other than Kurdish heard from Baghdad on this channel. A weak French signal on 7350 at 1830 proved to be Radio Beijing. (Victor Goonetilleke on RNMN 4/25 via Mike Fern)

Radio of the Iraqi Republic's domestic service observed on 558, 684, 756, 909, 1197 & 1431 kHz when checked between 1500 & 1900 4/18. The station continues also to be heard on 3980, 4600, 8350 & 15600 0125-2205, though sw usage is irregular. Iraqi Radio's Kurdish svc continues to be heard on 7350 kHz. (WBI 4/26)

ISRAEL - *Israel Radio* Ext.Svc English Broadcast Schedule, 5/5 - 8/31/91: 0000-0030 NA 9435 11604 15640; 0100-0130 NA 9435 11604 15640; 0400-0415 NA/Eu 9435 11605 15640; 0400-0415 WNA/Eu 11675; 0400-0415 As/ANZ 17575; 1000-1030 Eu 11588 17545 17575 21710; 1000-1030 As/ANZ 15650; 1000-1030 Eu 17590; 1700-1715 Eu 11588; 1700-1715 Eu 11675; 1900-1930 NA/Eu 11605 15640 17685; North America, Western Europe; 1900-1930 Af 17630; 2130-2200 NA/Eu 11588 15640 17685; 2130-2200 Eu 11604; 2130-2200 WNA 15100; 2130-2200 LA 17575; 2300-2330 NA 9435 11604 15640. 30 minute broadcasts are news and features. 15 minute broadcasts are news. (Kol Yisrael DX Corner 4/28, via Andy Tannenbaum, via Usenet)

The Jerusalem Post reported the week of May 5-11 that Kol Israel is planning to cut its SW operations in half. Hungarian, Romanian, and Portuguese language programs are threatened with extinction, and English bcsts in the nighttime hours to NA may go as well, leaving just one 60-minute English bcst a day. (JM on RNMN 5/16 via Mike Fern)

ITALY - RAI may resume broadcasts to the South Pacific. Arthur Cushen has been asked to survey their frequencies, particularly at 2200 when RAI has an English transmission to Japan. Frequencies which may be used include 9710, 11800, or 15330. (Arthur Cushen, RNZI Mailbag 3/31, via Mike Fern)

R. Italia Int'l, Spoleto, has been reactivated; heard by L. Bontefiora in Italy from 0806-1110 on 7140 kHz. (Play-DX via DXPL 4/26 via Mike Fern) [WRTH 91 says 0700-1700--mf]

JAPAN - *R. Japan* changed some of its frequencies at 0100 UTC 3/5. The new frequencies for English transmissions are: 1900-1930 to 9640 NF ex 15270. 2100-2200 to 15340 NF ex 15230. 2300-2400 to 15340 NF ex 15230. (Sumi Togasaki, RJDXC 4/28, via Mike Fern)

R. Japan plans to install 3 x 300 kw transmitters at Yamata, about 60 km NE of Tokyo. It now has 4 x 300 kw & 4 x 100 kw transmitters, and 17 antenna arrays at Yamata. Also hopes to add three new curtain antennas for the Asian continent and Southeast Asia. The new facilities are expected to enter service about January 1993. (RJDXC 4/21 via Mike Fern)

KOREA (No) - An unID station was heard in Japan 4/14 after 1800 on 3000.0 kHz in Korean. Reception was excellent. Two Korean stations have been on the air, and remained unID, for several years. One is on 3025 and the other on 1293 kHz. These stations remain unID because they do not broadcast IDs or locations. Programs on 3000 are similar to those heard on 3025 and 1293, including movie soundtracks, poetry, and music. Although no slogan or location was given, the station said the programs were for young Korean infantrymen. Although programs on 3000 and 3025 differ, the same announcement, "This broadcast is for the young infantrymen", is repeated several times a day on each frequency. Both stations have broadcast the soundtrack of a film "Nameless Heroes", with English dubbed over the Korean, from 1430-2100 UTC. 3000 kHz. is irregular, while 3025 (apparently) is not. (Tooru Yamashita on RJDXC 4/28 via Mike Fern) [These stations may not use IDs because they may be feeders for wired-audio networks at military bases. North Korea is one of the few countries making fixed-tuned medium-wave receivers, so its own people can't tune in South Korea.--mf]

LIBERIA - Omega Station B is back on the air, transmitting with reduced power. (US Coast Guard via WWV April 23 via Mike Fern.)

ELBC, Monrovia, 7275 kHz, widely heard in Australia and New Zealand at 0700 with news in English. (John Durham, Hamilton, Australia, and AC on RNZI 4/28 via Mike Fern)

LIBYA - *V of Great Arab Homeland* on 17725 4/30 at 1815 reading "Green Book" in German non-stop to 1911; then RS ID & Addr: Box 4677 or 4396, Tripoli, SPLAJ; 5/2 same stuff in GG to 1935; 5/4 in E.Eur lang to 1900, but some days only in AA. (Ernie Behr)

LITHUANIA - *R. Vilnius* 2300 in EE on new 15485, 15455, 15180, 13645 & 11790; also used by R.Minsk from 2330, R.Kiev in EE from 0000. Freqs listed in May LN under Latvia at 2300 were actually for R.Vilnius, not Riga. (Ernie Behr)

MALI - *RTV Malienne*, Bamako, 11960 kHz., heard in South Pacific with good signal and French ID at 0800. (AC on RNZI 4/28 via Mike Fern)

MONGOLIA - Sked for *R. Ulan Bator*: 0520-0550 (Su) JJ on 12015; 0840-0910 MG, 0910-0940 EE, 0950-1020 CC, 1020-1050 MG, 1055-1125 CC, 1125-1155 MG, 1200-1230 (Tu/Fr JJ, Su/ Mo/ We/ Th/ Sa EE), all on 11850, 12015; 1240-1340 Tu/Fr RR on 6000; 1255-1325 MG, 1325-1355 (Mo-Sa) CC, 1400-1430 MG, all on 11850, 12015; 1445-1515 (Mo-Sa) EE on 9795, 13780; 1710-1810 (We/Sa) RR on 9720, 12050; 1940-2010 EE to Eu on 11850, 12050; 2155-2225 & 2300-2300 (Su) JJ on 12015. (WBI 5/3) *R. Ulan Bator* now broadcasts in Russian from 1710-1740 and 1740-1810 Tues and Fri on 9722 NF and 12050 kHz. The Mongolian Home Service used to have Russian twice a week, for Russians living in Mongolia, but had dropped it. The new transmission seems to be targeted at the USSR. *R. Ulan Bator* is believed to have a third transmission in Russian for the Soviet Far East. Poor signals prevent good copy of the complete schedule announcement. (Yoshinori Kato, RJDXC 5/12 via Mike Fern)

MOROCCO - *RTM* on new 15345 from 1700-2101* AA, strong since 4/21, //15335 weaker, 15330 in QRM. (Ernie Behr)

R. Mediterranee, 9575, hrd 0730 w/FF nx & pop music. (AC on RNZI 4/28 via Mike Fern)

MOZAMBIQUE - The National Pgm from Maputo is sked in Portuguese 0250-0400 on 3210, 4866, 6112, 7242 kHz; 0400-0500 on 3210, 4866, 6112, 7242, 9618; 0500-0600 on 4855, 6112, 7242, 9618, 11818; 0600-0700 on 6122 (or 6112? df), 7242, 9618, 11818; 0700-1600 on 6112, 7242, 9618, 11818, 15295v; 1600-1700 on 4866, 6112, 7242, 9618, 11818; 1700-2210 on 3210, 4866, 6112, 7242, 9618. The Maputo & Gaza Interprovincial Pgm from Maputo is in PP & Tsonga 0255-2210 on 3338, 4926, 7113v, and 9525 (irreg). The Sofala (Beira) Regional Pgm "A", from Beira is sked 0255-2205 in Portuguese, Nda, Chissena on 3370, 6025. The Sofala (Beira) Regional "B" pgm is at 0255-2255 in Portuguese, Nyanja, Ajaua, Malunde on 3280, 9637 kHz. The latter two programs have Swahili news at 1930-1940. (WBI 5/10)

NETHERLANDS ANTILLES - *TWR Bonaire* has installed a new 500 kw MW transmitter & is adding computerized shortwave antenna switching similar to HCJB's, now completely indoors, so engineers don't have to use wooden poles in the rain to change beams. The new system should be ready in June. *TWR's* rated 250 kw SW transmitter is being run at 100 kw because of unsolved tube problems. (Chuck Roswell & Bonaire chief engineer Dave Butler, Bonaire Wavelength 5/11. via Mike Fern)

NEW ZEALAND - *R. New Zealand Intl* plans to produce a pilot one-hour program in Japanese sometime between May 15 & July 30. Exact date & time is still uncertain. RNZI now accepts Visa & MasterCard for its T-shirts & other productions. The first new production is a recording of Maori and (some) C&W music by the Maori singer Sir Howard Morrison. Cassette of the live concert is US\$15, CD is US\$20. (Tom King RNZI Mailbag 5/12, via Mike Fern)

RNZI sked from 5/12: 1800-2200 Su-Fr on 13785; 2200-0730 Daily on 17770; 0730-1210 Daily on 9700. NOTE: Transmissions beyond 1210 UTC to cover national and international sporting fixtures will be broadcast on 9700 kHz. Pgms primarily for listeners and radio stations in the Pacific, and are planned accordingly. Programmes broadcast between 1800 and 2200 hours UTC cover Pacific Islands and world news, sports news summaries, news in Pacific Islands languages, as well as music, New Zealand news and comment.

Between 2211-0730 UTC some of the pgmg from the domestic National Radio, or sports from our AM Network. Sports coverage dominates weekends till 0500. Our

programming from 0730 is a mix of Pacific Islands and feature programmes, with National Radio offerings from 0900.

Shortwave listeners and DXers are invited to join Tony King and Arthur Cushen for "Mailbox", now best fortnightly, alternating with "Travel Pacific". Each programme is best 3 times weekly - Mon at 0330 (0430 from 3/17), Thur 0735 (0835 from 3/17) and Fri 1905. Air dates for "Mailbox" are: March 4, 7, 8, 18, 21, 22, April 1, 4, 5, 15, 18, 19, 29, May 2, 3, 13, 16, 17, 27, 30, 31. Air dates for "Travel Pacific" are: March 11, 14, 15, 25, 28, 29, April 8, 11, 12, 22, 25, 26, May 6, 9, 10, 20, 23, 24.

We welcome reception reports and comments on our programmes. Reception reports should be accompanied by 3 IRC's where possible. Requests for frequency schedules - 1 IRC. Tapes of reception are not required. Mail to: Broadcast House, P.O. Box 2092, Wellington, New Zealand. (RNZI, via Ed Evans, WSHB, via Usenet)

RNZI on 13785 at 1750 w/IS & *1755. Has a Bible reading at 1756 then a hymn is sung. EE nx 1800. At 1851 noise level really up and hard to listen to. At recheck 1915 nothing but noise on May 14. (Bruce MacGibbon, OR, via Prodigy) But at 1800-2000 RNZI does very well here on 13785. No problem at all. Some days, including the first day, WSHB-13770 causes a problem at 2000-2200, but other days -- like today -- I noticed no interference or front end problems at all and RNZI was clean to 2200. Last night, 17770 was over 30 db/9 and 9700 this morning wasn't far behind. Actually, during the day RNZI is easier to hear than Radio Australia, which cannot be heard during the midday hours. (Tom Sundstrom, NJ)

NIGERIA - *Lagos*, 4990, heard well 0500; pops, EE anmts at 0510.(AC/RNZI 4/28 via Mike Fern)

NO.MARIANA ISLANDS - Sked for KHBI (#1 xmtr) from 4/29: 0000 (Sa/Su) 17865 Jpn; 0200 (Sa/Su) 17865 Jpn; 0400 17780 Jpn; 0600 17780 Chn; 0800 17555 Jpn; 1000 17555 Chn; 1200 13625 Ind/ME; 1400 13625 Ind/ME; 1600 13625 Ind/ME; 1800 13625 Ind/ME; 2000 9455 Jpn/Kor; 2200 15405 Chn. KHBI (#2 xmtr) from 4/29: 0000 17555 Phl; 0200 17555 (Sa/Su) Phl; 0400 17555 (Sa/Su) Phl; 0600 17555 Phl; 0800 15610 ANZ; 1000 13625 Indo; 1200 9475 Aus; 1400 9530 Chn; 1600 11580 SAs/Chn; 1800 13625 NZL; 2000 13625 Aus; 2200 13625 Indo. (Michael Batchelor, WSHB, via Usenet)

NORWAY - *R.Norway Intl* summer schedule for the Pacific includes 1200-1230 UTC on 21695 kHz., and 1900-1930 on 17730 and 2200-2230 on 21705 kHz. (Arthur Cushen on DXPL 4/20 via Mike Fern) *RNI* has been using compatible SSB for all its transmissions in the 15 MHz band for some time. (Erik Koie, Radio Denmark, on RNMN 4/25 via Mike Fern)

PERU - *R.Eco*, Iquitos, on 5097.2 with news features in Spanish and singing IDs. from 0820-0830. (Ken MacHarg, QLB on DXPL 4/27 via Mike Fern) [WRTH 91 says 0925-0400--mf]

R.Maranyon, Jaen, on 4835 with religious program; QRM from R. Interoceanica in Ecuador; tune on the low side for best copy. No time given. (QLB on DXPL 4/27 via Mike Fern) [WRTH 91 says 1100-0200, Sun from 1200--mf]

R.Tropical, Tarapoto, 4935, one of the more reliable Peruvians, at 1132 with marches and news in Spanish. (QLB on DXPL 4/27 via Mike Fern) [WRTH 91 says 0945-0400--mf]

PHILIPPINES - *FEBC*, 11650, heard at 2313 with fair signals; IS & EE ID by man. (QLB on DXPL 4/27 via Mike Fern)

ROMANIA - *R.Romania Intl* at 1736 in English on 17805 new frequency. Woman with News. At 1745 ID. Best in upper side band due to adjacent channel interference from 17800. Best I've heard Romania in a long time. This on May 16. (Bruce MacGibbon, via Prodigy)

SENEGAL - *ORT Senegal*, Dakar, 4891 kHz., heard well in Quito evenings; in Italy, A. Corassa in Giorno hears it 1935-0005 signoff. (Play-DX via DXPL 4/27 via Mike Fern) [WRTH says 0600-2400 on mw. No indication whether 4891 carries the International Service when it is scheduled.--mf]

SEYCHELLES - *FEBA* has extended its transmission on 15250; normally 0330-0400 in African languages, but from Wed-Fri as early as 0300. (AC/RNZI Mailbag 3/31, via Mike Fern)

SOMALIA - On 4/23-25 a stn IDing as "*R.Somalia, Hargeisa*" (Somali: "Halkani waa Hargeisa Radio Soomaali") was heard at 1500-1700 on 7121.9 kHz. Ancrs were recognized as the same as those who used to be heard on Radio SNM. At 1600 the stn carried the "Hogogaal" ("Information") program, which used to be carried at the same time by Radio SNM. A news bulletin at 1630 was introduced by the same signature tune as used by R.Mogadishu. R.SNM changed its name to R.Hargeisa in early February & was last hrd in the 6220-6525 kHz range on 3/5. The old R.Hargeisa (the govt regional stn) used to operate on 7120 kHz before it was destroyed during the fighting in northern Somalia in 1988. (WBI 5/3)

SOUTH AFRICA - The *Radio RSA* external svc sked, as of 5/7 is: 0300-0700 FF on 9675 (to 0500), 11900, 15365, 17815; 0400-0500 EE on 5960, 11860, 11920; 0400-0600 PP on 7230, 11920 (from 0500); 0900-1000 Sa/Su Tsonga on 9585; 1000-1100 EE on 17835; 1100-1200 EE on 9555, 11860, 11900; 1400-1700 Swahili on 11900, 15365; 1500-1600 EE on 7230, 15210; 1600-1800 EE on 7230, 15210, 17790; 1500-1800 Lozi on 7270; 1600-1800 Chichewa on 5960; 1800-1900 PP on 4965; 1800-2000 FF on 11900, 15365; 1900-2100 PP on 7230. (WBI 5/10)

SPAIN - The current *accurate* name for the Overseas Service is: The International Service of Spanish National Radio, because SNR also has an internal or domestic Service. This was the subject of a bit of business between Terry Burgoyne and John Cole on RNE's DX Spot 4/20. (DXS via Mike Fern)

