

NASA

The
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of the
North
American
Shortwave
Association

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UNIVERSAL RADIO

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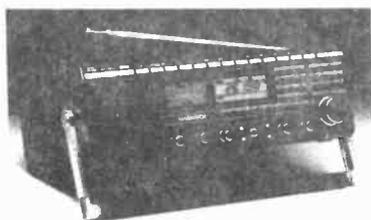


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NASWA Notes

Bob Brown

238 Cricklewood Circle
Lansdale, PA 19446
Compuserve 74756,1557



I mentioned in April that the NASWA Awards Program was undergoing some changes, specifically the reassignment of the Awards Chairman duties from John Kapinos to Rich D'Angelo. "Kap" is a public accountant and tax season had him swamped resulting in a delay in the transition. Kris Field tells me that he talked with Kap and that Kap had a few final award applications he wanted to wrap up and then would ship the materials to Rich. If you have applied for an award and have not received it yet, please be patient, you will get it soon. Please note that the change has not made the back cover of The Journal yet, so please do not send anymore awards applications to Kap, send them to Rich at 2216 Burkey Dr., Wyomissing, PA 19610.

NASWA MAILBAG

Charlie Gaharan wrote asking if any members might know of any publication that deals with the future of shortwave broadcasting. Any help on this one?

New NASWA member Tom Katzele of St. Croix Falls, WI wrote asking, "Do you have information on getting idents and interval signals on Russian regional stations? Radio Canada's SWL Digest had a feature on interval signals of the world back in the mid 70's. I wish they would repeat them or if someone has them recorded, make them available." If any members would like to make recordings of interval signals and ID's available to members, please let us know the details and we'll post it in The Journal.

Dave Kirby was kind enough to send me a tape of the Joel Rose call-in talk program that was aired over WERE in Cleveland, Ohio starring NASWA member George Zeller. This program is currently the top rated talk show in its time slot in the metro Cleveland radio market. Joel, George, and several callers discussed a number of issues related to pirate monitoring and general SW DXing. George did a great job promoting DXing and he mentioned to me that local

promotion of SWLing and DXing is something that deserves consideration by everybody in NASWA. Look for a feature article on this in the near future

SWL NETS

A few Sundays ago I received a call from James Olson asking about the time and frequency of the ANARC SWL Net. We quickly determined that it wouldn't do Jim much good because he lives in San Francisco and propagation on 40 meters doesn't extend much further west than Illinois on the best days. Jim, whose amateur call is N6IFO, is very interested in starting up a west coast version of the SWL Net. This is very good news and I hope that west coast NASWA members who are interested in this effort will contact Jim expressing your interest. Contact James Olson, N6IFO, 5820 California St., Apt. 1, San Francisco, CA. 94121. (415) 221-1976. As soon as I hear of a frequency and start date, I'll let you know. Are there any other hams that would like to get something going in their area? 2 meters works well also as proven by an SWL net in Baltimore, MD conducted on Sunday evenings at 8PM on 147.03 Mhz by NASWA member Mike Agner KA3JJZ and another in Syracuse, NY on Friday evenings at 8PM on 147.105 and 145.490 conducted by John Storsburg N2DCI. The ANARC SWL Net is on 7.240 LSB on Sunday mornings at 10AM Eastern time and is conducted by yours truly. It is rebroadcast in Syracuse, NY on 444.1 Mhz.

NEW PUB FROM BEIJING

I just received the first edition of The Messenger, an 8 page folio size, color, bi-monthly publication from Radio Beijing. Interested members should write to The Messenger, English Department, Radio Beijing, Beijing, 100866, China. It is free for the asking and contains articles, frequency schedules, and program information.

DXer's Forum

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



With Summer officially here this month, it's time to move some of your DXing "uptown" to the higher frequencies. You'll find the static more bearable from 31 meters on up, and the longer days in the Northern Hemisphere favor the daytime propagation paths in these same bands. If you haven't spent much time in the higher bands lately, look through the International Band Loggings column in the last few NASWA Journal's and get re-acquainted.

NASWA member Mike Stone continues to fill the Forum mailbox with interesting news clippings covering all aspects of radio — thanks for contributing Mike! A sampling with a synopsis in my own words: **New Radar Drug Fence is Erected** — On April 24 the US Air Force put into service the OTH-B ("Over-the-Horizon-Backscatter") radar system originally built for early warning against Soviet strategic bombers. The Bush administration believes this threat is now sharply reduced, and the budget and function of OTH-B has partially shifted to detection of drug traffickers. The Moscow, Maine transmitter has a 3,630 foot-long transmitting antenna and sends pulses of 1.2 megawatts of power in the shortwave spectrum. The Air Force intends to complete companion systems on the West Coast, Alaska, and North Dakota. (*The Washington Post, April 25, 1990*).

Another interesting article was titled **When More is Less: The Smithsonian's Dazzling, Orwellian 'Information Age'** — A monumental exhibit costing over \$10 million has opened at the Smithsonian Museum of American History in Washington, D.C. It documents and displays the explosive growth in information technology over the past 150 years. Although dominated by computing technology, you will find *Morse's original telegraph*, early radios and televisions, plus the Enigma Machine, used to encrypt World War II military transmissions. The exhibit sounds like it's definitely worth a side-trip if you're in the Washington, D.C. area. (*The Washington Post, May 6, 1990*).

I've been wanting to do an interview with a ham-turned-SWL for a long time, and I was very pleased when Bob Brown, Executive Director of NASWA, agreed to take some time from his overwhelming work and hobby schedule to answer some questions for us all in this month's feature article. Thanks Bob!

The Synergy between Ham and SWBC DXing

by Bob Brown, interviewed by Rowland Archer

One of the great myths in radio hobbydom is that the listening hobby is a subset of the listening and transmitting hobby. Rather than view hamming as an upgrade from SWBC DXing, why not view the two hobbies as complementary, each contributing knowledge and skills to the practice of the other?

There's no one better equipped to talk about the overlap between these pursuits

than someone who is active in both hobbies. We have several such people in NASWA, so I've started at the top — our own Executive Director, Bob Brown, does a great job blending hamming with SWBC DXing. His weekly 7.240 net, heard on that frequency Sunday mornings at 10:00 AM ET, currently 1400 UTC, is a superb example of using one hobby (hamming) to

enhance and promote the other (listening).

Forum: *Bob, let's open up with a brief overview of your ham career — how did you get into the hobby?*

Brown: When I was in the 7th grade, a friend who was a ham and 2 years older than myself lived across the street. As a result of my hanging out in his basement and showing the interest in radio, my parents bought me a Knight Kit Star Roamer as an 8th grade graduation gift. At that time I also was a fan of Hank Bennett's column in Popular Electronics and got the call WPE9IBV. I'll never forget the envelope of propaganda (and a QSL!) that arrived from Radio Peking. It had been opened and stamped with an official looking rubber stamp that to my mother looked like we were being watched by the CIA! And then the XMAS card from Havana that had a gun toting guerrilla peeking out from behind a XMAS tree, yes, those were the days! After becoming a ham, I fell away from SW DX'ing until October 1986 when I ran into Tom Sundstrom W2XQ on 2 meters and he introduced me to NASWA. I was hooked from then on.

Forum: *What parts of the SWBC DX hobby do you enjoy the most? What's a typical listening session composed of for you?*

Brown: I enjoy the shifts in propagation and the fact that on any given day the propagation may allow you to get readable audio from that low powered SW station you've been waiting to hear. Since most of my listening time is before or after work, I tend to concentrate my DX'ing on the tropical bands. When I sit down at the radio, I first try to assess the conditions I'm dealing with. If I don't have an idea as to the solar flux or K/A index, I'll connect via 2 meter packet to our local PacketCluster DX board. I can query the board at anytime for the latest WWV conditions. From there I'll hit up memories stored on my NRD for stations I use as indicators of conditions from par-

ticular parts of the world. That all may help me narrow things down a bit to start using my hit list.

Forum: *Do your interests as a ham bear any resemblance to your special interests as a SWBC DXer?*

Brown: Yes. I've always enjoyed DX'ing. I have 224 countries confirmed as a ham, and I especially enjoy DX'ing on 80 meters. I'm sure I would enjoy 160, but don't have the room for an effective antenna.

Forum: *How did your experience as a ham help you as a new SWBC DXer?*

Brown: Hams that are into low band DX'ing learn to recognize band openings, grayline DX'ing, listening for intelligence amongst noise, and patience.

Forum: *Are there any skills that you find have been sharpened as a SWBC DXer compared to how they got exercised in ham operation?*

Brown: Yes. The primary one has to do with propagation. If I hear that the Indonesian SWBC stations are in stronger than usual during the morning grayline, I'll check 80 and 40 CW for Indo hams. This has proved fruitful more than once.

Forum: *How about equipment — can the average ham shack be used for SWBC DXing? What needs to be added? What percent of your equipment is useful in both hobbies?*

Brown: Certainly the average ham transceiver can be used for DX'ing. There may be instances where it is desirable to have a different receiver tho. In my case I have an ICOM IC-745 transceiver and after I got heavily into SW DX'ing I bought an NRD525. There were a number of reasons that influenced my purchase of the NRD including number of memories, sensitivity, timer capability, keypad entry, etc. In fact, when ham DX'ing, which is primarily on CW, I use the NRD as my receiver and the ICOM

only as a transmitter. I will occasionally use both simultaneously for SW DX'ing, but the NRD wins hands down as the better receiver. My Datong FL-3 has been a great addition for ham DX'ing.

Forum: *To many people NASWA is a monthly bulletin, and that's OK — but we can add value by acting as a hobby organization or "club" as well. Hams seem more involved in hobby groups than SWBC DXers in general — any things we SWBC DXers can learn from hams about organizing to make our hobby more enjoyable?*

Brown: I think the camaraderie of a club is that much easier to attain for hams because their primary activity is to communicate. You'll find that the most active hams in clubs communicate with each other all the time, perhaps daily, especially on 2 meters. Computer bulletin boards have helped the communication amongst SWL's by providing a medium for the timely exchange of information and discussion. I think that our proposed efforts to get NASWA members that live in a particular metropolitan area to meet on a regular basis will make their hobby more enjoyable. The key to the success of this is finding that individual who will be the leader to get things rolling. Active hams seem to want to reach out to others to get them involved in the fun they are having with the hobby. I'd really like to see more of the active SWL's and DX'ers take example from this.

Forum: *One of the valuable things I found in Fine Tuning's Proceedings compendium was a list of articles from Medium Wave publications and the observation that LOTS of them were directly applicable to the SWBC hobby. Are there any similar resources from amateur radio which we should be more aware of than you have generally noticed we are?*

Brown: The ham magazines have articles from time to time that can be applied to SWBC DX'ing. Articles on antennas would be the most applicable. QST and CQ both have yearly indexes of articles

that can probably be found at your local library.

Forum: *Hams seem more involved in contests than SWBC DXers — does contesting help you to be a better ham? How? Any parallels for SWBC?*

Brown: Let me start this answer by saying that contests are a very controversial subject amongst hams. I think they are fine as long as the contesting is not infringing on the operating rights of others on the bands during the contests. Active participation in contests will increase the operating skill of a ham. Many times it will increase other skills as well, particularly if the contest is one that requires a more than average amount of technical knowledge to win such as a VHF or QRP contest. A parallel can be drawn to SWL contests like the North American DX Championships. Serious participation will most definitely increase your skills as an SWL DX'er. Language skills, propagation skills, and band and station knowledge all play a role in being competitive. Although not a contest, active participation in the Coordinated Monitoring Events that have recently been brought back to life by Dan Ferguson will increase your skills greatly.

Forum: *In years past hams built a lot of their own equipment — now this aspect of the hobby seems to be on the decline. Do you still do any of your own construction? Are there publications that carry projects that would be of interest to SWBC DXers?*

Brown: About the only construction I do these days is some antenna work. I did build my first transmitter from old TV parts so I haven't been an appliance operator all my life. Occasionally the ham magazines will have some very good antenna projects, or projects related to station accessories such as audio filters. Unfortunately, the one ham magazine that remained for the ham interested in construction, Ham Radio, has recently been sold to CQ Magazine. It remains to be seen whether CQ adds more construction articles.

QSLing Radio Pyongyang

by Eric Swedberg

My first reception report to Radio Pyongyang was in December 1972 when I was only 2 months into the DX hobby and just receiving my first few QSL cards. What I didn't know then was that a long tradition was about to be established when no reply was received.

평양방송 RADIO PYONGYANG

THE RADIO-TELEVISION BROADCASTING
COMMITTEE OF THE D.P.R.K.

PYONGYANG

DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA

北朝鮮人民共和國

I tried about twice a year for the first few years, even resorting to mailing one report from Canada. I also gave a letter to a Soviet seaman to mail when his ship reached Vladivostok, but I have no way of knowing if he actually did so. I eventually stopped using IRC's when someone at the post office told me that North Korea was not a member of the Universal Postal Union. I later found out that it is illegal to send US currency there.

Being that even during the Vietnam war, US mail to Vietnam got through, I had to believe the same held true for North Korea. Just the same, I kept trying other routes. I tried several North Korean embassies in Nordic countries (until they were closed for cigarette smuggling) to no avail. While waiting for the ferry in Haines, Alaska in 1975 I found at the library a "China Pictorial"-like magazine from North Korea. Obviously *some* mail was getting through, but trying the magazine didn't work either.

I settled into a routine of yearly tries, with an occasional extra try when I would see that an American DXer received the elusive QSL from Radio Pyongyang, as reported in a DX bulletin. An official at the main Portland post office said that all mail to North Korea from the US is shipped to Hong Kong, although he didn't know if it was handed over to HK postal authorities or a private mail contractor. My hunch is, if it is a private party, the checks from the US post office are being cashed, and the mail is either dumped or plundered.

It wasn't until 1989, when I rented a room to a woman from China, that I finally found a route to R. Pyongyang. A friend of hers agreed to forward my letter, and in 78 days I received a packet with booklets, pennant, etc. in addition to a much-sought QSL card, 17 years in the making.

In addition to addressing the letter in English, I put the name of Radio Pyongyang in Korean, so the Koreans would not mistake its destination. I also had my housemate write the country of destination in Chinese, for obvious reasons. Those who are not deft in oriental scribe might try photocopying the label shown above for their own use.

Postage at the time was 1.60 yuan, but I have been recently informed it was about 2 yuan and may yet rise higher. Those of you with no relay in China might try dropping your stamped and addressed envelope into one addressed to the Central Post Office in Beijing. I won't advise against asking Radio Beijing to do it, but if you do, at least enclose a report or souvenir for the people who are paid to handle their own station's correspondence and not that of others. And — Good Luck!

Net, hamming and SWL'ing play together very well.

Forum: *Let's talk about antennas. Are there things you learned about antennas as a ham that we SWBC DXers should know about? Many hams use rotatable beam antennas — very few SWBC DXers do. Should they?*

Brown: Any antenna that you can point directly at the desired station will aid in enhancing that signal as well as nulling undesirable signals on the same or adjacent frequencies. Unfortunately, rotatable arrays for the tropical bands would be very large and are out of reach for most SWL's. The majority of the beams in use by hams are for 14 Mhz and up, although many 40 meter beams are showing up on towers these days. I personally have never used a beam and have done quite well with wires and verticals. As a ham, the key thing that I learned about antennas is the understanding of antenna impedance and antenna/coax matching. Ted Benson did a great job covering this topic in the March and April Tech Topics columns. Those newcomers that missed it should beg, borrow, or steal a copy of these articles from the Company Store.

Forum: *In the listening hobby your receiver is your main piece of gear and the center of attention. For hams, is the receiver as critical as it is for SWBC DXers? Or does the transmitter dominate equipment concerns?*

Brown: We hams have a saying that goes "If ya can't hear 'em, ya can't work 'em" The receiver and listening antenna win over the transmitter in that race.

Forum: *How easy is it to enjoy both hobbies together? Do they conflict or enhance it each other?*

Brown: It all really depends on your objectives during your times at the radio. In my case, they complement each other very nicely. SWL DX'ing usually dominates my peak listening times but as explained earlier I'll often jump down to the ham bands if the Asians are hot on SW. Also, since I'm actively involved with the SWL

Forum: *We've focused on how hamming helps you be a better SWBC DXer. Now let's look at things in reverse — has your experience as a SWBC DXers made you a better ham?*

Brown: Patience. A SWBC DXer learns to develop a great deal of this. It has helped me as a ham. Also, I was never as interested in propagation as a ham prior to SWBC DX'ing. Having fixed targets to listen to every day helps enhance that.

Forum: *Most SWBC DXers tape their DX so they can listen over and over for program details and ID's. With hamming, you have the luxury of asking your contact to "say again!?" Do you tape ham DX?*

Brown: No, I have never taped ham DX. You either hear the DX station announce your call or you don't. And if you don't, you try to work him again for insurance.

Forum: *Although some hams operate on schedules, much ham DX is spontaneous. Does this alter your approach to ham DXing compared to SWBC DXing where broadcasts are scheduled (well, sort of)?*

Brown: Ham Dxing is for the most part "hunt and pounce". Unless you know of a pre-announced DXpedition, most contacts are of this nature. A serious SWBC Dx'er typically has a plan. That's not to say that hams don't, but I think it is much more prevalent in SW DXing.

Forum: *NASWA has an extensive awards program, but hams seem to have more programs and more awards. Can you compare the awards programs between the hobbies? Is it easier to verify 100 countries as a ham or as a SWBC DXer? 200?*

Brown: Verifying 100 countries as a ham is fairly easy to do, even with a modest station. You could probably do it over time by never sending out a QSL if you worked enough stations and just waited for the cards to come in through the

HOT DX NEWS: Only 12 Months Old?!

History Repeats Itself

by Rowland Archer

DX news is usually considered short-lived. Why? Things often change quickly in the shortwave bands, and the time delay involved in hearing, reporting, and publishing a DX tip can often outlive the usefulness of the news. For example, a tiny tropical station may come on the air for only a few weeks before a transmitter part breaks and puts it back off the air; propagation conditions improve for a few days or weeks and allow a rare station to be heard; a station appears on a new frequency, then leaves it due to reports of interference.

This fixation on getting the latest DX news sometimes leads us to ignore the wealth of DX news gathering dust on our bookshelves — the DX loggings heard and reported a year ago. Many aspects of DX follow a 12-month, recurring cycle: propagation conditions, station frequency changes, and special holiday broadcasts among them.

Let's say you're reading this on June 10th. The loggings in this, the June issue of *The Journal*, had to be in the editor's hands by the middle of May, so they are mostly from four to six weeks old. Fortunately the majority of the loggings are still relevant, but some seasonal catches may be out of reach by now. Your next chance to hear them could be in mid-May, 1991. So...don't throw this copy of *The Journal* out, but refer to it when you're preparing to do some listening *next May*.

The general idea is — use last year's loggings based on the *date of the logging*, not the *date of publication*. It doesn't matter whether the publication comes out weekly, monthly, or quarterly; you're looking for recurring 12-month cycles, and reception peaks that occur in a single month will often peak in that same month next year.

Signals that tend to be heard best for a only few days or weeks each year are also often sensitive to *your location* — the peak for West Coast listeners may be at a different time of year than for East Coast listeners. Take note of the location of the listener who logged the station you want to hear, and give more bias to listeners in your geographical vicinity.

There are many ways to use this "old information" so get creative. If you keep index cards on your most-wanted DX catches, note if there's a seasonal peak based on the quantity of loggings from past years in each month. Keep your old DX bulletins near the rig, and when you're fighting sleep during a long wait for an ID from a DX station, drag out the relevant year-old bulletin and scan for interesting targets that were logged a year ago and add them to your hit list.

Good luck farming the goldmine of oldies but goodies!

* * *

bureau. I'd have to say that the bigger challenge is with the SWDXer. He has to convince the station that he heard them and present himself in such a way as to solicit a response. 200 countries? No contest! The SWL wins that hands down. I wonder just how many hams would send

a letter in Indonesian to a ham in YB land to get a QSL?

Thanks for taking the time to talk with us this month! If any other readers would like to comment on these or related topics, please send your ideas to DXer's Forum.

* * *

Easy Listening

Alex Batman
Route 1, Box 367
Blowing Rock, NC 28605



Next month, I hope, **Easy Listening** will return to its regular format, but this month I want to pass along some information from **HCJB**. Although **HCJB** is not an Eastern European broadcaster as we've been featuring for the past few months (far from it), that station, too, has gone through some considerable changes in its programming recently. I'd like to partially quote and partially summarize some recent information the station sent me.

"On May 6, **HCJB**'s English Service will make some major changes to its program line-up. All Quito-produced programs will be consolidated into a one-hour block called *Studio 9*. This has resulted, among other things, in the dropping of our long-running program *Passport* and a major cutback in *Happiness Is* from a seven-day-a-week program to two programs a week."

"These change are being made primarily due to our limited personnel resources. The English service of **HCJB** consists of only a small team of producers and we feel this new format better reflects the resources that we have. We also believe the changes will enhance the service we can provide to our listeners."

"*Studio 9* will play three times to North America, twice to Europe (morning and evening), and twice to the South Pacific..."

"Each weekday release of *Studio 9* will begin with a five-minute Latin American newscast followed by 15 minutes of in-depth news, current affairs, interviews and features. This will be followed by a different 30-minute feature program each day... The release will end with a five-minute bulletin of world news."

"On weekends, the format of *Studio 9* will be slightly different. On Saturday, following the Latin American newscast, there will be a 15-minute science program, *Focus 2000*, followed by *DX Party Line*. On Sundays, a sports program, *Get Set*, will play after the news and will be followed by

Saludos Amigos."

"Here are details of what programs can be heard on which days:

SUNDAY

Saludos Amigos. This is **HCJB**'s international friendship program, hosted by Ken McHarg. Each week Ken calls listeners from around the world who have written to him. Join in on the fun by dropping Ken a note and tuning in to *Saludos Amigos*.

MONDAY

Dateline 90. This new program captures and confronts the issues of the decade. Each week hostess Jan Shober brings you discussion information and commentary designed to set you thinking. A current lineup of topics to be discussed on the program include bias in the media, Russia (Its Present and Its Future), and the International Literacy Year.

TUESDAY

Happiness Is. Dee Baklenko presents a cultural edition of *Happiness Is*. Topics to be included are "More than Conquerors" (about the early days of South American history), a presentation of Alfredo Colons Ecuadorian folk music, and a feature on the banana industry in Ecuador.

WEDNESDAY

Ham Radio Today. John Beck presents this program on amateur radio. Whether you're a ham yourself, or you're just interested in amateur radio, you'll find plenty of interest on this program. Topics to be featured include: What are ionosondes? Can you control transmission distance? and Do hams in some parts of the world have an advantage over hams in other parts of the world?

THURSDAY

Happiness Is. Host Dee Baklenko offers a variety of topics and interviews on the

Thursday edition of *Happiness Is*. Some of these features include a feature on Charles Colsons *Born Again* and his work with Prison Fellowship.

FRIDAY

Musica del Ecuador. Jorge Zambrano presents his unique mix of Ecuadorian and Latin music and friendly chatter. If you have a particular Ecuadorian tune or music style you would like to hear on the program, drop a note to Jorge.

SATURDAY

DX Party Line. Join Brent Allred for HCJB's shortwave and communications program. This will include a section on "Radio Stamps" and features on radio in the far north and televisions first 50 years.

ADDITIONAL PROGRAMS

Musical Mailbag. This is HCJB's mailbag program with a difference. We've taken the mailbag concept and turned it inside out. Every week the *Mailbag* team get together to have fun and read your letters.

This program can now be heard on Saturdays, following each release of *Studio 9*. An exception to that is HCJB's broadcasts to

Europe, when it can be heard at 0700 and again at 2130 UTC.

Music in the Night. Brian Seeley hosts this program in which he presents music and thoughts for the close of the day. Due to changes in HCJB's schedule, this program can now be heard in North America only, on Mondays, Wednesdays, and Friday, at 0600 UTC.

"A new schedule incorporating these program changes will be printed in June. In the interim, a mini-schedule has been printed for the *Studio 9* block only. This will be sent upon request."

"Please send us your comments on this new format. We realize that some of the changes that have been made will not be popular among some listeners, but we hope you will realize the reasoning behind them. Our goal continues to be to provide good quality programming."

"In North America, *Studio 9* can be heard at 0230 UTC in the evening broadcast, and the days listed above reflect local days rather than UTC days."

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NOTICE PLEASE

The Coordinated Monitoring Event frequency range for the month of June will be 17500 to 17900 kHz. Please refer to the May "NASWA NOTES" column for more information on this or write to Dan Ferguson, P.O. Box 2604, Dale City, VA 22193.

Listener's Library

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



Our first feature this month is the latest antenna book from the Amateur Radio Relay League. Our sister hobby has always supported a lot of creativity in antennas. However, most of the post-war era has seen ARO antenna attention focused on antennas primarily designed to transmit...Yagis and log periodics, other beams, etc. In the past ten years, the emphasis has changed—possibly because the “QRP” flea-power transmitter part of their hobby places maximum attention on reception. In recent years, the ARRL has put out a series of antenna design and reference books. The first, several years ago, was simply *The ARRL Antenna Book*. This was followed by the *ARRL Antenna Compendium*...a collection of highly experimental antennas not covered in the main book. That book (of several years ago) has been followed by the just published *Second Antenna Compendium*. It's a treasure trove of useful antennas for us SWL's, too! Among my favorite articles were features on kite and balloon-supported wire antennas, half loops (a version of the inverted vee), and the first article that I have ever found that gives formulae for designing the coils for shortening quad and delta loop wire antennas. Anyone interested in antennas ought to take a long look at this!

Hans Johnson checked in again with a stellar contribution:

“On a recent visit to the National Geographic Building in Washington, DC, I discovered that virtually all maps put out by the Society are available at \$4.00 each. If you like the map in the current issue of National Geographic, write them immediately and the map and the magazine can be had for just \$2.50. I bought the excellent Soviet issue and map this way (March, 1990). The above prices do not reflect shipping and handling. Write for a complete map list and purchasing information at: The National Geographic Society, Washington, DC 20036.”

Los Numeros Online

Several of us have been wondering when radio hobby journalism would “cross the line.” Well, it's been done and it works! Portal Online Communications is a somewhat similar and often less expensive computer service than CompuServe. To me, Portal also seems to be less business/professionally oriented and a bit more personable. For all of those reasons, Havana Moon and a group of other radio hobby journalists have chosen Portal as the venue for the new shortwave magazine *Los Numeros*. *Los Numeros* is an old tradition and has been around since NNRC days in one form or another. Now, it is a “full featured” shortwave magazine accessible on-line through Portal. Since Portal works through the Telenet data network, most of us can access it through a local phone call. To top it off, *Los Numeros* is FREE! You pay the very nominal Telenet charges (about 4 cents/minute off peak) and a flat \$10.00 per month to Portal. The \$10.00 monthly fee accesses most of Portal's myriad services and unlimited connect time, as well as gaining FREE access to *Los Numeros*!

What's in *Los Numeros*? Well, for one thing, many of the popular specialist newsletters are run as columns. When you first connect, you can choose a “Guided Tour.” Take it...there are more features than I can describe here! The columns alone are worth more than the Portal charge: ACE Digest (Kirk Baxter); Bits, Bytes and BBS (Kristin Kaye); Clandestine Confidential (NASWA's own Gerry Dexter); Intrigue, More Intrigue (Zel Eaton); MOONlight Madness (Havana Moon); Political Ponderings (Dr. John Santosusso); Radiogram (Eli Messinger); Surreptitious Communicate (John Fulton); The Jolly Roger Flies Again (Pirate o'the Month); LOW, Low, low down (Bernard Helms); The Numbers Log (Havana Moon); Umbra et Lux On-Line (Harry Helms); The Secret Shortwave

Spectrum (Harry Helms); and Veried Response On-Line (John Arthur). There are also features under "Special Interests" from Antique Radios to NASA and from DXing to Covert Communications.

From this listing, you can detect that numbers, clannies, pirates and computers are all specialities of *Los Numeros* and of many of its columnists. There is a good bit of general SWL/DX info, as well. One very pleasant surprise was Bit, Bytes and BBC by Kristin Kaye. She is an excellent writer, a computer communications professional, a "radio man," and a real breath of fresh air. If your hobby is radio and yet you want to know how your computer/modem can be used to get the most out of ALL the gear, Kristin Kaye's Bits, Bytes and BBC is the place to go.

If you own a computer and a modem, you should give *Los Numeros* a long look. It is part of the future and it works. Call or write Portal Communications for their literature and forms (Portal Communications Co., 10385 Cherry Tree Lane, Cupertino, CA 95014. Phone (voice) 408-973-9111 or (data) 408-725-0561.) You can sign up directly from your machine at the data number, or if you already use Tymnet or Telenet, you can go in through that service and contact Portal at "C PORTAL." There is a \$15.00 one time charge and then a flat rate of \$10.00 per month for Portal.

