

Y8
Y8

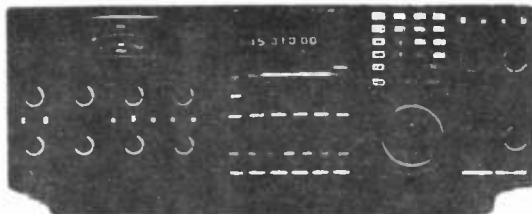
NASA

The
Journal
of the
North
American
Shortwave
Association

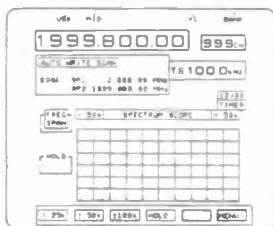
Volume XXX, Number 8
August, 1990

UNIVERSAL RADIO

ICOM R-9000



CRT DISPLAY



The Icom R 9000 is a revolutionary all-mode, super wide-band receiver that continuously covers a frequency range of 100 KHz to 1999.8 MHz. The most visible of the radio's many advanced features is the built-in multi-function CRT display. Receive frequencies, modes and additional useful data are displayed for your operating convenience. The CRT functions as a spectrum scope to show you, at a glance, the relative signal strengths of nearby receive frequencies. The span of the spectrum scope can be selected for ± 25 , ± 50 or ± 100 KHz according to your needs. The screen can also display the contents of 10 memories at once, and can be scrolled to display other memories. The CRT can also be used as a display device to monitor RTTY or packet via an ASCII RS 232 input port (external data converter required). A total of 1000 memories (ten banks of 100) store frequencies, mode, filter width and tuning step increments. You can use different memory banks according to station type, frequency ranges or whatever your preference. By using the memory list screen, many more convenient functions are provided: up to eight character notes for your reference, and the advanced super convenient memory editor function easily moves, copies and deletes the memory contents. Tuning steps: 10 Hz, 100 Hz, 1 KHz, 5 KHz, 9 KHz, 10 KHz, 12.5 KHz, 20 KHz, 25 KHz and 100 KHz. The R-9000 has seven different scan functions with adjust scan speed up to 13 channels/sec. *Program Scan* scans between pre-programmed scan edges. *Memory Scan* scans memory channels. *Selected Number Memory Scan* scans memory channels with the same programmed mode. *Priority Scan* monitors specified memory channels. *AF Scan* scans around the receiving frequency. *Auto Memory Wide Scan* programs receive frequencies into memory channels (900-999) during programmed scan. The R-9000 provides versatile scan resume functions when a signal is received: the scan cancels, pauses until a signal disappears, pauses for an adjustable time, or pauses for the mixed conditions of signal activity and time. Also a new *Voice Scan Control* system allows you to skip-incoming signals such as signals with no modulation, hiss or noise. Superior interference rejection is achieved with both IF shift and notch filters. Control features include dual clocks with two kinds of sleepers and five independent daily timers. Noise reduction is accomplished with a threshold selectable wide-narrow noise blanker. The squelch can operate by meters or noise level. A keypad is provided for rapid frequency entry. The output of the CRT can be routed to an external monitor, and the CRT can act as a monitor for an external or internal video source. See TV or your RTTY decoder on the CRT! Mounting handles for standard 19-inch racks are included. Rear jacks include DC Out, Ext. Spkr., Record Remote, Speech Out, Line Out, IF (10.7 MHz) Out, Video In & Out, Data In, Acc., plus 4 antenna jacks (see specifications). The R-9000 is on display at Universal now.

SPECIFICATIONS

Dimensions	16.7"W x 5.9"H x 14.4"D
Frequency Range	1 - 1999.8 MHz
Antenna Impedance	50 ohm (400-500 ohm!)
Selectivity (-6dB)	AM 6 KHz SSB 2.4 KHz CW 5 KHz FM-N 6/15/30 KHz FM-W 150 KHz
Sensitivity	16 μ V 1.6-30 MHz 32 μ V 30-999 MHz 1-30 MHz SO-239 1-30 MHz RCA 30-1000 MHz N 1000-1999 MHz N 11F Antenna Two
Antenna Jacks	

R-9000 List Price \$5459.00

R-9000 Discount Price

Order #0419 \$4265.00

**CALL FOR SPECIAL
R-9000 SALE PRICE!**

PASSPORT TO WORLD BAND RADIO 1991 Edition

By Larry Magne. A must-have book for every SWBC listener. Provides complete visual data on all SWBC stations from 2.3 to 26 MHz. See at a glance station name, location, frequency, time, language and power. Also includes candid hard-hitting reviews on SW radios. Indispensable!
©1990 IBS approx 390 p.
Order #1000 \$46.96
Pre-Publ. Special \$14.90 (+\$1)

THE DXER'S DIRECTORY

By Fred Osterman. The most complete list of radio listeners ever! A real Who Is Who for the listening community. Over 1,800 listeners are included. Find listeners in your area! The second part of the book features full information on over 125 radio clubs worldwide 1990-91 Edition
©1990 Universal Radio Research
Order #1695 \$4.95
Pre-Publ. Special \$3.90 (+\$1)

LATIN AMERICA BY RADIO

By Henrik Klemetz. This book covers the finer points of Latin American DXing. Topics include: how to identify stations, catchwords, slogans, regional speech patterns, addresses, music formats, brand names, sign-on/off announcements, time checks, anthems, PSAs plus numerous tips and tricks on OSLink. ©1989 167 p.
Order #1010 \$23.95 (+\$1)

- Visa, MC, Discover
- Prices are subject to change.
- Full catalog \$1 postpaid

STORE HOURS

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

Serving Listeners Since 1942!

Universal Radio, Inc.

1280 Aida Drive Dept. FREN
Reynoldsburg, Ohio 43068 U.S.A.
Toll Free: 800 431-3939 Ohio: 614 866-4267

NASWA Notes

Bob Brown
238 Cricklewood Circle
Lansdale, PA 19446
CompuServe 74756.1557



Hello again. It's time for me to jump up on the table and toot the NASWA horn a bit. I'll have to show it to you sometime, it's stored in the closet of the conference room at the beautiful and spacious NASWA headquarters in Levittown. Our hard working publisher Bill Oliver has informed me that last month our domestic mailing of *The Journal* was 1502 copies! We mailed 128 to the rest of the world. The membership has been climbing steadily for some time now and this is very encouraging. Our renewal rate is very good and a high number of those requesting a sample are joining the club. I look forward to seeing contributions to *The Journal* from all our new members.

Member News

We received a nice note from new NASWA member Michael Pollard of Otaki Beach, New Zealand. Michael is the Shortwave Editor of the New Zealand DX Times and has been a DXer for over 23 years. His receivers include an RCA AR88D, an RCA AR88LF, and a National Panasonic RF-B300. Michael said "The valve receivers keep me warm in winter, and still have an edge most solid-state receivers can't match". I use a BC-221M frequency meter to calibrate the AR88's..." He said his home is located 400 yards from the Tasman Sea. Sounds like a great DX location Michael!

Dave Leibowitz of Scarsdale, NY sent along an interesting article that appeared in April 2, 1990 NY Times about Ulan Bator, Mongolia and the newly opened (6/89) US Embassy there. David says, "Every morning I wake up for work, shave, get dressed, and fire-up my R5000, and try for it (Ulan Bator). So far only got it once, but it's my goal for a QSL someday! Someday I'll make the Trans-Mongolian Rail Trip and visit the station; but until then..." That visit will make a great feature article Dave, I hope your dream comes true!

Speaking of rail trips, Dr. Harold Cones

traveled by rail cross country to San Diego to study the marine life on Black Beach!?! and apologizes for the missing Listeners Classroom this month.

This month Jerry Klinck debuts as Portraits editor. Welcome aboard Jerry!

Survey Results

Remember the survey? Last October wasn't it? The results have been tabulated and are presented here for your reading pleasure. We said before that many of the suggestions that appeared in the surveys have already been implemented with the new *Journal*. As usual, your comments and suggestions are always welcome. No need to wait till the next survey, whenever that may be.

Total surveys received - 340

The average age of those who submitted surveys was 42. Of these folks, 97% were male and 3% were female. The average number of years in the hobby was 19 with the average starting age being 21.

24% are hams. 39% own a computer. 49% belong to other clubs. The top clubs reported and the percentage of those reporting who belong are: SPEEDX 15%, FT 8%, NRC 8%, ODXA 7%, ANDEX 4%, ARRL 4%, ASWLC 4%, IRCA 3%, NU 3%, ADXR 2%, ACE 2%

The average hours spent listening per week is 12. Of this time, 55% is spent SW program listening while 45% is spent DX'ing.

64% collect QSL's. 25% participate in the NASWA awards program. The average number of countries heard was 118, verified was 80.

Favorite columns is in order of votes - Listener's Notebook 24%, QSL Report 19%, DX'ers Forum 14%, Log Reports 14%, English Language Schedules 12%, Technical Topics 8%, Easy Listening 6%, Dr. DX 3%

Least favorite columns in order of votes - Dr. DX 19%, Easy Listening 14%, QSL Report 13%, Technical Topics 12%, Scoreboard 11%, NASWA Awards Program 8%, English Language Schedules 6%, Log Reports 5%, Listeners Notebook 3%, Portraits 3%

The survey indicated that the membership was "moderately" interested in columns devoted to SW program listening. (3 on a scale of 1 to 5). The same question related to DX'ing received a higher score. (4 on the scale)

The questions related to the English Language Schedules showed that 53% wanted to keep the current schedule service just like it is. 18% wanted to see the complete schedule monthly. 14% wanted 6 pages devoted to DX/Listening programs and schedules of the "most listened to" broadcasters. 9% wanted the complete schedule monthly as a separate NASWA publication and 5% wanted it eliminated completely. 82% would like to see target areas other than North America continue to be listed.

The recent dues increase for NASWA members was supported by 86% of those surveyed.

55% have never contributed log or QSL reports. 18% contribute once every 6 months,

10% once every 3 months, 8% once every 2 months, and 9% once or more a month. Many members promised an increase in their participation. Now is the time to make a resolution to do this during the upcoming fall listening season.

It was good to see that 99% planned on renewing their NASWA membership.

72% said that NASWA should sponsor a "NASWA" convention and 66% said they would attend. The locations desired were Philadelphia 47%, Cleveland 16%, Los Angeles 11%, Atlanta 10% and Kansas City 9%, Denver 5%. Chicago was the most popular write in vote at 2%. 32% said that they would participate in organizing or assisting with such a convention.

70% were interested in items with the NASWA logo such as coffee cups and tee shirts.

The last part of the survey was related to ANARC. 91% know what ANARC is and 86% think that NASWA should continue to support ANARC. 63% think that NASWA should sponsor an ANARC convention.

I'd like to thank all of you who participated in the survey. As space permits next month I'll print some of the written comments that appeared on the surveys.

Till next month - 73

Welcome to the following new NASWA members -

Robert Albright, Blue Springs, MO
Bruce B. Backlund, Sag Harbor, NY
Carmen A. Bellanca, Richmond, VA
Joseph J. Bial, Chagrin Falls, OH
Norbert M. Boner, Covington, TN
Daniel F. Burgess, Temple Hills, MD
Roger W. Burnham, Sarasota, FL
Virginia Cox, Morgantown, WV
Joe Dakille, Burlington, CT
Marianne Das, Philadelphia, PA
Frank Druktainis, Rochester, MN
Bruce E. Erickson, Franklin, MA
Pat Farrell, N. Syracuse, NY
Tom Fernandez, Loves Park, IL
Dan Goodwin, St. Louis, MO
Dennis Halverson, Moose Lake, MN
Rolf F. Hansen, New Milford, CT
Haruo Ilattori, Ibaraki, JAPAN
Steven F. Henry, Chapel Hill, NC
Patrick Howell, Rochester, MI
N.D. Johnston, Carson City, NV
Robert W. Kallio, Appleton, WI

Patrick J. Kelly, Albuquerque, NM
Katrina & Rolan Kunkel, Morgan Hill, CA
E. Leroy Lindahl, Wesley, AR
Leslie B. Marcus, St. John, NB
Mario Mariotta, Long Beach, CA
Frank Marsden, Toronto, ONT
Tom Overcamp, Seneca, SC
Richard M. Perz, Maple Heights, OH
Michael G. Pollard, Otaki, NEW ZEALAND
Sherman Colburn Seither, Kawkawlin, MI
Boruch M. Selevan, Brooklyn, NY
Tony Tapp, Ottawa, ONT
David Tobias, Juneau, AK
Rui A. Trindade, Belleville, NJ
James H. Turner, Jr., Richmond, VA
Vincent Veronneau, Longueuil, QUE
Jack Waller, Boca Raton, FL
P. F. Watzek, Greenville, MS
Clarence Williams, Miami, FL
John Wingard, Columbus, GA
Juchi Yamada, Nara, JAPAN
Sam Zelpé, Sheboygan, WI

DXer's Forum

Rowland Archer
5524 Hawthorne Park
Raleigh, NC 27613
Compuserve 70075,117



NASWA member and DXer's Forum contributor Ed Kusallk was the subject of an article in *The Lethbridge Herald*, titled "Shortwave Hobbyist in Tune with the World." This article was reprinted in Bruce MacGibbon's excellent *DX Spread* bulletin #126-131. The article did a great job of portraying Ed's devotion to SWBC (700 stations heard in 231 countries, 625 QSL's received!), and intriguing the reader with the thoughts of hearing news and music from exotic lands, making new friends around the world, and collecting QSL's, pennants and memorabilia. I'll bet we recruited several new enthusiasts to the SW world after they read this article!

Will a longtime identification aid to Brazilian shortwave stations disappear? Also from *DX Spread* #126-131, a report that private radio station owners have created a proposal to drop carrying the daily government-produced programs "The Voice of Brazil" ("A Voz do Brasil") and "Project Minerva" ("Projeto Minerva"). This proposal was made by radio and TV broadcasting association presidents from Minas Gerais, Rio Grande do Sul, Sao Paulo, Rio de Janeiro, Rio Grande do Norte, and Bahia. They made the proposal based on a survey that indicated people were not interested in these programs. Since they are broadcast in prime time and at no charge to the government, loss of advertising revenue is also a consideration. Currently "A Voz do Brasil" can be heard at 2200 Monday through Friday on all Brazilian SW stations, and "Projeto Minerva" at 2300 M-F, 2230 Sun and Sat.

NASWA member Mike Stone sent several news items again this month; one from the July 12 *Washington Post* is titled "Refugees Say Western Radio Pierced Albania's Armor of Isolation." It contains quotes from Musha Hoxha, a distant relative of the late Enver Hoxha, and a new refugee from Albania. Musha said "Every day, all of Albania listens to the Voice of America, Italian Radio, and Yugoslavia, and we talk about it afterward." He spent seven years in prison after telling some "friends" that Enver Hoxha was "worse than Stalin." It's a sobering thought to realize someone spent seven years in jail for speaking his mind, something we take for granted.

The Organized DXer

DX Record Keeping Systems

by Rowland Archer

When I first started listening to shortwave radio, I approached it the same way I did local AM/FM stations — I spun the dial and listened to the programs. Soon I started keeping notes on when and where I could hear my favorite programs.

HCJB's "DX Partyline" introduced me to reference books such as the *World*

Radio TV Handbook. The WRTH opened up the enormous possibilities of shortwave radio and I realized that if I was to fully enjoy its potential, I'd have to get more organized in my approach than "spin the dial and listen."

Twenty-five years later, I'm still refining my approach to organizing SW radio in-

formation. I expect that 25 years hence I'll still be modifying it. No matter what system you use, I urge you to stay flexible and look for better ways to do things, they DO exist.

Goals

My approach to organizing my DXing takes the following goals into account:

TARGETS: I want to keep track of the stations and countries I'd like to hear, with information about when and where I should tune. This information changes continually.

LOGGINGS: These are written records of what I hear. When I'm listening for reception report details, I need a comprehensive log report. If I'm scanning the bands and noting a few details or the text of a station ID, I need much less information.

BULLETIN REPORTING: I need a way to send information about my loggings to several bulletins, preferably in the format they each prefer.

RECEPTION REPORTING: I want to write reports in multiple languages, and to create follow-up reports without retyping the original.

QSL'ING: I want to track reception reports outstanding, QSL's received, and progress towards NASWA awards. I also want to generate QSL reports for DX bulletins.

Manual vs. Computerized

When I think about all the record-keeping and organizing that goes into DXing, I start wondering if I should hire a secretary! It's very easy to spend more than half your hobby-time writing and rewriting lists and reports. The use of a computer has given me back a big chunk of hobby time for actually listening to the radio.

I've used both manual and computerized systems. I probably wouldn't buy a computer just to organize my DX information, but I have made heavy use of my computer to do all of the above record keeping and organizing. For me, the computer approach is hands down the easiest way to go. Most of what I'll describe in this article revolves around the use of

various forms, and you can do 90% of this by hand. The computer just does it faster and with less repetitive drudgery.

Target Lists

Most successful DXer's keep lists of stations they want to hear. The list needs to be kept *current*: it must reflect the most up-to-date information available to help you in your quest. It must be *organized* in a way that lets you quickly check the targets available at any time you are DXing.

Some DXers like to sort their targets by frequency, but I prefer organizing the list by time. When I'm DXing, I want to quickly scan my current targets that might be audible at that time. My system keeps all the possible targets close together, on one or two pages.

Figure 1 shows a page from my *DX Targets by Time* list. Each page covers one hour in 15 minute intervals. The first two columns contain start and end time. I use the standard "•" notation before the time to indicate sign-on, and after the time to indicate sign-off. The next three columns contain frequency, country and station name.

The comments column is a catch-all for information that may help me hear the station. If an ID text was reported, I might copy it here, or give the reference to the bulletin where I saw the logging. City names, program details, language used, anything is fair game here.

Most of my DX targets at this stage in my DXing "career" come from DX reports from bulletins or DX programs. The last two columns in the target list tell me who heard the station, where they live, and on when they heard it. The location of the reporter is key information — the closer they are to my location, the more likely it is that I might hear the station here, at a similar time.

The date of the report is important too. In the fast changing scene on the tropical shortwave bands, the annual shifts in propagation mean that a station audible in January may be inaudible in June.

Constant Change

My target list has to accommodate these continual changes in its entries. This is

Start	End	Frequency	Country	Station	Comments	Reporter	Date
0145							
0200							
0215							

Figure 1. DX Target List by Time

Frequency		Station		City	Country	SINPO
UTC Date		Lang	QSL'd?	Other Remarks		
Tape Ctr	Time UTC	Program Details				Notes

Figure 2. Detailed Logging Form

one area where the computerized approach has a significant advantage. It lets me print out a complete, sorted list at any time I desire, without forcing me to rewrite anything. That's a big time saver.

I keep the target list using the RapidFile file management program by Ashton-Tate, running on an IBM PC compatible computer from Gateway 2000. I find RapidFile to be a jewel of a program for keeping DX information. It is very flexible and has the ability to print out lists in many different styles, generating most of the forms and reports in this article.

When I print out a new target list, I leave blank space for writing in entries by hand. One of the ways I stay awake during late night or early morning DX sessions is to scan DX bulletins with a highlighter and mark items to add to the target list. I can add these items to the list by writing them in, and then type them into the computer later.

Note that this form of target list is perfectly suitable for a purely manual system. Set up the pages with the start times written in the left hand column, separated by 10 lines of blank space for writing in the DX target info. When a page gets full, create a new blank page and copy over the old entries that you haven't logged yet to the new page. If you need more space for target entries, allow more blank lines between time intervals, possibly replacing one full page with two partially full ones.

Loggings

Loggings are the core of our hobby. You can use a plain notebook for your loggings, and hope that you remember to note all the important things: time, frequency, station name, country, ID text, notes on reception quality, etc. I've found that I often forget to note something (like the date!) when I use a plain notebook, and only realize this a week or so later when I sit down to type up a reception report.

Alternatively, you could use a pre-printed logsheet from a radio supply house. Many of these were designed for hams, and don't have all the right entries for SWBC DXers. Check it out carefully before you buy a large quantity.

I prefer to create my own forms. I need one kind of log sheet when I'm taking detailed notes for a reception report, and another when I'm just taking a brief logging during a band scan or for a report to a DX bulletin. A previous DXer's Forum article described the Spectrum Log forms, which are available from the NASWA Company Store. These are what I use for "Quick Logs."

Figure 2 is a sample of my current "Detailed Logging Form." I designed it using the WordPerfect word processor on my IBM PC compatible computer, and I print it out two-sided on my HP Laserjet II printer. It helps me remember to record the relevant details for a reception report: frequency, station name, city, country, SINPO rating, UTC Date, language, and other remarks. The "QSL'd" space is left blank until I fill out a reception report, then I write in the date that I sent out the report. This should probably say "Reception Report Sent" but that takes too much space. The purpose of this is to provide a quick reminder of which detailed logs still need to have reception reports written.

The body of the page is for program details. One thing that I haven't seen used by too many other DXers, and which I find very helpful, is the "Tape Counter" column. I always reset the counter on my tape deck to zero before starting to record, and when I note a program detail, I write the tape counter value AND the UTC time alongside the program information. This is invaluable to help me find things on the tape that I want to review, such as probable station ID's, while writing the reception report.

The program details column is self-explanatory; the notes column is where I note things like "station fading out" or "ham QRM" — information ABOUT the reception that I want to remember later, but which is not a program detail.

Next Installment

I'm out of space for this month's Forum, so I'll conclude this article next month with a review of the rest of my Organized DXer's record keeping system. Good DXing until then!

Pirate Freaks Broadcasting Service

German Pirate Radio Profile

via Rich D'Angelo

[Ed. Note: The following information was received by Rich together with a QSL for his reception of PFBS on 15050 kHz, on 4/1/90 (no, this is not an April Fool's Joke!), from 0002-0022 UTC. Nice catch Rich!]

Thanks for tuning your receiver to the airwaves of PFBS Radio, the Pirate Freaks Broadcasting Service. We are broadcasting from Germany to the world on the 48m, 41m, and 19m bands.

PFBS' test transmission on 15050 kHz in the 19m band caused approx. 50 reports from DXers and Free Radio listeners. We received most of the letters from the United Kingdom, Scandinavia, Italy and France. Signals had been very strong in those countries.

As a result of the Xmas test transmissions PFBS will continue broadcasting on 15050 kHz with programming in English and perhaps in a Scandinavian language. Because of security reasons we will have no regular schedule, but why not check 15050 at around 1000 GMT?

We also received two reports from the USA and one from Toronto, Canada for the 15050 kHz test transmission. However, reception was weak. Of course, that's no surprise when you consider we were only running about 10 watts into a halfwave dipole antenna.

We hope to increase power on the 19m band very soon, to make reception in those areas like North America more solid. We are still looking for reception reports from Australia and New Zealand, by the way. Let's transmit and see...hi!

OK, back to our 48m band transmissions. We also carried out some late night/early morning transmissions on Boxing Day [Ed. note: the first weekday after Christmas, a holiday in many British Commonwealth countries], resulting in one report from Spain and some from Scandinavia. We were active on 6230 and 6292 kHz and the latter frequency was also heard in the USA with a fair signal. However, propagation conditions for Euro-reception on 48 meters were very bad during the Winter months. Conditions should improve during the Summer, and we are sure many pirates will rule the waves on Saturday nights in the Summer of 1990. So, don't forget to check the band.

Meanwhile, PFBS is now broadcasting on Sunday mornings in the 41m band. Frequencies to check are 7480 and 7490 kHz.

Station History

The idea of setting up PFBS radio was born some 5 years ago. But unfortunately, we found no suitable transmitter until Summer 1985. At that time we got an old ex-US Army transmitter, called BC-1603, having an output power of approx. 17 watts.

Our first test transmission went out on July 6, 1985 on 6207 kHz from 0903 to 0936 hours GMT, but unfortunately these first tests were not successful. Further tests followed and we received one report from a listener in Sweden for our Sept. 22nd test on 6209 kHz.

So we decided to stop any further tests. However during that time we scrapped the BC-1306 and built a new transmitter from the remaining parts, which worked quite well. Later we used a 50 watt transmitter for mobile or portable use with 2 807's in the power amplifier. Our regular channel at that time was 6293 kHz, a frequency

we had to leave 2 years later because a utility station opened up on the same frequency.

We also carried out a couple of tests on medium wave 1508 and 1610 kHz, which was heard in Germany. We used about 35 watts into a longwire. Due to bad propagation conditions on the 48m band, resulting in long skips, PFBS started with tests on the 60m band 5295 kHz. This frequency provided very good and stable reception in Germany and we received many reports.

After our 3rd birthday broadcast we were absent from the bands for about one year. Transmissions commenced with our 4th birthday broadcast in October 1989.

I am afraid to say that the future of PFBS depends on the response from our listeners. Also, we hate these re-used report forms from Radio Bucharest for instance. Also, we don't send out any pennants! All criticism is most welcome at our mailbox in Utrecht. Also, we love to play your record requests and dedications. So don't hesitate to write in! You can help to keep the Fight for Free Radio alive and kicking. We do our best, you know. And you can help us.

Thanks to all our listeners for their support in the last 5 years! Keep listening...

PFBS Equipment

- 28 watts mobile SW-transmitter, which can be run with 12 volts (EL84 and 807 valves, solid state modulator)
- 50 watts SW-transmitter for the mains (EL84 and 2-807's)
- 15 watt 19m band SW-transmitter (220V AC) (EL84 and 807)
- 180 watt power amplifier (813 tube)
- 6 channel stereo mixer, self-made.
- 2 Technics record players (SL QD-22)
- 2 Grundig tape machines
- 1 Technics tape recorder
- 1 Fostex Compressor/Limiter unit (Stereo)

PFBS
The Pirate Freaks
Broadcasting Service

This card is to verify reception of PFBS Radio:
To: Richard A. D'Angelo, Wyomissing, PA, USA
Date: 1st April 1990 Time: 0002 - 0022 GMT
Frequency: 15050 kHz SINPO: weak
Remarks: Many thanks for your report! Ho Pe
to hear from you again, soo n.