SRI LANKA - *DW Trincomallee* back on a full sked including 0100-0150 Bengali & English 0200-0250 on 1548, 9615, 11945; 1430-1650 (EE 1600-1650) on 1548, 6170, 7225. (GVG, via UADX)

R.Japan, Ekala, on 11840 0100-0330, 0330-0400 (? df) on 17820.; 1930-2000 on 15210; 1300-1530 on 9530. (GVG via UADX)

SLBC is providing fair reception on 15120 around 2115 despite interference from R. New Zealand International. (Arthur Cushen, RNZI Mailbag 3/31, via Mike Fern)

SWEDEN - *R.Sweden's* English transmissions for the South Pacific are at 0100-0130 on 9765; 1130-1200 on 11960, 17740 and 21570; 1300-1330 on 11960, 11740 and 21570. The North American transmissions (as of 3/31) are unchanged, 0200-0230 on 9695 and 11705. 0330-0400 on 9695 and 11705. (Arthur Cushen, RNZI Mailbag 3/31, via Mike Fern)

Andy Sennitt visited Radio Sweden in April after attending the convention of the Arctic (bc) DX Club. Swedish *domestic* TV broadcasting is facing sweeping reorganization, which may also affect both radio and the international service. The

Swedish authorities have decided to allow commercial radio and TV. They suddenly woke up to the fact that advertisers were reaching good-sized Swedish audiences via satellite, which the government can't take its cut from. Other non-commercial stations will be affected by the shakeup. The staff at Radio Sweden is waiting to find out whether RS will remain part of (domestic) Sveriges Radio, or become autonomous like Radio Nederland. (Andy Sennitt on RNMN 5/2 via Mike Fern)

TONGA Tonga BC Comm is heard in New Zealand on 5030 at *1758 & 1000*, same sked as in WRTH. (AC/RNMN 5/16 via Mike Fern)

UNITED ARAB EMIRATES - *Abu Dhabi* has resumed EE px 2200-2400*; hrd on 13605, 15305, 17855; vy strong 5/8. (Ernie Behr)

USA - Sked for WCSN from 4/29: 0000 9850 Waf/ME; 0200 9850 Eaf/ME; 0400 9840 Sef/ME; 0600 9840 Eu; 0800 11705 Eu; 1000 (Sa/Su) 15610 Eu; 1200 (Sa/Su) 15610 Eu; 1400 21670 Eu/ME; 1600 21640 Eaf; 1800 21640 Sef; 2000 15610 Eu/ME; 2200 15300 Waf. WSHB (#1 xmtr) from 4/29: 0000 13760 SA; 0200 13760 SA; 0400 13760 Mex; 0600 11705 Mex; 0800 13760 Aus; 1000 9495 ENA; 1200 9495 ENA; 1400 (Sa/Su) 15610 ENA/Car; 1600 (Sa/Su) 15610 ENA/Car; 1800 21780 ENA/Eu; 2000 13770 ENA/Car/Eu; 2200 9465 ENA/Car. WSHB (#2 xmtr) from 4/29: 0000 7395 ENA/Car; 0200 9455 WNA/Mex; 0400 9455 WNA; 0600 9455 WNA; 0800 9455 SA; 1000 9455 SA; 1200 13760 CA; 1400 13760 WNA/Mex; 1600 (Sa/Su) 17555 WNA/Mex; 1800 (Sa/Su) 17555 WNA/Mex; 2000 17555 Brz; 2200 17555 SA. (Michael Batchelor, WSHB, via Usenet)

USSR - From All-Union Radio-1, in RR 1600 5/7: A new station, Vedo, is coming on the air on SW, and later on MW. "... a joint small enterprise of communications workers and journalists." To begin at 1900 5/20, "will be functioning in accordance with the principle of private radios stations which are widespread in the West, in the 42 to 50 metres band. This will be a station bringing together the interests of peoples of all nationalities living between the Volga and the Don: Russians, Germans, Kazakhz, Jews, Tatars, Ukrainians, as well as all religious beliefs. There are more than one hundred of those in this area of good religious tolerance. A place is being found for sermons and for programmes in German made specially by Deutsche Welle in Cologne and for philosophical thought sent by the Voice of America. There are special programmes for women, representatives of small businesses, young people - an extraordinarily broad range, because in the long term the radio station will be broadcasting for 20 hrs a day. (WBI 5/10)

Acc to ltr from the Korean section of R.Moscow, its Korean bcsts will be one hour later after 5/5. Same for Japanese (starting at 1030 instead of 0930). It seems likely that other language transmissions will also be advanced by one hour. (Tooru Yamashita on RJDXC 4/28 via Mike Fern)

The last part of Radio Japan's three-part series on Siberia and the Far East will focus on Western Siberia, 4 to 7 hours ahead of UTC. The stations in UTC + 6 and UTC + 7 carry Radio Orbita 3, the first program of All-Union Radio. Stations in UTC + 4 and UTC + 5 relay Radio Orbita 4. The closer to Moscow a station in the Russian Republic is, the less chance that it will have a shortwave service. This part focuses on those stations that do have shortwave transmitter. All stations mentioned broadcast in Russian unless specified otherwise.

Ulan-Ude is the capital of the Autonomous Republic of Buryat, and is one of the central cities in (the Baikal). The Buryats are of Mongolian origin, and their language is related to Mongolian. There are not many local Buryat language programs. Buryat

Radio's local evening program, which starts at 1115, is in Buryat. Buryat Radio broadcasts on 4795 kHz shortwave, 279 kHz lw, and on FM. [WRTH 91 says 2156-1700; Buryat at 2156-2200, 2214-2300, 2315-2330, 0015-0030, Su 0415-0500, Su 0515-0600, Mon-Fri 1115-1200, Su 1230-1345.]

Irkutsk External Service is transmitted from a very large site. [He may be confusing the domestic service with a shortwave relay base that has nine transmitters and serves mainly South Asia.--mf] The service has not been received in Japan for several years. The frequency listed in WRTH is 6090 kHz. It seems to have stopped broadcasting local programs. Irkutsk broadcasts on 198 kHz LW. Weekday local programs of this service are from 2200-2300 and 1200-1300.

Unlike most Soviet stations, Krasnoyarsk Radio has neither an interval signal nor a theme tune. Krasnoyarsk broadcasts on 5290 kHz shortwave and on 216 kHz lw. Local programs can usually be heard around 2300 and 1200.

The largest city in Western Siberia is Novosibirsk. The only local programs from here are on 270 kHz lw. Last year it was reported that Novosibirsk would relay the Voice of America. The relay would be aimed at people living in Novosibirsk, rather than improving reception in the Soviet Union. The frequency and duration of the broadcasts have not been announced, but it is likely that it will be for several hours a day on 270 kHz.

The preceding stations all relay Radio Orbita 3. Now for those that relay Radio Orbita 4. -

Tyumen Radio broadcasts from the state of Tyumen, east of the Ural mountains, on 4895 kHz shortwave and 891 kHz mw. These frequencies cannot be received in Japan. The local evening program is said to start at 1300. The recording of Tyumen Radio was a relay via Khanty Mansiysk radio, a local station in the Autonomous District of Khanty-Mansi. Its frequencies are 4820 and 1152 kHz. It used to broadcast on 4520 kHz but swapped frequencies with Mayak radio several years ago. The 4520 kHz transmitter is probably still in Khanty-Mansiysk.

Khanty-Mansiysk, Tyumen and Bashkir radios are the only stations carrying Radio Orbita 4 which have shortwave services. Bashkir probably uses 4485 kHz and the medium wave frequency is 693 kHz. Bashkir Radio was heard once in Japan several years ago, at 1300 at the start of a special new year's program. It is thought the station changed to 4030 kHz at the start of 1990. [WRTH 91 says 4485 kHz, 0200-1800.--mf]

In the Russian Republic, which is in UTC +3, Archangelsk Radio on 5015 kHz and Murmansk Radio on 5930 kHz have been heard in Japan. It's not known whether they still broadcast on shortwave [WRTH 91 says 0200-2200 for Archangelsk; does not list Murmansk. PWBR 91 says 0200-2200 for Murmansk.--mf]

Tatar Radio launched a sw svc last year; on 17810 or 11945 from xmtr near Moscow. [PWBR 91 says 0330-1600 on 11945.--mf] (Yoshinori Kato on RJDXC 5/12 via Mike Fern)

- **UZBEKISTAN** - *R. Tashkent* has added an additional English broadcast from 0100-0130 on 5945, 9540, 9600, 11860, 15470 kHz. (Arthur Cushen on DXPL 4/20 via Mike Fern)

- **KAZAKHSTAN** - *R. Alma Ata*'s English broadcast is on the air from 0130-0200 and 1630-1700 on 5035, 5915, 6135 and 7230 kHz. and 900 kHz. m.w. Only 5915 and 6135 kHz are heard in Japan. (Yoshinori Kato and BBCM on RJDXC 4/28 via Mike Fern) *R. Alma Ata* noted 5/6 with new EE bcst 2130-2200 on 5035 kHz. Ancd wavelengths equivalent to 5035, 5915, 6135 and 7230 kHz. (WBI 5/10)

UNITED KINGDOM - *BBC WS* added 15340 NF, ex 15140, to NZL 2000-2300. (AC/DXPL 4/20 via Mike Fern)

VATICAN - *Vatican Radio* is also using 15120 at 1930 for Europe of Mass and other rel bcsts; also suffers interference from R. New Zealand Internationl. The regular South Pacific service from 2205-2225 is very well received on 9600 and 11830. (AC/ RNZI Mailbag 3/31, via Mike Fern)

VIETNAM - This country survey appeared in the Union of Asian DXers bulletin, no date given; much of the material apparently from Sarat Virakoon of Sri Lanka:

Bac Tai BS, 1145-1400 on 6615v. Normal sign-on is at 1200 after a very long signature tune. Regular, with fair signals. Heard by bmm on 6616 at 1352-1354.

Hoang Lien Son BS on 6597v // 5690v from 1145-1315v. Believed to be located in Lao Cai, near the Chinese border.. Probably the most reliable provincial station, 6597 has been fairly stable, but 5690 wanders; on 5584 in the fall. Heard by bmm in early April on 6600 at 1305-1314.

Lai Chau BS, wandering between 6224 and 6400. Logged in Asia in February on 6363. Evening schedule is 1130-1345 in Mun, Thai and Vietnamese.

Son La BS, currently heard on 6294v and 4663v at 1200-1400 with reliable signal.

Ha Tuyen BS on 4815v, 1200-1400 in Vietnamese, also around 2330. Ha Tuyen has been steady between 4810-4820 since its first appearance in 1977. Located in Ha Giang.

Unid Vietnamese on 4790v from 1130-1215, heard fairly rarely. Poor modulation. Is it Gia Lai-Kon Tum BS from Pleiku? (Bruce MacGibbon on RJDXC 4/21 via Mike Fern)

CREDITS: *AC* - Arthur Cushen; *DXPL* - DX Party Line on HCJB; *JM* - Jonathan Marks; *QLB* - Quito Log Book by Rich McVicar & Ken MacHarg on DXPL (HCJB); *RJDXC* - R.Japan DX Corner; *RNMN* - Radio Nederland Media Network; *SCDX* - Sweden Calling DXers. *WBI* - World Broadcasting Information (copyright BBC Monitoring Service - may not be reproduced absent permission of BBCMS)

Material for LN may be submitted either on paper or as an MS-DOS text file on any size MS-DOS diskette; or by EMail on CompuServe (ID 76702,771). EMail can also reach me on CompuServe through the gateways from Internet and MCI Mail. Prodigy mail address is JDBM33A. GENIE mail address is D.FERGUSON14. I check CompuServe daily, the SWL Echo & Prodigy almost daily, & GENIE less often. ... Any opinions I may express here are mine, not those of VOA, where I work. (df)

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Trans World Radio new QSL card via Roswell

ADMIRALTY ISLANDS: Radio Manus 3315 p/d ltr. in 1 mo. for \$1.00. v/s Raphael Karahure, Station Manager. (Loudell-DE). f/d cd. in 60 ds. for ms. v/s Eliun Sereman. (Hazzard)

ALASKA: KNLS 7365 f/d cd. in 3 wks. w/ pennant. (Boulden). f/d cd. w/ schedule in 50 ds. for 1 IRC. Pennant was rcvd. (Dieterich-GER). 9815 f/d cd. w/ personal note w/ pennant and schedule in 1 mo. (Martin-MI). 11700 f/d "Map" cd. in 6 wks. w/ schedule and pennant. (Field-MI).

ALBANIA: Radio Tirana 9760 f/d cd. in 60 ds. w/ schedule and stamps. (Mayberry-TX). 9480 f/d cd. w/ sticker and schedule in 70 ds. Eleven (11) rpts. went unanswered prior to 1980: Very pleased w/ this one. (Prisco).

- ALGERIA: Radio TV Algerienne** 7145 p/d cd. w/ schedule in 4 mo. for a FR rpt., tape and ms. (Klinck-NY). 9535 f/d cd. in 4 mo. for a FR rpt., tape and ms. (Klinck-NY).
- ARGENTINA: RAE** 11710 f/d cd. in 3 mo. after a f/up rpt. in SP w/ 2 IRCs. v/s Silvana Licuardi. (Wallace-CT). Rcvd. 3 different designed QSLs w/ schedule and paper pennant in 5 wks. v/s Gabriel Ivan Barrera. Addr: Casilla 2868, 1000 Buenos Aires. (Berg-MA).
- ARMENIA: Radio Moscow** 17780 f/d "Ministers Building" cd. in 106 ds. (Butcher-MA).....via Yerevan. f/d cd. in 81 ds. (Turnick-PA).
- ASIATIC RUSSIA: Radio Moscow** 15460 via **Krasnoyarsk** p/d cd. w/ ltr. in 104 ds. (Butcher). 11730 via **Chita** f/d "Arbat Square" cd. in 54 ds. (Lare-MI). 17890 f/d cd. in 45 ds. (Lare). 17590 via **Kenya** f/d cd. in 45 ds. (Lare). 17825 and 21790 via **Irkutsk** f/d cd. in 45 ds. (Lare). 9705 via **Vladivostok** f/d "Moskva River" cd. in 45 ds. (Kurrasch-NY). 21690 f/d cd. in 45 ds. (Lare). f/d "Friendship Fountain" cd. in 48 ds. (Kurrasch-NY). 17655 via **Blagoveschensk** f/d cd. in 45 ds. (Lare). 21480 and 17605 via **Petropavlovsk-Kamchatsky** f/d cd. in 45 ds. (Lare-MI). 7270 f/d cd. in 2 mo. (Boulden-CA). 7270 and 7345 f/d cd. in 6 wks. (Boulden). 7345 f/d cd. in 49 ds. (Kurrasch). 7260 and 7270 f/d cd. in 66 ds. (Carson). 7150 via **Aravir** f/d cd. in 5 wks. (Boulden). 7175 via **Khabarovsk** f/d cd. in 1 mo. (Boulden). 9795 and 15180 via **Komsomolsk-on-Amur** f/d "Lenin Library" cd. w/ schedule in 53 ds. (Kurrasch-NY).
- AUSTRALIA: VLSA** 2310 via **Alice Springs** f/d ltr. w/ schedule in 25 ds. direct from site. v/s Rae Allen, Regional Programme Manager. (Stephens-AL). f/d cd. in 29 ds. for 2 IRCs (Hazzard-PA). f/d "ABC Map" cd. in 2 mo. for \$1.00. (Loudell). **VLSB** 2325 f/d cd. in 29 ds. for 2 IRCs. (Hazzard). **VLSM** 4920 via **Brisbane** f/d cd. in 4 mo. for \$1.00. (Loudell-DE). **Radio Australia** 21775 via **Darwin** f/d ltr. w/ stickers in 6 wks. for 2 IRCs. (Klinck-NY). 13605 p/d form ltr. w/ postcards and schedule in 65 ds. (MachHarg). 9580 cd. w/ schedule in 21 ds. (Livingston-CA). 11930 via **Brandon** f/d "Wilderness Society" cd. in 1 mo. (Millard-TX). f/d ltr. w/ schedule in 29 ds. (Bishop-FL).
- AUSTRIA: Radio Austria International** 9875 f/d ltr. w/ sticker and schedule in 46 ds. for 2 IRCs. (Martin-MI). same in 54 ds. w/ sticker. (Mayberry-TX). 6015 f/d ltr. w/ schedule in 20 ds. (Livingston-CA).
- BELGIUM: BRT** 9925 f/d "Madonna and Child" cd. in 64 ds. (Kurrasch-NY). f/d "Veurne" cd. w/ schedule in 54 ds. for 1 IRC. (Batson-WV). 21810 f/d cd. w/ schedule in 53 ds. for 1 IRC. (Martin-MI). 21815 f/d cd. in 109 ds. (Levinson-PA).
- BENIN: ORTB** 4870 f/d cd. in 5 mo. for a FR rpt. and ms. (Lare-MI). f/d prepared cd. in 5 wks. for a FR rpt. and ms. v/s Leonce Goohouede. (Krepp). p/d cd. in 30 ds. for a FR rpt. and 1 IRC. This after 3 f/up rpts. (Hazzard-PA).



