

NASA

The
Journal
of the
North
American
Shortwave
Association

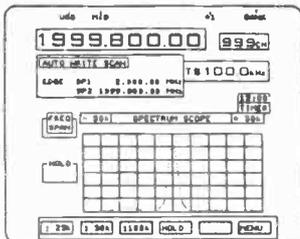
Volume XXX, Number 3
March, 1990

UNIVERSAL SHORTWAVE

ICOM R-9000



CRT DISPLAY



The Icom R-9000 is a revolutionary all-mode, super wide-band receiver that continuously covers a frequency range of 100 KHz to 1999.8 MHz. The most visible of the radio's many advanced features is the built-in multi-function CRT display. Receive frequencies, modes and additional useful data are displayed for your operating convenience. The CRT functions as a spectrum scope to show you, at a glance, the relative signal strengths of nearby receive frequencies. The span of the spectrum scope can be selected for ± 25 , ± 50 or ± 100 KHz according to your needs. The screen can also display the contents of 10 memories at once, and can be scrolled to display other memories. The CRT can also be used as a display device to monitor RTTY or packet via an ASCII RS-232 input port (external data converter required). A total of 1000 memories (ten banks of 100) store frequencies, mode, filter width and tuning step increments. You can use different memory banks according to station type, frequency ranges or whatever your preference. By using the memory list screen, many more convenient functions are provided: up to eight character notes for your reference; and the advanced super convenient memory editor (function easily moves, copies and deletes the memory contents. Tuning step: 10 Hz, 100 Hz, 1 KHz, 5 KHz, 9 KHz, 10 KHz, 12.5 KHz, 20 KHz, 25 KHz and 100 KHz. The R-9000 has seven different scan functions with adjust scan speed up to 13 channels/sec. *Program Scan* scans between pre-programmed scan edges. *Memory Scan* scans memory channels. *Selected Number Memory Scan* scans memory channels with the same programmed mode. *Priority Scan* monitors specified memory channels. *MF Scan* scans around the receiving frequency. *Auto Memory Write Scan* programs receive frequencies into memory channels (900-999) during programmed scan. The R-9000 provides versatile scan resume functions when a signal is received: the scan cancels, pauses until a signal disappears, pauses for an adjustable time, or pauses for the mixed conditions of signal activity and time. Also a new *Voice Scan Control* system allows you to skip inconvenient signals such as signals with no modulation, hiss or noise.

SPECIFICATIONS

Dimensions	16.7"W x 5.9"H x 14.4"D
Weight	44.1 Lbs. (56 Lbs. ship)
Frequency Range	1 - 1999.8 MHz
Power	110 - 120 VAC 60 Hz
Antenna Impedance	50 ohm (400-500 ohm ²)
Selectivity (-6dB)	AM 6 KHz SSB 2.4 KHz CW .5 KHz FM-N 6/15/30 KHz FM-W 150 KHz
Sensitivity	16 μ V 1.6-30 MHz 32 μ V 30-999 MHz
Freq. Stability	± 25 Hz 1-30 MHz
Inter. Freq.(MHz)	1st IF= 48.8 (1-30) 1st IF=778.7 (30-500) 1st IF=278.7 (500-1000) 2nd IF=10.7 3rd IF=455 4th IF=10.7
Antenna Jacks	1-30 MHz SO-239 1-30 MHz RCA 30-1000 MHz N 1000-1999 MHz N HP Antenna Two

Superior interference rejection is achieved with both IF shift and notch filters. Control features include dual clocks with two kinds of sleep timers and five independent daily timers. Noise reduction is accomplished with a threshold selectable wide-narrow noise blander. The squelch can operate by meter or noise level. A keypad is provided for rapid frequency entry. The output of the CRT can be routed to an external monitor, and the CRT can act as a monitor for an external or internal video source. See TV or your RTTY decoder on the CRT! Mounting handles for standard 19 inch racks are included. Rear jacks include: DC Out, Ext. Spkr., Record Remote, Speech Out, Line Out, IF (10.7 MHz) Out, Video In & Out, Data In, Acc., plus 4 antenna jacks (see specifications). The R-9000 is on display at Universal now.

LIMITED WARRANTY

Standard Manufacturer Warranty:	365 days
Optional Extended Warranty To:	548 days
Order #1585	\$49.00

PRICING

R-9000 List Price	\$5459.00
R-9000 Discount Price	
Order #0419	\$4795.00
Shipping/Handling/Insurance	\$28.00

OPTIONS AND ACCESSORIES

◆ Icom UT-36 Voice Synthesizer	Order #3002	\$33.95
This option tells you the frequency and mode at the press of a button.		
◆ Icom SP-28 Speaker	Order #1672	\$139.95
Matching speaker for improved tonal quality. Includes audio filter. With audio cable.		
◆ Icom CT-17 CI-V Level Converter	Order #2771	\$89.95
For remote control using a personal computer with RS-232 port.		

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

STORE HOURS

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

Serving Listeners Since 1942!

Universal Shortwave Radio

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

NASWA Notes

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



It seems like only yesterday that I was talking with Tom Sundstrom, W2XQ, on the local 2 meter repeater about shortwave listening. That conversation took place in October, 1986 and my interest in the radio hobby hasn't been the same since. Although having been a ham for 20 years, I had no idea that NASWA or any other clubs existed and I can remember being very impressed in receiving the sample bulletins from some of the clubs. Besides the content of these sample bulletins, I was most impressed with the fact that these bulletins were being produced by clubs through the volunteer efforts of their members. I joined a few of these clubs, including NASWA, and quickly found that SWL'ing began to consume much more of my time at the dials than hamming.

Our family vacation during the summer of 87 was to be a car trip to Chicago to visit my folks. We went to Chicago, but took a slight detour through Toronto and visited the ANARCON convention. It was there that I met Chuck Rippel and Harold Cones. Since that initial meeting, we've spent many hours talking about NASWA and how we could work together to help serve the membership. We wanted to give something back to the hobby that we loved and quickly found ourselves involved with the details of membership, publishing, and promoting NASWA. In every organization there are those folks who like to get involved and those who choose to follow. I'm the type of person that likes to get involved and I guess that's why I'm here.

I won't belabor this much longer, but I thought you might like to know a little of the background behind my becoming your new Executive Director. It's been fun working with Chuck and seeing the new *Journal* take shape and become a reality. My close proximity to headquarters in Levittown will allow for even closer communications with our publisher, Bill Oliver. I have passed the

wand of Assistant Director to Kris Field of Ambler, PA. Kris and I have been close friends for many years, (he was an usher in my wedding 18 years ago), and we talk daily about happenings within the hobby. Kris lives in close proximity of Levittown as well and will be an asset as my assistant.

Naswa Notes

Sorry I couldn't get more creative with a name for my new column, but NASWA Notes really is representative of the theme that I'd like to build on. I'll try to keep you informed with headquarters news and member feedback. In cases where I receive a letter that should be responded to through another column, I'll pass your letter along to the appropriate editor. I will enjoy hearing from you, but please also consider supporting your editors directly with contributions. Sending a simple thank you note for the job they do for NASWA will be greatly appreciated by them.

New Member Packet

As a result of the fine efforts of members Vern Hyson and Dr. Harold Cones, an updated New Member Packet is hot off the presses and ready to go. All new members will receive the packet upon joining NASWA. Any current member may send a request to Bill Oliver at headquarters and receive a packet as well. 45 cents in stamps will be gladly accepted to help offset the expense to the club for mailing, but is not mandatory to receive a packet. The packet contains info about NASWA, *The Journal*, abbreviations, and how to submit logging and QSL information.

Where's The Survey Results?

I was hoping to get all the surveys tabulated by this issue of *The Journal*, but unfortunately the report is not yet ready. We received just under 400 surveys which is

quite a return according to statistics I've read. I created a database on the computer in which to gather the information, but it is a time consuming process to enter it all in. Kris has volunteered to help and hopefully we can get the data finalized soon. Just because we haven't reported on the surveys yet doesn't mean we haven't used them. Many of the comments and letters received with the surveys guided us towards the changes that you have seen within *The Journal* the past 2 months. As soon as I can report some statistical information I will.

Conventions/SW Meetings

By the time you read this, the 3rd WinterFest will be history. It sure is great to meet and talk with other SW hobbyists and the WinterFest gives many of us here in the East that opportunity. The ANARC conventions have long been gathering places for SW hobbyists as well. But what do you do if you can't get to one of these events for whatever reason and you would like to meet some fellow NASWA members? Well, you could do a couple of things. You could organize your own "Fest" in your part of the country. I'd be glad to give you some pointers, it's not all that difficult. Just needs someone to take the ball and run with it. Secondly, you could inquire through headquarters as to what other NASWA members live close by and contact them to see if perhaps they would like to gather some Saturday morning for breakfast at a central location. Our membership list is computerized and we could do some searches by zip code or city. If you would like to take advantage of this, please drop in a couple of dollars with your request to offset the mailing and printing expense. Send your request either to Bill at headquarters, or myself. It would be kinda neat to see how many NASWA "chapters" form around the country.

Anarcon 1990

Speaking of ANARC conventions, I'm pleased to report that this years ANARCON will take place in Virginia Beach, VA the weekend of Sept. 14-16, 1990. It will be held in conjunction with the Tidewater Hamfest and the Radisson Hotel (804)422-

8900 will be the convention headquarters. Hotel reservations are being accepted directly with the Radisson. Mention the Tidewater Hamfest to get the special room rates of \$55/\$65. I'll report more details as available.

Around The Watercooler

I heard a rumor that Fr. John Eckert has received a verification from the station in the Azores, R. Clube do Angra reported on 13584. If Sam Barto doesn't have the scoop this month in QSL Reports, be sure to watch for it in April. I'm told that their schedule is Monday, Wednesdays, and Fridays. I've heard a het but no audio, oh well.

Are We A Little Late?

Please excuse us if your *Journal* arrived 5 to 7 days later than usual this month. We cut Bill a break and let him enjoy the WinterFest on the last weekend in February rather than making him assemble *The Journal*. As such, it got to the printer slightly later than normal.

WRTH Feedback

Following the release of the 1990 edition of The World Radio TV Handbook, user comments indicated dissatisfaction with the omission of certain types of information. Examples of omissions were verification signers, interval signal data, and English language schedules. In response to this early feedback, Editor Andy Sennitt is now soliciting specific suggestions as to content and organization for future handbooks. The publisher of the WRTH is sensitive to street price and number of pages as constraining factors. Comments can be addressed electronically to Andy Sennitt either via the Pinelands RBBS (609)859-1910 or the ANARC RBBS (913)345-1978. If you can't comment via modem, mail your comments to Tom Sundstrum at the address on the back cover of *The Journal*. Tom will be happy to pass your comments and suggestions on to Andy.

That's it for this month. I'm looking forward to your comments and news for NASWA Notes.

DXer's Forum

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



Want to add a special touch to your QSL collection? Vern Hyson checks in to the Forum with a nice, low-cost idea. He uses flags of the world, placed next to the appropriate QSL in his album. Vern recommends the Rand McNally Cosmopolitan Series Map of the World, which includes 168 flags in color. This map, number 83161-5 lists for \$2.95 but Vern found it for \$2.06 at his local office supply store. Thanks for the idea Vern!

This month our feature article comes from Kevin Atkins, member of NASWA's GRAFCOM (Graphics Committee) and an accomplished DXer. Many of you expressed your appreciation for Kevin's last effort for DXer's Forum, which gave a great explanation of using ECSSB as a DXing technique. This time Kevin continues in the instructional vein, and tells us about a wide range of techniques he uses to separate the desired signal from the interference that always seems to plague tough DX. I'm sure you'll agree with me that Kevin has produced another top-notch work for all our benefit. Thanks!

Hearing the Right Stuff

by Kevin Atkins

The good news: *Radio Whatsawatt* is active on 5955. The bad news: so are VOA, BBC, WYFR, a half-dozen utes and your neighbor's microwave. One can only guess how many newcomers to DXing have been daunted by the challenge of separating the wheat from the chaff. Despite repeated attempts, they can't hear that rare station—but **Log Report** shows that a few people have somehow managed to do so.

There is no single solution to the problem, because it's not a single problem. Many obstacles stand between a DXer and his or her target, and it takes a combination of techniques to overcome them. You need the right equipment, a little specialized knowledge, and a lot of common sense.

Let's take a look at four types of interference: co-channel QRM, adjacent-channel QRM, noise (both manmade and naturally occurring), and "things that aren't there," and see what can be done to overcome them.

Co-Channel QRM

Stations sharing the same frequency is an obvious problem throughout the shortwave spectrum, and it's not going to get any better. The sharpest bandwidth filters are no help when several stations are piled atop one another. There are a few solutions in the "common sense" category, though:

Find a window. Is there a period during the desired station's schedule when some of the co-channel stations are off the air? Several DXers logged Malawi on 5995 a few years ago during a 15-minute period when BBC was silent on the frequency...outside this window, it was practically impossible.

Failing a scheduling solution, look for a time when propagation patterns make the interfering stations inaudible. For example, the Indonesian RRI Fak-Fak on 4789.8v is often audible around 1000 UTC, but it suffers severe interference from the Peruvian Radio Atlantida on 4790. The best time to hear Fak-Fak is

after sunrise in Peru, when Atlantida fades out.

To determine sunrise/sunset times, you'll need a DX Edge (a Miller cylindrical projection map with overlays showing darkness paths), sold through most SW retailers, or one of the many computer programs that do the same thing.

Don't ignore the obvious solution of checking log reports to see if other DXers (and particularly those in your area) are hearing the station during a certain time frame. This may cut out some of the detective work.

Catch an Opening. Mother Nature smiles on us from time to time with enhanced reception from certain parts of the world. During such times, the weak signal you're after may get strong enough to rise above others on the frequency. For example, Radio East New Britain in Papua New Guinea is normally the dominant station on 3385 kHz at dawn in Alabama. Occasionally, bits & pieces of signal from the Indonesian RRI Kupang can be heard weakly under the PNG. But every now and then (no more than a half-dozen times over the last two years), Kupang will inexplicably surface with excellent signals, totally dominating the PNG.

These openings are somewhat seasonal in nature, and are influenced by a number of factors that are difficult to predict. They usually affect reception from a limited geographical area—if you look at the map, for example, you'll see that the stations in the above example aren't that far apart from a global perspective.

There are many reference works on this subject, the best-known of which is *The Shortwave Propagation Handbook* by George Jacobs and Theodore J. Cohen. Also, *Fine Tuning's Proceedings* has featured excellent propagation studies for the last two years. It is a fascinating subject which is still not fully understood. No one has managed to develop a foolproof method of predicting propagation openings aside from the obvious one: CHECK EVERY DAY! It's purely a matter of playing the odds, and daily checking is the best way to improve those odds. Rare is the DXer who can't tell stories about a station he heard once, but never again.

There are certain *daily* propagation factors you can count on, though. If you haven't ordered that DX Edge already, do it now—the majority of really tough DX catches coincide with sunrise or sunset at the transmitter or receiver site, or both. This is one of the aforementioned “not fully understood” phenomena, but its existence has been repeatedly proven by observation. It's a quite remarkable effect that must be heard to be appreciated...Indonesian RPD's rise above the noise for a few short minutes at your local dawn, and then they're gone; a rare Bolivian peaks at a listenable level for a quarter-hour at your sunset, & suddenly fades.

Some of the most dramatic examples of propagation enhancement occur when sunset or sunrise occurs simultaneously at your location and at the transmitter site, or when it's sunset at one and sunrise at the other. This is called a *grayline* condition, and whatever signal enhancement is taking place is doing so along the entire signal path.

The Cerebral Filter. Credit for naming this piece of “equipment” goes to Al Sizer, but anyone who's raised children already knows about it. How many times have you muttered to yourself, “They only hear what they WANT to hear?”

Somewhere on the road to adulthood we seem to outgrow this useful ability, but it can be partially recaptured with practice. I usually tape my loggings for reception report details, and it never ceases to amaze me when the clear ID or slogan I heard when listening intently to the “live” signal slips by me on a later “casual” replay. I usually have to replay the tape from the beginning and concentrate on the desired signal for several minutes to fully recapture the effect of my cerebral filter. The moral is, don't give up just because it's QRMed; you might still manage an ID. Just be sure you don't want to hear one so badly that you fool yourself.

Adjacent Channel QRM

The 5 kHz separation of stations on the international bands lends itself to the idea of “channels.” On the tropical bands, one must often deal with separation of less than 1 kHz. For practical purposes, con-

sider a "channel" to be equivalent to the nominal width of your receiver's narrowest bandwidth filter. What gets past the filter and interferes with the tuned signal is adjacent-channel QRM.

The same common-sense solutions to the co-channel QRM problem apply here, but we can add a few hardware options as well. Most tabletop receivers (and many of the better portables) offer a choice of bandwidths. Narrower bandwidths allow a smaller segment of the frequency spectrum to be received, thereby reducing interference from nearby stations. Another useful technique is exalted carrier single sideband (ECSS) tuning (see DXer's Forum in the January, 1989 *Friends*). By tuning an AM signal in upper sideband mode, you can virtually eliminate low-side QRM; vice-versa in lower-sideband.

These basic tuning techniques will liberate many signals, but the demanding conditions on the tropical bands often require more. Few filters are sharp enough to fully separate signals 1 kHz apart, and heterodynes ("whistling" tones produced when the carriers of two stations are detected close together) range from annoying to deafening. Fortunately, many receivers offer ways to deal with these problems.

Passband tuning allows the listener to shift the receiver's passband relative to the tuned frequency, hopefully keeping the offending signal outside the filter's bandwidth while keeping the desired signal in (Figure 1A, 1B).

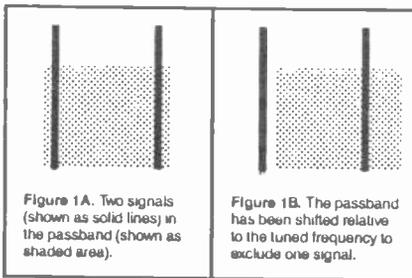


Figure 1A. Two signals (shown as solid lines) in the passband (shown as shaded area).

Figure 1B. The passband has been shifted relative to the tuned frequency to exclude one signal.

Notch filters place a moveable "null" at your control. By tuning a notch through

the passband, it is possible to find and null a narrow frequency range (Figure 2A, 2B). Heterodynes can be greatly reduced or eliminated, and the most offensive parts of RTTY, fax and the like can be dampened. If the width of the notch is sufficient, even high-frequency "splatter" from adjacent-channel voice or music can be reduced.

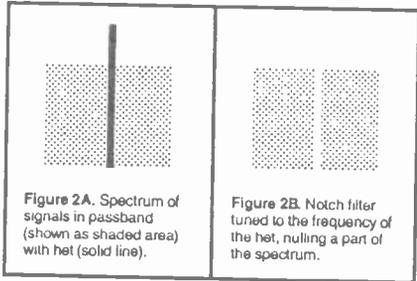


Figure 2A. Spectrum of signals in passband (shown as shaded area) with het (solid line).

Figure 2B. Notch filter tuned to the frequency of the het, nulling a part of the spectrum.

Audio filters are add-on devices which are often employed with receivers that have no built-in notch, but they are capable of far more than notching. They also include "peak", "highpass", and "lowpass" functions.

While a receiver's notch filter removes an offensive frequency in one of the IF stages before amplification, the AF (audio frequency) notch works with the receiver's audio output, much like a very selective graphic equalizer. While it is technically more desirable to remove the offensive signal before the audio stage, it is quite useful to have both. I use my Icom R-70's notch for very strong heterodynes, but in less demanding situations I find that an AF notch removes the "het" nicely and leaves the remaining audio more natural-sounding. Many audio filters have two notches which operate independently; add those to the receiver's own notch and you'll never fear hets again.

The "peak" function of an audio filter is the opposite of a notch; it is designed to enhance a narrow tonal range and suppress everything above and below. It is useful for CW reception, but has no broadcast DX application.

The "lowpass" and "highpass" functions are quite useful. Lowpass allows the

Thoughts on the Soviet Republics

by Al Miller

Over the years, at various times, some NASWA members have taken the Country List Committee to task for treating the 13 or so Soviet Republics as separate countries. The committee was accused of merely trying to inflate the total of countable countries.

It now appears that the Committee was almost prophetic. First to break away appear to Lithuania, Latvia, and Estonia. Next perhaps will be Azerbaijan. Maybe then Armenia and Ukraine. Will the Moslem Soviet Republics along the southern border be far behind?

All of which brings up interesting thoughts. Will the newly independent countries continue operating the former Radio Moscow SW transmitters within their borders? From what I am told such operations can be very expensive, but if they do continue, to whom will they broadcast? Will their programs be multi-lingual, hopefully including English? Will they have a liberal QSL policy? And will Roger Legge find out once and for all where the transmitters are located?

With all these unanswered questions, I suggest that those of the members who have not yet QSLed all the Soviet republics hasten to do so before it's too late! [Ed. Note: Just to clarify, it would only be "too late" if the republics left shortwave; if they did leave the Soviet Union, they would still be counted as at least as many separate radio countries, even if borders or names change.] As for myself, I have them all except Moldavia. Will that country please begin broadcasting with adequate power on shortwave and include English segments, preferably at 0100-0200 GMT?!

* * *

listener to set an audio frequency threshold and filter out all frequencies above it; highpass, of course, is vice-versa. Since adjacent-channel splatter from stations 2-3 kHz away is primarily at high audio frequencies, setting a high-midrange threshold and nulling everything above it with lowpass filtering can reduce or eliminate such interference. Highpass is helpful when attempting to eliminate very low-pitched heterodynes. It is sometimes difficult to tune a notch filter to frequencies near the lower threshold of human hearing. Highpass filtering eliminates the need for finding the precise frequency; close is good enough.

Noise

Unless you're willing to relocate to a remote cow pasture, you're going to encounter manmade electrical interference...a polite name for noise. It can be

a severe hobby disruption in urban locations, and a nuisance even in rural areas. The best solution is to find the noise source and eliminate it, and there are several books available from SW retailers that describe how to do this. Unfortunately, your noise source may not be anything you can control. It may be untraceable, or traceable to your local power distribution system, and some power companies are less than cooperative in eliminating it.

Older receivers were often equipped with *noise limiters*. Some worked fairly well; others appeared to be dead switches. Later on, *noise blankers* began to appear, and some of them work quite well...notably those on the Icom R70 and the venerable Drake R4C. Unfortunately, some of the modern noise blankers appear to be dead switches, too. It's an important consideration if you're shopping for a receiver.

Radio Stella International

by Jock Wilson, via Richard D'Angelo

Radio Stella International started broadcasting in 1979 under the name "Thistle Radio." The first transmissions were on 7315 kHz using 20 watts. The station was subsequently re-named Radio Stella International to avoid confusion with Radio Crystal, a contemporary shortwave broadcaster.

A setback was suffered in 1980 when the station was raided during an "outside broadcast", mistakenly taken for, and reported as, poachers. The arresting officers were eventually convinced that the only things being fired were radio waves into the ionosphere and, after notes were taken, so was the equipment. Thereafter, only sporadic broadcasts were heard until the summer of 1987 when the purchase of new transmitting equipment encouraged RSI to extend and increase its programming.

RSI can now be heard most Sundays for 6 hours somewhere between midnight and 0600 hours local time (Scotland), on 6320 kHz. The night-time transmissions are a new venture and an encouraging response has been received from Canada, Spain and Germany to mention but a few; there are obviously more insomniacs in Europe than anticipated.

Recently RTTY has troubled the early morning transmissions and hence the frequency of these emissions are under review pending extensive monitoring and sleepless nights. News of the schedule, when finalized, will be released through the usual Free Radio communications.

There exists the capability to triple record the programmes as they are produced and these tapes are available in exchange for 5 IRC's or cash equivalent.

The station is happy to include advertisements and announcements pertaining to Free Radio at no charge. It is recommended, however, that any adver-

tisements including dates be made available to the station at least thirty days prior to the event.

The transmitting equipment is primarily "Home-Brew" and emits 200 watts to a half-wave dipole horizontally slung. The studio equipment includes a double record deck, tape recorders of all shapes and sizes, amplifiers, microphone and conveniently-positioned refreshments which are required when reviewing the completed programme, although errors are rarely rectified.

The presents are Jock Wilson (Founder and Station Manager) and Cyder (Secretary). The position of treasurer is open to anyone who has some spare cash.

Radio Stella International is a Scottish Free Radio station transmitting only on shortwave. We are attempting to provide a service for Western Europe and beyond, of popular music of the last thirty years.

We strongly uphold "Listeners' Letters" programming; suggestions and requests are always welcome and, where possible and practical, will be fulfilled. All correspondence will be answered and correct reception reports will be verified by QSL cards which show various aspects of Scotland.

Reception reports over the last two years have been received from USA, Canada, Norway, Sweden, Denmark, Finland, Czechoslovakia, Switzerland, Italy, Spain, France, Belgium, East and West Germany, Eire, the Channel Islands and Mainland Great Britain.

We are always happy to hear from our listeners both old and new. Our address is: Jock Wilson, Radio Stella International, 23 South Beechwood, Edinburgh, Scotland EH12 5YR.

* * *

If you already have a receiver with no noise blanker (or a sub-par one), there are no add-on versions...the circuit is an integral part of the receiver's design. You can take the edge off the noise by using ECSS detection and a broad-banded AF notch or graphic equalizer, but you can't eliminate it entirely.

Random, naturally occurring noise (static) is everywhere...not even the cow-pasture is safe. The suggestions in the preceding paragraph will help some, as will the proper AGC (automatic gain control) setting. The AGC circuit is designed to temporarily cut the receiver's sensitivity when a sudden increase in signal strength (such as a static crash) is detected. Most modern receivers offer at least two AGC timing positions, which control the speed and duration of the cut in gain. The choice is a matter of personal preference. I find the "fast" position on the R70 to be the most useful, but many DXers find fast AGC too choppy-sounding and prefer a "slow" setting. Experimentation with your receiver under noisy conditions will determine which works best for you.

Both manmade and natural noise can be drastically affected by the antenna you use. Antenna design, orientation, and proximity to noise sources all play a role, and the best choice today might be the worst choice tomorrow, depending upon the noise source. It is helpful to have two or three antennas fed into a switching device, so the best antenna for receiving a particular signal can be found. You might have a longwire, a dipole, and a delta loop, or simply three longwires run at different angles...even if you don't have room for an antenna farm, a choice between a pair of 40-foot longwires is better than no choice at all. There is the added benefit that you can sometimes reduce QRM by switching antennas, since antenna design and orientation can enhance or null reception from certain directions.

Things That Aren't There

There are very few receivers available in the 3-figure price range that are not susceptible to *overloading*. Most can be

overwhelmed by a very strong signal, causing "ghosts" of the signal to appear all over the dial. These ghosts themselves can be so strong as to actually cover weak stations that really are there.