QSL
73's and FFFR.
C.P.

Latin Destinations

Don Moore
20108 Hayes Road
Big Rapids, MI 49307



Hola amigos, and welcome to another Latin Destinations. Instead of focusing on one DX-related topic this time, we're going to have a sort of Latin pot-pourri, starting with Costa Rica. Theresa & I spent three wonderful weeks there in May and June.

If you've never been to Latin America, but want to visit something other than a gringo beach resort, Costa Rica is the place to start. It's a nature-lovers paradise; over ten percent of the country is protected in national parks, wildlife preserves, etc. Costa Rica has everything from tropical cloud forests to beautiful beaches. There are even paved roads to the top of some volcanos! Dozens of picturesque colonial towns and villages are just a short distance outside San Jose. Local handicrafts, especially from wood, are inexpensive but well-made. English is so widely spoken that we had a hard time practicing our Spanish. Moreover, the food and water is safe! In fact, Costa Rica is practically a developed country. According to the UN, Costa Rica is the most developed underdeveloped country, and should be ranked with developed nations by 2000 (Chile, by the way, is the only Latin nation the UN ranks as developed). Prices are a bit high for Latin America, especially compared to the Andean countries, but are more than affordable by North American standards.

Of course while I was there I did some "door-to-door DXing" and dropped in at the local SW outlets. I was able to visit all of them except Radio Casino in Limon. The big news is that Radio Impacto has closed down. Impacto has always operated like a sort of semi-clandestine anti-Sandinista station. It is quite curious that they closed down just after the Sandinistas lost power in Nicaragua. I visited Impacto a few days before the end & got

some interesting photos. The complete story is too long to tell here, but I'll be writing an article on it for Monitoring Times.

Of all the stations that I visited, indeed of all the stations I've ever visited, the one that impressed me the most was Radio For Peace International. RFPI is hard-working homebrew radio at its best. These guys even grind their own crystals! It's great to see that it is possible to put an SWBC station on the air for just a few thousand dollars and a lot of elbow grease, instead of millions of dollars and high-priced consultants as with, for example, the VOA's modernization program (not that the VOA could do its job on RFPI's budget!). If you're so inclined politically, be assured that RFPI will get the most bang for your buck from any donations. If you don't want to give money, you can always buy one of their T-shirts. Bruce Springsteen did when he visited RFPI and the Peace University on an Amnesty International tour.

We arranged a one-night stopover in Tegucigalpa, Honduras on our flight to Costa Rica. It was fun to see Tegus again after our Peace Corps days there. Unlike Costa Rica, Honduras has not been doing a good job of protecting its environment, and it showed. We couldn't believe how much more deforested Honduras was after less than six years. People complained because the spring rains were already two weeks late, but no one seemed to make the connection between rain and vegetation.

I didn't have much time for DX-related activities in Tegus, but I did drop in on AVANCE, the organization that runs Sani Radio in Puerto Lempira. Sani Radio is just one of AVANCE's many social services and the far-off radio station doesn't seem to be much of a priority to

anyone at the Tegus office. That may be part of the reason they haven't been a particularly good verifier. It probably would be a good idea to send reports to both the Tegus address and to Sani Radio/Puerto Lempira/Honduras. Puerto Lempira is small enough that a street address shouldn't be necessary.

Time For A Sermon

Now onto a not-so-pleasant topic. As usual during my station visits, I browsed through the stations' reception report files. I can't say it was a pretty sight. Most reports were shoddy, demanding, and in general not worthy of an answer. I couldn't believe how many were written on fill-in-the-blank forms. Some people even sent postcard reports. Others wrote in English to stations like Radio Reloj which only broadcast in Spanish.

As DXers, we have to learn some manners, or more and more stations are going to stop QSLing. When reporting to small Latin American stations, be polite and, if you can't type, write neat and legibly. Be sure to include a few little souvenirs, like postcards. Most of these stations aren't trying to be heard in North America and any reply they send you is purely a favor. Unless the station has English programming (like RFPI, TIFC, or Adventist Radio in Costa Rica), write in Spanish. There are only two ways to write a good Spanish reception report. One is to learn the language with near fluency. The other is to buy a copy of the Spanish Language Lab by Tiare Publications. Finally, once that QSL arrives, be sure to send a thank you note. "The Thank You Lab" (available from the NASWA reprint service) has all the sentences you need for Spanish & Portuguese thank yous.

Latin Destinations Contest

Let's throw a little more spice into this month's mixed-up column with not one, but two Latin Destination's contests. Answer either or both of the following questions on a postcard or 3x5 card & send them to me at the mast head address.

All correct answers to either question will be eligible for a special drawing (that is, one drawing for each question). The winners will receive a now-rare Radio Impact bumpersticker and a color photo of a Latin American radio station. Deadline for receipt of entries is September 20. Here are the questions.

In the Journal's January to June, 1990 Tropical Band Loggings column, only one Bolivian station was reported in 90 meters (3200 - 3400 khz). What is the station's name and frequency?

What was the call and location of the first SWBC station in Latin America?

Good Works Department

I recently received the new catalog for Pueblo to People, a non-profit organization that works with peasant cooperatives. PTP helps cooperatives to develop, buys their products (mainly handicrafts) at a fair market price, then resells them at below import-store prices via their catalog. When I was a Peace Corps Volunteer in Santa Barbara, Honduras several years ago, I saw PTP put some hard cash into the hands of many poor peasant families. Their products are good and it's a worthy organization. PTP's full-color catalog has lots of great things to decorate the shack with or to buy for some distinctive Christmas presents. Get it for just a dollar from Pueblo to People; 1616 Montrose #4000; Houston, TX 77006.

If I can impinge just a little more on John Bryant's column, another place you might want to send a buck to is the South American Explorers Club; PO Box 18327; Denver, CO 80218. Their catalog includes some Latin American handicrafts, over a hundred books on the region, and an good selection of maps. Even if you don't buy anything, it's a great list of things to get through inter-library loan.

Looks like it for another three months. Summer is sadly coming to an end, but at least we have another Latin DX season to look forward to. So, it's time to get those new antennas up and polish up that Spanish! Hasta la proxima, amigos!

Listener's Library

John Bryant, AIA
Route 5, Box 14
Stillwater, OK 74704
CompuServe 74730,2145



Welcome back to the Listener's Library. This month we feature a contribution from Doug Johnson, AIA, of Issaquah, Washington. Doug has specialized in monitoring Soviet broadcasting and jamming for a number of years. The following is an absolute goldmine of first rate sources for things that we are all interested in, including Soviet & U.S. HF Broadcasting and HF Propagation. We'll call it....

Them, Us, And The Propagation Thereof

by Doug Johnson, AIA

Detailed information in book form on Soviet HF broadcasting is very scarce. The *USSR DXing Handbook* contains in its 208 pages a good overview of domestic service schedules and information helpful in identifying each service. For the historical overview of Radio Moscow see relevant chapters in *Voices of the Red Giants* by Markham, *International Radio Broadcasting* by Browne, *World Broadcasting Systems* by Head, and *The Soviet Propaganda Machine* by Ebon.

Clandestine Radio Broadcasting by Soley and Nichols contains some rare accounts of Soviet clandestine radio activities and provides good data on others. The three volume *Monitoring of Harmful Interference to the HF Broadcasting Service* by Sowers, Hand and Rush reports on a three year study of HF jammer locations. It is of interest now only in showing where Soviet HF skywave jamming transmitters were generally located and the techniques used in such a study. Many of these same transmitters now carry domestic service programming and the external Fifth Program (M5).

There have been several books published about the U.S. Government's HF broadcasting services. The most interesting

and informative ones I have read are: *America's Other Voice* by Michelson--the story of Radio Free Europe and Radio Liberty; and *The Voice of America* by Pirsein. As for other broadcasting services, good reading can be found in the series of International and Comparative Broadcasting texts edited by Sidney Head: *Broadcasting in Africa*, *Broadcasting in the Arab World*, and *Broadcasting in Asia and the Pacific*.

High frequency radio propagation is a fascinating subject if one is able to wade undaunted into some of the more technical treatises. The best in-depth book I have found on this subject is Budden's *The Propagation of Radio Waves*, which is quite informative even to one (like me) who cannot follow all of the math presented. Another very rewarding propagation text is *Radio Direction Finding* by Gething. Less technical and somewhat disorganized is Saveskie's *Radio Propagation Handbook*, but at this level a better source is Braun's *Planning and Engineering of Shortwave Links*.

As for antenna design the latter will also be helpful, but the popular *ARRL Antenna Book* is my choice for solid all-around antenna information even though it fails to discuss the best HF receiving antenna I know of--the cage-type broadbanded dipole. For help in its design one must refer to the excellent chapter nine in John Kraus' classic text *Antennas*. For some fine photos of Soviet cage-type dipoles see Desmond Ball's *Soviet Signals Intelligence*.

Doug, thanks so much for your contribution! This information has already been a major assistance to two articles that Don Moore, David Clark and I are writing for Fine Tuning's Proceedings 1990. I'm sure other NASWans will find it equally useful. A full bibliography appears at the end of this month's column.

Frequency Spectrum Chart

Mike Stone, a new NASWAN from Arlington, VA, checked in recently with a super contribution and a real bargain. He and I strongly recommend the "US Frequency Spectrum Chart" in color for only \$2.75 from the Government Printing Office. It's 30" x 52" on glossy paper and can be ordered by sending a check payable to: Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. To order by phone with payment by Visa or MC, call 202-783-3238 between 8 AM and 4 PM Eastern Time, and ask for US Freq. Spec. Chart (stock #003-000-00652-2). Mike contributed a copy of the Spectrum Chart to the Winterfest and I hear it was quite a hit. The commercial version of this chart runs about \$10, so here is one place where Uncle Sam is giving us a break. Thanks, Mike!

Horizontal Loops

My interest in large horizontal antennas was first sparked by Carl Huffaker of SPEEDX, whose full wave horizontal loops helped fight noise at his Mexico City QTH. Carl said these loops were extraordinarily sensitive to low arrival angle (DX!) signals. This summer, Nick Hall-Patch (Technical Editor of the mediumwave DX club IRCA) sent us the May 1990 issue of *QST*, with an article by Doug DeMaw on this antenna. Doug put up a loop cut for 160 meters (132' side at 50'). In computer simulations and in real use, he found it a superb DX antenna as far up as 10 meters. This summer, I built a 300' by 600' loop about 25 feet high and found it to be a superb Tropical Band DX antenna. The 160m loop could be made smaller, too; perhaps (2 turns spaced at 6"?). This looks like it would be a great suburban DXer's antenna.

Bibliography

- Ball, Desmond, *Soviet Signals Intelligence* (Canberra: Strategic and Defense Studies Centre, Research School of Pacific Studies, The Australian National University, 1989). Available in the US from The National Intelligence Book Center, 1700 K Street, NW, Washington, DC 20006.
- Boyd, Douglas A., *Broadcasting in the Arab World* (Philadelphia: Temple University Press, 1982)
- Braun, Gerhard, *Planning and Engineering of Shortwave Links* (Philadelphia: Heyden and Son, 1982)
- Brown, Donald R., *International Radio Broadcasting* (New York: Praeger Publishers, 1982)
- Budden, K.G., *The Propagation of Radio Waves* (New York: Cambridge University Press, paperback edition, 1988)
- Ebon, Martin, *The Soviet Propoganda Machine* (New York: McGraw-Hill, 1987)
- Gething, P.J.D., *Radio Direction Finding* (London: Peter Peregrinus Ltd., 1987)
- Head, Sydney W., *Broadcasting in Africa* (Philadelphia: Temple University Press, 1974)
- World Broadcasting Systems* (Belmont, CA: Wadsworth Publishing, 1985)
- Kraus, John D., *Antennas* (New York: McGraw-Hill, 1950)
- Lent, John A., *Broadcasting in Asia and the Pacific* (Philadelphia: Temple University Press, 1978)
- Markham, James W., *Voices of the Red Giants* (Ames, Iowa: Iowa State University Press, 1970)
- Mickelson, Sig., *America's Other Voice* (New York: Praeger Publishers, 1983)
- Pirsein, Robert W., *The Voice of America* (New York: Arno Press, 1979)
- Saveskie, Peter N., *Radio Propagation Handbook* (Blue Ridge Summit, PA: Tab Books, 1980)
- Soley, Lawrence C. and John S. Nichols, *Clandestine Radio Broadcasting* (New York: Praeger Publishers, 1987)
- Sowers, Mary W., Gregory Hand and Charles M. Rush, *Monitoring of Harmful Interference to the HF Broadcasting Service, Reports I, II, and III* (Washington, DC: U.S. Department of Commerce, National Telecommunications and Information Administration, NTIA Reports No. 85-187, 86-206 and 87-213, 1985, 1986 and 1987)

NASWA Portraits

Jerry Klinck
43 Lein Road
West Seneca, NY 14224

Deja vous takes on new meaning for yours truly as I type my first column for a SWL periodical in a quarter century. More on this in a later writing. Meanwhile, thanks to Bob Brown for his confidence in my ability to serve our fine club.

My view of "Portraits" is two-fold. I see it as both a way for club members to become better acquainted and a vehicle for us to share tips on equipment and techniques. So when you submit your profiles, please don't hesitate to include info on your DXing which you might share were we to visit your "shack" personally. Thanks!

This month we get to know Errol Urbelis a little better.....



"I really got started in short-wave in 1957 with an old 1939 New York Worlds Fair radio. It was in a beautiful wood cabinet with the unisphere and pylon carved out. I heard a few police calls and that turned me on to the hobby! Then I remember seeing a TV program called 'A Ham is Killed' and all I remember watching is the ham with all his equipment chatting with people all over the world. I forget what happened in the story, but that started me into DX.

"The next day my dad took me to the Lafayette store in Jamaica, NY where I almost went crazy looking at all the receivers. We picked up a Hallicrafters S-53A with the 6-meter band included. My antenna was a 50' longwire in the attic. My first station was R. Moscow and the whole family heard some interesting propaganda about Sputnik.

"My first reception report was a joke. I wrote to R. Sweden and told them I heard them and would like a QSL card. Much to my sur-

prise, after a month I received a pennant, schedule, postcards and a nice letter explaining about reception reports. No QSL then, but my first QSL was from R. Sweden.

"In September of 1958 I picked up a Hallicrafters SX-99 which I am still using today. I started going to 'ham fairs' rather steadily and bought quite a few receivers. I am now using Hallicrafters SX-43, SX-25, SX-99, a Hammarlund HQ-180, a G.E. World Monitor, and a Sony ICF-2010. My antenna is 100' of RG-58U cable.

"The first club I joined was the NNRC, then the URDXCC, followed by 7 or 8 clubs up to 1963, including NASWA when Bill Eddings was the 'main man'. I even have an SWL card from him.

"I also was into card swapping. This is where SWLs had cards printed up and would exchange them with other SWLs worldwide. Often they included info about themselves and their hobby activities. (I was into that myself-ed)" I was able to swap about 600 cards from the 50 states and 65 countries. For some reason this part of the hobby faded into oblivion but I have cards from well-known DXers and old-timers of NASWA.

"My log dates back to 1958 with over 28,000 listings. Every SWBC station I hear goes from scrap paper into my 'DX bible'. If this log was ever lost or destroyed, I would contemplate suicide -hi. (I should think so!-ed.)

"I am quite active in DXing but not much into programs. I like exotic DX. It's been called my 'second wife' because of all the weird hours I spend at it. I like to think we all have similar problems.

"I must be doing something not right because in 33 years of DX I've only heard 188 countries and other DXers have heard as much as 235. Where are those other 47 countries?

"I would like to meet other NASWA members from Long Island."

Thanks for the visit, Errol. His address is: 563 Meadow Road, Kings Park, N.Y. 11754.

Till next time, 73

Kerry

Technical Topics

Ted Benson, WA6BEJ
426 East Fulvia Drive
Encinitas, CA 92024



THE TELL-TALE ODOR OF AMTOR (and what to do about it)

What's that? You say you risked divorce to buy a new RTTY decoder for your shortwave system and now you can't copy anything? Read on...

In the last few years receiving and decoding Teletype (or "RTTY") transmissions has become easier and cheaper than ever. Until just a few years ago "reading" RTTY meant buying and overhauling a large, heavy, mechanical Teletype machine, and building or buying a decoder/driver to interface between the Teletype and your shortwave receiver. The machine took-up a lot of room, required frequent maintenance (it was the only piece of gear in your radio room that needed *oiling*), and made a lot of noise. You were also limited to how many different speeds you could copy.

The most popular source of Teletype, or "RTTY" signals to copy is on the ham bands. Here the messages are never scrambled (it's forbidden by law) and there are always plenty of stations to tune.

With the introduction of microprocessor-based receiving units, RTTY has come easily into the realm of the SWL.

But can it be that easy? Yes and no.

A Little Background

The first commercially successful Teletype machine was invented by a man by the name of Kleinschmidt, and for some time was actually referred to as a "Kleinschmidt Machine." For obvious reasons, the patent holder renamed the unit the "Teletype Machine." The familiar word "Teletype" is actually a trademark. The generic machine is referred to as a "teleprinter." RTTY is an acronym for "radio teletype."

At first machines were connected by wire - much like the telegraph network already in existence. With the advancement of radio,

however, the machines were connected over the airwaves.

Messages could be sent in one of two ways. Short messages were entered directly on the keyboard. The keyboard mechanism would convert the keystrokes into electrical signals, which were sent as quickly as they were typed. Longer messages were stored on paper tape as rows of holes, punched in the paper according to the characters or numbers to be sent (see Figure 1). The tape was loaded into a "reader" for transmission. The reader would then convert the hole patterns into the same electrical signals as the keyboard originally produced, and the message was sent smoothly and flawlessly.

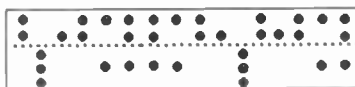


Figure 1. Punched Tape

Bits, Bauds, and WPMs

Teletype signals were originally sent according to a rigid format, known as the "ITA2" or "Baudot" code. In this code, similar to digital logic, no pulse or bit means "space," and a pulse or bit means "mark." Each letter and number has its own unique combination of marks and spaces, but the total number of both always adds up to 5. In addition, each set of pulses begins with a "start" pulse, and ends with a "stop" pulse (see Figure 2).

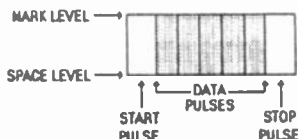


Figure 2. Baudot Format

The entire groups of pulses was sent at a carefully regulated speed. In the early days, the speed was 60 words per minute, or 300 characters per minute (1 WPM = 5 characters, or an "average word"). A better measure of speed is the "Baud," named after Mr. Baudot. "Baud rate" represents the number of bits per second.

As long as people typed messages by hand, this was fine, as most people couldn't type faster than 60 WPM. But when RTTY was being used for sending long weather reports, news articles, and reports, the 60 WPM speed limitation became a problem. Long messages were composed off-line, and stored on punched paper tape. When your turn on the network came around, you loaded the tape and sent the message. The reader and printer were capable of higher speeds than 60 WPM, and like a long-distance phone call the longer your message took to complete the more it cost you.

Life In The Fast Lane

Refinements were made in the mechanical Teletype equipment enabling speeds higher than 100 WPM. Soon several different speeds were being used, partly to make message interception by the competition harder, and partly because no one was willing to force the implementation of a standard.

Speed Isn't Everything

Not only were there several speeds being used, but several "shifts" were around.

letype signals are sent by switching a transmitter between two frequencies, one for "space" and one for "mark." The two frequencies are separated by a fixed distance, known as the "shift." Common shifts are 170 Hz, 425 Hz, and 850 Hz. Wider shifts make tuning the receiving end easier, but require more bandwidth and consequently more expensive equipment. As a result, amateur radio operators ("hams") most often use 170 Hz, while the well-funded military uses 850 Hz. Ships at sea and news services often rely on 425 Hz for their transmissions.

Just When It Was Getting Simple...

For years the Baudot system of RTTY was the only game in town. Aside from worrying about speed and shift, things were pretty simple. That is, until distances were pushed to extreme limits.

Since Nikola Tesla sent the first wireless intelligence, engineers have been pushing the distances achieved with radio. Teletype was no exception. But unlike normal Morse Code or voice communications, RTTY data is sent at a much higher rate, and every little bit counts - literally. When using Morse Code, the receiving operator can usually fill-in missing dits or dahs, or even entire letters, when atmospheric fading causes a momentary loss. In voice, as well, the idea of the message usually gets across even when a word or two is lost. But Teletype relies on the correct transmission of each and every bit, at the correct signal level, or entire blocks of the message might be lost. In many systems, even when you could hear the signal by ear it could not be copied by the Teletype machine.

Several very effective schemes have been devised to get around the problem of fading. First developed commercially, systems such as "SITOR" offered the option of several sub-species of error detection and correction. Some automatically sent blocks of information twice. The receiving end compared both received blocks, and if they matched, printed them once. If they didn't match, a request was sent to repeat the sequence again. This would continue until a match occurred, and then the next sequence would be sent. In other schemes, a count was made of the bits sent, and this count was sent along with the message (similar to the so-called "parity" used in computers). The receiving end counted its bits, and compared them to the original count number. If they matched, it signalled the sending end to proceed. If the count didn't match, a request to resend was transmitted.

Several of these commercial systems are in use today, and almost all marine RTTY traffic uses one or another.

The hams, too, use their own scheme, known as "AMTOR," or Amateur Teleprinting Over Radio. AMTOR is essentially a modified version of the commercial SITOR system, adapted to meet the unique limitations imposed by the amateur radio emission rules. AMTOR is also the reason I get so many cards from frustrated would-be RTTY listeners. You cannot copy AMTOR or SITOR unless your decoder, or terminal unit (TU) is equipped to do so. The simplest TUs can only copy straight Baudot or ASCII RTTY. And

these two modes are now a distinct minority of the RTTY signals on the air.

Since the details of AMTOR are public knowledge, let's look at that system, and then examine a few ways to receive these new RTTY signals. In our discussion, keep in mind that the same details apply approximately for SITOR as well - so we will get double duty from the following explanations.

The AMTOR format starts with a basic 5-bit Baudot character (as shown in figure 2) but at the time of transmission, bits are added, such that the final character "bundle" has a total of four marks and three spaces. At the receiving end the incoming bundle is examined for the correct mark/space ratio. If it is correct, the signal was probably received correctly. If the ratio is not present, there was an error in transmission - bits were lost.

Within AMTOR, there are two different type of error correction schemes available.

Mode A (ARQ)

When the sending station knows who the receiving stations are, it can use a *synchronous* mode known as ARQ, or Automatic Request. The desired receiving stations are called, and data is sent in blocks of three characters at a time at 100 Baud. Between characters there is a pause to allow the receiving station(s) to signal "go ahead" or "repeat," depending on whether any errors were detected. If the message block is repeated, only the final, correct block is *printed* at the receiving end. So as far as the receiving operator is concerned, nothing special has happened.

Mode B (FEC)

There are times when it is necessary to send to any station listening, without knowing ahead of time who that might be (sending a "CQ," or request to communicate, for instance). In marine applications messages are also sent without requiring a reply, such as weather and hazard to navigation messages. In these cases, FEC is an elegant yet simple mode. FEC, or Forward Error Correction sends each character twice, with dummy characters sent inbetween to allow for noise bursts. The receiving end watches for the 4/3 Mark/Space ratio mentioned earlier, as well as discarding the dummy characters. Only the remaining

correct characters are printed, and the duplicate letters sent for error correction are of course omitted. If both copies of a character are lost, either an error character or a simple space is printed in the desired character's place, so you will *know* that something was lost.

ASCII

I alluded to ASCII earlier, but rushed past it. That is because the previous methods of transmission and error correction use either the Baudot format, or a modified version of it. ASCII is in a category by itself.

ASCII, or the American National Standard Code for Information Interchange, was originally developed for computer communications. It seemed only natural, then, that when computers were brought into the world of radio data transmission, that ASCII would follow along.

ASCII is now used by many stations, both commercial, as well as amateur, for transmitting data, often directly from computer to computer. The ASCII code is somewhat similar to Baudot (see figure 3).

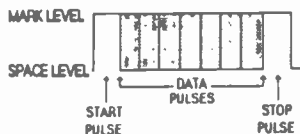


Figure 3. ASCII Format

The format contains seven bits instead of Baudot's five, which allows many more combinations of bit, and consequently many more characters to be represented. Baudot is limited to upper-case letters only. ASCII has both upper and lower case letters, as well as many more special characters.

ASCII characters are often sent with a parity bit. There is both even and odd parity. Let's assume that we are using even parity. The sending unit counts the number of bits in the character's "bundle." If the total number is already even, nothing is added. If the total number is odd, however, a bit is added to

make the total even. At the other end, the receiving unit counts the number of bits in each received bundle. If it is even, there is an excellent chance that the character was received correctly. If it is odd, an error occurred, and one of many schemes may then go into effect to handle the error.

Intentional Garbling

Not all signals are garbled by mistake. Some are mixed-up intentionally. The military, foreign governments, and increasingly the private sector, are using equipment to scramble their RTTY signals so you, or the enemy, cannot receive them.

The most common technique of RTTY encryption is "bit-inversion." In this scheme, a particular bit in each character bundle is moved to a different location in the bundle, or the entire sequence of mark and space bits can be inverted, so mark is space and vice-versa. Obviously, it can be rather easy to break this code, and many commercially available RTTY units are equipped to do so. What they cannot decode are signals scrambled with several of the "DES" schemes. These are based on very complicated computer-generated code keys. Although they could theoretically be broken, it would take a supercomputer thousands of hours to do so, and the key itself is changed many times per second! I'm sorry to disappoint you, but if you hoped to copy the deepest secrets of the State Department on your NRD-525 you are out of luck. (And if you can for goodness sake don't tell anyone).