VERIFICATION SIGNERS: Radio Illimani 4945 Mrs. Gladys de Zamora, Calle Ayacucho 467, 2 Piso, La Paz....Please enclose \$1.00 and postcards of your town and send via certified mail. Radio Nacional Brasil 15265 Gaby Hertha Einstoss. Radio Difusora Aquidauana 4795 Mr. Walter Georg Keppler. La Voz de Los Centauros 5955 Cielo de Corredor, Administradora. Radio Federacion Suar 4960 Professor Albino M. Utitaj P., Director. AMR Africa 9625 M.J. Thiombiano. European Christian Radio 6210 John Adams, Director. Radio BSA 17745 Lucienne Libotte. Radio Libertad Sport 6045 Andrea Cruz. Radio Maracaibo 4860 Maximo Flores, Director-Gerente.....via **PLAY/DX**.....Sam.



BOLIVIA: Radio Santa Cruz 6135 f/d prepared cd. w/ ltr. in 26 ds. for a SP rpt. and ms. v/s Victor Blajot S.I., Director General. Pennant was rcvd.(Turnick-PA). Radio San Gabriel 6079 n/d personal ltr. in 28 ds. for a SP rpt. and \$1.00. v/s Hno. Jose Canut Saurat, fsc., Director Gerente. Also rcvd. a 31 page station brochure, schedule and a very large 1991 calendar.(Allen-OK). **BOINAIRE:** Radio Nederland 9590 f/d cd. in 36 ds. for ms. v/s Eric Van Slee, Chief Engineer. Thx to Ed Kusalik for the addr. (Stephens-AL). f/d "Satellite" cd. in 35 ds.(Kurrasch-NY). 15560 f/d "Faces Behind the Voices" cd. in 1 mo.(Grenier-NV). Trans World Radio 11930 f/d "Bonaire's Bestuucollege" cd. in 45 ds. w/ schedule for 2 IRCs.(MacHarg). f/d cd. w/ ltr. in 24 ds. w/ schedule, calendar and postcards (Mayberry). 11815 f/d cd. in 1 mo. w/ personal note.(Datz-IL). 9535 and 11930 f/d "RTM" cd. in SP in 28 ds. v/s Chuck Roswell. (Carson).

BOTSWANA: Radio Botswana 4830 f/d "Herdsboy" cd. in 6½ mo. for ms. This after a f/up rpt. v/s Ted Makgekgenene, Chief Engineer.(Kohlbrener-PA).

BOGANVILLE: Radio North Solomons 3325 f/d "Topless Native" cd. in 4 mo. after many f/up rpt. for this 86 reception.(Hosmer-MI). prepared cd. collected personally for engineering tests preparatory to resumption of this service from Rabaul.(Darling).

BRASIL: Super Radio Alvorada - Radio Progresso do Acre ZYF204 2460 p/d lengthy personal ltr. w/ decals and a T-Shirt in 5 wks. for a PT rpt. and \$1.00. v/s Jose Alves Pereira Neto, Director-Presidente.(Loudell). Radio Marajoara ZYG361 4955 p/d ltr. in 17 ds. for a PT rpt. and \$1.00. (Loudell-DE).



BULGARIA: Radio Sofia 7115 f/d "Logo" cd. in 101 ds.(Levison-PA).

BURKINA FASO: Radio Burkina 4815 p/d ltr. in 3 mo. for a taped rpt. This was after a f/up rpt.(Wallace-CT).

BYELORUSSIA: Radio Minsk 7400 f/d cd. in 59 ds.(Washburn-ME). Radio Moscow 15480 via Orsha f/d "Friendship Fountain" cd. in 110 ds.(Butcher-MA).

CAMEROON: CRTV Bertoua 4750 f/d ltr. in 10 wks. for ms. and \$1.00 donation to CATHCA.

* (Klinck-NY). CRTV Bua 3970 f/d ltr. in 10 wks. for ms. and \$1.00.(Name?). CRTV Yaounde 4850 f/d prepared cd. in 2 mo. for \$2.00 donation. New Addr: Mr. James Achanyi Fontem, CRTV Feedback, P.O. Box 986, Douala.(Krepp).

CANADA: Radio Canada International 11705 f/d cd. in 46 ds.(Carson). 15260 f/d "1976 Olymriad" cd. in 22 ds. for last "SWL Digest" program.(Lare). 5960 f/d "RCI SWL Digest - Hamvention" cd. #43 in 21 ds. v/s Sheldon Harvey.(Weber-OH). No QSL but rcvd. ltr. explaining cutbacks w/ sticker and pennant.(Mayberry) CHU 14670 n/d cd. in 54 ds. for a taped rpt.(Batson). 3330 f/d cd.

in 1 mo.(Boulden-CA). 7335 f/d cd. in 66 ds.(Mayberry-TX). CKZI 6160 f/d "CBC Centre" cd. in 8 ds.(Grenier). Radio Korea 11715 via Sackville f/d cd. w/ schedule in 44 ds.(Nagengast-MN). Radio Japan 5960 via Sackville f/d "Mt. Fuji" cd. in 25 ds.(Livingston-CA). Leningrad Hamvention via RCI 5960 and 9755 f/d "Map" cd. in 5 ds. v/s Sheldon Harvey. Delivered at SWL WinterFest. (D'Angelo-PA).



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NOTES: Bill Kurrasch who serves on the local Fire Dept. has been very busy lately. First there was a massive ice storm followed by wind storms and heavy rains that flooded out area basements. Outside of these things, life has been quiet! When do you find the time to spin the dials?...Sam. Ben Krepp whom I met at the SWL WinterFest, is looking for a Barlow-Wadley XCR-30 receiver. If anyone has a working model please contact Ben at 106 Harnden Ave., Watertown, MA 02172. John Stephens of 122 Brawley Dr., Owens Cross Roads, AL 35763 is looking for a La Voz de Nicaragua pennant which pictures the Sandinista Flags. Please contact John if you know of one that may be available. Mike Hardester sent in some very interesting QSLs from Okinawa. Although it is not SWBC, I may feature the illustration of the Radio Moscow longwave stations. Verie interesting....Sam.

CANADA: Leningrad Hamvention 5960 f/d cd. in 22 ds. v/s S. Hanuy.(Wagner-NJ). f/d "Inter-Radio Leningrad Amateur Radio Centre" cd. for RCI's 3/17 program promoting the event. (Berg-MA).

CANADA (Pirate): CSIC f/d "Rubber Chicken" QSL w/ a personal ltr. and fact sheet in 3 mo. * for a relay of pirate MLIS. v/s Rambo. This QSL was actually a rubber chicken w/ the QSL data written on it in blue marker!!! (Stephens-AL)....Unbelievable!

CELEBES: RRI Ujung Pandang 4719.3 f/d "Logo" cd. in 6 wks. for \$1.00. v/s Drs. H. Harmyn Husein. This was for an IN/EG rpt.(Loudell-DE).

QSL

Verification Card

Station Radio Oman

For Benjamin Krepp

Thank you for your reception report. We are pleased to verify your reception of our transmission on 23 Sept. 1990 from 2000 UTC hours 2100 on 11890 kHz. with a power of 120.000 watts. (100W)



Official Seal

CHINA, PEOPLES REPUBLIC OF: Radio Bei-

jing 9770 f/d cd. w/ paper cuts in 20 ds.(Levison). 11715 same in 34 ds.

(Levison). 11840 f/d cd. w/ schedule and pin in 30 ds.(Livingston-CA). CPBS

7770 f/d "Great Wall" cd. in 1 mo. for \$1.00.(Loudell). Guanqi PBS 4915 via

* Nanning f/d "Kweilin Flower Bridge" cd. w/ personal ltr. in 1 mo. for \$1.00.

v/s Li Hai Li, Redactor. Addr: 12 Min Zu Street, Nanning.(Loudell-DE). Voice

of Jinling 4875 cd. in 308 ds. for ms. Addr: P.O. Box 268, Nanjing.(Hardest-

ter). Yunnan PBS 4760 p/d "Dragon Gate and Western Hills" cd. in 2 mo.(Lare).

CLAUDESTINE: La Voz del Sahara Libre

* 15215 Rcvd. three envelopes full of stuff from Mohamed Lamin Abdesalem and a long ltr. w/ a Fr QSL cd., postcards, booklets, maps, stickers, etc. Addr: B.P. 10, El Mouradia, Algeria.(Berg-MA). Radio Venceremos 6619 f/d prepared cd. in 1 wk. for ms. v/s Luis Peralta, Representative in the US.(Lare-MI).

COLOMBIA: Radio Melodia 6045 n/d cd. in 6 wks. on my 18th try! for a SP rpt. Also rcvd. 25th anniversary pennant. (Field-MI). Radio Nacional de Colombia 11795 n/d cd. in 2

mo. on my 6th try for a SP rpt.(Field-MI). La Voz del Guaviare 6035 f/d cd. w/ ltr. in 6 wks. on my 15th try for a SP rpt. v/s Harley Ramirez Sanchez, Locutor. Also rcvd.

* sticker, postcards, stamps and a personal ltr.(Field-MI). La Voz del Rio Arauca 4895

* p/d cd. w/ sticker in 3 1/2 mo. for a SP rpt. and \$1.00.(Loudell-DE). Radio Nueva Vida 5569 f/d prepared cd. w/ religious info. in 5 1/2 mo. for a SP rpt. v/s Marco Antonio Caicedo O., Director. 200 watts! Addr: P.O. Box 402, Cucuta.(Berg-MA).

COMPANIA RADIOFONICA LIMA, S.A.



Señor Benjamin Krepp

Estados Unidos de América

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DIRECTOR GENERAL

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and schedule.(Mac-

Harg). f/d cd. in 1

mo. w/ personal ltr.

and sticker for an

EG rpt. and \$1.00.

(Millard-TX).

VERIFICATION SIGNERS: KNLS 7365 Beverly Jones, Secretary. **ORFB** 4870 Damien Zinsou Ala Hassa. **Caracol** 6150 Luis Eduardo Bejarano, Jefe de Produccion. **Radio Cook Islands** 11760 Mr. Orango Tango, Assistant Chief Engineer. **Adventist World Radio** 7230 Lina Lega. **Tibet PBS** 4035 Lob Sang Chong Phel, Speaker Announcer. **Radio Santa Fe** 4965 Maria Luisa Bernal Mahe, Gerente. **Radio Nacional de Colombia** 17865 Juan Carlos Jaramillo Velosa, Director. **Radio Popular Independiente** 4800 S.ra Manena de Villavicencio. **Union Radio** 5980 Addr: Apartado 35/C, Guatemala City. **Radio Buenas Nuevas** 4800 Israel Rodas, Gerente. **Radio Frunze** 9735 E.M. Abdukarimov....via **PLAY/DX**....Sam.



**INSTITUTO CUBANO
DE LA RADIO Y TELEVISION
1989**

CUBA: Radio Moscow 11710 via **Habana** f/d cd. in 66 ds. for 2 IRCs.(Carson). 11840 f/d "Kremlin" cd. in 101 ds. (Hosmer-MI). 9720 and 11850 f/d cds. in 45 ds.(Lare-MI).

CYPRUS: BFBS 17695 p/d cd. w/ site in 1 mo. Maybe my being in the target area gave my report more meaning:(Bishop-FL).

CZECHOSLOVAKIA: Radio Prague International 5930 f/d "Hluboka Chateau" cd. in 42 ds.(Kurrasch-NY). f/d "Kozel Chateau" cd. w/ schedule in 1 mo.(Livingston). 7345 f/d "Kromeriz Chateau" cd. in 49 ds.(Kurrasch). in 22 ds. w/ schedule (Levison-PA). in 52 ds. w/ schedule.(Levison). 9605 via **Velke Kostotany** f/d cd. in 1 mo.(Field-MI). 7345, 11990 and 5930 f/d cd. in 46 ds. for 2 IRCs.(Carson). **OLBS** 3170 f/d "Observatory" cd. in 10 mo. for 1 IRC.(Taylor-PA).

DOMINICAN REP: Radio Barahona 4930 n/d ltr. in 2 mo. for a SP rpt. v/s Roberto Lama S., * Engineer.(Field-MI). in 5 mo. after a f/up rpt. in SP. Also rcvd. my prepared cd. Call on SW is **HISV**. Addr: **Gustavo Mejia Ricart No. 293, Apto. 2-B, Ens. Quisqueya, Santo Domingo, D.R. (Berg-MA)**.

DUBAI: UAE Radio and TV 21605 f/d "Great Circle Map" cd. w/ paper pennant and schedule in 1 mo.(Loudell). 13675 f/d cd. in 54 ds. w/ schedule and pennant.(Mayberry). 15435 same in 34 ds.(Nagengast). 21605 and 21675 cd. w/ pennant in 7 wks. for 1 IRC. v/s K.F. Kenner.(Datz-IL).

Ecuador: HCJB 15155 f/d cd. in 4 ds.(MacHarg). 9745 f/d "Studio" cd. w/ schedule in 1 * mo.(Livingston). **Radio Interoceania** 4840 n/d ltr. in 85 ds. for a SP rpt.(MacHarg). **Paisaras Gran Colombia** 4910 f/d personal ltr. in 30 ds. for a SP rpt. and ms. v/s Matilde Castro Vda. de Cevallos.(D'Angelo-PA). **Radio Catolica Nacional** 5030 n/d SP form ltr. w/ station fact sheet in 50 ds. for a SP rpt. Sticker was rcvd.(Bishop-FL).

* **Radio Centro** 3290 personal ltr. w/ sticker in 30 ds. for a SP rpt. and US stamps.(Bishop-FL). **La Voz del Napo** 3280 f/d cd. w/ sticker and pennant in 1 mo. v/s Ramiro Cubrero, Director. (Bishop). **Radio Rio Amazonas** 4870 p/d personal ltr. w/ station medallion in 50 ds. for a SP rpt. and US stamps. v/s Miriam Marino, Secretary.(Bishop).

ENGLAND: BFBS 17695 n/d cd. in 56 ds. for 2 IRCs. (Carson)....See Cyprus. same in 5 wks. for 2 IRCs.(Loudell-DE).

EUROPEAN RUSSIA: Radio Moscow 7150 via **Arnavir** f/d "Kosmos Hotel" cd. in 110 ds.(Butcher). 9530 f/d cd. in 45 ds.(Lare). 17810 via **Moscow** same cd. w/ sticker in 84 ds.(Levison). 11655 f/d cd. w/ schedule in 101 ds.(Hosmer). 6030 f/d cd. in 5 mo. (Hosmer). 15465 f/d "Lenin Tomb" cd. in 110 ds.(Butcher-MA). 7420 f/d cd. in 150 ds.(Stephens-AL). 9765 via **Ryazan** f/d cd. in 45 ds.(Lare) 12055 via **Serpukhov** f/d cd. in 45 ds.(Lare-MI). 17570 via **Leningrad** f/d cd. in 45 ds.(Lare-MI).

Plateau Broadcasting Corporation

BROADCASTING HOUSE,
P. M. B. 204,
JOB.
Date: 20th Sept. 1989
105/124/307/3

Dear Sir/Msme,
I am happy to confirm that it was PBC Joe you received on 5,705 MHz on 05-06-89 22.00 N.T. on 22.1.1989
The programme then on the air was "JITE in Africa" as you rightly indicated.
The transmitter, which is 100W, first came on the air as an effort to improve the broadcasting services of the Plateau Broadcasting Corporation.
It might interest you to know that Joe, where the transmitter is located, is the Capital city of Plateau State of Nigeria. The city is sited on a Plateau.....metres above sea level. The area is blessed with cool climate, beautiful scenery and abundance of mineral resources.
I wish you satisfactory reception thanks and goodbye.



РАДИО МОСКВА

Dear L.R.Barto,

This verifies your report on the reception of Radio Moscow's broadcast in Russian
Date July 30, 1990
Time 01.00-01.25 UTC

Frequency 21525 kHz via Vladivostok; 21505 kHz; Chita; 17700 kHz via Yerevan; 17680 kHz via Tula; 17695 kHz via. Best wishes from Radio Moscow Nikolayevsk-on-Asar; 15570 kHz via Lvov
MOSCOW. The Moskva river near the Kremlin.