George Zeller of Cleveland took time out from listening to Pirates and the Indians to drop the Library a note:

"We all are aware of the standard DX directories: *WRTH*, *Passport*, and *The Pirate Radio Directory*. But, these three leave a big hole in North American MW/FM stations. My old *White's Radio Log* was out of date, so the last time I was in Columbus, I stopped by at Universal to pick up an NRC log. A salesman talked me out of it, and I instead picked up a book that I had not heard of before: *The M Street Radio Directory* (1989, RadioPhiles, Inc., Post Office Box 3568, Alexandria, Virginia 22302, (703-684-3622). Although it lists at a heavy \$29.95, I feel that I got my money's worth. This book lists all USA MW/FM stations, cross-referenced by city, call, frequency, and programming format. It also contains station addresses, powers, antenna

heights, the latest Birch and Arbitron ratings for stations in all major markets, audience size of these markets, stations owners, and an unusually rich tabulation of similar stuff. The book run 635 pp. There is a less detailed, but apparently comprehensive, list of Canadian stations as well, along with a short list of USA shortwave stations.

"I am not basically a MW DXer, and NASWA is not a MW bulletin. But, I have found that there are uses for this book. For one thing, MW harmonics in the SWBC bands can be ID-ed and reported. Also, domestic stations being relayed by SWBC pirate transmitters from time to time can be identified. Third, while I was driving through Stinking Desert, New Mexico on vacation last month, I was suddenly seized by a desperate need to MW/FM DX in my car for purposes of finding a station that was carrying the NCAA basketball tournament (my car does not come equipped for TV reception of ESPN or CBS). This book was highly valuable under these circumstances. I recommend it."

A Reference Work For Latin Lovers

Richard D'Angelo, honcho of the NASWA Company Store, loaned the Library his copy of "Latin American Radio World--Home Service Station," published in Buenos Aires, Argentina by Julian Andersen and G.I. Barrera (only \$5 US or 10 IRC's directly from Andersen and Barrera at Casilla 4616, Buenos Aires 1000, Argentina). This is twenty-five 8 1/2 x 11 pages crammed full of excellent information for Latin DX buffs. The heart of the document is a By Frequency Listing of Latin stations. According to Rich, the listing is unusually complete and accurate and has a very good notation of each station's current schedule, as well. In addition to the By Frequency Listing, the authors have compiled what must be the most complete listing of accurate station addresses and QSL signers around. In addition, there are maps of Peru, Bolivia, Columbia and Ecuador showing station locations. Finally, our Latin friends have compiled a list of which stations have recently QSL'd reports. It's a real work of scholarship and a bargain at \$5. Thanks for the loan, Rich!

Listener's Classroom

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



I have received a number of letters from members who would like to submit an article to *The Journal* but are uncertain how to go about it. Over the next few months, I would like to combine my role as column editor with that of Editor in Chief and present a sort of "how-to" for potential feature writers. It is my hope that we will be able to print at least one article in *The Journal* each month from the membership at large.

This month I would like to start with some of the mechanics of column writing. Proper margin size insures that the reproduction of your column will match that of the other *Journal* columns. If you have never submitted anything to a publication like *The Journal*, you will probably be surprised to find out that each page is prepared on 8 X 14 paper, then reduced by the printer to the size you see here. As you type your copy on the 8 X 14 paper, you want to keep a one inch margin, both top and bottom, and a three-quarter inch margin on each side. These margins insure maximum utilization of the space available in *The Journal* printing process. On the first page of your article, you should leave a two and one inch top margin to allow for insertion of the masthead (which will occur in Levittown); the second and following pages will have the one inch top margin.

The ribbon on your typewriter/printer should be a single-use carbon film type or a brand new nylon ribbon. Whatever ribbon type you use, **IT MUST BE BLACK!** Blue ink ribbons, as well as blue pen or pencil, will not be picked up by the process used in printing *The Journal*. Because of the non-pickup of blue by the process, however, you can make light blue margin lines to serve as guides without fear of their being copied in the final article. Think **BLACK** and **NEW**.

You are free to design and lay out your column in a manner that best pleases you, as long as you adhere to the margin guidelines. Your material should be presented neatly and in an easily followed manner.

You are encouraged to include pictures and illustrations, but be careful to not turn your column into a scrapbook. Remember the old Chinese proverb: one picture is worth a thousand words. Photographs may be either color or black and white, but they must have high contrast and have the subject prominently featured (rather than being a small part of a much larger scene). Illustrations should be attached to your typed sheets in the appropriate location with double sided tape or spray adhesive, avoiding wrinkles and pulls. Illustrations should not be sketches but should look neat and professional and they should be made with black ink or black computer output.

You should avoid all but the most common abbreviations used in the shortwave hobby unless explained the first time they are used. Do not coin your own words unless clearly defined. If you use material from other sources in your column, be sure to correctly credit the source. Most hobby publications do not mind limited use of their items if accuracy is maintained and they are correctly credited. If you add your own comments to the material, be sure that the reader can easily distinguish your comments from the original item. Remember, it is illegal to publish maps and other copyrighted materials without permission of the copyright holder. If permission is granted, be sure to carefully cite the reference as you are asked.

We will continue our discussion next month. See you then!

NASWA Portraits

Tom McElvy
PO Box 9645
Norfolk, VA 23505-0645
CompuServe 73677.2351



This month, we hear from **Mike Nikolich**, from Arlington Heights, Illinois...

"I started DXing in 1969 when my father, who was concerned by the unsavory crowd of characters I was hanging around with, bought me an Allied Star Roamer kit. Somehow, I managed to complete the kit (although I discovered I was color blind), and the first night I cranked it up, I heard Radio Lebanon, a station I wouldn't hear again for nearly 10 years!

"NASWA was the first club I joined (in late 1970) and later became a member of the Midwest DX Club, SPEEDX, ASWLC and CIDX. In 1973, I founded CADX -- The Chicago Area DX Club -- which continues today. In 1972, I bought my first real DX machine, an Allied SX-190, which I still own. The first evening I fired up the '190, I logged five new countries, including my 100th, the Solomon Islands.

"I still have all of my original logbooks, and a quick scan of the oldest ones shows that I usually spent between five and six hours per evening tuning the bands. By the mid '70s, I had logged approximately 150 countries and verified about 100. One of my biggest thrills up to then was hearing my name read by an announcer on "Paris Calling Africa," which was broadcast at the time over the facilities of Radio-TV Congolese in Brazzaville. I yelled so loud that I woke up everyone in the house!

"By the late 70's, CADX had folded and my DX activities were next to nil. However, when I went away to college at Northern Illinois University in 1978, I met fellow *NASWA* member Kevin Mikell and he rekindled my interest in the hobby. One of my best college memories was logging all of the 49 meter band Canadian regionals one winter. We had a standing invitation from a radio personality at CKFX in

Vancouver to call whenever we heard the station (we were on his show three different times).

"By 1979, I graduated from NIU, moved to Chicago and bought a Hammarlund HQ-180 and a KRS digital display. That receiver was incredible. I still lament the day I foolishly sold it. Later that year, I received an early morning call from Kevin Mikell and managed to log Greenland. That was another big thrill for me. In early 1980, I reformed CADX. The membership was different, but the club still exists today. I also served as editor of the Africa column for SPEEDX, and later as the Log Report A columnist for NASWA.

"Today, the receivers are a Japan Radio NRD-515, Kenwood R-5000 and a Drake SPR-4. I am married, and currently work as a vice-president for a Chicago public relations firm. The totals are 212 countries heard and 176 verified. Africa, the Pacific, Southeast Asia and the Indian subcontinent remain my favorite areas to prowl. I also occasionally write freelance articles for a variety of magazines including MacWeek, MacUser, Publish, Popular Communications and Radio Electronics.

"Andy Warhol said everyone has 15 minutes of fame, and my moment in the limelight came in 1983, when Astronaut Owen Garret broadcast to amateur radio operators from the Space Shuttle. A camera crew from ABC Nightline came to my apartment to film me monitoring Garret. Wouldn't you know it, he didn't broadcast that day! Goodbye, Ted Koppel.

"To this day, I remain fascinated by shortwave radio. Nothing thrills me more than hearing an English newscast from a heavily accented announcer thousands of miles away from a transmitter in Kenya or Kiribati. Thanks, Dad. You're right. Shortwave is a great hobby!"

Until Next Month, 73, and keep writing!



Technical Topics

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

THE NRD-525 - ALL THAT IT'S CRACKED-UP TO BE?

While few would dispute the unmistakable quality of the Japan Radio Company's NRD-525 receiver, no receiver - whatever the price - is perfect. And of course no two people will feel the same way about any receiver.

John Tow, a NASWA member from Paison, Alabama, has done extensive research into the NRD-525, not just the receiver it is, but also the receiver it *can* be. I hope you find his results as interesting as I did. Even if you don't own a 525 (or, like me, ever expect to be able to) you will find some of John's comments of value.

MODIFICATIONS FOR THE NRD-525

by John Tow
5280 Baggett Dr.
Paison, AL 35128

The NRD-525 is one of the most popular of today's DX rigs for the serious SWL/DXer. It has its advantages and its disadvantages. I will address different approaches for correcting those disadvantages. These changes require some technical expertise and will invalidate anyone's warranty. I shall begin at the end and work my way forward.

The audio response is too wide. The low end is a bit boomy and the high end is too high - allowing too much of that 525 hiss for my taste. The low end can be rolled off below 200 Hz by replacing C29 (10 uF) on the IF AF Board (CAE-182) with a 2.2 uF tantalum capacitor. This change affects only the speaker/headphone output - not the line or record output. Suitable R-C components for all of my modifications can be purchased at Radio Shack. To roll-off at a higher frequency (even less bass) use a 1 uF instead.

The high end can be rolled off above 6 KHz by placing a 470 pF ceramic capacitor on the bottom of the same board from pin 1 to 2 on IC5. Watch lead dress to insure that you don't short the capacitor leads to other circuit lands. This change will be noted on each of the audio

outputs. The improvement in speech quality is quite noticeable.

The AGC (automatic gain control) has a too rapid attack time, a large amount of overshoot, and excessive demodulated audio riding on the AGC line. My cures were developed over the last 18 months - and are surpassed in effectiveness by the ESKAB AGC modification. But my modifications are simple to implement and involve IF AF Board CAE-182. Replace R103 and R104, both SMD's (surface mount devices) which must be pried loose with a hobby knife while gently unsoldering them, with 10K ohm 1/8 Watt or smaller resistors. This slows the attack time. Replace C77 (0.22 uF) with a 1 uF tantalum capacitor to further slow the attack and decay time. If you want a bit less speed, try a 2.2 uF instead. Finally, solder a 1 uF tantalum capacitor on the bottom of the board from pin 4 (-) to pin 5 (+) of IC9. These changes will lower the audio distortion on AM as well as improve the AGC response tremendously. The ESKAB AGC modification is still better - but harder to implement.

The next stage would logically be the detector stage. I have tested two external detectors:

the excellent quality Kiwi Electronics MAP unit and my own synchrophase detector. Both were connected independently at the same point as per the Kiwi instructions. My receiver had the CFL-218 1.8 kHz narrow filter and no AUX filter. I tested it at each bandwidth with a 1 μ V 30% modulated 400 Hz signal with the AGC off. The resulting measured (S+N)/N ratio was no better than the stock receiver. In fact, the MAP unit had a great deal of background hiss present when no carrier was available to lock on, thus making its (S+N)/N measurement much worse than stock unless the carrier was left on. The improvement yielded by implementing the MAP unit with the 525 is solely in the audio quality. I thus decided to leave the stock synchrophase detector alone and turn my attention to the front end bandwidth to improve the (S+N)/N ratio.

The front end first IF filter, FL1, is too broad. ESKAB suggests that it is 68 kHz wide at -60 db while they supply a 15 kHz width at -60 db 8 pole 70.455 Mhz filter. The second IF's first filter, FL2, is also too broad. ESKAB suggests that it is 36 kHz wide at -40 db while they supply a 12 kHz wide at -40 db filter. The replacement of FL1 is straight forward while FL2 requires the drilling of a couple of small holes. The end result of this is unbelievable. The (S+N)/N ratio improved by about 5 db over the stock receiver (see table). There is no free lunch - the tighter bandwidth renders the reception of narrowband FM much less than acceptable while it lengthens the noise impulses such the noise blanker circuitry is no longer as effective. I find these minor detriments in comparison to the vast selectivity improvement yielded by the changes. Additionally, a better use for the FM mode will be given later.

ESKAB also has the best approach to augmenting the JRC filters for bandwidth selection. I purchased a "Sharp 4 kHz" filter and board from ESKAB for my AUX position. What I received was a small PC board with matching components and a CFJ series filter. The board included pins to permit inserting it in place of a JRC filter. It yielded a flat passband, no more insertion loss than the JRC filters (same signal strength regardless of bandwidth), and a very professional appearing installation. I have seen what has to be done to put the excellent quality Collins filters on a 525's filter board. The excessive modifications of the JRC board required to mount the Collins filter still yield more attenuation and passband ripple than I fell is acceptable. The ESKAB filter, though not as good a filter ultimately as a Collins mechanical, is quite

acceptable in my application. I am afraid that the ultimate isolation of a good mechanical IF filter would be wasted on the JRC filter board because of the crosstalk and poor isolation. ESKAB has the best approach in spreading the filters between the original JRC board and the PLAM detector board they offer. I have not tried this approach yet.

The above modification yield a receiver with selectable bandwidths of 1.8, 2.2, 3.4, and 4.7 kHz at -6 db. To regain a wider bandwidth for listening to RCI, KUSW, and other near hi-fi stations, while using an otherwise useless FM mode, is quite simple. I found that by cutting the land from J28-13 to J30-9 on the motherboard the FM mode would yield AM reception bypassing the bandwidth filters as the original "AUX" position did prior to the installation of the additional filter. This added 6.8 kHz bandwidth as a possibility.

The land to be cut carries the signal from the BW decoder on the IF filter board to the IF AF board to turn off the AGC and turn on the FM detector audio path during FM reception. By interrupting the path, the AM detector and AGC will remain on when the BW decoder senses the selection of the FM mode. Unfortunately, the CPU still thinks you are using FM and ignores the AGC switch. You will be stuck on AGC Slow only and either 5 or 10 kHz depending on the resolution (10 or 100 Hz) selected for UP and DOWN slewing. The keypad and frequency knob function normally, as do the NB, PBT, and Notch controls. The loss of FM reception I find acceptable. A SPST toggle switch could be wired across the land cutting and placed on the back panel if you want to select the FM detection mode at some future time.

To slightly improve the receiver's ability to withstand the detrimental effects of IM (inter-modulation) and CM (cross-modulation) distortion, the front end protection diodes can be easily removed. Simply lift one end of CD1 and CD3 located on the HF Tune board CFL-205. Be sure to disconnect the antenna when not in use. Using a low voltage gas discharge device such as the Alpha Delta Transi Trap (LT)R is a must for protection from neighborhood RF sources. If you are the least bit concerned about a strong local RF signal, leave the diodes in place, as they do offer some front-end protection.

The back panel heat is the result of too wide an input AC voltage capability on the power transformer. The bridge rectifier output is

+17 VDC. This has to be dropped to the appropriate levels by the three voltage regulator ICs and the discrete VR circuit with a pass transistor. Two of the ICs, the pass transistor, and the power transformer provide the back panel heat. Operating from an external DC source of 12-13.6 V will drop the power dissipation back there by about 8-10 Watts plus the transformer losses. I have used a motorcycle battery successfully until it drops to about 10.8 V under load while on DXpeditions.

I was simply not satisfied with the low audio level available at the front panel headphone jack. If you use the traditional mini-phones from your carry along portable or the Icom, Yaesu, or Kenwood communications headphones then you know how low the level is. The aforementioned headphones have 8-16 ohm impedance. A 100 ohm resistor, R7 located on the front panel mounted board CQB-40, limits the output to low-Z phones to a few mW maximum. If you use the JRC headphones with their 600 ohm impedance you'll get around 15 mW. Change R7 to 33 ohms and the maximum level increases to around 80 mW. This has made listening with Icom HP1 headphones more enjoyable. This level is not great enough to damage your phones. At minimum audio level no AC hum or noise is heard through the headphones I've tried.

I have one area yet to address. The CPU clock noise emanating from the NRD prevents the

use of a loop antenna in its vicinity. To prove this, simply place a simple AM portable - or even a Sony ICF-2010 on LW/MW - near the operating NRD. The top and bottom panels offer electrostatic (E-field) shielding but very little magnetic (H-field) shielding mainly since they are not continuous. I am currently designing a wooden console for my 525 complete with an internal continuous sheet metal (high mu metal) hidden shield. Perhaps then I can bring my 1 meter air loop and ferrite loops back into the shack!

POSTSCRIPT

I enjoy my 525 now as I never did before. It is truly a DX rig. I have better selectivity choices, a more responsive AGC, cleaner audio, better weak signal (S+N)/N ration, and no more background hiss. The cost for all of these modifications was less than the cost of one Collins filter! Write:

Harm-Heven Broers, ESKAB,
P.O.B. 32001, S-200 64,
Malmoe, Sweden

for current prices and availability.

TEST CONDITIONS

	Original Bandwidth		Modified Bandwidth	
	-6db/-60db	(S+N)/N	-6db/-60db/-100db	(S+N)/N
AUX	12.2/22.3	9.6	3.4/4.5/11.1	16.1
WIDE	5.7/8.3	10.8	4.7/7.8/10.0	15.3
INTER	2.2/4.2	12.4	2.2/3.8/6.1	17.2
NAR	1.8/3.5	13.6	1.8/3.1/5.3	18.1
FM Mode	(see AUX)		6.8/13/-	> 14

Note: -100db BW not measurable on unmodified NRD-525

Modification Summary:

1. Audio modification
2. Increase AGC attack & decay time
3. Decouple AGC
4. ESKAB FL1 & FL2 installed
5. ESKAB 4 kHz AUX filter with board installed
6. ESKAB AGC modification
7. Improve CM/IM
8. Cut FM detector (adding wider BW)
9. Operate from battery
10. Increase headphone level
11. Wrap receiver in mu-metal shield (untested)

As John pointed out, the above modifications require some considerable skill in soldering and disassembly. I would strongly advise waiting to perform these modifications until the manufacturer's warranty had expired. Even NRD 525s have occasional in-warranty failures, and it would be a shame to be stuck paying for repairs simply because you made a modification.

"DXing the Ham Bands"

Several readers have written inquiring about the so-called "Ham Bands" and their limits. Although the frequencies for the amateur radio bands are not identical around the world (some hams in foreign countries can use frequencies we in the U.S. cannot use, and vice-versa) these are the exception rather than the rule. To catch the hams, your best bets are the frequencies shown below. Note that not all modes can be used anywhere in a band. Only CW, or "Morse Code" can be used anywhere. Other modes, like SSB (sideband phone), RTTY (radio teletype), and SSTV (slow scan television) are restricted to certain segments of each band. This is because these latter modes take up considerable bandwidth, whereas CW is the most narrow mode, and best for distance coverage. Note, also, that the "ham band" designation is not totally sacred. International broadcasters often seize frequencies within the ham bands, such as in the 40 meter band.

160 meters

1.8 to 2.0 MHz, SSB and CW are allowed over the entire band - no other modes allowed

80 meters

3.5 to 4.0 MHz, SSB and SSTV permitted from 3.75 to 4.0 MHz

40 meters

7.0 to 7.3 MHz, SSB and SSTV permitted from 7.15 to 7.3 MHz

30 meters

10.10 to 10.15 MHz, CW only permitted on this new band

20 meters

14.0 to 14.35 MHz, SSB and SSTV from 14.15 to 14.35 MHz

15 meters

21.0 to 21.45 MHz, SSB and SSTV from 21.2 to 21.45 MHz

12 meters

24.89 to 24.99 MHz, SSB and SSTV from 24.93 to 24.99 MHz

10 meters

28.0 to 29.7 MHz, SSB and SSTV from 28.3 to 29.7 MHz

Note that the SSB and SSTV segments, as well as the actual band limits, are for the highest class of ham license, the Extra Class license. Lower classes of licenses are afforded less privileges. Never the less, ham activity can be found all over the above mentioned bands.

In many cases, a ham station will QSL a reception report from an SWL. Remember, ham transmissions are not covered under the various electronic privacy acts, so you may quote the context of a transmission in your report.

Hams utilize an abbreviated form of the SINPO reporting code - the "RST" system, which stands for "Readability-Signal strength-Tone". Readability goes from 1-5; signal strength and tone go from 1-9. The higher the number, the better the figure. Tone refers only to CW transmissions, so a report for and SSB transmission would consist of only the first two numbers - "RST 5-9" would mean a very strong and readable SSB signal.

A F R I C A N Destinations

Chuck Rippel
1272 Parkside Place
Virginia Beach, VA 23454
Compuserve 72571,1046



This month's African Destination is the Ivory Coast or *Cote D' Ivoire*. This West African Country is located on the south side of the West African Bulge and is only slightly larger than New Mexico but has a population of 10.2 million. While the city of Yamoussoukro is the official capital, the seat of government remains in Abidjan, the country's commercial and population center.

In the western half of the country, dense forest extends to the sea; scrub savannah covers a narrow strip of stretching to the Ghana frontier. A lush tropical forest extends from the sea inland to a line that approximately bisects the country. The country's significant cash crops—cocoa, coffee, tropical woods and bananas are grown there. North of the forest lies an inland savanna zone of sandy soils, where the vegetation is sparse and the landscape unbroken. Only the Guinea Highlands in the northwest, which rise 4,800 feet above sea level break the monotony of the inland plain.

In 1844, Admiral Bouet-Williaumez signed treaties with the kings of the two significant regions, placing their regions under French protectorate. *Cote d'Ivoire* officially became a French Colony in 1893 and Captain Binger, who had explored the Gold Coast (Ghana) frontier was named the first governor.

From 1904 to 1958, *Cote d'Ivoire* was a constituent unit of the Federation of French West Africa (now Mauritania, Senegal, Guinea, Mali, Niger, Benin and Burkina). Until the period following World War II, governmental affairs in French West Africa were administered from Paris through governors general and territorial governors. France's policy in West Africa was reflected mainly in its philosophy of "association," meaning that all Africans in *Cote d'Ivoire* were officially French "subjects" without rights to representation in Africa or France. Gradually, France granted far reaching governmental reforms through the 1940's and 50's. *Cote d'Ivoire* achieved independence from France on August 7, 1960.

The shortwave outlets of Radiodiffusion Television Ivoirienne offers SWL's on both coasts of North America several listening opportunities. For many years, I have used the 25 KW 60 meter outlet on 4.940 as a bench mark to judge afternoon band conditions. Early, say from 2000 UTC, strong signals from this outlet suggest that band conditions are ripe. Further investigation of the weaker outlets on both the 60 and 90 meter bands is warranted. Sign on is 0600 UTC and sign off is 0001. The 60 meter, 4.940 outlet is in parallel with the 40 meter, 7.215 outlet.

Although the summer months have not been the traditional peak of listening activity on the 60 or even 40 meter bands, certainly the 60 meter outlet is still useful as a tool with which to help make judgements about propagation. With the stations late, 0001 sign off, listeners on the East Coast and in the Central part of North America have an excellent chance of hearing *Cote d'Ivoire* with only modest equipment. West Coast listeners have more of a challenge. The longer days and shorter nights of summer can make for difficult conditions even at the stations sign off time of 8:00 PM Pacific time.

The mailing address for the U.S. Embassy is 01 B.P. 1712, Abidjan 01, *Cote d'Ivoire*.

Equipment Review

Rich Arland
25 Amherst Avenue
Wilkes-Barre, PA 18702
Compuserve 71271.1651

Having lugged my faithful FRG-7700 SW receiver all over the East Coast, it became very apparent that I needed a smaller, lighter weight SW receiver for my travels. Having owned both the 2001 and 2010, I became enchanted with the idea of obtaining a tiny Sony 2003. Since I had played with a 2002 for several months, I was impressed with the size and performance on SW. Unfortunately the 2002 suffered from miserable SSB/CW performance. The PLL synthesizer would "pull" on strong SSB/CW stations, making readable copy difficult. Sony had fixed the PLL pulling problem on the 2003, making it a good rig for general SW BC & ute/ham listening.

A quick call to Jeanie Ferrell at Gilfer SW in Park Ridge, NJ and I had a Sony 2003 on the way. Along with the 2003 I also ordered the Sony AN-1 active antenna system. Having used DR. DX's AN-1 on several ODDX all-nighters, it seemed like an ideal companion for the 2003 in the portable DXing environment.

My "2003" arrived in a couple of days. However, upon opening the package, I noticed that the receiver that Gilfer had sent was the new ICF/SW-7600 "Worldband" receiver. This is the brand new replacement for the 2003!! After calling Gilfer, I was told that the only 2003 they had in stock was a used unit and that the SW-7600s were now coming into the country so they sent me the 7600 in place of the 2003. Right on, Gilfer!!

The new Sony box is approximately 7 5/8 X 4 3/4 X 1 5/16 inches, and weighs in at 1 lb. 5.7 ozs., considerably smaller than the current edition of WRTH!! Power is furnished by 4 "AA" batteries which (according to the manual) provide 10 hours of operation. My tests, using Duracell & Radio Shack "AA" alkaline batteries have yielded over 30 hours of operation before replacement was necessary. The SW-7600 has a built in whip antenna that folds down against the back of the radio. A built in ferrite bar antenna is used for AM reception. In addition, the radio comes with a compact reel antenna (that extends to about 21 ft) and connector that slips over the whip antenna which provides enhanced reception.

Audio power output delivers an impressive 400 mW @ 10% harmonic distortion to the internal 4 in. speaker. The SW-7600 has a record output jack, remote jack (for recording on-the-air signals) along with an external antenna input jack (yes, you can connect your 5000 ft beverage antenna to the 7600), headphone jack (stereo reception is available on FM) and the 6 VDC input jack all on the right side of the case. The RF attenuator (Local/DX switch) is also located on the right end of the box.

Left side of the receiver has the volume, tone, and mode (AM wide, AM narrow, USB/LSB) and fine tuning (plus/minus 5 KHz) controls. The fine tuning can be used in the AM Narrow position, allowing precise tuning of frequencies that don't fall on the even 5 KHz channel spacing in the SW bands.

The front panel contains a HUGE LCD readout (displays the clock, frequency, mode, sleep, and preset memory channels 1-10). Unfortunately the clock cannot be read when the receiver is on. If you want to check the time, you must first turn the receiver off and then the time pops up on the display. The LCD window is definitely large enough to have incorporated the clock into the operation of the radio. Another nice touch would have been the addition of a LCD S-Meter as opposed to the single red LED tuning indicator above the display. The LED lights when a station is properly tuned in. There is no indication of actual signal strength.

ICF/SW-7600 frequency coverage is as follows: FM 76-108 MHz (100 KHz steps), LW 150-528 KHz (3 KHz steps), MW 530-1610 KHz (10 KHz steps) & SW 1615-29895 KHz (5 KHz steps). The fine tuning control works in USB/LSB-CW & AM Narrow on all bands except FM. This allows tuning between preset steps in the synthesizer tuning range (exceptionally handy for tropical band, ham and ute DXing). The 10 preset memory channels store frequency & mode of the entry for instant recall at the touch of a button. Frequency entry is done by direct key-pad entry, manual tuning (via the slew buttons on the front panel) and scanning either the preset memory channels or by band segment.

Controls on the front panel allow for rapid frequency and/or band selection. Included is the Key Protect which renders the front panel controls inoperative so accidental key punches cannot alter the mode or frequency of the SW-7600. There is a sleep button which can also be used to select when to turn the radio on and record a program (timer function). The ON/OFF Power Switch has a very positive feel and can be locked in the OFF position to prevent accidental activation and unwanted battery drain.

Accessories supplied with the ICF/SW-7600 are: carrying case, stereo earphones, AC adaptor, compact (21 ft reel antenna), antenna connector and wave handbook. Optional accessories include a car battery cord, record patch cord, plug adaptor, cassette-corder, and a choice of two (2) active antennas, the AN-1 or the AN-102.

Performance is spectacular for such a small receiver package!! Not only does the SW-7600 pull in your run-of-the-mill SW broadcast stations, it also works exceptionally well on the Tropical Bands, ham and ute freqs, too. Audio quality is adequate, but still below what I consider "good" for a quality SW receiver. Selectivity is a bit wide on LW/SW, even in the AM Narrow position. A slightly tighter IF filter would really enhance the selectivity performance of the 7600. Tuning is very reminiscent of the 2001 as there is no "conventional" tuning knob (like on the 2010). With a little practice you can hop around the bands very quickly using the slew (Manual Tuning +/- buttons). Once a little experience is gained using the Fine Tuning control, interference can be minimized by tuning slightly off frequency (either above or below) the desired signal. This greatly reduces heterodynes present in the passband due to SW stations on adjacent frequencies coupled with mediocre IF filtering. Since the IF strip is relatively wide (even in the AM Narrow position) audio quality is not severely degraded using this technique. ECSS tuning is not possible on the SW-7600. Fine tuning on USB/LSB/CW is critical and is complicated using the edge-wise thumbwheel control on the side of the radio. It takes a little getting use to, but once mastered, SSB signals can be quickly tuned. Priced at around \$259.95, the Sony ICF/SW-7600 is an outstanding portable SW receiver capable of extending your fun on the road or in the shack.