What then, can you copy on RTTY, and what do you need to do it? Many manufacturer's offer excellent and rather inexpensive units to copy RTTY, even the modes discussed earlier. Such units often utilize either software or IC programs that can be updated as new technology comes along. Some of the units operate on their own, others connect to your personal computer. A few even copy FAX and weather satellite transmission. Many have provisions for automatically determining the format, mode, and speed/shift of an RTTY signal for you! The units simply connect to the speaker or headphone jack of your receiver.

Below is a partial list of manufacturers and suppliers of RTTY equipment and accessories. I urge you to write to them and request literature before you invest in a unit. You will then be able buy a system whose capabilities match your needs. Prices begin at around \$69 and go up to several thousands of dollars.

AEA, Inc.
2006-196th St. SW
Lynwood, WA 98036

Grove Electronics ("Infotech")
140 Dog Branch Rd.
Brasstown, NC 28902

Kantronics
1202 E. 23rd St.
Lawrence, KS 66046

MFJ Enterprises, Inc.
Box 494
Mississippi State, MS 39762

Software Systems Consulting
150 Avendia Cabrillo, suite C
San Clemente, CA 92672

Somerset Electronics, Inc. ("Microdec")
1290 Highway A1A
Satellite Beach, FL 32937

When writing, don't forget to tell them you heard about them in the *Journal of the North American Shortwave Association*.

Next Month

Next month we will take a look at synchronous detection and audio processing, techniques that can make our hobby quite a bit more enjoyable, as well as easy on the ears.

WANTED: Torrestronics WTK-1 Digital Frequency Display with owner's manual. Also need back issues of Hollow State Newsletter, issues #14 through #24. J. Lucas, 160 South Fourth Street, Lindenhurst, NY 11757. Phone (516) 589-1051 evenings.

Company Store

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



For DXing purposes, I have always considered August the last month of summer. Low band conditions usually begin to pick up after the Labor Day Weekend holiday period. Shortly thereafter, the weather begins to cool down in the Northeast. Naturally, this is the perfect time to add a NASWA sweatshirt or windbreaker to your DXing tool box. Is there a better way to prepare for Autumns blustery chill??? The complete NASWA clothing line is available year round. It includes a smart looking lined windbreaker jacket - US\$24.00, a warm sweatshirt - US\$20.00, a cool T Shirt - US\$11.00 and a sharp poplin golf hat - US\$14.00. All items are in NASWA Royal Blue with the club logo in white. The poplin golf hat is adjustable (one size). The other garments are available in small (S), medium (M), large (L) and extra large (XL) sizes. For extra, extra large (XXL) there is an additional US\$1.00 charge for the T shirt and a US\$2.00 charge for the sweatshirt and jacket. Orders are shipped direct from our supplier via UPS. Unfortunately, shipping costs to Canada require an additional US\$3.50.

Our Poplin Golf Hat is the latest addition to the clothing line. Looking at John "Kap" Kapinos, it's not difficult to see why this cap expert selected the club's hat to grace the top of his head. Kap looks rather relaxed since he retired from the Awards Chairman position that he held for many years. Nice job OM!!! Kap isn't disappearing since he is the unofficial advisor to the new Awards Chairman - a fellow that can use all the advise he can get.



Speaking of Kap, the D'Angelo family had the opportunity to see John and Muriel during our recent tour of the Boston, MA area in early July. Special thanks to Jerry and Ruth Berg & Family for their hospitality. We had a ball vacationing in New England and we especially enjoyed spending an evening with some truly wonderful people.

In the coming months the Company Store will be introducing a new catalogue style page to the JOURNAL to replace the existing column. Thanks to NASWA Graphic Design Guru Kevin Atkins for volunteering his time.

In last months QSL Reports, edited by Sam Barto, Don Moore talked about the "Thank You Lab" which is available through the Company Store Reprint Service for only US\$2.00. That reprint is only one of approximately 100 reprints available through the Reprint Service managed by Dave Turnick. Order the complete catalogue for only US\$1.00 from the Company Store. Subject areas include receivers, general DXing/SWling, antennas, other equipment and technical information, Latin America, computers, propagation, history and humor. Incidentally, the catalogue was developed by Don Moore and reflects an extensive research effort on his part in putting together this rich collection of articles that have appeared in the club's bulletin over the years.

I hope you are enjoying the summer. Time to get ready for the upcoming DX season. It should be a good one!!!

73 - RAD

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

Grundig Satellit 500

An unscientific review by Bill Cole

As those who attend ANARC conventions know, Saturday evening is highlighted by a banquet, keynote speech and raffle with the grand prize being a receiver. I have attended each convention since 1985 and have always added \$20+ to the kitty with my purchase of raffle tickets. The 1989 convention in St. Petersburg Beach was my year. I won the grand prize, a Grundig Satellit 500.

• Some Shortcomings

I read with interest the October edition of *Magne Tests...*, a column by Larry Magne in *Monitoring Times*, since it featured the production model Satellit 500. Larry had earlier done a review on a pre-production Satellit 500. Essentially, Larry indicated that the production 500 performed much like the pre-production model. To paraphrase the report; he found that the 500 performed well but had some notable shortcomings. Firstly, sensitivity especially in the 90 meter band was mediocre; more noticeably so in the production model than the pre-production! He also found that the 500 was affected by spurs caused by local AM, FM and TV stations. Finally, the 500 was able to use either nicads or standard batteries. By changing a switch, the 500's AC adapter was used to keep the nicads charged. It was found that the 500 badly overheated certain types of nicads. It was recommended that Grundig be consulted prior to using nicads. On the positive side; the synchronous detector, although not as good as on the Sony 2010, was easier to use; the bandwidth was excellent; the sound quality was good; and the selectivity was the best of any portable and as good as many table top units. Larry also noted that after serial number 802000, Grundig had promised improvements in the set.

• Feature Packed Receiver

When I had finished Larry's article, I rummaged through the warranty papers for my 500. It was serial number 802052. Armed with this information, I took a critical look at my satellit 500. Let me say that the satellit 500 is a feature packed receiver! It operates in four different modes: LW, MW, SW and FM. FM can be received in stereo with the use of

headphones. Bandwidths include: LW 148-353 KHz, MW 513-1611 KHz, SW 1612-30000 KHz and FM 87.5-108 MHz. These bands can be tuned and scanned in several ways. Tuning is by direct keypad entry or by tuning knob. There are 42 alphanumeric memories, with internal rechargeable battery back-up, for frequency storage. The memories are Alphanumeric because in addition to the frequency, they store a 4 letter/digit abbreviation or call sign (BBC, RN, RCI, WRNO, etc) to identify the frequency. These memories can be scanned sequentially or recalled individually. Medium wave scan can be set to 9 or 10KHz. Upper and lower sideband/CW reception is available. The 100HZ raster tuner is used with SSB/CW as well as for synchronous detection. There are two built in clocks and two separate auto on and off sequences can be programmed. Information about all these features is displayed on a big (1.5 x 3.75") Liquid Crystal Display (LCD). Output jacks include an external speaker and a stereo jack for headphones. There is a high level line out jack for a tape recorder and a clock controlled switch socket jack to turn a tape recorder off and on automatically. There is an input jack for an external antenna. There is an internal/external switch to control which antenna feeds the set and a DX/Local switch which functions like an attenuator. Besides tuning controls there are: AGC/MGC knob with switch, volume control, separate bass and treble controls and a lock switch to disable the keypad. There are other features, but I've listed enough to give the idea.

• My Findings

Not having had the benefit of Larry's review, I immediately bought nicads for my 500 because I figured that its large size and many features would make it a battery hog. I have not experienced any trouble with nicad overheating and its battery consumption rate is much less than I expected. I did have a gripe with the outboard AC power supply. This has a european style plug with an adaptor to operate in north american outlets. The poorly made adaptor didn't make proper contact so for the first 24 hours I thought I had a defective power supply. \$2.29 at Radio Shack cured the problem. Larry based

his poor sensitivity criticism upon a direct comparison with a Sony 2010. I sure wish I had a 2010 to compare mine with! I have a Sangean travel portable that cost 50 bucks and the Satellit 500 beat it hands down. Of course that was not a fair comparison. The Satellit is not a DX machine and is weak in the tropical band. Generally I have been pleased with its ability to pull in stations on short-wave, medium wave and FM. I have not found any evidence of overloading or spurs on mine when used on the built in antenna. I have found a spur or two when using it on a 75' long wire. This is very minor and taken care of by changing the DX/Local switch. Lowering the RF gain also handled this minor problem. I agree with Larry on his assessment of selectivity, it is excellent. Larry's assessment of the audio is also correct, it is very good. Although Larry didn't mention it, stability seems good especially when listening to SSB.

● My Criticisms

I have a criticism or two of my own to add to Larry's list. Firstly, I consider the Satellit 500 to be a small table model that will operate on batteries. At 11.75 x 6.75 x 2.5" and weighing 5+ pounds with batteries, it is not something I throw in an overnight bag when I travel. Its battery consumption makes the AC adaptor almost a necessity and adds over a pound plus its bulk to the package.

The LCD is poorly lit. It automatically turns itself off after a few seconds when on battery power but can't be turned off at all when the AC adaptor is used. Each time the AC adaptor is plugged into the set, the seconds on the clock apparently reset to zero. After a few pluggings and unpluggings, the time is off by several minutes. The spring contact in the battery pack is of thin steel and bends easily. When this occurs, the batteries are able to move which interrupts the power. This resets the clock, and causes all sort of nasty things to happen. Lastly and most disturbingly, the darned CPU locks up! When this happens the LCD displays garbage and most of the key operated functions will not work. The 500 can still be tuned with the knob, but without the LCD it is impossible to tell what's been tuned. The only way I've found to get out of this lock up is to disconnect all power and remove the batteries. After sitting without power for a couple of hours, the set returns to normal.

● All Things Considered

I am pleased to have won the Satellit 500. It has many superb features and is a good SWL receiver. To quote Larry Magne one last time, "by and large it is quite a performer." However, if I was going to spend my own five hundred bucks, I don't think that the Satellit 500 would be my first choice in a portable.

FOR SALE: Japan Radio Company NRD-525 sn 39119. About two years old. Includes CMH-532 Serial Interface RS-232, 6ZCJD00140 Serial Interface Cable, NVA-88 Speaker, CFL-233 RTTY 500 Hz filter, CFL-233 1 kHz RTTY filter, CFL-218 1.8 khz SSB filter. Very clean, no modifications. Includes receiver control software (PC-compatible). \$1730 new, \$1150 plus shipping/insurance or arrange pickup/delivery in this area. Tom Sundstrom, PO Box 2275, Vincentown, NJ 08088-2275. Voice: 609-859-2447. Fax: 609-859-3226. MCI Mail: 244-6376. Pinelands RBBS: 609-859-1910.

Listener's Notebook

Bruce MacGibbon
2295 Juniper Avenue
Gresham, OR 97030



COPYRIGHT NOTICE - BBC Monitoring Service items (WBI for World Broadcasting Information) are copyright and may not be reproduced without BBCM permission)

JAPANESE MIDDLE WAVE STATION LIST - This list contains all Japanese MW stations in frequency order with station name, transmitting power, location, prefecture and call sign. Also contains address guide, QSL information and DX map.

The price is only \$8.00 US (cash only accepted, no checks accepted) or 14 IRC's by air mail delivery.

Order to: Nobuyoshi Aoi, 3-20-18 Maehara, Koganei shi, Tokyo 184, Japan

ALGERIA - Sked of the Entreprise National de la Radiodiffusion Algerienne to Sep. Alg = Algeria. 02-0230 SP 9640 (235 deg./SAM, 15215 (235 deg./SAM); 08-16 FR 15205 (171 deg./SAlg); 14-16, 11715 (20 deg./CEU); 16-17 AR 11715 (20 deg./CEU, 17745 (146 deg./EAF); 16-17 FR 9510(E&W), 9685(N), 15160(20 deg./CEU); 17-18 AR 6145(E&W), 11715(20 deg./CEU), 17745(146 deg./Eaf); 17-19 FR 9510(E&W), 9535(146 deg./Eaf), 9685(N), 15160(20 deg./CEU); 18-20 AR 6145 (E&W), 7145(98 deg./ME), 11715(20 deg./CEU), 17745(146 deg/Eaf); 19-20 EG 9510(E&W), 9685(N), 15215(235 deg./SAM); 19-20 FR 9535(146 deg/EAF), 15160(20 deg./CEU); 20-21 SP 17745(146 deg./Eaf); 20-22 AR 6145(E&W), 7145(98 deg/ME), 11715(20 deg/CEU); 20-23 FR 9510(E&W), 9535(146 deg/Eaf), 9685(N), 15160(20 deg/CEU); 22-23 AR 7145(98 deg/ME), 11715(20 deg./CEU); 22-23 SP 15215(235 deg./SAM). Address: S/Direction des Ecoutes Radiophoniques, 21 Boulevard des Martyrs, Alger, Algeria. (Tohru Uno in 'Japan SW Club's', "SW DX Guide" 7/90)

ANTIGUA - BBC and Deutsche Welle w/IS's at 0457 on 9640 and both in EG. Switching error on 7/13. (Eric Swedberg, Portland, OR)

BANGLADESH - The official sked effective from 5/6 for Radio Bangladesh is as follows: 08-0830 Voice of Islam (EG) and 1230-13 GOS (EG) to Europe on 15195 and 17850; 1315-1345 Nepalese, 14-15 Urdu, 1515-1545 Hindi, 16-1630 AR, 1630-18 Bengali all on 15255 and 11705; 11815-19 GOS(EG) and 1915-20 Bengali to Eur on 15255 and 11860 (Direct) (In reality, station is operating on widely fluctuating outlets! Bob Padula via 'Shortwave Station News' in "ARDXC" 7/90)

Via 'World Broadcast News 4/90 and thanks to Gordon Darling, Papua New Guinea for this:

External Services Expanded by M.N. Mustafa.

Dhaka - In its external service to Mynmar, formerly known as Burma, the government plans to launch a thirty minute news service in Burmese language. Sharing a common border in the south, Mynmar and Bangladesh are close neighbors, having trade and cultural links for centuries. The news service is expected to go on air this year after financial, staff recruitment, and administrative formalities are completed.

Radio Bangladesh opened its first external service after independence in 1971. With this news service in Burmese, External Service of Radio Bangladesh will now have nine services with a total daily duration of seven hours. With its debut, the Burmese service will be the first of its kind towards Southeast Asia. Of the eight services Radio Bangladesh currently runs, two are in English, beamed towards Western Europe and Scandinavia, four towards the Middle East in Bengali and Arabic and the rest to India, Pakistan and Nepal. It employs a total of 700kW shortwave transmission power recently adding two Thomson 250kW transmitters. Run under a separate directorate with a budget of its own, the External Services of Radio Bangladesh also publishes a magazine Bangladesh Calling, circulated in the target areas abroad.

Also via Gordon Darling, Papua New Guinea in 'World Broadcast News' 4/90: One Radio Network Serves Three Nations by M.N. Mustafa & part of this story was reported by Indrajit Lahiri, India -

Amid week-long festivities, Radio Bangladesh recently celebrated its Golden Jubilee -- 50 years on the air spanning three governments. Highlighted by a grand opening by the head of state, the celebrations included the staging of old dramas, an exhibition, the publication of a brochure on radio's pioneering role and the release of recordings of songs from the last fifty years.

Dhaka was the site of the first radio station in the region, launched during World War II as a war propaganda station. Dhaka made its debut on December 16, 1939 from improvised studios in a rented building. The transmitter was a Marconi 5 kW medium wave unit. Having been retired in 1971, the transmitter is now a museum piece.

Today, Radio Bangladesh has 33 transmitters ranging from 10 kW to 1000 kW. Fourteen of them are medium wave with a total of 1590 kW power, five short wave with a total of 1707.5 kW and 14 FM transmitters. About 97 percent of the total land area and 100 percent of the population are covered by radio. The uncovered areas lie in fringe border enclaves surrounded by Indian territory. No other media in Bangladesh is as pervasive as radio. On average 67 percent of the population listens to radio.

After independence, a number of transmitters were installed at regional stations located in the major cities of Bangladesh. These regional stations originated their own programs for entertainment and rural development as well as relay news and other national programs from the National Broadcasting House in Dhaka.

Radio Bangladesh began with three small studios. Today, its six stations have a total of 50 well-equipped studios, including ten at the newly built National Broadcasting House at Sher-e-Banglanagar in Dhaka. Most of these facilities have been added since the independence of Bangladesh in 1971.

Since Bangladesh is an agricultural country, farm programs play a key role in motivating farmers to accept modern farming methods as opposed to traditional ones. Consequently, separate broadcast time is allocated exclusively for rural listeners. Even though the bulk of listeners are rural and television dominates the urban areas, Dhaka has also a separate service dealing with basic urban issues.

In order to maintain a qualified workforce, Radio Bangladesh attaches great importance to human resource management and development. To this end, a National Broadcasting Academy has been set up to train new entrants and to organize special training according to job requirements. The network has a staff of 4000.

Besides broadcasting a total of 85 hours of programming for local listeners from the six regional stations, Radio Bangladesh also broadcasts to overseas listeners a total of six and a half hours of programming in Bengali, English, Arabic, Hindu, Urdu and Nepalese languages. Radio Bangladesh's external service uses 700 kW in the shortwave band to reach the India sub-continent, and South-east Asia. It also runs two services directed towards Europe daily and two for the Middle East.

Radio Bangladesh emerged as a national broadcasting organization with the liberation of Bangladesh on December 16, 1971. It had to operate its home and external services from the regional station of Dhaka. Overnight, the Dhaka station was transformed from a regional to a national station and has improved slowly to what it is today. Radio Bangladesh now has a total of 2311 kW of installed power broadcasting to every nook and cranny of the country and beyond.

Development plans -

To keep pace with rapidly advancing technology, Radio Bangladesh has undertaken a comprehensive plan to replace old and less powerful transmitters. Under this scheme, two medium wave transmitters, 250 kW each, will replace the aging transmitters now in use at the Dhaka station. Three more transmitters, 100 kW each, will be added to the present low-powered transmitters at Rajshahi, Rangpur and Sylhet. The old transmitters will be used to broadcast alternative programs on a second channel. In order to run three channels simultaneously, Radio Bangladesh is currently negotiating to install two more 100 kW transmitters at Dhaka. Plus, a new station will be set up in Bandarban to serve the tribal people. It is the second radio station to be set up for the ethnic

minority community.

Radio Bangladesh is well developed in comparison to other media and covers the entire country. Besides, providing a continuous source of information and entertainment, Radio Bangladesh is closer to the people than any other media especially in hours of distress.

BHUTAN - 5023, 1250-1311, BBS(tentative), weak, time clicks, sub-cont. type music, fast fade-out on 5/25 (Ron Howard, Carmel, CA)

BOLIVIA - 4599.3, 1010, Radioemisoras Villamontes, Tarija. First heard 6/16 at 1010 w/talks. At 1036 ID as 'Alli donde... la gente permanece, el dial de su receptor, alli estamos nosotros. Somos Radioemisoras Villamontes, una propuesta seria, responsable, eficaz, al servicio de los mas altos intereses del sudeste boliviano, Villamontes, Tarija, Bolivia'. Time check at 1037 as '6 de la manana 37 minutos en nuestros estudios. En estos minutos que restan para las 7 de la manana, amigos auditores, les ofrecemos Musica Tropicalisima'. Best heard in LSB. Also on 6/18 from *0954. Took Radio Fides programming from 1100 on 6/18 and heard//6155. (Gabriel Ivan Barrera, Buenos Aires, Argentina via 'Peter Bunn's' 'OZ DX' No. 57 7/90)6080, *0825-0502*, R. San Gabriel(tentative). Heard many days in May. Aymara language, sign-on QRM R. Australia, 0830 and 0500 same choral anthem, after 0833 local music, before sign-off light pop music, poor-fair (Ron Howard, Carmel, CA)

BRAZIL - Facts about Radio and TV Broadcasting in Brasil -The first public radio broadcast in Brasil took place in the city of Rio de Janeiro on September 7, 1922. This first program consisted of a speech by President Epitacio da Silva Pressosa upon the celebration of the 100th Anniversary of the Brazilian Independence from Portugal. The transmission was not long and lasted only a few hours. A small transmitter was set on the top of the Corcovado Mountain (where today is the statue of Christ the Redemmer, one of Rio's trademarks) and was built there by the Westinghouse Electric International and Brazilian Telephone Company. When the celebrations of Independence were over, the small transmitter was taken away and taken apart.

Only in 1923, on the 20th of April, the first Brazilian Radio Station was to appear: The Radio Sociedade do Rio de Janeiro. From there on the pace was very fast for the development of radio broadcasts in Brasil. Nearly all state capitals were equipped with at least one or two radio stations. The industry grew even faster after World War II. In 1954 there were 500 radio stations in Brasil and by 1962 Brasil was the best equipped country in South America as far as radio stations were concerned.

The first law to be passed in Brasil concerning radio transmissions in the country was dated May 27, 1931. Before then all regulations were set by the Ministry of Transport. The only complete legislation on radio transmissions in Brasil came in 1962.

A remarkable experience however was done in 1892, by a Brazilian priest from Porto Alegre in the southern state of Rio Grande do Sul: Father Roberto Landell de Moura was able to transmit and receive the human voice without the use of wires by using a basic equipment consisting of one valve (similar to Crookes') and three electrodes. In 1894 he performed other experiences with the same type of equipment in the city of Sao Paulo and six years later he received a patent number to his "invent", numbered 8.279.

A Short History of Radio Nacional de Brasilia -

In 1958, two years before the new capital of Brazil was inaugurated, the government created Radio Nacional de Brasilia to serve, initially, as the only communication medium for the so-called "Candangos", the people who were building the new city. The radio began its operation in Nucleo Bandeirante - a type of camp town where the "Candangos" lived until the residential buildings were completed.

Radio Nacional de Brasilia's first official transmission was on May 31, 1958. By then, the headquarters had been moved to an auditorium within Brasilia and the Radio was broadcasting from five a.m. until midnight.

During those early broadcasts, much of the programming was devoted to public service. Many people used the Radio as a means of sending messages to their families in other parts of the country. RNB was so effective in this service that the Brazilian Postal Service at one point tried to limit the number of messages which could be passed over the air. The auditorium

also became a meeting place for local singers and their followers, and these gatherings served to help create a community spirit among those who attended.

In 1960, large caravans of people moving to the newly-completed capital started down the roads from Belem, Mato Grosso, Rio Grande do Sul and Rio de Janeiro. This movement was immediately given the name "the march of national integration", and RNB participated actively. The Radio sent reporters out all along these highways to accompany the new arrivals.

During the inauguration of Brasilia, RNB's headquarters were moved to the current - yet still temporary - building located near the city's centre. It was also at this time that RNB was integrated with Radio Nacional do Rio de Janeiro, one of the oldest and most prestigious radio stations in Brazil, which gave the Radio links with every part of the country. Thus, nearly 50 Brazilian stations re-transmitted RNB's coverage of the inauguration of the new capital.

In June, 1972, RNB began broadcasting test transmissions in English to Europe, to determine the viability of an international service. In September of the same year, the International Service was officially inaugurated, with four one-hour programmes in different languages (English, German, Portuguese and Spanish). In November, the French language was added, and in September, 1973, Italian was added.

However, at the time, we were using our 10-kW transmitters, designed for national coverage, and reception abroad was never as good as we should have liked. Therefore, we began plans for the purchase of transmitters which should effectively send our signal to distant lands.

In 1974, Radio Nacional de Brasilia began broadcasting its programmes on a new 250-kW short-wave transmitter, but during the same year we were faced with a number of problems, which forced us to limit our language services to English, German and Portuguese and to discontinue the publication of our monthly bulletin. Three years later, in June 1977, we had to suspend our International Service and in its place we started broadcasting a new short-wave service to the Brazilian Amazon Region. Such suspension, however, was only temporary, and on March 9, 1979 we resumed our International Service with experimental one-hour broadcasts in English to North America. These were later amplified to include broadcasts in English to Europe and North America and in Portuguese to Africa and the south of Europe.

Besides our broadcasts to the Brazilian Amazon Region, we have a medium-wave home service on a 10-kW transmitter, frequency of 980 kHz, and finally a medium-wave home service on a 300-kW transmitter using the same frequency of 980 kHz.

We also operate an FM stereo transmitter on the frequency of 96.9 MHz. and a colour TV station.

The International Service has recently become an autonomous entity with its own management, under the denomination of Radio Nacional do Brasil.

On November 9, 1981 we started a new short-wave service in Spanish having as target areas the Central and Southern Regions of the South American Continent.

And finally, on the 24th of May, 1982 our German service was resumed with daily programmes. (Thanks to John Carson, Norman, OK for this material received directly from station)

Radiobras now employs 25% less staff following reforms - A Voz do Brasil, Brasilia, in Portuguese 2200 gmt 21 Jun 90 - Summary of Report:

The Justice Ministry report that will be submitted to President Collor will emphasise the administrative reform carried out at Radiobras. As a result of this reform the organisation dismissed 25% of its employees; it has now only 998 employees, instead of the 1,332 it had on 13th March. To reduce expenses Radiobras closed 14 regional offices and reduced the number of employees at the seven remaining offices, which are now branch offices of the Brazil Agency. (WB1 6/29)

4915, 03-0330, R. Anhanguera, program of various music//6080, 11830. All frequencies fair-good on 6/10 (Ron Howard, Carmel, CA)

CHAD - Via a recent QSL Card received by Eric Swedberg, Portland, Oregon is this schedule for Radiodiff. Nationale Tchadienne, N'djamena: Mon-Fri 0425-0730 on 4904.5; 1025-16 on 7125; 16-22 on 4904.5; Sat: 0425-0730, 16-23 on 4904.5; 1025-16 on 7120. Sun: 0425-07, 16-22 on 4904.5; 07-16 on 7120.