It's not that difficult to stop overloading; it is difficult, though, to stop it without sacrificing the sensitivity necessary to hear weak signals. Most modern receivers are equipped with *attenuators* or *RF gain* controls to reduce sensitivity. If you reduce it enough, the ghost signals will usually disappear. But don't reduce it too much, or the *real* signals might disappear, too. If your receiver has neither of these controls, try shortening your antenna a few feet at a time. Many portable receivers are designed for optimum operation with their internal whip antennas, and have difficulty handling the signal level introduced by a longwire.

That's Just The Beginning

We've taken just a brief look at some of the obstacles a DXer must overcome. In fact, practically every paragraph in this article could be the subject of a complete article itself. If you're just getting started in this fascinating hobby, consider this an interstate map; you can fill in all the side roads by reading, talking with others in the hobby, and most of all, LISTENING. Bo Jackson has a point when he says "Just Do It."

If, on the other hand, you've been twisting the dials for a while, pick a paragraph that interests you and expand it into an article for one of the Journal's columns! The only thing more fun than having a hobby is sharing it.

* * *

Once again we all owe Kevin a big "THANKS!" for sharing his wealth of "how-to" DX knowledge with us. If you follow Kevin's loggings, you know his techniques really work.

Please do share your favorite ways to hear "the right stuff" ... I'll publish a compendium of your submissions in the future.

Easy Listening

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



This month, we continue our look at the changes happening in Eastern European Broad casting with a look at Radio Bucharest and Radio Sofia.

RADIO BUCHAREST

Of all the Eastern European broadcasters, Radio Bucharest seems to be the one that has undergone the greatest changes. Partially this is due to the violence of the Romanian revolution and it is also partially due to the strictness and intransigency of the Ceaucescu regime and the cult of personality he fostered, all of which was reflected in Radio Bucharest's previous programming. Even as of this writing (January 21, 1990), programming at Radio Bucharest is still in a state of flux which promises to continue for some time before it finally settles down into a permanent mold. But the changes here have been drastic.

First of all, like Radio Prague, Radio Bucharest now has a new interval signal. The old one was closely associated with Ceaucescu, but I'm afraid I can't say much about the new one. The station did give an explanation of its new interval signal in response to a letter from Jonathan Marks of Radio Netherlands, but reception was poor, and I could barely follow the explanation (some things never change; of all the Eastern Bloc broadcasters, with the exception of Radio Polonia, Radio Bucharest has traditionally had the poorest reception in North America).

Almost all the old feature programming, with one or two exceptions, has been dropped, and no wonder. So much of it, like *Socialism in Construction* and *Let's Talk It Over*, were devoted to singing the praises of Romanian life as an ideal socialist society under Ceaucescu. Only two programs I've been able to identify so far still remain; *The Skylark* (a collection of Romanian folk tunes) and *Listeners' Letterbox*. The trouble

with these two, however, is predicting when they're going to air. The nights seem to vary frequently (which was also more or less true with Radio Bucharest before the revolution), and sometimes they air two or three times a week. One interesting note is that in one of the first editions of *Listeners' Letterbox* for the new year, the announcers apologized for the previous policy of censorship which would not allow criticisms to be aired, and promised in the future they will respond to criticism fairly and accurately. Perhaps even more interesting are the terms now used to describe Ceaucescu. So far, on separate occasions, he has been referred to as "the loathsome dictator", "the blood-thirsty dictator", and "the hideous tyrant". The rhetoric, it appears, has not really changed at all. That's not exactly surprising in a country where the first official act of the new democratic government is to hold a secret trial and execute the ex-dictator and his wife. As the French have been reported to say, "the more things change, the more they remain the same."

Still, Radio Bucharest has made some strides. News, which was once confined largely to singing the praises of the policies and activities of Nikolai Ceaucescu (a name you could count on hearing at least a half-dozen times in previous news broadcasts), has now become more reliable. Although at first confined largely to domestic news, recent broadcasts have been more international and comprehensive in scope, and Radio Bucharest may in time become as first rate a source for international news as Radio Dubai or Swiss Radio International. In recent editions, the news has been followed by a ten minute Press Review, a program which would have made no sense before when the editorial policy of every paper was already pre-determined. Also, like Radio Prague and Radio Berlin International, Radio Bucharest is broadcasting large numbers of

interviews with church and civic leaders and visiting foreign delegations. These interviews in recent weeks have tended to make up the bulk of Radio Bucharest's programming, including one titled feature program, *Representatives of Romanian Political Parties*, which may or may not last until this column finally gets in print. Another new program, which I have only heard once and may be long or short-lived is *Play This Tune for Everybody*, which plays a mixture of Romanian pop and folk music, often but not always in response to listener requests.

Ultimately, of all four of the stations I've been monitoring, Radio Bucharest has undergone the most dramatic changes and its programming is still in the greatest state of flux, a condition which may last some months before finding its new identity. As the station itself has commented, Romanians are not used to democracy, and if they're to build a democratic state, they're going to have to start from square one.

RADIO SOFIA

Just the opposite of Radio Bucharest, Radio Sofia has undergone the least notable change of the four broadcasters. This is probably due to the fact that the revolution in Bulgaria was spearheaded by reform-minded members of the Communist party itself rather than by popular outcry, and the party itself still remains in control of the media. That is not to say there is no change at all, but what change there is has been limited to the editorial policies of the station, and most featured programming remains untouched.

As one would suspect, news and editorials (the editorials being aired in the continuing Events and Developments which follows the news) have become less propaganda laden and more open to airing dissenting viewpoints. In recent weeks, the station seems to have been concentrating on the

continuing problem of the Turkish/Islamic minority in the country and the new constitutions' guarantee of minority rights, a guarantee that some Bulgarians continue to oppose. Yet one suspects that the station is up to some subtle skulduggery. A recent edition of *History Club* concentrated on the legends of Bulgarian martyrs to the Ottoman oppression, including those who committed suicide rather than conform to forced conversion to Islam or assimilation into Turkish social structure. While listening to the program I could not help but suspect that it was particularly chosen to provide historical justification for those (including many traditional party members and supporters) who wish to continue the policy begun in 1984 of the forced "Bulgarization" of the Turkish minority, a policy which includes the outlawing of Islam and forced name changes from Turkish to Bulgarian names.

For all the talk of upcoming free elections and Round Table discussions between government and opposition and the guarantee of the rights of the ethnic Turks and now independent trade unions, Radio Sofia seems to have undergone the least change of the Eastern Bloc stations, and it is the one I would continue to suspect most strongly.

Those of you who have also been listening to stations in Eastern Europe may have some different impressions of these four stations, and if so I wish you would share them with me and the readers of *Easy Listening*. As the year progresses and these stations settle into more predictable patterns I'll focus on some of their feature programs that I've mentioned in this column and last months. What interests me at the moment, however, is Radio Moscow and all the difficulties in the Soviet Union.

NOTICE, PLEASE.

Ads are printed free in the Journal for NASWA members. Please send all such material to NASWA, 45 Wildflower Road, Levittown, PA 19057. When selling articles, don't forget to mention who is to pay postage.

A F R I C A N Destinations

Chuck Rippel
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Compuserve 72571,1046



When Bob Brown assumed my position as Executive Director, he asked me to round out the editing staff by writing the African section of Destinations. I am happy to complete the Destinations continental trio along with Mitch Sams and Don Moore.

For me, Short Wave Broadcasting on the African Continent has been a focus within the greater hobby since the early 1970's. I can remember coming home from high school and exploring the Dark Continent VIA Shortwave Radio during many an afternoon. A majority of African stations broadcast in the Tropical Bands-120, 90 and 60 meters. By broadcasting on Shortwave in those bands, a relatively large land area can be covered with a minimum number of expensive transmitting facilities. This represents a very cost effective approach to meeting a particular country's media needs.

This month's Destination is the Republic of Cameroon. It is often referred to as the "hinge" of Africa and is located in the western part of the continent along the coast of the Great African Bight in the Gulf of Guinea. Cameroon has a landmass equal to the size of California combined with about one fourth of Oregon.

Located in the geographical and ethnic crossroads of Africa, Cameroon has a complex of about 200 tribes speaking more than 80 major African languages. It is interesting to note to the SWL that Cameroon is the only African nation where both French and English have been given official status.

Given the countries history, Cameroons' potpourri of language is easily understood. Since 1884, Germany controlled the country until it was invaded by the armies of France and the United Kingdom. In 1919, a declaration signed in

London divided the country between England and France with the larger, eastern area transferred to French possession. In 1946, the French and English mandates were converted by the U.N. into trusteeships and on January 1, 1960, Cameroon achieved independence as the Republic of Cameroon. As a result of a popular vote in 1961, the English section of Cameroon joined Nigeria. It is not surprising that students are required to study both French and English from age 11 in the countries school system which, by African standards is unusually extensive.

The population is spread out among four topographical regions. The south is a low coastal plain with equatorial rain forests. The center is a transitional plateau with elevations reaching about 4,100 feet above sea level. In the west, there are mountainous forests including Mt. Cameroon, an active volcano and the highest in sub-Saharan West Africa which is 13,500 feet in elevation. The north consists of low, rolling savanna gradually sloping down to a desert basin/marshland surrounding Lake Chad.

Yaounde (pronounced Ya-un-day) is the capital, a modern city with many of the

New Years Day	January 1
Youth Day	February 11
Good Friday	Varies
Labor Day	May 1
Ascension Day	Varies
National Day	May 20
Assumption Day	August 15
End of Ramadan	Varies
Fete du Mouton	Varies
Christmas Day	Dec 25

Cameroon National Holidays

Frequency	Site	Times
3970	Buea	0430-0800 & 1630-2300
4000	Bafoussam	0425-0800 & 1600-2302
4750	Bertoua	0425-0800 & 1600-2214 (inactive?)
4795	Douala	0515-0645 & 1630-2304 (inactive?)
4850	Yaounde	0400-0700 & 1630-0000 (sporadic)
5010	Garoua	0425-0805 & 1630-2315 (replaced by 7240)
6005	Buea	1100-1625 (rarely reported)
6060	Yaounde	(inactive)
7150	Douala	(inactive)
7165	Bertoua	(inactive)
7240	Garoua	0425-2315(?)

Cameroon Shortwave Outlets

amenities a traveler might expect: good hotels, fine French restaurants, etc. Douala, the main port and rail terminus, is the commercial center of the country. Buea (pronounced Boo-yay) is located slightly to the north and west of Douala.

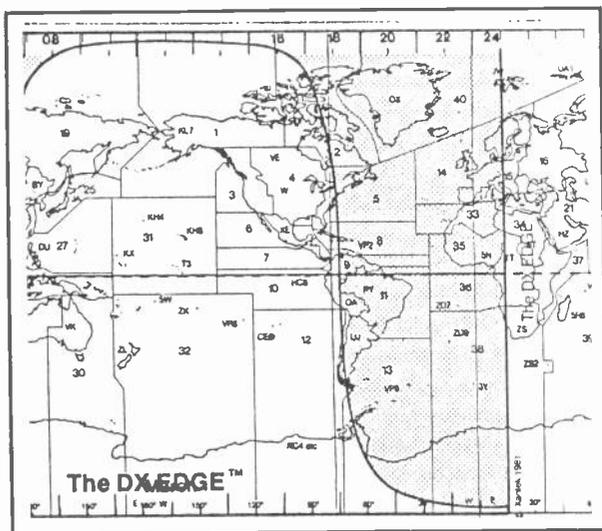
Pursuing the hobby of Shortwave Radio Listening belies more than a simple, passing interest in geography and international affairs. Rounding out hobby pursuits by being aware of the history, geographical and ethnic background of a particular country, in this case Cameroon, helps provide the hobbyist with further insight into the country's broadcast motivation.

Cameroon Radio & Television has been monitored on 6 outlets and 11 frequencies over the past few years. Some of them are noted as still active, some not. On 1/28/90, Buea was noted on the East Coast @2150 with a program of English news. Programming then went back to French @2200.

The inactive outlets are always worth giving a check during the National Holidays listed at the beginning of this article. There have been no recent reports of Yaounde on their 9745 frequency, which used to be heard

quite regularly. At one time, there was also an International Service on 15.215 which was heard briefly in 1982.

Many DX'ers discover the abundance of African shortwave outlets on the 60 meter band. East Coast SWL's have the advantage of having two "windows," both of which occur during local sign on and sign off times when propagation is possible. Remembering that darkness is necessary to propagate signals below 7 Mhz, in this case, the 60 meter band. Note the 2300 UTC darkness model for the month of March below. With the shaded

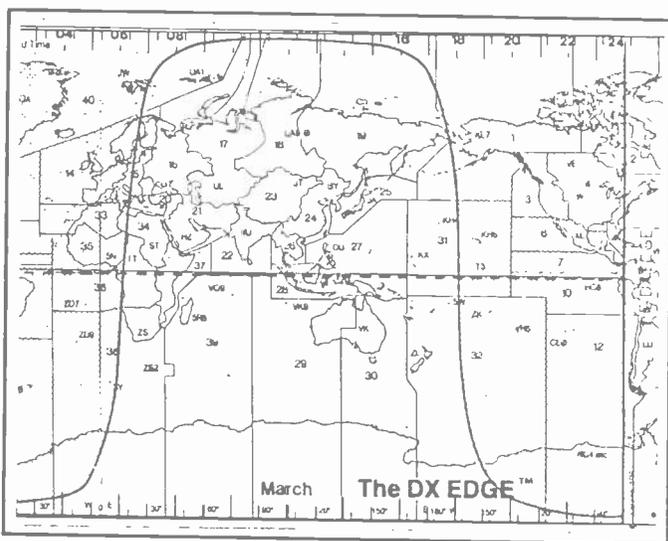


2300 UTC Darkness Model

area representing darkness, you can see that darkness is just beginning to fall and the East Coast DX'er is able to hear the 60 and 90 meterband signals arriving from the west.

For West Coast DX'ers, hearing many of the 60 or 90 meter African outlets before they sign off for the evening is nearly impossible. As you can see from the model on the previous page, darkness on the West Coast is still at least 3 hours away. Even with Yaounde being heard as late as 0000, afternoon reception is lucky at best. A more productive time for West Coast listeners to try to catch the various outlets in Cameroon is during sign on typically around 0500. The model on the above right represents the darkness profile at 0500 UTC. You will have to be quick! Even though both coasts of the US are in darkness, the sun is coming up in West Africa eliminating the propagation path.

During both sign on and sign off times, either dusk is falling at the reception terminus or dawn is rising at the transmitting



0500 UTC Darkness Model

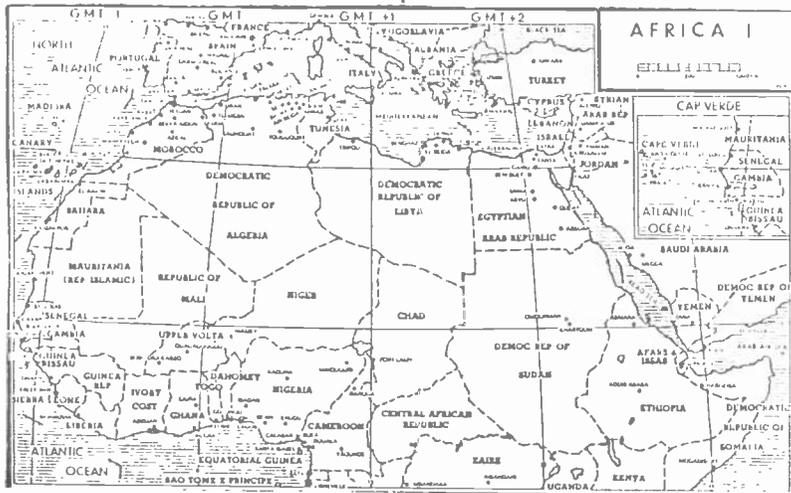
terminus. This allows for some dawn or dusk propagation enhancement.

Broadcast schedules may be modified for the Cameroonian holidays shown in the table on the first page.

Cameroon maintains an embassy in the United States at 2349 Massachusetts Avenue N.W., Washington, D.C. 20008 (tel. 202-265-8790). The Minister of Posts and Telecommunications is Mr. Sands Oumarou.

The United States maintains an embassy in Cameroon located on Rue Nichtigal, Yaounde.

* * *



COMMENTS ON THE DATONG AD-370

by Bob Rydzewski
135 Kenneth St.
Santa Cruz, Ca. 95060

The antenna comes with an instruction sheet that is informative and well written. However, the unit does not come with a PL-259 plug to hook it to your receiver's input. I happened to have one around, but if I didn't it would have irked me. The instructions mention that a pre-wired PL-259 output lead is available at extra cost, but come on, guys, most people are going to assume that the thing comes with a plug. I realize some buyers may need something other than a PL-259, but for most it's just dandy. Also, the power supply unit (batteries not recommended because of high current drain) isn't included, but that's as one would expect.

The unit, a dipole of 3 meters overall length, has one control, an on/off switch for the pre-amplifier. It can be mounted horizontally or vertically. I found that a vertical orientation gave much QRM from hams, or UTEs, or other things-that-go-bump-in-the-night, so I ended up mounting it horizontally, 18 feet off the *unstable* Santa Cruz ground. The Datong is unobtrusive enough so that none of the neighbors complained, and important factor in antenna suitability not found in the specifications (also important when your next door neighbor is a California Highway Patrolman, right Bob? -ed.). Of course, what have they got to complain about, with a 50' ham setup two doors down? By the way, with the dipole pointing at that ham, I haven't noticed a bit of interference.

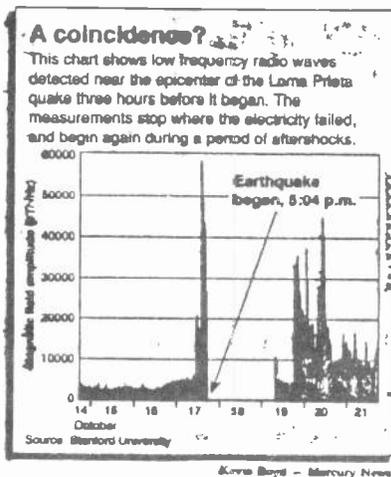
I generally use the preamp switched in, and this gives an additional 2-3 S units of gain over my control, a 48' random wire. The first thing I noticed in an A-B comparison is that this 9-foot active antenna indoors was roughly as good as the much longer outdoor wire. That's comforting if fate has more apartment (or, heaven forbid, motel) living in store for me (not funny, Bob -ed.). In its final outdoor location, the Datong seems to have a slight advantage over the wire below about 4 MHz, e.g. I got the ID on Radio Mara at 3275 KHZ whereas the longwire didn't give me a clear enough signal to recognize many words. Between 4 and 13 MHz the two are closely matched, with the choice of antennas depending on each particular signal. Sometimes one has a little less echo or more readability, but they're usually very close.

Surprisingly, the real payoff for the Datong seems to be at higher frequencies, at least in my case. Above 13 MHz the active antenna is far superior for weak signals: Radio New Zealand went from a hissy whisper to sounding like it was right next door. It was that big a difference, and it seem to hold true for higher frequency DX in general. Maybe, as we talked about, this has more to do with the preamplifier than the dipole, but if that's the case I'd recommend a preamp for all DXers interested in the higher frequency bands. In any case, Ted, I'm glad you recommended and I bought this antenna (perhaps "sage advice" is a little immodest... -ed.). Even in the cases where there's no audible difference between the two inputs, it's a psychological advantage for a chronic knob-twirler like me to have yet another control or two to fiddle with. And now, onwards to that homemade loop...

Editor's note: broadband receiver design is at best a compromise. No receiver, not even the NRD-525, can be equally sensitive at all frequencies. As a result, most tend to be a little numb at the higher frequencies. An active antenna, besides its traditional advantages, gives the added benefit of more gain than a passive antenna. The result: more apparent sensitivity at the higher frequencies, as Bob discovered. Also, horizontal dipoles tend to pick-up much less noise than vertical antennas; they also provide *gain* (in directions broadside to the antenna). The Datong can, because of its size, be mounted horizontally, and rotated for maximum signal gain.

RADIO FREE EARTHQUAKE?

Bob Rydzewski also sent along a newspaper article about unusual radio activity monitored by Stanford researchers just prior to the October earthquake. Apparently these researchers were monitoring 8 Hz (yes, that's 8 Hz, or 37,500,000 Meters) in the period leading up to the earthquake. Just before the quake struck, their signal intensity soared, then died as the power failed and the instruments shut down (see figure below). Apparently Chinese and Soviet researchers have reported similar phenomena prior to their quakes as well. It is interesting to note that this signal increase began hours before the quake, making it a possible "early warning" indicator if developed. U.S. Geologic Survey people were quick to label this oddity a "coincidence".



RESISTANCE, REACTANCE, IMPEDANCE, AND OTHER VOODOO SCIENCE

Each month I receive letters from readers trying to understand antenna and coax matching, and the role it plays in improving (or degrading) reception. To understand matching, it's first necessary to know something about impedance. But impedance, like antenna theory itself can be a frightening thing indeed. So for the remainder of this column, and continuing next month, I will cover some of the basics of impedance, concluding by applying these concepts to antenna impedance and antenna/coax matching.

RESISTANCE

Resistance is the opposition a device or circuit offers to the flow of current. The most common device that offers resistance is - you guessed it - the resistor. Common resistors are composed of either a tiny carbon bar, a film with carbon deposited on it, or a length of nichrome wire wound on a ceramic form. The goal of all of these types of resistors is to cause a known and fixed opposition to the current flowing through them. Their ability to do this is measured in Ohms (named after Georg Ohm). The nifty thing about this factor - resistance - is that it can be calculated by a simple formula, known as Ohm's law:

$$I = E / R$$

where I = current in Amps, E = voltage in volts, and R = resistance in Ohms.

Before we apply this formula, I should mention that it can be re-written, so that if you know any two factors you can find the third:

$$E = I \times R \quad \text{and} \quad R = E / I$$

Let's look at a simple circuit, containing just a resistor and a power source (a battery). Current flows from one pole of the battery, through the resistor, to the other pole of the battery.



Let's assume that we have the meters necessary to measure the voltage across the resistor, as well as the current flowing in the circuit. By applying Ohm's law, we can find the resistance of the resistor:

$$R = E / I \quad \text{or} \quad R = 100 / 20 \quad \text{so} \quad R = 5 \text{ Ohms}$$

Rather straightforward, yes? But before we move on to the next concept - reactance, please note this very carefully: *resistance is independent of frequency*. Frequency? What the heck does frequency have to do with anything? When it comes to resistance, frequency doesn't matter. Whether our power source in the circuit above was a battery (DC, or direct current - whose frequency is of course zero), or 60 Hz line current (which is AC, or alternating current), or a 1 MHz radio signal (which is *also* AC) the value of the resistor is always 5 Ohms. This concept will be very important when we explore our next topic.

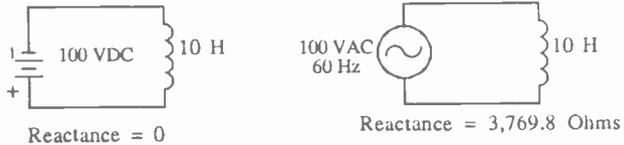
REACTANCE

To explore reactance, we will first pick a device that exhibits reactance, and learn how that device operates.

A simple coil is a length of wire, wound around a non-metal form. When DC flows through a coil, a magnetic field builds-up around the coil, reaching a fixed level in a very short time. But what about AC? When a 60 Hz AC current flows through the coil, a magnetic field results as before, but its level varies. Why? Because the field depends on the level of the current flowing through the coil. In each cycle of AC, the current goes from zero to a positive peak, back to zero, down to a negative peak, and back to zero. In other words, the current alternates its direction - in this case 60 times per second, or 60 Hz. Every time the current changes strength or direction, it causes a magnetic field in the coil. The magnetic field, in turn, induces its own current in the coil, opposite in polarity to the original circuit current. The amount of opposition the coil causes is called inductance, and is rated in Henries (after Joseph Henry). What has all this got to do with reactance? It demonstrates the most important part of reactance - it is frequency dependant. Like Ohm's law, there is a formula for inductance and reactance:

$$\text{Reactance} = 6.283 \times \text{Frequency} \times \text{Inductance}$$

Look carefully at the formula: if you have only DC flowing through the circuit, the "frequency" is zero - DC doesn't have "cycles" because it never changes polarity. That means that in a DC-only circuit, reactance is zero - there isn't any! See what I mean about frequency-dependent? O.K. Here is a practical example:



Here we have two circuits, both with the same 10 Henry inductance. One circuit has a DC power source, the other has an AC power source. We already know that coil, or inductance, has no reactance in the DC circuit. Does that mean that there is a short-circuit in the DC circuit? No. The wire that makes up the coil has some resistance of its own. In the AC circuit, we have a 10 Henry coil carrying a current of 100 Volts at 60 Hz. Using our formula from above, we can determine that the reactance of the coil is about 3,769.8 Ohms. Ohms? Wait a minute, you ask. Isn't Ohms the unit we used to measure resistance? Yes, it is. But it is also the unit used to specify reactance and impedance, so you must be careful.

What if we used the same AC circuit as the one above, but this time used a 100 Volt AC generator that put out a frequency of 400 Hz? Applying our formula, we would find that our coil now showed a reactance of 251,320 Ohms. This shows that reactance depends on frequency, and in the case of a coil gets greater as the frequency increases. By the way, although we won't cover capacitors here, they behave just the opposite: the higher the frequency the lower their reactance:

$$\text{Reactance} = 1 / (6.283 \times \text{Frequency} \times \text{Capacitance})$$

If we combine the above formula for "capacitive reactance" with the one for "inductive reactance" we come up with a magical formula, indeed:

$$\text{Frequency} = 1 / (6.283 \sqrt{\text{Inductance} \times \text{Capacitance}})$$

($\sqrt{\quad}$ means square root of...)

Why is this a magic formula? Because it shows that at one particular frequency, for a given inductance and capacitance, the capacitive reactance is exactly cancelled by the inductive reactance. This is the resonant frequency, at which the total reactance is zero! A so-called tuned circuit is tuned at one particular resonant frequency, and at this frequency the circuit behaves as though there was no reactance at all.

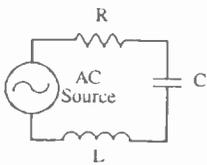
IMPEDANCE

At last! We have reached the point at which I actually discuss impedance. I apologize for the long introduction, but it was entirely necessary to allow for an understanding of impedance. Every circuit, and even every individual component, contains a combination of resistance and reactance. A resistor always has some capacitance and some inductance. Proper component design keeps this to a minimum, but although normally undesirable, it cannot be eliminated entirely. Circuits also contain capacitance (as from wires passing close together) and some

inductance (as from fields caused by current passing through adjacent wires). In some cases, such as antennas and tuned circuits, resistance, capacitance, and inductance are combined intentionally. In any case, the combination of resistance, inductive reactance, and capacitive reactance adds together to form impedance. But they don't simply add together algebraically, like $2 + 2 + 2 = 6$. Because inductive reactance, capacitive reactance, and resistance all behave differently - and interact with each other - two special formulas must be used to find impedance, one for series circuits, and one for parallel circuits.