The AN-1 active antenna is a portable unit designed as an optional accessory to the Sony line of portable SW receivers. It consists of an RF head with a 4 ft whip and mounting hardware, control box and AC adaptor (you can also power the AN-1 from internal batteries).

Frequency range of the AN-1 is 150 KHz - 30 Mhz in two bands. Two couplers are furnished with the AN-1. The ANC-1 couples the output of the AN-1 to a whip antenna on the receiver. The ANC-2 couples the AN-1 to the internal ferrite bar antenna inside a receiver. In addition, the output of the AN-1 directly to the receiver via supplied miniature coaxial cable and an 1/8 inch (3.5 mm) audio plug. This allows for some tremendous flexibility over most other active antennas. Also included on the AN-1 control box is a 20 dB attenuator to improve the dynamic range of the receiver in the presence of strong signals when using the active antenna.

Performance of the SW-7600/AN-1 combo is very good. The entire package can be disassembled and stowed in my soft-sided brief case for easy transport on aircraft or in a car. The additional gain offered by the AN-1 antenna system (over the built-in whip or short wire antenna) is a welcome addition for the traveling DXer. The attenuator on the AN-1 works as an effective RF gain control for the 7600. Priced at \$89.95, the AN-1 is good value for money if you are considering purchasing an active antenna to augment your existing antennas of use in portable applications.



NUMERO UNO
SWBC weekly since 1969

NEWS ITEM

For release upon receipt

1990 NORTH AMERICAN DX CHAMPIONSHIP WINNERS ANNOUNCED

Log scoring of entries in the 1990 North American DX Championships has been completed. The contest *this* year was designed primarily as a listener's contest, with restricted time (two weeks) and full shortwave frequency coverage (2.000 MHz--30.000 MHz). We are pleased to announce that the winner of the 1990 North American DX Championships is Don Hosmer of Dearborn, MI. Don's winning entry totaled 1044 points, computed from reception of 332 stations in 138 countries (using the country list of North American Shortwave Association).

Second place, with 843 points, went to Don Moman of Sherwood Park, Alberta. The third place finisher (804 points) was Bill Taylor of Unionville, PA. The three top winners will receive trophies provided by Numero Uno and Fine Tuning. All the finishers will receive certificates recognizing their participation in this year's contest.

The top 20, in order of finish:

1. Don Hosmer, Dearborn, MI
2. Don Moman, Sherwood Park, Alb.
3. Bill Taylor, Unionville, PA
4. Roger Morby, Londonderry, NH
5. Alex Graham, Bartlett, TN
6. Greg Hart, Live Oak, FL
7. Orv Lyttle, Burnaby, B.C.
8. Linda Sue Morby, Scotia, NY
9. Bill Breeden, Omaha, NE
10. Wallace Treibel, Seattle, WA
11. James Klein, Santa Monica, CA
12. Bill Flynn, San Jose, CA
13. David Morby, Clifton Park, NY
14. Adrienne Barhydt, Milwaukie, OR
15. Bud Powell, Kitimat, B.C.
16. K.L. Hobbs, Hamilton, Ont.
17. Edward Stroh, Thornton, IL
18. James Roberge, Valley Field, Que.
19. Jerry Gaiser, Gaston, OR
20. Mark Humenyk, Weston, Ont.

Company Store

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



Uncle Rowland certainly created a flurry of Spectrum Log activity with his DXers Forum feature in April's JOURNAL. Just a brief reminder that the International Broadcast Band Edition of the Spectrum Log is available from the Company Store of only US\$7.00 while the Tropical Band Edition of the Spectrum Log is available for only US\$3.50. Our regular Spectrum Log special: buy both for only US\$8.50. Other goodies from the Company Store include the Perpetual Propagation Predictor for only US\$2.00 and the System for only US\$2.00. You can order either item for only US\$1.00 each when placing an order for any other Company Store item.

The Winter SWL Festival gave us the opportunity to meet many members and to capture those moments on film. Pictured to the right is NASWA member Eric Johnson shortly after purchasing his sweatshirt at the Company Store table during the FEST. It was nice meeting you Eric. See you at next year's FEST!



Reprint Service Distribution Manager Dave Turnick reports that orders for reprints from the NASWA Company Store catalogue continue to be brisk. It seems there is always a backlog these days. Dave continues to work diligently to fill all orders in a timely fashion. However, please keep in mind that on occasion we just get swamped with orders. Occasionally someone like John Bryant orders everything carried in the catalogue - instant backlog, hi! Remember, Reprint Service Catalogues are available for only US\$1.00 from the above address.

As the weather gets warmer, it's time to order your NASWA T Shirt. Like all NASWA clothing articles, the T Shirt is in NASWA Royal Blue with the club's logo in white over the heart. The price is just US\$11.00 via UPS direct to U.S.A. customers from our supplier. Shipping costs to Canada will require another US\$3.50 for Canadians living in "major metropolitan areas". The T Shirt is available in sizes small (S), medium (M), large (L) and extra large (XL). There is an extra US\$1.00 charge for extra, extra large (XXL) T Shirts.

The complete NASWA clothing line consists of:

T SHIRT - US\$11.00

SWEATSHIRT - US\$20.00

POPLIN GOLF HAT - US\$14.00

LINED WINDBREAKER JACKET - US\$24.00

Our sweatshirts and lined windbreaker jackets are available in sizes S, M, L and XL. There is an additional US\$2.00 for size XXL.

Just enough room to thank the many members that have written to either Dave or I with kind words about the Company Store. The opportunity to serve the needs of the membership make the work involved worth while. We look forward to serving more of the membership in the upcoming months.

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

Listener's Notebook

Bruce MacGibbon
2295 Juniper Avenue
Gresham, OR 97030



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AUSTRALIA - Radio Australia J90 Sked effective 5/6:

English Service: 21825D 09-10, 45/50/51, 11-1230 45/50/51; 21775C 01-11, 54/41 (Sports World 02-0730 Sat) 21740S 0030-0730, 62/56 (Sports World 02-0730 Sat), 22-24 51/64/45; 21525D 01-09, 54/50/43/44

17795S 21-06, 62/56, 08-0830 62/56; 17750D 0000-0330, 43/44/50, 0430-06 43/44/50/54 (0000-06 Sat & Sun), 08-09 49/54, 23-0330 54/50/43/44; 17715S 09-1030, 49/54, 22-24 49/54; 17630C 0000-01, 43/44/49, 01-0330 41/54, 0430-08 54/41, 08-09 43/44/49/54; 17630S 23-24, 43/44.

15560S 0030-06, (not from 0030 per Glenn Hauser, AZ) 56/62; 15465C 11-1330, 54/49/43/54; 15465S 21-0730, 51/64/45; 15380C 0000-01, 43/44/54/49; 15320S 02-06, 56/62; 15240S 2130-0130, 49/54, 22-0830 60 (Sports World 02-0730 Saturday); 15160S 0030-06, 62/56, 08-0830 62/56.

13745C 1430-17, 41/54; 13745S 1930-2130, 56/62; 13700S 06-0830, 56/62; 13605D 22-01, 49/54.

12000C 1430-17, 54/49/41. (Jordan heard them from 1420 on 5/6 so probably sked should read from 1400. (bmm)

11910S 11-13, 49/54; 11880B 21-08 (Sports World 02-0730 Sat), 51/64; 11855S 17-21, 56/62; 11720S 12-13, 53.

9770S 1430-19, 49/54; 9760S 09-10, 45/51; 9710S 11-1230, 45/51; 9710C 1430-17, 54/41, 17-18, 44/43/54/49; 9655S 09-1130, 60; 9580S 0830-21, 62/56.

7240C 17-21, 54/41; 7215S 1330-2130, 60; 7205C 18-21, 49/54. 6080S 11-2030, 51; 6060 14-1630, 56/62; 6035B 0730-08, 51/64, 11-21, 51/64; 6020B 11-21, 51/64; 5995S 09-2030, 56.

United Kingdom/Europe: Radio Australia suggests trying: 21775C 01-11; 15465C 11-1330; 15240S 07-0830; 13745C 1430-17; 12000C 1430-17; 9710C 1430-17. (These services are directed to Asia and the Pacific. Reception further afield is influenced by propagation conditions and frequency congestion).

United States/Canada: Radio Australia suggests trying: 15560S 0030-06; 15320S 02-06; 15160S 0030-06; 13700S 06-0830; 9580S 0830-21; 5995S 09-2030. (These services are directed to the Pacific. Reception further afield is influenced by propagation conditions and frequency congestion).

INDONESIAN SERVICE: 15365D 22-01; 11855C 23-01, 09-13; 9645D 09-13; 9505D 22-23; 7240C 21-23; 6035C 21-23.

STANDARD CHINESE SERVICE: 17750D 0330-0430; 17715D 10-14; 17630C 0330-0430; 09-11 43/44/49/54; 17630S 2130-23 43/44. 15170D 09-13, 23. 13605D 21-22. 11765C 11-13, 44/43/54/49; 11765D 21-22, 54/50/44/43; 11765C 22-23, 43/44.

CANTONESE SERVICE: 11765C 13-1430, 43/44/49/54; 9770C 1330-1430, 49/54.

PAPUA NEW GUINEA SERVICE: 9710S 08-11; 6080S 08-11; 6035B 08-11; 6020B 08-11.

FRENCH SERVICE: 17795S 06-08, 62/56; 17750D 06-08, 49; 15320S 06-08, 56; 15160S 06-08, 62/56.

THAI SERVICE: 15380C 23-24, 49/54; 13700C 23-24, 49.

JAPANESE SERVICE: 21825D 10-11, 45/50/51/64; 11800D 1230-1330, 45/50/51/64; 9760S 10-11, 45; 9710S 1230-1330, 45.

VIETNAMESE SERVICE: 12000C 1330-1430, 49/54; 9770C 1330-1430, 49.

ITU ZONES: 41 - Bangladesh, Bhutan, India, Nepal, Pakistan, Sri Lanka. 45 - Japan; 49 - Cambodia, Laos, Myanmar, Thailand, Vietnam; 50 - The Philippines; 51 - Papua New Guinea, Solomon Islands; 53 - Madagascar, Malawi, Mauritius, Mozambique, South Africa, Zimbabwe; 54 - Brunei, Indonesia, Malaysia, Singapore; 56 - New Caledonia, Vanuatu; 60 - New Zealand, Norfolk; 62 - Cook Islands, Fiji, Kiribati, Tonga, Tuvalu,

Western Samoa; 64 - Federated States of Micronesia.

TRANSMITTING STATIONS - B - Brandon, Queensland 147 20 E/19 30/S; C - Carnarvon, Western Australia 113 43 E/24 54 S; D - Darwin, Northern Territory 130 38 E/12 25 S; S - Shepparton, Victoria 145 25 E/36 20 S. (Thanks to Keith Synnott, Publicity Officer, Radio Australia, for always sending the schedule timely!) 15560, 0430, RA, "Communicator" Pgm replaced by Business Horizons on UTC Sat. 'Communicator' has moved to 0430 on UTC Fri. (bmm)

BELGIUM - BRT Pub Sked t/9/29: 0630 Daily Australia 11695, Eur(1) 6035, Eur 13675; 09 Mon-Fri Afr 21810, Eur(2) 6035, Eur 13675; 1130 Sun NA 17555; 1230 Mon-Sat SE Asia 21810; 1530 Mon-Sat Afr 17580, 21810; 1730 Daily Eur 5910, 13675, 1512(MW); 21 Daily Eur 5910, 9925, 1512(MW); 2330 NA 12010, SAM 13675. (1) = Not on Saturdays from 3/25-6/30. (2) = Also on Saturdays from 3/25-6/30. **Programme Contents for:** 0630,09,1230,1530 Mon: News, Radio World, Tourism in Flanders, PO Box 26. **Tue:** News-Press review, Belgium Today, Focus on Europe, Sports. **Wed:** News-Press review, Belgium Today, Around the Arts, PO Box 26. **Thu:** News-Press review, Belgium Today, Living in Belgium, Musical Roundabout. **Fri:** News, Press review, Belgium Today, Economics, North-South. **Programme Contents for:** 1730,2100,2330 Mon News-Press review, Belgium Today, Focus on Europe, Sports. **Tue:** News-Press review, Belgium Today, Around the Arts, PO Box 26; **Wed:** News-Press review, Belgium Today, Living in Belgium, Musical Roundabout. **Thu:** News-Press review, Belgium Today, Economics, North-South. **Fri:** News-Press review, Belgium Today, Tourism in Flanders, Around the Arts.

Sat: (All Broadcasts): Radio World with Frans Vossen, Tourism - Record of the Week - PO Box 26. **Sun:** (All Broadcasts): The Fourth Community, a programme about English speaking inhabitants of Belgium. presented by Blackie Blackwell. Music through the Ages.

Brussels Calling is made and presented by Liz Sanderson, Frieda Van Wijck, Frans Vossen, Paul Rans, Steve Smith, Colin Clapson and Blackie Blackwell.

Ici Bruxelles: 0700 Daily(1) Eur 13675, 11695, 6035; 0930 Mon-Sat Afr 21810, Eur 13675, 6035; 13 Mon-Sat NA 17555, SE Asia 21810; 1630 Daily Af 21810, 17580; Sun Eur 1512(MW); 2130 Daily NA 12010, SAM 13675. (1) = Pas le samedi avant 6/30.

Programmes: 07,0930,13 **Lun(Mon):** Nouvelles-Presse, Tourisme, Cuisine, Ondes Courtes. **Mar(Tue):** Nouvelles-Presse, Actualites, Les Sports, Europe. **Mer(Wed):** Nouvelles-Presse, Actualites, Nord Sud, Boite Postale 26. **Jeu(Thu):** Nouvelles-Presse, Actualites, Portrait. **Ven(Fri):** Nouvelles-Presse, Actualites, Les Arts, Economie-Consommation.

Programmes: 1630,1930,2130 **Lun(Mon):** Nouvelles-Presse, Actualites, Les Sports, Europe. **Mar(Tue):** Nouvelles-Presse, Actualites, Nord Sud, Boite Postale 26. **Mer(Wed):** Nouvelles-Presse, Actualites, Portrait. **Jeu(Thu):** Nouvelles-Presse, Actualites, Les Arts, Economie-Consommation. **Ven(Fri):** Nouvelles-Presse, Actualites, Nouveaux Mondes, Mediations. **Sam(Sat):** (All Broadcasts) Ondes Courtes, Tourisme, Cuisine, BP 26. **Dim(Sun):** (All Broadcasts) Bande de Sons, le magazine musical du weekend.

Ice Bruxelles est concu et presente par Maryse Jacob, Marie-Laurie Steisel, Marc Oschinsky et Profiteroles.

Hier ist Brussel: 0730 Sunday Eur 13675, 11695, 6035; 0830 Sat t/6/30 Afr 21810, Eur 13675, 6035; 0830 Mon-Fri before 6/30 then Mon-Sat Eur 13675, 11695, 6035; 18 Mon-Sat Eur 13675, 5910, 1512(MW).

Programmes: 0830 **Mon(Mon):** Nachrichten-Presse, Brussel Heute, Tourismus, Wirtschaft. **Die(Tue):** Nachrichten-Presse, Brussel Heute, Flandem im Ausland, Sport. **Mit(Wed):** Nachrichten-Presse, Brussel Heute, Postfach 26, Jugend. **Don(Thu):** Nachrichten-Presse, Brussel Heute, Kurzwelle, Europa. **Frei(Fri):** Nachrichten-Presse, Brussel Heute, Unsere gute Küche, Kunst und Kulfur.

Programmes: 1800 **Mon(Mon):** Nachrichten-Presse, Brussel Heute, Flandem im Ausland, Sport. **Die(Tue):** Nachrichten-Presse, Brussel Heute, Postfach 26, Jugend. **Mit(Wed):** Nachrichten-Presse, Brussel Heute, Europa, Kurzwelle. **Don(Thu):** Nachrichten-Presse, Brussel Heute, Unsere gute Küche, Kunst und Kulture. **Frei(Fri):** Nachrichten-Presse, Brussel Heute, Tourismus, Wirtschaft. **Sams(Sat) und(and) Sonn(Sun) Broadcasts:** Society, Platte de Woche, Postfach 26, Ost-West.

Zusammenstellung und Präsentation: Katrin Mockel, Martina Luxen, Christine Fettweiss un Klaus Haas.

Aqui Bruselas: 2030 Dily Eur 9925, 5910, 1512(MW); 23 Daily NA 12010,

SAm 13675.

Programmes: 2030 & 23. Lunes (Mon): Belgica Hoy, Revista de la Prensa, Latinoamerica en nuestra Prensa, Deportes. Martes (Tue): Belgica Hoy - Revista de la Prensa, Europa, El Correo de los Oyentes. Miercoles (Wed): Belgica Hoy - Revista de la Prensa, Guia Turistica, El disco de la semana. Jueves (Thu): Belgica Hoy - Revista de la Prensa, Novedades, Prisma. Viernes (Fri): Belgica Hoy - Revista de la Prensa, Semana Cultural, El Correo de los Oyentes. Sabado (Saturday): El Cantor va por el Mundo, Sagas y Leyendas. Domingo (Sun): Debate Europa/Entre Amigos, DX.

Aqui Bruselas Es Preparado y Presentado por: Ximena Prieto, Muriel Verplaetse, Adoracion Dominguez, Claudia Camarena, Guido Peeters y Dirk van Esbroeck. (via Gordon Darling, Papua New Guinea)

BRAZIL - Via Bonaire Wavelength on 5/6 w/Chuck Roswell & thanks to Mike Fern, CA for this:

A complete list of all Brazilian AM, shortwave and FM stations is available from a Brazilian publisher. It is a 56-page book with several listings, including by station slogan and state. The foreword is bilingual. Easy-to-understand abbreviations are used. The 1990 edition is available for 8 IRC's from: Brazilian Short Wave, Medium Wave, and FM Stations List, Caixa Postal 949, 12001 Sao Jose dos Campos, SP (Sao Paulo State), Brazil.

CHAD - 4904.5, 1701, Rdiff. Nat. Tchadienne, AR, ID, NA, music, news by M, strong signal w/a het on 4/12 (Valery Ostroverkh, Karaganda, Kazakh SSR)

CHINA - Radio Beijing now has a bi-monthly (May-June is out) 8-Page Publication called "The Messenger" edited by the English Dept. of Radio Beijing. According to the Director of Radio Beijing, Cui Yulin, "The Messenger brings you information about Radio Beijing's present and plans for the future. We will feature programmes from the English Service as well as other languages. You will be introduced to the people who make these programmes: their pursuits, their life, and work. And last, but not least, we want to talk about you, our friends - the listeners. I hope you'll like it." Note: If you would like to receive a copy, write to "The Messenger", English Department, Radio Beijing, Beijing, 100866 China.

Radio Beijing Published EG Language Sked from 5/7: ECNA: 0000-01 15100M, 17705; 03-04 9690SP, 15100M, 11715M; 04-05 11685G; 12-13 17855; WCNA: 0000-01 15100M, 17705; 03-04 15100M, 11715M; 04-05 11840C, 11685G; 13-15 11855; Europe: 20-21 & 21-22 11500, 9920; 21-2130 3985S; SE Asia: 12-13 & 13-14 1341, 11660, 9530; South Asia: 14-15 & 15-16 15165, 11815; South Pacific: 09-10 & 10-11 17710, 15440, 11755; 12-13 & 13-14 15285; East & South Africa: 16-17 15130M, 15110M, 9570; 17-18 15225, 11575, 9570; 20-21 & 21-2130 15110M, 11715M; West and North Africa: 19-20 11515, 9440; 20-21 9440. Sites: C - Canada. G - French Guiana. M - Mali. S - Switzerland. SP - Spain. Radio Beijing's Regular Features (following the news, commentaries, Current Affairs (Mon-Fri) presenting an in-depth look at major news and feature stories across China). Sun: China Anthology, Music Album, Listeners' Letterbox. Mon: The Business Show (Biweekly), Learn to Speak Chinese; Tue: Listeners' Letterbox (rebroadcast); Wed: Learn to Speak Chinese (rebroadcast); Thu: Culture in China; Fri: In the Third World; Sat: Travel Talk, Cooking Show, Music from China. (via Lifang, Audience Relations, Radio Beijing.) 5050, UNID station in 2 languages, CH and probably Uighur. I had tuned in at 1509, the station was on the air up to 1520 on 4/30. On 5/2 I heard the station again, it started at 1500 with music, then at 1505 there were several announcements by W & M and clear ID in Uighur probably: Xinjiang Uighur Autonom Rayon Radiostanciacy" - Radio station of Xinjiang Uighur Autonomic Region. There there were some talks by W in CH and M in Uighur. It sounds like a test transmission. There were no usual time signals on the hour, and I do not hear any mentioning of Xinjiang PBS. (Valery Ostroverkh, Karaganda, Kazakh SSR)

CONGO - Congolese radio announced 48-hour test transmission on shortwaves. Monitoring research 9 May 90. On 9th May, Congolese radio in Brazzaville was heard signing off at 148 gmt on 9610 kHz with the following announcement: "This is Congolese Radio and Television, the shortwave station of the PK Rouge. Today, Wednesday 9 May and Thursday 10th May 1990, we are broadcasting a 48-hour test programme..." A frequency

schedule was then read out. It is summarised as follows: 0000-09 on 4765, 3265; 09-11 7105, 4765; 11-13 on 15190, 7105; 13-15 on 15190, 9610; 15-17 15190, 9715; 17-23 on 15190, 4765; 23-24 on 4765, 3265. Congolese radio was then heard from 1500 gmt on 9715 kHz with a programme of music. No explanation for the test transmissions was heard. (WBI 5/18)

Radiodiffusion Television Congolaise in Brazzaville has reactivated its 60 metre band channel of 4765, after some years of absence. Good signals were observed at 2130 when an ID announcement was given as "La Voix de la Revolution Congolaise", followed by some local music selections. The station faded out at 2235. Programming was entirely in the French language. (Radio Australia's 'Japanese DX Time' 19/20 May, compiled by Craig Seager of the Australian Radio DX Club.)

CUBA - The Radio Havana Cuba DX program is back to its regular time of 0240 and 0440 as heard by Mike Fern, CA on 4/29 and 5/6. Apparently the transmission at 0340 and 0540 was the result of an engineer putting tape A on recorder B and tape B on recorder A.

CZECHOSLOVAKIA - Radio Prague International Sked: Note: This schedule was compiled by monitoring research and may not be complete: 0000-0015 EG Am 11990, 11680, 7345; 0030-01 FR Am 11680, 7345, 5930; 01-0130 EGI Am 11680, 9540, 7345, 5930; 02-0230 SP Am 11990, 11680, 7345, 5930; 0230-03 Czech/Slovak Am 11990, 11680, 7345, 5930; 03-0330 EG Am 11680, 7345, 5930; 04-0415 EG Am 11680, 7345, 5930; 05-0530 FR Eu 9505, 7345, 6055; 0530-06 GM Eu 9505, 7345, 6055; 06-12 Multilingual ("Interprogramme") Eu Dom including ..00-..20 Programmes in GM; ..20-..40 Programmes in French; VHF/FM; 0730-08 EG As,Au 21705, 17840; 08-0830 Czech/Slovak As,Au 21705, 17840; 12-13 GM Eu 9505, 7345, 6055, 1287, 1071, 1035 VHF/FM; 14-1425 Czech/Slovak Eu 13715, 11685, 9605, 7345, 5930; 1445-1530 GM Eu 9605, 17345, 6055, 5930; 1630-1655 Czech/Slovak Eu 7345, 6055; 1630-1645 FR Eu 11990, 5930; 17-1727 EG Eu 11990, 7345, 6055, 5930; 1730-1757 SP Eu 11990, 7345, 6055, 5930; 18-1827 Czech/Slovak Eu 11990, 7345, 6055, 5930; 1830-1845 EG Eu 7345, 6055; 1830-1845 FR Eu 11990, 5930; 19-1915 GM Eu 7345, 5955; 19-1930 SP Eu 11990, 5930; 1930-1957 FR Eu 11990, 7345, 6055, 5930; 21-2115 EG Eu 11990, 7345, 6055, 5930; 2230-2245 FR Am 11990, 11680, 7345; 23-2315 SP Am 11990, 11680, 7345. (WBI 5/18)

DJIBOUTI - Radio Djibouti - Freq 4780. The duration of news bulletins is subject to variation. 03-04 Somali including news at 0330-04; 04-05 Afar; 05-07 AA; 07-09 (Fri) Somali; 09-11 Afar including news at 1000; 11-13 Somali including news at 1200; 13-16 AA including news 14-1410; 16-18 including "This Week in Africa" (Sun) & 17-1710 News; 18-20 Afar including news at 1830-1840. (WBI 4/27)

FEDERAL REPUBLIC OF GERMANY - Radio Deutsche Welle Published Sked: NA: 01-0150 on 15105, 11865, 9565, 6145, 6040; S.Asia: 02-0250 17770, 15235, 11945, 11835, 9690, 9615, 7285, 1548; NA: 03-0350 15205, 11810, 9545, 6085; East, Central, S.Afr: 04-0450 15265, 11765, 9765, 9565, 7225, 7150; NA: 05-0550 11845, 11705, 9670, 6120, 5960; W.Afr: 06-0650 17875, 15185, 13790, 11765; East, Central, S.Afr: 09-0950 21600, 15410, 9565; Asia and the Pacific: 09-0950 21680, 21650, 17820, 17780, 11740, 6160; W.Afr: 11-1150 21600, 17800, 17765, 15410; East, Central, S.Afr: 15-1550 21600, 17765, 11965, 9735; S. Asia: 16-1650 21680, 17825, 15595, 15105, 7225, 6170, 1548; W.Afr: 19-1950 17810, 15390, 13790, 11810, 11785; Asia and the Pacific: 21-2150 15435, 13780, 11785NF (Trincomalee) (via Radio Australia's 'Japanese DX Time' 5/12 compiled by Mick Ogrizek, of the Australian Radio DX Club) ex 11810, 9765, 9670.

German Programme: Eur, North, Central & LAm: 0000-02 17860, 15410*, 15270, 11795, 9735, 9700, 7130*, 6100, 6075, 3995 & 01-02 9545; Eur, North & CAm: 02-04 15510, 11795, 9735, 6100, 6075, 3995 & 02-03 17860*, 15270*, 9545; Eur, NA: 04-0547 13780, 11950, 11795, 9735, 9690, 9545*, 6075; Eur, Australia, New Zealand: 06-08 21600*, 21560, 17845, 15105, 11810, 11795, 9735, 9690, 9545*, 6075 & 07-08 21640; Eur, Australia, New Zealand: 08-10 21640*, 21560, 17845*, 15275*, 15105*, 11795*, 9735*, 9690*, 9545, 6075. Eur, Japan, East Asia, SE Asia: 10-12 21680, 21640, 21560, 17845, 9545, 6075, 1548 & 11-12 25740, 15245. Mediterranean, Eur, Japan, E.Asia, SE Asia: 12-14 25740*, 21680, 21640, 21560, 17845, 17715, 13780, 9545, 6075, 1557, 1548 & 12-13 15245. Mediterranean, Eur, S.Asia, ME: 14-16 21560, 17845*, 13780, 9545, 6075, 1557. Mediterranean, Eur, S.Asia, ME: 16-18

21560*, 17875*, 15275, 9545, 6075, 1557; 16-18 13780* & 17-18 21570, 1548.
Eur,Afr: 18-20 21570*, 17860, 15275, 11795, 9735, 9545, 6075, 1548.
Eur,Afr: 20-22 17860, 17830, 17810, 15275*, 11795*, 11765, 9735*; 20-21
9545*; 21-22 3995. Eur, LA & Cam: 22-0000 17860, 15410, 15270, 15250,
13780, 9735, 9715, 9700, 6100, 6075, 3995. Note: Frequencies marked with *
finish 5 to 10 minutes before the mentioned time.