CHILE - A new station is on the air from June 1990. It is called Radio Esperanza, and uses 6090 kHz. First heard active on shortwave on June 7th, 17-1735. At 1700 they had a programme called 'Capsula Cientifica' from the transcription service of VOA. At 1735 gave the ID: 'Esta es Radio Esperanza de Temuco, 106.9 frecuencia modulada y su estacion de onda corta CE609 en la frecuencia de 6090 kiloHertz en la banda de 49 metros'. They then presented a programme called 'Enfoque de la Familia'.

I heard this station in Santiago during a trip to Chile. They only broadcast on FM (106.0) and shortwave (6090). The address for reports is: Radio Esperanza, Casilla 830, Temuco, Chile. Or send reports to: Dinamarca 578-B, Temuco. Gerente is Mr. Rodolfo Campos. I rang them while in Santiago (the number is 045 213790) but they weren't answering their phone. (Gabriel Ivan Barrera, Buenos Aires, Argentina via 'Peter Bunn's' "OZ DX" No. 57, dated 17/90)

CHINA - CPBS - Broadcasts for National Minorities Sked: 0000-0026 Kazakh 15670, 11375, 5440-Urumqi, 4970-Urumqi, 4330-Urumqi; 0330-0356 KK 9920, 9775, 8566; 04-0426 Mongolian 9920, 9775, 8566, 6074-Hohhot, 4800, 4525-Hohhot, 1458-Hohhot; 0430-0456 Tibetan, 0530-0556 Kazakh 17635, 15670, 11630; 05-0526 Uighur 17635, 15670, 10260; 09-0926 9920, 9775, 8566, 1206-Yanji; 10-1026 Uighur, 1030-1056 Kazakh 15670, 11375, 10260; 11-1126 KK 9775, 5420, 4190; 1130-1156 Mongolian 9775, 6974-Hohot, 5420, 4800, 4525-Hohot, 4190, 1458-Hohhot; 12-1226 Tibetan 11630, 11375, 8566, 7110-Lhasa, 5995-Lhasa, 4085-Lhasa; 1230-1256 Uighur 11375, 10260, 8566, 5800-Urumqi, 4735-Urumqi, 3990-Urumqi; 13-1326 Mongolian 11375, 10260, 8566, 5440-Urumqi, 4970-Urumqi, 4330-Urumqi; 1330-1356 Mongolian 1375, 10260, 8566, 5060-Urumqi, 4980-Urumqi, 4220-Urumqi; 2030-2056 KK 9775, 5420, 4190, 1206-Yanji; 21-2126 Mongolian 9775, 5420, 4800, 4190; 23-2326 Tibetan 15670, 11630, 11375, 7110-Lhasa, 5995-Lhasa, 4085-Lhasa; 2330-2356 Uighur 15670, 11375, 10260. (WBI 7/13)

CPBS 1 Sked - During winter time in China, all programmes will be one hour later than shown. This schedule shows approximate short wave frequency use only; *1858 on 15390, 10245, 9080, 9064, 7935, 7525, 7516, 7505, 6840, 6750, 6125, 5915, 5880, 5320, 4905, 4460, 3220. 1858-1905 National anthem and programme preview; 20-2010 News; 21-2105 Programme preview; 2120 Freq change 15390, 11330, 10245, 9080, 9064, 7935, 7525, 7516, 6750, 6125, 5915, 5880, 5320, 4460, 3220; 2130-22 News and press review; 2230 Freq change 15520, 15390, 12120, 11610, 11330, 10245, 9800, 9064, 7504, 6840, 6750, 6125, 5880, 4460; 2230-2245 "Military Life"; 23-2305 News; 2330-24 News and press review (Repeat of 2130); 0000 Freq change 17605, 15550, 15390, 12120, 11610, 11330, 9064, 6840; 01-0115, 02-0210 News & 0250-0255 Programme preview(not Sun); 03-0330 "Half an Hour at Noon" (News and Music); 0430-0440 News(international - not Sun); 0500*; *05-0755* (except Tues) w/News at 05-0510, News Summary 06-0605, News 07-0710 on 17605, 15550, 15390, 12120, 11610, 11330, 9064, 7504, 6840. *0755 on 17605, 15550, 15390, 12120, 11610, 11330, 9064, 7504, 6840. 08-0810(except Sun) News; 0850-09 Programme preview; 09-0905 News summary; 0930-10 National Hook-up; 10 Freq change 17605, 15390, 12120, 11610, 11330, 9800, 9064, 7516, 7504, 7440, 6840, 6750, 6125, 5880, 5320; 1045 freq change 17605 dropped and 4460 added; 11-1130 National hook-up (Rpt 0930); 1130 freq change 15390, 11610 dropped, 7935 added; 1230-1245(Sun) Economic information; 1230 freq change 12120, 11330 dropped, 7525, 3220 added; 13-1310 News (International), 14-1410, 15-1510 News (domestic), 16-1610 News (International), 1635* (WBI 7/13)

CPBS Second Programme Sked - *1958 Chinese Std 11740, 11630, 10260, 9400, 9390, 7770, 6890, 5163, 5075, 4250, 3290; 1958-2005 National Anthem and programme preview; 21-2115 (Tue,Thu,Fri) "A Big Family of Nationalities"; 2130 Freq change 12200, 11740, 11630, 10260, 9400, 9390, 7770, 6890, 5075, 5290, 5163, 5075, 4800; 22-2230 News and press review(Rpt 2130 CPBS1); 2230 Freq change 17700, 12200, 11505, 11040, 10260, 9775, 9755, 9400, 9390, 7770, 5075, 4800; 23 Freq change 17700, 15030, 12200, 11505, 11040, 9775, 9755, 9400, 7770, 4800; 01 Freq change 17700, 15500, 12200, 11505, 11040, 9775, 9755, 9400, 7770, 4800; 01 Freq change 17700, 15500, 15030, 12200, 11505, 11040, 9400, 7770; 0215-0220 Programme preview; 0415-0445 News (Rpt 0300 CPBS-1); 0500*.

05-0855 (except Wed,Fri) Chinese Std (no significant programmes) 17700, 15500, 15030, 12200, 11505, 11040, 9400, 7770; 0855-0905 (Wed,Fri) National Anthem and programme preview; 09-0910 Economic information; 10 Freq change 17700, 15030, 12200, 11630, 11505, 11040, 9775, 9755, 9400,

7770, 5075; 1030 Freq change 17700, 15030, 12200, 11740, 9755, 9400, 7770, 6890, 5075, 4250; 12 Freq change 17700, 12200, 9775, 9755, 9400, 9390, 7770, 6890, 5075, 4800, 4250; 12-1205 News; 1230 Freq change 17700, 11630, 9775, 9755, 9400, 9390, 7770, 6890, 5075, 4800, 4250, 3290; 13-1330 National hook-up (Rpt #930 CPBS-1); 1500* (WBI 7/13)

CONGO - Voice of the Congolese Revolution Sked - 04-01 Multilingual (in French, Lingala, Kikongo, Subia, EE, PP) 1476, 873 VHF/FM; 05 News in FF, 0630 (Mon-Fri) News in EE, 07 News in French on 9715/9615, 7175/7105, 6115, 1476, 863 VHF/FM; 11 Freq change 15190/11710, 9715/9610, 6115, 1476, 863 VHF/FM; 12 News in FF; 1330 News in FF; 17 Freq change 6115, 5985, 4765, 1476, 863 VHF/FM; 1830 News in FF; 2230 News in FF; 23(Sunday) close down time; (but sked shows to 01(except for Mon-bmm) (WBI 7/6)

Change of shortwave frequencies - Monitoring research 26 Jun 90 -The Voice of the Congolese Revolution in Brazzaville was observed on 26th June signing off at 2100 gmt on 4765 kHz and a new frequency, 5985 kHz - a replacement for 3265 kHz. It was also observed on that same day on 15190 kHz at around 1450-1600 gmt - a frequency which, according to the station's experimental shortwave schedule, was only used at weekends. (WBI 6/29) 4765, *1700, RTV Congolaise(maybe)/UNID (in 'Jul' "LN") is being noted from 1700 (carrier/pgm suddenly on - no IS/ID) on days checked since 2 June. Signal has ranged from poor to fair. No ID has been heard, and if RTV Congolaise, none of the other reported frequencies are in //. Language is French. Announcer is always M. Programming varies from sports, talk, pop music. (Mike Hardester, Okinawa) Note: Didn't hear Voice of the Congolese Revolution on 11710 or 15190 on 7/10 when I checked at 1430 but heard them at 1517(tentively) on 7/10, M w/talk in FF t/1529 into hilife music and dropped signal at 1531 or changed frequencies. Haven't heard them since on either of these frequencies. (bmm)

COSTA RICA - Radio for Peace Int'l - Via the "RFPI" Newsletter for July - Due to severe interference from Radio Baghdad on 13.660 MHz we have decided to move to 13.630 MHz and we are now testing on 13.630 MHz to see how reception fares.

CUBA - Radio Havana Cuba - Since May 1st 1961, when the station was officially founded, the friendly voice of Radio Havana Cuba has been telling the world about the achievements of our people, denouncing the aggressive politics of imperialism and bringing to our fraternal nations the Cuban Revolution solidarity message.

Political figures, intellectuals, students, peasants and workers have had their voices heard through our international broadcasts. Our most varied programming, which includes news, commentaries, music programs, sports, and cultural features, has been a source of information and entertainment to our listeners all over the world.

By tuning in to Radio Havana Cuba our listeners can enjoy the music of Cuba, Latin America, the Caribbean, and other parts of the world. Through our broadcasts, our friends can learn about life and traditions in Cuba, about how the socialist way of life keeps progressing, about the decisive role of women in our society, about the achievements and the hopes of the Cuban youth. They also hear commentaries and interviews about events taking place in other countries all over the world.

Items such as "The Mailbag Show", "Cuba Today", "The World of Stamps", and "DXers Unlimited" -- our program for DXers -- and many others have given us the opportunity to strengthen the friendly ties with our listeners.

A proof of the constant multiplication of those ties is the great number of letters we receive -- from more than 160 countries in all the five continents -- letters in which our listeners and friends express their ideas and give us their opinion about our programs, greatly encouraging us in our work.

The first experimental transmissions of two hours in Spanish and in English, which were the life sign of Radio Havana Cuba when it went on the air a few days before the mercenary invasion of Playa Giron (Bay of Pigs), have at present developed into an extensive programming in nine languages: Spanish, English, French, Portuguese, Arabic, Quechua, Creole, Guarani, and Esperanto, aired to the most diverse regions of the world. An enthusiastic team of journalists, announcers, operators and workers in general assure, in all those languages, a complete and varied programming

which totals more than 54 daily hours.

Every year, our station organizes a contest in which thousands of listeners participate. The winners are awarded trips to our country with all the expenses paid and, in this manner, many friends have had the opportunity to enjoy the hospitality of our people.

Our station also promotes Friends' Clubs with the aim of strengthening the friendly ties and exchanging experiences. These Clubs are formed by groups of students, workers, peasants or housewives who get together to listen to our transmissions and discuss determined topics. The comments and suggestions they send us are valuable contributions to the day-by-day improvement of the programming offered by Radio Havana Cuba.

Radio Havana Cuba Published Sked from 5/7 shows relay sites. From USSR is listed: 11930 to Europe 21-23 in FF (21-22) & EE (22-23); 21670, 15230 to Mediterranean & ME at 18-21 in SS (18-20) & PP (20-21); 17860 to Mediterranean & ME 18-21 AA (18-19), FF (19-20), EE (20-21); 17835 to Africa 18-21 SS (18-20), PP (20-21); 17890 to Africa 21-22 FF. (John Carson, Norman, OK)

DENMARK - A local Danish station, "Radio Vicktor" plans to use the facilities of Radio Moscow's External Service on shortwave for reciprocal broadcasts, according to a report over Radio Denmark. Radio Vicktor is located in the town of Esbjerg, and the proposal is for Radio Moscow's Danish language department to present the programmes. In return, Radio Moscow programming, in Danish, would be transmitted over Radio Vicktor's facilities. The anticipated schedule is for a weekly broadcast. Radio Vicktor is also seeking air-time over shortwave facilities in Germany. Startup date is unknown, but hopefully by the end of August. (Finn Stelmach, via 'Shortwave Station News' in "ARDXC" 7/90)

GERMAN DEMOCRATIC REPUBLIC - 13770NF, *2145-2230*, Radio Berlin Int'l, EF on 6/28 (Bob Padula, Victoria) & EE to NA at 0206//13610 on 7/2 (Mick Ogrizek, Victoria) & both via 'Shortwave Trail' edited by Craig Seager in "ARDXC" 7/90. 13770NF, 0404, Radio Berlin Int'l, EF, W talking about political parties in East and West Germany and election procedures and location of capital when Germany reunited to 0407 brief music then sports news and said 'Sports Union' may soon become inoperative due to a lack of money. Not particularly that good of a signal due to Noise and at closing announced EE Sked and said 13760, so ex that now on 7/10 (bmm)

GHANA - Akan Producer Keeps Language Traditions Alive - Accra - Besides being the longest running and most popular cultural program, the Ghana Broadcasting Company's (GBC) "Antiref Pa" is also preserving the African oral tradition. Some feel it does so more effectively than conventional methods. The program, presented in Akan (language of the majority tribe in Ghana), has been a most useful forum for their lively public discussions of Akan oral tradition.

Akwasi Donkor, the program's originator, has been compiling and presenting the program since its inception in September 1965. When he began, his only aim was to produce a program which would be informative yet entertaining. So, he admits the program's success is overwhelming for him.

It seems Donkor's command of the Akan language and tradition coupled with his easy broadcasting style have earned "Antire Pa" top audience ratings. As GBC's most respected program, it won the National Award for Excellence in program production in 1986 and again in 1988. Donkor himself has won the Broadcaster of the Year Award more than once.

Although "Antire Pa's" strength is the oral tradition, modern music is presented side by side with the traditional. Forward thinking Donkor feels, "Today's issues will become tomorrow's traditions."

"Antire Pa's" interactive format encourages listener participation, which aids the intelligent and exhaustive discussion. The most reactive audience are the "Antire Faily Groups", or listener clubs. Formed with a common interest in the program and a thirst for knowledge of Akan oral traditions, the clubs provide a large volume of material for the show. "At this rate," says Donkor, "there's no way we are ever going to run out of material."

For more than twenty-four years, "Antire Pa" has changed little, even its time spot, 1:30-2:00 Friday afternoon, has remained the same. The word "antire" is an early afternoon greeting, so the program would seem

odd at any other time of day. ("World Broadcast News" 4/90 via Gordon Darling, Papua New Guinea)

GUAM - The High Adventure Ministries' Voice of Hope - Asia has ceased test broadcasts via the transmitters of KSDA. According to High Adventure Ministries they will commence broadcasts via their own station (which has the call-sign KHBN) in Guam in October or November this year. The planned "start-up" schedule is: 10-16 on 9830, and 20-0000 on 9820. Both time blocs will include programmes in English, Mandarin and Korean.

The inauguration of KHBN will bring to three the number of stations in the Voice of Hope International radio network. High Adventure Ministries also advise that they plan to increase transmission via their other two stations during the current financial year. King of Hope, in Lebanon, will add a further six hours programming per day by extending its broadcasts from 2200-0400. Additional programming will be provided in African languages and Russian. KVOH will increase the hours it broadcasts also, with Spanish language broadcasts to the Americas being extended. Thanks to the station for sending that along. (via Radio Australia's 'Japanese DX Time' on 7/14 edited by Mick Ogrizek of the 'Australian Radio DX Club')

INDIA - Radio Kashmir - Leh has started testing on 3330 kHz during local evening transmission. The complete sked of R. Kashmir Leh is as follows: 0155-0400 w/EE news at 0240-0250 on 1053, 4760; 1130-1630 w/EE news at 1530-1545 on 1053, 3330. (Kanwarjit Sandhu, Ludhiana, India)

3330NF, 1457-1630*, R. Kashmir, Leh(t), Hindi, flute music, M talk. At 1530 EE news, ex 4760. QRM: Ute carrier on 5/9 (Valery Ostroverkh, Karaganda, Kazakh SSR)

11620, 13-1530, AIR, Delhi, "Special" (unannounced) program in Kashmiri (targetted to Kashmir) daily. At the moment, no AIR official is ready to talk about this transmission, and for this reason it can be called clandestine operation. (Kanwarjit Sandhu, Ludhiana, India)

INDONESIA - A summary of the latest monitoring of some RRI outlets, for local evening service via 'Shortwave Station News' of the Australian Radio DX Club(ARDXC) dated 7/90.

2390 Cirebon *17-2150*; 2472.4 Purwokerto *17-2155*; 2490 Unjung Pandang *1615-21*; 3241 Ambon *1145-17* (also -20*); 3260 Kupang *1530-2130*; 3276.8 Surabaya *17-2130*; 3277 Jakarta *13-23*; 3355 Sumanep *17-2115*; 3376 Medan *1730-2305*; 3381 Malang *17-2210*; 3935 Semarang *10-17* (reactivated); 4719 Ujung Pandang *2055-0000*; 4774 Jakarta *13-23*; 4902 Surakarta *1715-22*; 5256 Sibolga *10-17*; 6187 Manokwari *1030-1330* (sometimes - 14*); 9552 Unjung Pandang *0000-07*; 9743 Sorong *0055-07*.

Mike Harvester monitored these Indonesians from his listening post in Okinawa. (Unfortunately, Mike will be transferring back to the states on 8/7) 3148.3, UNID Indo-lang station noted on 6/16 at 1510 to 1518 w/M announcer and vocal music. Covered by ute at 1518. Still covered on various rechecks. Poor to fair signal level. RPD Belitung on late and drifting? 3264.9, 1555-1632, RRI Bengkulu(t), Indo, M announcer w/several RRI mentions, but never a clear studio ID. Pop music. Int'l news by M on the hour. After news into mostly romantic (sounding) songs on 6/16 3306.0, 1525-1546, RRI Dili, Indo, M & W announcers, vocal group music, from 1534:30 to 1538:30, there were five (5) short announcements which sounded like commercials, though no specific name was heard. At 1544:40, sign-off announcement by M w/RRI ID, into chimes, "horn," and open air at 1546:00. Carrier off at 1546:20. There was QRM from an English language station which I hated had a M announcer and one clear announcement on the half hour: "This news comes to you from" Who? on 6/16.

ITALY - Italian Radio relay service - IRRS-Shortwave began regular operations in February 1989 following three months of highly successful programme and equipment tests that brought a virtual flood of spontaneous reception reports from all over Europe, and even from the United States, Canada, Australia, and New Zealand! IRRS-Shortwave is the sister station of IRRS-Globe Radio Milan-FM, which has been serving the international English-speaking community of Italy's most important commercial city since 1982.

THE IRRS PHILOSOPHY - The decision to start IRRS-Shortwave was taken

when it became clear that there was a demand for a reasonably-priced relay facility to cover Italy and Europe to broadcast the programmes of groups and organizations that cannot afford the high rates for airtime charged by other commercial relay facilities. We in the shortwave community are well aware of the effectiveness of this medium in reaching a large audience in Europe. IRRS conceived its shortwave station in the belief that careful engineering using the latest transmission techniques and moderate-power could make it possible to offer programme-makers an effective facility that enables every producer to enjoy the benefit of a shortwave relay in Europe.

OUR PROGRAMMES - Strictly-speaking, as a relay station, IRRS does not produce its own programming, but places its facilities at the disposal of programme-producing clients. However, in the unique evolution of IRRS-Shortwave, we became aware that a large number of listeners regarded us as a station in itself, offering hours of programming that were easy and interesting to stay tuned to. So for this reason, IRRS began connecting or "linking" its clients programmes with radio plays, recording of vintage radio shows, comedy, and music. In this way, IRRS offers every listener a wide variety of information and entertainment.

"HELLO THERE!" - One of our most popular non-relay programmes is "Hello There!", a listener contact show where IRRS acknowledge reception reports and comments on programmes. We also encourage active listener participation by inviting everyone to send us a cassette recording telling us about themselves and where they live." Or, as an immediate means of filing reception reports or personal participation, our telephone service is available 24 hours-a-day, seven days-a-week. Like all shortwave broadcasters today, IRRS very much encourages listeners to let us know how they are receiving us, but equally importantly, we also need to hear their programme comments, which are very valuable in helping our clients produce better and more attractive programming.

OUR QSL POLICY - IRRS is grateful for all technical reports, comments, and suggestions. Each report will be confirmed with a special QSL card. To help reduce costs, we appreciate the enclosure of two (2) IRC's with every reception report. This also helps to cover the cost of forwarding reports to IRRS clients, who often respond with a QSL or verification letter of their own.

IRRS: THE TECHNICAL SIDE - Presently, IRRS operates one SIEMENS commercial shortwave transmitter. It is of extremely high quality and reliability, and is rated at 10 kW output over the range of 1.5-30MHz (continuous). It is fully automatic with a maximum 10 seconds needed to change any new frequency within this range. Although capable of standard AM (double side-band) transmission, IRRS has chosen to operate with the much more effective and efficient "A3A" modulation, i.e. Single Side-Band, reduced carrier mode. In this way, IRRS achieves the same communication power as a conventional AM transmitter of 30 kW, while remaining completely compatible with non-SSB receivers. In any case, best reception of IRRS, especially in "fringe areas", will be in the "SSB" or "USB" mode of your receiver. Although reception reports indicate a good signal using only built-in antennas, some form of simple outdoor aerial almost always improves reception. This is especially important in locations beyond ca. 1,500 km from Milan. IRRS uses omni-directional "L-shaped dipoles", assuring uniform coverage of our prime target area. The 9 MHz band (31 metres) was chosen for its ability to best compromise between local and DX transmission serving the densest parts of the European Continent and Northern Africa. GOOD LISTENING TO IRRS! - IRRS - Italian Radio Relay Service, P.O. Box 10980, I-20110 Milano, Italy. Phone: +39-2-266 69 71; Fax: +39-2-710 229.

IRRS Sunday Sked effective 3 June: (but note Mike Fern, CA reported in "DXS" #122-125 that they would begin daily transmission in June - as reported on RN's 'Media Network' on 5/24)

Freq	CET (Central Euro Time)	Programme	Lang
9815	0700	European Gospel Radio	Ukrain.
	0815	(Same)	EE
	0845	UN in Action/UN News	RR
	0915	"Hello There" (*)	EE
	0930	UN Radio	EE
	0945	UN Radio	EE
	1000	UNESCO Radio	EE
	1030	UN Radio	FF

1045	UNESCO Radio	FF
1115	UN Radio	SS
1130	Play DX News(**)	IT/EE
1200	European Gospel Radio	EE

* - 1RKS Mailbag programme; ** - Play DX News with Dario Monferini: 2nd Sunday; ** - European Gospel Radio (Polish): 1st and 3rd Sun. (via John Carson, Norman, OK)

JAPAN - 3970.0, 1255-1316, R. Japan SSB relay in JJ. Time signal, ID across hour. Though relay site in Japan (Matsuyama) is not far from my QTH, this relay has only been fair at best. QRM CC station on 6/9 (Mike Hardester, Okinawa)

JORDAN - Radio Jordan, Amman Sked: 09-10 AA Australia/Far East ????; 09-10 AA (Argentina, Chile, & Brazil) ????; 10-11 AA (for USA & Canada) 13655; 11-1630 (relay of domestic service) EE w/freq change at 1315 9560; 2030-2130 AA (for Gulf, Australia & Far East) 11810; 2230-2330 AA (for N.Afr & Cam) ???? (WBI 6/29)

KUWAIT - Radio Kuwait has passed along its new schedule which came into effect during June, and we note that there has been an expansion of services beamed to Australia, Asia, and the Far East. English programmes from Radio Kuwait are now listed: 05-08 on 15345 to Australia, Asia, and the Far East. From 18-21 on 13610 for Australia, S.Africa, Europe, and NA. Other services intended for Australia are: On 13610 (13620NF now, bmm) 04-08 and 21-2359 in AA; On 17855 - 09-11 AA; On 15345 - 02-05 in AA, the Holy Koran programme; On 15495 02-05 in AA - Holy Koran service, and 05-2359 in AA; On 17895 04-0745 AA and 16-18 Urdu. (Radio Australia's 'Japanese DX Time' 7/7 compiled in Association with the Australian Radio DX Club.)

13610, 2100, R. Kuwait, EE, National Anthem & 2100* on 7/9 and tuned to 13620 and heard Kuwait in AA poorly w/co-channel ute on 7/9 (bmm) 13620NF, 2348, R. Kuwait, ME music//15505, 15495. At retune 0043 13620 w/M talk in AA into ME music but nothing on 15505, 15495 on 7/1 & on 7/7 on 13620 at 0255 M w/recitations then ID at 03 into news, but not//15505(bmm) 15505, 0014, R. Kuwait, AA, M talk//15495, 13620 but at recheck founding nothing on 15505, 15495 on 7/10, so some days these two freqs off earlier as in past I have heard them past 01. (bmm) 21675, 1629, R. Kuwait, AA, W announcer, ME music//15505 on 7/5 (bmm)

NEW ZEALAND - From 7/2, Radio New Zealand will be broadcasting 14 1/2 hours of programming. Sked from 7/2: Mon-Fri 1745-2205, 1845-2205 Sun on 15485; Sun-Thu: 2205-0710 on 17675; Mon-Fri: 0710-0830 on 9855; 2205 Fri - 0645 Sat on 17675 & 0645-11 Sat on 9855. (via 'Tony King's' Mailbox Program on RNZ1 on 7/2)

2XA Levin, Print Disabled Radio 1602 kHz is now operating Sundays 07-09, Monday and Thursday 06-10. The shortwave transmitter for 3935 kHz 1 kW, plans to open on August 25, and will use a V-beam running North/South covering New Zealand. (Arthur Cushen, Invercargill, New Zealand via 'Peter Bunn's "OZ DX" No. 57 dated 7/90)

PERU - 4914.5, 1006, Radio Cora, Lima. Tune-in 1006 w/travel program sponsored by Aero Peru about a town in Loreto. Musica tropical to 1030 time checks and advert for Banco Comercio. Frequencies at 1035, then news program 'Radio periodico de Cora' and 1100 time check and ID 'Radio Cora del Peru'. New on shortwave on 7/7 (Geoff Cosier, Melbourne, Australia via 'Peter Bunn's' "OZ DX" No. 57, dated 7/90)

PHILIPPINES - The Daylight Saving Time is used from May 21st due to the lack of the electric power. Summer time will be available till about the end of August. So now, the standard time in Philippines is the same as that in Japan. (Takeshi Sejimo via "NTDXC Tune. No. 77, dated 6/90 edited by Jun'ichi Nishikawa.)