Moscow. Погода на Москве-реке

- * from Scotland. Addr: RSI, 23 South Beechwood, Edinburgh 12, Scotland. **Livewire Radio** 6308 f/d hot pink cd. in 23 ds. for \$1.00. v/s Bill Lewis. 25 watts! (Bishop-FL). PS....**RMI** and **RSI** were also via Bishop! **Radio Orang Utan** 6206 two f/d cds. w/ sticker and a personal ltr. in 43 ds. for \$1.00. Addr: P.O. Box 114, s'Heerenberg, Holland. (Bishop). **Jolly Roger Radio** 6230 f/d "Photo" cd. w/ a personal ltr. from Joe
- * Vincent in 29 ds. for \$1.00. Addr: P.O. Box 39, Waterford, Ireland. **Radio Mi Amigo** 6267 and 7275 f/d cd. w/ ltr. for a rpt. on their test broadcast in 38 ds. for \$1.00.



РАДИО МОСКВА

- GEORGIAN SSR: Radio Moscow** 17790 via **Tbilisi** f/d cd. in 106 ds. (Butcher-MA). 11755 f/d cd. w/ schedule in 45 ds. (Lare-MI)...Before long we may be losing the SSR...Sam.
- GERMANY (East and West): Deutsche Welle** 11785 f/d cd. w/ pennant and sticker in 56 ds. (Macharg). 6040 f/d cd. in 51 ds. w/ pennant and sticker. (Mayberry). 13610 via **Leipzig** f/d cd. in 42 ds. w/ magazine. (Wagner-NJ). 6145 via **Julich** f/d "Map" cd. in 4 mo. (Loudell). 6145 f/d cd. in 25 ds. (D'Angelo). 6085 via **Wertachtal** f/d cd. in 25 ds. (D'Angelo). 13770 and 15440 via **Koings Musterhausen** f/d cd. in 25 ds. v/s Peter Senger. (D'Angelo-PA). **Sender Freies Berlin** 6190 via **Bremen** f/d "Logo" cd. in 2 wks. for \$1.00 (returned). (Loudell).
- Radio Bremen** 6190 f/d cd. w/ sticker in 58 ds. for \$1.00. (Kurrasch). **Suddeutscher Rundfunk** 6030 f/d "Funkhaus" cd. w/ sticker and brochure in 50 ds. for a taped rpt. and \$1.00 (Kurrasch). **Radio Canada International** 9555 cd. in 53 ds. (Kurrasch-NY).
- GUATEMALA: Radio Buenas Nuevas** **TGM** 4799.8 p/d "Quetzal" cd. in 2 mo. for a SP rpt. and \$1.00. (Loudell). p/d cd. in 3 mo. for a SP rpt. and ms. (Krepp). **Radio K'ekchi TGVC** 4845 f/d prepared cd. in 3 mo. for a SP rpt. and ms. Also rcvd. personal ltr. from Gilberto Sun Xicol along w/ a paper pennant. (Krepp). **Union Radio** 5980 f/d cd. w/ ltr. in 1 mo. for a SP rpt. and ms. Also rcvd. stamps and tourist info. v/s Nora Lissette Vasquez R. (Krepp).
- HAWAII: Radio 4VH** 4930 f/d cd. w/ ltr. in 17 mo. for a taped rpt. and ms. v/s Mardy Picazo, Engineer. (Field-PA).
- HAWAII: WWH** 10000 p/d cd. in 14 ds. (Nagengast).
- HONG KONG: BBC East Asia Relay** 7180 p/d cd. in 3 wks. for \$1.00. (Loudell-DE).

EURO PIRATES: Radio Tower 15050 f/d cd.

- * in 31 ds. w/ 1 IRC. Rcvd. station info sheet and survey. (Zeller-OH). f/d blue "Logo" cd. in 3 wks. 125 watts. Also rcvd. postcard and a long ltr. from Peter de Jong. Addr: P.O. Box 81, NL-3450-AB Vleuten.
- * Holland. (Berg-MA). **Radio Waves International** 11400 f/d ltr. w/ station info sheet in 39 ds. for \$1.00. 50 watts. Addr: B.P. 130, 92504 Rueil Cedex, France. **Radio Stella International** 6313 and 11393 two f/d cds. w/ personal ltr. v/s Jock Wilson. Transmitter is in Ireland but programs originate

This is just one of many Euro Pirates to use 6275 this year. Even the DXers in Europe must get an ID to be sure. (Bishop-FL).

FRANCE: RFI 17620 f/d cd. w/ schedule in 22 ds. (Mayberry-TX).

GABON: Africa No. One 4830 f/d ltr. w/ postcard in 26 mo. (Terrence).

James Athanyi-Pontes,
CITY FIELD BACK,
P.O. Box 930 Douala,
Republic of Cameroon,
26 DEC 1990

Dear Mr. Klink,
Thank you very much for your reception report of CRTV Gabon, heard on the frequency below this in the 50,90 uh short wave on 29 November 1990 between 22h4 and 22h45 UTC.

The cassette recording sent to us by you strongly confirms that the station you heard was CRTV Gabon and we hope that you will continue to try to catch other short wave stations in our country.

This is the second time we are writing to you and hope that you have noted the change of address. Inform all DXers of the North American Short Wave Association that they should henceforth send their reports to the above address, CRTV FIELD BACK, Box 90 Douala, Cameroon.

We now have a programme on short wave for DXers and in the broadcast we read letters from listeners and answer their questions about Cameroon and radio action. The programme is known as CRTV FIELD BACK.

It is also a programme in which short wave listeners exchange addresses for the radio pen pal club. Listeners give information about their age, professions, hobbies and brief stories about the town, region or country they live in.

This is another way of promoting world friendship through short wave. Let us use this opportunity to thank you for your contribution to save the handicapped children of Cameroon through CATHICA, and we promise to make very good use of your donation.

With the hope that we shall be reading from you again in the near future, please accept our sincere greetings of a happy new year 1991.

Your radio friends,
on behalf of CRTV





HUNGARY: Radio Budapest 9835 f/d "Costume" cd. in 45 ds. (Levison-PA).

ISRAEL: Kol Israel f/d cd. in 75 ds. w/ * sticker, pennant and schedule. (MacHarg).

ITALY: RAI 9575 f/d "Carlo Carra Painting" cd. in 158 ds. (Fanderys-OH). f/d cd. in 8 mo. for 1 IRC. (Kurrasch). IRRS 9860 f/d form ltr. w/ station brochure in 65 ds. for 1 IRC. (Bishop). Voice of Europe 7537 n/d cd. in 83 ds. for ms. (Bishop). European Christian Radio 6210 f/d cd. via the Austrian address in 44 ds. (Bishop-FL).

NOTES: Steve Batson reports that during Operation Desert Storm he received a beautiful "Defenders of Freedom" postcard from Major James Clifford who was listed in the Jan. 91 issue of The Journal. Jerry Kinck has recently set up an HQ-180 in his shack. He says that he finally got a real receiver. New member Greg Martin did some DXing about 20 years ago when he was in high school. He just got back into it and enjoys it even more. Mike Hardester is presently waiting for QSLs from stations he logged while on Okinawa. He is very pleased with the Kampuchea QSL. Bob Carberry is yet another new member and made his first contribution to the Journal. Keep the reports coming in. Ron Howard says that he enjoys the QSL Column and the new format of the bulletin very much. Thanks Ron...Sam.

JAPAN: Radio Japan 11840 n/d "Fuji" cd. in 28 ds. (Washburn-ME). 15325 n/d cd. in 5 wks. w/ schedule. (Datz).

KAMPUCHEA: Voice of the People of Kampuchea 11938 ltr. w/ schedule and stamps in 204 ds. Pennant was rcvd. (Darling-PNG).

KIRGHIZ: Radio Moscow 17775 via Frunze f/d cd. in 66 ds. for 2 IRCs. (Carson). 12045 f/d cd. in 45 ds. (Lare-MI). 11820 f/d "Arbat Square" cd. in 54 ds. (Lare).

KOREA, REPUBLIC OF: Radio Korea 15575 f/d cd. w/ schedule in 34 ds. (Carberry-CA). HLA 5000 f/d cd. in 50 ds. for \$1.00. My 18th Time Signal Station QSLed! (Lare-MI).

LATVIA: Radio Riga International 5935 f/d "Schwarzhaupthaus" cd. in 90 ds. (Washburn-ME) f/d "Bunnies in the Snow" cd. w/ pennant in 5 mo. (Hosmer). Radio Moscow 12020 via Riga f/d "Kremlin" cd. in 84 ds. (Butcher-MA)...Not sure if legit site as per your request but w/o any better and more detailed info. to go on, I would certainly accept it...Sam.

LEBANON: King of Hope 6280 f/d cd. in 1 mo. from the CA address, also in 1½ mo. from the address in Israel. all for \$1.00. (Loudell-DE).

LESOTHO: IRRS 4800 f/d "Flag" cd. in 1½ mo. New flag on card! (Loudell-DE).

LITHUANIA: Radio Vilnius 9710 ltr. and cd.

* was rcvd. from Sigitas Zilonis, DX Editor for a taped rpt. Card has f/d but ltr. says "The QSL card...is one of the few which survived after the military occupation of radio HQ in Vilnius. I use them to verify only most valuable reception reports now." Transmitter site was given as Sitkumai, just north of Kaunas. (Berg-MA).

LUXEMBOURG: Radio Luxembourg 15350 f/d cd. w/ stickers in 26 ds. for 3 IRCs. (Name?) f/d cd. in 17 ds. w/ 6 different stickers. (Mayberry-TX).

MALACASY REPUBLIC: Radio Nederland 15570 cd. in 56 ds. (Fanderys-OH).

MALI: Radio TV Mali 4783 p/d cd. in 60 ds. after 3 f/up rpts. in FR w/ IRCs. (Hazzard).

MALTA: Deutsche Welle 9605 f/d cd. w/ pennant and sticker in 2½ mo. (Millard-TX).


MANCHURIA: Heilongjiang PBS 4840 via Harbin City n/d "Studio" cd. w/ gold lettering in 1½ mo. for \$1.00. Addr: No. 115 Zhongshan Road, Harbin City, Heilongjiang, China. (Loudell-DE).

MEXICO: Radio Educacion 6185 f/d ltr. in 6 mo. for a SP rpt. and ms. Station photo was rcvd. 1 kw. (Krepp-MA).

RADIO 48	RADIO 48
QUALITY ROCK	Q.S.L.
FOR EUROPE	
THE FINAL BROADCAST	
16TH DECEMBER 1990	
This is to certify that <u>ROLAND DIETERICH</u>	
Heard the final broadcast from Radio 48 on the 16th December 1990	
Frequency <u>6220 kHz SW</u>	
Time <u>1610 - 1630 UTC</u>	Power <u>70w</u>

Via Mike Hardester

WINNER OF THE NUMBER
V. O. K.



QSL CARD

(Note: The left side of the card contains faint, illegible text, likely bleed-through from the reverse side.)

MEXICO: Radio UNAM 9600 f/d cd. w/ personal ltr. and tourist info. in 69 ds. for a SP rpt. and used stamps. This was on my 7th try back to 1978: (Bishop-FL).

MONACO: Radio Monte Carlo 11685 ltr. in 6 wks. for a FR pgm. which was directed towards the Gulf. Sked. and stickers were rcvd. (Berg-MA).

Trans World Radio 12020 f/d cd. in 1 mo. for \$1.00. (Loudell-DE).

NEW BRITAIN: Radio East New Britain 3385 f/d cd. in 6 mo. via Port Moresby addr. v/s Esekia Mael, Station Manager. (Hazzard). f/d "Logo" cd. in 17 mo. direct from station for ms. v/s Raka D. Saini, Station Manager. (Hosmer-MI).

DX Service: William Plum has for many successful years supplied the DX hobbyist with many useful services. Bill produces single-language QSL cards in several different languages. He also produces plain and pre-printed envelopes along with a complete supply of foreign mint stamps that can be enclosed with your reception reports. For a complete brochure of Bill's services, please address your letters to Bill Plum, 12 Glenn Road, Flemington, NJ 08822.....Sam.

NEW BRITAIN: Radio West New Britain 3235 f/d "Native Costume" cd. or lack thereof in 4 mo. for a rpt. of a test transmission. (Hosmer-MI).

NEW IRELAND: Radio New Ireland 3905 p/d personal ltr. in 1 mo. for \$1.00. v/s Otto A. Malatana, Station Manager. (Loudell-DE).

NEW ZEALAND: Radio New Zealand International 17770 f/d "Sheep" cd. w/ schedule in 1 mo. v/s Tony King. (Grenier). same in 22 ds. for 3 IRCs. Pennant rcvd. (Wagner-NJ). in 26 ds. w/ Tiki souvenir and paper pennant. (Mayberry). 17680 p/d cd. in 60 ds. for 3 IRCs.

NIGERIA: FRCN Kaduna 4770 f/d form ltr. in 21 ds. after a f/up (Bishop-FL). rpt. v/s Johnson D. Alle. (Kurrasch-NY).

NORTHERN IRELAND: Northern Ireland Relay Service 6272.4 f/d cd. w/ personal ltr. in 47 ds. for \$1.00. v/s Andy Craig, Engineer. (Lare). same w/ info. sheets in 2 mo. for 1 IRC. (Taylor-PA). 6272.7 f/d blue cd. w/ postcards in 1 mo. for a taped rpt. and \$1.00. (Sgrulletta-NY). 6273 f/d cd. w/ personal ltr. in 40 ds. for \$1.00. Tx. to the Committee for arranging this special broadcast. (Field-PA).

OMAN: IRC 15310 f/d sheet in 95 ds. v/s Paddy O'Reilly. (MacHarg). f/d ltr. in 53 ds. for 1 IRC. (Hazzard-PA). **Radio Sultanate of Oman** 11890 f/d prepared cd. in 2 mo. for a taped rpt. and ms. (Krepp).

PAKISTAN: Radio Pakistan 15605 f/d cd. in 2 mo. * w/ a personal ltr. and pennant. (Field-MI).

PAPUA NEW GUINEA: Radio Simbu 3355 n/d personal ltr. in 43 ds. for ms. Thanks to Kris Field for the v/s which is Gabriel Palao, Station Technician. (D'Angelo-PA). **Radio Northern** 3345 n/d ltr. w/ cd. in 32 ds. for ms. v/s Misael Pendaia, Station Manager. (Bishop-FL). **Radio Western** 3305 f/d cd. in 3 mo. for ms. (Lare).

PERU: Radio Cora 4914.5 p/d cd. w/ ltr. and stickers in 4 mo. for a SP rpt. and a tape. v/s Juan Ramirez Lazo. (Krepp). 4915 n/d personal ltr. in 1 mo. for a SP rpt. Stickers rcvd. (Field-MI). same in 6 wks. for a SP rpt. * and \$1.00. (Lobdell-MA). **Radio Satellite** 6725 p/d cd. w/ f/d personal ltr. in 63 ds. for a SP rpt. v/s Sabino Llamo Chavez, Gerente. (MacHarg).

NOTES: Well I guess I dood it again. The rest of your QSLs will be in the next QSL Column. Regrettably, I will have to cut down on the number and size of the illustrations. This will give me the room to get all of your reports into print. Till next time....73s.....Sam.



Canciones para Nuestra Juventud

QUE ESTE AÑO
LE DEPREN MUCHOS
EXITOS Y FELICIDADES
Son los Sinceros deseos

CELIA DEL RIO
LOCUTORA
RADIO TAWANTINSUYO 1981

NASWA Scoreboard

Jerry Lineback
6361 Shore Drive
Douglasville, GA 30135



JERRY A. LINEBACK, EDITOR
6361 Shore Drive
Douglasville, Georgia 30135

June, 1991

Greetings and welcome to SCOREBOARD. This issue has the SPOTLIGHT on Oceania. Remember, C/H = Countries Heard and C/V = Countries Verified. Country counts are by the NASWA Country List. We welcome several newcomers to the SCOREBOARD and thank all who have shared their totals with us this month. The next deadline will be on August 15 for the September issue of the Journal. The SPOTLIGHT will be on South America. Please update your totals once a year to remain listed on the SCOREBOARD and please update all totals each time you submit an update. Thanks for the comments on this column.