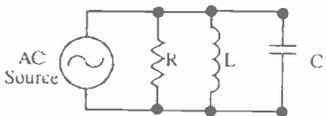
For Series circuits:
$$\text{Impedance} = \sqrt{R^2 + (\text{Reactance}_{\text{Inductor}} - \text{Reactance}_{\text{Capacitor}})^2}$$

For Parallel circuits:
$$\text{Impedance} = \sqrt{(1/R)^2 + (\text{Reactance}_{\text{Inductor}} - \text{Reactance}_{\text{Capacitor}})^2}$$



Typical Series Circuit

R = Resistor
L = Inductor
C = Capacitor



Typical Parallel Circuit

To use either formula, first determine the frequency of the signal current going through the circuit. Then, using the previous formulas for capacitors and inductors, calculate the capacitive reactance and the inductive reactance at that frequency. Then simply plug in the values to the appropriate series or parallel formula, and you will learn the impedance of your circuit.

NEXT MONTH

Next month we will conclude our trip into the world of voodoo science, and I promise to show you why all this was necessary to understand impedance and antenna matching, and how you can use your knowledge of these things to improve your reception!

73's Ted Benson

Listener's Library

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We received an almost unique book in the Listener's Library recently. It is *Genius at Riverhead—A Profile of Harold H. Beverage*. The book was written by Ms. Alberta Wallen, a historian and summer resident on North Haven Island, Maine, the home town of Dr. Beverage; yes sir, he is the guy whose name is attached to most DXers' favorite antenna.

Harold Beverage was born on North Haven Island on October 14, 1893. In his early teens (13 years old, like so many of us!) he became fascinated with the new wireless telegraphy that allowed ships far off the Maine coast to maintain communication with shore stations. Harold built a radio shack (a real shack) on his family's farm and built his first "cat whiskers" crystal receiver. A "1 inch spark gap" transmitter soon followed and he became an early amateur using his initials "HB" as his call sign. Harold spent his high school years avidly experimenting with radio and preparing scholastically to study radio engineering. In 1915, Harold graduated from the University of Maine as an electrical engineer. After college, he was immediately hired by General Electric and began a career as an innovator in radio research. His initial interests were propagation and antennas. He discovered the highly directional characteristics of long low wire antennas quite by accident while involved in research related to military communications in the latter stages of WWI.

Following WWI, General Electric and Westinghouse joined together to form Radio Corporation of America. Dr. Beverage was transferred to RCA as the senior research engineer in charge of research into radio reception systems: receivers, antennas and high frequency radio propagation. It was at the new and very primitive RCA research station at Riverhead, Long Island that Dr. Beverage and his assistants first laid out the antenna that will forever bear his name.

The wave or "Beverage" antenna was an

instant hit. Dr. Beverage and his associates published their extensive research and designs for the wave antenna first in a new radio amateur publication—*QST*—in November 1922 and in the *Transactions of AIEE* in February of 1923.

Most people in the radio hobby community do not realize that Harold Beverage went on to become one of the two or three most highly decorated and honored American radio engineers. He was the chief research engineer of RCA Communications from 1941 until his retirement in 1958.

I strongly recommend the purchase of this book (see bibliography). It is very well written and provides a fascinating insight into the early days of radio. Dr. Beverage, now 96 years young and retired for 31 years, provided the author of *Genius at Riverhead* with literally priceless photographs that are, alone, worth the purchase price. My favorite is a picture of Guglielmo Marconi standing in front of a 15 foot square wooden building which housed the Marconi Company's early station at Babylon, on Long Island. The building was known as "The Babylon Shack," and is probably why we call our radio rooms "shacks." If you are a life-long radio enthusiast, you should BUY THIS BOOK—there are very few left !!!

Wish Books For Radio Nuts

The Listener's Library contains many things besides books and magazines. From time to time we receive catalogues. One of our current favorites is a large full-color one called *Wireless*. It is the catalogue for Fans and Friends of Minnesota Public Radio. Although most of the items are oriented to the NPR audience, a number would be of interest to many SWBC types. To get your free copy, call 1-800-669-9999. They are nice folks. (Contributed by Bryant)

Our absolute favorite catalogue just arrived as a contribution from NASWAN Alan Anderson of MA via Rowland Archer. It is called *The Whole World Language Catalog* from the Audio Forum folks in Guilford, CT and London. Call 1-800-243-1234. You may remember the language tapes from the Barnes and Noble Bookstores that Rowland featured in DXers Forum last December. That offering covered 31 languages with "crash" language courses based on two 45 minute cassettes. Well, the Audio Forum is where Barnes and Noble are getting the tapes that Rowland featured. *The Whole World Language Catalog* contains 191 tape-based courses offering many different levels of instruction in 51 different languages!!! Many of their courses were originally developed by the Foreign Service Institute of the State Department. They offer about every

major language and many very obscure ones. Better yet, the Audio Forum also offers a wide variety of original ethnic music from almost every language area. Why did it take the hobby community so long to find this gem? (Contributed by Alan Anderson and Rowland Archer)

Your old Librarian ordered the beginning Indonesian tapes (part of the "Language/30" series), and has found them excellent. Coincidentally, Hans Johnson, author of the superb feature on DXing the Arabic World in fine tuning's Proceedings 1989, dropped by the Listener's Library and dropped off the following review of the Arabic Language/30 tapes from the same catalog. We value his opinion very highly, since he is a graduate of both the University of Texas' Arabic Studies Program, and the Monterey Language School.

A Brief Review of Language/30

by Hans Johnson

As a student of Arabic for many years, I have the Arabic language version of Language 30. I have also purchased the Russian edition for my father. The English side of all the Language/30 tapes and booklets is the same. Of course the other side depends on what language you have bought. The booklet is divided into the following subtitles: Introduction (which includes a brief history of the language), General Expressions, Personal Needs, Time, Numbers, Colors, Communications (no, not DX terms but rather "at the post office," "at Customs," etc.), Transportation, and Social Customs and Polite Expressions. All expressions in the booklet are written in the target language as well as English. The words in the target language are also written out phonetically for easy pronunciation. Alas, the numbers are written rather than the numerals of the target language (i.e. one, instead of 1).

The tapes consist of phrases in English followed by the same phrase repeated twice in the language you are studying. The tapes have pauses built in so that you can repeat the phrase in between the two times it is said plus after.

I recommend Language/30 highly. I feel that it is the best of the mini language programs. Will it help you to enjoy shortwave radio more? Most certainly, if nothing else, you will at least be able to recognize the language you are studying a lot easier next time you hear it on your shortwave radio. Who knows? Maybe next time you hear the weather report on Radio Kuwait you'll understand it!

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- BIBLIOGRAPHY:** Wallen, Alberta A., *Genius At Riverhead*, (North Haven, ME: North Haven Historical Society, 1988. \$15.95)
Minnesota Public Radio *Wireless Catalog* (Minneapolis: 1-800-669-9999, 1990. Free)
Audio Forum *The Whole World Language Catalog* (Guilford, CT 1-800-243-1234, 1989. Free)

Listener's Classroom

Dr. Harold Cones
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CompuServe 71570,411



As Mr. T's friend used to say, "I love it when a plan comes together." I received a letter several weeks ago from Bill Galliger of Kentucky. Bill is fairly new to the hobby and says, "I have the basic idea of what goes on on a DXpedition, but would like to find out more about it." Well, Bill, a lot of us go on DXpeditions and sometimes even take our radios, but one DXer who takes this DXpedition stuff seriously is John Bryant, *The Journal's Listener's Library* editor. John lives in Stillwater, Oklahoma, near, as best as I can tell, nothing. John uses all that nothing to stretch out wire--literally miles of DXpedition wire--antennas he has concocted with names like "Beverage onna bush" and "the Okie Beverage." John is currently on sabbatical in Washington state and I caught up with him there via CompuServe. As I suspected, he is up to his Beverage antenna tricks along the rocky Washington coast. Bill, a Beverage antenna (named for it's inventor, Dr. Harold Beverage) is a single or double long wire (500' to 10,000') mounted relatively low (3'-12') to the ground and aimed toward the desired geographical target. (An antenna that size is not back yard stock for most folks, so a DXpedition is often called for as an excuse to erect such a monster). Although the Beverage is supposed to work best on Medium Wave, John tells me that a Beverage of 1,000' to 1,200' works very well in the tropical bands; longer Beverages are excellent on medium wave, but are not so hot on the tropical bands.

He oughtta know. He fills his mornings by listening to Australian and Papuan New Guinean medium wave stations (to name just a few --I could tell you more, but you would turn green and become physically ill). Then, when there are so many medium wave stations drifting down his Beverage that there is too much interference, he starts listening to the 120 and 90 meter Pacific shortwave stations. Well, to do some Beverage testing, John and his local club have planned a DXpedition to correspond with the last two days of Shortwave Radio Week (12-18 March--his DXpedition is set for 17-18 March), on which, I guess, he plans to hear all the rest of the radio stations in the world he has not heard yet. When I asked him for some tips and pointers, he said, "A DXpedition is one of those things you just have to do--you have to plan carefully and then find out that once you get to the site and get your wire strung all over, that you forgot the two most important things--your radio and the toilet paper." (I know just what he means, I did exactly that once).

That got us to thinking, Bill. John and I think you need to get together with some friends, do some homework (John suggests that you find copies of *Proceedings 1988* and *Proceedings 1989* for more information on the Beverage Antenna), find an open piece of land to string some wire over, set up tents or arrange to rent a cottage, and go on a DXpedition. And why not try it on 17-18 March? My local group (the Old Dominion DX Association) decided to hold a DXpedition on 17-18 March also--we thought it would be neat to compare our far-eastern results with their far-western results. Well, as we talked to others, one thing led to another, and now we know of groups going on DXpedition at the same time in Washington state, North Carolina, Florida, Kansas, Michigan, and two locations in Canada. This has suddenly become some sort of major "happening," so here is what I propose: let's see how many DXpeditions we can get up for 17-18 March as a grand celebration of Shortwave Radio Week. From the educational

viewpoint (this is *Listener's Classroom*, remember), those of you who have never been on a DXpedition will learn the basics of one of the more fun aspects of the hobby. For those of you who are old hands, this will be the first time that shortwave listeners all over North America will be on Dxpediton at the same time, and we ought to be able to gather some valuable data. And, you should contact your local media. This is Shortwave Radio Week and 20-30 clubs, all out listening at the same time, is certainly newsworthy and will call attention to what has got to be one of the world's least understood hobbies. Then, so we all get to share in the fun, send a half-page chronicle of your "event" to me (along with a copy of any press coverage you received--and don't forget to mention *NASWA*) and I will see that it gets published in *The Journal* (after all, I am the Editor in Chief). Everybody profits--the hobbyist, the general public and local beer distributors all over North America! Thanks, Bill, for touching off all this with your question.

I love it when a plan comes together.

Equipment Review

Rich Arland
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Compuserve 71271,1651

This month's product review will deal with two outstanding active antennas offered by Inline Components of Irvine, CA. Who needs active antennas??? Everyone!! It doesn't matter if you have a 5000 foot beverage or several single band dipoles up at 90 feet. Every SW hobbyist can use a good active antenna. Active antennas can also be used to back up an existing antenna farm. They are ideal for the traveling SWL who wants to spend some time scanning the bands while on the road.

Finding a good active antenna can be a chore. Typically, these antennas use a 1 meter whip and a bipolar device to provide 12-18dB of gain (and a noise figure of 5 to 6dB) from 150KHz to 30MHz. This kind of raw gain and poor noise figure will adversely affect the front end of most receivers.

True active antenna preamplifiers use electronic circuitry to transform the impedance of a short whip (usually about ten kilohms at 2 MHz) to an impedance more suitable for the desired frequency range. They act as current amplifying devices to convert a small input signal voltage at a high impedance to nearly the same voltage at a low impedance. Since the short 1 meter whip used in most active antenna applications is rather inefficient below 15MHz, some form of preamplification is needed to increase antenna output voltages to a useable level.

There are many so called "active" antennas on the market today. The majority of these units are wide-band RF amplifiers, totally unsuited to the task at hand. Most exhibit extremely high gain and mediocre to poor noise figures and less than spectacular performance.

Two examples of a true active antennas are manufactured by Inline Components 4521 Campus Drive, No 113, Irvine, CA 92715. Their AC-1 Indoor Micro-Module Active Antenna is a scant 2 X 2.5 X .75 inches. The one meter flexible wire whip protrudes from one edge of the plastic case while the receiver coax and power

connector are on the opposite edge. The AC-1 has a wide dynamic range and a 1.5dB noise factor. It operates from a 5-16 VDC source and comes supplied with a 9 volt adaptor for AC mains use. There are no controls on this active antenna. Just hang it in a window by the whip using a small suction cup (supplied), plug in the AC power supply and connect the 10 foot length of RG-174 coax to the receiver. The entire antenna system can be rolled up to form a compact bundle only a couple of cubic inches in size. When compared to the built-in whip on my Sony 2010, the AC-1 consistently yielded a 2 S-Unit increase in signal strength. There was little increase in background noise and no noticeable intermod or adjacent channel interference when switching between the active antenna and the 2010 whip, indicating that the AC-1 does not adversely affect receiver performance.

The AD-2 Portable AC/DC Active Antenna measures 4 X 5.25 X 1.5 inches in size and has a built in 9 volt battery for power. A collapsible 1 meter whip on the top of the box is pulled up for use. An AC adaptor is also supplied. This antenna is connected to the receiver by a 10 foot length of RG-174 coax. Controls are simple; an on/off switch, power connector and RF connector. That's it. Plug it in and go to work.

In a side by side test using the AC-1 Micro-Module and the AD-2 Portable Active Antennas on my Sony 2010 and comparing the results using the 2010's built in whip (on the same signals) the two active antennas consistently outperformed the 2010 whip. A second receiver (Icom R-70) using an external 50 foot sloper antenna was also used to check the active antennas performance against a "real" antenna system. In several instances (on frequencies below 5 MHz) the two Inline Components active antennas actually outperformed the R-70 with an external antenna!! The tests were conducted using African stations between 4 and 5 MHz over a period of several months. African signals heard clearly on the 2010 using the AD-2 and AC-1 active systems were much less readable on the Icom due to the increased noise present on the external antenna system. Additional testing was done on the major SW bands and amateur bands with outstanding results.

Conclusions which can be drawn from these experiments:

1. Active antennas can enhance the performance of most portable SW receivers.
2. The Inline Components active antennas will outperform built in whip antennas on SW portables by almost 2 S-Units across the HF spectrum.
3. Under certain conditions, active antennas can outperform external wire antennas.
4. Active antennas can compliment any antenna system, adding versatility and portability.
5. Beware of imitations!! Do your research first and buy intelligently. Not all "active antennas" are created equal.

NOTE: Recently there was a certain amount of confusion generated over the AC-1 Micro-Module's alleged ability to cause a failure of Q-303 (RF front end device) in Sony 2010 receivers. As of this writing, there has not been a single documented case of a 2010 RF front end being damaged through the use of this active antenna. Approximately two years ago, Sony undertook some design changes in the 2010 to prevent the all too common problem of Q-303 failure due to high RF voltages at the antenna input or static discharge. According to warranty and maintenance records kept by Grove Enterprises, none of the 2010 receivers sold over the last year and a half have been returned for Q-303 failures. Looks like Sony finally got a handle on the problem.

Cost (including shipping) of the AC-1 Micro-Module Active Antenna is \$ 33.00. The AC-2 Portable Active Antenna costs \$ 61.00 (shipping included). Both are available from Inline Components, 4521 Campus Drive, No. 113, Irvine, CA 92715.

NASWA Portraits

Tom McElvy
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CompuServe 73677,2351



March. The winds will be blowing and I hope that you all have your antennas tied down well enough to stand the pressure! The mailman was very kind to us this month, bringing a lot of mail. I just hope that the QSL supply has not run dry for any of you. Hopefully, I will be able to blow some of the dust off the radio this week, and try to remember where the power switch is...

This month, we hear from **R.C. Watts** of Louisville, Kentucky, who writes...

"...my reception reports to Eastern Europe were not appreciated by our side."

-- R.C. Watts

I began mediumwave DX listening at Indian Fields Kentucky during World War II, hearing CBK, XEG, CMQ and other. No electricity, just a battery that was larger than the radio! Around 1956, I built a Knight Kit receiver while I was in Albuquerque. Immediately, I was able to hear Radio Brazzaville and ELWA. But, I still wasn't really bitten by the bug until I read some old Popular Electronics magazines while stationed at Ramstein Air Force Base, West Germany in 1959. While there, I purchased a Phillips receiver in the PX and began to hear lots of goodies. Radio Kasmier came in well, as did the pirate radio ships. To put this in perspective, ORF and TWR were just testing their transmitters before going on the air!

During the time of the Berlin Wall crisis, I held a sensitive position within the military. Of course, I ran afoul of the intelligence community.....my reception reports to Eastern Europe were not appreciated by our side! However, I continued to DX and SWL, leaving the communist stations alone until I retired from the Air Force. I did so in 1972, and have lived, worked and DX'ed from Louisville since 1972.

My best QSL is probably Radio Maldives, but I really like the one I received from the Goodyear blimp, which came with a small inflatable model. These days, I use a Sony 2010 and a D-2999, but still have the old Phillips. Like so many people these days, I am short of time, but manage to write the "World Band Radio" column for **The**

REACTer, the bi-monthly publication of REACT International.

I guess you would consider me one of the old-timers now, but didn't join *NASWA* until about 2 years ago, about the time I purchased the 2010. I go for long periods just QSL'ing a very few stations if any; I mostly listen. I also hop over to the mediumwaves and utilities now and then. As a result, I have not amassed a spectacular record, but I have learned alot and enjoyed the hobby a great deal!

And from **James Streitmatter** of South Bend, Indiana, who says...

I began SWBC listening about 1958 with dad's old cabinet model Philco, which had SW bands. I became more interested, and built a Knight-Kit Star Roamer. As time progressed, my father bought me a Drake SW-4, which I used to listen to Perth, Australia on Saturday mornings.

After graduating from college, I married and began raising children while in Peoria, Illinois. We moved to South Bend, Indiana in 1976 and earned my amateur license in 1977. I was only active for two years and that was strictly CW.

February 1986 found me living alone and I became involved in shortwave listening again, this time with a Panasonic RFB-300. In '86, I was up to 80 countries heard, but I am only a logger, not a QSL'er. I became interested in Ham Radio again as well, and spend time on 2 meters, as N9HAS with an Extra Class ticket that I earned recently.

Well, I guess that about wraps it up for the month! I hope you all had a great time at the *Winter SWL Fest*, and look forward to seeing you all at **ANARCON '90**, being held in Virginia Beach, Virginia, during September. For more info on **ANARCON '90**, or to submit YOUR bio for **PORTRAITS**, contact me directly at the address above!

Until next month, Cheers! ¶

"...began listening in 1958 with Dad's old cabinet model Philco..."

--- James Streitmatter

Company Store

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



Things are really jumping in the **COMPANY STORE** thanks to the warm response from you - the club member. New orders arrive daily - catalogue requests, sweatshirt and/or T shirt orders, reprint orders, etc. It's gratifying to know that the long hard hours spent establishing the **COMPANY STORE** have been worth it. The response has been overwhelming.

The **NASWA COMPANY STORE** is proud to announce the addition of Dave Turnick to the staff as our **REPRINT SERVICE DISTRIBUTION MANAGER**. All orders for reprints from our catalogue should be sent directly to him at:

David J. Turnick
372 Spohn Road
Sinking Spring, PA 19608

Orders for sweatshirts, T shirts, and other clothing items, as they are introduced, continue to go to me. Orders for both editions of the Spectrum Logs, The System, and the Perpetual Propagation Predictor can go either to Dave or myself. In any case, misdirected orders can easily be rerouted, since Dave and I live only minutes away from each other.

The Spring Line

As we head into spring, it's time to add a new item to the **COMPANY STORE** clothing line.

LINED WINDBREAKER JACKET US\$24.00

The lined windbreaker jacket, made by Hartwell, is available in NASWA Royal Blue with the club's logo over the heart. It is available in Small (S), Medium (M), Large (L), Extra Large (XL) and, for an additional US\$2.00 charge, Extra, Extra Large (XXL). Similar to the sweatshirts and T shirts, there is an additional US\$3.50 charge for shipments to major metropolitan areas in Canada. Overseas inquiries are encouraged, however arrangements for additional shipping charges will have to be worked out on an individual basis. Please write first.

Remember, we are still taking sweatshirt (US\$20.00) and T shirt (US\$11.00) orders.

Greetings to Haruhira Saito of Tokyo, Japan. Our Japanese member is the first from overseas to write to the **COMPANY STORE**. Thanks for the letter Haruhira. I look forward to hearing from you again.

NASWA Reprint Service Catalogue - Edition #1 (US\$1.00)
100 reprints out of the pages of NASWA.

The Spectrum Log - International Broadcast Band Edition (US\$7.00)

The Spectrum Log - Tropical Band Edition (US\$3.50)
Special offer: Buy both for only US\$8.50.

Perpetual Propagation Predictor (US\$2.00)

The System (US\$2.00)

Available for only US\$1.00 each with purchase of any other item for the **NASWA COMPANY STORE**.

The response to the above items, contributed by **FINE TUNING**, has been brisk. Gene Johnson and Barry Cushman were the first two members to take advantage of the Spectrum Log special offer. Don Warner was the first to take advantage of The System special offer.

73 - RAD

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

Listener's Notebook

Bruce MacGibbon
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Gresham, OR 97030



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AFGHANISTAN - Radio Afghanistan Sked. Some freqs are relayed from transmitters in the USSR. 0130-0430 Baluchi/Pashto As 15255, 11820, 9635, 6085, 4940; 0730-0930 Pashto/Dari (Voice of the Homeland) As 17720, 15350, 9635, 6085v, 4940; 0930-1030 EG As 17720, 15350, 9635, 6085v, 4940; 1230-1330 Urdu As 11985, 4940 (unconfirmed); 1330-1430 Baluchi/Pashto As 11985, 9635, 6085v, 4940; 1430-1530 Baluchi/Pashto As 7200, 4975, 4740; 1430-17 Pashto/Dari (Voice of the Homeland) As 11985, 9635, 6085v, 4940; 17-1730 AR ME 11715, 9895; 17-18 Pashto/Dari (Breeze of the Hindu Kush) Eu 9635, 7215, 6020; 18-1830 GM Eu, 1830-1930 EG Eu, Am, 1930-20 FR Eu, ME 9635, 7215, 6020 (WBI 2/9)

ARGENTINA - RAE Published Sked from Jan 90: All Broadcasts Mon-Fri except as noted. 09-0955 JP Far East 11710; 1005-11 PT Am 11710; 11-1130 SP Am 11710/15345; 16-1630 AR Eur, NAF, 1630-1730 EG Eur, NAF, 1730-1830 GM Eur, NAF, 1830-1915 FR Eur, NAF, 1915-20 IT Eur, NAF, 20-21 SS Eur, NAF, 21-22 (Mon, Wed, Fri) EG Eur, NAF 15345; 21-22 (Tue & Thu) GM Eur, NAF 15345; 2205-24 SP Am 6060/11710; 0000-01 PT Am 11710; 01-02 EG Am 11710. (John Carson, OK)

AUSTRALIA - Radio Australia EG Freq Sked effective 3/4: 21825D 09-10 t/45,50; 21775C 0630-14 t/41,54; 21740S 22-0730 t/56/62 (Sports World 01-0630 Sat); 21525C 01-0630 t/41,54; 21525D 13-1430 t/41/54; 17795S 21-06 t/56,62; 17750D 0000-01 t/43,44; 01-04 t/43,44, 05-06 t/43,44 (01-06 Sat & Sun), 08-09; 17715D 01-10 (Sports World 01-0630 Sat); 17630C 0000-04 t/49,43,44; 05-09 (0000-09 Sat & Sun) t/49,43,44; 15560 02-08 t/56,52; 15465 2030-0730 t/51; 15320S 0030-06, 18-2130 t/56; 15240C 0000-01 t/54; 15240S 22-1030 t/60; 15160S 08-0930 t/56,62; 15160C 14-1630 t/41,54; 15160S 1930-06 t/62,56; 15130S, 2030-0130 t/49,54; 13700C 1530-18 t/54,41; 13605D, 2230-24 t/44,43; 11930B 07-08, 11-2030 t/51; 11910S 20-2130 t/60; 11880B 2030-08 t/51; 11855S 18-2030 t/56,62; 11800D 11-1230 t/45; 11800C 20-22 t/50; 11720S 1630-19 t/53; 9770C, 1530-1630 t/49; 9760S, 09-10 t/45; 9710S 11-1230 t/45; 9710C 1630-21 t/54,41; 9655S 11-1930 t/60; 9580S 0830-20 t/56,62; 9505C 18-20 t/54,41; 7240B 11-20 t/51; 7205S 10-1430 t/54,49; 6080S 11-20 t/51; 6060S 14-1730 t/56,62; 5995S 0830-18.

Indonesian Service: 15365D 22-01; 11855C 23-01, 09-13; 9645D 09-13; 7240C 21-23; 6035C 21-23.

Standard Chinese Service: 17750D 04-05 t/43,44; 17715D 10-14 t/43/44; 17630C 04-05 t/43,44,49; 17630S 22-24; 15170D, 22-23; 11765C 10-14, 22-23 t/43,44.

Cantonese Service: 11765C 14-1530 t/44/43; 9770C 1430-1530 t/49.

Papua New Guinea Service: 11930B 08-11; 9710S, 08-11; 7240B 08-11; 6080S 08-11.

French Service: 17795S 06-08 t/56,62; 17750D 06-08 t/49; 15320S 06-08; 15160S 06-08 t/62,56; 11720S 15-1630 t/53.

Thai Service: 15380C 23-24; 13700C 23-24.

Japanese Service: 11800D 10-11, 1230-1330; 9760S 10-11; 9710S 1230-1330.

Vietnamese Service: 9770C 1330-1430; 7135D 1330-1430.

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 =

Mauritius; 54 = Brunei, Indonesia, Malaysia, Singapore; 56 = New Caledonia, Vanuatu; 60 = New Zealand, Norfolk Island; 62 = Cook Islands, Fiji, Kiribati, Tonga, Tuvalu, Western Samoa.

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. (via Keith Synnott, Publicity Officer, Radio Australia)

17795, 0430, R. Australia, 'Communicator' w/'Bright Sparks' Series. Signal was poor so couldn't catch new sked of 'Communicator' on 2/9 as this is not listed on this day in program guide. (bmm)

BULGARIA - Radio Sofia - How Did We Start?

It all began in the '20s when a small group of radio enthusiasts gathered to discuss the way to introduce Bulgarians to the world of airwaves. In June, 1926, they founded the first radio club in Bulgaria with the purpose of acquiring a transmitter. In this the club failed but it did make the public aware of the great potentials of radio broadcasting, and as a result the Bulgarian Parliament adopted Broadcasting Law in 1927. One of the most ardent propagators of radio broadcasting at that time was Prof. Assen Zlatarov, a prominent scientist and a public figure. His was the idea for setting up a cooperative called "National Radio" with the aim of supplying money for a transmitter, and on December 13, 1929, the call-sign "This is Radio Sofia" was heard for the first time.