9578, R. Philippines, replied in 37 days for a '81 report. Says off SW for present but they plan to return in '91 with up-graded transmitters (new international service?). Presently only using 6170 kHz only for relay broadcasts to Provincial Stations. (Wrote back to get a clarification of this). Welcomes correspondence to Philippine Broadcasting Service, Sgt. Esquerria Ave., Quezon City. v/s: Jose Q. Borromeo. (Ed Kusalik, Coledale,

Alberta)

<u>SOUTH AFRICA</u> - Radio	Orion	Summary	Program	Sked as from	1/90:
Time(local)	Day		Programme		Presenter
2131	Mon		One of Those Songs		Wouter de Wet
	Tue		That was the Year		Percy Sieff
	Wed		Listener's Choice		
	Thu		SA Top 20		David Gresham
	Fri		Keep it Country		Lance James
			Includes:		
			My Kind of Country Star		
	Sat		Remember When?		Daniel Kirstein
	Sun		The Heavens Rejoice		Jan de Wet
2200	Mon		Rendezvous		
	Tue		Esme's Music Album		Esme Euvrard
	Wed		Under the Southern Stars		Leon V. Heerden
	Sat		Listener's Choice		
	Sun		Sunday Requests		Bill Sharp
2230	Wed		Rendezvous		
	Fri		With a Pinch of Salt		Pierre Louw
	Sat		My Song is a Love Song		Isidor Davis
2235	Fri		Rendezvous		Laetitia Vorster
2300	Mon-Sun		News(Afrikaans)		
2308			Meditation(Afrikaans)		
2310			Making for Midnight		
			(Mondays presented by Fonnie du Plooy)		
0000	Mon-Sat		Up and About with Orion		Robin Alexander
	Sun		Nightline (to 0100)		
0030			News (English)		
0033			Up and About (Continued)		
0400	Mon-Sat		Rise and Shine		Danie Smuts
0455	Mon-Fri		News(Afrikaans)		
0500			Closing		

Enquiries: Publicity Office Tel: (011) 714-3942 FAX: (011) 714-6445
(Thanks to Frank Aden Jr, Boise, ID)

SUDAN - After 6 months in transit, got back my double-registered airmail report to P.O. Box 1572. No reason on envelope for return, but maybe it was the fact that someone had to sign for my envelope and that they couldn't rip off the contents - interesting possibility? (Ed Kusalik, Coledale, Alberta)

TONGA - Via 'Musings' column edited by Garry Bowles in 'DX'ers Calling', the monthly magazine of DX Australia dated 7/90, Chris Rogers, Berwick, Victoria passed along this information:

Had a great time at the 1990 SPARC Convention. After the convention, our party of David Headland, Don & Gwen Cook and my girlfriend Barbara Lang, spent a week around the Coromandel Peninsula before venturing on to Tonga. Radio listening conditions in Tonga were poor due to bad atmospheric conditions, similar to the convention. David and myself were fortunate to be shown over the Tonga Broadcasting Commission's studios and transmitter by the new Chief Engineer, Siale Petu'ufka. Mr. Petu'ufka has replaced Mr. Indiran who was only over in Nuku'alofa from India, as part of an overseas aid program. The studios of A3Z were quite primitive, although visiting the transmitter site at Papua surprised us when we saw two brand new 10kW Harris medium wave transmitters which were donated by the Australian government. These transmitters replaced two aging AWA 10kW medium wave transmitters. We also saw the shortwave transmitter which is a modified Kenwood amateur linear amp running 1kW into a dipole strung between two coconut trees, about 18 feet off the ground. The modulation on the transmitter is running about 80% to save the output tubes. The transmitter was donated by UNESCO. We also visited the local television station in Nuku'alofa ASTL-TV3 (not listed in WRTVH), a private concern running 30 watts on a subscription basis.

U.S.S.R. - DXing in Estonia and USSR by Andres Aule, Tallinn, USSR:

The first ideas of DXing came to the Soviet Union from the Western Countries in the end of the sixties. The forces did not look upon the very first DX-fans tolerantly: they found vast correspondence with Western

Martin Rothblatt, president of a consulting group here called Marcor Inc., and Gary Noreen, president of Radio Satellite Corp., Pasadena, CA -- are scheduled to address the group.

"Let's get started first in the U.S.," says Mr. Noreen, who proposes a system that would broadcast 10 stations nationally in 1993. "Then we can turn our system into a world-wide system." A report of the federal effort first appeared in Space Business News, an Arlington, Va., newsletter.

At the first Commerce Department meeting, on April 17, H. Don Messer, USIA's satellite broadcast program manager, sketched his agency's plans for the system. According to a memo passed around at the meeting, the system would include as many as 100 radio stations that could broadcast anywhere in the world with a sound quality comparable to compact disks. Mr. Messer's memo called the plan "a fundamentally different, new radio broadcasting service from satellites."

For global reach, the USIA envisions four satellites in orbit, at a total cost of \$700 million. A one-satellite system, costing \$200 million, could cover the Americas, Europe and Africa, the memo said. The USIA is pushing the plan to increase its reach geographically, to cut its costs by sharing the satellite system with commercial broadcasters and to improve its quality, said participants in the Commerce Department meetings. The Voice of America, for instance, broadcasts on scratchy, shortwave frequencies and wants to augment its service with a better-resolution system.

The agency has enlisted NASA in support of its proposal. The two agencies will spend \$3 million over three years studying the engineering requirements of a satellite system. They also plan to seal broadcast frequencies for the system at an international meeting in 1992 called the World Administrative Radio Conference. Any communications system that transmits abroad needs international approval for use of foreign frequencies.

The proposal faces formidable political and technical obstacles. Most importantly, current radios can't receive satellite signals, so the agencies must persuade manufacturers to develop a new generation of receivers. It also will require the Federal Communications Commission to allocate a huge number of unused or currently used broadcast frequencies, which U.S. broadcasters will surely oppose. The National Association of Broadcasters, for instance, last week tried to head off the satellite system by proposing a digital transmission system using conventional, land-based radio towers.

The two satellite entrepreneurs so far have made proposals to the FCC that closely mirror aspects of the federal proposal, but that would provide service by 1994. The systems would be privately owned.

Mr. Rothblatt, the Marcor executive, asked the FCC to approve a \$330 million plan that he calls Satellite CD Radio Inc. His system would use two satellites to provide 100 channels of compact-disk quality music in the U.S. starting in 1994. In an attempt to blunt opposition from broadcasters, Satellite CD reserves one-third of the channels for local broadcasters. Listeners would use radio sets with antennas that look like cellular-phone antennas to pick up the satellite signals, he says.

"NASA and Commerce being behind this concept gives people more technical confidence that it will work," Mr. Rothblatt says. The two agencies declined to comment on the system.

Mr. Noreen proposes something more modest. He asked the FCC to approve construction of a \$1 million earth station in Pasadena to transmit 10 channels of music, as well as paging data and telephone calls to a satellite that the FCC has already approved for launch in 1993. Mr. Noreen is a partner in that satellite venture, called American Mobile Satellite Corp.

The California entrepreneur says his system at first wouldn't offer compact-disk quality sound, but rather would offer a package of services. He envisions a car radio that could pick up FM-quality satellite radio stations and also act as a pager and a mobile phone. He says the receiver could be on sale by Christmas of 1993 and cost about \$200 more than top-of-the-line conventional radios.

The two entrepreneurs already are taking potshots at each other. Mr. Noreen calls the Satellite CD proposal "silly" and grandiose. Mr. Rothblatt counters that Mr. Noreen's idea is too limited. "It's geared to truckers--people who like radio and a pager into one," he says.

For its part, the FCC has asked for comment on the Satellite CD

radio stations and "strange" QSL-cards dangerous to the communist ideology. So they started to put obstacles on the way of the first DXers. The brand-formed DX-circles were abolished. The ones who maintained interest had to do their DXing alone - knowing that they were not safe against government and also knowing that many QSLs were eliminated from the postage by strict censors. Still there were the ones who maintained interest.

The centres of DXing in the USSR have always been Leningrad, Moscow, the Baltic States and the Ukraine. In the seventies, a DX-club "Baltica" was formed with alot of members from the Baltic countries, especially Lithuania. Still they were not able to make it legal and finally their club was prohibited.

So it continued until recent years, when the QSLs finally did not get lost so often any more. People started to receive foreign radio programs and managed to hear about the DXing. Soon some new ideas rose about forming DX-organizations and publications. The government was more tolerant now. The first organizations were DX-Circle-Leningrad (DXCL), a DX-Club in Moscow. On Nov 26, 1988, DX-club "Banga" was formed in Lithuania. Just now there are little DX-communities in Kishinev (Moldavia), Doneck (Ukraine), Minsk (Byelorussia), Altai, etc. There is a good net of correspondence between the Soviet DXers. According to some of my friends, the total number of the DXers is some 200. The number of clubs is 10 or more and the number of publications probably 5-7. "Banga" is periodically issuing a newsletter.

In Estonia, DX has never been popular. Just now I know 4 DXers here - I am the only Estonian (probably). The forming of our own club has been impossible, so we keep contacts with other DXers abroad as well as in the USSR.

The equipment of the Soviet DXers is very poor - mostly old military receivers based on tubes. The antennas are self-made and longwires mostly.

The numbers of verifications received are low as well.

But the interest towards DXing is slowly growing and we all hope that the organizational life of DXing has its future here as well. (Note: Andres tells me that he is 17 living 10 km from Tallinn. He is an Estonian. Besides Estonian, he speaks English, Russian and a little Finnish and Swedish, and can also read German and Spanish. He uses a Russian military receiver from 1957 with a longwire external antenna. His best QSLs are R. Atlantida 4790, R. Cancao Nova, R. Aparecida, R. Cultura do Para, R. Tachira, R. Mozambique, Northsound R. (UK), Devonair R. (UK), Invicta R. (UK), etc. He also lets me know that I am the first one to write him from the United States. (bmm)

UNITED STATES - Via "The Wall Street Journal" dated 6/26 and thanks to Karl Forth, Chicago, IL for this: "U.S. Looks Into Global Radio Network Using Satellites" by Bob Davis, Staff Reporter of The Wall Street Journal" -

Washington - The U.S. is quietly pursuing a plan to create a global radio network that would be run jointly by the government and private industry.

The network would use a \$1 billion satellite system that would begin broadcasts of music, information and advertising around the year 2000. It would require a new generation of radios that can receive satellite broadcasts.

The proposal generally envisions private ownership of satellites and radio stations in the U.S. market and government ownership of satellites in foreign markets, according to people who heard a briefing on the plan.

The proposal is backed principally by the Commerce Department, the U.S. Information Agency and the National Aeronautics and Space Administration. But already the plan is running into opposition from U.S. broadcasters, who fear that the proposed system would gobble up scarce broadcast frequencies and increase competition among radio stations. It also may kick up a storm within the Bush administration, where senior officials have fiercely opposed government direction of new commercial technologies.

Even so, the system has two big advantages. It would offer broadcasters and advertisers a way to reach a national and international market. And it would offer listeners crystalline sound quality by using digital technology to transmit signals.

The Commerce Department's Office of Space Commerce has invited a group of government and industry officials to a breakfast today for their second closed-door discussion of satellite radio. Two satellite entrepreneurs--

proposal. "It's getting alot of discussion in and out of the agency," says Ray Laforge, an FCC engineer who is attending the Commerce Department meetings.

CLANDESTINE(S): New time for EPRP - Monitoring research 7 Jun 90. According to an announcement in Amharic at the start of the 0330 gmt experimental broadcast from the Ethiopian's People's Revolutionary Party, its afternoon broadcast has been retimed to 1430-15 gmt. Originally the afternoon transmission had been carried at 1730-18 gmt, a time which was later changed to 14-15 gmt. Both morning and afternoon broadcasts are observed on 9440 and 7010 kHz. (WBI 6/15)

Voice of the EDORM - Another Ethiopian opposition group starts broadcasts. Voice of the Ethiopian People for Peace, Democracy and Freedom in Amharic 0430 gmt 08 June 90.

The Ethiopian Democratic Officers' Revolutionary Movement (EDORM), which recently held its founding conference and achieved its recognition, announces that from 10 Jun 1990 it will start a 30-minute radio programme every Sunday. It will broadcast in the morning from 08-0830 (05-0530 gmt) and from 2230-23 (1930-20 gmt) in the evening on the 49,44,43,41,40 and 31 metre bands.

The Voice of the Ethiopian People for Peace, Democracy and Freedom has, therefore, made some programme changes. The regular programme on Sundays, which was broadcast from 0730-0830(0430-0530 gmt) in the morning and from 22-23(19-20 gmt) in the evening, will broadcast for only half-an-hour from 0730-08(0430-05 gmt) in the morning and from 22-2230(19-1930 gmt) in the evening. The regular programme between Mondays and Saturdays will continue to be broadcast at its usual times.

Monitoring research - 11 June 90: The addition of the above broadcast means that there are now four radios sharing the same facilities: Voice of the Tigray Revolution, Voice of the Ethiopian People for Peace, Democracy and Freedom, Voice of the Broad Oromo Masses, and Voice of the Ethiopian Democratic Officer's Revolutionary Movement. (WBI 6/15)

Radio Venceremos - After receiving a vague reply, wrote back and received a full data verie letter from v/s Anita Ocampo, who apologized for the delay, in 14 days. Reply to NY address for Radio Venceremos representative. (Ed Kusalik, Coledale, Alberta)

Voice of June 4th - Checked 6/2 at listed times and all freqs to 1000, but only jamming noted. At *1630, 603, 750, 900, 1000, 7250 and 11905 (+7150) all heavily jammed. On 5/20, noted 7150 occasionally in clear from jamming at 0950-1000, but 11905 remain covered. After 1000, both freqs in clear w/CH programming (presumed regular VOFC programming) (Mike Hardester, Okinawa)

NUMBERS STATION - GDR "numbers station ceases broadcasts? DPA news agency, Hamburg, in German 0801 gmt 8 Jun 90. Excerpt from report -

They were always preceded by a gong struck several times. Then a shortwave - a frequency of 3220 kHz - one heard the synthetic voice speaking in a metallic tone: eg one, seven, five, three, eight - combinations of numbers in groups of five conveying coded news from East Berlin to agents in the FRG and neighbouring foreign countries. Once again the routine broadcast was expected on Thursday evening this week by the FRG counter-intelligence service - but it never came. The voice of espionage has fallen silent.

The conclusion is drawn from this that East Berlin has now "officially ended the activities" of its spies in the FRG, ie with its last radio messages on Thursday 31st May, it either called back its "spies" or ordered them to go underground and wait - possibly to end espionage altogether in the light of the forthcoming unification of Germany... (WBI 6/15)

TIME SIGNAL STATION - HLA SF&TSS noted on 5/27 at 1750-1801 w/W announcer w/possible minute announcements at :50-:58 before minute. At 1800:10, W began talking and one mention of "H L A." QRM from JJY, BPM and BSF. SIO 333. (Mike Hardester, Okinawa)

UNIDENTIFIED - 6106, *0900, Unid Latin American. Just missed the opening, and didn't have a tape ready so missed any ID! Two announcers swapping the mike with apparent news past 0910 on 7/1. Couldn't stay with it as had to go out. Not heard since. I'd suggest it is Radio Calama(Chile), which I haven't logged for some years. This may be another Sundays-only operation. (Peter Bunn, Melbourne, Australia via his publication "OZ DX" No. 57, dated 7/90) Hope you're having a nice Summer. 73's, *Bruce*

QSL Reports

Sam Barto
47 Prospect Place
Bristol, CT 06010



ALBANIA: Radio Tirana 9760 f/d "Costumes of Gjirokaster" cd. w/ sked. and 2 pins. in 40 ds. for 2 IRCs. (Brouillette-IL). 9480 f/d cd. w/ pin in 38 ds. for 1 IRC. (Wallace-CT). 9500 cd. w/ pin in 45 ds. (Palmersheim-MN).

ARGENTINA: Radio Continental 9115 f/d cd. w/ * personal ltr. and prepared cd. in 37 ds. for a SP rpt. and \$1.00. v/s J. Valles. (D'Angelo-PA).

ARMENIA: Radio Moscow 17570 via Yerevan f/d "Kosmos Hotel" cd. in 2 mo. (Barto-CT). Radio Rodina 12065 (Yerevan - ILG) p/d cd. in RS in 3 mo. (Barto-CT).

ASIATIC RUSSIA: Radio Moscow 4795 via Ulan * Ude f/d cd. in 123 ds. (returned for site) (Butcher-MA)...Great: 13625 via Novosibirsk f/d cd. in 3 mo. (Barto). 17645 via Komsomolsk cd. in 3 mo. (Barto). 17850 via Khabarovsk cd. in RS in 2 mo. (Barto), 17665 via Petropavlovsk f/d cd. in RS in

2½ mo. (Barto). 17655 via Nikolaevsk-on-Amur f/d cd. in 3 mo. (Barto). 13775 via Yakutsk p/d cd. in 2 mo. (Barto). 9705 (per ILG) p/d cd. in 3 mo. (Barto). Radio-staniya Rodina 15180 via Blagovesztensk f/d "Kremlin" cd. in 57 ds. (Kusalik). 7390 via Novosibirsk RS cd. in 3 mo. (Barto). 17690 via Komsomolsk-on-Amur f/d cd. in 57 ds. (Kusalik).

AUSTRALIA: Radio Australia 21740 via Shepparton f/d ltr. w/ cd. and sked. in 42 ds. for 1 IRC. (Wallace-CT). 17750 via Darwin f/d ltr. w/ n/d cd. (Field-PA). 6020 via Brandon f/d "Wilderness Society" cd. w/ brochure. (Hardester-OKI). 6035 f/d "Junction Creek Waterfall" cd. w/ sked. in 16 ds. for 1 IRC. (Butcher). VLO9 9660 via Brisbane f/d cd. in 42 ds. for \$1.00. Station said 10 watts - sure they meant 10KWS. (Field-PA). f/d "Map" cd. in 3 wks. for 2 IRCs. (Barhydt-OR). VLW9 9610 via Wanneroo f/d cd. in 3 mo. (Taylor-PA). VLW6 6140 via Perth f/d cd. in 50 ds. (Field-PA).

AUSTRIA: Radio Austria International 9870 f/d cd. w/ sked. in 32 ds. for 1 IRC. (Wallace). f/d "Costume" cd. in 19 ds. (O'Keefe).

BALI: WRI Singaraja 3398 f/d ltr. w/ prepared cd. in 1 mo. for an IN rpt. * v/s Ketut Asvin, B.A. This was for an 85 reception. (Kusalik).

BELGIUM: BRT 9925 and 12010 f/d "New Art" cd. in 1 mo. (Levison-PA).

BENIN: ORTB 4870 via Cotonou p/d cd. in 109 ds. for a FR rpt. and \$1.00.

BONAIRE: TWR 11815 f/d "Willemsstoren Lighthouse" cd. in (Hosmer-MI) 22 ds. v/s Sally Rork. This for 2 IRCs. (Sellers-ONT).

BOUGANVILLE: Radio North Solomons 3325 f/d "Ela Beach" cd. in 4 mo. for ms. QSL rcvd. via Gordon Darling. (Eckert-PA).

BRASIL: Radio Bras 11745 f/d cd. in 122 ds. w/ sked. and sticker for ms.

* (Bywater-CO). Radio Alvorado de Parentins 4965 f/d cd. w/ brochure in 1 mo. for a PT rpt. (Field-MI). Radio Cultural Araraquara f/d prepared cd. w/ decal in 2½ mo. for a PT rpt., tape and SASE. v/s Antonio Carlos Rodrigues dos Santos, Director Artistico. (Huniwell).

* Radio Brasil Tropical f/d prepared cd. w/ decal and postcards in 4 mo. for a PT rpt. and \$1.00. (Huniwell-NJ).

Rádio Copacabana



PFBS

**The Pirate Freaks
Broadcasting Service**

This card is to verify reception of PFBS Radio:
To: Richard A. D'Angelo, Bradenton, FL, USA
Date: 1st April 1990 Time: 0002 - 0022 GMT
Frequency: 15650 kHz
Remarks: Many thanks for your report! Ho Pe to hear from you again, soo n.
QSL
73's and FFR.

HURUNDI: Radio-Television Nat-ionale du Hurundi 3300 f/d folding "Logo" cd. in 261 ds. for a FR rpt. and \$1.00. This after 3 f/up rpts. (D'Angelo-PA).
HYELORUSSIA: Radio Moscow 13650 via **Orsha** cd. in 2 mo. (Harto)
Radio Minsk 7400 f/d cd. w/ personal ltr. in 141 ds. v/s Tamara Savking. (D'Angelo).
CANADA: RCI 5960 f/d "Forestry" cd. in 10 ds. (Lare-MI). 9755 cd. in 3 wks. (Nagengast-MN).
* **Radio Korea** 11715 via **Sackville** cd. in 1 mo. (Rigas-IL).

VERIFICATION SIGNERS: Radio Santa Cruz 6135 Alvaro Puente, Director. **Radio Difusoras Mieria** 4981 Dr. Jose Carlos Gomes Espinoza, Director. **Radio Educadora Guajaramirim** 3375 Isidoro Jose Moro, Director. **La Voz de la Fundacion Nacion Cubano - Americana** 9495 A. Perez, Director. **Radio Cairo** 9910 Futna Abdalla, Secretary. **Italian Radio Belay Service** 9860 Anna S. Boschetti, Secretary.....via Play DX...Sam.

CENTRAL AFRICAN REP: Radio Centrafrique 5035 n/d "Map" cd. in 2106 ds. after many f/ups w/ ms. v/s Jacques Mbilo, Directeur des Services Techniques. (Woloch-QUE).

CHILE: CBV Time Signal Station f/d cd. in 31 ds. for a SP rpt. v/s German Valdivia Barra. (Kusalik). **Radio Santa Maria** 6030 f/d cd. w/ pennant in 3 mo. on my 3rd try. (Field-MI).

CHINA, PEOPLES REP OP: Radio Beijing 17705 f/d cd. in 26 ds. w/ papercuts. (Levison). f/d "Ornaments" cd. in 1 mo. (Kohlbrener). 15100 and 17705 f/d "Horse" cd. in 26 ds. (Levison). **HPM** 15000 f/d cd. w/ ltr. Addr: Shaanxi Astronomical Observatory, Chinese Academy of Sciences, P.O. Box 18, Lintong, XIAN. (Hardester-OKI).

CLANDESTINE: La Voz de Fundacion 9495 via **WHRI** f/d cd. in 20 ds. for ms. (Rigas). f/d cd. w/ prepared cd. in 23 ds. for \$1.00. Sticker and sked. rcvd. v/s Amoska Perez. (Kusalik). **Radio Iran Toolers** 10490 2 f/d prepared cds. in 15 ds. for an EG rpt. to the address in Sweden. v/s Dr. John Takman, M.D. (Kusalik). **Radio Vencere-mos** 6620 f/d ltr. in 14 ds. v/s Anita Ocampo. (Kusalik).

COLOMBIA: Caracol Neiva 4945 and 6150 along w/ **Caracol Bogota** on 5075 and 4755 f/d ltr. w/ stickers in 3 mo. on my 3rd try for a SP rpt. (Field-MI). **La Voz de los Centauros** 5955 f/d cd. in 3 mo. for a SP rpt. (Field-MI).

COSTA RICA: Radio For Peace International 21565 f/d cd. w/ schedule in 370 ds. for \$1.00. (Hardester-PA). f/d "Dove" cd. in 90 ds. for \$1.00. v/s James Lantham, Manager. (Weber-OH). 7375 same in 7 mo. for 2 IRCs. (Kohlbrener). **Radio Impacto** 5030 p/d ltr. in 107 ds. for a SP rpt. and ms. Pennant rcvd. (Hosmer). 5044 p/d ltr. in 58 ds. for a SP rpt. and ms. v/s Hector Requena C., Asesor General. Rcvd. 2 pennants - one cloth and one paper. (Butcher).

CUHA: Radio Habana Cuba 5965 f/d cd. in 4 mo. (Hosmer). **Radio Rebelde** 5025 n/d ltr. w/ pennant and stickers in 4 mo. for a SP rpt. (Field-MI).

CZECHOSLOVAKIA: OLH5 3170 cd. in 1 mo. for 1 IRC. (Hardester-PA). **Radio Praha International** 7345 f/d "Wallachian Museum" cd. in 44 ds. (Palmerheim). 5930 same cd. in 36 ds. for 1 IRC. (Wallace-CT).