International Programmes: FR: 0515-0550 Afr 15275, 11765, 9765, 9565,
7225; 07-0750 W.Afr 17875, 15185, 13790, 11765; 12-13 21600, 17800, 17765,
15410; 1650-1750 21600, 17765, 11965, 9735; SP: 02-0250 LAM 11865, 11810,
9700, 6045; 11-1150 LAM 21630, 15205, 11705; 1930-2020 Spain 9615, 7235,
6130; 23-0050 LAM 17720, 15425, 15105, 13790, 11865, 11810, 9545, 6145.
PT: 05-0515 Afr 15275, 11765, 9765, 9565, 7225; 10-1050 LAM 17800a, 15205,
11810, 11795; 20-2050 Afr 17765, 17715, 15425, 15105, 13790, 11810; 2130-
2130 LAM 17720, 15425, 15105, 13790, 11865, 9545, 6145; 2130-2220 Portugal
9515, 7120, 6130; JP: 11-1150 21650, 17825, 17715, 15400, 15185; CH: 12-
1320 21650, 17875, 17825, 15185, 15105; INDO: 1330-1420 21650, 17825,
15185, 15105; 2230-2320 15435, 11845, 11740, 9605, 7235; Bengali: 01-0150
15235, 11945, 9690, 9615, 7285, 1548; Urdu: 1430-1515 21680, 17825, 15595,
15105, 7225, 6170, 1548; Hindi: 1515-16 & Sanskrit (every second Monday)
1545-1558 (Same as Urdu). Pashtu: 03-0350 21650, 17800, 15410, 15275,
11905, 9615; Dari: 08-0850 21650, 21600, 17875, 17780, 15435, 15320;
Persian: 10-1050 21650, 21630, 17875, 17715, 15275; 18-1850 21650, 17825,
15435, 13780, 11950, 9615; AR(ME): 04-0550 11865, 9690, 7235, 6025, 6000,
1557; 07-0750 15435, 11905, 11745; 19-2120 11905, 9690, 9515, 7265, 1557;
Maghrebinian(every Friday): 0735-0750 15435, 11905, 11745; Swahili(Afr):
03-04 15265, 11765, 9765, 9565, 7225, 7150; 10-1050 21600, 17825, 11785,
9735; 1550-1650 21600, 17765, 11965, 9735. Hausa(Afr): 13-1350 21600,
17800, 17765, 15410; 18-1850 17810, 15390, 13790, 11810; Amharic: 14-1450
21600, 17765, 15410, 11810. Turkish: 06-0650 15275, 11905, 11865, 9750,
9650; 17-1750 13780, 11865, 9615, 7245; Greek: 17-1750 9640, 6140. RS: 03-
0350 15185, 11865, 9690, 9650, 7285; 15-1820 15425, 15405, 11915, 9715;
2030-2120 11865, 9650, 9605, 7140; Czech/Slovak: 0430-05 11905, 9650;
1030-1120 9770, 7150, 6015, 5995; 1830-1930 17795, 15155. Polish: 05-0530
11905, 9650; 1215-1250 9770, 7150, 6015; 18-1830 17795, 15155; Romanian:
0830-0920 15510, 11850, 9650; 15-1550 & 17-1750 15470, 11795. Bulgarian:
0930-1020 15510, 11905, 11850, 9650; 16-1650 17705, 15470, 11795; 1830-
1920 11960, 9715, 7255, 6170. Hungarian: 1130-12 9770, 7150, 6015; 1930-
2030 17795, 15155. Slovenian: Sat & Sun 0730-0820 9650, 7130, 6130; Mon-Sat
1415-1450 6130, 7175, 9770; Serbo-Croat: Mon-Fri 0730-08 9650, 7130,
6130; Mon-Sat 1330-1415 & Sun 1330-1450 9770, 7175, 6130 & Sun 2045-2135
9615, 11960. Macedonian: 13-1330 9770, 7175, 6130. German language course,
Yugoslav programme Mon-Fri 08-0820 9650, 7130, 6130. (Deutsche Welle 'tune
in' May/June via Gordon Darling, Papua New Guinea)

FINLAND - Radio Finland has a regular five-minute news summary in Latin entire
a week. The schedule is: Mon, to Asia & Europe at 0650 on 963, 6120, 9560
& 11755. Saturday at 1445 on 11850. Sundays at 2120 on 963, 6120, 11755
and at 2320 on 963. (Sweden Calling DXers, 'Spanish Edition' on 5/8 via
Fern)

Radio Finland to reintroduce news bulletins in French - Monitoring
research 8 May 90. In their English-language programme at 0830 gmt on 8th
May, Radio Finland announced that as from 1st June news bulletins in
French, which stopped in the mid-fifties, would be reintroduced.
Broadcasts in French were resumed in 1987 and press reviews started
earlier this spring. The timing of French-language broadcasts would also
be changed and a new broadcast introduced at 0645 gmt. The changes were
announced as follows:

0645-07 gmt to Europe on 11755, 9560, 6120, 963, 558, 252 kHz; 2045-21
gmt to Europe, Africa and Australasia on 15400, 11755, 9550, 6120, 963,
558, 252 kHz; 2225-2240 gmt to Europe and North America on 15185, 11755,
963 63, 558, 252 kHz. (WBI 5/11)

FRANCE - RFI increases broadcasting in Standard Chinese. Monitoring research
14 May 90. A study of a recently received Radio France Int'l schedule,
for the period 25th March to 23rd September 1990, shows, inter alia, that
broadcasting in Standard Chinese to China and the Korean peninsula has
quadrupled from three hours thirty minutes to 14 hours per week. The
service is on the air daily, relayed from a transmitter in Japan from
0930-1030 and 12-13 gmt on 15215 kHz. (WBI 5/18)

GUAM - AWR-Asia to Broadcast Special Reports - News Release dated 5/7:

For the first time, listeners in Asia will be able to hear broadcasts direct from a Seventh-day Adventist General Conference session as it happens. The General Conference Session of the Seventh-day Adventist Church is held every five years to conduct church business and to elect new officers. Over 50,000 people from 190 countries are expected to attend the 10-day session.

The session begins on July 5, 1990, and AWR-Asia will begin coverage on July 7 through 14. The 55th General Conference session will be held at the Hoosier Dome in Indianapolis, Indiana, USA and AWR-Asia will be there to bring direct reports, via satellite to Asia. The one hour reports will be heard five times a day so that listeners in Asia will have a variety of times to choose from.

The programs will be in English and will include special reports on the organization of the 11th Division of the SDA Church in the Soviet Union and recent developments in that country; the latest developments in Eastern Europe; phenomenal church growth in various world fields; Adventist Development and Relief projects in the Far East, and other interesting reports.

A special QSL card has been designed and a limited number will be issued during the session for correct reports of the programs. Send all reports to P.O. Box 310 Hong Kong. (PO Box 7468, Agat, Guam 96928 USA)

Regular scheduled English programs will not be aired during this week.

AWR-Asia English Program Schedule During the SDA General Conference

Session July 7 to 14, 1990.

UTC Time	Freq	Program
0000	15125	General Conference Report
0200	13720	General Conference Report
(Saturday and Sunday only)		
0400	15225	General Conference Report
(Monday through Friday only)		
1000	13720	General Conference Report
1600	11980	General Conference Report
2300	15125	General Conference Report

(Thanks to AWR-Asia for this)

INDIA - Manosij Guha, Delhi tells Bob Palmer, WA that a new language is now in use by AIR to SE Asia. Telugu. It is sked 2245-2315 on 9535, 11745 and 15110 replacing 1/2 hour of English in all cases. At 2315 all three begin EE GOS, still to SE Asia. 9910 and 11715 with similar skeds to NE Asia remain unaffected w/EE during 2245-2315.

Shillong Home Service 50 kW has vacated 3255 and moved to 4790 for 0125-0220. Also on 7190 0230-0430v and 0730v-1215.

The "All India Radio" External and Home Service Skeds in graphic format update 4/1 are now available from Manosij Guha only. Please send \$5.00 cash or 5 IRCs to Mr. Guha:

Manosij Guha, UDXL, 101 S.R.K. Hostel, Jamia Nagar, New Delhi - 110 025. Listen to Radio Nederland's "Media Network" for regular updates on the broadcasting scene in India. Also subscribe to "DX Post" (Bi-monthly) for news and reports from South Asia. For a sample copy send 3 IRCs to: Kanwarjit Sandhu, Universal DX League, 400 Krishna Nagar, Ludhiana - 141 001 India. (Tel: +91 161 29403). Tell him "The DX SPREAD" sent you.

Also a special thanks to Bob Palmer, Spokane, WA for having made this excellent graphic sked available to SW SWL's in North America. (bmm)

AIR HS SKED M-90 (4/1 Update) Courtesy of All India Radio w/Monitoring updates by Kanwarjit Sandhu, Jose Jacob, and Manosij Guha, all of whom live in India.

* = Carries Home News Service from Delhi. These transmitters also act as standby HF feeders when the satlink fails. @ = Carries programs for Arunachal Pradesh.

kHz	kW	Station	UTC
3205	10	Lucknow	0025-0215
3223	2.5	Shimla	0045-0200, 13-17/1741
3235	10	Guwahati B	1230-1701 (Sat 1730)
3255	50	Shillong	0125-0220, 1225-1630 (Now Vacated - See above)
3268	50	Kohima A	1315-1630
3277	50	Srinagar B	0120-0225, 1130-1739

*3295	20	Delhi	1330-1340, 1344-1415, 1420-1440, 1450-1830
3305	2	Ranchi	0055-02, 12-1741
3315	10	Bhopal A	0025-0215, 12-1741
3330	10	Leh	0120-03 (Test Transmission)
3345	2	Jammu A	1130-1741
3355	10	Kuresong	1130-1700/1741
*3365	10	Delhi	1230-1840
3375	50	Guwahati A	1230-1701/1740
*3905	20	Delhi	0229-0250 (Sun to 04)
*3925	20	Delhi	0029-0040, 1219-1310, 1329-1340, 1345-1415, 1420-1440, 1450-1830
4760	10	Port Blair	1030-1630/1730
4760	10	Leh	0155-0400 (Per ltr 4/18 from Kanwarjit Sandhu, Universal DX League, Ludhiana, India)
4775	10	Guwahati B	1030-1215
4790	50	Shillong	0125-0220 (Also see 7190)
4800	10	Hyderabad A	0025-0215, 12-1741
4820	10	Calcutta	0025, 0210, 1230-1736
4840	10	Bombay B	0025-0215, 1230-1741
4850	2	Kohima	0025-0215, 00229-04, 10-13
4860	50	Delhi	0129-0205v, 0214-0225, 0229-0251, 03-0355 (Sun to 04), 1244-1325/1330, 1330-1340, 1345-1415, 1420-1445, 1450-1740/1830v
4880	10	Lucknow	0029-04
4895	20	Kuresong	0124-04
4920	10	Madras A	0015-0215, 12-1736
4940	50	Guwahati A	0025-0145, 02-04
4950	2	Jammu A	0120-0215
4960	10	Delhi A	0025-0229, 0245-04, 1030-1215
5050	50	Aizawl	0030-02, 1229-1630 (Sat to 1741)
5960	2	Jammu A	0229-04 (Sun to 0445), 0630-09
5990	10	Bhopal	0229-0405 (Sun to 0531)
6010	10	Calcutta	0230-04, 0429-0443, 1015-1215
6020	2.5	Shimla	0215-04, 07-09, 1030-1115, 1130-1245
*6045	250	Delhi	0135-0145
*6045	100	Delhi	1329-1415, 1429-1440, 1450-1830
6065	50	Kohima A	0229-04, 0630-0941
6110	50	Srinagar B	0240-0453 (Sun to 0515), 06-1115
6115	100	Madras	1330-1730
6120	10	Hyderabad	0229-0331 (Sun to 0430)
*6140	250	Delhi	1515-1740v
6140	2	Ranchi A	0215-04 (Sun to 0430)
6190	10	Delhi A	0734-1031
7125	2	Ranchi A	07-0941
*7140	50	Delhi	1359-16/1830
7140	10	Hyderabad	0530-0630 (Sundays only), 0610-0840/0915 (Sun 0530-1030), 1515-1830
*7145	50	Delhi	0124-0130
7150	10	Guwahati B	0630-10 (Begin Sun at 06), 1010-1011
7160	10	Madras A	0230-0415 (Sun to 0530, Sat to 0430), 0610/0630-08, 0830-1030 (Sat to 1130) (Sun to 1145), 1329-1415, 1420-1445, 1450-1730v
7180	10	Port Blair	07-0850
7180	10	Bhopal A	07-0945
7190	50	Shillong	0230-0430v, 0730v-1215
7210	10	Calcutta	0630-10
*7210	50	Delhi	0229-0251, 03-0355 (Sun to 04)
7230	20	Kuresong	0630-07, 0730-1031
7240	10	Bombay B	0229-0430 (Sun to 0530), 0530-0925/1035
7250	10	Lucknow	0630-0930, 0935-0936 (Sun from 0415)
7260	100	Bombay	0129-03
7280	50	Guwahati A	0430-0630 (Sun only), 0630-0910 (Sun 0430-10), 1130-1215
7295	50	Aizawl	0215-0345, 1130-1215
*7412	100	Delhi	1515-1740v
9535	100	Madras	0125-04
*9550	50	Delhi	0229-0251, 0320-0355 (Sun to 04)
*9575	50	Delhi	1345-1415
@*9610	50	Delhi	0029-0040o, 0125-0225, 0229-0251, 03-0355,

			(Sun to 04)
*9615	100	Bombay	1219-1245, 13-1445
*9630	100	Delhi	0029-0040, 0124-0205
*9675	100	Delhi	1130-1140
*9770	250	Aligarh	1329-1415, 1430-1440, 1450-1830
*9950	100	Delhi	1329-1415, 1420-1445, 1450-1830
*10330	50	Delhi	1329-1415, 1450-1830
*11620	250	Aligarh	1114-1140, 1219-1245
*11735	100	Bombay	0030-1015, 1030-12
*11830	250	Aligarh	0130-0225, 0229-0251, 0259-0355(Sun to 04) 0030-1015, 1030-12
*11850	250	Delhi	07-0940
*11870	250	Delhi	0129-0205, 0229-0251, 03-0355(Sun to 04)
	15105	100	Delhi
	15120	100	Delhi
			(Sun to 04)
	15125	100	Madras
	15185	250	Aligarh
	15250	100	Delhi
	15275	100	Delhi
	15420	100	Delhi
	17705	50	Delhi
	17815	50	Delhi
	17850	250	Delhi
	17875	50	Delhi

4760, *0155-04*, Radio Kashmir, Leh, relaying the programmes from their MW outlet of 1053 kHz. At sign on after playing signature tune of AIR and 'Vande Matram', they also play typical Ladakhi drum music for 5 minutes till the time reaches 0200. Then ID in Ladakhi/Urdu given before starting normal transmission. The signal here in Ludhiana is booming in! (via letter dated 4/18 from 'Kanwarjit Sandhu', Editor/Publisher of "Universal DX League")

INDONESIA - Lim Kong Jin, of Penang, Malaysia, advises us that the Voice of Indonesia, at Jakarta, is now using 11750, for its services from 01-03 in EG and Indonesian. The same channel is also noted from 08-10 in EG and Malay. All programmes are also heard on the parallel frequency of 11785. Lim says that the transmitter on 11750 appears to have a technical problem, and on occasions varies to 11755. (Radio Australia's "Japanese DX Time" on 5/6 May compiled by the Australian Radio DX Club, in Melbourne.)

Craig Tyson reports that Radio Republik Indonesia in Jakarta has extended its schedule on the 25 metre band outlet of 11760. The station now operates on this frequency from 0600-1605, with the "Programa Nasional" in Indonesian for the domestic audience. In other Indonesian news, RRI Gorontalo is currently heard on 4977.2 with reception from tune-in at 1230 until sign-off at 1557. The transmitter would appear to be faulty, as Gorontalo has also been observed on such frequencies as 4989 and 4990 in recent weeks. RRI Merauke is currently heard on 3904.8 from sign-on at 1900, through until 2130 fade-out, whilst RRI Palu is noted on 3961 from 2130, when the day's programming commences. (Radio Australia's 'Japanese DX Time' 19/20 May, compiled by Craig Seager of the Australian Radio DX Club)

IRAQ - Radio Baghdad made some changes to its AR language service. Craig Seager, Australia reports that the station is now using 13800 and is providing good reception at 0600//15310 & 17720. (Radio Australia 'Japanese DX Time' 5/19,20 compiled by Craig Seager of the Australian Radio DX Club.)

ITALY - European Christian Radio is currently providing fair signals in Australia on 6210, noted with an English identification announcement at 1700, followed by a program in Romanian. This frequency replaces the former 6205 and 7335. (Robert Shepherd, Brisbane via "Radio Australia's" 'Japanese DX Time' 5/19,20 May 90 compiled by Craig Seager.) & heard from 3/6 from 17-1732 w/IS, EE ID, relig songs & M talk. (Valery Ostroperkh, Karaganda, Kazakh SSR) Voice of Europe: Craig Seager, Australia reports them on 7538NF ex 7557. A program of popular music was observed at 2053, with an EG ID announcement at 2100, also giving the station's address.

Reception was fair, though there was some interference from a point-to-point station using an adjacent channel. The address of "Voice of Europe" is Box 26, 33170 Pordenone, Italy. The station is reported to run to a 24 hour schedule. (RA's 'Japanese DX Time' 5/19,20 compiled by Craig Seager)

DPR KOREA - Radio Pyongyang's announced EE Sked on 5/14: SE Asia/India: 04 17765, 15230, 15180; 06 15230, 15180; 07 17765, 15340; 08 15230, 15180; 13 15230, 13650, 9640. ME/Africa: 15, 17, 20 9977, 9640. Europe: 13 9345, 9325; 15 & 17 11760, 9325; 20 9345, 6576. Americas: 0000 15115, 13775, 11975; 11 11735, 9977, 9645; 13 15230, 13650; 23 13650, 11735. (bmm)

LEBANON - The new schedule for the "King of Hope", from South Lebanon, of the Voice of Hope international radio network, High Adventure Ministries, shows only one frequency in use, 6280, for the period up to 30 September. This is listed for services to India and the Middle East, from 14-15 in EG. Other broadcasts include: AR 03-06, EG 06-10, AR 10-14 intended for the Middle East. Programmes for Europe are: 15-1830 RS, 1830-1915 Ukrainian, 1915-20 Romanian, and EG 20-22. There is a special service in Turkish, from 2130-22 on Saturdays. (Radio Australia's "Japanese DX Time" on 5/6 May compiled by the Australian Radio DX Club, in Melbourne)

MEXICO - Radio Mil, 6010 kHz. -

It was back in 1985 that Japanese DXer Takayuki Inoue and Austrian Christian Zettl stopped by the shack in Lomas (Mexico City). When the conversation got to Radio Mil, Takayuki insisted they were not on shortwave and punched in the frequency on his Sony to prove it. I said they were active as I'd logged them many times, including recently, but for some reason that I couldn't explain, the signal was sometimes so weak that I had to peak the antenna and run the receiver at full gain to copy it at all. Asking for information at the administrative office produced the statement that they were on shortwave, but often had problems with tubes, etc. When Takayuki and Christian visited the transmitter, the "engineer" told them that the transmitter bothered both the television and the telephones of some "politicians" who lived nearby so they ran at reduced power. Takayuki, it was early in his first visit to Latin America, didn't really accept the explanation and only hinted at something in his LA DXing report. Christian, who had done considerable study for his sponsored investigation, thought it interesting. I reported Radio Mil as active and Glenn Hauser, then I believe in Florida an excellent location for monitoring Mexico, republished the report, but added he could receive nothing on the frequency. WRTH continued to list Radio Mil as active on incorrect 6008 kHz. All involved are conscientious DXers and I've only mentioned the personalities to show how much interpretation can creep into "observed data".

I, perhaps brainwashed into exaggerating the power of politicians, not only accepted the explanation, but began investigating the reduced power transmissions. They were too strong for running the final at reduced power, or even running the transmitter without the final, but were probably a case of the part of the transmitter being turned off and the signal getting to the antenna through random pickup. From a Latin-America point of view, it made sense, the station was legally on the air and didn't bother anyone's TV or telephones -- and the mode of operation discovered during a random throwing of switches. The micro-power transmissions continued, and I monitored them from time to time until I moved to Huasca and was located far beyond their range.

But Radio Mil did occasionally operate at full power, and on checking the logs of these transmissions, it was obvious that they occurred only at the end of the year or at Easter. Now in Mexico, these are the times when everyone goes to the beach. It's an exodus that can only be compared to the legend of Lemuria. The government's on vacation and to the extent that many lawyers schedule their activities to take advantage of these long periods when there's no possible court action. Whatever "politicians" that Radio Mil would have bothered with their shortwave transmissions would be out of town.

During the years that followed, Radio Mil continued to include their shortwave outlet in their mediumwave ID. (The FM outlets have different programs and use other ID's) And every year around Christmas or Easter 6010 kHz was on the air with a week or so of full power transmissions.

New Years 1989 marked a week of full-power transmissions, but in 1990, Radio Mil was silent. It's almost Easter now, it's March 29th as I write

this, and as I tuned across the 49-meter there was a signal on 6010 kHz. It staggered a few times between audio and open carrier and then became solid 444, Radio Mil in full-power operation for 1990!

Back in 1985, Radio Mil claimed to be operating AM-stereo in both its mediumwave and shortwave outlets. I visited them at the time and could find no one who knew anything about it although one secretary said, "No one has receivers for that anyway" and left me to guess. They dropped stereo from their AM/SW ID a few years ago and now claim stereo only for their FM outlets which are actually in stereo.

If this is only a seasonal full-power reactivation, they'll be off the air again by the time this is published so make note 'check 6010 kHz around next Christmas or Easter'. And if you did log them tentative and was unable to confirm it later, it probably was Radio Mil. (via 'Latin Notebook' by Carl Huffaker, Domicilio Conocido, Huasca De Ocampo, Estado De Hidalgo, Mexico (His address if you want to write him) in "SPEEDX" May 90)

MONGOLIA - Radio Ulan Bator announces new English schedule. Radio Ulan Bator in English 0910 gmt 25 Apr 90. Text of announcement:

This is Radio Ulan Bator broadcasting to Oceania, the Far East, South Asia and Europe. On Mon, Wed, Thu, Sat and Sun we are on the air from 0910-0940 UTC on 12015 and 11850 kHz in the 24.9 and 25.3 metre bands; then from 12-1230 UTC on 12025 and 11850 kHz in the 24.9 and 25.3 metre bands; then from 1445-1515 UTC on 13780 and 9795 kHz in the 21.7 and 30/6 metre bands; and finally from 1940-2010 UTC on 12050 and 11850 kHz in the 24.8 and 25.3 metre bands shortwave. (WBI 5/3)

NEW ZEALAND - RNZ's only Pacific service frequency drowned by Soviet Station - AFP News agency, Hong Kong, in English 0646 gmt 9 May 90. Text of report from Wellington.

Shortwave radio broadcasts from the Soviet Union here drowned out Radio New Zealand (RNZ) International's Pacific Service, RNZ reported here on Wednesday (9th May). Problems began on Monday when "Radio Peace and Progress" began broadcasting in French and Spanish to Central and South America on the same frequency RNZ had been allocated by the International Frequency Board.

RNZ said it had previously been understood Moscow would join the board and "stop plundering the airwaves." But RNZ International official Rudi Hill said "they've now come down on us." He said the Soviet Station was broadcasting with a 500-kW transmitter, five times more powerful than RNZ's transmitter and obliterating midday and evening shows put out by RNZ.

Mr Hill said they had reports from Papua New Guinea, Western Samoa and as far as Britain that the New Zealand signal had been wiped out. It was not only New Zealand's 117.68 MHz signal (RNZ's only external service frequency) on the 16 metre band that was affected as the Soviet signals were spread over several frequencies.

Mr. Hill said the Soviet Embassy here gave RNZ a sympathetic and "humorous" hearing to their complaints but said they would best be dealt with by New Zealand diplomats in Moscow. Government-owned RNZ said approaches had already been made.

The shortwave station went on the air in January and has been plagued with equipment failures since. (WBI 5/18)

NIGER - Gordon Darling, Papua New Guinea sent me an article on "National Languages on La Voix du Sahel" by Adamou Mahaman (who is head of La Voix du Sahel broadcasting in Niamey, Niger. in a column called "Dossier" (but no mention of what magazine this was in).

All of us in the developing countries today know that development is impossible unless the people actually take part in bringing it about. But before they take part, they have to be put in the picture and educated so that they can be mobilised and feel totally involved in the development process.

How this can be done in a vast country such as Niger, with its 1,287,000km, is a question which the authorities, well aware of the vital need for population involvement in development, are answering through radio broadcasts, with their enormous scope for spreading information.

But is broadcasting all it takes to put a country with an 80% illiteracy rate in the picture?

This brings us to what Niger sees as being the all-important issue of language. The national authorities' interest in the national languages is clear from their constant drive for cultural promotion, aimed particularly

at using our languages and educating the masses in their own tongues because if the various sections of society are to be mobilised and made aware of what is going on, then both their languages and their cultures have to be taken into account. A huge effort has been made with linguistic research, primary education (in experimental schools), functional literacy, political discussion (gradually integrating our languages), communication in our languages in the media and so on.

But in a country such as Niger where there are eight national languages (Hausa, Zerma, Fulfulde, Tamashek, Kanuri, Gourmantche, Toubou and Arabic) side by side, how can broadcasting be organised to reach "the whole nation", particularly when the coexistence of different languages very often poses problems of regional balance in Africa? Although choices have had to be made in some countries where hundreds of languages are spoken, no such selection of dominant ones has been made in Niger and all our languages are used and have broadcasting time on La Voix du Sahel.

Since Niger's development is based mainly on farming and herding, the main occupation of 80% of the population, La Voix du Sahel stresses development and the various factors of it in its news, education, information and entertainment programmes.

Between the start of broadcasting in October 1958 and independence in 1960, most of the programmes were prepared in Paris and finished in Niamey.

La Voix du Sahel currently broadcasts for 119 hours, as follows: - in the national languages - 4,600 minutes, or 64.43% of total time; - in French - 2,420 minutes, or 33.89% of total time; - in English - 15 minutes, or 0.21% of total time; - announcements and changes of frequency - 105 minutes or 1.47% of total time.

So the national languages are well represented on La Voix du Sahel, whose main aim is to pass on information and messages about development, register feedback and educate the people and make them aware of what is going on so as to achieve our development aims. The programs are as in Table 1.

Area	Total time	French	National languages	English	% of total broadcasting time
Education and information	2475'	450'	2025'	-	34.66
Culture	735'	270'	465'	-	10.30
Entertainment	1400'	630'	770'	-	19.61
News	2425'	1070'	1340'	15'	33.96
Miscellaneous	105'	-	-	-	1.47

Education and information broadcasts deal with such questions as food crops, product preservation, animal health, desertification, reafforestation, combating endemic diseases, food hygiene, cooperatives, the use of contraceptives, women in development, private enterprise, national unit and more.

Cultural broadcasts cover religion and history of Niger and introduce our people to the social and cultural sides of our towns and villages and bring them the works of our artists (singers, travelling musicians, painters, writers and so on).

News programmes provide coverage of national, African and international events and the very varied entertainment programmes include traditional and modern music from Niger, music from Africa, the international hit parade and record requests.

NORTHERN MARIANAS - KHBI, Saipan now 14-18 on 13625 ex 15055 as heard on 5/21. (bmm)

POLAND - Programmes for Poles "in the East" confirmed. Monitoring research 7-15 May 90. The special programmes for Poles "in the east" have been confirmed and are broadcast as part of Polish Radio's external service for Poles abroad. They are heard as follows: 1530-1555 on 9540; 19-1925 on 7285 & 6095. They do not reflect a change in broadcasting output for Radio Polonia. (WBI 5/18)

SOUTH AFRICA - Non-African external services not "audience" or "cost" effective. SAPA news agency, Johannesburg in English 1509 gmt 8 May 90. Text of report from the House of Assembly -

The SABC's external broadcasting services to the Northern Hemisphere

and to South America had been suspended and the services to Africa had been improved and expanded, the Minister of Foreign Affairs, Mr. Pik Botha said on Tuesday.

Replying to a question by Mr. Peter Soal (DP Johannesburg North), he said after extensive consultations between his department and the SABC it had been decided there was a need for improvement and rationalisation of external services. It had been decided to improve the service to Africa where South Africa did not enjoy access through other communication media. (WBI 5/18)

And via Radio South Africa, Johannesburg, in English 0500 gmt on 9 May 90. Text of report.

The minister of foreign affairs, Mr. Pik Botha, says the termination of the services of Radio RSA to South America and the Northern Hemisphere has resulted in the saving of four million rands. He said this money would now be used to upgrade the services of Radio RSA to Africa.

Replying to a question in the House of Assembly, Mr. Botha said the decision had been taken in consultation with the SABC (South African Broadcasting Corporation) because some of the shortwave services to foreign countries were no longer either listener effective or cost effective.

Mr. Botha said the Department of Foreign Affairs would contribute an additional 4.4 million rands from its own image building budget to help the SABC continue its other services to foreign countries.