At first "National Radio" broadcast 3 times a week, 2 hours a day featuring mainly music. Gradually the air time expanded as new programs were introduced: Children's Hour, Agricultural Survey, programs on family life and child upbringing, as well as sports news and even lessons in foreign languages. "National Radio" broadcast till 1935 when according to a new law the transmitter was nationalized and the state began to control radio broadcasting.

As for the Foreign Service, it was founded in 1937.

Nowadays Radio Sofia has 4 channels: Horizon, which broadcasts 24 hours a day; Hristo Botev, which broadcasts 18 hours daily, Orpheu which is similar to BBC Radio 4 in its orientation towards classical music and cultural topics; an educational channel called Knowledge, and of course, the Foreign Service, which broadcasts in 11 languages with a total of 44 hours daily transmissions. (Radio Sofia via John Carson, OK)

Radio Sofia monitored on 2/12: External service to Europe on 9520 kHz. 05-06 in SP (WRTH says 7233); 06-0630 GK, 0630 onward in, I think, Serbo-Croat. Time and Freq sked for SP pgms at 05, 0530, 0557. News at 0502 and 0553. DX pgm in SP at 0545 Mon. UTC. Current SP freq sked: 2130-22 on 15310; 22-23, 0000-01, and 02-03 on 9850(11755?), 11870, 15310; 05-06 on 9520 and 9700. Weak to fair signals, readability poor. (Mike Fern, CA)

CANADA - Information from RCI Japanese Section by FAX. Exchange broadcasting between Canada and South Korea to start on April 2, 1990 as follows: Radio Korea via RCI (Sackville/250kW): 10-1030 SP t/LAM on 11715; 1030-11 EG t/NA on 11715; 11-1130 EG to NA on 6145; 11-1130 KR t/NA on 9650. (See Korea) (via Koji Yamada, Tokyo Japan in 'The DX SPREAD' Edition #101, 102)

Details of RCI budget cuts announced: Radio Canada Int'l, Montreal, in EG 2230 gmt 4 Feb 90. Excerpts from "SWL Digest" report.

I have a few precise details for you regarding the RCI budget cuts. On Tuesday of this past week (30 Jan) it was announced that the budget cut will be 578,000 dollars for the forthcoming fiscal year starting 1st April, and that will reduce the overall RCI budget to 15.5 million dollars. In order to cope with the cuts, somewhere between five and ten jobs will be cut, but as far as possible these will be eliminated through attrition and early retirement. It was also announced that while no target area services would actually be eliminated, there may possibly be some programming changes...We don't have any details on these changes yet, because they are still being worked on. One broadcast will be dropped though, as of the beginning of April, is the present broadcast to Africa and Europe at 0600-0700 UTC Monday to Friday and that includes two English news programmes at 0615 and 0645 UTC. (WBI 2/9)

CHINA - Voice of Puijiang, Shanghai Sked: *0955-1550* CH-Std As 4950, 3990, 3280 (WBI 2/2)

COLOMBIA - 4865, 0710-0740, Lv Voz de Cinaruco, Published sked is 09-04 but station had frequent promotional spots for all-night operation on 12/29. Medium-wave outlet on 1050 or 1055 may be 24 hours. (Mike Fern, CA)

CZECHOSLOVAKIA - Radio Prague Sked External Service Sked: 0000-0055 PT Am 11990, 11680, 9540, 7345, 5930; 01-02 EG, Am, 02-03 SP Am, 03-04 EG Am, 04-0455 SP Am 13715, 11990, 11680, 9540, 7345, 5930; 06-0630 FR (one hour earlier in Summer) Eu, 0630-07 GM (one hour earlier in summer) 9505, 7345, 6055; 0730-08, EG As, Au, 08-0830 Czech/Slovak As, Au, 0830-09, EG, Au, As, 09-0930 (Sat&Sun) EG As, Au 21705, 17840, 11685; 12-13, IT (one hour earlier in summer) Eu, 13-1455 (Sat&Sun) IT (one hour earlier in summer) Eu 9505, 7345, 6055; 14-1425 (Mon-Fri) Czech/Slovak Eu, ME, Af, As 21505, 17840, 15155, 15110, 13715, 11685, 7345, 5930; 1430-15 EG As, Au, 21505, 17840, 15155, 15110, 13715, 11685; 15-1530, Czech/Slovak Eu, Af, As 21505, 17840, 15155, 15110, 13715, 11990, 11685, 7345, 6055, 5930; 1530-1625 EG Eu, Af, As 21505, 17840, 17640, 15155, 15110, 13715, 11990, 11685, 7345, 5930; 1630-1725 AR Eu, ME 21505, 17840, 15110, 13715, 11990, 11685, 9605, 1630-1735 (SIC - might be typo for 7345, bmm), 5930; 17-18 GM Eu 6055, 1287; 1730-18 FR Eu 7345, 5930; 1730-1825, EG Af, As 21505, 17840, 15110, 13715, 11990, 11685, 9605; 18-1830 EG Eu 7345, 5930; 18-19 IT Eu 6055, 1287; 1830-19 SP Eu 7345, 5930; 1830-1930 FR Af 21505, 17840, 13715, 11990, 11685, 9605; 19-20 EG Eu 7345, 5930; 19-20 GM Eu 6055, 1287; 1930-2030 AR ME 21505, 17840, 13715, 11990, 11685, 9605; 20-21 SP Eu 7345, 5930; 20-21 FR Eu 6055, 1287; 2030-2125 FR Af 21505, 17840, 13715, 11990, 11685, 9605; 21-2125 PT Eu 7345, 5930; 21-2130 GM Eu, 2130-22 IT Eu 6055, 1287; 2130-22 PT Eu, Af, Am 17840, 13715, 11990, 11685, 9540, 7345, 5930; 22-23 Czech/Slovak Eu, Am 13715, 11990, 11680, 9540, 7345, 5930; 22-2230 EG Eu, 2230-23 Czech/Slovak Eu 6055, 1287; 23-24 SP Am 15540, 11990, 11685, 9540, 7345, 5930. (WBI 2/9)

Radio Prague Interprogramme: *0700-14 overall, Multilingual t/Eu (one hour earlier in summer) w/opening announcements and programme preview in English, German, French and Russian on 9505, 7345, 6055, 1287, 1071, 1035. 07-14 (Sunday only) Music/Cultural programme (EG, GM, FR, RR); 0730-14 (Mon-Sat) Overall. 0730-0733 News headlines in EG; 0735-0738 News headlines in GM; 0740-0743 News headlines in FR; 0745-0748 News headlines in RR; 08-0805 Commentary in RR; 0815-0820 Commentary in GM; 0830-0835 Commentary in FR; 0845-0850 Commentary in EG; 09-0903 News in RR; 0915-0918 News in GM; 0930-0933 News in FR; 0945-0948 News in EG; 10-1006 Press review in RR; 1015-1020 Press review in GM; 1030-1034 Press review in FR; 1045-1049 Press review in EG; 11-1105 News in RR; 1115-1120 News in GM; 1130-1135 News in FR; 1145-1152 News in EG; 12-1205 Commentary in RR; 1215-1220 Commentary in GM; 1230-1235 Commentary in FR; 1245-13 Commentary in EG; 13-1305 News in RR; 1315-1320 News in GM; 1330-1335 News in FR; 1345-1650 (SIC - might be a typo as sked only shows to 1400) News in EG; *23-0055* overall Eu, Am, Dom on 13715, 6055, 1287, 1035. 23 News in Czech/Slovak; 2330 News in GM; 0000 News in FR; 0030 News in EG. (WBI 2/9)

DENMARK - Radio Denmark via Norway sked from 2/12: (all 25 minute broadcasts) 1530 15310, 11845; 1630 15220, 17790; 1730 21705, 15220, 9655; 2130 15165, 11850, 9605; 2230 11850; 2330 9605; 0030 9610; 0130 11925, 9615; 0230 15305, 9565; 0430 11865, 9585; 0630 15160, 5980; 0730 21730, 15165; 0930 17740; 1030 25730, 21705, 15165; 1130 25730, 21705; 1230 21705, 15165; 1330 21710. (via Glenn Hauser's 'World of Radio' Pgm on 2/2)

GABON - President to inaugurate fifth 500-kW transmitter. AFP news agency, Paris, in French 1100 gmt 3 Feb 90. Excerpts from report from Libreville.

Africa No. 1, the pan-African radio station based in Libreville, will switch on its fifth 500kW transmitter on 7th Feb, it was learned

today in the Gabonese capital.

The launch of this new transmitter by Gabonese President Omar Bongo will take place in Moyabi (40km from Franceville in the southeastern part of the country). The ceremony will coincide with the ninth anniversary of the radio station.

At a total cost of 3 billion CFA francs, the new transmitter will enable the station to cover part of South America, the Middle East, Southern Africa and Madagascar, in addition to West Africa and Europe. (WBI 2/9)

GUAM - Adventist World Radio-Asia 2-90 Broadcast schedule, 3/25-9/30:
0000 Mandarin China 15225, EG Indochina 15125; 01 Mandarin China 15225, Burmese Burma 15125; 0200 Mandarin* China 15225, EG* China, Japan, Korea 13720; 03 Mandarin* China 15225, Canton, Shanghai* 13720; 04 Mandarin China 15225, Mandarin@, Hakka+ 13720; 05 Mandarin* China 15225, Mandarin* 13720; 06 Mandarin* China 15225, 13720; 07 Mandarin* China 15225, 13720; 08 Mandarin* China 15225, Mandarin@ Hakka+ 13720; 09 Mandarin China 11980, Canton, Shanghai* 13720; 10 Mandarin China 11980, EG Indonesia, Malaysia 13720; 11 Mandarin China 11980, Indo Indonesia, Malaysia 13720; 12 Mandarin China 11980, Filipino(1) 13720; 13 JP Japan 11980, KR Korea 9650; 14 Mandarin China 11980, Burmese Burma 13720; 15 Mandarin China 11980, Indian# India 13720; 16 EG 11980 India, Indian(2) India 13720; 03 sign off; 20 KR Korea 15310, Mandarin China 15225; 21 JP Japan 15310, Mandarin China 15225; 22 Indo Indonesia, Malaysia 15125; Mandarin China 15225; 23 EG Indochina 15125, Mandarin 15225. *Broadcast Saturday and Sunday only; @Saturday only, +Sunday only; #Sun, Wed, Sat - Tamil, Thur - Malayalam; Tues, Fri - Marathi; (1) - Sat, Tues, Fri - Tagalog; Sun, Thurs - Ilonggo; Mon, Wed - Cebuano; (2) - Sun, Tues, Thurs, Sat - Hindi; Mon, Wed, Fri - Telugu (Direct)
15485NF, 2057, KTRW, Agana, IS, JP ID at 21 w/M & W announcer on 2/18 ex 15310 as in WRTH90. (bmm)

INDIA - All India Radio External Services Sked for D-89 (Updated 1 Jan 90): Note: Just arrived after last 'LN' was sent in. Schedule courtesy of All India Radio. Monitoring updates by Kanwarjit Sandhu, Jose Jacob and Manosij Guha all of whom live in India. 3905D, 100kW, 0130-0230 Nepali t/Nepal & 1430-1930 Urdu t/Pakistan; 4920M, 100kW, 12-1230 Tamil t/Sri Lanka; 4990M, 100kW, 0000-0045 Tamil t/SE Asia & 0045-0115 Burmese t/Burma; 6045D, 250kW, 0215-03 Pashto & 03-0345 Dari t/Afghan; 6110A, 250kW, 0130-0230 Nepali t/Nepal; 6140D, 100kW, 14-15 Nepali t/Nepal; 6155D, 100kW, 0015-0430 Urdu t/Pakistan; 6170D, 100kW, 12-13 Sinhi & 13-1330 Baluchi t/Pakistan; 7110D, 50kW, 07-08 Nepali t/Nepal; 7120B, 100kW, 2145-2230 Cantonese & 2230-2245 Kuoyu; 7140D, 50kW, 12-13 Sindhi & 13-1330 Baluchi t/Pakistan; 7145D, 50kW, 0215-03 Pashto & 03-0345 Dari t/Afghan; 7160M, 100kW, 08-0830 Tamil t/Sri Lanka; 7210D, 50kW, 0130-0229 Nepali t/Nepal; 7225A, 250kW, 0215-03 Pashto & 03-0315 Dari t/Afghan; 7230K, 100kW, 07-0730 Nepali t/Nepal; 7255D, 100kW, 1215-1315 Tibetan, 14-15 Nepali t/Nepal; 7265A, 250kW, 100kW, 1615-1730 FR, 1730-1945 AR t/WAS; 7265D, 100kW, 2045-2230 EG t/Australia; 7340M, 100kW, 2345-0330 & 07-0930 Tamil t/Sri Lanka; 7412A, 250kW, 1745-1830 Hindi t/WAS; 7412A, 250kW, 1845-1945 EG, 1945-2045 Hindi & 2045-2230 EG t/WEU; 9535D, 250kW, 2245-0115 EG t/E&SEAS; 9550D, 100kW, 0130-0230 Nepali t/Nepal; 9550A, 250kW, 0215-0229 Tibetan t/Tibet; 9550A, 250kW, 2045-2230 EG t/Australia; 9550A, 250kW, 1745-1830 Hindi t/WAS; 9550A, 250kW, 21-2230 EG t/Australia; 9565D, 250kW, 1330-15 EG t/SEAS; 9575D, 100kW, 1215-1315 Tibetan t/Tibet; 9585b, 500kW, 23-24 Hindi & 0000-0045 Tamil t/SEAS; 9610D, 100kW, 07-08 Nepali t/Nepal; 9620A, 250kW, 1615-1715 RR t/URS; 9630A, 2150kW, 0215-0229 Tibetan t/Tibet; 9665D, 100kW, 1945-2045 Hindi & 2045-2230 EG t/WEU; 9675D, 100kW, 0830-1130 Urdu t/Pakistan; 9700D, 50kW, 13-15 Sinhala t/Sri Lanka; 9910D, 100kW, 2245-0115 EG t/NEAS; 9910A, 250kW, 20-2045 Hindi & 2045-2230 EG t/WEU; 9910A, 250kW, 03-0330 Dari t/Afghan, 16-1730 FR & 1730-1945 AR t/WAS; 9910M, 100kW, 07-0930 Tamil t/Sri Lanka; 9950D, 250kW, 1845-1930 FR, 1945-2045 EG t/W&NAF, 2145-2230 Cantonese, 2230-2245 Kuoyu t/China; 11620A, 250kW, 1115-1215 Burmese t/Burma; 11620A, 250kW, 13-15 Sinhala t/Sri Lanka; 11620A, 250kW, 1745-1830 Hindi t/WAS; 11620A, 1845-1945 EG, 1945-2045 Hindi & 2045-2230 EG t/WEU;

11715A, 250kW, 2245-0115 EG t/NEAs; 11735D, 100kW, 07-08 Nepali t/Nepal; 11745A, 250kW, 2245-0115 t/E&SEAS; 11760D, 250kW, 1330-15 EG t/SEAS; 11810A, 250kW, 1215-13 Cantonese, 13-1315 Kuoyu t/China; 11810b, 500kW, 1615-1730 Farsi t/Iran; 11810b, 500kW, 1745-1830 Hindi t/WAS; 11810b, 500kW, 1845-2230 EG t/WEU; 11830B, 100kW, 1515-16 Sinhala, 1615-17 Hindi & 17-1745 Gujarati; 11855A, 250kW, 0315-0415 Hindi, 0415-0430 Gujarati & 0430-0530 Sinhala t/EAF; 11860A, 250kW, 1845-1930 FR, 1945-2045 EG t/W&NWAF; 11860D, 100kW, 10-11 EG t/Australia; 11870D, 250kW, 0215-0229 Tibetan t/Tibet; 11880D, 250kW, 23-24 Hindi, 0000-0045 Tibetan & 0045-0115 Burmese t/SEAS & Burma; 11900b, 500kW, 1245-1315 Punjabi, 1315-1615 Sindhi t/Pakistan; 11900b, 500kW, 1615-1715 RR t/URS; 11935A, 1615-1715 RR t/URS; 11935B, 100kW, 18-20 EG t/EAF; 11960b, 500kW, 13-1345 Baluchi, 1345-1430 Dari & 1430-1545 Pashto t/AFghar & Pakistan; 15020A, 250kW, 13-15 Sinhala t/Sri Lanka; 15050A, 100kW, 0315-0415 Hindi, 0415-0430 Gujarati & 0430-0530 Sinhala t/EAF; 15165D, 50kW, 23-24 Hindi, 0000-0045 Tamil & 0045-0115 Burmese t/SEAS & Burma, 1115-1215 Burmese t/Burma; 15175A, 250kW, 0845-0945 Indo t/Indonesia; 15185b, 500kW, 1730-1945 AR t/WAS; 15265b, 500kW, 2045-2230 EG t/Australia; 15275A, 250kW, 1130-1230 Tamil t/SEAS; 15280D, 250kW, 1515-16 Sinhala, 1615-17 Hindi & 17-1745 Gujarati t/EAF; 15335A, 250kW, 10-11 EG t/Australia; 15335M, 100kW, 1130-1230 Tamil t/S&SEAS; 15335b, 500kW, 13-15 EG t/SEAS; 15345b, 500kW, 2245-0115 EG t/Australia; 15360D, 250kW, 18-20 EG t/Australia; 15365A, 250kW, 04-0430 Farsi, 0430-0530 AR t/WAS & 1115-12 Thai t/Thailand; 15365D, 250kW, 1215-13 Cantonese, 13-1315 Kuoyu t/China; 17387A, 250kW, 10-11 EG & 1130-1230 Tamil t/S&SEAS; 17785A, 250kW, 04-0430 Farsi, 0430-0530 AR t/WAS; 17785D, 250kW, 1115-1215 Burmese t/Burma, 1215-13 Cantonese, 13-1315 Kuoyu t/China; 17805A, 250kW, 0315-0415 Hindi, 0415-0430 Gujarati, 0430-0530 Sinhala t/EAF; 17830D, 50kW, 1115-12 Thai t/Thailand; 17805D, 50kW, 1130-1230 Tamil t/SEAS; 17860D, 250kW, 0845-0945 Indo t/Indonesia; 17865A, 250kW, 10-11 EG t/Australia; 21735D, 250kW, 10-11 EG t/NEAs, 1115-1145 Thai t/Thailand.

Key to Transmitter Sites: A = Aligarh 4 x 250kW HF 28:00 degrees N, 78:06 degrees E; B = Bombay 1 x 100kW 19:11 degrees N, 72:49 degrees E; b = Bangalore 2 x 500kW HF 12:58 degrees N, 77:38 degrees E; D = Delhi 2 x 250HF 28:43 degrees N, 77:12 degrees E; 5 x 100kW HF, 2 x 10kW HF on standby, 6 x 50kW HF, 2 x 20kW HF, 1 x 10kW HF; K = Kuresong 1 x 10kW HF 26:58 degrees N, 88:20 degrees E; M = Madras 2 x 100kW HF 13:04 degrees N, 80:17 degrees E, 1 x 10kW HF.

Interesting Tidbit of Information: During the transmitter pause at each of the sites the transmitters are tested on any of the following frequencies before regular transmission commences. Bombay 0545-0815 on 6035, 9550, 11830, 15270, 17855, 21695; Madras: 04-0545 on 6120, 7205, 9705; 07-0815 on 11810, 15335, 17875; Delhi: 0045-0645 on 6115, 7110, 9730, 11810, 15250, 17835, 21895. (Data above for the Kingsway xmtr site at Delhi); Delhi: 04-0645 on 6050, 7195, 9705, 11850, 15250, 17835, 21695. (Data above for the Khampur xmtr site at Delhi.); Aligarh: 0530-0815 on 5980, 11790, 15450, 17750, 21660.

Note: This schedule may also be obtained in a graphic compilation via Robert R. Palmer, E. 2707 - 15th Ave, Spokane, WA 99223-5101 USA. (Tel: +1-509-536-7671) (14-04 UTC). Cost is \$2.00 USA & Canada only in United States funds for each copy ordered. (AIR Internal Sked Jan 1 update is also available at the same price.) Listeners in the rest of the world may order from Mr. Manosij Guha, 101 S.R.K. Hostel, Jamia Nagar, New Delhi - 110 025 India. Telex: + 81 31 75210 mrcr in (24 hrs). Tel: +91 11 637571 and: +91 11 6846832 (04-12 UTC Mon-Fri). Cost is US \$3.00 cash or 3 IRCs. All orders are promptly processed and no profit is made on this project. Listen to Radio Nederland's "Media Network" for regular updates on the broadcasting scene in India.

New Document Available: A list of all AIR stations' detailed addresses with possible verie signers, telephone and telex numbers, and telegraphic addresses is available now from Mr. Ghua at the above address for the the price noted. (via Bob Palmer, WA) 9660NF, 1448, AIR, IS under 'ABC Brisbane'//7160 on 2/14 (bmm)

IRAN - Islamic Republic of Iran Broadcasting External Service
Broadcasting Published Schedule No. 89-Feb90, D89-90: Arabic 2130-

2230 Eur 9022, ME 9610; 0230-0330 America 9022, 15084; 0330-0730 ME 5975, 6140, 6150, 1386; 0930-1130 ME 9680, 9525, 6140, 1224, 1386; 1715-2130 ME 765, 7215, 9610, 9685, 1224, 1386; Armenian: 15-1530 W.Asia 1404; Assyrian: 1830-1930 ME 936; Azerbaijani: 1230-14 W.Asia 720; 1630-1830 W.Asia 1404; Baluchi: 1430-1530 E.Asia 594; Bengali: 1430-1525 E.Asia 11790, 9685, ME 9610, 9520, 1224; Dari: 1430-1530 E.Asia 720; EE: 1130-1215 E.Asia 11790, 9685, ME 9610, 9520, 1224; 1930-2030 Eur 9022, 6030; FF: 0630-0730 Eur 9022, 15084, 7110; 1845-1930 Eur 9022, 6030; GG: 18-1845 Eur 9022, 6030; Kurdish: 1330-1830 ME 639; 02-0230 E.Asia 594, 765, 1098; Pushtu: 02-0230 E.Asia 594, 765, 1098; 1330-1430 E.Asia 11790, 9685; ME 9610, 9520, 1224; 1430-1530 E.Asia 1098; 1530-1630 E.Asia 720. RR: 1530-1630 W.Asia 9022, 11790, 1404, 1449; SS: 2030-2130 Eur 9022, 6030; 0130-0230 America 9022, 15084, 9720; 0530-0630 Eur 9022, 15084, 7110; Turkish: 04-05 ME 9022, 15084, 7110; 17-18 ME 9022, 6080; Turkmen: 1630-18 W.Asia 1449; Urdu: 01-02 E.Asia 765, 594, 1098; 1230-1330 E.Asia 11790, 9685 & ME 9610, 9520, 1224; 1430-1530 E.Asia 765; 1530-1630 E.Asia 765, 1098. (James Kline, CA)

ISRAEL - The outlook for the proposed Voice of America relay site in Israel is up in the air again, for two reasons: The political changes in Eastern Europe are signaling some U.S. politicians that the station's mission may no longer be necessary. Israeli conservationists object because (a) the Voice of America site had been an Israeli Defence Force training area; (b) IDF wants a new training area in what is now a nature reserve. (Kol Israel DX Corner 2/12 via Mike Fern, CA) (See United States)

JAPAN - Radio Japan Pub Sked 3/4-4/1: Reg Svc: AR: 1830-19 ME, NAF 9520; Burmese: 1130-12 SE Asia 11875, 17820; Bengali: 15-1530 S.Asia 9535, 11935; Chinese: 1130-1230 Asian Cont. 7210, 9580; 1230-1330 SE Asia, Asian Cont. 11875; 1445-1545 Asian Cont & SE Asia 7210, 9580, 11840; EG: 01-0130 NA 17755; 03-0330 NA, Cent & SAM, Hawaii 15195, 17825, 21610 & CAM 15325 (French Guiana); 09-10 Oceania 15270, 17890; FR: 0630-07 Eur 21690 (Gabon), 21500; 19-1930 ME & NAF 9520; 2030-21 Eur 9540; GM: 06-0630 Eur 21690 (Gabon), 21500; 20-2030 9540; Hindi: 1530-16 S.Asia 9535, 11935; IT: 0545-06 21690 (Gabon), 21500; 2115-2130 9540; Indo: 1015-1115 15300, 17820; 23-0000 11840, 17785; JP: 02-03 N.Cent&SAM, Hawaii 15195, 17825, 21610; KR: 1030-1130 Asian Cont. 7210, 9580; 1330-1430 Asian Cont. 6080, 7210; Malay: 12-1230 SE Asia 11875, 17820; PT: 09-0930 9675 (French Guiana), 11875; RR: 05-0530 Eur 21690 (Gabon), 21500; 1230-13 Asian Cont. 7210, 9580; Swedish: 0530-0545 21690 (Gabon); 21-2115 9540; SP: 0330-04 CAM 15325 (French Guiana), 15350 (French Guiana) & C&SAM 15195, 17825, 21610; 0930-10 SAM 21635 (Gabon), 11875; Swahili: 1630-17 E.Afr 9535, 11935; Thai: 1330-14 SE Asia 11875, 15270, 17810; Urdu: 16-1630 9535, 11935; VT: 14-1430 SE Asia 11875, 15270, 17810; 2230-23 11840, 17785. General Service: SE Asia: 0000 JP on 17180, 21610; 01-02 EG, 02-03 JP, 03-04 EG, 04-05 EG, 06-07 JP, 07-08 EG, 08-09 JP, 09-10 EG on 17810; 10-11 JP, 11-12 EG, 12-14 JP, 14-16 EG on 11815; 16-17 JP on 11815, 15140, 17810; 17-18 EG on 11815; 21-2130 EG on 15230, 17810; 22-23 JP on 17810; 23-0000 EG on 17810, 21610. Asian Cont: 0000-0030 JP 17765, 17835; 01-02 EG, 02-03 JP on 17835, 03-04 EG on 17765, 17835; 04-05 JP, 05-06 EG, 06-07 JP, 07-08 EG, 08-09 JP on 17765; 10-11 JP, 11-12 EG, 12-13 JP on 11840; 16-17 JP, 17-18 EG on 9695; 20-2030 JP, 21-2130 EG on 11815; 22-23 JP, 23-0000 EG on 15195, 17765. S. Asia: 0000-0030 JP 17845, 01-02 EG, 02-03 JP on 17845; 17-18 EG, 18-19 JP 9535; NA: 02-03 JP, 03-04 EG on 5960 (Sackville, Canada); 04-05 JP, 05-06 EG, 06-07 JP 15195, 17825; 11-12 EG 6120 (Sackville, Canada) & from 4/1 will be 10-11 EG; 12-13 JP on 6120 (Sackville, Canada) & from 4/1 will be 11-12 JP) & 11815; 13-14 JP, 14-16 EG on 11865; 16-17 JJ 11865, 15195; 17-18 EG, 18-19 JJ, 19-1930 EG on 11865; 20-21 JP 17825. CentAm: 02-03 JP 15325 (French Guiana); SAM: 0000-0030 21635 (Gabon); 02-03 JP 15350 (French Guiana); 08-09 JP 9675 (French Guiana), 15390; 10-11 EG 21635 (Gabon); 22-23 JP (French Guiana). Oceania: 05-06 EG, 06-07 JP, 07-08 EG, 08-09 JP on 17890; 18-19 JP 11850; 19-1930 EG 11850, 15270; 20-21 JP 15270, 17890; 21-2130 15270, 17890; Eur, ME & Africa: 03-0330 EG, 04-0430 JP on 9645 (Gabon); 07-08 EG 21500, 21690 (Gabon); 08-0830 JP 21690 (Gabon);

08-09 JP 21500, 21640(Gabon); 15-16 EG, 16-17 JP on 21700(Gabon); 21-2130 EG, 22-23 JP, 23-0000 EG on 11835(Gabon). (Direct)

JORDAN - 9560, 1700, Radio Jordan, EG, M w/news & wx t/1725 then ezl music & at 1729 M announced they were going to play a 'Glenn Frye' album but they dropped EG at 1730. Co-chan R. Moscow usually on top of them. Picked them back up in AR at 1845 on 2/18(bmm) Pub EG Sked: 12-1315 13655 & 1315-1730 9560 t/WEur & NA. (John Carson, OK)

KOREA - Info from Radio Korea by telephone: Radio Canada Int'l via Radio Korea to start April 2, 1990. (Kimje transmitting station/250kW): 13-1325 CH to China on 6150; 1330-14 JP t/Japan on 6095, 9700; 1430-1455 CH t/China on 9700. (via Koji Yamada, Tokyo, Japan in "The DX SPREAD" Edition #101, 102.)