**RADIO
NEW ZEALAND
INTERNATIONAL**

TE REO WHIRANGI O AOTEAROA
O TE MOANA-NUI-A-KIWA

**VOICE OF
THE
PACIFIC**

DJIBOUTI: RTVD 4780 p/d cd. in 93 ds. for a FR rpt. and ms. (Hosmer-MI).
DODCANESE (Rhodes): VOA 11960 f/d cd. in 78 ds. w/ calendar. (Kusalik).
DUBAI: Radio Dubai 21605 f/d "Great Circle Map" cd. w/ pennant in 27 ds. for \$1.00. VIC # 148. (Michalenska-RI).
EGYPT: Radio Cairo 9455, 9475, 9620, 9675 and 9755 f/d "River" cd. in 14 wks. w/ stickers, bookmarks and calendar. (Butcher-MA).
EUROPEAN RUSSIA: Radio Moscow 17890 via Moscow cd. in 2 mo. (Barto). 7380 via Ryazan cd. in RS w/ sked and pennant in 3 mo. (Barto). 9745 via Kenga and 9775 via Kazan f/d cd. in 3 mo. (Barto). RRG26 18870, RCI73 18195 and 13735 via Zhigulevsk p/d cd. in RS in 2 mo. for reception of USB in RS. (Barto-CT). Radio Rodina 9890 via Leningrad, 12030 via Moscow, 15585 via Armavir, 15540 via Zhigulevsk and 13715 via Serpukhov (sites per ILG) p/d cds. in RS in 3 1/2 mo. (Barto).
FRANCE: RPI 11670 f/d cd. w/ sked. in 40 ds. (Paustian).
FRENCH GUIANA: RPI 9800 f/d cd. w/ sked. in 4 wks. (Nagengast-MN).
GERMAN DEMOCRATIC REP: RBI 13690 via Konigs Wusterhausen f/d cd. in 60 ds. (Rigas). 13610 via Leipzig f/d cd. w/ site in 60 ds. (Rigas).

NOTES: G. Michael Woloch of 954 Hartland Avenue, Outremont, P.Q., Canada H2V 2Y1 is looking for different addresses for Radio Nacional de Guinea Ecuatorial in Bata and for Radio Damascus, i.e., different than those in the WRTH. Any help would be appreciated. Don Homer is getting back into the swing of things. He says he kinda got burned out after the NU Contest. At least you won Don. Hi!...Sam. Glad to have your reports once again. Mike Hardester says he is permanently leaving "The Rock of Japan - Okinawa" and will be stationed in the U.S. Okinawa was a great DX location. Mike says his interim address will be c/o Goltry, 7001 West Fillmore, Phoenix, AZ 85043-2384. Richard Wallace thinks 3 IRCs for a QSL from RNZ is a bit steep. So do I but if that's what the station needs for return postage then that's what we'll have to give them. Several stations are cutting back on their QSL policies such as Finland, Australia, Canada, etc...most are due to fiscal reasons...Sam. Received a very nice letter from old friend Henry J. Michalenska. He would like to receive a live sked for South Yemen and Qatar. Anyone got one? Be sure to read Henry's comments under Iceland...Sam.

9730 f/d "Berlin" cd. w/ newsletter in 45 ds. for 1 IRC. (Brouillette). same type cd. in 58 ds. (O'Keefe). Y3S Time Signal Station 4525 p/d cd. in 1 mo. (Hardester-PA).

GERMANY, FEDERAL REP. OF: Sudwestfunk 7265 p/d "Logo" cd. in 22 ds. (Levian). VOA Wertachtal f/d cd. in 78 ds. w/ sked. (Kusalik). (Wallace).

GREECE: Voice of Greece 11645 f/d "Halkidiki" cd. in 39 ds. for 1 IRC.

GUAM: KHBN 15225 f/d cd. w/ schedule in 1 mo. for ms. (Hardester). KSDA 15225 f/d cd. w/ decal and pennant in 1 mo. for \$1.00. (Hardester).


HAWAII: WWVH 15000 f/d cd. in 17 ds. w/ station history. (Paustian).

HOLLAND: Radio Nederlands 6165 f/d "Space Telescope" cd. in 31 ds. (Paustian). same cd. in 48 ds. (O'Keefe).


HONDURAS: HRVC 4820 p/d ltr. w/ cd. and pennant in 7 mo. for a SP rpt. v/s Ofra Duran. (Klinck-NY). f/d cd. w/ pennant in 11 wks. for a SP rpt. and \$1.00. (Kohlbrener). Radio Landia 4965 f/d prepared cd. in 4 mo. for a SP rpt., tape, ms. and SASE. (Huniwell-NJ).

HONG KONG: BBC 21715 f/d prepared cd. in 6 mo. for 2 IRCs. (Kohlbrener).

ICELAND: INBS 17440 f/d cd. in 5 wks. for 2 IRCs. (Barhydt). 15770 f/d "Fra Pomorsk" cd. in 55 ds. (Michalenska)...I sent them technically detailed rpts. over a period of several days with some suggestions for changing meter bands. One wk. before I got my QSL, I heard on the World of Radio that they took to some of my suggestions to change channels. Not even a thank you! That's the way it goes Hank...Sam.



ROCKY RHINO SAYS...



RICH D'ANGELO
2216 BURKEY DR.
WYOMING, PA.
USA 19610

Rockabilly Radio

QSL #7

CONFIRMS YOUR RECEPTION

DATE: MARCH 04, 1990

WEC: 022 Z


FREQ: 7415 kHz

TX: WYOMING STATE
STATION W/SP AND
RECEIVED

POWER: 100W

ANT: CANDY ANTENNA GEAR

73 Rocky



APPROVED BY F.C.C. "FAMILY COOL CATS"



EL ESPECTADOR

BORNAND 1287 E.P. • MONTEVIDEO • URUGUAY

Sr. RICHARD A. D'ANGELO por medio del
presenta CERTIFICADO confirmamos el reporte de recep-
ción de nuestra emisora operando en 11835 Khz en la
banda de 85 m., el día 09/02/50 entre las 23.24 y
las 23.00 horas. Local.

Agradeciendo su atención le saludo muy atte.

CARLOS MARIA BERRO COLLAZO

f/d "Tokyo Bay Area" cd. w/ newsletter in 39 ds. for 1 IRC.(Wallace).
Sorry...should of been placed under Canada...Sam.

JAVA: RRI Station Nasional 11760 p/d "Schedule" cd. in 7 wks. for an EG
rpt. and ms. v/s R. Baskara.(Barhydt).

VERIFICATION SIGNERS: Radio Impacto 5030 Hector Requena C., Asesor General. WJCR 15690
Roland Wolfe and Scott Markley. TIAMR Radio Lira International 9725 David Gregory,
General Manager. MMV 5000 John B. Milson, Engineer-in-Charge. TGFZ Radio Tezulutlan
4835 Antonio Jacobs, Executive Director, SABC-Radio Orion 4810 Helena Boshoff, Pub-
lic Relations Officer. Radio Beijing 11855 c/o English Dept.....via Steve Ponder.

KAZAKH: Radio Rodina 15230 via Alma Ata (per ILG) p/d cd. in RS in 2 mo.
w/ sked. in RS (Barto-CT).

KENYA: Voice of Kenya 4934 f/d ltr. in 25 ds. for 1 IRC.(Wallace-CT).

KIRGHIZ: Radio Moscow 17835 via Frunze (per ILG) cd. in RS in 2½ mo.

KOREA, REPUBLIC OF: HLA Time Signal Station 5000 via (Barto-CT).

* Taejon n/d cd. in 29 ds. for ms. Postage was equivalent to US \$10.00!
Station sent a 1 pound bronze paperweight...extremely beautiful!

I'll need a larger safe deposit box when I return to the US (Hardester)

LATVIA: Radio Riga 5935 f/d cd. in 92 ds.(Rigas-IL).

LEBANON: King of Hope 6280 p/d "Swords into Plowshares" cd. w/ ltr. in 12
wks. for \$1.00. v/s David Lawrence. (Taylor-PA).

LESOTHO: BBC 11940 n/d ltr. w/ sked. in 14 wks. for ms.(Klinck-NY). This
was my 2nd ltr. from the BBC stating that they no longer have the
staff to send QSL cds. Not too different from the old policy.

LIBERIA: ELWA 4760 f/d cd. w/ schedule in 175 ds. for 3 IRCs. v/s J. Tok-
eh. Brochures on station history was rcvd.(Butcher-MA). (Barhydt-OR)

LUXEMBOURG: Radio Luxembourg 15350 f/d cd. w/ stickers in 17 ds. for ms.

MALI: Radio Beijing 15100 via Bamako f/d cd. w/ site in 25 ds.(Rigas).

MEXICO: XEQ 9680.4 f/d prepared cd. w/ p/d ltr. in 3 mo. for \$1.00. This
after 6 tries. Rcvd. stickers and keychain. v/s Martha Aguilar Sando-
val. Addr: Ejercito Nacional, No. 579 6 piso, Mexico, D.F. C.P. 11520,

* (Palmerheim). Radio Mil XEOI 6009 and 6011 2 f/d prepared cds. in 30
ds. for a SP rpt. and \$1.00. v/s Jaime pontones, Director.(Kusalik).

Radio Educacion 6185 f/d registered ltr. in 98 ds. for an EG/SP rpt.

and \$1.00. v/s Gustavo Carreno L., Subdirector Technico.(Weber-OR).

MONACO: TWR 6230 f/d cd. in 17 ds.(Paustian). 9480 f/d "World Map" cd.

in 2 mo. w/ schedule(Field).

MONGOLIA: Radio Ulaanbaatar

12015 f/d cd. w/ sked. in 8
wks. for a taped rpt. and

\$1.00. v/s N. Boldmaa(Klinck)

NAMIBIA: Radio SWA 4965 f/d cd.

w/ sked. in 1 mo. for \$1.00.

(Hardester-VA).

NEW ZEALAND: RNZI 17680 f/d cd.

in 43 ds. for 1 IRC.(Wall-

ace). f/d "Lake Hayes" cd.

w/ paper pennant in 65 ds.

(Paustian). f/d cd. w/ paper

pennant in 1 mo. for 3 IRCs.

(Hardester-OKI).

THE OVERSEAS BROADCASTING STATION

BANGKOK, THAILAND.

HSK 9

Normal Input Power 50 Kw Wavelength 25 M 1167 Mcs

Schedule 1200-1400 G.M.T.

Max Ernest Bahr

With thanks we beg to verify correct
your report on 28 June 1956

Overseas Broadcasting Division Public Relations Dept.

NICARAGUA: Radio Sandino 7587 f/d cd. w/ personal ltr. in 6 wks. for a SP rpt. This was for a reception in 1979 while Samoza was still in power. Station was a clandestine operation. (Field-MI).

NIGER: La Voix du Sahel 5020 p/d ltr. in 2 mo. for a FR rpt. (Mancine-OH)...Good report.

NIGERIA: Voice of Nigeria 7255 f/d "Murtala Muhammed Airport in Lagos" cd. in 124 ds. for 1 IRC. (Peake-IA).

OMAN: Radio Sultanate of Oman

17735 p/d ltr. in 16 wks. for a taped rpt. and ms. v/s Hamed Yahya al Kindy. (Klinck)...Did they add to their station name?...Sam.

PAPUA NEW GUINEA: Radio Sandaun 3205 p/d ltr. in 252 ds. for ms. v/s Gabriel Deckwalen....Please remember to put your name at the end.

PERU: Radiodifusora Huancayo 5955 p/d ltr. w/ postcard and pennant (*#700 in my collection) in 2 mo. for a SP rpt. after 6 tries. v/s Nicholas Pernal Rojas, Gerente. (Field-MI).

PHILIPPINES: Radio Phillipine 9578 n/d ltr. in 37 ds. after a f/up on * a 1981 reception. v/s Jose Q. Borcomeo. (Kusalik).

PORTUGAL: Radio Portugal International 11840 f/d "Map/Ship" cd. in 2 mo. w/ sticker. (Palmer-shelm). 9600 f/d cd. w/ sticker and calendar in 24 ds. for 1 IRC. (Wallace-CT). **Radio Free Afghanistan** 9555 via **Gloria** f/d "Map" cd. in 4 ds. for

ms. Very good looking cd. v/s David Walcutt, Freq. Management Division. (Brouillette).

RIO MUNI: Radio Africa 7189 f/d cd. in 6 wks. for ms. (Klinck-NY).

SAIPAN: KHXY 9530 f/d "Dipole Antenna Arrays" cd. in 27 ds. via the fill in the blank method (D'Angelo-PA). same in 31 ds. (Kigas-IL). 13745 same in 3½ wks. (Kusalik). 17780 f/d cd. in 4 wks. for ms. (Kohlbrener).

SINGAPORE: MBC Far Eastern Relay 15360 f/d cd. in 33 ds. direct from site for ms. (Name?)

SOUTH AFRICA: Radio Orange 3215 f/d cd. in 48 ds. for ms. Also recvd. personal ltr. and stickers. (Bywater-CO). **Radio Five** 4880 f/d "SABC" cd. w/ stickers in 79 ds. for ms. v/s M. Vorster, Senior Supervisor of Frequency Planning. (Bywater). **Radio RSA** 11935 f/d cd. in 69 ds. for 1 IRC. (Wallace-CT). **ZSC Time Signal Station** p/d "Springbok" cd. in 3 mo. for a taped rpt. and \$1.00. v/s J.G. Nothnagel, Control Coastal officer. (Hunivell).

SPANISH MOROCCO: Radio Medi 1 9575 via **Nador** f/d cd. w/ sticker in 6 mo. for a FR rpt. and ms. (Lare-MI).

SRI LANKA: Deutsche Welle 17810 f/d "Satellite Globe" cd. in 36 ds. v/s Peter Senger. (Buer-FL).

SWEDEN: Radio Sweden International 17880 f/d "Stockholm at Night" cd. w/ sked. in 12 ds. (Nagengast-MN).

SWITZERLAND: Red Cross Broadcasting Service 9885 f/d "Logo" cd. in 3 wks. w/ stickers and sked. for \$1.00. (Kohlbrener-PA). via **Schwarzenburg** same cd. w/ sked. and stickers in 42 ds. for 2 IRCs. (Brouillette-IL). **Swiss Radio International** 9885 f/d cd. w/ sked. in 16 ds. (Nagengast-MN).

TADZHIK: Radio Moscow 15140 via **Dushanbe** f/d "Kosmos Hotel" cd. in 2½ mo. (Barto-CT).

KRIS.
RADIO STELLA INTERNATIONAL
IS PLEASED TO CONFIRM YOUR
CORRECT RECEPTION REPORT

DATE: 01/19/90 TIME: 06:10:58 UTC

FREQ: 15.360 MHz S.FREQ: 133233

FROM: via Telex Cable

See the Press

61
R.S.I.
61
MILCHINI CASTLE, LOCH AWE, ARGYLE
Photography by Dennis Hendry
Published by J. Arthur Dixon
PCO 0288

PCG
INTERNATIONAL

POSTED TO GREAT BRITAIN BY J. Arthur Dixon, Tel. 0203 62020

Kris W. Fields
431 Broken Road
Amaric PA. 19607-2302
U. S. A.

Rai



EUROPEAN
CHRISTIAN
RADIO

SUMMER 1990

(from 25.3.90)

Sunday
Daily

English/German/Italian
Albanian, Romanian, Croatian

06:00-07:30
16:30-18:00

All times GMT/UTC Frequency 4210 KHz
Transmitter power 10-26 kW p.e.p. Antenna beam East



NOTES: Jerry Klinck says that he received an interesting letter from Teal Martin of FEBA on Seychelles. He indicated that the station is running about a 3 mo. backlog but they are trying to QSL all correct reports. Colin Nagengast just sent in her first six QSLs to the Column. Hope to see more reports from you in the future...Sam. Rick Bywater received a letter from Hennie Klopper at Radio Oranje. The station is putting together a program of telephone interviews with foreign listeners. I received a call from Hennie and I will be on the program. Should be interesting.

TADZHIK: Radio Rodina 9855 via Dushanbe p/d cd. in RS for USB reception in 3 mo. w/ sked. in RS. (Barto-CT).

TAIWAN: BSP Time Signal Station 15000 f/d "Chiang Kai-shek Memorial Hall" cd. in 1 mo. for ms. (Hardester-OKI).

UKRAINIAN SSR: Radio Kiev 7400 f/d "Monument to Ivan Franko" cd. in 81 ds. (Levison-PA).

Radio Moscow 17860 via Lvov f/d "Council of Ministers Building" cd. in 56 ds. (Butcher-MA). Radio Station Peace and Progress 17745 via Vinnitsa cd. in 3 mo. w/ schedule. (Barto). Radiostansiya Rodina 17690 via Kiev f/d "Kremlin" cd. w/ site in 57 ds. (Kusalik). 21460 via Tula p/d cd. in 4 mo. (Barto). 9810 via Lvov cd. w/ sked. in 3 mo. (Barto-CT). 12060 via Vinnitsa f/d "Kremlin" cd. in 57 ds. (Kusalik).

URUGUAY: Radio El Espectador 11835 cd. w/ sticker and key chain via registered mail in 1 mo. for a SP rpt. and ms. v/s Carlos Maria Berro Collado, Jefe de Personal. (Barhydt-OR).

USA: WHIRI 11790 f/d cd. in 73 ds. for ms. v/s J. Holycross. (Name?) WSHB 13770 f/d "DIY" cd. in 4 wks. Beautiful cd! (Kusalik). 11930 same cd. in 1 mo. (Rigas-IL). 9465 same cd. in 13 ds. for ms. v/s Judy P. Cooke. (Brouillette-IL). KUSW 11695 f/d "Utah" cd. in 100 ds. for ms. Station sent along a SW catalog. (Bywater-CO). 15580 f/d cd. w/ same catalog in 1 mo. for ms. (Hardester-VA). same in 24 ds. for ms. (Nagengast-MN). WNQ 15420 f/d cd. in 37 ds. (Paustian). WWV 10000 f/d cd. w/ station info. in 7 ds. (Nagengast-MN). Voice of the OAS 9565 p/d cd. w/ sked., pamphlets and magazine in 12 wks. for a SP rpt.

and ms. (Barhydt-OR). WCSN 9840 f/d "Antenna" cd. in 3 wks. for ms. (Kohlbrener). new style "CSN Tower in the Fog" cd. in 28 ds. for ms. (Taylor-PA). same cd. in 3 wks. v/s E.H. Cockburn. (Kusalik). 21780 same cd. in 30 ds. (Rigas-IL). WMTS (WMPF?)

-405 1610 Balboa Park TIS p/d prepared cd. in 1 mo. for SASE (used). Addr: City of San Diego, Park and Recreation Dept., Balboa Park Management Center, San Diego, CA 92101... Interesting. (Hardester-CA).

KGFI 15280 f/d cd. w/ sked. and poster in 6 wks. for \$1.00. v/s Jesus C. Elizondo. (Kohlbrener-PA). Voice of Free

China 5950 via WYFR f/d cd. w/ stickers in 23 ds. (Levison-PA). VOA Europe 21585 via Bethany f/d cd. for a Special Transmission on April 27 to the EDXC Conference in Italy. Arrived in 2 wks. (Sellers-ONT). f/d "Crosley Transmitter" cd. in 37 ds. (Palmerheim-MN). same in 35 ds. (O'Keefe).

USA (Pirate): Samurai Radio 6858 and 7415 f/d cd. in 2 mo. QSL was mailed from P.O. Box 109, Blue Summit Ridge, PA 17214. (Field-MI).

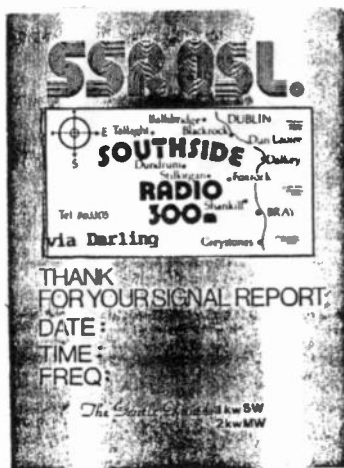


USA (Pirate): Hope Radio International 7415 f/d ltr. in 90 ds. (Rigas-IL). **One Voice Radio** 7415 f/d cd. in 15 ds. (Rigas-IL). **Radio USA** 6858 and 7415 f/d cd. in 2 mo. Report was sent to P.O. Box 524, Wellsville, NY 14845. (Field-MI). **Radio Clandestine** 7415 f/d ltr. in 1 mo. v/s R. F. Burns. Too bad I don't have a logging of this station. Hi! (Hard-ester-PA). **Rockabilly Radio** 7415 f/d "Rhino" form ltr. in 60 ds. for a rpt. to ACE. QSL #7. (D'Angelo-PA). **Voice of Monotony** 7415 f/d ltr. # 16 w/ personal note confirming the Easter weekend transmission w/ Radio USA and Samurai Radio. v/s Uncle Salty. (Paustian). f/d ltr. in 2 mo. for reception of the above broadcast. QSL # 38. (Field-MI). **Radio Free Massachusetts** 7400 f/d photo cd. # 11 in 25 ds. for ms. v/s H.V. Short. (Paustian) **East Coast Pirate Radio** 7515 f/d cds. for reception of 3 transmissions in 39, 53 and 60 ds. All for ms. v/s N. Tesla, Chief Engineer. (Paustian)

USA (Clandestine - well sort of): Radio Libertas 11790 via **WHRI** f/d personal ltr. in 1 wk. on my second try. (Field-MI). **La Voz de la Fundacion** 7315 and 9495 via **WHRI** f/d white cd. in 23 ds. w/ business cd. and sticker. v/s Amoska Perez. (Sellers-ONT). 9495 f/d cd. w/ sked. and stickers in 1 wk. (Field-MI)...Don't write any letters. I know I also listed this under Clandestine. Hi!...Sam.

USSR: Radio Station Peace and Progress 9520 p/d cd. in 2 mo. (Barto-CT). **Radio Moscow** 11800 and 7320 cd. in 3 mo. (Barto). 7115 cd. w/ stamps and sticker in 120 ds. Schedule was rcvd. (Levison-PA).

UZBEK SSR: Radio Tashkent 9540 f/d cd. in 60 ds. for ms. Schedule, post-cards and personal ltr. was rcvd. (Bywater-CO). **Radio Moscow** 9505 via **Alma Ata** f/d cd. in 3 mo. (Barto-CT). **Radio Rodina** 11975 via **Alma Ata**



Congratulations...
you have gone beyond
the Twilight Zone!
You Have Tuned QZ!
Beyond the reach of ken
of the mortal mind...
there exists a land
of wonder... the land
of QZ.

Card - 0001 Photo



(per ILG) p/d cd. in RS in 3 mo. w/ schedule in RS. (Barto). **VENEZUELA: YVTO** 5000 p/d "Observatory" cd. w/ personal ltr. and fact folder information from the station. This was for a SP rpt. and ms. (Barhydt-OR). **WEST BERLIN: RIAS** 6005 p/d "RIAS Building" cd. in 29 ds. for \$1.00. (Taylor-PA)...Say Bill, thanks for the telephone call. It was great hearing from you.

Well I guess that takes care of yet another QSL Column. I've lost count on the number of years that I've been doing this Column but I hope everyone has enjoyed reading it and looking at the illustrations...Sam.

73s

Sam Barto

Down that long-winding yellow brick road we come upon the radio shack of the **Voice of QZ** and their ample QSL....Sam.

Contributors' Page

Kris Field
431 Babylon Road
Ambler, PA 19002-2302



LOGGINGS CONTRIBUTORS - AUGUST 1990 - DEADLINE 10th of MONTH

The following members contributed loggings:

Adrienne BARHYDT, Milwaukie, OR
Patrick CRUMHORN, Austin, TX
Richard D'ANGELO, Wyomissing, PA
Peter DILLON, Greece
Gary EMERSON, Golden, CO
Pete GRENIER, Sparks, NV
Mike HARDESTER, Okinawa
Hans JOHNSON, Columbia, MD
Rufus JORDAN, Pittsburgh, PA
W. KARCHESKI, Holden, MA
Harold LEVISON, Philadelphia, PA
Michael OLSON, San Jose, CA
John PRATH, Ft. Lauderdale, FL
Larry ROYSTON, Paho, HI
Jim STREITMATTER, South Bend, IN
David SWARINGEN, Huntersville, NC
Mike WOLFSON, Ashland, OH

Kenwood R 5000
NRD 525, random wire
R70, Alpha Delta DX Sloper
R71A, MFJ-1024 ant, R388, 170' LW
R70, Sony 2010
R71A, Multiband AM Pickup
DX 302, Zenith Transoceanic
R70
NRD 525, Alpha Delta DX Sloper
NRD 525, R71A
DX 440, 70' LW
Yaesu 747GX
Kenwood R 5000
Sony 2010

Well, it looks like summertime is finally taking a toll on the time we all get to spend at the radios. I admit I haven't been able to spend a lot of time listening myself. However, some of the folks who have contributed this month have been proving that DX'ing is possible in the summertime! Just look at the loggings for proof. Good job by one and all.

Welcome to P. Crumhorn who submits his first loggings to *The Journal* this month. There are a few other names that I don't necessarily recognize as well (might just be a memory problem...), so welcome to all of you, too. Mike Hardester checks in to tell us that he's transferring back to the States after DX'ing from Okinawa. Welcome back Mike, the DX can be just as much fun Stateside.

I received a couple of people's logs after I had sent the monthly mailings to Wally and Sheryl. I had the best intentions of getting a second mailing out right away, but I ran out of time. Sorry to anyone who just missed this month. Your logs will appear next time...

I received an interesting letter from someone in the Monitoring Section of FRCN Nigeria (no QSL enclosed though!). They are looking for help in acquiring a higher education and a benefactor. If you're feeling philanthropic, drop me a line. I'll be glad to provide the name and address!

Until next month...