The decision to rationalise Radio RSA's foreign services included improving and extending the shortwave broadcasts to Africa, where this method of communication was very effective and where South Africa did not have ready access to alternative communications media. (WBI 5/18)

Radio RSA Sked: 04-0655 FR 17745, 15220, 11745, 9675; 0430-0530 PP 7270, 5960; 09-0955 (SatsSun) Tsonga 9585; 11-1155 EE 17835, 11900, 11805, 9555; 12-1255 EE 17835, 11900, 11805, 9555; 14-1555 EE 17835, 11925, 9555; 14-1655 Swahili 15365; 15-1755 Lozi 11900; 16-1755 Chichewa 5960; 17-1755 PP 7230; 18-1855 EE 17765, 15270, 7230; 18-1955 FF 17745, 15365; 19-2055 15220, 11950. (WBI 5/11)

SPAIN - Radio Expo begins broadcasting in Seville. RNE Radio 1, Madrid, in Spanish 2100 gmt 19 Apr 90. Excerpts from report:

Precisely because of this latest terrorist attack (a parcel bomb), RNE in Seville decided to cancel the ceremonies to launch Radio Expo, a station which PNE(sic) (probably RNE) is running and will be the official station of Expo '92 (1992 World Fair in Seville). In any case, Radio Expo began broadcasting just over three minutes ago at midnight (2200 gmt)... Mainly musical in content, Radio Expo will broadcast 24 hours a day and its transmissions will even be able to reach other countries via Radio Exterior de Espana... (WBI 4/27)

SWAZILAND - TWR, Swaziland, EE Broadcast Sked to 9/1: 0430-075 on 3200, 9655; 0430-07 on 5055; 0430-0835 on 7200; 0530-0835 on 11755; 0835-0850 (Mon-Fri) on 7200, 11755; 16-17 on 15135; 17-1730 on 9520; 17-21 on 3200; 1730-2115 1170 mediumwave; 18-1845 on 15135; 19-2115 on 3240. Thanks to the station for that information. (Radio Australia's Japanese DX Time Program on 5/12 edited by Mick Ogrizek of the Australian Radio DX Club)

TURKEY - Voice of Turkey Pub Sked 5/6-9/2: Eur: 15267 04-16 Turkish; 9460 16-22 Turkish; 9685 EE 22-23 & 23-03 Turkish; 9515 Turkish 05-09 Daily & 10-1815 except Fridays; 9795 GG 1630-1730, 1930-20, EE 20-21, FF 21-22. Balkans: 6140 Turkish 03-05; 11875 Hungarian 0930-10, Romanian 10-1030, Serbo Croat 1030-11, 11-1130 Albanian; 7180 GK 1430-15; 7110 GK 1730-1830; 5980 Bulgarian 16-17, Turkish 17-21, Bulgarian 21-22; ME: 11955 AA 09-10, Turkish 10-15, AA 15-16; 9665 EE 22-23. North Africa: 15160 09-10 AA, Turkish 10-15 (Fridays only), AA 15-16; 11775: Turkish 16-22. North East Asia: 6120 Azerbaijani 03-04; 11925 Turkish 04-09; 11735 RR 14-1430. SW Asia: 15405 Azerbaijani 03-04, Turkish 04-09; 17785 Urdu 12-1230, EE 1230-13, Persian 13-14; 9665 Azerbaijani 1830-1930. Australia: 17880 EE 22-23, Turkish 23-03, EE 03-04. North America: 9445 EE 22-23, Turkish 23-03, EE 03-04. Far East: 17785 CC 1130-12. (Coskun Arslan, Deputy Director General, Engineering.)

URUGUAY - Gabriel Ivan Barrera reports to OZ DX on the Active & Inactive Stations in Uruguay.

Active Stations: CXA61 Radio Libertad Sport, 6045.1 kHz, 0915-0300v

(Sign-off varies depending on when sport events conclude)

- CXA20 Radio Monte Carlo, 6139.9 kHz, 1 kW, daily 1030-1630.
CXA6 SODRE, 9620.3 kHz, 0.5 kW, daily 10-0400, subject to change as they plan to move their transmitters from Montevideo to a new site at Santiago Vazquez.
CXA7 Radio Oriental, 11734.9 kHz, 1 kW, daily 1630-23v (Sign-off varies due to sports coverage)
CXA19 Radio El Espectador, 11835 kHz, now only 0.5 kW, daily 10-03.

Inactive Stations: CX8 Radio Sarandi, 4900 kHz, 0.1 kW, 08-0330.

CXA30 La Radio, 6035 kHz, 1 kW, 13-05.

CX118 (new call!) La Voz de Artigas, 6075 kHz, 11-03.

Inactive stations are off the air currently for transmitter repairs. (via Peter Bunn's OZ DX Editon No. 54 4/90), but recent information from Gabriel Ivan Barrera to Ed Janusz, NJ, Editor of 'Continuous Tuning' in SPEEDX, says that 'La Voz de Artigas' has been reactivated, on 6078.6v to 6078.9v kHz, heard on 4/12 at 1937-2034, with a sports program about cycling, with ads about Artigas City, and the ID, 'Trasmiten Emisoras del Norte La Voz de Artigas, CX118 y CXA3 en 49 metros de alcance continental,' with a good signal.

VIETNAM - Radio Cao Bang was heard in Japan on 4/23 from *12-14* on 6.615 mHz. Reception was fair. The transmission was in local languages of the region except between 13-1330 UTC when Vietnamese was used. Isao Ugusa of Kobe, Western Japan tells me (Rika Kobayashi, Producer, Presenter of Radio Japan DX Corner) that the station is located in Cao Bang Province northern most province of Vietnam that borders on China on the north. It is the first time since November last year that the station has been received in Japan. (via Radio Japan DX Corner on 5/13)

CLANDESTINE BROADCASTS - Ethiopian People's Revolutionary Party Radio (EPRP Radio) -41 metre band frequency traced, address in Paris announced. Monitoring research 6-9 May 90.

The new Ethiopian opposition radio, the Ethiopian People's Revolutionary Party Radio continues to be heard carrying its experimental transmissions from 0330-04 & 1730-18 gmt on 9400 kHz. The second announced frequency has now been traced on 7010 kHz in the 41 metre band. There is a delay of a few seconds between the transmissions on the two frequencies.

The address for listeners' letters are heard as follows: (?SPIC), PO Box 710358, Dallas, Texas 75371, USA, and (?SPIC), 46 Rue de Vaugirard, Paris 75006, France. (WBI 5/18)

Voice of the People of Kurdistan (Kurdish: Aira Dangi Gelli Kurdistana) is hostile to the Iraqi government. The radio was first observed on 24th October 1988 but may have been in existence for some time. Frequencies vary constantly to avoid interference. Up to two of the listed channels have been observed parallel at any one time. Transmission times are also variable; a broadcast from 13-1430 gmt has been observed in the past. Sked: 03-04 (except Fri) ME & 04-0430 (except Fri) ME in Surani Kurdish on 15048v, 7100v, 4040-4340v; 09-11 (Fri) Surani Kurish, AR ME; 16-17 (Daily) Surani Kurdish ME; 17-1730 AR ME on 15048v, 7100v, 4040-4340v. (WBI 5/18) 15060, 1611-1630, Vo the People of Kurdistan, Kurdish, news, patriotic song, M talk on 4/3 (Valery Ostroverkh, Karaganda, Kazakh SSR)

NUMBERS STATION - Via Radio Japan DX Corner on 4/22, China & Taiwan report written by Tetsuya Kondo of 'The Asian Broadcasting institute' ready by Jim Mason:

"It seems that the random number broadcasts in Chinese are picked up in various countries including Japan as we can find reception reports on such broadcasts every now and then in many DX magazines. The random number broadcasts in Chinese come from both China and Taiwan.

Taiwan's random number broadcasts are more frequently received than those of China because they are on the air longer and they are on defined frequencies. The most common frequencies that Taiwan uses for random number broadcasting are: 8.3, 9.725, 11.430, & 15.388 mHz. Of these the 9.725 & 15.388 mHz are in the broadcast bands. Each of these four frequencies carries different transmissions. But, all of the transmissions are on the air in the same time slot from 2200-1730 UTC, almost throughout the given period of time. To be more precise, each

transmission is divided into several segments of thirty minutes. They usually begin with opening music and a station ID. According to the station ID, the Taiwanese random number broadcast had its own name as a normal broadcasting station and is called "New Star Broadcasting Station". (Opening music is played and W w/ID) This opening music and station ID can heard every hour on the hour and on the half hour between 2200-1730 on 8.3, 9.725, 11.430, 15.388 MHz. After the station ID comes an announcement as follows: (They played Chinese ID) The announcement after the station ID includes the target or recipient of the telegraphic message, the ordinal number of the message, and the number of units of multi-digit numbers that are going to be given.

For example, the recording that we just heard mentioned, "We will now send to the 'X Unit' the message number such and such with so many groups of numbers and to the 'Y Unit' message number so and so with so many groups of numbers. Please pay close attention and get ready to write the message down."

As you probably noticed (listening to this example), the targets of the telegraphic messages are described as Units. That's very interesting and unique to Taiwan. Then after such an announcement follows a text. (Let's now listen to another recording of the Taiwanese random-number broadcast). This one starts with a beginning announcement and then goes on to the actual message. (Broadcast played)

The beginning announcement said, "We will now send to the 'X Unit' the message number so and so with so many groups of numbers." 'X Unit' will pay close attention this broadcast and get ready to write the message down."

The messages are usually formed by groups of 4-digit numbers but 5-digit numbers are used on rare occasions. As I explained, the target for Taiwan's random-number broadcasts are described as Units, unlike other stations of the kind.

Attracted by these Units, a Japanese DXer made a close monitoring of the Taiwanese random-number broadcasts in a one-month period 1986, paying special attention to their Units. As a result, 119 different Units were confirmed from numbers 42 to 9,881, many of which can be heard at present as yet, and it was found out that Chinese names are rarely used for the targets in addition to numerals. Furthermore the continuous monitoring over the years has revealed the following facts:

Firstly, it is just about determined when a message is transmitted to what target. For example, the messages directed to the target called '42 Unit' are on the air from 0930 and from 1400 UTC on 8.3 MHz, and those directed to '2115 Unit' are on the air from 0030, from 0730, from 1200 and from 1700 UTC on 15.388 MHz. Likewise, the other frequencies appear on the air about the (problem w/tape).

Therefore, it can be said that each target of the Taiwanese random-number broadcasts or the Taiwanese Spy is allocated a certain time slot to receive the order from his or her country of origin. Secondly, the same message is repeated over and over again on different days over a long-period of time, often more than a month.

The random-number broadcasts from Taiwan, 'The New Star Broadcasting Station' began broadcasting around 1977. It's thought that its transmissions are beamed to mainland China. As a matter of fact, it was strongly jammed by Mainland China until 1982.

The New Star Broadcasting Station makes use of 4 frequencies to send messages by random numbers: 8.3, 9.725, 11.430, & 15.388 MHz, and the transmission on each of these frequencies has its own service name and schedule. The transmission on 11.430 is called "New Star Broadcasting Station First Service" and is on the air from 2300-1700 UTC. The one on 15.388 MHz is "New Star Broadcasting Station 2nd Service" and is on the air from 2200-1730 UTC. The one on 9.725 MHz is the "New Star Broadcasting Station 3rd Service" and is on the air from 2200-1700 UTC, and the one on 8.3 MHz is "New Star Broadcasting Station's 4th Service" and is on the air from 2200-1730 UTC. Generally speaking, these transmissions have their own segments although all of them consist of random numbers. However, the 1st service and 3rd service parallel each other for one hour from 0700 UTC and from 1200 UTC, and the transmission during the period is simply called: "New Star Broadcasting Station" without the service names.

The four frequencies used for random-number broadcasts from Taiwan often vary by a few kilohertz."

Alot of action on the shortwave bands! 73's, *Bruce*

QSL Reports

Sam Barto
47 Prospect Place
Bristol, CT 06010



ABU DHABI: UAE Radio 13605 f/d folder cd. w/ personal note in 32 ds. for 2 IRCs. (Carson) same in 28 ds. for 2 IRCs. Schedule rcvd. (Gears). 11985 p/d folder cd. in 37 ds. for 2 IRCs. v/s Ahmed A. Shouly, Director. (Bywater-CO). 11965, 13605, 11815 and 9780 p/d cd. in 3½ mo. (Barto-CT).

ALASKA: KNLS 11700 f/d cd. w/ ltr. and sked. in 15 ds. for ms. v/s Beverly Jones, Promotion Department. (Gears).

ALBANIA: Radio Tirana 9480 f/d "National Museum" cd. in 2 mo. for 2 IRCs. (Gears).

ANDAMAN ISLANDS: All India Radio 4760 via **Port Blair** ltr. in 126 ds. for \$1.00. (Darling). f/d "Horse Statue" cd. w/o site in 5 wks. Reply came from the E:ternal Service. (Behr).

ARGENTINA: RAE 11710 f/d cds. in 27 ds. w/ paper pennant for 3 IRCs. Thanks to Gabriel * Ivan Barrera for assistance. (Weber-OH). **LOL2** 8030 and **LOL3** 17180 **Observatorio Naval Time Signal Station** p/d cd. in 5 wks. for a SP rpt. (Barto-CT).

ARMENIAN SSR: Radio Yerevan 15455 f/d cd. in 112 ds. for ms. (Bywater-CO).

ASIATIC RUSSIA: Radio Moscow 12050 via **Khabarovsk** f/d "Moskva River" cd. in 78 ds. (Carson-OK). 17850 f/d "Kosmos Hotel" cd. in 3 mo. (Barto). 7220 via **Chita** f/d cd. in 3 mo. (Barto). 17860 f/d "Lenin Mausoleum" cd. in 62 ds. (Hoffman-PA). 17645 via **Komsomolsk-on-Amur** f/d cd. in 3 mo. (Barto). 15180 f/d cd. w/ personal ltr. in 45 ds. v/s Eugenia Stepanova. (Weber-OH). 21690 via **Vladivostok** f/d "Lenin" cd. in 2 mo. (Barto). 9705 via **Irkutsk** f/d "State University" cd. in 75 ds. (Butcher-MA). 17675 f/d "Bolshoy Theatre" cd. w/ personal ltr. and pennant along w/ a RS Service schedule in 2 mo. v/s Paul Mikhaylov, DX Editor for the Russian World Service. (Kohlbrener-PA). 15425 via **Petropavlovsk-Kamchatsky** f/d "Arbat Square" cd. in 56 ds. (Davisson). 5905 f/d cd. in 39 ds. w/ Moscow newspaper. (Carson). 7345 f/d "Friendship House" cd. in 39 ds. (Carson-OK).

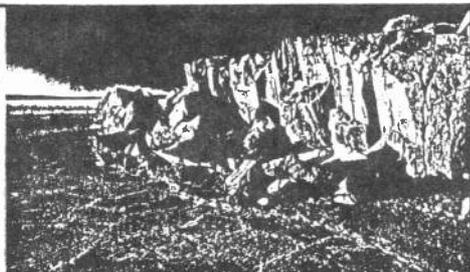
AUSTRALIA: Radio Australia 6020 via **Brandon** n/d cd. in 14 ds. after a f/up rpt. for \$1.00. * (Paszkievicz). same in 3 mo. (Barto-CT). f/d ltr. w/ site and call ltr. listed as **VIG** in 38 ds. after a f/up rpt. for 2 IRCs. Report came from Farmingdale, NY. (Hoffman-PA). 9620 via **Shepparton** limited edition "Bi-Centennial" cd. in 396 ds. (Darling). 15160 n/d "Wilderness Society" cd. [see below] in 76 ds. for 1 IRC. (Peake-IA). same cd. for **Darwin** on 11800 and **Carnarvon** on 15140 in 84 ds. (Butcher-MA). **VNG** 15000 via **Llandilo** p/d cd. w/ station data and 2 cloth arm patches in 2 mo. (Barto-CT).

AUSTRIA: Radio Austria International 9875 f/d "Gail Valley" cd. in 29 ds. (Davisson-OH). f/d cd. in 15 ds. w/ sticker and report forms. (Allred-ECU). 6015 via **Radio Canada International** f/d "Tyrol Costume" cd. in 1 mo. (Gears).

BELGIUM: BRT 9925 f/d cd. in 32 ds. (Gears). f/d "Gent" cd. w/ stickers in 28 ds. for 2 IRCs (Carson). 21810 f/d "Botanical Gardens" cd. in 50 ds. w/ goodies. (Gears). 21815 f/d cd. w/ sked. in 33 ds. (Darling).

BIAFRA (Nigeria): 6025 via **Enugu** f/d ltr. in 7 wks. for a taped rpt. and ms. (Huniwell-NJ).

BOLIVIA: La Cruz del Sur 4875 f/d prepared cd. in 4 wks. for a SP rpt. and ms. (Kohlbrener-PA).



RADIO AUSTRALIA THE WILDERNESS SOCIETY



NOTES: Ernie Behr says that he has received his first QSL card from Radio Tirana since 1965 but he threw it in the trash can. The card was rolled tightly inside a magazine called "New Albania" and badly damaged. A very stupid way to send a QSL...I agree. Tim Davison reports that Radio Norway International will still QSL reports but only if sent to the station and not to a Norwegian embassy or consulate. No rp is necessary. Bill Peake asks a question that has come up several times in the past. If he receives a QSL card from a station with no data at all should he count it as a QSL? Bill mentions RCI and Radio Australia as recent examples. That is totally up to you Bill. If you honestly heard a station and a blank card was your reply go ahead and count it. That doesn't mean, however, that it will or will not count towards any awards program. You have to make the decision and feel comfortable with it...Sam. Rich D'Angelo says that QSLing is a funny business. You can go for weeks without a QSL then receive several in just a few days...I know what you mean! Thank you very much for the WDXC bulletin. I enjoyed it very much...Sam.

- BOLIVIA:** Radio Cosmos 6095 f/d prepared cd. w/ p/d ltr. in 5 wks. for a SP rpt. and ms. v/s Laureano Rojas Jr., Director Administrativo and Jacqueline Alvarez Daza, Secretary. Pennant and sticker rcvd.(Kohlbrenner-PA).
- BONAIRE:** Radio Nederland 15315 f/d cd. in 3 wks.(Allred). Trans World Radio 11930 and 9535 "Bonaire House" cd. in 43 ds. w/ schedule. v/s Sally Rock.(Carson-OK).
- BOTSWANA:** Radio Botswana 4820 f/d "Herdsoy" cd. in 38 ds. for ms. v/s Ted Makgekgenene, Chief Engineer.(Bywater-CO).
- BRASIL:** Radio Macapa 4915 f/d paper cd. in 45 ds. for \$1.00. v/s Eudson Monteiro Lima. (Paszkievicz). Radio Brasil Tropical 5015 p/d cd. in 26 ds. for a PT rpt. and ms. (Paszkievicz). Radio Bras 11745 f/d cd. w/ stickers and schedule in 63 ds. for 1 IRC.(Burns-MA). Radio Difusora Jatal f/d prepared cd. in 3½ wks. for a PT rpt., tape and ms. (Huniwell). Radio Cultura de Cuiaba 5015 f/d prepared cd. in 24 ds. for a PT rpt. and \$1.00. Sticker rcvd.(D'Angelo-PA). Radio Nacional Cruzeiro do Sul 4765 f/d form cd. in 177 ds. for a PT rpt. and \$1.00.(Hoffman-PA).
- BULGARIA:** Radio Sofia 15290 f/d cd. in 42 ds. for 2 IRCs.(Gears). 7115, 9700 and 15160 f/d "Church" cd. in 81 ds. v/s Nadezhda Gecheva.(Carson-OK).
- BURKINA FASO:** Radio TV Burkina 4815 f/d form ltr. in 206 ds. for a FR rpt. and ms. (Butcher-MA). n/d form ltr. in 5 mo. for a FR rpt. and 2 IRCs.(Kohlbrenner-PA). p/d ltr. in 22 wks. for a FR rpt., tape and 2 IRCs.(Klinck-NY).
- BYELORUSSIAN SSR:** Radio Moscow 11860 via Gorky f/d cd. in 80 ds.(Wilkins-CO). 11745 via Minsk f/d cd. in 61 ds. v/s Miss Olga Milyaeva.(Butcher-MA).
- CANADA:** Radio Japan 5960 via RCI f/d cd. in 38 ds. w/ schedule.(Gears). n/d "Sunset" cd. in 1½ mo.(Allred-ECU).
- CHINA, PEOPLES REP. OF:** Xinjiang PBS 5800 and 4735 f/d cd. w/ personal ltr. in 91 ds. direct from station. Addr: XPBS, Tuan Tie Road 84 - 830044, Urumqi, PRC. Verie was in CH.(D'Angelo-PA). ltr. w/ postcard in 98 ds. direct from station. v/s Guo Ying. (Kusalik). Radio Beijing 17710 cd. w/ schedule in 224 ds.(Darling). f/d cd. in 2 mo. for a taped rpt.(Huniwell-NJ).
- CLANDESTINE:** Radio Libertas 11790 and 21840 via MHRI f/d cd. w/ personal ltr. in 28 ds. v/s Vivian Gamulin, Assistant Producer.(D'Angelo).
- COSTA RICA:** AMR-Radio Lira Internacional 9725 f/d cd. in 27 ds. for \$1.00. v/s David Gregory, General Manager. Sticker and schedule rcvd.(Weber). f/d cd. w/ pennant and personal ltr. in 43 ds.(Field-PA). f/d "Map" cd. in 6 wks.(Behr-ONT). f/d cd. in 40 ds. for \$1.00.(Paszkievicz). TIPC 9645 f/d cd. in 21 ds. for \$1.00.(Paszkievicz).

Radio Belo 4832 p/d cd. in 19 ds. for a SP rpt. and ms. v/s Francisco Barabona.(Butcher-MA).

CUBA: Radio Moscow 11840 via Habana f/d cd. in 38 ds.(Weber). f/d cd. w/ stamps and schedule in 40 ds. for 2 IRCs.(Gears) Radio Habana Cuba 11835 f/d "Crocodile Farm" cd. in 169 ds.(Burns-MA). 11820, 9710 and 11950 f/d cds. in 6 mo.(Barhydt-OR).

CZECHOSLOVAKIA: Radio Prague 7345 f/d cd. in 38 ds.(Carson). f/d "Rajec Nad Svitavou Chateau" cd. in 1 mo.(Roth). 7345 and 5930 same cd. in 68 ds.(Carson-OK).

RADIO TANZANIA ZANZIBAR

VERIFICATION

To: Ernest S. Behr - Canada
 Confirming your report of January 29, 1990
 on 11734 MHz at 1200 - 1645 UTC



P.O. Box 1170
 Zanzibar, Tanzania

NOTES: Bill Peake sent in an interesting newspaper article regarding the slow mail service from Italy. He also stated that he received his AWR-Forli QSL in only 49 days. His Vatican QSL took much longer. Maybe the Adventists have more pull than the Pope. Hi. Jerry Klinck says that we should consider using the \$1.00 in our reports more discriminately. Anyone who wishes to turn QSLs into a national source of income can keep the QSLs.....I agree...Sam. Don Weber says that in addition to rp. in his reports he also sticks in a postcard of the Cleveland area as well as a few bumper stickers of local stations. That also works quite well from this end...Sam. Rich Wallace, a new member from CT has been into SWLING for 23 years. He decided to get back into the hobby after all of the new high-tech sets came on the market. Glad to have you back...Sam. Old friend Bill Taylor sent along a very interesting letter in which he asks "Who is the patron saint of QSLs." If you find out Bill, let me know. I'll join you in prayer.

CZECHOSLOVAKIA: Radio Prague 7345 and 5930 3 f/d "Chateau" cds. in 32 ds. for 2 IRCs. Schedule and Maps were rcvd.(Gears).

DOMINICAN REP: Radio Amanecer 6025 n/d form ltr. w/ postcard in 99 ds. for a SP rpt. and \$1.00. v/s Socrates Dominguez.(Barhydt-OR). Radio Clarin 9955 f/d cd. in 21 ds. for a SP rpt. and ms. v/s Jose Penzo, Presidente.(Turnick-PA).

DUBAI: Radio Dubai 15435 f/d cd. w/ schedule in 35 ds. for 2 IRCs.(Gears). 15400 f/d cd. in 35 ds. w/ paper pennant. v/s K.F. Fenner, Chief Engineer.(Bywater). 11985 folder ltr. in 33 ds.(Davisson).

ECUADOR: HCJB 11995 and 15155 f/d "Stamp" cd. in 30 ds. for ms. v/s Glen Volkhardt.(Gears) 17790 f/d "Ilinzas Ecuadorian Mtn." cd. in 23 ds.(Davisson). 9745 f/d "Owl" cd. in 28 ds. v/s Sam Rowley.(Gears). Radiodifusora Nacional del Ecuador 15220 via HCJB f/d "Metropolitan Cathedral in Quito" cd. in 32 ds. for US ms.(Weber-OH).

EUROPEAN RUSSIA: Radio Moscow 17810 via Kazan f/d cd. in 9 wks.(Klinck). 7390 p/d cd. in SP in 3 mo. w/ sked. and DX booklet in SP.(Barto). 4895 via Moscow f/d "State University" cd. in 2 mo. v/s Mrs. Eugenia Stepanova says that this is a feeder freq.(Kohl-brenner). 15150 and 7370 f/d cd. in 58 ds.(butcher). 17890 f/d "Friendship" cd. in 65 ds.(Carson). 15345 f/d "Kosmos Hotel" cd. in 76 ds.(Butcher). 15345, 15560 and 7370 f/d cd. in 1 1/2 mo.(Lare-MI). 15305 via Voronezh f/d cd. in 76 ds.(Butcher). 9530 via Arnavir f/d "Arbat Square" cd. in 1 1/2 mo.(Lare-MI). 21450 f/d cd. in 1 1/2 mo.(Lare-MI).

* 11850 via Kazan f/d cd. in 1 1/2 mo.(Lare). Radio Archangel 5015 f/d prepared cd. w/ postcard and pennant in 2 mo. v/s Valentin G. Kalashnikov.(Kusalik). Karelian Radio 5015 via Archangel f/d prepared cd. w/ verie postcard indicating that I heard the Karelian Radio Program One.(Kusalik).

EURO PIRATE: Pirate Freaks Broadcasting Service 15050 f/d yellow/black ltr. in 54 ds. for \$1.00. Sticker rcvd.(Butcher-MA).

GABON: Radio France International 7135 f/d cd. w/ schedule in 39 ds. for 2 IRCs.(Gears).

GEORGIAN SSR: Radio Moscow 21725 via Tbilisi f/d cd. in 54 ds.(Butcher). same in 1 1/2 mo. w/ schedule.(Lare-MI).

GERMAN DFM. REP: Radio Berlin International 11785 p/d cd. in 30 ds.(Peake-IA). 15350 f/d cd. w/ schedule in 6 wks.(Allred-ECU)...Wonder how long this station will last?

GERMANY, FEDERAL REP. OP: Sueddeutscher Rundfunk 6030 f/d cd. in 35 ds.(Weber-OH).

GREECE: VOA 15195 f/d cd. in 8 ds. via Rhodes.(Turnick)...Count this as Rhodes...Sam. Voice of Greece 7430 f/d "Meteora Monasteries" cd. in 29 ds.(Davisson).

GREENLAND: Radio Greenland 3999 n/d cd. in 3 wks. after a f/up rpt. for \$1.00. v/s Henrik Jorgensen, Engineer.(Kohl-brenner). f/d cd. w/ info. booklet in 32 ds.(Field-PA).

GUAM: KTWR 11650 f/d cd. w/ personal ltr. in 1 mo. for 3 IRCs. v/s

Susan Tag.(Turnick).

KSDA 13720 f/d cd.,

sticker type, in 46 ds.(Darling-PNG).

GUATEMALA: Radio Tezulutlan

4835 f/d cd. in 33 ds.

for a SP rpt. and \$1.00.

(Paszkiwicz). Radio Mam

4825 n/d form ltr. in 37

ds. for a SP rpt. and

\$1.00. v/s Jose Benito

E. Ramos, Director.(Bar-

hydt). La Voz de Atitlan

2390 f/d prepared cd. in

51 ds. for a SP rpt. Per-

sonal ltr. rcvd. v/s Juan

Ajtzip Alvarado, Director

de la Radio.(D'Angelo).



Belém, 14 de fevereiro de 1990

Richard A.D'Angelo
2216 Burkey Drive
Hyonissing, PA 19610
Estados Unidos da América

E com imenso prazer eu recebo sua carta de 05. de fevereiro/90, a qual agradecemos.

Confirmamos sua escuta em nossa onda tropical em

4.955 KHz.

Informamos que as cartas que eu tenho recebido, eu as respondo pessoalmente, infelizmente não sei o que houve com a sua, talvez tenha sido extravaziada.

Ficamos sempre ao inteiro dispostos a receber suas cartas.

EMISSORAS RADIO MARAJOARA LTDA. *Cidade para de Jansen Domingos*
Trav. Campos Sales, 870 - Fone: 222-1018 (Deptº Comercial) Telex: (001) STUDIO: *Estações Rádio Marajoara*

NOTES: Mike Bolitho utilizes \$1.00 as return postage. He says that in some countries were inflation is running away, the US dollar is still very stable. He dislikes the situation in Somalia very much. Mike also wants to know if anyone has a decent "Thank you" note text in SP or PT available to be sent to stations after a QSL is received? Let us know if you have one...Sam. Rick Bywater is back after a ten year inactive period. Rick also mentions that he sends a postcard "Thank You" after receiving his QSL. Rick, can you assist Mike? Larry Goering received several pieces of literature from North Korea after 7 years of reporting. They came from the Institute of North Korean Studies and not from Radio Pyongyang. Drat! Keep trying! John Carson sent in a very nice newspaper article regarding station KFRO and their daily activities. Thanks John. John...the cartoon was great!...Sam.