Name, State	Total C/H	C/V	Oceania C/H	Best Oceania C/V	Oceania QSL
James Young, CA	238	225	20	20	Cook Is. 3264
John Tuchscherer, WI	237		20		Fiji
Gordon Darling, P/NG	235	229	20	20	R. Cook Is.
Sam Barto, CT	234	229			
Edward Kusalik, Alb.	231	227	21	21	Fiji 3230
Marlin Field, MI	225	222	20	20	R. Kerema
Jerry Berg, MA	224	223	19	19	Fiji
Gerry Bishop, FL	224	210	19	19	R. Cook Is.
William Flynn, CA	224	208	20	20	Honiara 5960
Roland Schulze, Germany	224	206	19	19	Cook Is. 5045
Harold Cones, VA	223	214	19	19	Fiji (VRH)
Terry Palmersheim, WA	221	204	20	19	WSZO Marshall Is.
Nobuaki Takahashi, Japan	221	189	20	18	Fiji
Tom Gavaras, MN	219	216	19	19	Kiribati
Steven Lare, MI	219	184	20	19	R. Cook Is.
Mitch Sams, KS	218	171	20	19	R. Northern PNG
Al Miller, OH	217	209	20	20	Fiji
Bill Harms, FRG	215	151	18	13	R. New Ireland
C. Vernon Hyson, NC	214	203	19	18	R. New Ireland
John Sgrulletta, NY	213	213	15	15	R. Cook Is.
Del Fye, FL	212	197	20	19	R. Cook Is.
Kevin Atkins, AL	211	185	19	19	R. Enga
Rick Krzemien, CA	209	195	20	19	Tonga/Marshall
Ron Howard, CA	209	190	21	20	Tonga
Donald Hosmer, MI	209	172	19	18	R. Cook Is.
Richard Davis, NM	208	197	19	19	Kiribati
Paul Buer, FL	208	197	18	18	R. Cook Is.
Kirk Allen, OK	207	198	19	19	RRI Biak 500W
Sheryl Paszkiewicz, WI	206	196	19	19	Kiribati
Jerry Lineback, GA	205	108	18	8	SIBC Solomon Is.
Frank Orcutt, NY	199	157	18	17	RRI Serui
Robert Ross, Ont.	198	173	20	20	Tonga 5030
Mike Harvester, NC	197	184	20	19	Fiji 3230
Tom Daly, NY	197	45	19	4	R Northern P/NG
John Huniwell, NJ	194	189			
Harold Sellers, Ont.	191	155	19	13	WSZO Marshall Is.
Kent Willis, KY	191	143			
Fred Kohlbrenner, PA	185	154	15	13	R. Cook Is.
Henry Michalenka, RI	184	151	14	12	Fiji 3284
Jerry Klinck, NY	183	152			
Tom Laskowski, IN	176	139	19	17	RRI Fak Fak
Peter Tutak, WA	175	131	17	14	Tonga
Norman Bobb, MN	175		15		
Rev. John Eckert, PA	171	154	14	13	R. Cook Is.

Name, State	Total		Oceania		Best Oceania	QSL
	C/H	C/V	C/H	C/V		
Ichiro Maruo, Japan	171	101	19	16	WSZO	Marshall Is.
Kevin Klein, WI	166	73	15	4	NBC	P/NG
Andy Rugg, Que.	165	150	7	7	ABC	Perth
Charlie Washburn, ME	165	139				
Allan R. Loudell, DE	165	130	13	11	RRI	Serui
Greg Hart, FL	161	107	14	9	RRI	Wamena
Jim Renfrew, NY	160	121	11	8	SIBC	Solomon Is.
Kurt C. Cox, OR	153	117	12	11	R.	New Ireland
Carl Mann, NB	151	127	11	10	ABC	Sydney 6090
Thomas Ross, IL	150	127	16	15	Kiribati	14802
Carl Radtke, WA	147	147	10	10	Cook	Is.
David Edger, VA	147	120				
Bill Taylor, PA	146	109	12	10	Cook	Is.
David Morby, NY	146	37	10	4	NBC	P/NG
Roger Morby, NH	143	1	8			
Daniel Prisco, PA	142	121	10	9	SIBC	Solomon Is.
Donna Robinson, IL	141	104	11	8	SIBC	Solomon Is.
Jim Smallwood, AL	140	112				
Cris Hazzard, PA	137	105				
Robert Landau, NJ	136	118	8	8	VTL4	P/NG
Mark Humenyk, Ont.	133	78				
Dale Park, HI	131	37	15	4	KFBS	first week
Joe Kremer, IN	129	82	9	6	SIBC	Solomon Is.
David Turnick, PA	123	104	7	7	R.	New Ireland
Adrienne Barhydt, OR	117	72				
Joe Zobro, MI	115	87	12	9	Vanuatu	
Randy Doyle, AR	114	64	12	8	SIBC	Solomon Is.
Bill Kurrasch, NY	113	80	7	5	SIBC	Solomon Is.
Richard Wallace, CT	112	56	5	4	SIBC	Solomon Is.
Larry Royston, HI	109	37				
Robert Carlsen, OH	106	87	8	8		
Edward Stroh, IL	100	82				
David Galletly, NY	97	70	6	5	KSDA	Guam
Rev. William Peake, IA	99	50	1			
Brian Boulden, CA	67	41	6	5		
Bruce Orenstein, NY	66	66				

 Thanks again to all who have contributed to SCOREBOARD. Next deadline is August 15 and the SPOTLIGHT will be on South America. 73s to next time.

INTRODUCING INTERNATIONAL RADIO

By Kenneth D. MacHarg

Still available, this basic introduction to international shortwave radio provides an excellent overview for someone new in the hobby. Descriptions of programs, stations, basic terminology. Learn how to use UTC (Coordinated Universal Time), what antennas will help, how to select a radio.

Originally \$4.00 plus shipping

NOW only \$2.00 including shipping (\$2.75 outside of the U.S.)

TO ORDER: Send check or money order in U.S. dollars only to:

Mrs. Beth Brown
 1471 Robertson Road
 Conley, GA 30027

(Make checks payable to Mrs. Beth Brown)

Contributors' Page

Vernon Hyson
9835 Lone Eagle Lane
Charlotte, NC 28215



LOGGINGS CONTRIBUTORS - JUNE 1991 - DEADLINE 10th of MONTH

The following members contributed loggings:

Brian ALEXANDER, PA	**
Kirk ALLEN, OK	NRD515
Peter BARR, IL	R5000
Steve BATSON, WV	DX440
Jerry BERG, MA	HQ180A R390A 150' Longwire**
John CARSON, OK	NRD525 NC183D ATS803A SPR4 AD Sloper 500' Bev**
David CLARK, ONT	NRD515 51J3 3-500' Beverage 60/90m Dipoles**
Kurt COX, OR	DX440 60m Dipole
Patrick CRUMHORN, TX	NRD525 Random Longwire
Richard D'ANGELO, PA	R70 AD Sloper**
David EDGER, VA	R5000 Sony 2010 SW1 Longwire Vertical Dipole
Marlin FIELD, MI	SPR4
William FLYNN, OR	R2000 Sony 2010 TUN3 140' Longwire 85' Dipole**
Karl FORTH, IL	R70 RF2900 HQ160
Peter GRENIER, NV	FRG7 Sangean 789 MFJ1020A**
Michael HARDESTER, NC	R70 Sony 2010 75' Random R.West Loop**
Gerald HART, MN	Sony 2010 Long wire
Hans JOHNSON, MD	R71A MAP AD370
Jerry JOHNSTON, KY	NRD525 Eavesdropper Longwire
Rufus JORDAN, PA	DX302 Zenith Transoceanic**
W KARCHESKI, MA	**
Jerry KLINCK, NY	R5000 100' Longwire 60/90m Dipoles
Harold LEVINSON, PA	R70 D2999
David MORBY, NY	NED525 150' Longwire
John PRATH, FL	NRD525 R71A
Chuck RIPPEL, VA	HQ180A FT1000 DX Sloper Inverted V 130'Dip
Daniel SAMPSON, WI	FRG7700 Sony 2010 R1000
Harlan SEYFER, CHINA	Sony 2010 MFJ1020A 30' Random Wire
Richard WALLACE, CT	DX440 S108 TUN4
Phil WANAT, VT	
Dwight WEIDMAN, NY	R71A 230' Longwire
Dave WEINRICH, ND	ATS803A Antenna Tuner Random Wire
Mike WESTDAL, CA	Sony 2010 AN1
Mike WOLFSON, OH	R5000 Sony 2010 125' Longwire**
Juichi YAMADA, JAPAN	NRD525
Late thanks for these donations to the April issue!	
Karl FORTH, IL	
Arthur HANKINS, PA	R1000
Sheryl PASZKIEWICZ, WI	NRD515 NRD525 AD Eavesdropper Random
Dan UNRUH, WA	R71A Random Wire
Robert ZILMER, NM	NRD525 R7 3-Antennas

(** Contributed for May & June)

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The city for our reporters is missing this month. I have a greater than normal curiosity about not only the receivers we use, but the peripheral equipment used to bag those great loggings. There are many signals where these accessories mean the difference between solid copy or frustration. I can judge my opportunity by knowing exactly what was used. By eliminating the city, we have more room to list such goodies as filters, preamps, antenna farms, etc. I would like your comments good or bad about making the change permanent. Even if you are not a regular contributor, I would like to hear from you as a user of the loggings service. Actually, a hernia for the mailperson wouldn't hurt.

COMPUSERVE ID# 76516,1531

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

Tropical Band Loggings

Sheryl Paszkiewicz
1015 Green Street
Manitowoc, WI 54220



- 1620 USA, WNFF, 5/7, 0315 loop tape, "This is ___ advisory station WNFF 589 in the City of Virginia Beach." Ancd equip. tests. Could be WNFF. Any idea who this is exactly? (Johnson-MD)
- 1620.6 PIRATE, unid, 3/17, 0414 EG pgm of Who mx, no ID or tlk 0414-0451, fair sig. Pse. QSL. (Karcheski-MA)
- 3264.6 SULAWESI, RRI Gorontalo, 3/13, 1050-1115 tlk, IS, TP, nx, IIOB lcl ID by W, IS, lcl nx, SIO=433-333 (Yamada-JAPAN)
- 3300 GUATEMALA, R. Cultural, 4/6, 1111-1116 tlks in SP, mx, ID 1116. (Wolfson-OH)
- 3324.9 BORNEO, RRI Palangkaraya, 3/3, 1125-1153 pop mx, 1133 ID, more mx, SIO=343 (Yamada-JAPAN)
- 3345 MOLUCCAS, RRI Ternate, 3/13, 1140-1210 mx, 1158 lcl ID, IS, I200 Jak nx by M, SIO=333. (Yamada-JAPAN)
- 3366p CUBA, R. Rebelde, 4/14, 0550-0603 tlks, instl, partial ID Incl. "por la revolucion. ." SIO=352. 5025 off. (Hardester)
- 3366 GHANA, GBC-2, 3/17, 2252 EG lcl nx, sports, 2254 ID, vern mx, very good sig. (Karcheski-MA)
- 4000.2 SULAWESI, RRI Kendari, 3/13, 1210-1225 Jak nx, lcl ID, lcl mx, SIO=443. (Yamada-JAPAN) Some nice Indo logs--sp.
- 4600 BOLIVIA, R. Perla del Acre, 5/7, 0250 mx, lots of tlk, ID to 0307*, no sign of Baghdad but weak bubble jammer. (Johnson-MD) Still trying to hear this--sp.
- 4670.1 VIETNAM, Son La BS, 3/30, 1340-1355 long song, then suddenly off. Confirmed station by checking //6295.6 (Yamada-JAPAN)
- 4680 ECUADOR, RN Espejo, 5/7, 0235-0257* dramatic tlk by 2M, martial mx, ID 0242, tlks & instls. (Jordan-PA)
- 4744.8 BOLIVIA, LV del Tropico, 5/8, 0220 mx & ID to 0237* "Esta es La Voz del Tropico, Villa Tunari, Cochabamba, Bolivia." (Johnson-MD)
- 4755 BRAZIL, R. Educacao Rural, 4/27, 0025-0115 rustic vcls, pops IDs, promos, echo effects, long tlk & mx. (Jordan-PA) 4/27, 0040-0117 pops, full ID, FC 0100, SIO=252 (D'Angelo) 4/16, 0041 tlk, ID, ads. (Johnston-KY)
- 4760v VENEZUELA, R. Frontera, 4/10, 0248-0300* rapid tlk, vcls, lively instls, jingles, ads, echo IDs, very poor. (Jordan)
- 4765 CONGO, RTV Congolaise, 4/5, 2245-2359* FR tlk, Afr. pops, ID, closing anmts 2355, speech, NA //5985. (Alexander-PA) 4/12, 2355 FC, ID, mx. (Johnston-KY)
- 4765 CUBA, R. Moscow relay, 5/9, 0158 ID, FC, 0200 SP ID, nx abt. Bush SIO=433 (Carson-OK)
- 4769.9 CLANDESTINE, random numbers, 3/5, 2208-2226 KR, reading of numbers by W, 2211 North Korean mx pgm, fair. (Yamada-JAPAN)
- 4770 NIGERIA, R. Nigeria Kaduna, 4/9, 0457 EG pop mx, ID, ment Kaduna, drum IS, TC, nx. (Johnston-KY) 4/24, 0530 EG nx abt dissolved task force, ment "niara" sev times. (Weinrich-ND) Welcome & report often!--sp. 3/17, 2259 EG world nx, ID, TC, closing comments, NA to 2300*, good. (Karcheski-MA)
- 4775 BRAZIL, Rdf. de Congonhas, 4/6, 2345-0003* anmts, folk mx, ID & TP, good. (Alexander-PA)
- 4786t AZERBAIJAN SSR, R. Baku, 3/17, 2303 Azerbaijani, political tlk, poss. ment Azerbaijan, AR-sounding lang but not listed at this time in WRTH (Karcheski-MA)
- 4787.3 VIETNAM, prob. Gia Lai-Kon Tum BS, 3/19, 1150-1215 vern, tlk, lcl mx, closing mx to s/off, fair. (Yamada-JAPAN)
- 4795 CAMEROON, R. Douala, 4/12, 2252 FR mx, tlk, NA to 2304* (Johnston-KY)
- 4801 GUATEMALA, R. Buenas Nuevas, 4/16, 4/17, 1115-1126, IDs in SP. (Weinrich-ND)
- 4815 BRAZIL, R. Cabocla Tabatinga, 4/27, 0115-0150 mx, sev IDs, anmts, very poor. (Jordan-PA)