73, Kris

Tropical Band Loggings

Sheryl Paszkiewicz
1015 Green Street
Manitowoc, WI 54220



- 2325 AUSTRALIA, VL8T, 22/6, 1135 in EG w/pop mx (Emerson-CO)
2410 NEW GUINEA, R. Enga, 22/6, 1137 w/tlk in Pidgin English (Emerson-CO)
- 2485 AUSTRALIA, VL8K, 22/6, 1140 in EG w/pop mx (Emerson-CO)
3148.3 INDONESIA, unid, 16/6, 1510-1518 w/OM tlk & vcls. Covered by ute 1518. Poor-fair, RPD Belitung on late & drifting? (Hardester-OKINAWA)
- 3205 NEW GUINEA, R. West Sepik, 18/6, 1040 in Pidgin w/old pop mx & tlk. (Emerson-CO) 23/6 tent. at 1055-1131 in PD w/ Donna Fargo mx, poss. countdown of records, some echo effects. PNG stations good, Indos in poor. SIO=354. (Hardester-OKINAWA)
- 3214.8 SULAWESI, RRI Manado, 22/6, 1142 w/chanting (Emerson-CO)
3250y HONDURAS, R. Luz y Vida, 20/6, 0205-0220 in SP w/tlks, jingles, ID 0212, 0215. Lively tlks, poor sig. (Jordan-PA)
- 3260 NEW GUINEA, R. Madang, 18/6, 1045 in PD w/poss. rel tlk. (Emerson-CO) 17/6, 1059-1146 w/tlk, mx, ID, TC (Barhydt-OR)
- 3264.9t SUMATRA, RRI Bengkulu, 16/6, 1555-1632 in IN w/ment of RRI, no site ID. Pop mx, intl nx by M on hour, romantic mx. SIO=433. (Hardester-OKINAWA)
- 3275 NEW GUINEA, R. Southern Highlands, 18/6, 1055 in PD w/tlk, good sig. (Emerson-CO)
- 3279.8 ECUADOR, LV del Napo, 18/6, 1057 w/lcl mx in SP. (Emerson)
3280 CHINA, Vo Pujiang, 23/6, 1045 in CH w/rapid tlk. (Emerson-CO)
3300 GUATEMALA, R. Cultural, 20/6, 0250-0302 in SP w/orch mx, tlks, marimbas, tlk over mx, rel in EG 0300 plus hymns. Very poor sig. (Jordan-PA) Nice details--sp.
- 3305 NEW GUINEA, R. Western, 22/6, 1152 in PD w/C&W mx (Emerson)
3306 TIMUR, RRI Dili, 16/6, 1525-1546 in IN w/vcl groups, 5 poss. ads, 1544 s/off annts, RRI ID, chimes, "horn" & open air. QRM from EG station, "This news comes to you from. . ." who? (Hardester-OKINAWA)
- 3315 ADMIRALTY ISLANDS, R. Manus, 4/6, 1200 some PD & some EG pgs. (Emerson-CO)
- 3324.8 GUATEMALA, R. Maya de Barillas, 23/6, 1050 in SP w/lcl mx. (Emerson-CO) 21/6, 1115 w/rel pgs, M anncr, guitar & vcl, "Onward Christian Soldiers" on 2 guitars, heavy QRM. (Crumhorn)
- 3360 GUATEMALA, LV de Nahuala, 26/6, 0140-0200 in SP w/tlks, ID, QTH, marimbas, group vcls, prob. nx, ID 0200, poor. (Jordan)
3365 BRAZIL, R. Cultura Araquara, 20/6, 0237-0308+ w/sports, ment Ecuador, Venezuela, Nicaragua, Mexico, canned IDs, jingles, ID 0305, fair sig. (Jordan-PA)
- 3375 NEW GUINEA, R. Western Highlands, 22/6, 1158 in PD w/tlk. (Emerson-CO) Any specific annts?--sp
- 3380 GUATEMALA, R. Chortis, 20/6, 0221-0235 in SP w/w reading list, weak mx, ID 0231, extremely poor sig. (Jordan-PA)
- 3385t NEW BRITAIN, R. East New Britain, 1/6, 1205 in PD w/mx & tlks. (Emerson-CO)
- 3395 NEW GUINEA, R. Eastern Highlands, 22/6, 1200 in PD w/poss. nx (Emerson-CO)
- 3945 JAPAN, R. Tampa, 6/6, 0904-0942 in JP & EG w/show tunes, EG lesson, fair. (Barhydt-OR)
- 3970 JAPAN, R. Japan SSB relay, 9/6, 1255-1316 in JP w/time sig, ID across hour. Site (Matsuyama) fair at best tho not far from my QTH. SIO=333 w/QRM from CH station. (Hardester)
- 4450 CLANDESTINE, Vo Nation Saving, 23/6, 1140 in KK w/heavy jamming. (Emerson-CO)

- 4485 ASIATIC RSPFSK, Kamchatka Radio, 23/6, 1130 in RS w/clx mx. (Emerson-CO)
- 4565 USSR, RMWS in USB on 30/6, 1544 in EG, 1558 "Midnight in Moscow," CW QRM, white noise QRN. (Park-HI)
- 4606.7t PERU, R. Ayaviri, 23/6, 1125 in SP w/lcl mx, weak sig. (Emerson-CO)
- 4607.3 IRIAN JAYA, RRI Serui, 12/6, 1025-1050 in IN w/pop mx in lang, ID by W 1047, tlk, fair-good. (Royston-HI)
- 4760 SWAZILAND, TWR, 24/6, 0402-0415* in lang w/sermons & choir vcls, 0415 ID, s/off anmt. S10=353. (D'Angelo-PA)
tent on 30/6, 1537 in vern w/singing, tlks, poor in noise. (Park-HI)
- 4765t CONGO, RTV Congolaise, *1700 on days checked since 2/6. Poor-fair, no ID but always M in FR, no //s found. Sports, tlk, pop mx. (Hardester-OKINAWA)
- 4780t PAKISTAN, R. Pakistan? 22/6 at 1230 w/SE Asian mx (Emerson)
- 4799.8 GUATEMALA, R. Buenas Nuevas, 21/6, 1125 in SP w/accordion mx full ID 1127, call ltrs, addr, vcl/guitar mx 1129 (Crumhorn)
- 4835 GUATEMALA, R. Tezulutlan, 21/6, 1134 in SP w/whistles & marimbas, anmmts, fair w/some lcl QRN. (Crumhorn)
- 4835 SARAWAK, RTM Kuching, 8/7, 1050 in BM w/Qur'an, echo tlks, a capella singing //7145 w/white noise. (Park-HI)
- 4840 VENEZUELA, R. Valera, 20/6, 0925 in SP w/ads & mx (Emerson)
- 4844.3 GUATEMALA, R. K'ekchi', 21/6, 1140 in SP w/anmmts, guitar/vcls, fading under QRN 1145. (Crumhorn)
- 4850 CAMEROON, CRTV Yaounde, 14/6, 0435-0447 in FR & EG w/Afr. pop mx, full EG ID 0445, more mx. (Royston-HI)
- 4870 ECUADOR, R. Rio Amazonas, 21/6, 0240-0303 in SP w/heroic chorus, rel tlk, ID, folk mx (Jordan-PA)
- 4890 GABON, RFI relay, 23/5, 0510 in FR w/nx rpt. (Grenier)
- 4904.6 CHAD, RN Tchadienne, 9/7, 0237-0300 in FR w/tlk, phone calls ment. Chad, Africa, on early tonight. (Paszkievicz-WI)
24/6, *0427-0440 in FR w/children's chorus, ID, anmmts, hilife mx. S10=3+53. (D'Angelo-PA)
- 4910 ZAMBIA, ZNBC, 22/6, 0359-0411 in EG, "This is R. Zambia Intl," rpt on Mandela, into lang 0410, fair. (Streitmatter)
- 4915 BRAZIL, R. Anhanguera, 20/6, 0310-0335 w/tlk, lcl mx, echo IDs, rapid fade & hvy QRN (Jordan-PA) 14/5, 2330-2345 w/ID, FC, "Hey Jude" in PT. (Swaringen-NC)
- 4915 CHINA, Guangxi PBS, 22/6, 1220 in CH w/trad mx (Emerson-CO)
- 4995.8 PERU, R. Andina, 23/6, 1100 in SP w/beautiful lcl mx. (Emerson-CO)
- 5005 SARAWAK, RTM Sibu, 23/6, 1155-1215 in lang w/mx, time sig, ID, nx by M. S10=333 w/QRM unid on 5010. (Hardester-OKINAWA)
- 5010t MADAGASCAR, R. Madagasikara, 24/6, 0413-0432 in pres. Malagasy, chime type IS, ment. Madagascar 0422, mx, poor-fair. (Royston-HI)
- 5020 SOLOMON ISLANDS, SIBC, 20/5, 1052-1105 in EG w/choir, nx, RA nx. (Swaringen-NC)
- 5030v ECUADOR, R. Catolica Nac., 18/6, 2315-2345 w/tlks, ID 2331, guitars. Also same pgm 20/6, 0204-0309* (Jordan-PA)
- 5040 CHINA, Fujian PBS, 12/6, 1012 w/ID 1015, tlk //4975, instl, good sig. (Royston-HI) Nice one--sp.
- 5040 ECUADOR, LV del Upano, 8/7, 0200+ w/tlk, musica romantica, ID 0206. (Paszkievicz-WI)
- 5055.1 SWAZILAND, TWR, 22/6, 0315-0345* in EG w/Afr. mx, tlks, cmtry, 0345 ID, IS, off. S10=323. (Streitmatter-IN)
- 5075 CHINA, CPBS, 1/6, 1220 in CH w/tlks. (Emerson-CO)

Last night I got back from vacation; one place I went was Vancouver. I had a chance to stop into the CBC Centre there, which houses CBU, 690 kHz medium wave and CBUT TV, Channel 2. CBU is relayed on SW as CKZU, 6160 kHz. If you have their QSL, you know what the building looks like. They do offer tours in fall but are shorter staffed in summer. If you are ever in Vancouver in the fall, you might want to call them to arrange for a tour. You must check in with security but the staff I talked with were very friendly. You can see the building a few blocks away by its marquee which advertises their programs as well as the familiar CBC logo. Definitely the high point of my trip.

International Band Loggings

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



- 5930 CZECHOSLOVAKIA R Prague in EG 0303, nx, ID, //7345 (Olson 6/13)
 5975 COLOMBIA R. Macarena in SP 1105, several ID's, promos, tlks, mx (Prath FL 6/23)
 59817 GUATEMALA Union R/AMR in SP 0033, ID "Radio Adventista Mundial" (Johnson MD 6/12)
 5990 ROMANIA RRI in EG 0234, local mx, propagation rpts, sports, g (Levison PA 6/28)
 59952 PERU R Melodia in SP? 0230 after VOA s/off, ID 0303, ad (Johnson MD 6/16)
 6015 ZANZIBAR RTZ in SH 0353, tLk, local mx, drum IS, pips, ID, nx (D'Angelo PA 6/28)
 60157 BOLIVIA R El Mundo in SP? 0031, ID as "R Mundo" w/o El, jingle (Johnson MD)
 6020 NETHERLANDS ANTILLES RN relay in EG 1030, "Newslines" (Grenier CA)
 6020 NETHERLANDS RN Plevio in EG 0052, "Media Network", f (Carson OK 7/6)
 6050 NIGERIA RN Ibadan in EG 2307*, nx, ID, s/off annmnts, NA, f (D'Angelo PA 6/3)
 60553 PERU R Continental in SP 0235, SP pops, many annmnts, ID (Johnson MD 6/12)
 6070 CANADA CFRX Toronto in EG 0601, nx, wx, sports, ads, mx, g (Carson OK 7/6)
 60788 BOLIVIA R San Gabriel in Aymara? 0058, ID by calm w annrc, mx (Johnson MD)
 6080 EAST GERMANY RBI in GM 0229, IS, nx, p (Carson OK 6/26)
 6090 LUXEMBOURG RL in EG 0105, songs & rock mx, ads (Swaringen NC, Carson OK 6/26)
 6095 SWITZERLAND SRI in EG 0210, rpt on earthquake in Iran, f (Carson OK 6/26)
 61159v COLOMBIA LV del Llano in SP 0315, "Super" Network promos, domestic mx, ID, QTH, Tively mx (Jordan PA 6/21) in SP 1105 w/continuous tLk & phone #'s, ID (Prath FL)
 6155 BOLIVIA R Fides La Paz in SP? 0225, newsbriefs & ID under noise (Johnson 6/12)
 6165 NETHERLANDS ANTILLES RN relay in EG 0058, tlks on various subjects (Wolfson)
 In EG 0350, "Newslines", "Tokyo Rose of WW II, g (Carson OK 6/15)
 7155nf? JORDAN RJ in AR 1455, ID, AR mx, pips, QRM R Tirana, p (Dillon GRECE 6/15)
 7235 WEST GERMANY Deut Walle Koln in AR 0400-0550, nx, AR mx (Bader DC)
 7260 VANUATU RV Bislama in FR/Pidgin 0641, tlks, island mx, ID, p (Jordan PA 6/16)
 7275 SOUTH KOREA RK in EG 1345, tLk re issuing license for cable TV (Grenier CA)
 7325 UNITED KINGDOM BBC London in EG 0257, promo, ID, nx re Britain, g (Carson 7/3)
 7345 CZECHOSLOVAKIA R Prague in EG 0259, nx, readings from CZ literature (Carson 7/2)
 91147nf? ARGENTINA R Continental in SP 0135, soccer game?, ID (Barhydt OR 6/7) in SP 2300, nx, ID, "Italy 90" presumably re soccer World Cup (Bloisse NJ 7/3)
 9410 UNITED KINGDOM BBC London in EG 0510, nx, tLk on US space mission (Grenier CA)
 9435 ISRAEL Kol Israel in EG 0017, tLk re Sea of Galilee area, sked (Wolfson 7/2)
 9445 TURKEY VoT in EG 0305, nx, TK press review, TK pop mx, f (Carson OK 7/10)
 9455 USA WSHB Cypress Creek in EG/SP 0759, IS, ID, CS nx rpt, into SP pgm 0807, f (Hardester OKINAWA 6/17) Mike reports that (aside from UT stns) this is the only loggable N AM stn being hrd in Okinawa. VOA take note!
 9500 ALBANIA R Tirana in EG 0229, IS, fqys, sked, bad QRM from WYFR (Carson OK 6/28)
 9545 ANTIGUA Deut Walle relay in EG 0304, nx, ID (Olson 6/13)
 9545 AUSTRALIA RA in EG *0830, IS, theme mx, ID, fqy, billboard, p (Jordan PA 6/26)
 9565 BRAZIL R Universo in PT 0805, ID, relig speech, mx, f (Royston HI 6/25)
 9570 ROMANIA RRI in EG 0232, "Sunday Studio Program", p (Grenier OK 7/2)
 9580 AUSTRALIA RA in EG 0845, sports results and pop mx (Grenier CA)
 9640 ALGERIA V of Free Sahara in SP/AR 2228, choral mx, ID, chants, p (Karcheski MA)
 9655 THAILAND RT in EG 2350, calendar of local events, Big Band mx, ID, nx of Asia, several listed // 's checked but none hrd, f (Hardester OKINAWA 6/22-23)
 9680 INDONESIA RRI Jakarta in IN 1500, rpts, IS, xmsn to SE Asia, p (Flynn CA 6/19)
 9705 PORTUGAL RP in EG 0245, stamp show, ID (Olson 6/16)
 9715 NETHERLANDS ANTILLES RN relay in EG 0730, ID, cmntry, nx, mx (Bader DC 5/31)
 9755 CANADA RCT in EG 2306, "SWL Digest" (Bloisse NJ 7/1)
 9760 AUSTRALIA RA in EG 0900, s/on w/world nx, tLk on elections in Burma (Grenier CA)
 9800 FRENCH GUIANA RFI relay in EG 0325, nx, ID (Olson 6/11)
 9835 HUNGARY R Budapest in EG 0035, nx, cmntry, mx, //11910, g (Levison PA 6/29)
 9885nf? NEW ZEALAND RNZ in EG 1740*, nx, features, weak in daytime (Flynn CA 6/19)
 9925 BELGIUM BRT in EG 2332, cmntry re farmers' union, wx, f (Levison PA 6/28)
 11605 ISRAEL Kol Israel in EG 0000, Israel nx magazine, g (Carson OK 6/28)
 11645 GREECE V of Greece in EG 0345, nx, ID (Olson 6/19)
 11720 AUSTRALIA RA in EG 1200, s/on w/IS, ID, and nx, //9580 (Prath FL 6/9)
 11725 VATICAN STATE Vatican R in EG 0320, relig mx, ID (Olson 6/24)
 11730 CANADA RCT in EG 2308, tLk re "new" digital tvrcv invention! (Flynn CA 6/13)

11780 BRAZIL RN de Amazonia in PT 0930-1056, nx, ID, BR mx (Barhydt OR, Grenier CA)
11840 NORWAY RNI in NO/EG 0316, IS, annmt about strike repeated, f (Carson OK 6/30)
11905 BRAZIL R Universo in PT 0148, tlk, crowd noise, mx, ID (Barhydt OR 6/16)
11925 NORWAY RNI in EG/NO 0110, repeated IS & strike annmt (Barhydt OR 6/24)
11925 BRAZIL R Bandeirantes in PT 0335, tlk, ID (Barhydt OR 6/17)
11955 SINGAPORE BBC relay in IN 1115, story re rock star Prince, g (Park HI 6/23)
11955 MADAGASCAR R Nederlands relay in DT 1407, tlk re World Cup soccer (Park HI 6/21)
12025 MONGOLIA R Ulan Bator in EG *1200, IS, ID, sked, nx, vp (Jordan PA 6/7-8)
12050 EGYPT R Cairo in AR 1516, ID, interview, bet QRM (Dillon GREECE 6/5)
12450 CHINA R Beijing in IN 1105, light rock, tlks, poor modul, p (Park HI 7/8)
13655 JORDAN KJ in AR/EG 1000-1130, 9 note IS, ID, into EG 1100, f-p (Jordan PA 6/17)
13660 IRAQ R Baghdad in EG 2108, ME mx, ID 2112, more mx, p (Royston HI 6/23)
13665 PAKISTAN RP Karachi in Urdu 1520, tlks by several men, p (Flynn CA 6/12)
13675 BELGIUM BMT in SP *2300, "Debate Europa", nx, tlks, mx (Blois NJ 7/1)
13705nf? AUSTRALIA RA in EG 0709, extreme QRM from bubble jammer same freq (Hardester OKI)
13730 AUSTRIA OKF in EG 1130, "Shortwave Panorama" (Swaringen NC) in EG 0130, nx, mx selections by various musicians & instruments, g (Levison PA 6/5)
13780 WEST GERMANY Laut Welle Koln in EG 2115, ID, review of World Cup (Prath FL 6/16)
13855 ICELAND R Reykjavik in IC *2300-2337*, nx, 9-10 note IS (Jordan PA 6/22)
149177 KIRIBATI KK in EG *0555-0632, BBC nx, island mx (Emerson CO, Barhydt OR 6/10)
15020 INDIA AIR Aligarh in Sinhala 1300, nx, mx, chanting (Emerson CO 6/2)
15030 CHINA CPBS-2 Beijing in CH 0830, CH drama w/mx, //7770, 11040, f-p (Royston HI)
15095 SYRIA R Damascus in EG 2005-2104*, nx, ID, AR mx (Royston HI, Carson OK 6/24)
15100 PHILIPPINE IS. FBBC in EG/Vern 1110, IS, annmt bcst in VT tribal langs (Park HI)
15105 YUGOSLAVIA RY in EG 2358, nx, cmntry, interview (Carson OK 6/17, Flynn CA)
15115 NO. KOREA R Pyonongyang in EG 0035, tlk on KR herbal medicine, ID (Park HI 6/14)
15165 NORWAY RNI in EG 0011, IS, ID, annmt of reduced sked due to strike (Wolfson 7/2)
15190 CONGO KTV Brazzaville in FR 1105-1235, cmntry, ID, fqys, pop mx (Jordan PA 6/18)
15195 JAPAN KJ in EG 0505, world nx, tlk on Baltic republics (Grenier CA)
15250 PORTUGAL RP in EG 2000-2029, nx, features (Barhydt OR 6/15)
15265 QATAR QBS in AR 1405, dramatic tlks backed by piano & orch, ID (Jordan PA 7/6)
15330 BULGARIA K Sofia in EG 2200, rpt on ESP study in Bulgaria (Prath FL 6/9)
15360 NORWAY RNI in NO 0427, IS, strike annmt, into R Denmark relay 0430 (Park 7/9)
15425 AUSTRALIA ABC Perth in EG 0729, C&W mx, 'C, tlk, pronas, p (Park HI) in EG 0903 nx, signal abruptly lost 0917 (Barhydt OR 6/26)
15485 NEW ZEALAND RNZ in EG 1920, "Mailbox", future skeds, g (Park HI 7/6)
15525 SWITZERLAND SRI in EG 2117, "Swiss Merry-Go-Round", //13635 (Prath FL 6/9)
15560 AUSTRALIA RA in EG 0115, "Oz Country Style", p (Park HI 7/5)
15610nf? NO. MARIANAS KHBI Saipan in EG 1645, "Home Forum", essay, //13625 (Park HI 7/6)
17535nf GREECE VOG in GK *0800-0855*, IS, ID's, GK mx, tlks, f-p (Jordan 6/17)
17610 TUNISIA RTV Tunis in AR 0625, tlks, ID 0630, "Casbah" type mx, f (Jordan 6/16)
17640 PAKISTAN RP in EG 0244*, slow speed nx, ID, f-p, //15115, p (D'Angelo PA 6/25)
17675nf NEW ZEALAND RNZI in EG 0557-0830, mx, sports, ID (Jordan, Royston, Carson 7/6)
17740 PORTUGAL FDP in PT 1000-1045, NA, "Portugal Magazine", pop mx, g (Jordan 6/26)
17775nf? NORWAY RNI relay of R Denmark in DN 1730, ID in EG, KVOH under (Flynn CA 6/15)
17825 QATAR QBS in AR 1440, nx(p), AR instrms, brief tlks, ID, p (Jordan PA 6/16)
17835 SOUTH AFRICA RSA in EG 1110, "Touring RSA", book pgm, //11900, p (Park HI 7/1)
17855 NO. MARIANAS KHBI Saipan in EG 0745, CSM relig pgm, IS, ID, fqys (Hardester OKI)
21500 SWEDEN RSI in EG 1530, ID, SW rock mx, nx, mailbag, interview (Bader DC 6/3)
21650 WEST GERMANY D Welle Koln in Parsi 1759*, IS, ID, nx, p (Park HI)
21725 UNITED ARAB EMIRATES Abu Dhabi in AR 0225-0406+, ME instrms, recitations, dramatic readings, pipe, martial mx, nx, tlks, vg (Jordan PA 6/22)
21770 SWITZERLAND SRI in FR 1715, ID, relig pgm, mx, //17830, 15525 (Prath FL 6/10)
21770 FRANCE RPI in EG 1405, nx, "Press Review", "Cinema Magazine" (Hardester OKI)
25795 YUGOSLAVIA RY in EG 1215-1230*, ID, pgm of Yugo pop mx (Prath FL 6/16)

CLANDESTINES & PIRATES

6325 CLANDESTINE V of the Khmer Kunming(t) in KH 1220, near continuous rx, brief tlk, into nx? pgm w/male and female alternating items, f (Hardester OKINAWA 6/23)
7410 PIRATE V of Tomorrow Baltimore, ID 0130, racist stuff (Johnson MD)
7415 PIRATE WKZP in EG 0128, rock mx, ID "K-Zap", address (Johnson MD 6/10)
11635 CLANDESTINE LW del CID San Jose, CR in SP 1455, Afr mx, ID's (Swaringen NC)
15710 EUROPIRATE R Marabu in EG 0045, rock vocals, ID, p (D'Angelo PA 6/11)

English Schedules

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



Prepared 07/27/90 at 8:30 PM.

Thanks to John Carson (OK), Kris Field (PA), Gordon Darling (Papua New Guinea), George Poppin (CA) and Joe Hanlon (NJ) for the many schedules and press clippings received.

HCJB & DX Party Line

Brent Allred's last show was aired July 14, and he had already returned to New Zealand. John Beck will take over producing the show until the new producer Richard McVicar, from Canada, can begin producing the show. McVicar is scheduled to arrive at HCJB August 19.

If you are an early riser, I find the South Pacific release at 10 UT to be quite good here. For me, 9745 is better than 11925 kHz.

Notes

A week after I received a fax from Rudi Hill of Radio New Zealand Int'l saying there would no changes in July, on July 2 I heard a new schedule announced on the Mailbag show. The new schedule was effective July 2. Thanks to Al Quaglieri via the ANARC SWL Net, I confirmed his tip that Radio for Peace International moved out from under Radio Baghdad on 13660. RFPI moved down to 13630 kHz, noted early afternoon weak but readable and parallel to 21566 kHz. In mid-July I found Radio Moscow WS on 11520 kHz at 20-22 UT. Seems like an unusual frequency to me. Radio Vilnius at 22 announces frequencies which I don't think are in use (e.g., 15455, 13645), and doesn't announce 11520 kHz; I have

listed what I can hear. Radio Berlin International has moved to 13770 kHz, from 13660, at 2145, 2345, 0145 and 0345 UT. Other frequencies remain as they were. Tony King in Radio New Zealand's *Mailbag* show July 16 announced that DST would be stabilized in the future: the first Sunday of October to the third Sunday in March.

Voice of Turkey

To support the 4 national TV programs and 4 national radio programs, and to add one more of each service plus a teletext service in August, the Turkish Radio and Television Corporation (TRT) is adding 5x250 kw transmitters to the 5x500 kw transmitters, 2 rotatable, 3 quadrant and 44 HF curtain antennas already purchased. Coskin Arslan, Deputy Director General for Engineering, says in a June 28 letter sent to George Poppin that the first transmitter will be ready March 1991 and all 5x500 kw transmitters will be completed in 15 months. Arslan writes "So if everything is OK, then I could say that west coast coverage of USA will be possible in the middle of 1992 at the latest."

FCC BBS

The Federal Communications Commission has a bulletin board system called *Public Access Link* at 301-725-1072. There are announcements and public notices, no messaging or file downloads. There is no log-on procedure. Set your modem to 1200 bps, 8 bits, no parity, 1 stop bit. After connecting, press *Enter* to start.