GUATEMALA: IGMIA Union Radio 5980 f/d "Map" cd. in 4 wks. though I actually reported the reception on 17945.(Behr-ONT).

HOLLAND: Radio Nederland 17605 via Flevo f/d "Satellite" cd. in 26 ds.(Davisson).

INDIA: All India Radio 11715 via Aliqarh cd. w/ schedule in 44 ds.(Darling). f/d cd. w/ sticker in 6 wks.(Allred). 3235 via Gauhati f/d "Vishnu Sculpture" cd. in 3 mo.(Bar-to-CT). 3205 via Lucknow same cd. in 3 mo.(Barto).

ISRAEL: IRA 11605 f/d cd. in 49 ds.(Davisson). same w/ schedule in 61 ds.(Burns-MA).

ITALY: RAI 11800 f/d "Art" cd. in 55 ds. for 2 IRCs.(Gears). Italian Radio Relay Service 9860 cd. w/ schedule in 44 ds. for \$1.00.(Darling-PNG). 9815 f/d ltr. w/ schedule in 6 wks. for 2 IRCs. v/s Anna S. Boschetti, QSL Manager.(Kohlbrenner-PA).

JAVA: R.P.D. Tingkat Dua 2526 via Indramayu f/d prepared cd. w/ verie ltr. and station * info. 500 watts. Addr: Studio Radio Daerah Kabupaten Indramayu, Jalan Olah Komplek

* B.T.N., Indramayu.(Kusalik). Radio Daerah Kabupaten Dati II Sumedang 2706 f/d ltr. w/ all types of station goodies in 48 ds. after a f/up rpt. in TN. v/s Tatang Harjana Bc. AN. 500 watts. Addr: Jalan Prabu Geusan Ulun, No. 129A. Station calls itself Dinas

* Radio Daerah.(Kusalik). R.P.D. Sutradra 2629 f/d prepared cd. w/ station info. in 48 ds. 750 watts. Both this station and Indramayu share the same location. (Kusalik).

JORDAN: Radio Jordan 9560 f/d cd. in 15 mo., 6 mo. after a f/up rpt.(Behr). 11810 cd. w/ schedule in 396 ds.(Darling-PNG).

KALIMANTAN (Borneo): RRI Palang-

karaya 3325 p/d ltr. in 1 mo. for an IN rpt. and ms. v/s Ami Ruddin.(Lare-MI).

LEBANON: King of Hope cd. w/

schedule and ltr. v/s David Lawrence. Sticker rcvd.(Taylor-PA)...Txn. for the article on the R-390A...Great!

LITHUANIA: Radio Vilnius 7400 p/d cd. in 103 ds. w/ personal ltr, sticker and schedule. v/s Edvinas Butkus, Deputy Chief Editor.(Peake-IA).

MALI: Radio Beijing 11715 and 9770 f/d "Silk Figurine" cd. w/ Bamako site in 21 ds. for 1 IRC. Schedule and papercuts were rcvd.(Bywater). 11715 f/d "Vase" cd. w/ schedule in 24 ds.(Davisson).

NEW CALEDONIA: RFO 7170.7 f/d cd. in 9 wks. for a FR rpt., tape and 3 IRCs.(Klinck-NY).

NEW ZEALAND: Radio New Zealand International 17680 via Rangitaike Plains f/d pennant w/ schedule in 80 ds. for 3 IRCs.(butcher). cd. for a FAXED rpt. in 45 min. after the transmission came on the air!(Darling-PNG).

NICARAGUA: Radio Zinica 6120 reply rcvd. after my 2nd f/up rpt. via double registered

* mail. v/s Arturo J. Valdez, Director. The transmitter was destroyed by Hurricane Joan in Oct. of 88. Addr: Ap. de Correos 25, Bluefields - RAAS.(Kusalik). (Kusalik).

NIGERIA: FRON Kaduna 4770 two separate ltrs. in 96 ds. after a f/up rpt. for \$1.00.

NORWAY: Radio Norway International 21705 and 17765 f/d "Ardal Aluminum Works" cd. in 23 ds. w/ schedule.(Davisson).

PAKISTAN: Radio Pakistan 17895 and 15295 f/d "Mausoleum" cd. in 4 mo.(Barto-CT).

PERU: Radio Oriente 6188 p/d ltr. in 67 ds. for a SP rpt. and \$1.00. v/s Prof. Ricardo Arevalo Flores, Director-Gerente. Beautiful pennant rcvd.(D'Angelo). La Voz de Selva 4825 f/d prepared cd. in 16 1/2 mo. for a SP rpt., tape and ms. v/s Julia Jauregui Rengifo (Huniwell-NJ). Radio Nor Peruana 9654.6 p/d ltr. in 2 mo. for a SP rpt.(Barto-CT).

PHILIPPINES: VOA 17820, 15305, 15290, 11760, 9770, 7120 and 21545 cds. in 39 ds.(Darling)

PORTUGAL: Radio Portugal International 21495 f/d cd. in 23 ds. for 2 IRCs. Schedule, ltr., pennant were rcvd. v/s W. Almeida.(Weber). 15250 via Pegoes 2 f/d cds. w/ site in 1 mo. w/ pennant v/s Carminda dias da Salva.(Kusalik). 9405 f/d cd. in 62 ds. for 2 IRCs. (Gears). RFE/RL 15445 f/d cd. in 22 ds. for 2 IRCs.(Gears).

RADIO TASHKENT



VERIFICATION SIGNERS: SLBS 3316 Emmanuel B. Ehirim, Project Engineer. Emisora Casarqo 3390 Pablo Garcia Pastrana, Director. Radio San Gabriel 6079 Hermano Franciscano Jose Canut Saurat. Radio Clube de Marilia 3235 Jose Marques Beato, Gerente. Radio Pastaza 3315 Rodolfo Torres Beltran and Augusto Efrén Veloz. Radio Catolica Nacional 5030 Monsenor Antonio Arregui, Director General. Radio K'eskhi 4845 Gilberto Sun Xicol, Gerente. Radio Medi Un C. Thuret. Radio Pakistan 11570 Inayat Khan, Senior Broadcasting Engineer. Ondas del Huallaga 3300 Flaviano Llanos, QSL Manager. Radio Huancavelica 4885 Fidel Hilario Huamani, Locutor. Radio Atlantida 4790 Julio



Reategui Trigoso, Director General.

ROMANIA: Radio Bucharest 11830 and 11940 f/d cd. in 3 mo. for 2 IRCs. (Gears). Radio Romania International 11940 f/d "Braila Folk Costume" cd. w/ R.R.I. typed over Radio Bucharest in 3½ mo. for reception on 12/24/89. (Barto-CT). Radio Free Bucharest 5990 f/d "Manuc's Inn" cd. in 3 mo. for reception on 12/23/89 w/ RFB ID. (Barto-CT).
SAIPAN: KIBI n/d ltr. w/ schedule in 40 ds. for ms. (Turnick-PA).
SCOTLAND: Weekend Music Radio 15043 f/d cd. w/ personal ltr. in 10 wks. for \$1.00. (Bolitho-ONT). Radio Stella International 6319.5 f/d beautiful "Red Deer" cd. w/ station photo and info. in 7 wks. (Barto-CT).
SEYCHELLES: FIBA 15325 and 11865 f/d ltr. w/ schedule in 2 mo. for 3 IRCs. v/s Roger J. Foyle, Audience Relations Counsellor. (Butcher). HBC 15420 f/d prepared cd. w/ ltr. in 5 wks. for 2 IRCs. v/s Peter J. Loveday. (Moore-MI).
SICILY: Radio Uno-RAI 9515 via Caltanissetta f/d cd. in 7 wks. (Barto-CT).
SINGAPORE: HBC 15360 and 9740 f/d cd. in 30 ds. for \$1.00 direct from site. (Klinck-NY).
SOLOMON ISLANDS: SIBC 9545 f/d cd. in 75 ds. for ms. (McDavitt-NC).
SOUTH AFRICA: Radio RSA 15365 f/d "Lioness" cd. w/ pennant in 2 mo. (Barto-CT). 11935 same cd. in 29 ds. (Davison). 15230 and 17765 same cd. w/ personal ltr. in 2 mo. (Barto-CT). 9615 cd. in 32 ds. w/ schedule for 2 IRCs. (Gears). 11935 f/d "Downtown Johannesburg" cd. w/ schedule and pennant in 21 ds. (Levendusky-CO). 9580, 4810, 11740, 11975 and 15265 f/d "Karoo" cd. in 7 wks. (Barto). Radio Suid Afrika 3320 f/d "Bloubergstrand" cd. w/ schedule in 26 ds. v/s M. Voster. (Butcher). f/d "SAUK" cd. in 2 mo. w/ pennant and schedule. (Barto-CT).
SPAIN: Radio Exterior de Espana 9630 f/d cd. w/ sticker and pennant in 2½ mo. (Allred). f/d "Sevilla Expo" cd. w/ pennant in 52 ds. for 2 IRCs. (returned). (Weber-OH). f/d "Festival" cd. in 35 ds. w/ pennant. (Gears). 11880 f/d cd. w/ pennant in 52 ds. (Carson-OK). same cd. in 70 ds. for 1 IRC. w/ pennant. (Burns-MA). 12035, 15395, 11915 and 17730 f/d cd. in 7 wks. (Barto-CT). 15360, 21555 and 21570 f/d cd. in 9 wks. (Barto-CT).
Radio Beijing f/d cd. w/ decal in 2½ wks. for a taped rpt. (Huniwell-NJ).
SPANISH MOROCCO: Radio Medi 1 9575 f/d cd. in 5 mo. for a FR rpt. and \$1.00. Sticker and schedule rcvd. (Kohlbrener). f/d cd. w/ ltr. in 2 yrs. after 2 f/up rpts. (Young-CA). f/d cd. in 17½ mo. for a taped rpt. and ms. via registered mail. (Huniwell-NJ).
SRI LANKA: Deutsche Welle 15105 f/d "Map and Satellite" cd. in 5 mo. (Behr-ONT). VOA 15250 via Colombo cd. in 39 ds. (Darling-PNG).
SWEDEN: Radio Sweden International 21655 via Karlsborg and 17880 via Horby f/d "Globe" cd. in 10 ds. (Butcher-MA). 11705 f/d cd. in 3 wks. (Roth).
SWITZERLAND: Swiss Radio International 6135 f/d "European Headquarters of the UN" cd. in 21 ds. for 1 IRC. (Burns-MA). f/d "Open Air Parliament" cd. in 23 ds. (Davison). 17730 f/d "Bellinzona - Cathedral and Castle" cd. in 3 wks. (Allred-ECU). Red Cross Broadcasting Service 12035, 9885, 9725 and 6135 f/d "Logo" cd. in 56 ds. for 1 IRC. Schedule and sticker rcvd. (Bywater-CO)...The above freq's are from different transmitter sites...Sam.



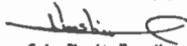
TAIWAN: Voice of Free China 9765, 11860 15345 and 7445 via Panchiao site. f/d "Pottery" cd. in 1 mo. (Barto-CT) 9765 and 9575 f/d cd. in 3 mo. (Barto). 11860, 17805 and 15130 f/d cd. in 1 mo. w/ schedule. (Barto). 15270 f/d cd. in 6 wks. (Barto-CT).

ORGANIZADO POR AMERICA
 10 Copypaper 1 1/2 1000 plus 1. Quantity of
 sets follows.
 100 Copypaper 1 1/2 1000 plus 1. Quantity of
 sets follows.

Desearnos que en el camino de
 cada uno de los hombres resaca
 el amor de paz, prosperidad
 y de justicia que anhela nuestros
 pueblos.

RADIO BAHAI DEL BOUNDAR
 trabajo fructuoso para el esta-
 blecimiento de la unidad de la
 humanidad.

Orcus, diciembre 1980.



Celia Nooshin Barwell,
 COORDINADORA



VERIFICATION SIGNERS: Radio Tyumen
 4895 G.M. Sedov, Chief Engineer.
Radio Tbilisi 5040 Y. Akobia,
 Chief Engineer. **Turkish State**
Meteorological Service 6900 Fay-
 sal Geyik, General Director.

TAIWAN: BSF 5000 f/d "Chiang Kai-
 shek Memorial Hall" cd. in 1
 mo. for ms. (Lare-MI).

TANGIER: VOA 9760 f/d "White House"
 cd. in 3 wks. (Allred-ECU).

TURKEY: Voice of Turkey 9445 f/d
 "Copper Pot" cd. w/ stickers and
 pennant in 43 ds. for 3 IRCs.
 (Carson-OK). same in 48 ds. w/
 schedule and pennant. (Carson-OK).

f/d "Santa Claus" cd. w/ pennant and sticker in 31 ds. (Barhydt-OR). f/d cd. in 77 ds.
 w/ stickers and decals, pennant and schedule. (Peake-IA). f/d cd. in 65 ds. w/ lots
 of goodies. (Butcher-MA). f/d cd. in 32 ds. for 2 IRCs. (Gears). 15267 f/d cd. w/ penn-
 ant and schedule in 3 mo. (Barto-CT). **Turkish Police Radio** 6340 f/d cd. in 12 mo. and
 4 mo. after a f/up rpt. (Behr-ONT).

THAILAND: Radio Thailand 9655 p/d "Fruit Market" cd. w/ pennant in 12 wks. (Bolitho-ONT).

UKRAINIAN SSR: Radio Kiev 11675 f/d "Countryside/Monument" cd. in 52 ds. w/ local stamps
 for 2 IRCs. (Gears). 7400 f/d "Song of Labor Testament" cd. in 86 ds. w/ sched-
 ule (Carson-OK). 7400 f/d "Suburban Apartments and View of Kiev" cd.

in 86 ds. w/ mint USSR stamps. (Carson). **Radio Moscow** 15475 via
Siniferopol f/d "Kosmos Hotel" cd. in 2 mo. (Lare-MI). 12040

f/d cd. w/ schedule and pennant in 2 mo. (Barto-CT).
 17810 f/d "Arbat Square" cd. in 2 mo. (Butcher-MA).
 15475 and 17810 f/d "Peoples Friendship House" and
 "Peoples Friendship Fountain" cds. in 38 ds. v/s Mrs.

Tanya Lavrova, World Service Letters Department. (Weber).
 7115 via **Ivano-Frankovsk** f/d cd. w/ sticker and pennant
 in 8 wks. v/s Tanya Stukova. (Kohlbrener-PA). f/d cd. in

55 ds. (Butcher). 11705 via **Kiev** f/d cd. w/ schedule in 61
 ds. (Butcher). 9685 via **Lvov** f/d "Bolshoi Theatre" cd. w/
 schedule in 45 ds. (Butcher). 11735 via **Vinnitsa** f/d cd. w/ per-
 sonal ltr. in 1 1/2 mo. (Lare-MI). 11745 f/d cd. in 2 mo. (Barto).

11950 via **Kharkov** f/d cd. in 1 1/2 mo. (Lare-MI).

URUGUAY: Radio El Espectador CQA14 11835 f/d black/white cd. w/
 sticker and a key chain in 3 wks. for a SP rpt. and \$1.00. v/s Car-
 los Maria Berro Collado, Jefe de Personal. (Bolitho-ONT).

USA: KVOH 17775 f/d cd. in 33 ds. w/ personal note and ltr. v/s John D.
 Tayloe, General Manager. (Weber-OH). **WRNO** 6185 f/d "DX Club Member" cd.
 in 3 mo. w/ schedule for ms. (Gears). **Voice of Free China** 9680 via **WYFR**

f/d cd. in 6 wks. (Barto-CT). **WYFR** 21465, 17845 and 15440 f/d cds. in 4 mo.
 (Barto-CT). **WBRI** 7520 f/d "Logo" cd. in 2 mo. w/ schedule for ms. v/s Loren
 Holycross, Engineering Department. (Gears). **WBCR** 15690 cd. in 44 ds. after a

f/up rpt. for \$1.00. (Darling-PNG). **WRNO** 6185 p/d cd. in 74 ds. (Peake-IA).

USA (Pirates): One Voice Radio 7410 f/d cd. w/ personal ltr. shaped like a foot
 in 24 ds. for ms. (D'Angelo-PA). **Radio Mexico** 7425 f/d ltr. on Radio Mexico letter-
 head in 40 ds. for a rpt. to the

Slanesville addr. QSL was in SP.
 (Zeller-OH). **WCCR Neontological Re-
 search Radio** 7425 f/d "The Trial" cd.
 in 26 ds. v/s Klaus Kinski. (Zeller).

Radio Raul 7425 f/d QSL on same sheet
 as the above Radio Mexico QSL just diff-
 erent type face print. Says QSL #1!
 (Zeller-OH). **WLIS** 7414.8 f/d pink sheet

w/ group photo of Ian McFarland in 2
 wks. for a rpt. to the Slanesville addr.
 Sent \$1.00. (Bolitho-ONT). **Free Radio One**

f/d cd. w/ personal ltr. for ms. (Field-
 PA).

USSR: Radio Moscow 7310 p/d "Bolshoi" cd.
 in 36 ds. (Levison-PA).



QSL-card from
**Radio
 Scandinavia**

John L SCRUWETA
 MAHOPAC NY.
 USA

USSR: Radio Moscow

15540 p/d "Friendship" cd. in 71 ds. for 2 IRCs.(Hunt). You may be wasting your money by sending IRCs to the USSR. As far as I know they are not required at all...Sam.

Radio Station Peace and Progress 7360 cd. in 77 ds. for ms.(Carson-OK).

UZBEK SSR: Radio Moscow

15590 via **Tashkent** f/d "Lenin Mausoleum" cd. in 62 ds.(Hoffman-PA).17655 same f/d cd. w/ schedule in 2 mo.(Barto-CT). 12000 f/d cd. in 2 mo.(Barto-CT).

VATICAN: Radio Vatican

15120 and 17730 f/d "Ufficio Propaganda" cd. w/ stickers in 2 mo.(Barto). 7250 and 9645 f/d cd. in 3 mo. w/ pennant and schedule.(Barto). 6150, 9605 and 11780 f/d "Tower" cd. in 3 mo.(Barto).

VENEZUELA: YVTO 5000 f/d cd. w/ prepared cd. and a station brochure in 128 ds. for a SP rpt., tape and \$1.00. v/s Pedro Pablo Leon and Jesus Escalona.(Field-PA). **YVZR Radio Continental** 4940 f/d "World Map" cd. in 142 ds. for a SP rpt., ms and \$1.00.

VIETNAM: Voice of Vietnam 15010 f/d cd. w/ schedule and calendar in 6 (Hoffman-PA). mo. for \$1.00.(Klinck-NY). f/d form ltr. in 51 ds.(Barhydt-OR). 15009.6 and 9839.9 f/d cd. w/ pennant and schedule in 3 mo.(Barto). **Nghia Binh Radio** 4712.9, **Bac Thai Radio** 6616.8, **Cao Bang Radio** 6575.9 and **Voice of Vietnam** 4894.7 and 10060.5 via **Hanoi** p/d cds. in 4 mo.(Barto-CT).

WEST BERLIN: RIAS 6005 f/d "RIAS Building" cd. in 4 wks. for 2 IRCs.(Roth).

YEMEN ARAB REPUBLIC: Voice of Palestine 9779.3 via **Radio Sana'a** p/d ltr. in 4 mo. for an 87 reception. Stamped postcard was received. v/s Abdullah Farhan.(Barto-CT).

YEMEN, PEOPLES DEMOCRATIC REPUBLIC: DYBS 7190 f/d cd. in 10 wks. for a rpt. to the Yemen Telecommunications Corporation and \$1.00. (Bolitho).

ZANZIBAR: Radio Tanzania Zanzibar 11734 f/d cd. in 6 wks. after trying for 20 yrs!!!

* The cd. is of my own design.(Behr-ONT)....Great going...Sam.

That about ends this months QSL Column. I'm sorry for the small print. Let me know if you like this print or do you feel I should go to a larger print style. If I go to a larger style I may have to leave out a few extra items or in lieu of this increase the Column by one page. I could always cut out an illustration or two...Hi!

Anyway, best of DXing and QSLing...Sam.



Moscow, March 16, 1990.

Dear Mr.Samual Barto,

Thank you very much for your letter as well as for report of our Radio broadcasting reception.

The 12,135 kHz frequency (USB modulation) is the feeder channel of Radio Moscow.

Please find our QSL card, schedule, pennant and a publication of Radio Moscow Russian World Sec.

Wishing you all the best, godd DXing and hoping to hear from you again soon,

Sincerely

P. Mikhaylov

Eng.Pavel Mikhaylov, DX Editor

(Radio Moscow Russian World Sec.)



РАДИО МОСКВА Samuel Barto,

Эта карточка подтверждает ваш рапорт о приеме передачи
Московского радио

Дата January 21st, 1990

Время 05:50-06:00 UTC

Частота = 12,135 kHz USB

Listening time must be more than 30 minutes!

DX Editor

P.Mikhaylov

Наилучшим образом
Московский радио

Sam

NASWA Scoreboard

Jerry Lineback
6361 Shore Drive
Douglasville, GA 30135



Welcome to Scoreboard for June. We welcome several newcomers this month. We especially welcome those new to the hobby who are willing to share their totals with us. Your totals will grow rapidly. For some of us "oldtimers" it literally takes a revolution or an act of the Country List Committee to get us a new country. In any case, we invite all to share their DX totals with your fellow DXers through Scoreboard. The Spotlight this month is on Africa. C/H=countries heard and C/V=countries verified. Country counts should be in accordance with the NASWA Radio Countries List. You must update, or at least write and say that there is no change, once a year to remain on the Scoreboard. If you write only once a year, please update all totals. Thanks again to the contributors for this Scoreboard. The next deadline will be on August 15 for the September issue and the Spotlight will be on Asia.

Name, State	Total		Africa		Best African QSL
	C/H	C/V	C/H	C/V	
James Young, CA	238	225	64	63	Zanzibar 3339
John Tuchscherer, WI	236		64		R. Cordac
Sam Barto, CT	234	229	64	63	CQM 7946 Guinea
Gordon Darling, PNG	234	226	63	60	Radio Cordac
Edward Kusalik, Alb.	228	225	65	64	Reunion
Marlin Field, MI	225	222	63	63	Mt Kenya NYERI
Gerry Bishop, FL	224	210	62	54	Gambia
William Flynn, CA	224	208	61	54	V3USE Mauritius
Roland Schulze, FRG	224	206	60	54	R. Comores
Harold Cones, VA	223	214	58	55	R. Comores
Nobuaki Takahashi, Japan	221	189			
Tom Gavaras, MN	219	216	59	58	Zanzibar
Terry Palmersheim, WA	219	201	50	50	OZRT Lubumbashi
Mitch Sams, KS	218	171	61	34	Comores 3331
Steven Lare, MI	215	174	59	38	Mauritius
Bill Harms, FRG	215	151	58	31	ORTF Brazzeville
C. Vernon Hyson, NC	214	202	58	53	R Sao Tome
John Sgrulletta, NY	213	213	61	61	Comoros Is.
Rick Krzemien, CA	209	190	35	16	Benin
Paul Buer, FL	208	197	58	53	LV Isla Palma
Richard Davis, NM	208	197	53	48	Mauritius
Ron Howard, CA	208	190	53	47	Damara sv RSAWA
Kirk Allen, OK	206	197	55	48	R Mogadishu
Del Fye, FL	206	191	55	53	Zanzibar
Kevin Atkins, AL	206	182	57	46	Mauritius
Donald Hosmer, MI	206	160			
Jerry Lineback, GA	205	107	59	31	Swazi MR
Sheryl Paszkiewicz, WI	204	191	53	49	Somalia
David Swaringen, NC	202	182	54	47	Dijibouti
Charlie Hoffman, PA	201	150	52	36	Omdurman 5040
Christos Rigas, IL	200	178	54	41	Ethiopia
John Bryant, OK	199	176			
Rowland Archer, NC	198	181	49	42	Lobito direct
Robert Ross, Ont.	193	167	54	39	R Halgan
Harold Sellers, Ont.	191	154			

Name, State	Total	Africa	Best African	QSL
	C/H C/V	C/H C/V		
Kent Willis, KY	191 143	57 40	Burundi	
Tom Daly, NY	191 44	50 4	Voz Galo Negro	
John Huniwell, NJ	189 181	51 47	R. Malabo	
Henry Michalenska, RI	182 145	53 34	Mauritius	
Fred Kohlbrenner, PA	178 142	47 27	Sao Tome	
Tom Laskowski, IN	176 139	54 38	Burundi	
Norman Bobb, MN	175	49		
Ichiro Maruo, Japan	167 98	23 9	Africa No. 1	
Rev. John Eckert, PA	166 147	46 35	R. Senegal	
Kevin Klein, WI	164	73		
Andy Rugg, Que.	163 145	38 32	TWR Swaziland	
Jim Renfrew, NY	158 111	42 21	Seychelles	
Jim Streitmatter, IN	158	37	Rio Muni	
Jerry Klinck, NY	157	130		
Greg Hart, FL	157 97	40 17	Chad	
Kurt C. Cox, OR	153 117	44 31	R. Gambia	
Carl Mann, NB	151 127	31 24	Lesotho 4800	
Carl Radtke, CA	147	147		
Peter Dillon, Greece	146 91	37 17	Ascension dir.	
Thomas Ross, IL	145 125	34 25	Nouakchott	
Donna Robinson, IL	141 104	35 22	Tanzania	
David Morby, NY	139 36	34 4	ELWA	
Robert Landau, NJ	133 106	34 18	ELTF	
Dale Park, HI	131 37	29 7	R. SWA first wk	
Bill Taylor, PA	129 97	28 17	UBC	
Harold Levison, PA	125	92		
Joe Kremer, IN	122 70	31 7	Uganda	
Joe Zobro, MI	113 83	7 5	Ghana	
Mark Humenyk, Ont.	111 54	18 3	R. RSA	
Larry Royston, HI	109 37	33 5	ETLF Ethiopia	
Adrienne Barhydt, OR	108 62	20 5	TWR Swaziland	
Robert Carlsen, OH	103 85	17 14		
Adrienne, Barhydt, OR	96	51		
David Turnick, PA	92 80	8 5	R. Oranje	
David Galletly, NY	86 59	14 6	RNE Canary Is.	
Dennis Kelly, MI	73	60		
William Blight, MD	70 51	14 6	Burkina Faso	
Rev. William Peake, IA	49 35	3 1	R. RSA	

Thanks to all who have shared their totals with us this quarter. We encourage all NASWA Members to share their totals with us through the Scoreboard. Remember the next deadline is 15 August for the September issue and the Spotlight will be on Asia. Gud DX and 73s y'all.

Jan

A REMINDER

When writing to NASWA, please be sure that your address is somewhere inside your envelope. The return address on the outside is no longer safe from the post office automatic cancelling machines. An envelope containing a request for a sample copy of the Journal arrived here with all but 1/4 inch of the return address sticker torn off and no address inside.

Contributors' Page

Kris Field
431 Babylon Road
Ambler, PA 19002-2302



LOGGINGS CONTRIBUTORS - MAY/JUNE 1990 - DEADLINE 10th of MONTH

The following members contributed loggings:

Frank ADEN, Jr Boise, ID	FRG7,HQ180A,CR202
Brian ALEXANDER, Mechanicsburg, PA	
Guy ATKINS, Issaquah, WA	NRD525,MAP,T2FD 60MB ant.
Faleh R. BADER, Washington D.C.	
Adrienne BARHYDT, Milwaukie, OR	Kenwood R 5000
Ed CICHOREK, Somerset, NJ	FRG 8800
Richard D'ANGELO, Wyomissing, PA	R70, Alpha Delta DX Sloper
Peter DILLON, Greece	DX 400
Bill ESTES, Huntsville, AL	NRD 515,MAP,FL3,HQ180AX
Karl FORTH, Chicago, IL	R70, HQ160
Pete GRENIER, Covina, CA	FRG7, Sangean SG789
Joe HOWELL, Escondido, CA	
Hans JOHNSON, Columbia, MD	R71A, Multiband AM Pickup
Jerry JOHNSTON, Lexington, KY	NRD 525
Rufus JORDAN, Pittsburgh, PA	DX 302, Zenith Transoceanic
W. KARCHESKI, Holden, MA	
Jerry KLINCK, West Seneca, NY	Kenwood R 5000
Fred KOHLBRENNER, Philadelphia, PA	NRD 525, Sony 2010
John LACKMAN, Lexington, VA	
Harold LEVISON, Philadelphia, PA	
Robert MONTGOMERY, Levittown, PA	Collins R390
Don MOORE, Big Rapids, MI	R5000, FRG7,ICF 7600D
Dale PARK, Honolulu, HI	R5000, ATS 803
John PRATH, Ft. Lauderdale, FL	NRD 525, R71A
Larry ROYSTON, Pahoa, HI	DX 440, 70' LW
Jim RENFREW, Rochester, NY	Sony 2010 + LW
Jim STREITMATTER, South Bend, IN	Yaesu 7476X
Pete TUTAK, Whidbey Island, WA	R70A
Richard WALLACE, Danbury, CT	Hallicrafters S108,DX 440
Mike WOLFSON, Ashland, OH	Sony 2010

Good turnout the last two months. Please note that I'm moving up the deadline to submit loggings to the tenth of the month. I may hold them until the 12th if the month is long enough to get them to the editors in time but I'd like to have the flexibility to mail the loggings to the editors on the 11th if necessary. If you can't make the deadline, send loggings direct to the editors and drop me a card and I'll get your name on the contributors list. I don't have to turn my column in until later in the month.