Korean Broadcasting System(KBS) moved its SW transmitting site from Suwon to Hwasong, owing to what are called environmental influences on the nearby residential area. After the change of the site, KBS began coming through better in Japan than it used to be, and it was obvious that the station increased the power output for some of its frequencies. According to the reply from the KBS, the power output for its Channel 1 on 3930kHz was increased from 5 to 10kW. Radio Korea on 5975 from 10 to 100kW, and the Social Education Channel 1 on 6015 is from 50 to 100kW. However the power for the Social Education Channel 2 on 6135 remains the same as before 10kW. From these facts, it is evident that KBS's Hwasong Transmitting Station has two 10kW SW transmitters & two 100kW ones. (T. Yamashita via Radio Japan DX Corner via Japan SW Club's 'SW DX Guide 2/90)

DPR KOREA - Radio Pyongyang changed its sked from what WBI said as in Feb LN. As announced on 1/30: Asia & India: 04 13650, 15180, 17665; 06 13650, 15180; 07 11335, 15340; 08 13650, 15180, 11830; 13 9640, 13650, 15180; ME/AFR: 15,17,20 9640, 9977; Eur: 13 9325, 9345; 15 & 17 9325, 11760; 20 6576, 9345; Americas: 23 11735, 13650; 0000 15115, 15180; 11 9645, 9977, 11735; 13 13650, 15180. (bmm)

KUWAIT - The new mailing address for reception reports to Radio Kuwait is: The Controller of Receiving and Frequency Management, 14th Floor, Ministry of Information, P.O. Box 139, Safat 13002, Kuwait. (Arthur Cushen on HCJB DX Party Line 1/23 via Mike Fern, CA)

MALTA - The Voice of the Mediterranean 1575 & 6110 kHz has closed down for good, because audience response fell short of expectations. (Radio Nederland's Media Network 2/8/9 via Mike Fern, CA)

MEXICO - 6105, Tus Panteras, Merida - Some people think Tus Panteras in Merida, Yucatan is off the air. On 31 Dec 89 at 0200, I copied their pre-New Years Eve Broadcast on a Sangean at SINPO 55555. No it isn't April Fools Day. We were in a hotel two blocks away! No QSL Yet. (Norm Crocker, Creston, IA) 6115, 0530, XEUDS, Hermosillo, From 0530 to closing w/ march at 0718-0720. During normal propagation R. Tanpa, Tokyo, wipes out XEUDS after about 0600. XEUDS has lots of ID's and program promotion but my report has been out for about two months. Heard on 12/27 (Mike Fern, CA)

NEW ZEALAND - "Pacific People to hear games" - NZ Herald around 12/15:

People in far flung corners of the Pacific will tune into a commentary of the opening ceremony at the Commonwealth Games.

Radio New Zealand's new shortwave transmitter, about 20 times as powerful as the service used since the Second World War, will begin broadcasting on January 24.

The transmitter is designed to provide full coverage of the Pacific basin.

A special feature of the new equipment allows its broadcast power to be concentrated across different segments of the Pacific at different times.

In the mornings the station will focus on Polynesia with an appropriate breakfast service.

As the sun climbs across the Pacific the transmitter will be beamed across Melanesia two hours later with programming to suit the region.

Between times the transmitter will be switched to give a slightly less broad spectrum coverage of the entire Pacific Basin.

The manager of RNZ International, Mr. Ian Johnstone, said that until Waitangi Day the station would concentrate on covering the games and on special events associated with the 1990 celebrations.

This service will include a number of interviews with competitors in Pacific Island languages.

After February 6 the station will settle into a permanent pattern of specialized broadcasts for Polynesia and Micronesia in the mornings, with a general news service across the entire Pacific at midday.

In the evenings it will again switch, first to cover Polynesia and then Melanesia, with a music programme.

This will consist mainly of dedications from Pacific Islanders living in New Zealand to their friends and relatives back home. (via Noel Brown, Auckland, NZ)

I received a letter dated 1/24 from Bruce MacGibbon, Dunedin, New Zealand! "This morning just on 9 AM (NZ Time) Kim Hill one of the presenters of "Morning Report" which runs from 7-9AM said she had had a call from a "Bruce MacGibbon", Gresham, Oregon saying you had been listening to the start up of "N.Z. International Shortwave Radio." Naturally, I was very interested as I am the only "Bruce MacGibbon" in New Zealand. I rang Kim Hill in Wellington and of course she was very taken with the whole set up and said she would (I had requested it if possible) send me your address. She rang me within thirty minutes to give your address hence this letter." (Possibly a relative - strange indeed, but I haven't seen a QSL Card yet! - bmm)

Some RNZI Observations: Pete Patel, Portland, OR received a letter, along w/old sked & no QSL Card on 2/1 from Rudi Hill, RNZI. RNZI Sked seems to run Mon-Fri: *17-2105*, *23-0105*, *03-0607*. On Saturday nothing consistent yet as on 2/17, they didn't come on at all. On Sunday 2/18 *1800. The Bell Bird IS usually precedes start of programming by about 5 minutes. For sporting events, they run continuous but sig not as good from 21 & during 23 segment.(bmm)

Arthur Cushen tells Glenn Hauser that from 3/4, he is to have a 'DX Programme' & Tony King a 'Mailbox' Programme on RNZI, but didn't give time. (via Glenn Hauser's 'World of Radio' on 2/17)

NORTHERN MARIANAS - WRTH 90 says KFBS has three transmitters but WRTH's published schedule shows five. So I phoned FEBC HQ (about 15 miles away) for a current schedule. Natalie J. Fisher, Assistant to the Director of Operations said they have four transmitters. We did have five, but one has been taken out of service. Learned from the receptionist at Chinese Ministries that FEBC Saipan has a transmitter on order at the HCJB-Crown International transmitter plant in Indiana. There may be an error in the printout from FEBC HQ. I checked this morning 1/24 and found nothing on 12025. However, there was Mandarin on 9495 with recorded KFBS Saipan announcements by a W in mixed EG and CH until signoff at 16.

KFBS Sked: Burmese: 1430-1530 Burma 9670; Mandarin: 09-16 China 12025(9495?); GM: 1530-16(Sunday) USSR C & 19-1930 (Fri & Sat) USSR S; Indonesian 11-1230 Indonesia 15375, 22-23 11980; Javanese: 1030-11 Indonesia 15375; Kazakh: 1530-1545(Wed&Thu) USSR C 9465; Kirghiz: 1530-1545(Wed&Thu) USSR C 9465; Malay: 1230-13 Malaysia 15375; Polish: 19-1930(Thu) Poland 9465, 1915-1930(Tue) 9465; Romanian: 19-1930(Sun) 9465; RR: 16-1830 USSR C 9465, 1530-16(Mon,Tue,Fri,Sat) USSR C 9465; 09-12 USSR E, 12-14 USSR 11650; 14-1530 USSR 9465; Sundanese: 10-1030 Indonesia 15375; Ukrainian: 1830-19 USSR W, 19-1930(Mon&Wed) USSR W, 19-1915(Tue) 9465; Vietnamese: 13-1430 Vietnam 9575; 23-24 Vietnam 11795. (Mike Fern, CA)

NORWAY - Radio Norway EG Sked (Sunday Only) from 3/4-5/3: 06 Pacific 15165, Eur 9590; 08 Far East/Australia 25730, NA/Pacific 15165; 09 Far East, Australia/New Zealand 25730; 12 NA 15165; 13 Eur 9590; 14 S.Asia, Australia 21710; 16 NA 21705, 17765; 17 Afr 25730, WCNA 17765; 18 EAfr, ME 15165; 19 Eur 15165; 22 WAfr, SAM 15180; 23 N&CAM 11930, 0000 SAM 15225. (Eric Swedberg, OR)

ROMANIA - Radio Bucharest Sked: 0000-01 SP, 01-0130 PT 15255, 11940,

11830, 9570, 9510, 6155, 5990; 0130-02 Romanian Am, 02-03 EG Am, 03-04 SS Am, 04-0430 EG Am on 11940, 11830, 9570, 9510, 6155, 5990; 0530-06 EG Af 17745, 17720, 15380; 0645-0715 EG Au 21550, 17805, 17720, 15335, 15250, 11940; 0715-0810 Sun, Romanian (Program for Seamen), ME, Af 17790, 17745, 17720, 15380, 15370, 15335; 0815-0910 Sun Romanian (Programme for Seamen) ME, Afr 17790, 17720, 15380, 15370, 15335; 0915-1010 Sun Romanian (Programme for Seamen) Am 11940, 11810, 11775, 9665, 9590, 9570; 1130-12 FR Eu, Afr 17850, 17790, 117720, 15445, 15365, 15340, 11940; 12-1230 EG As 17720, 15340; 12-1230 GG Eu 15365, 11940, 9690; 1230-13 AR ME 17805, 17745, 17720, 15405, 15365, 15340; 13-14 EG Eu 21550, 17850, 15365, 11940; 1330-14 Turkish Eu 11770; 14-1430 AR ME 17805, 17745, 15405, 15365, 15340, 11740; 1430-15 FR Af 17805, 17745, 15365, 15340; 15-1530 EG As 17745, 17720, 15335, 15250, 11940; 1530-16 IT Eur 11790, 9625; 1530-16 Persian ME 17745, 15250, 11940; 16-17 AR ME 17805, 15390, 15340, 15250, 11885, 11790, 11740; 17-1730 Persian ME 15250, 11940, 9690; 17-1730 RR Eur 9625, 9570, 7175, 7105; 1730-18 EG Af 17720, 15365, 15340, 11940; 1730-18 Romanian Eur 9690, 7195; 18-1830 GM Eur 11940, 9690, 9510, 7195; 18-1830 PT Af 17720, 15340; 1830-19 FR Eur 11940, 9690, 7195; 1830-19 RR 9570, 7125, 7105, 6105; 19-1930 GM Eur 9690, 9510, 7225, 7195; 19-1930 SP Eur 15365, 11940; 1930-20 FR Af 11970, 11940; 1930-2030 EG Eur 9690, 7195, 7105, 6105; 20-2030 Romanian Eur 17225, 6190; 2030-21 FR Eur 9690, 9510, 7195; 2030-2130 Eur 11940, 9570; 21-2130 EG Eur 9690, 7195, 7105, 6105, 5990; 2130-22 PT Eur, Am 15380, 11940, 11830, 9690, 9570, 9510, 5990; 22-23 SP 15255, 11940, 11830, 9570, 9510, 6155, 5990. (WBI 2/2) 11940, 1316-1318, R. Bucharest, Romanian, Christmas Greetings & thanks for humanitarian aid on 12/24 (Igor Sannikov, Kirov)

UNITED STATES - Via the Feb 1990 "Living in South Carolina" we have this interesting article on "WSHB" and thanks to Tom Overcamp, Seneca, SC for sending this to me.

Hampton County is Home to World's Largest Private Shortwave Radio Station by Larry Cribb.

It sits in the middle of 315 acres of land in rural Cypress Creek Section of Hampton County, is served by Palmetto Electric Cooperative and about half of its 16-person staff is made up of local people who are natives of the area, but this is not a local radio station.

Its regular listening audience is scattered across Latin America, the Caribbean, North America, Europe and Australia and is made up of people who have to depend, to a large extent, on shortwave radio to keep up with what is going on in the world outside their own small sphere of existence.

WSHB is one of three shortwave stations making up The World Service and owned by The Christian Science Monitor Syndicate, a division of the Christian Science Publishing Society. This organization is recognized as one of the top news operations in the world today. Not only do they publish The Christian Science Monitor newspaper, a world-wide recognized authority in the field of journalism; they also publish World Monitor Magazine; broadcast MonitoRadio on 200 AM and FM radio stations and on Public Radio and American Forces Radio and Television. The World Monitor nightly television news program is also carried on Cable TV's The Discovery Channel.

The focus of The Christian Science Monitor in its multimedia news operation is to "report the daily news in a clear, factual, accurate and calm manner--free of inflammatory style or individual bias," according to Ed Evans, Senior Station Manager for the organization. "We broadcast news 20 hours a day Monday through Friday," Evans said. "On the weekend we have inspirational programming, but 80 percent of what we do is strictly news broadcasts. We also have some news feature and documentary presentations."

Evans pointed out that while shortwave radio has never been very big in the United States, many people around the world depend on it for their primary source of information. "People in other countries use shortwave radios like we use our car radios," Evans said. "The rest of the world doesn't have local AM or FM radio stations like we have in this country. And then there are people in remote locations who can't pick up any other type of radio other than shortwave, or

any television stations at all."

The Christian Science Monitor began its radio World Service when it started construction of its first shortwave station in 1985 in the state of Maine. That station went on the air in 1987. That same year, they bought a station in Saipan, and then went on the air with their third station, WSHB in South Carolina, on March 27, 1989. Today, The World Service is heard from these three stations by an estimated daily audience of more than 9,000,000 in more than 150 countries around the world.

Evans pointed out that the Hampton County site was chosen because it was the best location to give good coverage to the primary target sites this location is designed to serve--North and South America, with some coverage, also, to parts of Europe and Australia. The station in Maine has the primary responsibility of Europe and Africa, while the Saipan station serves China, Japan, India, New Zealand and Australia.

Another important consideration this area had to offer was the excellent electrical power supply which could be provided by Palmetto Electric Cooperative, which agreed to build a substation on the radio station site. "A radio station of this magnitude is too powerful to operate off just an electric line, it has to have its own substation," Evans said. "Also playing a role in the selection process was the very excellent rate Palmetto could offer because the radio station's useage was during off-peak hours.

At the time negotiations were taking place for this particular site, Evans was Engineer for Palmetto Co-op, a position he held for 15 years, so he played an important part right from the beginning. As plans were firming up, the organization offered Evans the position as station manager and he accepted. Since that time, Evans has been promoted to Senior Station Manager and is now in charge of all three of the Christian Science Monitor shortwave broadcast facilities.

Just to give an idea of the power of this station, it currently has two 500,000 watt transmitters. For an AM broadcast station like the one in your area, 5,000 to 10,000 watts is considered a big station. "Our transmitters are so powerful that we have to take them off the air at least four hours a day for maintenance purposes," he said. "Anything that is that powerful and uses that much electric current has to have a lot of maintenance just to keep it in operation."

The signal is sent out over massive curtain antennas which are beamed at the different target locations. These curtains are strung between giant towers. Just the antenna field of WSHB occupies about 125 acres of land.

Evans pointed out that another unusual thing about this operation is the fact that the United States is probably the only nation in the world which allows the private ownership of shortwave broadcast stations. There are shortwave operations here now which are government controlled and produced like Voice of America and Radio Free Europe," Evans said, "but The World Service of The Christian Science Monitor has no government connections at all. We are strictly a private organization."

All the programming for WSHB is produced at the headquarters location of The Christian Science Monitor which is in Boston, Mass. The programs are sent to all three stations by satellite and are then broadcast all over the world. This station broadcasts in two languages, English and Spanish, and also has some weekend inspirational programming in French.

"There may be some areas in the world where people can't pick up the broadcasts," Evans said, "for instance, we've never gotten any reception reports from Antarctic, but then we don't know how many people there are down there with shortwave radio sets. There aren't many places, if any, where you can't get our broadcasts. This is truly a World Service."

Evans pointed out that although the signals are beamed at places great distances from South Carolina, people in most parts of the state can pick up WSHB. "There are a few dead zones in close-by locations," he said, "but most of the people in the state can get us if they have a shortwave radio. Unlike AM and FM stations, we do broadcast on different frequencies at different times of the day or

night or times of the year. We have to change frequencies frequently in order to get the best coverage because we are bouncing our signals off the ionosphere to get them where they're going, so you need a program guide to find our signal."

Anyone who would like to have a free copy of the program guide can obtain it by writing: World Service, P.O. Box 860, Boston, MA 02123. The times of the broadcast are given in Greenwich Mean Time. You can convert this by subtracting five hours for Eastern Standard Time or four hours for Daylight Savings Time.

Tours of WSHB are also available during working hours of 9 a.m. to 4:30 p.m. Monday through Friday. "If you're bringing a group, we'd like to have a few days' advanced notice." Evans said. You can call the station at 625-4880 or write WSHB, Rt. 2, Box 107A, Pineland, SC 29934.

The Christian Science Monitor feels it is unique in the world because of the editorial responsibility assigned by its founder, Mary Baker Eddy in 1908, it is simply: "To injure no man, but to bless all mankind." The goal of the organization is: To provide people with the information they need to better understand the world they live in, the people they live with, and the common ground we all share."

KJES Radio Update - Information about Radio KJES - January 1990 received by Bill Flynn, CA & is a form letter he apparently made up for them to check off the boxes and make comments. We are presently not on the air. We hope to reactivate the station approximately - ASAP. It is difficult to arrange for necessary personnel to operate KJES. We have some bad news: We don't have the right transmitter and there are other technical difficulties. Now for the good news: God is in control! Thanks for your interest. (Thank you Bill for getting in touch with them.)

VOICE OF AMERICA - On VOA's Communication World on 2/3: VOA to abolish 6 language services: Lao, Greek, Turkish, Slovene, Uzbek, and Swahili. They will cease broadcasting on Sunday April 1st. The elimination of these services will affect a potential audience that numbers in the hundreds of millions. As a result of the cutbacks, 57 VOA broadcasters will lose their jobs. (Thanks to Eric Swedberg, OR for telling me this was on 'Communication World'.)

WHRI - WHRI is carrying Radio Libertas at 1600, not 1630 as usually listed. Freqs are 11790 & 21840. They are also carrying The Cuban American National Foundation on 9495 from 01-02 in SP w/a Miami address. (Norm Crocker, Creston, IA)

WLOV - Updating Jan LN under UNITED STATES: WLOV is a station in Washington, GA on 1370 kHz - Daytime only. (Chuck Oliver, TX)

U.S.S.R. - August brought the Soviet DXers something absolutely new - the DX Programs of our own! It was started by the old-timer DXer from Moscow Paul Mikhailov on the waves of the R. Moscow WS in Russian on August 17. Since then the "Klub DX" consisting of infos, reviews of listeners' letters, tips, etc. is on the air every second Thursday (not of the month, just in sequence) within the following transmissions (the times are not fixed, but the program starts surely after the 10-minute news bulletin at the beginning of each hour, it may even conclude the hour): From March 4 - 12-1259 Eur: 21795, 15190, 15475, 15525, 15540, 15585, 13715, 13775, 11830, 11850, 11870, 12020, 12030, 9880, 1494, 1215. Americas: 15475, 4765; Australia: 17795, 17850, 15230, 11975, 9855; 19-1959: Eur: 15540, 9890, 7155, 7400, 6045; Americas: 17895, 15475, 13645, 11790, 12060, 4765; Australia: 15130, 15580, 11655, 11710, 9855, 1080; Repeated on Friday 05-0559: Eur: 15465, 13775, 11850, 12050, 9775, 9880, 7400, 7420, 6045, 1494, 1386; Americas: 7400, 4765; Australia: 21585, 21615, 21625, 21655, 21830, 17560, 17740, 17815, 17850, 15220, 15320, 15360, 15550, 12035. Note: Some of the above frequencies are valid only in the second half of the hour. Though this is an international service addressed to all those who know Russian, most of the letters received are from Soviet DXers.

A purely domestic DX program appeared on the air for the first time on August 21, 1989. Hosted by a journalist Igor Denisov and consisting of infos, interviews, live recordings and occasional tips, it is broadcast by R. Alma-Ata (in Russian!) within the "radiostantsija Molodlyozhnaja" youth program, which starts at 1700

every third Monday of the month on Alma-Ata I: 11950, 9780, 6180, 5970, 4610, 180kHz and repeated next Tuesday on Alma-Ata II: 5960, 5260, 1440, 1341 and other MW frequencies, plus the relay to Moscow on 9690 at 1100 (which is also start of the youth program, the DX-session having no fixed time within it)

And finally - at least for 1989 - Lithuanian DXers of the "BANGA" club who were already engaged in preparing English DX programs for R. Vilnius decided to produce such programs in Russian for the Home Service of Lithuanian Radio. The first program was aired on October 8. Called "Privet, DXisty!" (Hello, DXers!) and hosted by Sigitas Zilionis (an experienced DXer, an old friend of mine) and Rimantas Pleikys (a journalist), it can be heard Sunday at 1323-1330 on Vilnius 1: 9710, 1557, 666, plus the relay to Moscow on 6010. The content of this 7-minute program is quite diverse, the most interesting features being a report from the Lithuanian Monitoring Service (also in the English program) and monitoring of the December events in Romania. The club sells studio tape recordings of both its English and Russian DX programs: Please contact: Lietuvos DX Klubas "BANGA", A.D. 1646, 232010 Vilnius, USSR. Telex: 261143 LOSC SU. You may also subscribe to the club's bulletins: "BANGA" in English and "ONDO" in Esperanto.

Apart from these programs 'of our own' some DXers have been occasionally contributing to various DX sessions run by Soviet External services. Especially active in this field in 1989 were Sergey Sosedkin, who is practically a co-producer of "Frecuencia Radio Moscu", and your humble editor who after the Scandinavian DXpedition became a close friend of R. Moscow's Department of Broadcasting to Scandinavia and Finland. Interviews with both can also be heard in other DX programs originating from this one of the world's largest international broadcasters. So, here is a complete list of DX-Sessions from Radio Moscow (See above for RR service).

The times given - except those marked * - denote the broadcast within which the DX program can be heard. The latter have no fixed time - though they tend to be included in the second half of a broadcast. The telephone numbers are valid and for working days and hours which in Moscow are between 0700 and 1400 UTC.

German: "DX Klub" - Editor: Valentina Khosheva, tele: 233-69-85. Every Monday 18-19. From 3/4/90: 12010, 7340, 7360, 6145, 1386. Repeated on Wed & Fri 11-12 on 15540, 13715, 11745, 9450, 1323, 263.

Scandinavian: "Nordiske DX-Klubben". Editor: Lena Zheludkova, tele: 233-68-43 (Swedish Section). Every 2nd, 3d, 4th and 5th Thursday of the month. From 3/4/90: Finnish 1630-1730 11870, 9780, 7140, 1494; Swedish: 19-20 11870, 9780, 7170, 7115, 1494; Norwegian: 1730-1830 (Same as Swedish except 7170. Danish: 2030-2130 11870, 9780, 7170, 7115, 6155, 6090, 6010, 1494. Repeated every 2nd Saturday in Swedish: 16-1630 7150, 6055, 5945, 1494, 11870, 9780, 7170, 1494 & in Norwegian 2130-22 (Same Freqs as Swedish).

Spanish: "Frecuencia R. Moscu". Editor: Francisco Rodriguez, tele - 233-72-67. Every 2nd & 4th Sat of the month From 3/4/90: 2245-23* 11890, 11700, 9785, 9580. Repeated on Sunday 2045-21* 15450, 11890, 9880, 9785, 7420 & on Monday 1945-2000* 11890, 9880, 9785, 7420.

Spanish (to Latin America) - "Para los diexistas". Editor: Manolo de la Rosa, tele - 233-72-68. Every Sat & Sunday at 0210 - * (the station's schedule till March 31 only): 15195, 15210, 15450, 15465, 15475, 15510, 15525, 15445, 11655, 11690, 11710, 11890, 11960, 11980, 12000, 12010, 12020, 12050, 9470, 9490, 9610, 9665, 9675, 9745, 9795, 9860, 7390, 6195. Repeated at: 0410 - * 15195, 15380, 15465, 15475, 15490, 15510, 15520, 15525, 15550, 11655, 11670, 11700, 11745, 11860, 11890, 11900, 11920, 11960, 11980, 9470, 9490, 9520, 9530, 9610, 9650, 9665, 9820, 9860, 9865, 9880, 7195, 7360.

Portuguese (to Brasil) - "Onda DX". Editor: Yuri Gromov, tele - 233-68-02. Every Wednesday From 3/4: 15585, 15550, 15475, 15450, 12040, 12020, 12000, 11670.

All these programs are of a magazine type, containing infos, interviews and very seldom - DX tips. Anyway, they are the best source of the first-hand information about both DXing and broadcasting in the USSR.

One more DX program from Moscow - in Italian - is currently under preparation here, in Kirov. A monthly program of 7-minute duration,

it is due to appear later this month. Meanwhile, here is the schedule of Radio Moscow's broadcasts in Italian: From 3/4: 18-19 7320, 7310, 6130; 20-21 same except add 1548; 21-22 7400, 7310, 6130, 1548.

And finally - a sensational broadcast news. The monopoly of Gosteleradio of the USSR on the on-air broadcasting was broken on December 31, 1989. An independent station calling itself "M-1" (M stands for "music") appeared in Vilnius. It transmits pop, rock and sometimes classical music, plus short news bulletins at the start of an hour - everything direct - from 1700-23 UTC on FM-stereo 73.34 MHz. The 4kW transmitter is installed on the Vilnius TV tower. It couldn't do without Lithuanian Dxeers, as well as the assistance of some West German companies including Sueddeutscher Rundfunk. (via Igor Sannikov's "Soviet DX Club" Newsletter No. 3, Jan 1990)

Belorussian Radio observed on 15200: Belorussian Radio's First Programme from Minsk was observed on 15200 at 1500 gmt on 23rd Jan, in //9655, 7210, 7140, 5945 & 281 kHz. The news programme "A Day in Our Life" was broadcast from 1540-1600. (WBI 1/26)

Estonian SSR: Estonian Radio starts shortwave broadcast for seamen. Estonian Radio, Tallinn, in Russian 0700 gmt 14 Jan 90. Text of opening announcement. That was the signature tune for the broadcast for sailors and fishermen which, starting today (14th January), goes out, not only on the republican air waves, but also on shortwave, on a frequency of 5925 kHz, that is 50.6 metres. This means that it can now be heard in various parts of the world's oceans. The sponsors of our program are the labour collectives of the Estonian Merchant Marine and the Strybprom production association. We shall be going on the air at 0900 Tallinn time, that is at 0700 gmt, on Sundays alternately in Russian and Estonian. I remind you that our broadcast is live; there is a telephone in the studio, the number is 43-44-91. Today you will hear: a news bulletin - short news; what do Estonia's sailors and fishermen get from co-operation with our northern neighbours, Finland, sea poetry page; and a feature on a (?comedian).