- 4820 HONDURAS, LV Evangelica, 4/20, 0300 SP ID, mx, tlks, promo
for upcoming rel pgm. (Crumhorn-TX)
- 4825 BRAZIL, R. Educadora Braganca, 4/30, 0840 mx, tlk, TC, ID
0855, ment. Para. (Johnston-KY)
- 4830 VENEZUELA, R. Tachira, 4/2, 0312 ID, tlks, sounded like a
play. (Weinrich-ND) Yes, they do run plays at this time.
Last year they were running a mystery, "La Hora Misteriosa."
It was funny listening to a scary pgm in Spanish--sp.
- 4835.2 GUATEMALA, R. Tezulutlan, 4/20, 0235 in lang w/list of
dedications & marimba mx, sev. IDs. (Crumhorn-TX) 4/16,
1117-1123 marimba mx, ID. Also hrd on 4/7 at 1100 here &
on 3/70. (Weinrich-ND)
- 4840t VENEZUELA, R. Valera, 4/9, 0312-0322 EZL LA mx, anmts by M
unreadable, weak. (Flynn-OR)
- 4845v GUATEMALA, R. K'ekchi', 4/29, 0030-0150 exotic chants,
percussions, tlks, chorus, IDs, good. (Jordan-PA) 4/20,
0250 w/ballads in SP, tlk in lang. (Crumhorn-TX)
- 4850 CAMEROON, CRTV Yaounde, 3/21, 2327 FR mx, tlk. (Johnston-KY)
- 4865 COLOMBIA, LV del Cinaruco, 4/20, 0250 ID, salsa mx (Crumhorn)
4/4, 0530 SP ID, tlk abt Colombia. (Weinrich-ND)
- 4885 COLOMBIA, Ondas del Meta, 4/23, 0838 IDs & promos, cochannel
QRM. (Johnston-KY)
- 4890 GABON, RFI relay, 4/4, 0525 FR tlks by M&W. (Grenier-NV)
- 4899.8 GUINEA, RTV Guineenne, 4/5-6, 2325-0000* FR tlk, ment
Conakry, Afr. folk mx, NA. Also hrd 0600 anmts. (Alexander)
- 4914.5 PERU, R. Cora, 4/16, 0415-0430 dedications, lcl mx, sev
echo IDs, fair w/very clear audio. (Flynn-OR) 3/13, 0940-
1013 lcl mx, tlks, 1000 ID, mx, fair. (Yamada-JAPAN)
- 4915 GHANA, GBC-1, 4/6, 0515-0530 EG drums, anmt, ID 0529.
(Weinrich-ND)
- 4926.8 SUMATRA, RRI Jambi, 3/3, 1320-1400 pop mx, tlks, 1359 closing
anmts to 1400* (Yamada-JAPAN) Sumatra has always been
difficult here--sp.
- 4930 DOMINICAN REPUBLIC, R. Barahona, 4/6, 0316-0358* romantic
vcls, full IDs, jingles, s/off anmts, NA, fair. (D'Angelo-PA)
- 4951 ANGOLA, RN, 4/20, 2255-2345 tlks, ballads, Stevie Wonder mx,
barely audible at 2400. //4820 off 2300 and //5041.1 off
2303. 4951 listed 24 hours. (Alexander-PA)
- 4970 VENEZUELA, R. Rumbos, 4/3, 0450-0509 mx, tlks, ID 0504
(Weinrich-ND)
- 4988.7 SULAWESI, RRI Gorontalo, 3/3, 1504-1520 Jak nx, lcl ID
1513, romantic mx, SIO=333. (Yamada-JAPAN)
- 5009.4t MADAGASCAR, RTV Malagasy, 4/28, 0308 lang, poss rel pgm,
tlk by W. (Johnston-KY)
- 5015 BRAZIL, R. Pioneira, 4/23, 0755 tlk, rooster crows, TCs,
"Bom dia Brasil," ID 0827, bird chirpa. (Johnston-KY)
- 5020 SOLOMON ISLANDS, SIBC, 4/17, 1150 EG gospel mx, rel pgm,
ID to s/off. (Weinrich-ND)
- 5025 BENIN, ORTB Parakou, 3/7, 2140-2201 FR mx pgm, closing anmts
2158, NA to s/off, poor. (Yamada-JAPAN)
- 5025 BHUTAN, BBS, 4/23, 1345-1430 lcl mx, nx in lang, IS on drums
& instruments, flute mx, good but 1400 fading. EG nx 1415,
only partly readable. (Flynn-OR) Very nice--sp.
- 5025 CUBA, R. Rebelde, 4/3, 0140-0212 mix pgm, at one point sound-
ing like sporting match, ID 0209. (Weinrich-ND)
- 5041.2 ANGOLA, EP de Benguela, 4/6, 0512-0520 PT tlk, chorus mx,
very weak. (Flynn-OR)
- 5046.3 JAVA, RRI Yogyakarta, 3/21, 1215-1245 Jak nx, pop mx, tlk,
lcl ID 1230, nx, 1239 ID. SIO=443. (Yamada-JAPAN)

Just enough room to say thank you. I see things are quiet all over,
not just here in Manitowoc. There's still DX out there if you can
stand the static. This time there were reporters from 10 states and
1 foreign country. Hans, you had some good Bolivian logs. Maybe
during the summer months there'll be room to run a special feature or
two. You'll notice the bandscan section will be a bit shorter in the
future to allow for even more articles of interest and usefulness--sp.



International Band Loggings

Wallace C. Treibel
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- 5965nf CUBA RHC in EG *0400+, IS, ID, skeds, nx, mx, "This Week in Havana", mailbag, USB test xmsn to NA & Carib. (Jordan PA 5/5, Carson OK 4/29)
- 6000 BRAZIL R Guaiba in PT 2330, ID, QTH, nx at 2330, g (Johnston KY 3/17)
- 6010 MEXICO R Mil in SP 0150, nx, cmntry, ID's (Crumhorn TX 5/1) in SP 0459, bugle call IS, "Informa" pgm, s-8 signal on Sony 2010 (Flynn OR 4/2)
- 6029.9 BRAZIL R Globo in PT 2310, jingles, ads, ID's, TC's (Johnston KY 3/21)
- 6030 CANADA CFVP Calgary in EG 1405, //FM outlet, contest, ID, rock (Flynn OR 4/23)
- 6045.5 COLOMBIA R Melodia in SP 0735, LA mx, ID's after rx's, f-g (Alexander PA 4/21)
- 6055 JAPAN R Tanpa in JP 1155, classicals, //3925, 9595 (Weinrich ND)
- 6065 COLOMBIA R Super in SP 1016, ads, PSA's, ID 1024, f (D'Angelo PA 4/8)
- 6070 CANADA CFRX Toronto in EG 0204, traffic rpt, wx, sports, f-g (Carson OK 5/9)
- 6075 COLOMBIA Caracol Bogota in SP 0929, ID, TC, nx, ads, tlk, vocals (D'Angelo 4/21)
- 6150 COLOMBIA Caracol Neiva in SP 0515, ads, nx, ID, g (D'Angelo PA 4/28)
- 6165 NETHERLANDS ANTILLES RN relay in EG 0350, "Media Network", exc (Carson OK 5/10)
- 6890 CHINA R Beijing in CH 1350, score from "Sound of Music", exc (Flynn OR 4/19)
- 7145 ALGERIA RTVA in FR 2100, tlk, lite instrms, AR mx, //15215 (Alexander PA 4/14)
- 7160 MALAYSIA RTM Kuching in EG 1127, Herb Alpert mx, ID (Grenier NV 4/10)
- 7190 PORTUGAL R Free Europe in EG? 0514, mx, nx, cmntry, ID, f (Carson OK 4/20)
- 7195 ROMANIA RRI in FR 2028, IS, nx, ID 2039, tlk, g (Yamada JAPAN 3/15)
- 7205.1 ITALY(?) AMR V of Hope in lang 0555, relig mx, ID's in EG 0600, IS 0630, p (Alexander PA 4/20) ED: WRTH lists xmters in Italy & Portugal. If 7205 is a repl for 7230, then this is most likely coming from Forli, Italy.
- 7215 IVORY COAST RTVI in FR 2320-0002*, tlk, pops & ballads, ID's, NA, also hrd with *0554 s/on, NA 0600 (Alexander PA 4/19-20)
- 7270 POLAND R Polonia in EG 2320, pgm of traditional mx, g (Karcheki MA 4/12)
- 7275nf? LIBERIA ELBC in EG 0704, nx, ID, anncts from interim Pres (Weinrich ND 4/23)
- 7350 CHINA R Beijing in CH 1300, trad CH & pop mx (Crumhorn TX 4/27)
- 7475 TUNISIA RTV Tunisienne in AR 0434, AR chanting & mx, //12005, f (Hart MN 4/15)
- 7600 ECUADOR HD210A Time Station at 0450, time signals, very faint (Boulden CA 4/17)
- 9268usb ICELAND INBS in IC 0657, varied mx sels, tlk, nx, f (Carson OK 4/12)
- 9388 ISRAEL Rashuth Hashidur in HB 0157, vocals, ID, nx, f (D'Angelo PA 4/14)
- 9435 ISRAEL Kol Israel in EG 0000*, ID, nx magazine, pop mx, f-g (Carson OK 5/6)
- 9485 MORACO TWR in RS 1630-1700*, ID, tlks, IS at s/off, g (Yamada JAPAN 3/16)
- 9515 SICILY(ITALY) R Uno in IT *0459-0610, IS, ID, pipe, tlk, mx, f (D'Angelo PA 4/7)
- 9540 CZECHOSLOVAKIA R Prague in EG 0000, "Czech Today", sports pgm, p (Flynn OR 4/16)
- 9555nf PORTUGAL RPI in EG 0230, nx, mx, f (Boulden CA 5/1) in FR/PT/EG 0225-0300, in FR at t/in, ID in PT 0230, EG nx next, sports, wx, skeds, f (Jordan PA 4/9-10)
- 9615 BRAZIL R Cultura in PT 2328, tlk, ID "R Cultura de Sao Paulo" (Johnston KY 4/15)
- 9615 VATICAN STATE VR in FR 0228, IS, ID, into nx, g (Carson OK 5/7)
- 9634.7 SINGAPORE SBC in CH 1115, promos?, ads, tlk (Johnston KY 4/26)
- 9655 SWAZILAND TWR in EG 0437, "College Bible Class" (Grenier NV 5/2)
- 9660.9 VENEZUELA R Rumbos in SP 2346, tlk, ID, splash QRM (Johnston KY 4/3)
- 9665 BRAZIL R Marumbi in PT 2258, mx, ID, moderate QRM (Johnston KY 4/15)
- 9685.2 BRAZIL R Gazeta in PT 0920, mx, ID, weak w/splash QRM (Johnston KY 4/30)
- 9700 NEW ZEALAND RNZI in EG 0831, mailbox w/Tony King (Grenier NV 5/2) in EG 1207* nx, wx, freq, skeds (Zilmer NM 5/3)
- 9705 PORTUGAL RPI in EG 0240, tlk on Portugese aid to Kurds (Grenier NV 5/2) in EG 0230*, nx, wx rpt, pgm of Portugese folk mx, f (Carson OK 5/8)
- 9725 COSTA RICA AMR in SP 0430-0505*, mx, ID's in SP/EG, relig mx, NA (Carson 4/20) in EG 1100, ID, drama, "Radio Doctor", f-g (Jordan PA 4/30) in EG 1220, "Family Matters", letter from listener in Swaziland (Weinrich ND 4/12)
- 9750 SOUTH KOREA RK in EG *1214, IS, ID, sked, nx, mx (Johnston KY 3/3)
- 9765 MALTA V of Mediterranean in EG 0648, short story, ID, cmntry on Kurds plight, guitar mx, into lang? at 0701, f w/QRM and fading (Hardester NC 4/14)
- 11402nf? ICELAND Reykjavik in IC 0115, //9265, 3295, vg (Berg MA 4/21)
- 11595 GREECE RSM Thessaloniki in GK 2205, tlks, US pops, GK vocals, ID (Jordan 4/21)
- 11605 ISRAEL Kol Israel in EG 2311, mailbag, //15640, 9435, f-p (Hart MN 4/14)
- 11645 GREECE V of Greece in EG 0113, mx, tlk in vernac, ID, nx (Hart MN 4/1)

- 11650 NO. MARIANAS KFBS Saipan in RS 1135-1400*, expressive relig tlks, mixture of tlks & vocals, s/off annmnts 1359, f-g (Jordan PA 4/14)
- 11665 GUAM K1WR Merizo in Mandarin 1105, EG translations of relig tlks in CH, "Let us Pray", some Biblical text in EG, p (Jordan PA 4/14)
- 11685 PHILIPPINES FBBC in EG 1030-1102*, relig sermon and mx, ID, IS, p (Jordan 4/14)
In EG 1341 w/ "Far East Forum", mailbag, "English Now", f (Carson OK 4/21)
- 11760 NO. KOREA R Pyongyang in EG 1503, nx, ID, mx, f (Yamada JAPAN 3/1)
- 11815 NETHERLANDS ANTILLES TWR in EG 1240, relig pgm, nx, "Glad Tidings" (Carson 4/12)
- 11825 FRENCH POLYNESIA R Tahiti in FR 0532, lovely island mx, ID, f-g (Carson OK 5/9)
In FR/TT 0702, tlks, nx, island mx (uke, accordion, drums), ID (Jordan PA 5/1)
- 11835 SRI LANKA SLBC in EG 1050, ID, nx, pgm notes, g, //15120 (Clark ONT 5/5)
- 11840 CANADA R Beijing relay in EG 0425, "On Location in Tibet", g (Carson OK 4/16)
- 11880 SPAIN RNE in EG 0134, "As Others See It", book reviews, g (Carson OK 5/9)
- 11910 HUNGARY R Budapest in EG 0030, nx, "Update", sports, cmntry, g (Carson OK 5/7)
- 11990 CZECHOSLOVAKIA R Prague in EG 0000, nx, influx of Easter tourists (Hart MN 4/1)
- 13605 UNITED ARAB EMIRATES Abu Dhabi in EG 2340, holy Koran, into AR 2356 (Carson 5/5)
- 13635 SWITZERLAND SRI in EG 2100, nx, Swiss SW Merry-go-Round" (Zilmer NM 4/27)
- 13650 NO. KOREA R Pyongyang in EG 1300, nx, cmntry, mx, fgy, sked, sports (Zilmer 5/9)
- 13660 UNITED KINGDOM BBC to Falklands in EG 2130, nx, tlks, interview, p (Jordan 4/12)
- 13690 GERMANY Deut Welle in GM 2340, tlk on DDR, IS, ID, GM mx, f (Carson OK 4/25)
- 13730 AUSTRIA RAI in GM 0058, local mx, gong 0100, nx, IS, cmntry (Yamada JAPAN 3/17)
- 13745 AUSTRALIA RA in EG 1625, sports rpt, tlk on cricket match (Grenier NV 5/1)
- 15000 AUSTRALIA VNG Time Station in EG 1044, ID, fgy, TC, moving to 16 mhz (Clark ONT)
- 15010 VIETNAM V o Vietnam in EG 1012, nx, mx (Wanat VT) in EG 1230, ID (Weinrich ND)
In EG 1256*, nx, cmntry, mx (Zilmer NM) in EG 1617, nx, mx, ID, g (Boulden CA)
in EG *2030, nx, Far East mx, abruptly off 2053, back in lang 2100 (Rippel VA)
- 15020 INDIA AIR Delhi in Sinhala 1420, S Asian mx, f-g (Flynn OR 4/9)
- 15095 SYRIA R Damascus in EG 2000, nx, Saudi prince visits Damascus, f (Hart MN 4/19)
- 15100nf ISRAEL Kol Israel in EG 2150-2200*, nx, fgy, pips at s/off (Treibel WA 5/17)
Note: This is really a return to old fgy. Last heard here in 1979.
- 15120 SRI LANKA SLBC in EG 2008, nx, ID 2010, pips 2015, local mx, f (Clark ONT 5/4)
- 15140 PORTUGAL RPI in PT 1700-2000*, nx, mx, soccer match, g (Johnston KY 4/3)
- 15140nf PHILIPPINE IS. R Veritas in EG 1535-1543*, nx, ID, IS at s/off (Treibel WA 5/4)
- 15160 AUSTRALIA RA in EG 0526, country hits, agricultural nx, g (Carson OK 5/9)
- 15170 SWAZILAND TWR in Urdu 1526, IS, opening anmt & mx, tlk, f (Yamada JAPAN 3/21)
- 15170nf SO. KOREA RK Seoul in EG 0600*, IS, ID, fgy, nx, p under QRM (Treibel WA 5/16)
- 15220 HUNGARY R Budapest in EG 0050, "168 Hours" pgm, //11910, f (Flynn OR 4/20)
- 15245 PHILIPPINE IS. R Veritas in VT 0129, IS, nx, relig tlk, hymn (Yamada JAPAN 3/13)
- 15275 CHINA R France relay in FR 0144, tlk, mx, closing anmts (Yamada JAPAN 3/16)
- 15310 QMAN BBC relay in EG *0300, pips, ID, nx, "The World Today", f (D'Angelo PA 4/9)
- 15325 FRENCH GUIANA R Japan relay in EG 0301, nx, "Viewpoint", f (Hart MN 3/24)
- 15325 SEYCHELLES FBBA in HD *1310-1400*, IS, ID in EG, //11855 (Zilmer NM 4/17)
- 15330 BULGARIA R Sofia in BG 1522, tlks, ID, nx, mx, IS, into GM 1600 (D'Angelo 4/28)
- 15335 INDIA AIR in EG? 1415, Indian film mx, tlk, very weak (Crumhorn TX 5/4)
- 15345 NETHERLANDS ANTILLES TWR in EG 1057, "Caribbean Connection" (Wanat VT 4/20)
- 15345nf? SRI LANKA R Japan relay in EG 1700, nx, "Viewpoint", fgy, f (Berg MA 4/7)
- 15352 LUXEMBOURG R TeleLux in EG 0545, mx, nx, heavy QRM (Boulden CA 5/9)
- 15365 SOUTH AFRICA RSA in SH 1415, US pop/dance mx, wild top 40 style (Crumhorn TX)
- 15400 ASCENSION IS. BBC relay in EG 0617, election results, f (Hart MN 4/5)
- 15400 UNITED ARAB EMIRATES R Dubai in EG 0330, IS, nx, address, ID (Crumhorn TX 5/4)
- 15445nf SEYCHELLES FBBA in langs 1210-1400, IS, ID in EG, reed mx, tlks (Jordan PA 5/6)
- 15570 MADAGASCAR R Netherlands relay in EG *1827, IS, ID, nx (Carson OK, Johnston KY)
- 15590 UNITED KINGDOM BBC London in EG 0542, "Words of Faith", pgm notes (Grenier NV)
- 16000nf AUSTRALIA VNG time signal in EG 1200, clear ID and TS (Jordan PA, Clark ONT 5/8)
- 17525nf GREECE VoG in EG/SW 1530-1550*, nx in EG to 1540, into SW, ID (Treibel WA 4/24)
- 17535nf? VATICAN STATE VR in EG 1345, nx, relig mx, move from 17540? (Zilmer NM 5/9)
- 17690 USSR R ViInius in EG 2307, privatization tlk, chamber mx, f (Carson OK 4/20)
- 17690 USSR R Minsk in Byelorussian 2330, IS, nx?, organ notes, p (Jordan PA 4/28)
- 17690 USSR R Kiev in EG 0000, IS, ID, nx, p with severe QSB (Boulden CA 4/28)
- 17690 USSR R Yerevan in EG 0253, nx, ID (Boulden CA 4/29)
- 17730 VATICAN STATE VR in EG 2100, relig nx to Africa (Zilmer NM 4/21)
- 17810nf SEYCHELLES FBBA in EG *0430-0502*, IS, sked, "Lutheran Hour" f-g (Jordan PA 5/5)
- 17825.4nf QATAR QBS in AR 2158, tlk, ID "Min-al-Doha", nx (Johnston KY 4/12)
- 17855 UNITED ARAB EMIRATES Abu Dhabi in EG 2200, Holy Koran, Arab sciences, pop mx, press review, editorial, //11985, 13605 (Zilmer NM 5/4)
- 17899.7v COLOMBIA RN de Colombia in SP 2045, tlk, LA mx, poor audio (Zilmer NM 4/26)
In SP 2325, LA mx, cmntry w/each song, nx features (Crumhorn TX 5/5)