I'd like to recognize some of the folks who have been going direct. I've pulled these names from the loggings sections: D. Clark, N. Bobb, R. Schulze, D. Ross, W. Treibel, J. Carson to name a few. Thanks to one and all for submitting loggings. Hope I didn't miss anyone.

Hello to all the new members submitting their first loggings in the last two months. Welcome aboard; we're glad to have you. Til next time.....

Tropical Band Loggings

Sheryl Paszkiewicz
1015 Green Street
Maritowoc, WI 54220



Welcome to another issue. Loggings are down this month, but if DX at your location is anything like here, it's no wonder. Read on:

- 3205 BRAZIL, R. Ribeirao Preto, 31/3, 0015-0025 w/ID, tlk by M, LA mx. (Schulze-FRG) 8/4, 0125 w/EZL vcls, ID on half hour. (Johnson-MD)
- 3230.1 PERU, R. El Sol de los Andes, 1/4, 0005-0015 w/ID, rel tlks. (Schulze-FRG)
- 3285 BRAZIL, R. Sentinela da Amazonia, 25/3, 0235-0304 w/ID, slow mx, slow fade. First log for me. (Schulze-FRG)
- 3290 NAMIBIA, R. Namibia, 3/4, 0155 w/Amer. pops, ID on hour, 3270 buried under ute & untraced. (Johnson-MD)
- 3300 GUATEMALA, R. Cultural, 12/4, 0300 in EG w/ID, anmts, rel mx. (Klinck-NY)
- 3310.2 BOLIVIA, R. San Miguel, 31/3, 0008-0015 w/tlk by M, mx bridges. (Schulze-FRG) 11/4, 0907-0940 w/tlk, mx, IDs, poor. (Barhydt-OR) I'm gonna have to try for this--sp.
- 3335 BRAZIL, R. Alvorada, 30/3, 2350-0006, "R. Alvorada Tropical Londrina," mx bridges. (Schulze-FRG)
- 3360v CUBA, R. Rebelde, 15/4, 0350 and //5025 (Renfrew-NY) 25/4, 0352-0400 w/pol. tlks, ID 0400. (Schulze-FRG) 6/5, 0555-0605 w/anmts, tlks, LA mx //600, 710, good. (Alexander-PA)
- 3360 GUATEMALA, LV de Nahuala, 30/4, 0151-0330+ w/lively vcls, Instls, full echo IDs, best from 0230, real commercial sound. (Jordan-PA)
- 3370 GUATEMALA, R. Tezulutlan, 30/4, 0105-0315* w/rel tlks, "Rock of Ages," "Battle Hymn of the Republic," tlks in SP & Indian lang, FG, ID, fair. (Jordan-PA) Hi Rufus--sp. 4/4, 0303-0314* w/marimbas, anmts, //4835, ID, s/off anmts, SIO=2+52+ (D'Angelo-PA) 25/3, 0310-0317 w/ID, //4835, rel, marimbas. (Schulze-FRG)
- 3380 GUATEMALA, R. Chortis, 1/4, 0234-0300* w/ID, rel pgm, marimbas, closing anmts. (Schulze-FRG)
- 3385 NEW BRITAIN, R. East New Britain, 6/5, 1000 in EG w/tlk by M&W, C&W mx. (Klinck-NY)
- 3955 ENGLAND, BBC, 7/5, 0430 in EG w/nx, mx, cmtry. (Wallace-CT)
- 3990 LIBERIA, VOA Relay, 6/5, 0300 in EG w/nx, mx, cmtry. (Wallace-CT) Tnx for your input.--sp
- 4000 CAMEROON, R. Bafoussam, 15/4, 1855-1906 in FR w/ID, Afr. folk mx, strong CW QRM. (Schulze-FRG)
- 4040 Last month there appeared two loggings here, for Yerevan & Vladivostok. I asked the reporters how they determined the transmitter sites and Hans Johnson responds: Sunrise at Vlad. is abt 2100 GMT on this date so that site is impossible given the time of my log (0248). Makes sense to me, Hans. Vlad. & Yerevan are quite far apart if I would look at the map. So there you have it folks. Thanks, Hans--sp.
- 4055t USSR, tent. Estonia. 6/4, 0255-0330 in RS w/lite instls, little tlk. No IS or //s. WRTH lists Estonia. (Alexander-PA) The 1990 WRTH lists it as unknown and IIG lists Kalinin so who knows--sp.
- 4610 USSR, unid, 8/4, *0200 for sev. days. Doubt it's Khabarovsk with sunrise abt 2030. 0155 tones, 6 TP & tlk in RS. Too late for Alma Ata as well. Ufa maybe? (Johnson-MD)
- 4680v ECUADOR, R. Nac. Espejo, 22/3, 0015 w/tlk, ads, promo but no mx. Definite ID 0045. SIO=242. (Estes-AL) 13/4, 0228-0243 w/ID, ad string, anmts, 0235 drama pgm. SIO=252 w/deep fades. (D'Angelo-PA)
- 4747a UNID, 5/5, 1015 in SP/lang, folk mx, IDs "R. Juan Carlos Mil." Clear, fair sig. (Royston-HI) Maybe Huanta Dos Mil--sp

- 4775 PERU, R. Tarma, 6/5, 0425-0435 in SP w/mx, anmts, ID 0432, fair to good sig. (Royston-HI)
- 4785 AZERBAIJAN SSR, R. Baku, 15/4, *0159-0245 in RS w/IS, Kremlin chimes, anthem, tlk, clx & ME mx, weak. (Alexander)
- 4810 PERU, R. San Martin, 31/3, 2335-0000* w/ID, tlks, slow mx, weak sig. (Schulze-FRG)
- 4819.7 ECUADOR, R. Paz y Bien, 7/4, 1015 w/calm tlk, choir type mx, ID, wiped out by HRVC carrier 1040. (Johnson-MD)
- 4820 HONDURAS, HRVC, 6/5, 0330 w/mx, cmtry. (Wallace-CT)
- 4820.8 PERU, R. Atahualpa, 19/4, 0805-0921 w/pop mx, huaynos, ID, poor. (Barhydt-OR) 6/5, 0900-0910 w/flute type folk mx, ID, tlk over mx, ID 0910, fair to good. (Royston-HI)
- 4825 BRAZIL, R. Educ. Braganca, 6/4, 0854-0910 w/ID, tlk, festive mx, rooster crows, no sign of Cancao Nova, good (Alexander)
- 4825v PERU, LV de la Selva, 1/4, 0130-0140 w/ID, monotonous OA mx. (Schulze-FRG) Never hrd it described as monotonous before, hi--sp. 5/5, 1055-1110 w/pop mx, ID 1103, ads, more mx, fair sig. (Royston-HI)
- 4840 ECUADOR, R. Interoceanica, 3/5, 0230-0330 w/nx, mx, cmtry. (Wallace-CT)
- 4844.3 GUATEMALA, R. K'ek'chi, 8/4, 0108-0130 in SP/lang w/rel, organ, anmts, ID, ment. LV de las Casas, Alta Verapaz. (Paszkiewicz-WI) 14/4, 0230-0250 w/ID, rel, marimbas. (Schulze-FRG)
- 4845 MALAYSIA, R. Malaysia, 14/4, 2220-2245 w/Hindi pgm, Indian mx, TP 2230, nx in Bahasa Malay. (Schulze-FRG)
- 4845.3 MOLUCCAS, RRI Ambon, 5/4, 1020-1131* w/many IDs, tlk, pop mx, fair. (Barhydt-OR)
- 4855 BOLIVIA, R. Centenario, 20, 21, 30/3, 2340-0022 in SP w/ID, "R. Centenario la Nueva," LA mx, first log for me. (Schulze)
- 4865 COLOMBIA, LV del Cinaruco, 13/4, 0500 in SP w/cmtry, mx. (Wallace-CT)
- 4870 ECUADOR, R. Rio Amazonas, 29/4, 0503-0515 w/mx, ID, brief tlk, more mx, poor sig. (Royston-HI)
- 4870.2t SRI LANKA, SLBC, 1/5, 1630 in Sinhala? w/mournful song, tlk, SAs mx, carriers on //4902, 5020 but no audio. (Park-HI)
- 4875.6 BOLIVIA, R. La Cruz del Sur, 23/4, 2240-2304 in Indian lang, ID by M, rel pgm & prayer. (Schulze-FRG)
- 4880 SOUTH AFRICA, Radio 5, 30/3, 0300 in EG w/rel, ID, light pop mx, M anncr. (Karcheski-MA)
- 4883 CHINA, R. Beijing via Hohhot, 13/4, 1540-1558 in CH w/RS lesson, //4815, 5145, fair to good. (Royston-HI) 25/4, 1545 in RS w/CH lessons //4815, 4620 (Park-HI) I don't know either lang but they are listed in RS so was prob. CH lessons--sp.
- 4890 PAPUA TERR., NBC Karai Svc, 30/4, 0910-1018 in EG w/nx rpts pop mx, ID, poor. (Barhydt-OR)
- 4895 COLOMBIA, LV del Rio Arauca, 25/4, 0337 w/RCN IDs, 6 TP 0400 (Johnston-KY) Also 26/4, 0445 w/sev. IDs, NA to 0502* (Johnston-KY)
- 4895 USSR, RMNA, 21/4, 0120-0130 in EG mixing w/Brazil, ID, cmtry, lite mx. (Alexander-PA)
- 4900 GUINEA, RTV Guineenne, 9/4, 0610-0620 in lang w/folk mx, anmts //6155, poor. (Royston-HI)
- 4900 UNLD, who??, 8/4, 0214-0317 w/continuous rock w/EG lyrics, no anmts, break at 0248 and off 0317. SIO=242 (D'Angelo)
- 4907.5 USA, KUSW, subharmonic, 29/4, 0322 really strong, rock mx, ID. 9815 x 1/2. (Alexander-PA) 6/5, 0445-0500, same format, good sig. (Royston-HI)
- 4910 HONDURAS, LV de la Mosquitia, 13/4, 0227-0257* in EG w/Brother Jack Meeks, Bible corres. course, SP ID, SIO=343. (D'Angelo-PA)
- 4910 ZAMBIA, ZNBC HS, 3/4, 0311 in lang w/vcls, lots of QRN. (Karcheski-MA)
- 4910.4 UNLD, 8/4, 1115 in lang w/tlk, island mx, good sig. Sounds like PNG, maybe Australia? (Paszkiewicz-WI)
- 4915 BRAZIL, R. Anhanguera, 29/4, 0035-0130 w/rel tlk, choir, Ave Maria, phone tlks, ID, FC, TCs, fair. (Jordan-PA)

- 4915 BRAZIL, R. Anhanguera, 2/4, 2524-0004 w/tlks, full ID, FC 2331, Braz. mx, jingles, brief mx 0000. SIO=3+53. (D'Angelo-PA)
- 4934 KFNIA, Vo Kenya, 13/4, 0255-0307 in EG w/rock mx, 0259- "This is the Voice of Kenya, Nairobi." Mx, TP, lcl TC, ID, mx. SIO-553. (D'Angelo-PA) 18/4, 0301-0331 in EG w/nx, mx, ID, poor. (Barhydt-OR) Nice catch for the West Coast I think--sp.
- 4935 BRAZIL, R. Capixaba, 3/4, 2326 mx bridges, anmts, canned IDs 2330. (Johnson-MD)
- 4935 PERU, R. Tropical, 17/4, 1044 w/mx, ID, poor. (Barhydt-OR)
- 4940.1 COTE D'IVOIRE, RTVI, 12/4, 2202-0002* in FR w/Afr. pops, hillife mx, lite instls, tlk, electronic mx bridges, jingles, NA. Nothing on 7215. Also 15/4 *0551-0620. (Alexander-PA) 8/5, 2300-0000 in FR w/nx, tlk, mx. (Wallace-CT)
- 4965 BRAZIL, R. Alvorada, 7/4, 0850-0910 w/Braz. pops, anmts, ID 0907, good. (Alexander-PA)
- 4970 PERU, R. Imagen, 29/4, 0737-0800 w/mx, tlks, ment. Tarapoto, ID, good sig, thought it was Rumbos! (Royston-HI)
- 4990 NIGERIA, R. Nigeria Lagos, 8/5, 2200-2305 in EG w/nx, cmtry, mx. (Wallace-CT)
- 4995.8 PERU, R. Andina, 4/4, 0545-0401 w/folk mx, anmts, ID 0358, mx, fair sig. (Royston-HI) You've been busy at the dials--sp
- 5005.7t SURINAM, R. Apintie, 9/4, 0158 in DT w/tlk, choral mx, anmts by M. (Karcheski-MA)
- 5010 MADAGASCAR, R. Madagasikara, 15/4, *0256-0320 in FR/vern, IS, NA, anmts, ID 0300, rel mx, tlk, good at s/on but quickly faded out. (Alexander-PA)
- 5015y BRAZIL, R. Pioneira, 15/4, 0815-0840 w/lite mx, ment. Teresina. (Renfrew-NY) 6/5, 0840-0850 w/IDs, OM DJ, ballads, fair. (Alexander-PA)
- 5015 CLANDESTINE, R. Truth, 14/4, 0447 in EG w/pop mx, "R. Truth standing for what is right," tlk abt ANC. (Park-HI)
- 5019 VENEZUELA, RN, 19/4, 0304-0323 w/nx & remote feeds, some IDs, 0317 rpt abt Nicaragua. SIO=553. (D'Angelo-PA)
- 5020t SOLOMON ISLANDS, SIBC, 8/4, 0938 in EG w/tlk, pop mx. (Karcheski-MA)
- 5030 TONGA, A3Z, 12/4, 0633-0734 in Tongan w/tlk, choral mx, 0700 "This is the call of the Friendly Islands, A3Z, Nuku'alofa. The time is 8 o'clock." Drumbeats, anmts, nx, RA nx, another ID, tlk & mx, poor-fair. The nx theme mx is same used by Eyewitness Nx Channel 7, WABC New York (Tutak-WA)
- 5035 CENTRAL AFRICAN REPUBLIC, RTV Centafricaine, 12/5, 0430-0500 in FR w/nx, tlk, mx. (Wallace-CT)
- 5045 COSTA RICA, R. Impacto, 10/4, 0522-0526 w/rock mx, TC, IDs over mx, good. (Tutak-WA)
- 5060 ECUADOR, RN Progreso, 5/5, 1120-1132 w/tlk, brief mx, ment. R. Nacional. Fair sig. (Royston-HI)
- 5075 COLOMBIA, R. Caracol, 13/4, 0530 w/nx, cmtry. (Wallace-CT)
- 5097.2 PERU, R. Eco, 6/4, 1010-1020 w/LA ballads, lots of IDs, tough copy due to CW station. (Alexander-PA)

There were some real interesting logs in here! How about that Tonga logging? 11 states represented this month but no Canadian provinces. Also one foreign country. Remember that the dates of the loggings are shown here in day/month format in case it was confusing.

And now if you will turn the page, there are a couple of special features for you:

SOVIET TRANSMITTER SITES BY RADIO COUNTRY

<u>Armenia:</u>	Yerevan	
<u>Asiatic RSFSR:</u>	Blagoveschensk	Novosibirsk
	Chita	Omsk
	Irkutsk	Petropavlovsk
	Kenga	Tyumen
	Khabarovsk	Ulan Ude
	Komsomolsk	Vladivostok
	Krasnoyarsk	Yakutsk
	Magadan	Yuzhno-Sakhalinsk
	Nikolayevsk	
<u>Azerbaijan SSR:</u>	Baku	
<u>Byelorussia:</u>	Minsk	Orsha
<u>Estonia:</u>	Tallinn	
<u>European RSFSR:</u>	Arkhangelsk	Moscow
	Armavir	Murmansk
	Gorki	Orenburg
	Kalach	Ryazan
	Kalinin	Serpukhov
	Kazan	Sverdlovsk
	Kingisep	Tula
	Konevo	Ufa
	Kursk	Vologda
	Leningrad	Voronezh
	Mitchurinsk	Zhigulevsk
<u>Georgia:</u>	Tbilisi	
<u>Karelo-Finnish SSR:</u>	Petrozavodsk	
<u>Kazakh SSR:</u>	Alma Ata	Dzhambul
<u>Kirghiz SSR:</u>	Frunze	
<u>Latvia:</u>	Riga	
<u>Lithuania:</u>	Kaunas	Vilnius
<u>Tadzhik SSR:</u>	Dushanbe	
<u>Turkmen SSR:</u>	Ashkhabad	
<u>Ukraine:</u>	Ivano-Frankovsk	Nikolaev
	Kharkov	Simferopol
	Kiev	Starobelsk
	Lvov	Vinnitsa
<u>Uzbek SSR:</u>	Tashkent	

Sometime ago, I asked log reporter BOB RYDZEWSKI of SANTA CRUZ, CALIFORNIA, to relate to me his DXing experiences in California as compared to Chicago because he had mentioned he is originally from Chicago. This month since we have some room, I thought I would share his letter with you. Also, Bob talks about coping with the earthquake in October, centered at Santa Cruz. Bob writes:

"Ted (Benson) is moving out of the area, so I'll be all alone in the DX world out here. I'm working on indoctrinating a couple of friends at work who recently got SW radios, but as you know, the bug doesn't strike everyone with a set or everyone forced to hear a SW set, as my wife will attest to."

"The earthquake here was pretty nasty, scary enough to put one into the kind of different universe that shocks and disasters cause. Where I am, about 30 miles away (from Morgan Hill), nothing really happened except for broken crockery, fallen bathroom items and a tipped-over sugar bowl. I was on the road when it happened and the van we were in went out of control, causing all us passengers to think a wheel fell off or something. Fortunately, we were OK. The worst parts were lack of electricity for a day and the phones being out for some hours. Also the 3-4 thousand aftershocks (I kid you not) were scary. One scanner listener had a really tough time of it: with the electricity out, how was he to recharge his Ni-Cad batteries? The poor guy!"

"As for my DXing history, I wish there was more of it. I played with a giant (bigger than me at the time) mahogany Zenith radio with the kind of mysterious green vacuum tube 'eye' that was supposed to be a signal indicator when I was a kid, but never got anything other than buzzing sounds which I thought at the time were transmissions from prop planes. Later on a friend lent me his Eico tube-type shortwave set with which I was able to pick up WWV as well as the BBC! On my next set, a Radio Shack kit about 15 years ago, I got a few more stations, but the regenerative noise was still so annoying I never got serious about it. About 2 years ago, nostalgia got to me and I bought another shortwave radio, this time a good, modern set, a Sony 2003. Couldn't believe how many stations you could get! It was like night & day compared to the older radios. It sounded so good I ended up buying a NRD and going broke! But since I've lived in California for the last six years, I really can't give you a comparison of conditions here versus Chicago except to say that I can get much more than WWV and the BBC!"

"My targets are still pretty simple. I haven't logged a PNG station yet, although Indos seem to come in pretty good here if I can get myself out of bed at 4 a.m. Also I'd like to get Iceland (I think I did once but no ID), Antarctica and as many islands as possible since I'm big on islands. IAs I also find interesting since I like the music (Andean & otherwise). I particularly would like to get more small Brazilian stations, since I once visited Brazil and I've been to some cities there that have SW outlets. The Portuguese is tough, though. Since I work as a research scientist and have to do everything in an organized way, I'm not too organized about the way I go DXing. Mostly I just go up or down a band in ECSS. I'm trying to get myself to use some of the memories on the NRD-525."

OK, this is the type of article that normally appears in "Portraits" but I thought you'd like to read it here since I had the room. I would like to mention that 1-2 page articles will be welcome here as space permits, so if you have an idea for one, why not drop me a note first of all. I wouldn't want to get inundated with material and not be able to use it. Also, just a reminder to please note your state abbreviation after your name on the loggings. And with that, we come to the end of another Tropical Bands column! Remember to unplug the radios and antennas when not in use! Keep those radios tuned in, report what you hear and most of all, have fun! Till next time.

International Band Loggings

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



5900-30000 MHZ

- 5955 COLOMBIA LV de los Centauros in SP 0444-0501*, mx, ID (Barhydt OR 4/8)
 59554 GUATEMALA R. Cultural in SP 0521, relig tlk, mx, ID (Barhydt OR 4/8)
 59667 ECUADOR LV del Upano in SP 0540-0617*, Easter service, ID (Alexander PA 4/15)
 59816 GUATEMALA AWR in SP 0104, hymns, TC, call letters, ID (Paszkiwicz WI 4/23)
 60019 NICARAGUA LV de Nicaragua in SP 1205, nx, tlk, mx, ID (Prath FL, Barhydt OR)
 6010 MEXICO R. Mil in SP 0504-0705, tlk, US oldies, 4 note whistle between tunes, ID traditional "La Bamba" (Renfrew NY 4/15, Barhydt OR 4/15)
 6020 BRAZIL R. Gaucha in PT 0840, mx, tlk, IS at 0857 (Barhydt OR 4/11)
 60499 NIGERIA RN Ibadan in EG 0527, African pops, ID, nx, tlk in Vern (Alexander PA) in EG 2213, hi-life mx, ID, nx at 2300 (Renfrew NY)
 6080 E.GERMANY R Berlin Int in EG 0120, rpt on single parents in GDR (Prath FL 5/6)
 6105 BOLIVIA R. Panamericana in SP 1035, NA, ID, tlks w/echo effect, mx (Royston HI)
 6116 COLOMBIA LV del Llano in SP 0300, ID, nx, Latin vocals, f (D'Angelo PA 4/28)
 6180 BRAZIL RN de Amazonia in PT 2310, coverage of futbol game, ID (Prath FL 4/15)
 7010 PAKISTAN RP w/Koranic recitations 0048, tlk, song, ID on hr (Johnson MD 4/13)
 7189 EQUATORIAL GUINEA R. Africa in EG 2150, relig pgm, ID (Klinck NY 5/6)
 7220 YUGOSLAVIA RY in SP 2300, s/on, ID, nx, mx, //9620 (Prath FL 4/13)
 7245 ALBANIA R. Tirana in EG 2200, nx, tlks, mx, ID (Wallace CT 4/6)
 7255 BOTSWANA RB in EG/Vern 0359, IS, ID, choral mx, "Breakfast Show" (Carson OK 4/23)
 7300 ALBANIA R. Tirana in PT 2200, IS, ID, nx, tlk, //9500 (Prath FL 5/5)
 7345 CZECHOSLOVAKIA R. Prague in EG 0100, IS, ID, nx, feature, sked (Jordan PA 5/7)
 7445 TAIWAN V of Asia in EG 1134, nx, mx, "Spoken Chinese", ID, f-g (Royston HI 5/5)
 9115sb ARGENTINA R. Continental in SP 2244, nx, ads, ID's, remote (D'Angelo PA 4/21)
 9334sb UNITED KINGDOM APRTS in EG 0532, ad for credit card, nx (Royston HI 4/9)
 9440 CHINA R. Beijing in EG 1900-1956*, nx, "Life in China" (Dillon GREECE 4/6)
 9445 TURKEY V of Turkey in EG 2228, nx, letterbox pgm (Montgomery 4/24)
 9500 ALBANIA R. Tirana in EG 0529-0557*, nx, polit cmntry, ethnic mx (Carson OK 4/15)
 9515 IRAQ R. Baghdad in EG 0230, nx, mx, tlks w/propaganda flavor (Wallace CT 4/8)
 9540 VENEZUELA RN in SP *1102, tlk, ID's (Barhydt OR) in SP 1400, ID, nx (Prath FL)
 9545 SOLOMON IS. SIBC in EG 0700-0745, local nx, cmntry on local museum, ID's, ads for local stores, shipping skeds for holidays (Tutak WA 4/11, Klinck NY 5/1)
 9545 MONTERRAT D. Welle relay in EG 0315, "Living in Germany", ID (Royston HI 4/23)
 9560 ETHIOPIA V of Ethiopia in EG 1602, ID, address, mx, into lang, f (Royston 4/13)
 9565 BRAZIL R. Universo in PT 0935, pops, ID, speech, QRM mixing (Alexander PA 4/6)
 9580 SOUTH AFRICA RSA in EG *0158, final xmen to US/Canada!? (Johnston KY 5/1)
 9600 USSR R. Kiev in EG 1807, ID, songs, letters, sked (Dillon GREECE 4/7)
 9610 INDIA AIR in EG/langs 0000, regional nx (HS), //15120, 15420 (Reddy NJ 5/3)
 9615 SOUTH AFRICA RSA in EG 0200, mailbag, "Amateur Radio Spectrum" (Carson OK 4/22)
 9650 CYPRUS CBC Nicosia via BBC relay in GK *2215-2245*, IS, ID, GK mx (Jordan PA)
 9660 AUSTRALIA ABC Brisbane in EG 0745, racing results, nx (Carson OK, Klinck NY)
 9660 VENEZUELA R. Rumbos in SP 1415, up-tempo LA mx, ID's (Prath FL 4/7)
 9680 PORTUGAL RP in PT 0008, Fado mx, ID 0015, g (Kling TX 4/12)
 9690 ROMANIA RRI in EG 2115, rpt on new election process (Prath FL 4/28)
 9705 PORTUGAL RP in PT 2210, ID, pop mx, tlks, //1840 (Prath FL 4/14)
 9735 PARAGUAY RN in SP 0756, anthem?, ID, brief mx, tlks, f-g (Royston HI 4/24)
 97797 YEMEN R. Sana in AR 0300, brief tlk, NA, Qu'ran for 15 mins, full ID (Estes)
 9800 FRENCH GUIANA RFI relay in EG 0318, "Land of France" (Carson OK 5/2)
 9860 NETHERLANDS RN in EG 2120, mx by Frankie Lane, //15560, 13700 (Prath FL 4/7)
 9835 HUNGARY R. Budapest in EG 2328, Pope visits Czechoslovakia, mailbag (Carson OK)
 9870 AUSTRIA RAI in GR 0019, classical mx, ID 0030, into SP, g (Kling TX 4/12)
 9977 NORTH KOREA R. Pyongyang in EG 1133, ID, tlk re life in N.Korea (Prath FL 4/14)
 11445 CHINA R Beijing in EG/Tagalog *1130, world & CH nx, feature (Jordan PA 4/27)
 11570 PAKISTAN RP in EG 1727, Indian-style mx, ID, cmntry (Dillon GREECE 4/6)
 11585 ISRAEL Kol Israel in EG 1700, ID, nx, instrum mx, into FR 1715 (Dillon 4/16)
 11685 FRENCH GUIANA R. Beijing relay in EG 0410, tlk on CH trade, g (Carson OK 4/12) in EG *0400-0457*, world nx, "Current Affairs", lang lessons, g (Jordan PA 4/17)

11715 CANADA R. Korea relay in EG 1030, nx, S. Koreans very excited and proud about agreement w/Canada on relay, exc (Johnson MD 4/2)

11735 BULGARIA R. Sofia in EG 0339, mx, "History Club" re politics, f (Carson OK 4/13)

11770 USSR R Vilnius Lithuania in EG 2200, nx, cmntry (Wallace CT 5/1, Carson OK)

11775 TURKEY V of Turkey in TK 1730, 'K choral mx, tlks, mx, ID (Dillon GREECE 4/5)

11784 INDONESIA V of Indonesia in IN 1215, nx, ID, fgy, pop mx (Ross ONT, Clark ONT)

11785 USSR R. Tashkent in EG 1200, local mx featuring local groups (Klinck NY 4/12)

11785 WEST GERMANY VOA relay in EG 0432, "VOA Thursday Morning", f (Carson OK 4/19)

11790 UNITED ARAB EMIRATES R. Dubai in AR 1707, nx, ID, Ramadan tlks (Dillon GREECE)

11805 GUAM KTWR Agana in EG *0828-0840, IS, ID, relig pgm (Alexander PA 5/6)

11820 ATASKA KNLS in JP 1040, Glenn Miller oldies, ID, tlk, f (Lackmann VA 4/23)

11840 IRAQ R. Baghdad in EG 0259, full ID, AR mx, f (Carson OK 5/2)

11845nf NO. KOREA R. Pyongyang in AR 1550*, s/off AR xmsn w/NA, f (Treibel WA 5/12)

11870 COSTA RICA AWR in SP/EG 0453, ID, address, closing mx 0500, g (Carson OK 4/12)

11910 HUNGARY R. Budapest in EG 0133, DX pgm, g (Carson OK 5/1)

11920 USSR R. Yerevan in SP/Armenian 2159, f, switch diff svce 2300 (Ponder LA 4/13)

11930 NORWAY RNI in EG 2325, s/off EG pgm 2330, into R. Denmark relay in DN (Prath FL)

11935 SOUTH AFRICA RSA in EG 0229, river pollution in S Africa, DX pgm (Carson OK 4/9)

11940 SINGAPORE SBC in EG 1030, promo for Radio One, relig pgm, nx (Lackmann VA 4/8)

11960 LIBERIA Radio ELWA in AR 0543, IS, ID, into relig pgms, g (Carson OK 4/18)

12000nf AUSTRALIA RA in EG 1420-1700*, fgy, TC, xmsn targets, pop mx, ID (Jordan PA 5/6)

12015 MONGOLIA R Ulan Bator in EG 0913, ID, nx, cmntry, into CH 0939 (Klinck NY) in EG 0833, mx, ID, TC, fgy (Carson) in EG 0908, mx, QRM Beijing (Alexander PA 5/6)

12025 NO. MARIANAS KPBS Saipan in RS 1215, relig Q&A, ID, gospel, f (Lackmann VA 4/7)

12060 USSR R. Kiev in EG 2300, rpt re local papers, nx, mx (Wallace CT, Prath FL 5/5)

12060 USSR R. Vilnius Lithuania in EG 2159, IS, altho the Soviets are xmitting the signal they are apparently reducing modul to barely readable levels (Johnson MD)

12200 CHINA CPBS Beijing in CH 1200, tlks, operatic vocals, flute mx (Jordan PA 5/4)

13605 UNITED ARAB EMIRATES UAE Abu Dhabi in EG 2200, Qu'ran, mx, f (Carson OK 4/27)

13635 SWITZERLAND SRI in EG 2105, nx, cmntry, "Swiss Merry-go-Round" (Prath FL 5/5)

13660 IRAQ R. Baghdad in FR 1800, AR mx, ID at 1812 (Wolfson 5/1)

13730 AUSTRIA RAI in EG 1630, Austrian & world mx, ID, classical mx (Dillon GREECE)

149176 KIRIBATI RK in EG *0555-0630, test tone, lite instr mx, pips, BBC at 0600, lcl nx 0610, US pops (Alexander PA 4/7) ED: Apologies for erroneous fgy last month.