(At the end of the program the announcer requested seamen to write in and tell them where in the world the broadcast is audible, to: 200001, Tallinn, Lomonosova 21, Estonian Radio. Telex: 173-271. Telefax: 43-41-72. Telephones: 43-44-24 and 43-43-39 (WBI 1/19)

Estonian Radio observed on 11850: Estonian Radio's First Programme from Tallinn was observed on 11850 kHz at 08-0910 on 16th & 17th Jan, in parallel w/5925 kHz, and the Moscow area relay on 5980. Reception was lost under co-channel interference after 0910. (WBI 1/26)

Kazakh Radio Second Programme extended: Monitoring research 19 Jan 90: The Second Programme of Kazakh Radio, Alma-Ata has been extended and was observed closing at 2159 on 18th & 19th Jan on 5970, 5960, 5260, 5035, 1341 & 1098 kHz. This service, also known as "Shalkar", previously signed off at 1800. The extended broadcast contains news bulletins at 2000 & 2100 and a programme preview at 2030. (WBI 1/26)

Latvian Radio, Riga Sked: During Summer time in the Latvian SSR, programmes will be heard one hour earlier than shown. 08-0830 Sun 5935, 1350; 13-14 except Tue & Fri RR t/Eur Radiostantsiya Atlantika (relay of Latvian Radio's domestic Second Programme) 5935, 1539, 1071; 1730-18 Daily Latvian Eur 1143; 2030-21 Tue, Thu, Sat Swedish 5935, 1350; 2230-23 Tue, Thu, Sat Swedish (Repeat of 2030 broadcast) Swedish Eur 5935, 576. (WBI 1/26)

Moldavian Radio First Programme, Kishinev Sked: 0315-22 overall w/0315-0330 Moldavian SSR NA opening announcements & news on 6075; 1905 Freq change t/15360. (WBI 2/9)

Radio Moscow: Additional broadcasts in Romanian observed 16-17 Jan. Two additional broadcasts in Romanian have been observed from Radio Moscow at 1230-13 & 14-1430 on 9795, 7380 & 4895. (WBI 1/26)

Radio Moscow "Escucha Chile" broadcasts end; Radio Moscow in Spanish 2100 gmt 30 Jan 90. Summary of report: The tenth and final instalment of the series "Mission Accomplished" will be broadcast tomorrow, 31st Jan, when "Escucha Chile" will broadcast its last programme to Chile. Monitoring research 1-6 Feb 90: The Radio Moscow 2100 gmt "Escucha Chile" programme was not heard when checked on 1st Feb and appears to have been replaced by a broadcast in Spanish for Spain. Frequencies used for the 0130 gmt "Esucha Chile" programme

now carry the general service in Spanish for Latin America. (WBI 2/9)
Murmansk Oblast Radio, Murmansk Sked: 02-2200 RR 5930, 657 overall
w/Programme preview at 03-0344 Mon-Fri; Oblast News at 0344-0355 Mon-Fri; 0355-04 Mon-Fri Announcements; ; 0515-0525 except Mon Review of 'Polyarnaya Pravda' and 'Rybnyy Murman' (irreg.) 0515-0540 & 0525-0540 except Mon Features; 10-11 Mon-Fri Radiostantsiya Atlantika; 15-1520 Mon-Fri Features; 1520-1540 Mon-Fri Oblast news and programme preview for the following day. (WBI 1/26)

Tatar Radio relayed on HF in Perm oblast: Radio Moscow World Service in Russian 1215 gmt 18 Jan 90 - Excerpt from DX Club report: RSFSR, Perm Oblast: according to the local press, test retransmissions of broadcasts of Tatar Radio from Kazan have begun. In daytime the frequency of 7185 is used and in the evening 15200. (Editorial note: Tatar Radio was observed on 7185 in parallel w/11945 when checked at 1145 gmt on 23rd Jan) (WBI 1/26)

VIETNAM - Voice of Vietnam now using 15010//9840 ex 12020. Heard them in VT at 1702 on 2/16. For EG Sked: See 2/90 'LN'. (bmm) 4710v, 1200, UNID VT regional. *12-13*, but owing to poor signals, it was difficult to extract ID. Perhaps Binh Tri Thien BS from Hue reactivated. (Sarath Weerakoon, Mt. Lavinia, Sri Lanka in Peter Bunn's 'OZ DX' Edit. #52, Jan/Feb 90)

CLANDESTINE(S) - Voice of National Salvation (North Korean directed against South Korea) heard here with fair signals on 3480, 4120, 4454v (nominal 4450) and 6010, from 1000 to fade-out after 1530. Heavy bubble jamming off to the side a bit and hear the program in December and January. (Mike Fern, CA)

NUMBERS STATIONS - Radio Japan DX Corner has a monthly series on numbers stations. Best reception of DX Corner here at 0325 Mondays UTC on 5960, but on 1/22 RCI's transmitter went off the air for 10 minutes or so and I had to keep shifting between 5960 and 17810 which is much weaker.

Via Radio Japan DX Corner 2/12, by Tetsuya Kondo of Asian Broadcasting Institute: North Korea uses medium wave and shortwave stations from two networks. (National & Pyongyang Regional) for spy numbers transmissions. These transmissions are broadcast irregularly at 1500 UTC and vary in length from 10 to 60 minutes. The networks are: (a) 6400, 3250, 855, (810?), 783, 720, 684, 657 kHz; theme music is 'Song of the Red Flag'. (b) 6250, 3320, 1080, 864, 801, 729, 702 kHz; theme song, 'March of the Flying Squadron'.

Each transmission begins with a traffic list read by a woman. (Apparently the same woman prepares the traffic lists for these networks and the network on 4771v-5871v kHz.--Mike Fern, CA)

North Korean radio also has programs which relay letters from North Korean residents to their relatives in the south. It is believed some of these letters are spy messages although they appear to be ordinary letters when they are read on the air. (Note that these networks do not correspond to the WRTH networks for KCBS and Pyongyang Pangsong. Two of the mw xmtrs are 1500 kW, which makes them the most powerful numbers stations in the world. I heard 6400 with a typical numbers-session introduction at 1500 today 2/12; it is readable under teletype or Morse interference. - Mike Fern, CA)

Passport to World Band Radio 1990 lists Radio Pyongyang on 4771v and 5871v at 10, 12, and 14 UTC. This is actually a numbers station according to Tetsuya Kondo of the Asian Broadcasting Institute.

Kondo wrote the DX Corner script on the Pyongyang numbers station. He said there is a third transmitter on 7270. I can't hear 7270 because of co-channel interference. He gave the schedule as 04, 10, 12, 14, 1530, 17 and 22 UTC on 4771 and 7270. I checked Monday (1/22) at 12 and found music, checked again at 14 and found numbers on both 4771 and 5871.

This is apparently a dictionary code or a two-part code. Not "53230" like the Caribbean numbers station but (I think) "five hundreds, three tens, two, three tens, zero." Signals on 4771 and 5871 are fair here, with modulation a bit mushy. Transmissions begin with the Hymn to Kim Il Sung (all five minutes of it). (via Mike Fern, CA) 73's, Bruce

QSL Reports

Sam Barto
47 Prospect Place
Bristol, CT 06010



ABU DHABI: Voice of the U.A.E. 13605 f/d folder cd. in 48 ds. for 2 IRCs. v/s Ahmed A. Shouly, Director.(Barhydt-OR). p/d cd. in 34 ds.(Kremer-IN).

ADMIRALTY ISLANDS: Radio Manus 3315 p/d personal ltr. in 67 ds. for ms. v/s Eliun Sereman, Acting Station Manager. Rcvd. apology for not having QSL cds.(D'Angelo-PA).

ALASKA: KNLS 7355 f/d cd. w/ ltr. and schedule in 22 ds. for ms.(Gaharan-LA).

ARGENTINA: RAE 11710 f/d cd. w/ personal note in 67 ds. w/ pennant, ms. and schedule. v/s's are Silvana Licciardi of the English Team and Marcella G.R. Campos, Director. (Field-PA). f/d cd. w/ schedule in 11 wks. for 2 IRCs. (Kohlbrenner-IA). f/d cd. in 97 ds. for 3 IRCs.(Carson).

ARMENIAN SSR: Radio Yerevan 13645 f/d plain white cd. in 146 ds. for 2 IRCs. Schedule rcvd.(Ryan-NY). Radio Moscow 17570 via Yerevan f/d "Lenin Mausoleum" cd. in 1 mo. (Lare-MI). f/d "Bolshoi Theatre" cd. in 2 mo.(Hosmer-MI) 17570 and 21740 f/d cd. in 1 mo.(Lare-MI).

ASIATIC RUSSIA: Radio Kiev 15180 via Komsomolsk - Amure f/d "J. Gagarin" cd. in 72 ds. w/ schedule and calendar. (Peake-IA). 17890 via Chita f/d "Arbat Square" cd. in 57 ds.(Butcher-MA). 9655 via Komsomolsk-on-Amur f/d cd. in 1 mo. w/ schedule.(Lare-MI) 15425 via Petropavlovsk-Kamchatsky f/d "Peoples Friendship Fountain" cd. in 56 ds. (Butcher-MA). 15425 and 12010 same cd. in 62 ds. for 1 IRC.(Carson-OK).

AUSTRIA: Radio Austria International 9870 f/d "Costume" cd. in 17 ds.(Terrence-NY). 13730 f/d "Walser Valley Costumes" cd. in 15 ds. for 1 IRC.(Hunt). 13730, 9870 and 9875 same f/d cd. in 2 mo. w/ sticker and schedule.(Barto-CT).

AUSTRALIA: VNC 5000 via Llandilo f/d "Antenna" folder cd. in 1 mo. for 1 IRC (returned) v/s Marion Leiba.(Lare-MI). Radio Australia 9580 via Shepparton f/d "Bicentennial Commemorative Card #3" in 13 mo. for \$2.00.(Kacir-MI).

AZORES: Radio Club de Angra 13584 f/d prepared cd. in 46 ds. for a PT rpt. and \$1.00. (Allen-OK). f/d "Heroismo Airport View" cd. in 3 wks. for a PT rpt. and 2 IRCs. The * freq. listed on the cd. was 909khz.(Kohlbrenner-PA). f/d cd. for "909" in 1 mo. for a PT rpt. and copies of my two MW QSLs from 71 and 72 when station was on 1394khz. Station sent a beautiful Artic Radio DX Club station pennant!(Barto-CT). f/d cd. in 21 ds. for an EG rpt. Station sent stamps and decals along with a personal note in PT which stated (possibly something lost in translation): "10kw on 909khz....you can hear us on shortwave 13584 khz. spectrum from AM." (Eckert-PA)....This sure looks like an admission by the station that they are operating on shortwave....Sam.

BANGLADESH: Radio Bangladesh 15195 and 17710 n/d "Bengal Tiger" cd. in 27 ds. for \$1.00. Also rcvd. personal ltr. and "Bangladesh Calling" schedule booklet.(Ryan-NY).

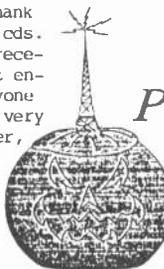
BELGIUM: BRT 9925 f/d "Le Jugement de Cambyse by David Gerard" painting cd. in 42 ds. for 2 IRCs. Also rcvd. stickers, map and schedule.(Carson-OK). 21810 f/d "Brussels University Building" cd. in 62 ds. for 2 IRCs.(Carson-OK). 17555 f/d cd. of "Lace Makers at Work" in 3 mo. (Humenyk-ONT).

BIAFRA (Nigeria): Radio Nigeria 6025 via Enugu f/d cd. w/ ltr. in 96 ds. for \$1.00. Station signed and stamped my prepared cd. v/s L. Nnamuchi, Assistant Chief Engineer. Thanks to Kris Field for v/s. (D'Angelo-PA). f/d ltr. in 3 mo. Station says transmitter is located at a place called Milliken Hill (Barto-CT).

BONAIRE: Trans World Radio 9535 and 11930 f/d cd. w/ schedule in 33 ds. for 2 IRCs. v/s Sally Rork.(Carson-OK).



NOTES: First of all I would like to thank our members for the many Christmas cds. and Seasons Greetings cds. that I received over the Holidays. It was most enjoyable to hear from each and everyone of you. Jerry Klinck says he had a very nice time over the Holidays; however, he is still awaiting his QSL from Radio Australia. He is about ready to call the station. John Bryant writes that he is presently in the State of Washington on sabbatical. He hopes to get in some good DXing from that location. Thanks for the mailing labels John. I will definitely use them...Sam. Kris Field says that he use to get in a little time for himself when he only had one child to worry about. Now he has two. He says he has about 10 minutes a day for some serious DXing. I know exactly how you feel. By September of this year, I'll have both of mine in college. I don't know whether to be happy or sad with that one. I'll have lots of free time but no money!...Sam. Gordon Darling sent in several great SWBC QSLs but he has also QSLed the PTT stations on Niue and Manihiki! Gordon - do you have any schedules for these utility stations?...Sam.



Voice Of The Purple Pumpkin QSL

Dr. C. RIGAS

We are pleased to confirm your reception of The Voice Of The Purple Pumpkin on a frequency of 6037 kHz. at 2012 to 2018 UTC. on 20/12/57 transmitter power was 100W. with a half-wave dipole antenna. 15045 Oct # 2105-2142

Dr. C. RIGAS
1 M. Agard
Chief Engineer

BOTSWANA: Radio Botswana 4820 p/d "Herdsboy Milking a Cow" cd. in 299 ds. for ms. 'This was 24 ds. after a f/up rpt. v/s Ted Makgekgenene, Chief Engineer.(Field-PA).

BRASIL: Radio Itas 11745 f/d cd. w/ schedule and travel info. in 64 ds.(Kacir-MI). Radio Jornal da Transamazonica 5025 f/d prepared cd w/ ltr. and sticker in 5 wks. for SASE (used). This was for a f/up rpt. for an 88 reception. v/s Mariene F. Gomes, Depto. Comercial. Alternative address to the one listed in the WRTI is: Rua 1 de Janeiro

* 1359-Centro, 68370 Altamira, Para.(Moore-MI). Radio Dourados 3375 two f/d prepared cds. w/ postcards and an XMAS cd. in 1 mo. for SASE (used). This was for a 1980 reception. v/s Selene Roberto. (Moore-MI). Radio Ribeirao Preto 3205 f/d prepared cd. in 3 wks. for SASE (used). v/s was the Socio-Gerente for the station.(Moore-MI). Radio Nacional da Amazonia 11780 f/d prepared cd. w/ station stickers and a calendar in 59 ds. for a PT rpt. and ms. v/s Lucia Emilia M. Fernandes, Gerente.(Turnick-PA). Radio Pioneira de Teresina 5015 f/d prepared cd. w/ station information folder [very nice w/ color photos] in 4 mo. for SASE w/ lots of added postage. v/s Tony Batista, Director. This is my 36th ZY station and my 20th ZY State so look out Kap. Here comes my application. (Moore-MI). Radio Guarujá 5975 f/d prepared cd. in 1 mo. for SASE (used). This was on my 5th try. for an 84 reception. v/s Irineo Conelli Junior.(Moore-MI). Radio Marajoara 4955 f/d prepared cd. in 28 ds. for a PT rpt. and ms.(Turnick-PA). Radio Clube de Marilia 3235 f/d prepared cd. w/ ltr. and schedule in 1 mo. for SASE (used). Also rcvcd. station business cd. v/s Jose Marques Beato, Gerente. Addr: Rua Paes Leme No. 20, Marilia, SP 17.500. (Moore-MI)..... Don says that postage on all above ZYs 5.45 Novos Cruzados will probably increase again by the time this QSL Column is published....Thanks for the rpts. Don...Sam.

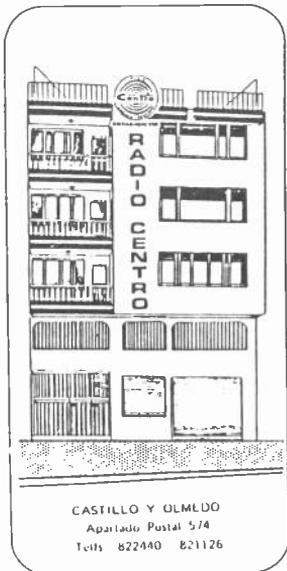
via Rich D'Angelo



BULGARIA: Radio Sofia 11660 f/d cd. w/ stickers and form ltrs. in 77 ds. for ms. (Field-PA). 9700 f/d "Pamporovo" cd. in 2½ mo. w/ personal ltr.(Humenyk-ONT). 15330 f/d cd. w/ schedule in 61 ds. for 2 IRCs.(Hunt).11680 f/d cd. in 104 ds. w/ schedule.(Turnick-PA).

BURKINA FASO: Radio Television Burkina 4815 f/d ltr. w/ schedule in 208 ds. for ms. This was for a FR rpt.(Ryan-NY).

BYELORUSSIAN SSR: Radio Moscow 17700 via Orsha f/d cd. in 2 mo.(Hosmer-MI).



BYELORUSSIAN SSR: Radio Moscow 15540 via **Minsk** f/d "Lenin Mausoleum" cd. in 1 mo.(Lare-MI).

CAMEROON: CRTV - Yaounde 4050 f/d ltr. in 213 ds. after a f/up rpt. plus a \$2.00 donation to CATHCA, c/o Mr. James Fonteym, P.O. Box 751, Ebolowa. The v/s promises to answer all ltrs. and asks help in publishing the activities of CATCHA (relief for handicapped children of Cameroon & Central Africa).(Field-PA).

CANADA: Radio Japan 5960 via **Sackville** p/d cd. in 2 mo. w/ schedule.(Barto-CT). "Tokyo: Shinjuku by Night" cd. in 50 ds.(Peake-IA).

CHILE: Radio Nacional de Chile 15140 f/d ltr. w/ stickers and coins in 71 ds. for a SP rpt. and ms. v/s Carlos Toledo Verdugo, QSL Manager.(Turnick-PA). f/d ltr. w/ prepared cd. in 74 ds. for ms.(Turnick). **CBV** 8677 Time Signal Station f/d "Map" cd. in 120 ds. for \$1.00. v/s Jose L. Andaur Carrero, Capitan de Fragata Lt.(Gavaras-MN).

CHINA, PEOPLES REP. OF: Radio Beijing 11685 f/d cd. in 30 ds. for 2 IRCs.(Hunt). 11755 and 15440 f/d cds. in 44 ds.(Darling-PNG). **CPBS-2** 5075 f/d "Stuffed Animal" cd. in 28 ds. for a postcard and local stickers.(Frodge-MI).

CLANDESTINE: Radio Venceremos 6343 f/d ltr. in 56 ds. for an EG rpt., tape and ms. v/s Anita Ocampo.(Hosmer-MI).

COLOMBIA: Radio Macareana 5975 f/d cd. w/ ltr. in 45 ds. for a SP rpt. and ms. v/s Enrique Zambrano, Gerente.(Turnick-PA). **Radio Caracol** n/d "Map/Globe" cd. in 16 mo. for a SP rpt., tape and ms. (Huniwell-NJ)...Exactly what station was this? What freq?...Sam. **Ondas del Orto-**

equaza HJOA 4975 f/d prepared cd. w/ p/d form ltr. in 48 ds. for a SP rpt. and ms. This after 4 tries. Sticker rcvd. v/s C.P. Norberto Plaza Vargas, Sub-Gerente.(Palm-ersheim-WA). **La Voz del Ariari HJNE** 5991.5 f/d prepared cd. via registered mail in 26 ds. for ms. This was for an 87 reception.(Palmerseim-WA).

COSTA RICA: TIPC 5055 f/d cd. in 42 ds. for ms. Also rcvd. pennant, sticker, schedule and calendar.(Hosmer-MI). 9645 f/d cd. in 55 ds. for \$1.00.(Barhydt-OR).

CUBA: Radio Moscow 9600 and 11840 via **Habana** f/d "Moscow State University" cd. in 1 mo.(Lare-MI). 9600 f/d cd. in 62 ds.(Carson-OK).

CZECHOSLOVAKIA: Radio Praha 7345 and 21505 f/d "Opocno Chateau" cd. in 1 mo.(Humenyk-ONT). 11990 f/d cd. in 42 ds. for 1 IRC.(Carson-OK).

ECUADOR: HCJB 6130, 15155 and 17890 f/d "50th Anniversary Stamps" cd. in 29 ds. v/s Glen Volbhardt. (Humenyk-ONT). 11775 same f/d cd. in 24 ds. for 1 IRC.(Carson-OK).

* **Radio Centro** 3290 n/d personal ltr. w/ postcard in 24 ds. for a SP rpt. and SASE (not used). v/s Miguel Angel Martinez G., News Dept. (Moore-MI).

EGYPT: Radio Cairo 9805 and 4902.5 p/d "Luxor" cd. in 3 mo.(Barto-CT).

ENGLAND: VOA 5995 via **Woolferton** f/d "White House" cd. in 2 mo.(Humenyk-ONT).

EURO PIRATE: W.F.R.L. Wonderful Free Radio London personal ltr. and QSL Magazine in 2 wks. v/s Andy Walker.(Druzak)...Please rpt. freq. and/or addr. w/ report...Sam.

EUROPEAN RUSSIA: Radio Moscow 11850 via **Komevo** f/d cd. in 6 wks.(Rugg-QUE). 7150 via **Arnavir** f/d "Lenin Mausoleum" cd. w/ schedule in 48 ds.(Carson-OK). f/d "Moscow State University" cd. in 1 mo.(Lare-MI). 9865 f/d cd. in 1 mo.(Lare). 12055 f/d "Bolshoi Theatre" cd. in 2 mo.(Hosmer-MI). 11880 and 15150 via **Moscow** f/d cds. in 2 mo.(Hosmer-MI). 17660, 15220 and 15560 f/d "Peoples Friendship Fountain" cd. in 2 mo.(Lare-MI). 15220 f/d cd. in 1 mo.(Lare). 17815 via **Serpukhov** f/d cd. in 1 mo.(Lare-MI). 15530 f/d cd. in 2 mo.(Lare). 15550 and 17665 via **Tula** f/d cd. in 2 mo.(Lare-MI). 17600 f/d cd. in 2 mo.(Hosmer-MI). **Radio Station Peace and Progress** 15320 via **Kingisepp** and 11980 via **Moscow** p/d cds. in 4 mo.(Barto-CT).

FRANCE: Radio France International 11670 cd. w/ schedule in 33 ds. for 2 IRCs. (Hunt). 21635 f/d cd. w/ schedule in 3 wks. for a FR rpt.(Rugg).

GALAPAGOS ISLANDS: La Voz de Galapagos 4810 p/d "Galapagos Wildlife" cd. in 5 wks. after a f/up rpt. in SP for \$1.00. v/s Padre Victor Maldonado. (Kohlbrener-PA).

LRA 36

RADIO NACIONAL
via Jim Renfrew
"ARCANGEL SAN GABRIEL"

QTH 9411 Base ANTARTICA ESPERANZA
TERRITORIO ANTARTICO ARGENTINO
REPUBLICA ARGENTINA

UBICACION GEOGRAFICA
Lat 63° 21' Sur
Long 56° 59' Oeste



THIS CONFIRMS that Robert Carl Scott Head
 SECRET SOCIETY Radio on November 25th 1989
 At 2109 to 2124 (G.M.) ON 7410KHZ
 TUNE Your Receiver CAREFULLY AND Look for
 ANOTHER BROADCAST FROM SECRET SOCIETY Radio
 ANTENNA: Cut D.Pole
 TRANSMITTER: HALL-CRAFTS HI-40
 POWER: 50 WATTS MAX
 LOCATION: ??????????????

Q.S.I. 6250
 H10
 SECRET SOCIETY
 Your Rock-N-Roll Connection

IRELAND: Radio Stella Inter-
 * national 6319.5 f/d cd.
 w/ ltr. in 16 ds. for
 \$1.00. (Kohlbrener-PA).
 f/d "Cafe Royal" cd. in
 18 ds. for \$2.00. Also
 rcvd. personal ltr. (Eck-
 ert-PA).
ISRAEL: Kol Israel 11605
 f/d cd. in 38 ds. for 2
 IRCs. (Hunt).
ITALY: RAI 9575 f/d "Cavio
 Carra: Estate Sulfiume"

cd. in 151 ds. for ms. (Ryan-NY). 11800 f/d cd. in 3 mo. (Terrence-NY).
JAPAN: Radio Japan 9620 "Nara Sunset" cd. in 3 wks. (Pyatt-VA). 17810, 11870, 17825 and
 15195 p/d cd. in 3 mo. (Barto-CT). 15325, 17835, 21610, 17765, 9585 and 17755 p/d
 "Clay Figures" cd. w/ newspaper and schedule in 2 mo. (Barto-CT).
JORDAN: Radio Jordan 11810 cd. in 369 ds. after a f/up rpt. (Darling). 9560 f/d cd. in
 295 ds. w/ schedule for ms. (Ryan-NY). f/d cd. in 14 mo. w/ schedule for ms. C/V #
 170: (Lare-MI).
KATANGA: La Voix du Zaïre 7202 via **Lubumbashi** n/d ltr. in 106 ds. after a f/up rpt. in
 * 1 mo. for \$1.00. v/s Bebe Beshelemu. (Paszkievicz-WI).
KIRGHIZ SSR: Radio Moscow 15140 via **Frunze** f/d cd. in 57 ds. (Butscher-MA).
KOREA, REPUBLIC OF: Radio Korea 13670.1 f/d "Staff Photo" cd. in 2 mo. w/ schedule.
 (Barto-CT). 9750 f/d cd. w/ schedule in 42 ds. (Rugg-QUE). 15575 f/d "Mask Dance" cd.
 in 26 ds. (Zobro-MI). 9750 and 15575 f/d cd. in 2 mo. w/ personal ltr. and schedule.
 Report forms rcvd. (Humenyk-ONT).
KUWAIT: Radio Kuwait 15505 f/d cd. w/ schedule in 61 ds. for 2 IRCs. (Hunt). **Bahrain**
Broadcasting Station 15505 p/d form ltr. in 415 ds. for 2 IRCs. v/s Abdul Rahman
 Abdulla, Acting Director of Broadcasting. (D'Angelo-PA)...Kris Field says to use the
 following address: Radio Kuwait, The Controller of Receiving and Frequency Manage-
 ment, 14th Floor, Ministry of Information, P.O. Box 193 Safat, 13002 Safat, Kuwait.
LAOS: Lao National Radio f/d "Station Temple" cd. in 16 mo. for a taped rpt. Schedule
 rcvd. This was from the Soviet transmitter site. (Huniwell-NJ)...John, please tell
 us the site (if known) and the freq...Sam. (Druzak).
LEBANON: Voice of Hope/King of Hope 6280 n/d "The Good Fence-Metulla" cd. in 2 wks.
LESOTHO: Radio Lesotho 4800 cd. in 400 ds. Also rcvd. a second cd. for the same rpt.
LIBERIA: VOA 6035 f/d "White House" cd. in 19 ds. (Humenyk-ONT). (Darling-PNG).
 11835 same cd. in 19 ds. w/ rpt. forms. (Humenyk). 17870 p/d cd. in 68 ds. (Davisson).
ELMA 4760 f/d "Transmitter Site" cd. in 66 ds. for 2 IRCs. Also rcvd. station history
 and schedule. (Hosmer-MI). same cd. in 9 wks. for 3 IRCs. (Klinck-NY). 11955 same
 type cd. in 100 ds. w/ schedule. v/s J. Tokeh. (Zobro-MI).
LUXEMBOURG: Radio Luxembourg 6090 f/d "Antenna/Coat of Arms" cd. w/ stickers in 25 ds.
 Same cd. I received 19 yrs. ago. (Ryan-NY).
MALI: Radio Beijing 9770 via **Bamako** f/d cd. in 16 ds. w/ schedule. (Barhydt-OR).
MALTA: Deutsche Welle 11865 f/d "Trincomalle Relay Site" cd. w/ sticker and pennant in
 62 ds. v/s Peter Senger. (Carson-OK).
MADRIPATANIA: Radio Nationale 4845 n/d "Map" cd. after several f/up rpts. over many years.
 This was for a FR rpt. and several IRCs. (Woloch-QUE).
MEXICO: Radio Huayacocotla 2390 f/d prepared cd. w/ personal ltr. for a SP rpt. and
 \$1.00. v/s Elvia Sanchez Alvarez, Coordinadora del Noticiero. Rcvd. a very nice over-
 sized poster. (D'Angelo-PA).
MONACO: Trans World Radio 9485 f/d cd. w/ schedule in 17 wks. for \$1.00. (Klinck-NY).