21455usb ECUADOR HCJB Quito in EG/CZ 1750, "Ham Radio Today", to CZ 1800 (Carson OK 5/2)
 21470 CYPRUS(p) BBC relay in EG 0615, nx, vg, site per PWBR (Boulden CA 5/12)
 21480 ECUADOR HCJB Quito in EG 1705, IS, Topic w/Rich Vicar (Wanat VT 4/21)
 21515 UNITED ARAB EMIRATES Abu Dhabi in AR 0225, Holy Koran, ID, tlk (Yamada JAPAN)
 21520 FRANCE RPT in FR 1130-1200*, electronic mx effects, nx?, mx, IS (Jordan PA 4/30)
 21550nf FINLAND RF in langs/EG 1150-1255, langs to 1230, nx in EG, press review, sports, (Jordan PA 4/24) in EG 1410, nx, "Finland has the highest rate of women in Parliament in the world", //15185 (Hart MN 4/12)
 21650 SRI LANKA Deut Welle relay in EG 0259, IS, site ID, into Pushto 0300 w/apparent nx, f and dominant over 2 other co-channel stations, //15410 (Clark ONT 5/4)
 21650 VATICAN STATE VR in EG 0459, IS, tlk, mx pgm (Yamada JAPAN 3/13)
 21685 NETHERLANDS ANTILLES RN relay in EG 1827, "Newline", "Media Net" (Carson OK)
 21695 SWITZERLAND SRI in EG 1338, The New "Grapevine", f (Carson OK 5/5)
 21715 HONGKONG BBC relay in EG 0430, jazz mx show, f (Boulden CA 4/13)
 25730 NORWAY RNI in NO 1110, relig pgm, sermon, organ mx, ID, exc (Jordan PA 4/14)

CLANDESTINE STATIONS

6305 LV del Cid in SP 0555, LA mx, ID, tlk re Cuba (Grenier NV 4/5)
 7100 A Voz de Res do Galo Negro in PT 2230-2320*, tlks, Afr pops, lite instruml mx, Big Ben chimes 2300, ID, choral mx, s/off w/lcl anthem, vg (Alexander PA 4/21)
 9940 LV del Cid in SP 2305, "Music of the Free", US mx, tlks, g (Carson OK 5/5)
 In SP 0300-0400, tlks, nx 0300, polemics, patriotic mx, g (Jordan PA 5/7)
 15565 Flag of Freedom R in Farsi 0349-0525, polemics, patriotic mx, g (Jordan PA 4/23)
 15605 V of Free Iraq in AR 2210, tlk, AR mx, speech, //9570, 17960 (Alexander PA 4/6)

PIRATE STATIONS

6233 R Mi Amigo Intl Europirate in EG 0344-0456*, rock mx, ID's, rpts requested, maildrop Wuppertal, Germany. Test xmsn anncd, promos (Berg MA 4/14)
 6272.4 No. Ireland SW Relay Service in EG 0352, "Danny Boy" IS, ID, tlks, pop mx, off at 0359 with tlk of special b/c, vp (Karcheski MA 3/17)
 7411.6 Hope R Intl in EG 2310, screaming rock, comedy skits, ID's (Alexander PA 4/21)
 7413.1 V of Anarchy in EG 0053, ID, mailbag pgm, wk (Alexander PA 4/13)
 7414.3 WYMN Radio in EG 0425-0522*, ID "WYMN Women Radio", Wellsville, NY, ad parodies, female pop mx, g (Alexander PA 4/14) tlk on the history of shoulder pads 0507 (Berg MA 4/14) interview of US female soldier in Saudi Arabia and her views on how men viewed her while there, vocals, ID at s/off "WYMN Radio: the ones who really wear the pants in the house" (Hardester NC 4/14)
 7415v WHO in EG 0206-0224*, promo for astronomy, mx by Yankovic, ID's, fake ads, 100 watts anncd, Wellsville, NY address, g (Alexander PA 4/20)
 7415usb R Beaver in EG 0004, rock mx, ID, promo, Bucky Beaver DJ, g (Alexander PA 4/15)
 7415usb He Man Radio in EG *0024-0057*, ID's, 180 watts, pop mx, macho tlk, Blue Ridge Summit, PA address (Alexander PA 4/21) in EG 0025-0057*, "Secret Agent" theme, "This Is Your Life", various songs (Wolfson OH 4/21)
 7415lsb KULP (mobile) in EG 1503-1518*, rock mx, ID's, joke ads, nx re Kulpville SWL convention, Blue Ridge Summit, PA address (Karcheski MA 3/24)
 9266 UNIDENTIFIED Beatles mx, rockabilly, Black spirituals from 0413-0515, nx at 0500 in EG and lang? (Cox OR 4/16)
 11416 R Stella Intl - Europirate in EG 0050, Edinburgh address, playing mx and tapes of other stations?, vg, still on 0500 (Berg MA 4/14)
 12255 R Fax - Ireland? in EG 0143-0317, mostly pop mx, ID's, address Surrey, England, anncd they carry "R Caroline" from 10 to 2 UK time, ads, f-g (Berg MA 4/23)
 15050 R Tower - Europirate in EG 0010-0055, pop mx, ID's, address Utrecht, Holland, jingle ID's, seems to be a regular on Saturdays, g (Alexander PA 4/7)
 15050 Hope R Intl in EG 2105, rock mx, DJ type pgm, address (Zilmer NM 4/20)

There isn't time to send the following logging tip to Sheryl Paszkiewicz so I'll list it here. A new station was heard on 5/19 at 48046 from 1115 UTC with Andean type mx. Their ID was "R Villarrica" and they are located in Huancavelica, Peru with 850 watts according to the latest Tropical Band listings from Peacewood Publications in Germany. They gave their ID and a TC after each recording. Needless to say, they did not pin my S-meter and it was necessary to listen carefully between the static crashes for the ID.

English Schedules

Tom Sundstrom

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Pinelands RBBS 609-859-1910



Prepared 5/24/91 at 11:16 PM.

Thanks to John Carson (OK), Kris Field (PA), Chuck Roswell (TWR Bonaire), Rich McVicar (HCJB), Gordon Darling (Papua New Guinea), Tetsuya Kondo (Japan), Andy Sennitt (WRTH) and Joe Hanlon (PA) for material received.

Notes

The problem with printing a complete schedules list in the May *Journal* two days before a broadcast seasonal change means a host of changes this month. Many changes were not announced in advance.

R Bangladesh returned to the air mid-May a few weeks after the terrible stores that killed so many people. This time, at 1230 UT, the audible frequency in NA is 15208, ex-15647 and ex-15607.

V of UAE in English has returned to the air at 22-24 UT. *World of Radio* on WWCR was retimed to 2130 (ex-2115) UT Friday, effective May 17. **TWR Bonaire's** 1055 UT release to NA/CA now runs to 1330 each day. **Vatican R** dropped 7305 at 0250 UT to NA, adding 11625, parallel to 9615.

HCJB's John Beck and Jan Shober will be manning an HCJB booth at the 1991 ARRL National Convention in Saginaw, MI, August 23-25. Stop by and say hello.

R Havana Cuba was noted May 19 using 11950 in lieu of 11820 which

suffers from interference from the Columbian 1400 Hz up. That test ran for a few days before **RHC** returned to 11820. By the time you read this, the move (effective May 28 per **Hauser**) to 11950 will be permanent. The new 15140 (ex-9505) at 02-06 has worked well here. Look for an upcoming article in *Monitoring Times* on **RHC's** 30th anniversary and **Arnie Coro, CO2KK**, host of *DXers Unlimited*.

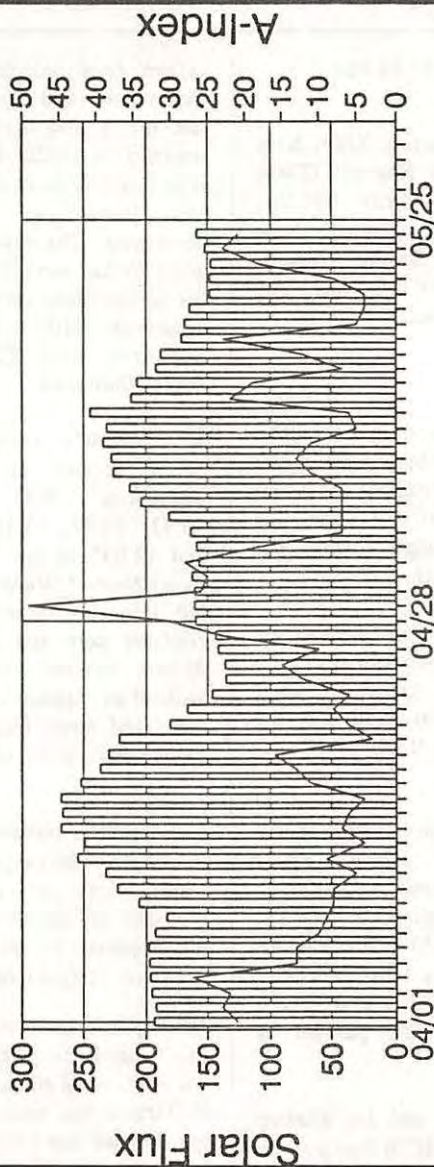
R Moscow's separate 04-08 UT WNA service at 08 on 12050 announces "15.51, 15.58, 15.45, 15.42, 15.47, 15.18, 13.64, 13.60, and 12.05" in the "19, 22, and 25 meter bands." When I listen at 04, all but three of these frequencies are readable here and carry the *World Service* forward from 03 UT to 04 without any special announcements on these and other frequencies. I don't know what's going on.

Kol Israel is reportedly cutting back its English language output to one transmission per day from June onwards. No details are known as we go to press, but no doubt **MN** and **WoR** will carry the news.

R Beijing's announced frequencies don't match the printed material, but we've made an educated guess herein. **R Tirana** has made major cutbacks too, but we don't have all the details yet and we're checking it as best we can. The 1730-0330 UT listings are correct. We are also awaiting word on the **R Budapest** cutbacks announced earlier this year.

Solar Flux & A-Index: Apr-May 1991

Recorded from WWV



27 day intervals



by Sundstrom

Changes entered between 04/27/91 and 05/25/91.

ENGLISH LANGUAGE SW BROADCAST SCHEDULES: By Start Time

Compiled by Thomas R. Sundstrom, W2XO

Start Time (UTC)	Country	Station	Freq #1	Freq #2	Freq #3	Freq #4	Freq #5	Freq #6	Freq #7	Freq #8	Target Area	Notes	Record Last Updated
0000	0100	China	R Beijing	17705	15100	11715	9770				WMA/ENA Americas	#324 v Mali	05/24/91
0000	0200	Cuba	R Havana	11950							Americas		05/20/91
0000	0027	Czechoslovakia	R Prague Int'l	11990	11685	7345					MA		05/06/91
0000	0030	Israel	Kol. Israel	15640	11604	9435					MA		04/28/91
0000	0100	USSR	R Kiev	15525	15485	15455	15180	13645	11790		MA		05/05/91
0000	0100	USSR	R Moscow	21690	17890	15355	15315	12040	11850	11780	9720	World Service	05/07/91
0030	0430	Ecuador	HCBJ	25950	21455	15155	9745				MA	#182 SSB	05/07/91
0100	0130	Czechoslovakia	R Prague Int'l	11685	7345	5930					MA		05/06/91
0100	0130	Israel	Kol. Israel	15640	11604	9435					MA		04/28/91
0100	0300	South Africa	Radio Orion	3320									05/11/91
0100	0300	USSR	R Moscow	21790	21690	21585	17890	15315	15290	12040	11780	World Service	05/05/91
0130	0200	USSR	R Stn Peace & Progress	11790							MA	#9 v Cuba -04 annex 19-22-25 m	05/06/91
0200	0400	Cuba	R Havana	15140	11950						Americas		05/20/91
0200	0300	USSR	R Moscow	15540	15480	15415	11990	11980	11970	11880	11690	World Service	05/05/91
0250	0300	USSR	R Yerevan	15455	15180	11790					MA	also see 01 UT News/Eng	05/05/91
0250	0315	Vatican State	Vatican Radio	11625	9615						MA		05/24/91
0300	0400	Bulgaria	R Sofia	17825	15310	15290	15160	11720			Af/NA		05/08/91
0300	0330	Czechoslovakia	R Prague Int'l	11685	7345	5930					MA		05/06/91
0300	0400	USSR	R Moscow	21790	21690	21585	17890	15540	15480	15415	11980	World Service	05/16/91
0400	0500	China	R Beijing	11840	11685						WMA/ENA Americas	#4, 5, 8, 10 -05 UT #1 Canada #2 Fr Guin #1 -0500 #4 SSB	05/24/91
0400	0600	Cuba	R Havana	15140	11950	11760	5965				MA		05/20/91
0400	0430	Czechoslovakia	R Prague Int'l	11685	7345	5930					MA		05/06/91
0400	0415	Israel	Kol. Israel	17575	15640	11675	11605	9435			Aus/As/NEU/NA/WMA		04/28/91
0400	0500	South Africa	Radio RSA	11920	11860	5960					ECC&S Afr		05/11/91
0400	0500	USSR	R Moscow	21725	21625	17635	17560	15525	15320	15280	11995	World Service	05/16/91
0500	0600	USSR	R Moscow	21690	17560	15540	15525	15315	12040	11980	11780	World Service	05/17/91
0510	1640	South Africa	Radio Oranje	9665									05/11/91
0530	0600	United Arab Emirates	R Dubai	21700	17830	15435					SE As/Aus		05/06/91