15010 VIETNAM V of Vietnam in JP 1400, ID, mx, f-g (Klinck NY) in EG 1824, tlks on VT commerce, ID, g (Tutak WA) in EG 2030, mx, ID, nx, tlks (Royston HI, Wallace CT)

15055nf GUAM KTWR Agana in IN *2157-2327*, IS, ID, relig pgm, mx, tlk (Alexander PA 4/7)

15100 MAI'I R. Beijing relay in EG 0300-0357*, "Current Affairs", classical mx, ID, cmntry, lang lesson, skeds (Tutak WA 4/13, Johnston KY 4/25, Jordan PA 4/17)

15105 YUGOSLAVIA RY in EG 0018, ID, sci & technology pgm, g (Tutak WA 4/26)

15110 SPAIN REE in SP 2240, nx, tlks, nx, ID, //17845 until 2245 (Prath FL 4/22)

15140 CHILE R Nacional in SP 0344, ads, guitar & orch mx, ID, nx, vg (Tutak WA 4/13)

15150 NETHERLANDS RN in SP *2230, ID, s/on "Happy Station" pgm, //9895 (Prath FL 4/15)

15160 HUNGARY R. Budapest in HG 2230, IS, ID, nx, //15220, 9835 (Prath FL 4/21)

15165 INDIA AIR Delhi in Burmese 1200-1215*, mx, rapid tlks, ID, f (Jordan PA 4/25)

151708 SOCIETY IS. RPO Papeete in FR/PT 0227, ezl & rock mx, tlks, nx (Barhydt OR, Karcheski MA) in FR 0740, Polynesian mx, ID, vg (Klinck NY 5/1)

15200 GUAM KTWR Agana in EG *0800, IS, ID, relig pgm, DX Magazine (Alexander PA 5/6)

15275 NO. MARIANAS KHBI Saipan in EG 2157, IS, ID, church svce (Paszkiwicz WI 4/22)

15310 BULGARIA R. Sofia in SP *2300, IS, s/on annmnts, ID, nx, QRM (Prath FL 4/14)

15330 BULGARIA R. Sofia in EG 2200, nx, mx, Macedonian historical tlk (Wallace CT 4/3)

15360 FRANCE RFI in EG 1645, "RFI Countdown", nx headlines, fgy, f (Carson OK 4/17)

15370 BULGARIA R. Sofia in PT 0010, end of nx, ID, tlks (Prath FL 4/15)

15425 SRI LANKA SLBC in EG 0135, relig pgm, TC, nx, ID (Ross ONT, Paszkiewicz WI)

15470 USSR R. Tashkent in EG *1200, ID, nx, mx request pgm, mailbag (Prath FL 4/28)

15485 AUSTRALIA RA in EG 1604, international rpt re Cambodia, f (Carson OK 4/19)

15495 KUWAIT RK in AR 0200-0500, holy Qu'ran pgm, nx 0300 (Bader DC 5/5)

15505 KUWAIT RK in AR 1300-0015, mx, nx 1700, sports 1730, ID, QRM (Bader DC 5/6)

15615 ISRAEL Reshet Bet in HB *0300, mostly tlk, some nx, ad (Barhydt OR 5/3)

15640 ISRAEL Kol Israel in EG 2135, nx, mx for Passover, g (Carson OK 4/14)

17545 ISRAEL Kol Israel Jerusalem in HB 2105, nx, songs, ID 2200 (Estes 4/29)

17575 NETHERLANDS RN in SP 2237, tlk, nx, ID, QRM from Israel, f (Estes 4/20)

17575 ISRAEL Kol Israel in EG 2133, local nx, mixing badly with RN (Estes 4/29)

17605 NETHERLANDS RN in IN *1230, ID, nx, tlks, //17575, 21480 (Prath FL 4/14)

17620 FRENCH GUIANA RFI relay in SP 2320, press reviews, ID, exc (Estes 4/29)

17665 USSR R Vilnius (Petrozavodsk relay) in EG 2218, sports pgm, g (Dillon TX 4/27)

17665 USSR R. Kiev in UK 2144, mx, ID (Carson OK) in EG 2347, feature (Estes 4/27)

17700 CHINA CPBS-2 Beijing in CH 1105, ID, into traditional CH mx (Prath FL 4/28)
 17715 SPAIN RNE in SP 2355, tlk, ID, mx about Nicaragua, g (Estes 5/1)
 17755 BRAZIL R. Surinam Int. in EG 1715, ID, mx, "Letterbox", f-g (Royston HI 4/2)
 17855 CHINA R. Beijing in EG *1200-1300, nx pgms, "Current Affairs" (Jordan PA 4/18)
 17860 ASCENSION IS. BBC relay in EG 1609, rpt on Council of Europe, g (Carson OK 4/19)
 17880 TURKEY VOF in EG 2200, IS, nx, feature, mx, //9445 (Prath FL, Lackmann VA)
 17895 KUWAIT RK in AR 0400-0600, nx, press review, mx, ID, local svce (Bader DC 5/3)
 21490 PAKISTAN RP in Urdu 0110-0245, tlk, vocals, into EG 0230 (Estes 4/26)
 21520 GREECE VOA relay Kavala in Urdu *1330-1430*, nx, interviews, IS (Jordan PA 4/21)
 21555 SPAIN RNE in SP 2330, ID, mx, political tlks, //9360 (Estes 4/22, Prath FL 4/14)
 21565 COSTA RICA RPFI in GM/EG 2309-0000*, tlks, ID in SP,GM,EG, features (Jordan PA)
 21650 VATICAN STATE VR in Esperanto 1900, IS, ID, tlk, //17730 (Prath FL 4/22)
 21660 ASCENSION IS. BBC relay in EG 1440, rugby, "Newsreel", f (Carson OK 4/21)
 21675 KUWAIT RK in AR 1200-2100, mx, ID, Qu'ran (Bader DC 5/7)
 21695 SWITZERLAND SRI in EG 1350, "Listener's Letters", mx requests (Prath FL 5/6)
 21715 HONGKONG BBC relay in EG 0728, Tokyo stock rpt, orch mx, ID, exc (Tutak WA 4/11)
 21740 AUSTRALIA RA in EG 2222-0045, mx, ID, fgys (Montgomery 4/28, Estes 4/22)
 25680nf SWITZERLAND SRI in Esperanto/EG *1315-1400*, "Deadline Saturday" (Jordan PA 4/7)
 25795nf YUGOSLAVIA RY in EG *1200-1230*, nx, folk mx, tlks, p (Jordan PA 4/16)

CLANDESTINES

7340 COSTA RICA LV del Cid in SP 2315, pop mx countdown, ID, //9940 (Prath FL 4/22)
 116197 EGYPT Iran' Flag of Freedom R. in Farsi(p) *0329-0400, IS, multi-lingual ID's, military band mx, ME mx, //9045 on some nights (Alexander PA 4/13)

PIRATES

7368v Hope Radio International in EG 0016-0036*, "DX Corner", ID, address, satire on plight of American Indians (D'Angelo PA) Also hrd on 73756 (Johnston KY) on 7385 (D'Angelo PA) 7400 (Renfrew NY)
 7390 Black Time Radio in EG 0125, Whites doing Black voice imitations (Johnson MD)
 7395 Radio USA in EG 0135*, ID, slogan, ads for collectibles, ancmts (D'Angelo PA)
 7400 Radio Free Texas in EG 0225, Sonny & Cher song, tlk re QSL rpts (Aden ID)
 7403v WKZR Meontological Research Radio in EG 0104, strange mx, address, ads from TV show "Outer Limits", phone messages (Johnson MD, Alexander PA)
 7410 One Voice Radio in EG 0001, cmntry re article from 1989 New England Journal of Medicine, apparently a one-man operation, ask listener feedback (D'Angelo PA)
 74148 Voice of Monotony in EG 0009, rap mx, ID (Alexander PA)
 74148 East Coast Pirate R. in EG 2358, ID'S, QSO with WKZR, V of Monotony, Radio USA, WKZP, Rockabilly R., and Samurai R. in combined bcst over one xmtr (Renfrew NY, D'Angelo PA, Alexander PA)
 7415 CHGO in EG 0010, Beatles and Stones rock mx (D'Angelo PA)
 7415 KFBA Broadcasters of Free America in EG 0008-0040*, rock mx, TC, ID, Popular Communications address for reports (Alexander PA)
 74155 Radio Free Yesteryear in EG 0247, mx oldies, f (Barhydt OR)
 7416 WENJ in EG 0039*, phone nos, ID, goodbyes w/oldies in background (D'Angelo PA)
 74865 V of the Kentucky Fried Rodent(sic) in EG 0010-0027*, said hello to ACE, NASWA, and SPEEDX. DJ was (what else?) Col. Sanders. ID's, pops, oldies (Alexander PA)
 74936v R. Mauser Worldwide in EG 2148-0010*, address, ID's, Beatles mx, IS of musical horns fanfare, strong sigs rptd (D'Angelo PA, Alexander PA, Karcheski MA)
 7546 WRI? in EG 0409-0415*, rock mx, ID "The Voice of the Northern Hemisphere" exc signal, anncr said goodnight and cut carrier immediately (D'Angelo PA)

I trust that I didn't butcher these Pirate reports too badly but with the shifting freqs, the simultaneous broadcasts etc., it is hard to make sense out of some of these reports. Some reporters are still sending me full pages of loggings that I have to clip apart in order to collate the material. I hope that those who have been doing this will take the trouble to do this chore themselves in the future since it takes a great deal of time to sort out the hundreds of loggings. Thanks to all who contributed this month.

English Schedules

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

Prepared 05/23/90 at 7:01 AM

Thanks to John Carson (OK), Kris Field (PA), Gordon Darling (Papua New Guinea), Joe Hanlon (PA), Nick Terrence (NY), and Andy Sennitt of the WRTH for material this month. Also thanks to both Fanus Venter and Pieter Martins of R RSA for their revised schedule received by fax.

Notes

R Prague Int'l returned to the air May 7. The schedules for English to Europe and NA are in the accompanying list. R Baghdad has moved to 13660 kHz at 20-22 to Europe. This release is stronger than the later NA broadcast. RFPI Costa Rica can only be heard on 21566 as 13660 is covered by Baghdad. The evening transmission has shifted up 2 kHz to 7377 to provide better reception. R New Zealand Int'l used to be heard during the afternoon hours here, but in mid-May R Moscow and R Stn Peace & Progress in Spanish landed on 17680. R Moscow also forced R Nederland to shift to 15560 from 15315 at 0030, effective UTC May 10. R Moscow changed many frequencies in May and is announcing use of the 11 meter band circa 10 and 11 UT. Early Saturday morning is a nice time to catch HCJB and TWR Bonaire with good signals. DX Party Line airs at 1020 on 9745 kHz, and Bonaire Wavelength follows at 1130 on 11815 (slightly better than on 15345 here). A

revised (effective May 18) VOA broadcast schedule listing all languages is now posted on the Pinelands RBBS and may be downloaded as VOA_MAY.TXT. The schedule is valid until September.

R Moscow's new WS frequencies noted here in late May:

9710	21-22	9800	21-22
11630	20-22	11745	21-22
11775	21-22	11780	21-22
11840	10-22	(v Cuba)	
11890	20-22	12040	21-22
12050	19-22	13605	20-22
15110	11-13	15130	10-13
15185	17-21	15315	20-22
15355	20-22	15375	16-19
15405	10-12	15535	10-11
15550	10-14	15585	10-13
15590	10-12	17665	12-13
17670	15-20	17695	16-21
17765	11-12	17775	10-11
17790	12-13	17815	10-15
17830	12-15	21655	10-14
21690	10-16	21725	10-11
21785	12-15	21800	10-12

R RSA

Unfortunately the revised schedule arrived just after the bulletin went to press last month, but the full schedule was posted the next day on the Pinelands RBBS and distributed to all BBSs on the FidoNet SW echo. The best opportunities for us in NA to hear the English broadcasts are 11-16 UT on 17835 (but co-channel with R Swiss Int'l) and 18-19 UT on 17765 and 25270. The full English-language schedule is in the listing this month.

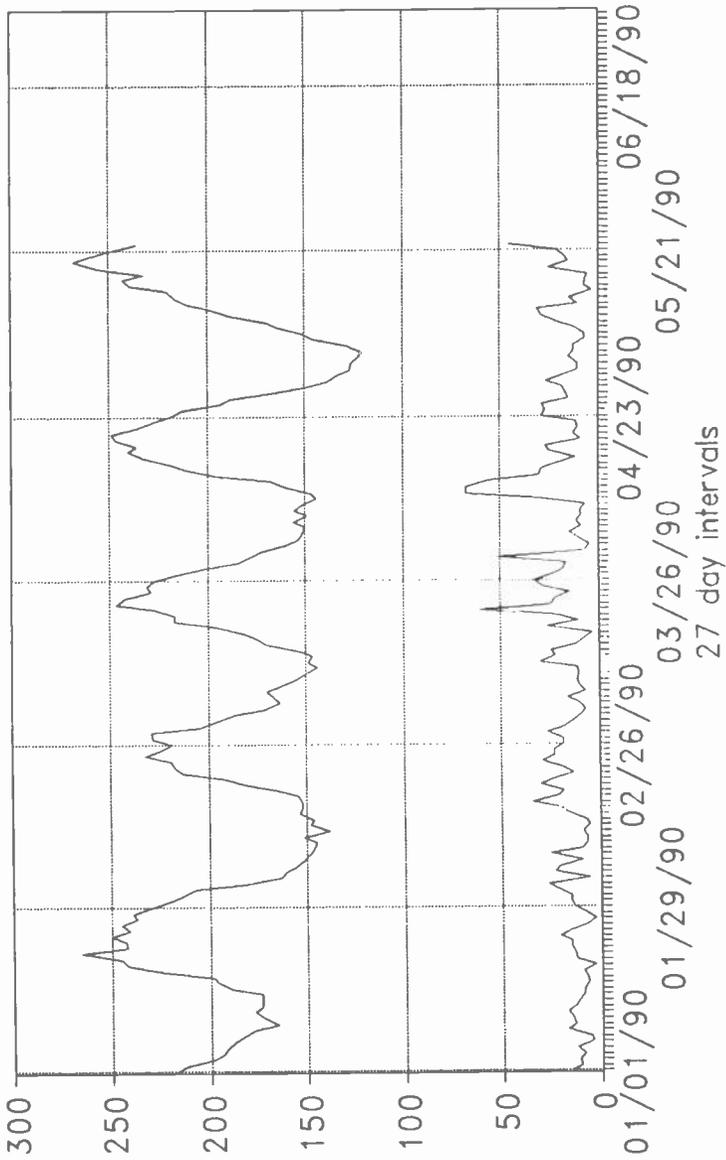
Changes entered between 04/26/90 and 05/24/90.

ENGLISH LANGUAGE BY BROADCAST SCHEDULES: By Start Time
Compiled by Thomas R. Sundstrom, W2XQ

Start 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 0100	China	R Beijing	17705	15100							EMA/WMA	#1&2 v Heli	05/22/90
0000 0015	Czechoslovakia	R Prague Int'l	11990	11680	7345						MA		05/09/90
0000 0100	USA	R Moscow	15205	11695	11580	9815	9775	9455	6130	5995	Caribbean/Americas	alt pgn #1,3,4,5,8	05/19/90
0000 0100	USSR	R Hoerlnd	15223	13315	15290	13605	12040	11980	11850	11780	EMA		05/15/90
0030 0125	Netherlands	R Hoerlnd	11580	6165	6020						MA	#1&2 v Bonaire	05/11/90
0100 0130	Czechoslovakia	R Prague Int'l	11680	7345	5930						EMA		05/09/90
0100 0200	USA	R Moscow	15205	11380	9815	9775	9455	6130	5995		Caribbean/Americas		05/19/90
0100 0200	USSR	R Hoerlnd	15223	13315	15290	13605	12040	11980	11850	11780	EMA	often delayed start	05/15/90
0130 0230	Iraq	R Berlin Int'l	11820	1910							MA/SA/Ind/Pakis		05/05/90
0145 0250	German Dem Rep	R Berlin Int'l	15240	13160	13610	11890	6080				CA/WA		05/22/90
0200 0250	Fed Rep Germany	R Deutsche Welle	17700	15335	11845	11835	9690	9615	7285		S As		05/20/90
0200 0255	Romania	R Romania Int'l	15330	11640	11830	9570	9510	5990			MA		05/15/90
0200 0300	USSR	R Moscow	15425	15315	15290	13605	12040	11980	11850	11780	EMA		05/23/90
0230 0300	Albania	R Tirana	11825	9500							MA		05/16/90
0250 0300	USSR	R Yerevan	15180	11790							MA		05/14/90
0300 0400	Bulgaria	R Sofia	15290	11720							MA		05/19/90
0300 0400	China	R Beijing	15100	11715	9490						MA		05/22/90
0300 0330	Czechoslovakia	R Prague Int'l	11680	7345	5930						EMA/EMA	#1 Hali #3 Spain	05/09/90
0300 0345	German Dem Rep	R Berlin Int'l	9730	6080							MA		05/09/90
0300 0330	USSR	R Moscow	15425	15180	12040	11980	11850	11710			MA	#1&2 WMA	05/19/90
0305 0505	South Africa	Radio Drama	3215								US/WMA		05/15/90
0315 0645	Costa Rica	R for Peace Int'l	7377										05/05/90
0330 0400	Albania	R Tirana	11825	9500							MA	Tu-Sa:USB mode	05/23/90
0330 0400	Japan	R Japan	17835	17825	17810	17765	15195				GOS/Asia		05/14/90
0345 0430	German Dem Rep	R Berlin Int'l	13760	11890							MA		05/22/90
0400 0500	China	R Beijing	11840	11685							MA/EMA	#2 v Fr Guinea	05/19/90
0400 0415	Czechoslovakia	R Prague Int'l	11680	7345	5930						MA		05/22/90
0400 0450	Fed Rep Germany	R Deutsche Welle	15265	11765	11765	9565	7225	7150			SE/EE Afr		05/09/90
0400 0425	Romania	R Romania Int'l	15380	11940	11830	9570	9510	5990			MA		05/16/90
0400 0530	USA	VOA	15205	11785	7200	7170	6140	6040	5995	3980	WE/N Af/EU	#8 0430-	05/03/90
0500 0550	Fed Rep Germany	R Berlin Int'l	11845	11705	9670	6120	5940				MA		05/22/90
0500 0600	Japan	R Japan	17890	17825	17810	17765	15195				GOS/As/NA/Oceania		05/15/90
0505 1640	South Africa	Radio Oranje	7285										05/23/90
0530 0555	Romania	R Romania Int'l	21665	17790	17745	17720	15380	15340			Afr		05/19/90
0545 0630	USA	VOA	15205	11805	11785	9715	7325	7200	7170	6140	WE/N Af/EU	#2,5,9 0600-	05/23/90
0600 0700	USA	VOA	21540	15445	13690	13610	11970	9730	7185	6115	As/Af/WE/EU		05/19/90
0630 0700	Czechoslovakia	R Prague Int'l	11915	9575	9540	9530	7280	6125	6080	6035	Africa		05/20/90
0645 0715	Romania	R Romania Int'l	21705	17840							As/Pac		05/23/90
0645 0715	Romania	R Romania Int'l	21665	17805	17720	15335	11940	11810			SE As/EMA/EU	#1,3,4,6 Sa-Su	05/23/90
0828 0855	Netherlands	R Berlin Int'l	21465	11785	9730	7185	6115	6040			MA	M-Sa	05/15/90
0900 0950	Fed Rep Germany	R Berlin Int'l	21680	21650	21600	17820	17780	15410	11740	9565	Aus/As/S/SE/EE Afr		05/23/90
0900 1000	Japan	R Japan	21540	21465	11890	11785					Far E/EMA	#2 Sa-Su	05/02/90
0910 0940	Mongolia	R Ulan Bator	21610	11840							GOS/As/Oc		05/12/90
0930 1030	Afghanistan	R Afghanistan	21600	17655	9635	4940					AUS	v USSR escr #3	04/28/90
1000 1100	India	AIR	21735	17865	17387	15335	15050				GOS/NE As/AushZ		

Solar Flux & A-Index: Jan-Jun 90

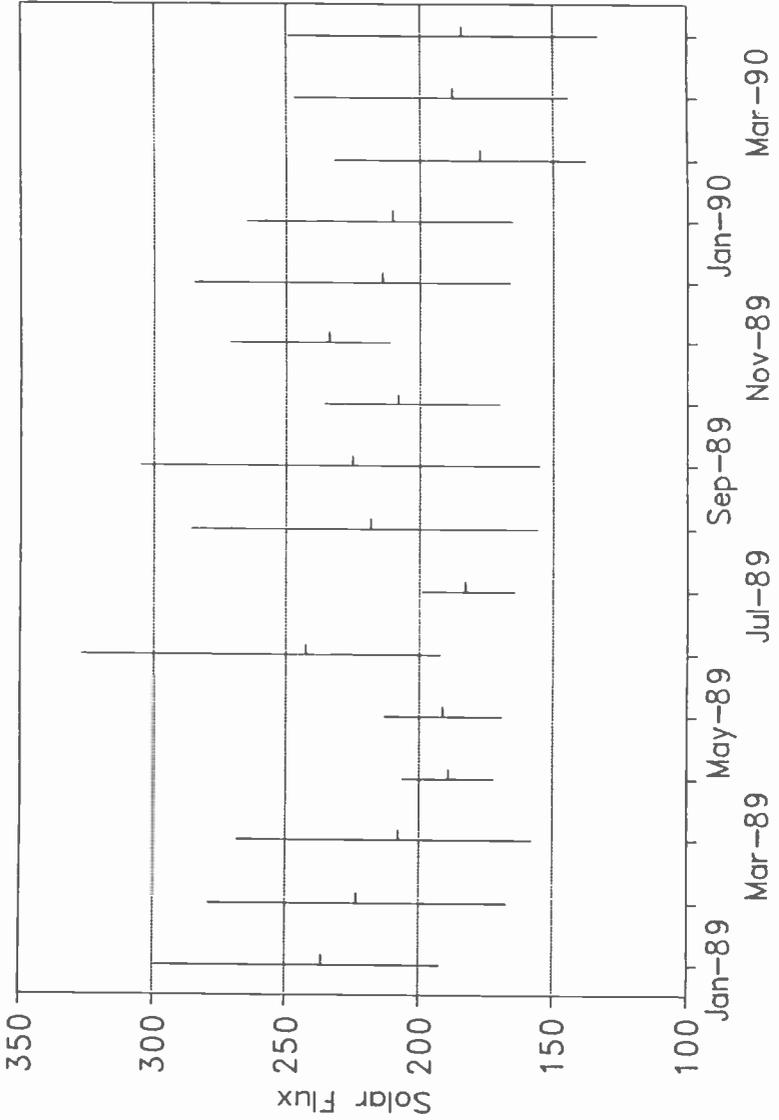
Recorded from WWV



by Sundstrom

Solar Flux: 1989-1990

Monthly High-Low-Average



PUBLISHER'S PAGE



NO COLLECT CALLS ON THESE ADS, PLEASE

FOR SALE: Drake R7 general coverage receiver. Fully equipped with all accessories and in mint condition. Price \$975.00, I pay shipping. Victor Barz, 8198 T Drive North, Battlecreek, MI 49017. Phone (616) 965-4529 before 1330 UTC or after 0000 UTC.

WANTED: Hallicrafters "S" series such as the S-38 (any series), S-120, etc. in good working condition. Also want low-priced National SW receivers. Please let me know what you have and price desired. Tom Mooningham, P.O. Box 487, Maugansville, MD 21767-0487.

WANTED: Contact with anyone who purchased a Reid Enterprise PI5K interface for Kenwood R-5000. This was marketed in 1988. Call (503) 653-0319 after 0100 GMT or write: Bruce Lindner, 10603 SE Home Avenue, Milwaukie, OR 97222.

FOR SALE: 10:1 matching transformers for beverage antennas. \$17.00 each plus \$2.00 shipping. Steven R. Lare, 824 West 25th Street, Holland, MI 48423.

WANTED: Allied SX-190 SWL receiver. 1978 abd 1980 through 1983 issues of the World Radio-TV Handbook (or good photocopies of the equipment review sections ok). Service manual (not copy) for Sony ICF-6800W. Alan Johnson, 6001 Goldsboro Road, Bethesda, MD 20817. Phone (301) 229-7069 evenings.

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. "Passport to World Band Radio" '89, \$9.50. FRENDX '89, \$9.00. WRTH '87, \$8.25, '89, \$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.

DECALCO MANIA, the club for fans of radio, is holding its annual summer meeting of all radio fans, during the weekend of August 17th to 19th, 1990, in Arlington Heights, IL. All people with any interest in discussing radio, or trading broadcasting promotional materials (such as stickers, T-shirts) and airchecks (recordings), are invited to attend this get-together.

Being "Fans of Radio", the DecalcoMania club will be doing radio things, such as a station tour or two or ?, and it goes without saying that there'll be a "promotional item smorgasbord" (a tasty layout of stickers, music surveys and other radio station collectibles to feed your curiosity if not your collection). Please note that non-members of DecalcoMania are invited to participate in this meeting, and will not be treated as "outsiders".

If you are even considering attending this radio-fan meet, please be sure to send a self-addressed stamped envelope to the get-together host, to receive full information:



Mark Strickert
3852 N Oconto Ave
Chicago IL 60634

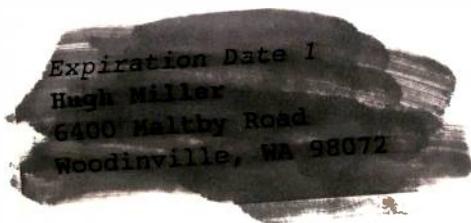
Lodging/meeting arrangements are still being made, but will be finalized before most of you see this announcement.

The DecalcoMania club is not limited to just "stickers", "tapes" or even only "commercial" radio. Members are interested in a wide variety of topics, and say so in the club's regular newsletters. A sample copy of a current club bulletin can be ordered for \$1.25 [\$1.30 to Canada/Mexico, or \$2.25 to other countries] in US funds or unused postage stamps.

North American Shortwave Association
45 Wildflower Road
Levittown, Pennsylvania 19057

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

Assistant Executive 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: Tom McElvy, P.O. Box 9645, Norfolk, VA 23505-0645

Technical Topics: Ted Benson, WA6BEJ, 14705-B Watsonville Rd., Morgan Hill, CA 95037

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: John Kapinos, 86 S.

Quinsigamond Ave., Shrewsbury, MA 01545

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

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Destinations: Mitch Sams, P.O. Box 780075,

Wichita, KS 67278; Don Moore, 20108 Hayes

Rd., Big Rapids, MI, 49307; Chuck Rippel, 1272

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

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