RADIO MOSCU INTERNACIONAL



1929 QSL 1989

MONGOLIA: Radio Ulan Bator 12015 f/d
 blue cd. in 2 mo. who said they
 only send a pennant after receiving
 a second rpt. (Pyatt-VA).
MOROCCO: Radio TV Morocco 17595 f/d cd.
 in 261 ds. for 1 IRC. (MacHarg-IN).
NAMIBIA: SWABC 3290 f/d "Desert Hills"
 cd. w/ schedule and sticker in 6
 mo. for \$2.00. v/s O.J. Van Schalk-
 wyk, Manager. (Eckert-PA). same cd.
 in 30 ds. for 1 IRC. (MacHarg-IN).
NEWFOUNDLAND: CKZN 6160 f/d cd. in 28
 ds. v/s R. Knowles, Manager. (Ryan-
 NY). same cd. in 32 ds. w/ list of
 regional stations. (Peake-IA).

NEW ZEALAND: Radio New Zealand International 15485 f/d paper pennant w/ verie statement in 28 ds. for 2 IRCs.(Darling).
NIGER: La Voix du Sahel 5020 f/d cd. in 6 wks. for a FR rpt. and 2 IRCs. v/s Yacouba Alwali. (Kohlbrener-PA).
NIGERIA: Voice of Nigeria 7255 f/d "Airport" cd. in 86 ds. for ms. Schedule rcvd. (Ryan-NY). Radio Nigeria 6050 via Ibadan f/d ltr. in 7 wks. v/s V.A. Kalejaiye, Station Engineer.(Barto-CT).

NORWAY: Radio N way International 21710 f/d "Romsdals Horn" cd. in 72 ds. for 2 IRCs. Schedule and new style stickers rcvd.(Carson-OK). 9560 f/d cd. w/ stickers in 62

ds. for 2 IRCs.(Hunt). 21710 and 17840 f/d "Fjellanger/Widerøe" cd. w/ stickers and schedule in 6 wks.(Barto-CT).

PAKISTAN: Radio Pakistan 21575 and 17565 f/d "Mausoleum of Founder of Pakistan" in 3 mo.(Barto-CT).

PAPUA NEW GUINEA: Radio Sandaun * 3205 p/d ltr. in 45 ds. for ms. v/s Gabriel Deckwalen, Station Manager.(Lare-MI).

QSL CARD

Thank you for your reception report of RADIO ULAN BATOR's broadcast, which we've checked and found correct as follows:

Mr. Nick Terrence
 Date of reception May 24, 1989
 Time 10:45-1145 (UTC) Frequency 72015 (MHz)

Ulan Bator time is +8 GMT
 Your remarks, comments and requests are welcome.

NOTES: Don Hosmer is very glad about his two new countries verified namely, Tibet and Bolivia. He is presently awaiting a direct reply from Manchuria. If it doesn't come in 2 or 3 months he says he will try the Beijing route. Kirk Allen in OK is enjoying the life style out that way very much. He was away from the radio for about a month but glad to be back home now. Thanks for the tips Kirk...Sam. Pastor William Peake sent along a newspaper clipping which talked about his involvement with short-wave radio listening especially the religious stations. The article was excellent reading...Sam.

PAPUA NEW GUINEA: Radio Guif 3245 f/d ltr. in 2 mo. for ms. v/s Mark Auhova, Manager. (Lare-MI). Radio Western Highlands 3375 f/d "Map" cd. w/ ltr. in 1 mo. for ms. v/s Esau Okole, Station Technician.(Lare-MI).

PHILIPPINES: VOA 11920 f/d cd. in 18 ds. for ms.(Klinck). 15290, 17735, 6110, 15155 & 17820 cds. in 19 ds.(Darling). 9760 f/d cd. in 1 mo.(Humenyk-ONT).

POLAND: Radio Polonia 7270 f/d cd. w/ schedule and ltr. in 10 wks. for 2 IRCs.(Klinck). f/d "Nowy Targ" cd. w/ schedule in 3 mo. v/s Miroslaw Lubon, Editor.(Humenyk-ONT).

PORTUGAL: Radio Japan 15230 and 9670 via Sinea p/d cd. in 3 mo.(Barto-CT).

RIO MINI: Radio Africa 7188.9 f/d cd. in 54 ds. for ms.(Lare-MI).

SARAH: Radio Malaysia Kota Kinabalu 4970 p/d "Map/Logo" cd. in 2 mo. after 3 f/up rpts. for ms. v/s Benedict Janil, Director. Pleased w/ this one!(Lare-MI).

SAIPAN: KHBI 17780 prepared cd. in 36 ds. v/s Thomas H. Nickell, Manager.(Barhydt-OR).

KPBS 12025 f/d cd. in 7 mo. after a f/up rpt. for 2 IRCs. Schedule rcvd. (Kohlbrener)

SEYCHELLES: BUC 17885 f/d prepared cd. in 51 ds. w/ personal ltr. for 2 IRCs. v/s Peter J. Loveday, Senior Transmitter Engineer.(Estes-AI).

SINGAPORE: BBC 9740 f/d "Transmitter Site" cd. in 25 ds. for \$1.00. v/s Fon Lynn.(Barhydt-OR). Singapore Broadcasting Corporation 5052 f/d "Singapore at Night" cd. in 122 ds. for \$1.00.(Cichorek).

SOMALIA: Radio Hargeisa same

* stuff...station wants a processing fee of \$50.00!
 Read my last months QSL Column...Sam.(Darling).

SOUTH AFRICA: Radio Oranje

3215 f/d cd. in 28 ds. for ms.(Turnick-IA). Radio Five 4880 f/d cd. w/ schedule and decal in 56 ds.(Gaharan-LA). Radio RSA 9615 f/d "Flame Lily" cd. in 23 ds. for 2 IRCs.(Hunt). cd. in 32 ds. v/s M. Vorster.(Kacir-MI). 21535 f/d "Durban Beachfront" cd. in 24 ds.(Kacir).

SPAIN: Radio Beijing 9690 via REE f/d "Silk Figurine" cd. in 22 ds. for 3 IRCs. Schedule and stickers rcvd.(Ryan). REE 9630 f/d cd. w/ pennant in 79 ds.(Gaharan-LA).

RM



RADIO MATORIN

QSL

Certificado de Sintonia

Sr. ROWLAND ARCHER

Muchas gracias por su informe de recepción. Tenemos el gusto de confirmar su control de nuestra emisión en 5.040 kHz. de fecha 21 de Mayo de 1988 a las 11.30 horas de Venezuela con 1.000 vatios de potencia.

RADIO MATORIN

ALONSO HURTADO
 Director

SRI LANKA: VOA 15250 f/d "White House" cd. in 15 ds. (Turnick-PA).
SUMATERA: RRI Palembang 4855.8 f/d "Traditional House" cd. in 47 ds. for an IN rpt. and ms. v/s Iskandar Suradilaga, BA. (Palmerheim-MN).
SWEDEN: Radio Sweden 11705 f/d cd. in 15 ds. for 1 IRC. (Carson-OK).
SWITZERLAND: International Committee of Red Cross-RCIS 9885 f/d cd. in 47 ds. for ms. (Turnick). Swiss Radio International 21630 f/d cd. w/ schedule in 2 wks. (Rugg-QUE).
Radio Beijing 3985 via SRI f/d cd. in 21 ds. w/ site details. (Turnick-PA).
TAIWAN: WYFR 9280 via VOFC f/d cd. in 11 ds. w/ stickers. (MacHarg).
TANGIER: VOA 9760 f/d "Statue of Liberty" cd. in 16 ds. (Turnick-PA).
TURKEY: Voice of Turkey 9445 f/d "Beaded Pouches" cd. in 43 ds. w/ pennant, schedule and stickers. (Kacir-MI).

UKRAINIAN SSR: Radio Moscow 9860 via Ivano-Frankovsk f/d cd. in 2 mo. (Paszkievicz-WI). 12030 f/d cd. in 68 ds. (Butcher). 7310 cd. in 2 mo. (Hosmer-MI). 17615 f/d cd. in 1 mo. (Lare). 9765 via Lvov f/d cd. in 1 mo. (Lare). 11675 f/d cd. in 109 ds. (Woloch). 7290 f/d cd. in 60 ds. (Watts-KY). 17655 via Vinnitsa f/d "Arbat Square" cd. in 2 mo. (Lare). 11750 f/d cd. in 58 ds. (Watts). 12060 f/d cd. in 3 mo. v/s Tanya Lavrova, Letters Dept. (Eckert-PA). 12030 f/d cd. in 66 ds. (Butcher-MA). 21800 via Simferopol f/d cd. in 1 mo. (Lare-MI). 11790 f/d cd. in 109 ds. (Woloch). 15475 f/d cd. in 2 mo. (Hosmer-MI). 15260 via Kiev f/d cd. in 2 mo. (Hosmer). 4795 via Kharkov f/d cd. in 6 wks. (Huniwell-NJ). Radio Rodina (Freg?) via Kharkov f/d cd. in 2 mo. for a taped rpt. (Huniwell). Radio Kiev 17665 f/d cd. in 51 ds. (Barhydt). 9610 f/d cd. in 63 ds. for 1 IRC. (Carson).
USA: WYFR 15215 f/d cd. in 20 ds. for ms. (Klinck). WWV 10000 * "Leap Second QSL" folder in 26 ds. (Barhydt). Radio Libertas 11790 and 21840 via WIRI f/d cd. w/ ltr. in 5 wks. v/s Vivian Gamulin, Assistant Producer. (Barto-CT). KUSW 11695 f/d cd. in 2 1/2 mo. (Wittschen-OH). 15580 f/d cd. in 6 wks. for \$1.00. v/s Sheryl Sheafor. (Kohlbrener). WIRI 15105 f/d cd. in 148 ds. (Davisson). WWCR 15690 n/d "Globe" cd. in 135 ds. for 3 ms. v/s George McClintoch. (Gavaras-MN). KGEI 15280 f/d cd. in 39 ds. w/ FEBC brochure. v/s Jesus C. Elizondo. (Peake-IA). WSHU 9455 ltr. in 28 ds. for a f/up rpt. v/s Robert J. German, Chief Engineer. (Darling). VOA Delano 5985 cd. in 19 ds. (Darling). 9815 f/d cd. in 18 ds. (HumenyK).

USA (Pirate): East Coast Pirate Radio 7407 f/d cd. in 7 ds. for 3 ms. (Blight-MD). 7442 f/d "Skull and Crossbones" ltr. in 10 ds. for ms. (Connor-PA). Voice of the Purple Pumpkin 7450 f/d cd. in 24 ds. for ms. (Connor). 15037 f/d cd. in 24 ds. (Kohlbrener). f/d cd. in 25 ds. for ms. (Rigas-IL). 15045 f/d yellow "Logo" cd. in 24 ds. for ms. (Frodge-MI). Samurai Radio 15607 f/d cd. in 3 wks. for ms. (Allen-OK). 15045 f/d cd. in 39 ds. for ms. (Frodge). Hope Radio International 7413.8 p/d sheet in 40 ds. (Zeller-OH). 7416.2 p/d form ltr. in 42 ds. for ms. (Palmerheim). Zodiac Radio 7416 f/d cd. in 47 ds. for ms. (Palmerheim-MN). Radio USA 7407 f/d "Flag" cd. in 48 ds. for ms. (D'Angelo). 7417 f/d cd. in 75 ds. for ms. (Renfrew-NY). 7411 f/d cd. in 46 ds. for ms. (Connor). 10 different cds. for different rpts. dating back to 85. (Zeller). WBST 7388 f/d cd. in 11 ds. for ms. (Renfrew). Voice of Laryngitis 7435 f/d ltr. in 18 ds. for ms. (Connor). La Voz de Gringo America 7415 f/d folder in 21 ds. for ms. (Paszkievicz). KNBS 15063 f/d cd. in 16 ds. for ms. (Paszkievicz). Voice of the Abnormal 7411 f/d cd. for a non-report! (Allen). Voice of Tomorrow 6240 f/d cd. in 4 mo. for \$1.00. (Kohlbrener). Secret Society Radio 6850 f/d cd. in 32 ds. (Zeller). f/d cd. in 3 wks. (Barto-CT). Radio Morania 7375 f/d Radio Clandestine ltr. w/ an "Official Relay" typed in for R.M. This in 110 ds. for ms. (Gavaras-MN).

USSR: Radio Station Peace and Progress 11980 f/d "Logo" cd. in 65 ds. (Carson-OK).
UZBEK SSR: Radio Tashkent 11785 f/d cd. w/ schedule in 8 wks. (Klinck). 15470 f/d cd. in 43 ds. for ms. (Turnick). Radio Moscow 15590 via Tashkent f/d cd. in 40 ds. (Hart)
VENEZUELA: Radio Nacional n/d cd. in 872 ds. w/ ltr. for \$1.00. (MacHarg-IN). Don Moore says that his recent rpt. to

Ondas Panamericas was returned as wrong address... Sam.

WEST IRIAN: RRI Fak Fak 4790 ltr. in 210 ds. for an IN rpt. and ms. v/s Aloys Ngotra. (Gavaras).

ZANZIBAR: Radio TV Tanzania/Zan-
 * Zibar 11735 prepared cd. w/ ltr in 412 ds. after 7 rpts. over the years. v/s M. Suleiman, Maintenance Engineer. C/V 228: (Darling).

Can't believe I actually got the reports all in! Till next time... best of QSLing..... Sam.

<p>Dear</p> <p>We thank you for your report and we are pleased to confirm that you have heard our programme on <u>11790</u> at <u>16.53</u> on a frequency of <u>4790</u> kHz, on 1/8/4/6/6/8</p> <p>We hope you will continue to enjoy our programmes and we welcome your further comments.</p> <p>RADIO LIBERTAS</p> <p>• Radio-Libertas, Toronto 1174 (Toronto Band North, Mississauga, Ontario L4L 2W1) CANADA telephone (416) 813-1067 telex (416) 813-1290</p>	<p>SLUŠAJTE I ŠIRITE FREKVENCIJE SLOBODNOG HRVATSKOG RADJIA! RADIO «LIBERTAS» EMITIRA NA KRATKIM VALOVIMA</p> <p>— ZA VPROPU I HRVATSKU: od ponedjeljka do subote od 18 do 19 sati po arapskoizjavojskom vremenu, na frekvenciji 21.840 kHz, na valnoj dužini 13 metara.</p> <p>— ZA SJEVNU, JUŽNU AMERIKU I KANADU: od ponedjeljka do subote od 12 do 13 sati po EST (Eastern Standard Time), na frekvenciji 11.790 kHz, na valnoj dužini 25 metara.</p> <p><i>Samuel Suleiman (Suleiman Miller radi)</i></p>
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NASWA Scoreboard

Jerry Lineback
6361 Shore Drive
Douglasville, GA 30135



JERRY A. LINEBACK, Editor
6361 Shore Dr.
Douglasville, Georgia 30135

March, 1990

Welcome to Scoreboard for March. We welcome several newcomers this month. Please share your DX progress with your fellow DXers through Scoreboard. The Spotlight this month is on South America. C/H=countries heard and C/V=countries verified. Country counts are guided by the NASWA Radio Countries List. You must update at least once a year to remain on the Scoreboard. We thank all who have participated this month. Next deadline will be May 15 for the June issue and the Spotlight will be on Africa.

Name, State	Total		S Amer		Best SA QSL
	C/H	C/V	C/H	C/V	
James Young, CA	238	224	14	13	Galapagos
John Tuchscherer, WI	236		15		Qollasuyo
Gordon Darling, PNG	234	226	15	15	Falklands
Edward Kusalik, Alb.	228	225	15	15	Falklands
Marlin Field, MI	225	222	15	15	Apintie
Gerry Bishop, FL	224	210	15	14	FIBS
William Flynn, CA	224	208	15	15	R Apintie 50W
Jerry Berg, MA	223	221	15	15	R Teleco, Par.
Harold Cones, VA	223	214	15	15	Falkl/Galapagos
Roland Schulze, FRG	221	206	15	14	Galapagos IS.
Nobuaki Takahashi, Japan	221	189	15	10	R Pres Prudente
Tom Gavaras, MN	219	216	15	15	Galapagos
Terry Palmersheim, WA	219	201	15	15	R Antena Libre
Mitch Sams, KS	218	171			
Bill Harms, FRG	215	151	15	10	FIBS
Al Miller, OH	214	207	15	15	Galapagos
John Sgrulletta, NY	213	213	15	15	HCJB 26020 100W
C. Vernon Hyson, NC	213	200	15	15	Espectador
Steven Lare, MI	212	171	15	11	Falklands
Rick Krzemien, CA	209	190	15	12	Galapagos
Paul Buer, FL	208	197	14	14	R Apintie
Richard Davis, NM	208	197	15	15	Falklands
Ron Howard, CA	208	190	14	14	R Santa Maria
Donald Hosmer, MI	206	160	15	12	FIBS
Kevin Atkins, AL	205	179			
Jerry Lineback, GA	205	107	15	11	Maranhao
Kirk Allen, OK	204	191	15	14	R Juan XXIII
Sheryl Paszkiewicz, WI	204	189	15	15	Falklands
Del Fye, FL	202	187	15	15	Madre de Dios
David Swaringen, NC	202	182	15	15	Galapagos Is.
Charlie Hoffman, PA	201	150	15	14	Ondas deHullaga
Christos Rigas, IL	200	178	15	15	Falklands
John Bryant, OK	199	176	15	14	FIBS&Apintie
Rowland Archer, NC	198	181	15	15	Falklands
Robert Ross, Ont.	192	165	13	11	R Moderna, Peru
Harold Sellers, Ont.	191	154	15	13	FIBS
Kent Willis, KY	191	143	14	8	Galapagos
Tom Daly, NY	191	44	13	1	Ecuador
Gayle Van Horn, LA	190	166	15	14	Falkland Is.
John Huniwell, NJ	189	181			
Tom Laskowski, IN	176	139	14	10	HCJB 26020
Fred Kohlbrenner, PA	175	134	14	14	Galapagos
Norman Bobb, MN	175		15		

Name, State	Total C/H	S C/V	Amer C/H	Best C/V	SA	QSL
Ichiro Maruo, Japan	167	98	6	4	R. El Mundo	
Rev. John Eckert, PA	166	147	11	10	R Panamericana	
Kevin Klein, WI	164	73	13	5	RN Brazil	
Andy Rugg, Que.	163	145	11	10	CP73-4795	
Jim Renfrew, NY	158	111	14	9	BFBSFalklands	
Jerry Klinck, NY	157	130	12	8	LV de Chile 10k	
Greg Hart, FL	157	97	13	8	R Bahai, Ec.	
Kurt C. Cox, OR	153	117	12	10	Guyana BS	
Jim Streitmatter, IN	151		12		R MonteCarlo Ur	
Carl Radtke, CA	147	147	12	12	Quillabamba	
Peter Dillon, Greece	146	91	11	8	R Turismo	
Thomas Ross, IL	143	122	9	7	HCJB 100W	
Donna Robinson, IL	141	104				
Dale Park, HI	131	37	9	1	HCJB 26020	
Bill Taylor, PA	129	97	10	6	HCJB 26020	
David Morby, NY	129	31	12	3	Radiobras	
Robert Landau, NJ	128	103	11	8	R Demerara	
Harold Levison, PA	125	92				
Joe Kremer, IN	122	70	11	6	Chile	
Joe Zobro, MI	113	83	11	7	LV del Upano	
Robert Carlsen, OH	103	85	8	5		
Adrienne, Barhydt, OR	96	51	9	6	LV del Cinaruco	
David Turnik, PA	84	69	9	7	R. Nac. Chile	
Dennis Kelly, MI	73	60				
William Blight, MD	70	51	7	6	RAE & YVTO	
Rev. William Peake, IA	44	22	2	1	HCJB	

Thanks to all who have shared totals with us this quarter. We encourage all NASWA members to share their totals with us through Scoreboard. Remember the next deadline is 15 May for the June issue and the Spotlight will be on Africa. Gud DX and 73s.

NO COLLECT CALLS ON THESE ADS, PLEASE.

WANTED: Matching speaker and manual for Hallicrafters SX-62A receiver. Steve Wallace, Box 5081, RD. 5, Fluetwood, PA 19522.

FOR SALE: Sony ICF-7600A, \$55.00. ALSO: WRTM-89 and Passport '89 \$5.00 each. John Miller, 2620 Powell Drive, Thomasville, GA 31792. Phone (912) 226-5524.

NOTICE: Pete Patel, 8050 NE Union Avenue, Portland, OR 97211-1486 would like to contact anyone with a satellite dish regarding reception of INTEL-SAT satellites. You can call Pete at (503) 285-3661 or -3666.

Contributors' Page

Kris Field
431 Babylon Road
Ambler, PA 19002-2302



LOGGINGS CONTRIBUTORS — MARCH 1990 — DEADLINE 12th of MONTH

The following members submitted loggings this month:

Frank ADEN, JR Boise, ID
Brian ALEXANDER, Mechanicsburg, PA
John CARSON, Norman, OK
Edward CICHOREK, Somerset, NJ
Richard D'ANGELO, Wyomissing, PA
David DUNN, Columbus, OH
Kris FIELD, Ambler, PA
Harold FRODGE, Midland, MI
Joe HOWELL, Escondido, CA
Hans JOHNSON, Savannah, GA
Jerry JOHNSTON, Lexington, KY
Rufus JORDAN, Pittsburgh, PA
W. KARCHESKI, Holden, MA
Jerry KLINCK, West Seneca, NY
Fred KOHLBRENNER, Philadelphia, PA
Joe KREMER, South Bend, IN
John LACKMAN, Lexington, VA
Harold LEVISON, Philadelphia, PA
Ken MACHARG, Jeffersonville, IN
Mike NIKOLICH, Arlington Heights, IL
Dale PARK, Honolulu, HI
Dale PARK, Beverly Hills, CA (vacation)
Gene PEARSON, Perrysburg, OH
John PRATH, Ft. Lauderdale, FL
Ronald PURDUE, Byron, MN
Jim RENFREW, Rochester, NY
R. Charles RIPPEL, Virginia Beach, VA
Andrew RUGG, Nuns Island, Quebec
Terry RYAN, Bellerose, NY
Roland SCHULZE, Stuttgart, W. Germany
Nick TERRENCE, Huntington, NY
Jim STREITMATTER, South Bend, IN
Bill TAYLOR, Unionville, PA
John TUCHSCHERER, Neenah, WI

Drake SPR4, National NC183D
FRG 8800
R70, Alpha Delta DX Sloper
DX 440
NRD 525
R71A + Trap dipole

R71A, Multiband AM Pickup
NRD 525
DX 302, Zenith Transoceanic

Kenwood R 5000
NRD 525, Sony 2010
HQ 180

Sony 2010
NRD 525, SPR4
R5000
ATS 803A
NRD 525, R390A
NRD 525, R71A
FRG 8800, DX440, AD-370 ant.
Sony 2010, longwire antenna
HQ 180, Icom 761
R 390A, R71A
NRD 525
Drake R7 & R4C, R70
R71A + trap dipole, Sony 2010
Yaesu 747GX, ATS 803A
R390A, Magnavox D2999
R70, FRG 7700

Thanks everyone for all the great loggings this month !! You're keeping Sheryl and Wally busy and they're doing a great job keeping up with all of the information submitted.

I've had a chance to do some listening myself, lately. I'm still waiting for a few Papua New Guinea regionals that I need to hear, and as always I'm trying to hear and verify the various Africans. With all of the time I've been putting in at work and with my family, though, it's a wonder I have time to turn on the radio at all !

Let I confuse anyone, please keep submitting your loggings to me for distribution to the editors. We may make some changes in the future, but unless you're running late I'll be glad to pass them along.

By the time you read this, the SWL Fest will have come and gone. As I type I'm getting excited with anticipation of this event. I hope to tell more about that at a later date. As usual, keep listening and I'll be back in one month !

73, Kris

Tropical Band Loggings

Sheryl Paszkiewicz
1015 Green Street
Manitowoc, WI 54220



Hi and welcome. There is a lot of good DX in this issue. The bad news is that the bulk of loggings has been lost in the mail somewhere between Kris and me. My apologies to those of you whose loggings won't show up in the column. If they ever get to my mailbox, I'll go through them and use as many of the most recent loggings as possible next time.