0600	0800	Cuba	11760		Americas	05/17/91
0600	0700	USSR	17560	15550 15540 15210 12010 11980 11690 11675	World Service	05/17/91
0630	0700	Bulgaria	17825	15160 11720	W Eu	05/08/91
0630	1206	New Zealand	9700		Pacific	05/15/91
1000	1030	Israel	21710	17590 17575 17545 15650 11588	W Eu/E Eu/Aus/As	04/28/91
1000	1100	South Africa	17835		E Afr	05/11/91
1000	1100	USSR	21800	21790 21785 17810 17775 15560 15485	World Service	05/11/91
1030	1055	United Arab Emirates	21605	15435 15320 13675	Eu/N Af	05/06/91
1055	1330	Netherlands Antilles	15345	11815	EMA/Carib	05/20/91
1100	1200	South Africa	11900	11860 9555	Afr	05/11/91
1100	1200	USSR	21800	21790 21785 17810 17775 15560 15485	World Service	05/11/91
1130	1200	Finland	21550	15400	NA	05/06/91
1200	1300	China	17855	15450 11660 11600 9670	EMA/S Pac/SE As	05/24/91
1200	1230	Norway	21700	17710	S As/Far East/Aus	05/24/91
1200	1300	USSR	21800	21785 17810 17570 15560 15485 15375 15155	World Service	05/11/91
1200	1225	USSR	17740	15460 9715 7325	As	05/04/91
1230	1300	Bangladesh	17750	15208	Eu	ann 15200
1230	1300	Finland	21550	15400	NA	05/16/91
1230	1255	France	21645	21635 15195 15155 11670 9805	Am/EU	05/06/91
1300	1400	China	15450	11660 11600 9670	NA	05/11/91
1300	1345	Finland	21550	15400	S Pac/NNA/SE As	05/25/91
1300	1400	USSR	21785	17810 17570 15560 15485 15375 12025 11840	World Service	05/06/91
1330	1400	Finland	21550	15400	NA	05/07/91
1330	1355	USSR	21605	15435 15320 13675	Eu/N Af	05/06/91
1400	1500	China	17740	15460 9715 7325	As	05/05/91
1400	1500	USSR	15165	11815	S As	05/04/91
1430	1530	Bulgaria	21785	17810 17670 17570 15485 15375 15155 12050	World Service	05/05/91
1500	1600	China	17825	17780 11735	Afr	#9 v Cuba
1500	1800	South Africa	15165	11815	S As	05/10/91
1500	1600	USSR	15365		E&C&S Afr	05/25/91
1600	1655	France	21790	17810 17670 17655 17570 15485 15375 15180	World Service	05/11/91
1600	1640	United Arab Emirates	17850	17795 17620 15530 12015 11705 6175	Afr/ME/As/N Eu	05/05/91
1630	1700	China	21605	15320 13675 11795	Eu/N Af	#5&6 v Gabon
1630	1700	Poland	21790	21740 17765 17670 17655 15485 15375 12050	World Service	05/05/91
1645	2200	South Africa	9555	7150	India	05/11/91
1700	1800	China	11840	9525	Af	05/24/91
1700	1715	Israel	3215		E&S Afr	05/16/91
			15225	11575 9570 7405	E Eu/N Eu	05/11/91
			11675	11588		05/05/91
						04/28/91

1700	1800	South Africa	Radio RSA	17700	21790	21740	17670	17600	15540	15500	15485	15375	World Service	W Afr	05/11/91	
1700	1800	USSR	R Moscow	17825	17780	11765								Afr	05/11/91	#10 v Cuba
1730	1830	Bulgaria	R Sofia	15510	11845									Eu	05/08/91	v USSR
1800	1900	Afghanistan	R Afghanistan	15030	13630	7375								LA/NA	05/15/91	Sa-Su/#3 USB
1800	0030	Costa Rica	R for Peace Int'l	13785										Pacific	05/04/91	
1800	2200	New Zealand	R New Zealand Int'l	21740	17695	17655	15540	15520	15375	11890	11840		World Service	W Afr	05/08/91	#8 v Cuba
1800	1900	USSR	R Moscow	15330	11720	11660								W Eu	05/11/91	
1830	1900	Bulgaria	R Sofia	7285	6135	5995								Eu	05/08/91	
1830	1855	Poland	R Polonia	11515	9440									W Afr	05/16/91	
1900	2000	China	R Beijing	17685	17630	15640	11605							W Eu/Afr	05/05/91	
1900	1930	Israel	Kol Israel	11850	9640	7140								GOS/Oc/Am	04/28/91	
1900	1930	Japan	R Japan	15395	15375	11790	9875							Af/ME/Eu	04/29/91	#3 v Gabon
1900	2000	Spain	Spanish Foreign Radio	21740	17695	17670	15540	15520	15375	11890	11840		World Service	W Afr	05/11/91	#8 v Cuba
1900	2000	USSR	R Moscow	11645	9395									Eu	05/19/91	News/Eng ex Su
1920	1930	Greece	V of Greece	21465	15030	13630	7375							LA/NA	05/04/91	M-F/#1&3 USB
2000	1230	Costa Rica	R for Peace Int'l	11840	9525									Af	05/16/91	
2000	2030	Poland	R Polonia	21740	17695	15540	15520	15375	11890	11840	11765		World Service	W Afr	05/11/91	#7 v Cuba
2000	2100	USSR	R Moscow	15330	11720	11660								Eu	05/08/91	
2030	2100	Bulgaria	R Sofia	17890	17810	15340	15270	11815						GOS/As/Oc/Eu/ME	04/29/91	#3 v Sri Lanka
2100	2200	Japan	R Japan	13720										MA/CA/Eu	05/05/91	20 deg
2100	2400	USA	WRMO	5960										Eu	05/05/91	
2100	2200	USSR	R Kiev	17735	17695	15535	15500	15385	12060	11890	11850		World Service	W Afr	05/08/91	
2100	2200	USSR	R Moscow	15330	11660									W Eu	05/08/91	
2130	2330	Bulgaria	R Sofia	17685	17575	15640	15100	11604	11588					LA/NA/NA Eu/E Eu	04/28/91	
2130	2200	Israel	Kol Israel	7230	6135	5915	5035							Eu	05/15/91	
2130	2200	USSR	R Alimn Ata	6100										Eu	05/06/91	
2130	2200	USSR	R Vilnius	17770										Pacific	05/15/91	
2200	0630	New Zealand	R New Zealand Int'l	17855	15305	13605								World Service	05/06/91	
2200	2400	United Arab Emirates	V of UAE	17655	15535	15500	15355	12060	11890	11850	11675		World Service	W Afr	05/07/91	#10 v Cuba -04 UT
2200	2300	USSR	R Moscow	9675	7270	5995								Eu	05/16/91	
2230	2300	Poland	R Polonia	15330	11660									MA	05/08/91	
2300	2400	Bulgaria	R Sofia	15430	15185									MA/E As	05/11/91	
2300	2320	Finland	R Finland	15640	11604	9435								MA	04/28/91	
2300	2330	Israel	Kol Israel	17810	15340	15210	15195	11815	11735					GOS/As/Eu/ME/Af	04/29/91	#3 v Sri L #6 v Gab
2300	2400	Japan	R Japan	21690	17890	17735	17655	15315	12040	11820			World Service	W Afr	05/07/91	
2300	2400	USSR	R Moscow	15525	15485	15180	13645	11790						MA	05/25/91	
2300	2330	USSR	R Vilnius	9675	7270	6135	5995							Eu	05/16/91	
2305	2355	Poland	R Polonia	11645	11595	9425								SA/CA	05/06/91	News/Eng
2335	2345	Greece	V of Greece													

Changes entered between 04/27/91 and 05/25/91.

ENGLISH LANGUAGE DX SHOWS: By Day of Week
Compiled by Thomas R. Sundstrom, W2XQ

Shortwave DX Program	Show Xmen Start Time	Country	Station	Freq #1	Freq #2	Freq #3	Freq #4	Freq #5	Freq #6	Freq #7	Target Area	Notes re DX Show	Record Last Updated
** DAY OF THE WEEK: Sunday													
DXers World Meeting	0113	Fed Rep Germany	R Deutsche Welle	15425	15105	13770	13610	11890	11865	9565	NA	Last Sun/mo	05/17/91
DXers World Meeting	0313	Fed Rep Germany	R Deutsche Welle	15245	15205	13770	13610	11890	11810	9545	NA	Last Sun/mo	05/17/91
DXers World Meeting	0513	Fed Rep Germany	R Deutsche Welle	13790	13610	11925	11705	9700	9670	6120	NA	Last Sun/mo	05/17/91
** DAY OF THE WEEK: Wednesday													
World of Radio	0500	Costa Rica	R for Peace Int'l	21465	15030	13630	7375				LA/NA	#1&4 USB	05/04/91
World of Radio	1030	Costa Rica	R for Peace Int'l	21465	15030	13630	7375				LA/NA	#1&4 USB	05/04/91
DX Program	1635	Poland	R Polonia	11840	9525						Af		05/16/91
DX Program	2005	Poland	R Polonia	11840	9525						Af		05/16/91
** DAY OF THE WEEK: Thursday													
Hailbog	0630	New Zealand	R New Zealand Int'l	9700							Pacific	Th after 1&3 Mon/m	05/15/91
** DAY OF THE WEEK: Friday													
World of Radio	0030	USA	WRNO	7355							NA/CA		05/02/91
Hailbog	1930	New Zealand	R New Zealand Int'l	13785							Pacific	Fr after 1&3 Mo/mo	05/03/91
World of Radio	2130	USA	WOCR	15690									05/17/91
R Sofia Calling	2315	Bulgaria	R Sofia	15330	11660						NA		05/10/91
** DAY OF THE WEEK: Saturday													
World of Radio	0230	Costa Rica	R for Peace Int'l	21465	15030	13630	7375				LA/NA	#1&4 USB	05/04/91
World of Radio	0800	Costa Rica	R for Peace Int'l	21465	15030	13630	7375				LA/NA	#1&4 USB	05/04/91
DX Program	1205	Poland	R Polonia	11815	6095						Eu		05/16/91
DX Program	1435	Poland	R Polonia	11815	9540	6135					Eu		05/16/91

Publisher's Page

Bill Oliver
45 Wildflower Road
Levittown, PA 19057



FOR SALE: Original Heathkit manuals; PM-3A, EA-2, W-5M, WA-P2, SA-2, SS-1. Price \$5.00 each ppd. Library copy WRTH-1987, \$6.50 ppd. Tom Mooningham, P.O. Box 487, Maugansville, MD 21767-0487.

WANTED: Surplus Navy line throwing gun and HAL Rs2100 RTTY scope tuning indicator for use with CWR 6700 telereader. John Gunter, 4098 Oak Circle, Franklinton, NC 27525.

FOR SALE: Kenwood R-1000 with Radio West modification for two-speed AGC and amplified Collins 1.9 and 2.9 kHz filters switchable in narrow. Shape factor 2:1 with ultimate rejection over 80 db. Has a few scratches, but works fine. I have separated stations 0.4 kHz apart. Price \$450.00. George B. Sherman, 104 Pinewood Circle, Apple Valley, MN 55124. Phone (612) 432-7975.

WANTED: Sony 6800W Orange in the \$320 to \$450 range. Serious sellers may call collect. I would also like information on how the AM to CW for improved selectivity was achieved for the Drake SPR-4 and any other SPR-4 modifications. Roger Giannini, 822 West Jefferson C-6, Springfield, IL 62702. Phone (217) 744-8886 late mornings or before 2:30 pm CST or after 11:00 pm Sunday nights.

WANTED: Old shortwave receivers such as Zenith, Scott, and Halli-crafters in any condition. C. Baltter, 610 West Sunset Drive, Redlands, CA 92373. Phone (714) 792-4184.

WANTED: Used NRD-515, preferably with narrow AM filters and original manual. Please state condition and price. **FOR SALE:** Yaesu FRG-7 modified by Gilfer/Radio West in like-new condition with original manual, DC power cord (for portable use in car), and onboard crystal calibrator. Price \$300.00 or best offer. Hank Michalenka, 11 Elizabeth Ann Drive, Johnston, RI 02919. Phone (401) 934-0918.

WANTED: E.H. Scott Radios, 1930-1948; Scott Transformer Co. Radios, 1927-1930; World Record Radios, 1925-1927 and/or radios with Selectone Coils. John Meredith, 1792 Nemoke Trail, Haslett, MI 48840. Phone (517) 349-4348.

FOR SALE: Kenwood R-5000. Has International Radio 6 kHz filter, 12 VDC option, dust cover, service and owner's manual, \$775.00. Drake R-4B with crystals for all major SWBC bands, R-4C spinner knob, record out, MS-4 speaker, dust cover, \$325.00. INFO-TECH M-6000 v5.0 demodulator, Panasonic 9" black and white monitor, \$525.00. Daiwa AF-606K audio filter, \$95.00. Steven R. Lare, 824 West 25th Street, Holland, MI 49423. Phone (616) 335-2270.

WANTED: Sony ICF-SW1S or ICF-SW1E sub-compact SW receiver. I will buy with or without the accessories. Please state price on first inquiry. Dave McLaren, P.O. Box 665, Sheffield, IL 61361. Phone (815) 454-2204.

FOR SALE: R390A in excellent condition, \$225.00. Jeff Stover, 90 Susquehanna Avenue, Lock Haven, PA 17745. Phone (717) 748-6729.

FOR SALE: Kenwood R-5000 communications receiver with optional YK-88A-1 AM filter. Mint! \$775.00 including UPS. I'm studying for ham license and need \$5 to purchase a transceiver. Bob Schoenleber, 310 Yardley Commons, Yardley, PA 19067.

FOR SALE: JRC NRD-525U in mint condition with all boxes, manuals, etc. Price \$799.00 plus UPS. Also INFO-TECH M-6000 ver 9.01. Price \$499.00 plus UPS. Jim Uerlings, 1437 Pacific Terrace, Klamath Falls, OR 97601. Phone (503) 884-7659.

FOR SALE: Customized Beam Headings (from/to) and distances (MI/KM) to over 470 WRTH-91 transmitter sites. Useful in selecting alternate transmissions and choosing listening times based on distances. ITU Country Codes included. Send your location/coordinates, \$6.50. Passport to World Band Radio '89, \$8.95. Journal, complete '89 and '90, \$8.95 a year or \$17.00 for both. WRTH-87, \$7.95, -90, \$9.95. All items include shipping. Cashiers check or money order, please. Al Drehmann, Route 2, Box 3-B, Tryon, NC 28782. Phone (704) 894-3398, not collect.

WANTED: Hallicrafter manuals SX-101 and SX-70. C. Watson Hall, 7 Woodside Drive, Milford, DE 19963-1671.

HighText

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One book you must have is the *Shortwave Listening Guidebook* by Harry Helms (ISBN # 1-878702-02-7). This is the book you've heard about. . . . 320 pages crammed with the latest info on receivers, antennas, accessories, frequency bands, transmission modes, propagation, collecting QSLs, DX reception on the AM, FM, and TV bands, the SWLing hobby, and a lot more. It's written in a clear, direct, and non-technical style with numerous photos, drawings, and—darn right!—illustrations of QSL cards and pennants. There are also profiles of major international broadcasters and a review of domestic broadcasting around the world. Learn when, where, and how to hear stations like those you see reported in the *Journal* each month. It's a complete tutorial on how to listen to the world! You can learn about SWLing the hard way through trial and error, or for only \$16.95 you can get the book the manufacturer should have packed with your shortwave radio.

Hey, shortwave radio is a lot more than international broadcasting! It's also mysterious female voices in the night reading groups of numbers in various languages. It's transmissions from embassies, Soviet spacecraft, drug smugglers, Cuba to Angola military networks, guerilla and paramilitary forces, and a host of other enigmatic signals. *The Underground Frequency Guide* by Harry Helms (ISBN # 1-878707-01-9) gives a thorough discussion of such radio signals along with 500 frequencies where such stations can be heard. There's inside information you can't find elsewhere, such as the actual locations for numbers stations in the United States, Nicaragua, Cuba, and Honduras, along with the latest details on single-letter beacons, "pulsers," and the Department of State's "KKN" station network. You can continue to be puzzled by these stations, or for \$10.95 you can finally understand what you're hearing.

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Announcing....

Tropical Band Survey 19th Edition, 1991

by the Danish Shortwave Clubs International

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The 1991 nineteenth edition has been edited by Argentine DXer, Julian Anderson and is expected to be available in June.

The **TBS** lists all broadcasting stations which have been monitored in the frequency range of 2000-5900 kHz, including details such as transmission times and powers. Seasoned tropical band DXers wouldn't be without their copy.

The Ontario DX Association is pleased to offer the **Tropical Band Survey** for US\$10.00 or Cdn\$9.00 postpaid. You may pay in U.S. or Canadian dollars. When you write, also ask for a free copy of our monthly 80-page magazine, **DX ONTARIO**, which includes a list of many other publications and DX aids sold by the ODXA. Simply mention where you read this notice.

Our address is the Ontario DX Association, P.O. Box 161, Station A, Willowdale, Ontario M2N 5S8. You may also contact us by telephone or facsimile at (416)853-3169 should you have further inquiries.

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JOSEPH J. CARR is the author of 22 books for TAB, including *Data Acquisition and Control* and *Old Time Radios! Restoration and Repair*. He holds an M.S. in electrical engineering from George Washington University.

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The Journal of the
North American Shortwave Association

ISSN 0160-1989

Executive Director: Bob Brown, 238 Cricklewood Circle, Lansdale, PA 19446

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