More Notes

This arrived too late to make to McGibbon. Radio Botswana has changed at least its SW schedule from the April 9th letter sent to Gordon Darling (c.f. last month's *Listener's Notebook*). In a July 26th fax to Andy Sennitt at the WRTII Editorial Offices Radio Botswana gave the following schedule: 3356 0300-0730 and 1500-2200, 4830 0300-2200, 5955 0730-1700, and 7255 0300-1800 UT. Jonathan Marks forwarded the Radio Nederland *Program Preview* for August, September and October. It may be downloaded from the Pinelands RBBS (as *RN_PRG.TXT*) or the ANARC BBS. If you don't see an announcement of the availability of *Proceedings 1990* elsewhere in *The Journal*, send a SASE to John Bryant for a brochure on this excellent *Fine Tuning* publication. Shipping of the third edition is scheduled for early September. You should find it easier to dial into the *Pinelands RBBS* these days. A large number of repeat callers for certain packet radio software have been shuffled off to another BBS. That BBS is now acting as a primary distribution point for the software.

Sri Lanka

Gordon Darling sent clippings from the April *World Broadcast News*, and one told of Hudson Samarasinghe recently appointed as Chairman of the Sir Lanka Broadcasting Corporation. He has initiated the widening of SLBC foreign broadcasts to make "Sri Lanka's point of view, as well as its attractions better known throughout the world." On July 26, Jonathan Marks on *Media Network* reported and aired a tape of the new SLBC *World Service*: English to Europe 1835-2000 UT on 9720 (100 kw) and 15120 kHz (35 kw). Lo and behold, on July 27, I too heard this one with a full ID and address at 1930 through 2000 UT. It was not very strong and suffered sideband splash

from 15115, but was quite readable except during signal fades. Watch your ears and speakers, however, as the VOA dumps a carrier on 15120 at 2001 followed by tones, as a prelude to Caribbean broadcasts.

Icom R-1

Icom America withdrew the tiny R-1 and two other new receivers from the North American market, apparently due to conflicts with patents owned by Uniden. I acquired an R-1 in May via a friend travelling to Japan on business. After using it for two months, I found that this 100 kHz-1300 MHz receiver is an amazing little package. It does have some shortcomings however. MW and HF reception is at best adequate. In my opinion it will not challenge the popular Sony, Panasonic, Radio Shack and Sangean portables. Suffering from overload and a wide AM bandwidth, HF reception is limited to the stronger stations (e.g., the Caribbean relays, BBC, Moscow, etc.). Attaching a larger or external antenna only worsens the situation. But you can go for a walk around the block with the R-1 in your shirt pocket, listening to Media Network. Even through a close paging, cellular or other transmitter can cause some problems for the radio, the VHF and UHF performance is quite good. In the severe tests in Trenton and Newark the R-1 performed much better than the Radio Shack PRO-34 and other 800 MHz hand-held scanners I have used.

Changes in the Column

The column format has taken on a new look in the past months. A Hewlett-Packard LaserJet III is printing the column and schedules. Last month I used MicroPro's WordStar 6.0 but this month I have gone back to my favorite speed demon XyQuest's Xywrite III Plus 3.55. The solar flux graph is done in Borland's Quattro Pro. I hope you find things easy to read these days.

Changes entered between 06/30/90 and 07/27/90.

ENGLISH LANGUAGE SW BROADCAST SCHEDULES: By Start Time

Compiled by Thomas R. Sundstrom, W2XG

Start Time (UTC)	End Time (UTC)	Country	Station	Freq #1	Freq #2	Freq #3	Freq #4	Freq #5	Freq #6	Freq #7	Freq #8	Target Area	Notes	Record Last Updated
0000	0300	Guam	KHBN	15225								China		07/25/90
0000	0050	North Korea	R Pyongyang	15115	13765	11975						Am		07/15/90
0145	0230	German Dem Rep	R Berlin Int'l	15240	13770	13610	11890	6080				CA/NA		07/15/90
0145	0200	Vatican State	Vatican Radio	15135	11750	9650						As/Aus/NZ		07/07/90
0200	0300	Argentina	RAE	11710								Americas	Tu-Sa	07/15/90
0200	0800	New Zealand	R New Zealand Int'l	17675								Pacific	Su	07/02/90
0200	0300	Taiwan	V of Free China	15345	11860	11740	9765	9680	5950			NA/Jap/As/CA/Aus/NZ	#3,5,6 v WYFR	07/07/90
0230	0330	England	BBC	12095	9915	7325	6175	5975				US: NA/CA/Carib		07/25/90
0300	0400	Bulgaria	R Sofia	17835	17825	15290	11735	11720				Afr/NA		07/17/90
0300	0400	Taiwan	V of Free China	15345	11745	9765	9680	5950				NA/Jap/As/Aus/NZ	#4,5 v WYFR	07/07/90
0315	0345	France	R France Int'l	15155	11955	11705	9800	9790	9745	7280	7135	Am/Afr/Ind/As/Eu	#4 v Fr Guinea	07/20/90
0330	0400	United Arab Emirates	R Dubai	15435	15400	13675	11945					NA		07/04/90
0345	0430	German Dem Rep	R Berlin Int'l	13770	11890							NA		07/15/90
0400	0450	North Korea	R Pyongyang	17765	15230	15180						SE As		07/15/90
0500	0530	England	BBC	9915	9640	5965						US: NA/CA/Carib		07/03/90
0600	0650	North Korea	R Pyongyang	15230	15180							SE As		07/15/90
0700	0750	North Korea	R Pyongyang	17765	15340							SE As		07/15/90
0710	0830	New Zealand	R New Zealand Int'l	9855								Pacific	M-F	07/02/90
0800	0830	Bangladesh	R Bangladesh	17850	15195							Eu		07/03/90
0800	0850	North Korea	R Pyongyang	15240	15180							SE As		07/15/90
1000	1200	Guam	KHBN	9830								China		07/25/90
1030	1110	United Arab Emirates	R Dubai	21605	17865	15435	15320					Eu/W Af		07/04/90
1100	1150	North Korea	R Pyongyang	11735	9977	9645						Am		07/15/90
1130	1225	Iran	R Tehran	11790	11715	9705	9575					S&SE As/ME/India		06/30/90
1300	1350	North Korea	R Pyongyang	15230	13650	9640	9345	9325				SE As/Am/Eu		07/15/90
1300	1330	Norway	R Norway	9585								Eu	Eng Sun only	07/21/90
1330	1400	United Arab Emirates	R Dubai	21605	17865	15435	15320					Eu/W Af		07/04/90
1400	1425	France	R France Int'l	21770	11910							SE As	#2 v China	07/20/90
1400	1600	N Mariana Is	KHBI	13625	9530							SE As/India/China	285/310 deg	07/03/90

1415	1430	Canada	R Canada Int'l	21545	17820	17795	15325	15315	15305	11935	C&E Eu	#2,4,5,7 v Eu rlys	07/07/90
1459	1601	Guam	KTWR	11785							India		07/15/90
1500	1550	North Korea	R Pyongyang	11760	9977	9640	9325				Eu/ME/Af		07/15/90
1545	1600	Vatican State	Vatican Radio	17870	15090	11715					As/Aus/NZ		07/07/90
1600	1745	England	BBC	15260	11775						WS: NA/CA/Carib		07/25/90
1600	1630	Norway	R Norway	21705	17755						NA/CA	Eng Sun only	07/02/90
1600	2100	Saudi Arabia	BC Serv of Kingdom of SA	9720	9705								07/01/90
1600	1640	United Arab Emirates	R Dubai	21605	15435	15320	11795				Eu/N Af		07/04/90
1700	1750	North Korea	R Pyongyang	11760	9977	9640	9325				Eu/ME/Af		07/15/90
1700	1730	Norway	R Norway	25730	17755						Af/NA	Eng Sun only	07/02/90
1730	1830	Bulgaria	R Sofia	17825	15310	11680					Afr		07/17/90
1745	2205	New Zealand	R New Zealand Int'l	15485							Pacific	M-F	07/02/90
1800	1850	Brazil	R Bras	15265							Eu		07/17/90
1800	2330	Costa Rica	R for Peace Int'l	21566	13630							Se-Su	07/14/90
1835	2000	Sri Lanka	SLBC	15120	9720						Eu		07/27/90
1845	2200	New Zealand	R New Zealand Int'l	15485							Pacific	Su	07/02/90
1900	2000	Argentina	RAE	15345							Eu/Afr	M-F	07/14/90
2000	0330	Costa Rica	R for Peace Int'l	21566	13630							M-F	07/04/90
2000	2200	N Mariana Is	KHBI	13625	9455						Aus/Japan	180/340 deg	07/03/90
2100	2150	Fed Rep Germany	R Deutsche Welle	15435	13780	11785	9765	9670			Aus/As		07/02/90
2100	2125	Finland	R Finland	15430	11755	6120					Aus/S&SE As/Af/ME/Eu		07/08/90
2100	0100	USA	KVOM	17775							CA/Carib	100 deg	07/25/90
2100	2145	Yugoslavia	R Yugoslavia	15105	11735	9620	7215				Af/NA/Aus/Eu		07/11/90
2130	2200	Israel	Kol Israel	17630	17590	15640	12077	11605			Af/LA/NA/W Eu		07/08/90
2145	2230	German Dem Rep	R Berlin Int'l	13770	9730	7295	5965				NA/Eu		07/15/90
2200	2230	Lithuania	R Vilnius	15485	15180	11790	11520				NA		07/11/90
2200	2300	Taiwan	V of Free China	21720	17750						Eu	v WYFR	07/07/90
2205	0710	New Zealand	R New Zealand Int'l	17675							Pacific	Su-F (F->Su -0645)	07/02/90
2345	0030	German Dem Rep	R Berlin Int'l	15240	13770	13610	11890	9730	6080		CA/NA		07/15/90

Changes entered between 06/30/90 and 07/27/90.

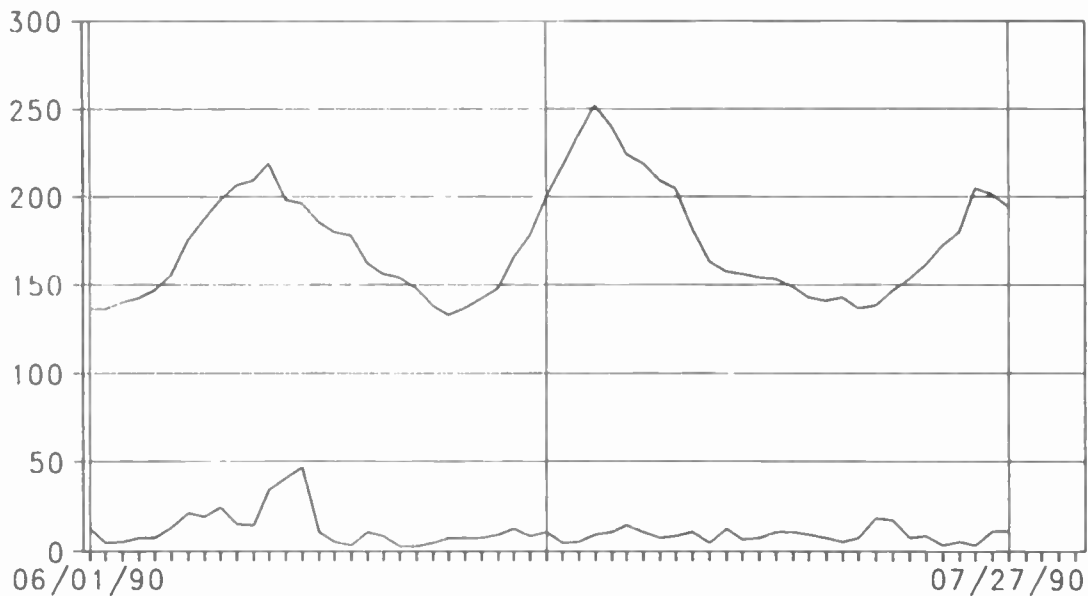
ENGLISH LANGUAGE DX SHOWS: By Day of Week

Compiled by Thomas R. Sundstrom, W2XR

Shortwave DX Program	Show Start	Xmas Start	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: Monday														
Hailbag	0430	2205	New Zealand	R New Zealand Int'l	17675							Pacific	1st & 3rd Mon/mo	07/02/90
** DAY OF THE WEEK: Wednesday														
DXer's Special	1920	1900	Argentina	RAE	15345							Eu/Afr		07/21/90
** DAY OF THE WEEK: Friday														
Hailbag	1905	1745	New Zealand	R New Zealand Int'l	15485							Pacific	Fr after 1&3 Mo/mo	07/02/90
** DAY OF THE WEEK: Saturday														
DXer's Special	0235	0200	Argentina	RAE	11710							Americas		07/21/90
Radio World	1235	1230	Belgium	BRT	21810							SE As/NA		07/01/90
Radio World	1535	1530	Belgium	BRT	21815	17550						Afr		07/01/90
Radio World	1735	1730	Belgium	BRT	13675	5910						Eu		07/01/90
Radio World	2105	2100	Belgium	BRT	9925	5910						Eu		07/01/90
Radio World	2335	2330	Belgium	BRT	13675	9925						SA/NA		07/01/90

Solar Flux & A-Index: Jun-Jul 1990

Recorded from WWV



06/29/90
27 day intervals

by Sundstrom

PC Software by W2XQ



English Language SW Broadcast Schedules

- Schedules by country and time, DX shows by day of the week.
- All data immediately at your fingertips. No cutting and pasting of the monthly columns until the next full edition is published in the NASWA Journal.
- Updates available via a telephone BBS as changes are known. No waiting a month to get the new data.
- Load the memories of the JRC NRD-525, JST-135, and the Kenwood R-5000 receivers.

WRTH
1988
Industry
Award
Winner

Program & Current Data File..... \$20 + s/h
1-Year Download Subscription via
Pinelands R8BS..... \$25



RECEIVER CONTROL

Japan Radio Company NRD-525 Kenwood R-5000

- **Database Management of Receiver Memories**
Manipulate (create, edit, delete, combine) many lists and load them into memories. Scan after loading a list (time-based). Poll memories.
- **Scan Frequency Ranges**
Specify starting and ending range, mode, time delay. Capture data to daily file. Broadcast band (11-120 m, MW, LW) limits predefined.

Either Version \$ 60 + s/h



EVENT MANAGER for the Kenwood R-5000

- **Many Events, Many Frequencies**
Akin to programming a television VCR, create and run a file of multiple events to turn the receiver on and off at days and times specified, changing frequencies and modes as necessary.
- **Remote Control**
Control a tape recorder or other device by rear apron relay contacts. Listen to the tape later at your leisure.

New! \$ 75 + s/h

All software requires PC/XT/AT/PS-2/compatible, 640 KB, hard disk.

Shipping & Handling:
US & Canada - \$2.50
Elsewhere - \$5.00

NJ Residents add 7% sales tax.
Personal Checks Welcome (on
US Bank). No cash please.



TRS Consultants
PO Box 2275
Vincentown, NJ 08088-2275
609-859-2447
Fax: 609-859-3226
Pinelands R8BS
609-859-1910

Download software catalog
or send SASE (2 IRCs).



Contact:
Lee Ann Browning
717-794-2191

ANNOUNCEMENT OF PUBLICATION

Pirate Radio Stations:

Tuning In to Underground Broadcasts

by ANDREW R. YODER

Featuring station listings to help
listeners identify unlicensed broadcasts.

Tuning in to underground radio is perhaps the most intriguing activity of radio hobbyists and shortwave listeners. Many do so for the sheer excitement of listening to renegade broadcasters, but few deny the value of the pirate radio station as a source of alternative music, fringe political discourse, and uninhibited entertainment.

Still, the nuts and bolts of locating and listening to pirate stations remain a mystery to most radio buffs. The illegality of unlicensed broadcasting plays a major role in restricting underground radio information to the pages of obscure bulletins and specialty magazines. In this book, ANDREW YODER reminds readers that, while it may be illegal to operate a pirate station, there aren't any laws against listening to one.

Pirate Radio Stations is the first and only comprehensive guide to tuning in, identifying, and contacting the most unpredictable stations on the radio spectrum. This practical handbook presents

- A complete history of pirate radio since its emergence in the 1920s
- Listings of land-based and offshore stations with specific descriptions of programming activity
- Station biographies and interviews with notable pirates and FCC officials
- Technical coverage of equipment and radio utilities required to zero in on pirate stations
- Instructions for contacting stations to confirm reception and collecting coveted QSL cards
- Ways to contact other pirate listeners and DXers
- Numerous diagrams illustrating the operation of pirate radio systems

With more than 35 confirmed contacts, ANDREW YODER is one of the foremost pirate radio listeners in North America.

CONTENTS: Pirate Radio: 1925-1976—Pirate Radio: 1976-1982—Pirates Since 1983—Inside Pirate Radio—Europirates—Offshore Pirates—Holiday Pirates—Political Pirates—Pirate Utilities—Verifying Pirates—Equipment and Information Sources

ORDERING INFORMATION:

Order No. 3268 • FPT \$12.95 Paper (ISBN 0-8306-3268-9) • \$19.95 Hard (ISBN 0-8306-9268-X) • 192 pp., 89 illus., 7" x 10" • Publication Date: MAY 1990

TAB BOOKS Inc. • Blue Ridge Summit, PA 17294-0850 • 1-800-822-8138 (PA/AK (717) 794-2191)



WILLIAM J. PLUM

SOCIAL & COMMERCIAL PRINTING

12 GLENN ROAD :: FLEMINGTON, NEW JERSEY 08822

TELEPHONE 201-788-1020

List 10/89

FOREIGN LANGUAGE PREPARED QSL CARDS 3½x5½ for use in QSLing SWBC & Utility Stations

E-English	F-French	P-Portuguese	S-Spanish	I-Indonesian
50 Cards-\$3.00	100-Cards-\$5.00	300 Cards-\$12.00		

Cards are sold in units of 50 per language. Cards are pre-packed and are printed on several colors of stock for variety. Mix & match for quantity discount.

<u>PLAIN AIRMAIL ENVELOPES</u>	100	250	500	<u>PRINTED AIRMAIL ENVELOPES</u>	250	500
#6-3/4 (3-5/8x6½)	\$5.50	11.75	21.25		23.75	41.25
#European (4-3/4x6½)	6.00	13.75	25.00		25.50	45.00
#10 (4-1/8x9½)	5.50	11.75	21.25		23.75	41.25

ALL AIRMAIL ENVELOPES are sealed in plastic for protection. For printed airmail envelopes, specify size, quantity, and whether regular style (with name and address printed in upper left) or return style (with name and address printed in lower center). We suggest that you not include your call on mailing or return envelopes.

FOREIGN AIRMAIL POSTAGE stamps for return postage use. SASE brings current list.

HAM QSLs - Card #1

500-\$17.50 1000-\$23.00

STOCK: Choice of white, gray, blue, ivory, pink, yellow, green or asst.
INK: BLACK ONLY

HAM QSLs - Card #2

500-\$21.50 1000-\$27.00

STOCK: Choice of white, gray, blue, ivory, pink, yellow, green or asst.
INK: Blue or red

**We cannot print Ø, though meant to represent a zero, this is actually a letter from the Danish alphabet. In our typestyles, there is ample difference between a zero and the letter "O". See QSL on reverse side.

TWO COLOR U.S. FLAG QSL two color u.s. flag qsl TWO COLOR U.S. FLAG QSL

1000-\$57.50

Cards can be printed on one color of stock or on assortment. Let us include your rig and ant. or club affiliation initials.

****COMING SOON ++++++ EYEBALL CARDS ++++++ COMING SOON****

NOTE Products are shipped UPS ground service & require a street address. P&H is only \$2.50 per order. Shipping costs via Parcel Post or to Canada must be quoted first, as the \$2.50 P&H will not cover shipments sent via the P.O. UPS Next Day Air and Second Day Air services are available if you need your supplies that much faster. THANKS!!

PUBLISHER'S PAGE



NO COLLECT CALLS ON THESE ADS, PLEASE.

FOR SALE: One used and one never used Sony 2010, \$275.00 and \$300.00. Never used Bearcat 800, \$300.00. Never used Bearcat 200 including spare battery pack, car lighter cord, and 18 inch antenna, \$250.00. Panasonic 12-hour voice activated recorder, \$170.00. And books, books, books. Don Loebel, 2000 Springdale Blvd #112, Palma Springs, FL 33461. Phone (407) 439-0427.

WANTED: WRH/WRTH 1946 to 1973 and 1976. Call or write with prices. Gene Pearson, 869 East Boundary, Perrysburg, OH, 43551. Phone (419) 874-7008.

NOTICE: I am looking for SWL's and DX'ers in the Reno-Sparks, Nevada area to possibly form a local club. Pete Grenier, 3190 Elaine Way, Sparks, NV 89431. Phone (702) 358-4929.

FOR SALE: Kenwood R-1000 receiver in excellent condition. Tunes 150 to 30 MHz. Has 4 kHz wide and 2.9 and 1.9 narrow Collins filters installed. Original carton and manual included. Price \$400.00 including UPS shipping. Bob Thunberg, 409 Rurt Street, DuBois, PA 15801. Phone (814) 371-7665.

FOR SALE: Customized beam headings (from/to) and distances (MI/KM) to over 439 WRTH-90 transmitter sites. Useful in selecting alternate transmissions and choosing listening times based on distances. ITU Country Codes included. Send your location/coordinates, \$6.25. Also "Passport to World Band Radio" 1989, \$9.50. "FRENDX" 1989, \$9.00. WRTH 1987, \$8.25; 1989, \$9.25. All items include shipping. Cashiers check or money order, please. Al Drehmann, Route 2, Box 3-B, Tryon, NC 28782. Phone (704) 894-3398.

18th. Edition 1990 DSWCI TROPICAL BANDS SURVEY

The 18th edition of the wellknown DSWCI Tropical Bands Survey is now available.

In this 36 pages offset-printed booklet in A-4 size you will find all active broadcasting stations in the 2,000 - 5,900 kHz frequency range, listed by frequency with their power and transmission times.

It is completely updated and based upon monitoring information from DX-ers all over the World, including "special envoys" to rarely visited countries in Latin America, Africa and Asia. Each station is classified by a code, which tells you how often the station has been reported since May 1989 worldwide and in Europe.

The survey is doubled spaced for updating ease.

It is compiled by DSWCI member Hans van den Boogert.

The TBS is available for 7 IRC's or 30,- Danish Crowns - or 9 IRC's or 35,- Danish crowns by airmail. Reduced rates for bulk orders to DX-Clubs: 15% for orders of more than 20 copies.

Send your order together with payment now to: DSWCI
c/o Rent Nielsen
Betty Nansens Allé 49, 1 tv.
DK-2000 Frederiksberg
Denmark
Postal Giro Account:
7 10 34 09

North American Shortwave Association
45 Wildflower Road
Levittown, Pennsylvania 19057

First Class Mail
U.S. Postage
PAID
Levittown, PA
Permit No. 319

FIRST CLASS MAIL

Expiration Date 11
Fred McCormack
Box 9077 Prairiewood Station
Fargo, ND 58106-9077



ISSN 0160-1989

The Journal of the
North American Shortwave Association

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

Assistant Director: Kris Field, 431 Babylon Rd., Ambler, PA 19002-2302

Publisher: Bill Oliver, 45 Wildflower Road, Levittown, PA 19057

Executive Council: Jerry Berg, Bob Brown, Dr. Harold Cones, Gerry Dexter, Kris Field, Glenn Hauser, Don Jensen, Bill Oliver

EDITORIAL STAFF

Editor-in-Chief: Dr. Harold Cones, 2 Whits Court, Newport News, VA 23606

DXer's Forum: Rowland Archer, 5524 Hawthorne Park, Raleigh, NC 27613

Easy Listening: Alex Batman, Route 1, Box 367, Blowing Rock, NC 28605

NASWA Portraits: Jerry Klinck, 43 Lein Road, West Seneca, NY 14224

Technical Topics: Ted Benson, WA6BEJ, 426 East Fulvia Drive, Encinitas, CA 92024

Listener's Notebook: Bruce MacGibbon, 2295 Juniper Ave., Gresham, OR 97030

QSL Report: Sam Barto, 47 Prospect Place, Bristol, CT 06010

Distributing Editor: Kris Field, 431 Babylon Rd., Ambler, PA 19002-2302

Tropical Band Loggings: Sheryl Paszkiewicz, 1015 Green Street, Manitowoc, WI 54220

International Band Loggings: Wallace C. Treibel, 357 N.E. 149th St., Seattle, WA 98155

Scoreboard: Jerry Lineback, 6361 Shore Drive, Douglasville, GA 30135

NASWA Awards: Richard A. D'Angelo, 2216 Burkey Dr., Wyomissing, PA 19610

English Schedules: Tom Sundstrom, P.O. Box 2275, Vincentown, NJ 08088-2275

Listener's Library: John Bryant, AIA, Rt. 5, Box 14, Stillwater, OK 74704

Listener's Classroom: Dr. Harold Cones, 2 Whits Court, Newport News, VA 23606

Destinations: Mitch Sams, P.O. Box 780075, Wichita, KS 67278; Don Moore, 20108 Hayes Rd., Big Rapids, MI, 49307; Chuck Rippel, 1272 Parkside Place, Virginia Beach, VA 23454

Equipment Review: Rich Arland, 25 Amherst Ave., Wilkes-Barre, PA 18702

The Company Store: 2216 Burkey Dr., Wyomissing, PA 19610; managed by Richard A. D'Angelo and Don Moore

MEMBERSHIP FEES:

North America (First Class Mail)\$23.00

Overseas (Surface Mail)\$23.00

Overseas (Air Mail):

Central America, Caribbean, Venezuela

& Colombia\$25.00

South America and Europe\$27.00

Asia, Africa and Pacific\$30.00

All remittances must be in U.S. funds and mailed to:

NASWA
45 Wildflower Road
Levittown, PA 19057
U.S.A.