- 1720h DOMINICAN REPUBLIC, R. Clarin, 27/1, 0113-0230 w/ballads, anmts, IDs mixing w/VOAY, both 2x860 harmonic (Moore-MI)
- 2390t JAVA, RRI Cirebon, 21-22/1, het hrd around 1110, their ICI sunset but no audio. (BHP-BC)
- 2582.3p NUSA TENGGARA, RPDT2 Timor Tengah Selatan, 22/1, low audio at 1025, het only on some days. Located on Timor Island. (BHP-BC) Nusa Tenggara is a region in Indonesia-sp.
- 2694.9p NUSA TENGGARA, RPK Ende, 21-22/1, weak audio at 1025 w/M anncr, pop mx, tribal mx (BHP-BC)
- 2760h USA, WTVR, 8/2, 0200 w/nx, a regular here. 2x1380 harmonic (Moore-MI)
- 2840h CUBA, R. Rebelde, 8/2, 0152-0155 w/nx //5025. 4x710 harmonic (Moore-MI)
- 2904.7 NUSA TENGGARA, RPDT2 Ngada, 21-22/1, 1020 w/excellent audio lagu pops & US 50s mx. S8 sig. (BHP-BC)
- 2962.7 NUSA TENGGARA, RPDT2 Manggarai, 21-22/1, moderate audio level, poss. tx or antenna trouble. (BHP-BC)
- 3199.9 SWAZILAND, TWR, 21/1, 0320-0330 w/choral mx, EG ID, super sig off backside of W. beverage (BHP-BC)
- 3204.4 JAVA, RRI Bandung, daily in mid-Jan w/pop mx pgm & Jakarta nx relays, fair. (Bryant-WA)
- 3205 NEW GUINEA, R. West Sepik, 21/1, 0830 w/lcl ID by M, lcl nx in Pidgin & EG, excellent. (BHP-BC)
- 3214.9p SULAWESI, RRI Manado, 21/1, 0935 w/lcl pgm, exc. sig at exact ICI sunset at tx site (BHP-BC)
- 3215t SOUTH AFRICA, R. Oranje, 4/2, 0323 in AK w/"Edelweiss," EZL mx, tlk by M. SIO=333 (Peck/Bianco-NY)
- 3220 ECUADOR, HGJB, 13/1, 0946-1000 in Quechua w/tlk, Andean mx, ID, poor-fair. (Bobb-MN)
- 3220 NEW GUINEA, R. Morobe, 21/1, 0835 w/instl elevator mx pgm hosted by W. S9 sig (BHP-BC)
- 3222.9 LESSER SUNDAS, RRI Mataram, 21-22/1, 1030 w/monster sig, mostly lagu pops, S9 sigs. (BHP-BC)
- 3224.9 SUMATRA, RRI Tanjung Pinang, 3/2, 2240+ w/tlk by W, mx break & vcls 2256, poss. ID 2259, SCI, Jak relay, nx // 3231.8, weak by 2300, first ever logging! & this after 2 days of mod geomagnetic disturbance! (Clark-ON)
- 3230.2p PERU, R. El Sol de los Andes, 12/1, 0145-0149, tlk by M & rock mx, very poor. (Moore-MI)
- 3231.9 SUMATRA, RRI Bukittinggi, 20/1, 1450-1501 w/drama, TC, SCI ID, fair. (Rydzewski-CA) each morning mid-Jan around 1500 w/Jakarta relay, fair-poor. (Bryant-WA) 22/1, 2304-2316, Indo nx //4002.7 Padang, poor. (Moore-MI)
- 3235 INDIA, AIR Gauhati, 16/1, 1530 w/EG nx //other Indians, poor level. (Bryant-WA)
- 3235 NEW BRITAIN, R. West New Britain, 21/1, 0835 w/lcl nx in EG, mx featuring village mx, exc sig (BHP-BC)
- 3245 NEW GUINEA, R. Gulf, 21/1, 0840 w/hymns in lcl lang, super S9 sig (BHP-BC)
- 3250 HONDURAS, R. Luz y Vida, 15/1, 1148-1200 w/mx, tlk & 3 IDs, fair. (Bobb-MN)

- 3255 INDIA, AIR Shillong, 23/1, 1235 w/ID, "This is the Natl Svc of All India R, bxing from. ." doesn't just ID as INES fair till PNG rises moments later. Good sigs also from Pakistan 4779.9 & Bangladesh 4880. (Clark-ON)
- 3255 LESOTHO, BBC relay, 25/1, 0331 w/EG tlk on Commonwealth games, Afr. nx, fair, clear sig. (Dunn-OH)
- 3260 NEW GUINEA, R. Madang, 21/1, 0840 noted briefly w/S9 sig till covered by massive utility station (BHP-BC)
- 3264.8 SUMATRA, RRI Bengkulu, most ams in mid-Jan at 1600 w/Jak nx relay (Bryant-WA) Also 21/1 at 1135 w/exc sig but badly distorted audio, lagu pops. (BHP-BC)
- 3264.8 SULAWESI, RRI Gorontalo, 28/1, 1228 w/trumpet fanfare, clr lcl ID, off at 1230. (Clark-ON)
- 3275 NEW GUINEA, R. Southern Highlands, 21/1, 0840 w/lcl mx, abt S6 to S7 sig. (BHP-BC)
- 3276.8 JAVA, RRI Jakarta, every am in Jan w/medium fair sig, good mod, giving Bhutan fits. Thank God for the MAP unit. (Bryant)
- 3280 ECUADOR, LV del Napo, 13/1, 1000-1035, ment. Napo sev times, tlk, varied mx, poor-fair (Bobb-MN) 7/2, 1100-1120 w/ID after R. del Punto ID & "Programa de Santerina" (Taylor-PA)
- 3282 MOZAMBIQUE, EP de Sofala, Beira, 4/2, 0340 in lang w/tlks, lilife mx, bad RTTY QRM. SIO=222. (Peck-NY)
- 3290 NAMIBIA, SWABC, 12/2, 0315-0415 w/pop & rock mx including the Eurythmics. Ute QRM, fair-poor. (Taylor-PA)
- 3290 NEW GUINEA, R. Central, 21/1, 0842 w/Pidgin hymns, above S9 sig. (BHP-BC)
- 3295 INDIA, AIR Delhi, mid-Jan in pres. Hindi 1400-1430 (Bryant)
- 3300 GUATEMALA, R. Cultural, 28/1, 0510 in SP w/Latinized Amer. pops, Jazz, ID 0519, sermon 0520. SIO=444 (Peck/Bianco-NY)
- 3305p INDIA, AIR Ranchi, 22/1, 1152 w/low level audio, tlk in lang, peaked 1158, no break 1200. Ranchi lcl sunset 1158 (BHP)
- 3305 NEW GUINEA, R. Western, 21/1, 0845-0855 w/church svc from Christian church, Pidgin sermon, choir. (BHP-BC)
- 3305.9 TIMUR, RRI Dili, 14-16/1, carrier above S7 but very low audio as usual. On 17/1 great modulation. Must've fixed it once more (Bryant-WA)
- 3310.3 BOLIVIA, R. San Miguel, 12-13/1, 2345-0005 w/mx, sev IDs, Lone Ranger theme song, weak but clear (Moore-MI)
- 3310 CHINA, Jilin PBS, 15/1, 1340 w/Western clx, not EG lessons as listed, hrd to 1500, poor lvl. (Bryant-WA)
- 3314.9 INDIA, AIR Bhopal, most ams mid-Jan, 1500 TP, EG nx 1530 (Bryant-WA)
- 3315 ADMIRALTY ISLANDS, R. Manus, 21/1, 0850-0859 w/studio quality sound, EZL mx, hymns by villagers (BHP-BC)
- 3325p BORNEO, RRI Palangkaraya, 17/1, on later than sked, seemed to be working on xmtr, poss. taped pgm (Bryant-WA)
- 3335 NEW GUINEA, R. East Sepik, 21/1, 0905 w/sermon in lcl lang (BHP-BC)
- 3345 MOLUCCAS, RRI Ternate, 21/1, 0955 w/lagu pops, exc sig S9 w/no sign of R. Northern (BHP-BC) 28/1, 1235-1245 w/pops, tlk, ad string, best ever lvl, Jak nx 1301, anthem 1310, 1320 fade, no R. Northern (Clark-ON)
- 3345 NEW GUINEA, R. Northern, 15/1, 0839-902 in EG w/"Service Messages" mx, ID 0859, nx, fair (Royston-HI) Nice!--sp 21/1 at 0905 w/S6 peak sigs, running lcl notices in lang, then mx (BHP-BC)
- 3355 NEW GUINEA, R. Simbu, 21/1, 0858 in LSB to avoid ute, choir singing "Lord of Lords," ID 0900 (BHP-BC) 15/1, 0904-0915 w/"NBC News" by W, M tlk 0912, fading. (Royston-HI)
- 3365 BRAZIL, R. Cult. Araraquara, 5/1, 0020-0102 w/rustic guitar mx, ads, fair (Moore-MI)
- 3365 NEW GUINEA, R. Milne Bay, 21/1, 0910 w/pops, lcl ID, pronounced "Mill-n Bay," not "Mill-Knee Bay" (BHP-BC)
- 3365.4t SUMATRA, RRI Padang, every am mid-Jan, huge OC, Jak relay one morning. Anyone have info on their xmtr? (Bryant-WA)

3375 ANGOLA, R. Nacional, 4/2, 0345 in PT w/jazz, tlk ment Africa, 60s rock 0352, SIO=232 (Peck/Bianco-NY)

3375 NEW GUINEA, R. Western Highlands, 21/1, 0905 w/exc sig Western pop mx (BHP-BC)

3376 BRAZIL, RN Sao Gabriel, 13/2, 0051-0104 w/EZL mx, ID, 1st time hrd in ages, poor, CW QRM (Moore-MI)

3385 BRAZIL, R. Educacao Rural, 13/1, 0105-0143, finally sure ID after weeks trying, mx, long tlk, ID 0128 (Moore-MI)

3385p LESSER SUNDAS, RRI Kupang, 14/1, 1513 w/Jak relay, live performance on Natl hookup. Funny outside audio (Bryant-WA)

3394.8 SUMATRA, RRI Tanjung Karang, 22/1, 1650 w/lagu pops, mod sig, also 21/1 w/S9 sig 1122 UTC. Hrd in LSB to avoid ute. (BHP-BC) 3/2, 2220 w/very good sig, Indo pops, promo annt, more mx. Weakening by 2237. (Clark-ON)

3395 ECUADOR, R. Zaracay, 27/1, 1106-1121 w/long tlk, soft chimes, ID, poor-fair & fading. (Bobb-MN)

3395 NEW GUINEA, R. Eastern Highlands, 21/1, 0920 in USB w/poor sig strength. (BHP-BC)

3600h CUBA, R. Rebelde, 30/1, 1129-1140 w/nx //5025 & poor. 6x600 harmonic (Moore-MI)

3774.9 NUSA TENGGARA, RPDT2 Sumbawa, 22/1, 1035 w/big signal, Islamic recitations, mx. (BHP-BC)

3945p BALI, RRI Denpasar, 21/1, 1301-1310 w/Jak nx //4753.3. JP station off at 1300. (BHP-BC)

3985.9 IRIAN JAYA, RRI Manokwari, 21/1, good sig w/bad het from Korea. (BHP-BC) 7/1, 1329 w/drama pgm //Fak-Fak, others, poor w/ARO QRM (Moore-MI)

3995 ENGLAND? BBC, 28/1, 0400-0450 in EG w/Newsdesk pgm, ID. (Jones-TN)

4002.7 SUMATRA, RRI Padang, 11/1, 2249-2302 w/pop vcls, SCI 2259, nx, bad RTTY QRM & MARS station (Moore-MI)

4607.3p IRIAN JAYA, RRI Serui, 21/1, 0911 w/exc sig & Qur'an (BHP)

4649p BOLIVIA, R. Santa Ana, 12/1, 2350-2355 w/tlk & pop mx, poor. Also hrd Padilla 3473 & Movima 4473 (Moore-MI)

4700t JAVA, RKIP Surabaya, 28/1, 1316-1339 w/soft vcls, tlk by W 1329, nx, very poor. (Moore-MI)

4740 USSR, R. Afghanistan relay, 4/2, 0226 in pres. Dari w/orch Folk mx, TP 0230, ment Afghani & Kabul, ute QRM (Peck/Bianco)

4760 UNID, 11/2, 1220 w/subcont vcls, lost when Kunning got stronger. Also hrd Thailand 4830 so would like to think this Ft. Blair but no way of knowing (Clark-ON)

4770p NORTH KOREA, R. Pyongyang, 15/1, 1350 w/spy numbers in KK! Hrd till 1410 off, good sig. (Bryant-WA)

4774.9 PERU, R. Tarma, 7/2, 0440-0502 w/romantic mx, huaynos, ads, poor. (Rydzewski-CA)

4780 DJIBOUTI, RTVD, 22/1, 0320 w/tlk, ME vcls, IS 0400, tlk, Qur'an. Peak 0345 best in LSB, good to 0405, then fading fast to 0420. Late considering 0325 sunrise in Djibouti. Also noted 0315 on 29/1 (Clark-ON)

4785v AZERBAIJAN SSR, R. Baku, 31/1, 0255-0303 w/clx, anthem, ID, IS, ID, nx, ute QRM (Paszkiewicz-WI) 4/2, 0400 w/tlk, pop mx, QRM, SIO=332. (Peck/Bianco-NY)

4785 BRAZIL, R. Calari, 13/1, 0925-0940 w/nonstop mx, 0936 ID, fair. (Moore-MI)

4785 CHINA, Zhejiang PBS, 20/1, 0925-0933 weak w/ID 0929 //2475, 1st time hrd here many yrs (Sheedy-CA)

4789.7 IRIAN JAYA, RRI Fak Fak, 21/1 w/moderate lvl, tlk by M, lagu pops (BHP-BC)

4790 PERU, R. Atlantida, 4/2, 0303 w/tlk, IDs, huaynos, SIO=322. (Peck/Bianco-NY)

4800 INDIA, AIR Hyderabad, most ams mid-Jan, 1530 TP, EG nx, exc mod. (Bryant-WA)

4810 PERU, R. San Martin, 24/1, 1024-1041 w/tlk, some mx (Bobb)

4810 SOUTH AFRICA, R. Orion, 29/1, 0400-0419 w/clx mx, nx in AK (Jones-TN)

4810 USSR, R. Moscow, 13/1, 1305-1313 w/EG nx, ID, cmtry (Royston)

- 4815 BRAZIL, Rdf. Londrina, 26-7/1, 2345-0007 w/EZL mx, tlk by M, ID, ads, Brasopops, fair (Moore-MI)
- 4820 PERU, R. Atahualpa, 21/1, 1015-1059 w/tlk, flutes, flutes, a deluge of flutes! ID, fair (Bobb-MN)
- 4825 GUATEMALA, R. Mam, 14/1, 1248-1250 w/CAM style rel guitar mx, fair (Moore-MI)
- 4830 BOTSWANA, R. Botswana, 17/1, 0400-0415 in EG/lang w/ID, sked, varied mx, tlk, but noisy (Bobb-MN) 22/1, 0406-0446 Afr. nx, wx, "AIDS in Botswana" pgm (Dunn-OH)
- 4830 THAILAND, R. Thailand, 11/2, 1235 w/chime IS, anmt by W, long tlk in pres. Khmer to 1250 fade. (Clark-ON) Very good-sp
- 4835 SARAWAK, RTM Kuching, 1400 w/evening pops pgm. Like a local here //very weak 7145 kHz (Bryant-WA)
- 4845.2 MOLUCCAS, RRI Ambon, 21/1, 0905-0920 w/long tlk, ID as "Radio Ambon" full site ID 0910, poss lcl nx (Sheedy-CA) 8/2, 1240 w/pops, best ever lvl, ID & anmt 1257, theme mx, ID, SCI to 1300 Jak nx. Sorong 4784.6 good too (Clark-ON)
- 4860 INDIA, AIR Delhi, 14/1, 1255-1331 w/Indian mx, tlk by W in lang, 1324 anncd train skeds, IS 1328, two pips 1330. Good but no other Indians in at all (Moore-MI) Most ams mid-Jan, 1530 EG nx (Bryant-WA)
- 4870± ECUADOR, R. Rio Amazonas, 2/2, 1117-1132 w/Andean mx, tlk in Quechua, chanting & chimes, fair. (Bobb-MN)
- 4871.0 IRIAN JAYA, RRI Wamena, 22/1, good lvl w/elevator mx to 0930 lcl ID by M, tribal mx (BHP-BC)
- 4874.6 IRIAN JAYA, RRI Sorong, 21/1, big sig w/tlk by W on family planning (BHP-BC)
- 4885 PERU, R. Huancavelica, 11/1, 1047 w/political tlk, ID, folk mx, fair w/het (Moore-MI)
- 4894.6 VIETNAM, Hanoi HS, 14/1, 1530-1559* w/exc level. As Dan Sheedy said, the bad het here is this & Kuching (Bryant-WA)
- 4895 BRAZIL, R. Bare, 13/1, 0840-0900 w/pop mx, ads, vocal ID, 0900 nx (Jones-TN)
- 4901.9 SRI LANKA, SLBC, 11/2, 1253 w/tlk in pres. Sinhala, sub-cont vcls, 5 TP 1300, fading w/vcls. Very rare here (Clark)
- 4905 BRAZIL, R. Araguaia, 31/1, 0847-0919 w/tlk, mx, ment Araguaia 3 times. (Bobb-MN) It's really confusing between this station & Anhanguera--sp
- 4920 AUSTRALIA, VLM4 Brisbane, 23/1, 0850-0935 w/EG songs, tlk, Australian info, noisy (Bobb-MN)
- 4920 ASIATIC RSFSR, Dom Radio, 27/1, 2257-2318 w/tlk by W in lang 6 pips 2300, "Govorit Dom" ID, IS, tlk in RS (Moore-MI)
- 4920 ECUADOR, R. Quito, 19/1, 1005-1018 w/EZL mx, tlk, ID, fair w/TCs (Bobb-MN)
- 4934 KENYA, Voice of Kenya, 11/1, 0402-0408 in EG w/nx, ID, fair sig (Royston-HI)
- 4945 BOLIVIA, R. Illimani, 15/1, 1029-1045 w/Andean flutes, tlk, full ID 1030, fair & fading (Bobb-MN)
- 4950 SARAWAK, RTM Kuching, 27/1, 1552 w/songs & M DJ w/ID, fair (Rydzewski-CA)
- 4970.1 PERU, R. Imagen, 14/1, 0810-0837 w/MOR mx, TCs, sparse IDs, slightly distorted audio (Sheedy-CA)
- 4975 USSR, R. Afghanistan poss via Dushanbe, 25/1, 0202-0230 fade //4740 w/sitar mx, exercise pgm (Sheedy-CA)
- 4990 NIGERIA, R. Nigeria, 3/1, 0515 w/EG ID, pop mx, fair to poor, much QR! (Royston-HI)
- 4990.9 PERU, R. Ancash, 18/1, 0154-0159 w/huaynos, ID, fair. (Rydzewski-CA)
- 5014.6 PERU, Estacion Tarapoto, 30/1, 1110-1123 w/lcl civic anmts ID, TCs, het from Vladivostok (Moore-MI)
- 5020 CHINA, Jiangxi PBS, 27/1, 1315-1337 w/tlk in CH, instl mx poor (Moore-MI)
- 5023.1 BHUTAN, BBS, 31/1, 1240-1250 w/choral vcls, instl mx (Clark)
- 5024.9 PERU, R. Quillabamba, 14/1, 1025-1040 w/"Peru Andina" pgm, Quechua but SP ads, IDs (Sheedy-CA) 27/1, 1023-1050 w/mx, drama pgm, 3 IDs, poor-fair (Bobb-MN)

5025.4 BRAZIL, R. Jornal Transamazonica, 14/1, 0903-0937 w/MOR
mx, pops, 2 IDs 0923, 0926 (Sheedy-CA)
5030.1 ECUADOR, R. Catolica Nacional, 9/1, 0105-0135 w/EZL mx,
requests, ID 0131, Song of Joy (Paszkievicz-WI)
5034 CENTRAL AFRICAN REPUBLIC, RTV Centafricaine, 15/1, 0429
in FR w/piano IS, NA, ID, tlk & mx, poor. (Royston-HI)
5040 GEORGIAN SSR, Tbilisi, 28/1, 0427 w/tlks & pops, working
song & drinking song, TP & ment Tbilisi 0500 (Peck/Bianco)
5059 PERU, R. Lircay, 27/1, 1052-1115 w/NA, anmts, EZL mx, folk
mx, good. New here (Moore-MI) Good one--sp
5488 PERU, R. San Francisco, 2/1, 0030-0302 w/Caribbean & dance
mx, 0302 ID, other ment San Francisco, drifted to 5487.5
(Paszkievicz-WI)
5560 CLANDESTINE, R. Miscut, 9/2, 2305-2345 w/political tlk
(Taylor-PA)
5680h CUBA, R. Rebelde, 7/2, 1155 w/nx. 8x710 harmonic (Moore)
5900 CHINA, Sichuan PBS, 27/1, 1325-1346 w/CH opera (Moore-MI)

Very good considering we were only able to use the loggings which came direct this month. Don't let the mail's getting lost discourage you; these things happen sometimes, so keep those logs coming! The logs marked BHP-BC are from John Bryant and Nick Hall-Patch on DXpedition in British Columbia. Those logs were all at sunset times at the transmitter site. David Jones: Sorry, I don't have the address for Iran's Flag of Freedom. Logs marked Peck-NY were done at Martin's home while Peck/Bianco were at another QTH in New York state. And now a special feature:

INDONESIAN TRANSMITTER SITES BY RADIO COUNTRY

<u>Bali:</u>	Denpasar	
<u>Borneo:</u>	Banjarmasin Palangkaraya	Pontianek Samarinda
<u>Celebes:</u>	Gorontalo Kendari Manado	Palu Ujung Pandang
<u>Irian Jaya:</u>	Biak Fak Fak Jayapura Manokwari Merauke	Nabire Serui Sorong Wamena
<u>Java:</u>	Bandung Blitar* Cirebon Jakarta Jember Lumajang* Madiun	Malang Purwokerto Semarang Sumenep Surabaya Surakarta Yogyakarta
<u>Lesser Sundas:</u>	Kupang	Mataram
<u>Moluccas:</u>	Ambon	Ternate
<u>Sumatra:</u>	Banda Aceh Bengkulu Bukittinggi Jambi Medan	Padang Palembang Fekanbaru Sibolga Tanjung Pinang
<u>Timur:</u>	Dili	

* although a transmitter site, not represented by an RRI station.
Thanks to all who contributed for making this possible! 73.

These finally showed up so including Jan logs with at least something from each reporter. Bill's extending his deadline a day so this should get to him in time. Thanks for your great work!

- 2390 MEXICO, R. Huayacocotla, 26/1, 0032 w/"La Voz de Campesinos," mx, cmtrys, ment. Huayacocotla (Frodge-MI)
- 2410 NEW GUINEA, R. Enga, 5/1, 2010-2020 w/ID, South Seas mx, fade by 2020. 1st time heard! (Schulze-FRG) Good one-sp
- 3245 NEW GUINEA, R. Gulf, 5/1, 1955-2005 w/South Seas mx, "This is the Voice of Seagull," PD tlk (Schulze-FRG)
- 3289.9 ECUADOR, R. Centro, 21/1, 0711-0800 w/HC mx, anmts, ID, poor in ute QRM, better at 0900 recheck (Alexander-PA)
- 3345 MOLUCCAS, RRI Ternate, 20/1, 1318 w/ballads, M host poss. Telling jokes, clr w/CW QRM (Nikolich-IL) Tnx Mike--sp
- 3945t VANUATU, R. Vanuatu, 11/1, 0801 in vern/EG w/tlk, EG at 0812, drum/flute mx, fair/diff to understand (Karcheski-MA)
- 4159.5 CLANDESTINE, V. of the Fed'a'i, 17/1, 0255 s/off, 0300 s/on w/instl, peace greetings, ID, same sound so probably same xmtr site (Johnson-GA)
- 4600t BOLIVIA, R. La Perla del Acre, 20/1, 0023 w/lcl tunes, YL anncr, peaked 0035, unable to catch ID (Johnson-GA)
- 4607 IRIAN JAYA, RRI Serui, 20/1, 1320 super lvl w/pop mx, M host, SCT 1330-usually hrd top of hour (Nikolich-IL)
- 4755 HONDURAS, SANI R., 16/1, 1225 in Indian lang, ment. Puerto Lempira (Johnston-KY)
- 4760 SWAZILAND, TWR, 6/1, 1805-1820 in PT w/rel pgm, ID, ELWA in background. (Schulze-FRG)
- 4780 DJIBOUTI, RTVD, 31/1, 0332-0415, 0332-0340 w/nx or feature, mx, flutes 0400, ID in FR, back to Somali, HIC 212. Tnx Sheryl tip, Allen & Clark for ECSS tuning tip (Nikolich-IL)
- 4785 AZERBAIJAN SSR, R. Baku, 30/1, 0200-0250 in RS w/stringed mx tlks, ment Baku, Azerbaijan, percussion/flutes (Jordan-PA)
- 4800 INDIA, AIR Hyderabad, 6/1, *0025-0035 w/IS, subcont mx, AIR IS but weak. QRM makes difficult (Alexander-PA)
- 4805 BRAZIL, Rdf. Amazonas, 10/1, 0155-0159* w/Brasopops, ID 0158, off mid-song, fair (Kohlbrenner-PA)
- 4820.8 PERU, R. Atahualpa, 10/1, 0805 w/mx, ID, rooster crows (Johnston-KY)
- 4825 BRAZIL, R. Cancao Nova, 22/1, 0123-0200 w/vcls, YL tlk, ID, FC 0130 (Rugg-PQ)
- 4835 GUATEMALA, R. Tezulutlan, 22/1, 0216-0301 in vern w/marimbas YL tlk, 0300 ID, gone by 0302 (Rugg-PQ)
- 4835 MALI, RTV Malienne, 30/1, 2247 in FR w/lcl mx, tlk, SIO=444 (Klinck-NY)
- 4845 MAURITANIA, ORTM, 30/1, 2240 in FR w/discussion, ID, SIO=444 (Klinck-NY)
- 4860 INDIA, AIR Delhi, 22/1, 0036-0040* in EG w/nx, ID, carrier cut. SIO=252 (D'Angelo-PA)
- 4865 COLOMBIA, LV del Cinaruco, 29/1, 0541 w/lots of tlk, IDs, Colombian MOR mx, trad mx, SIO=323 (Carson-OK)
- 4875 CHINA, Voice of Jinling, 16/1, 1219 in CH (Klinck-NY)
- 4895.1 COLOMBIA, LV del Rio Arauca, 16/1, 0050 w/ballads, ads, ID 0100, fair sig (Terrence-NY)
- 4910 ZAMBIA, R. Zambia, 25/1, 0411-0429 w/tlk in vern, ID & mx 0427 (Tuschcherer-WI)
- 4915 GHANA, GBC-1, 27/1, 2230-2304* w/mx, EG nx 2245, TC, IDs (Kremer-IN) 13/1, 2301 w/sermon, ID, TC, chorus (Karcheski)
- 4920 UNID, 30/1, 1030 w/La Voz de Capital IDs, mx--? (Levison-PA) This is R. Quito from Ecuador, Harold--sp
- 4930 HAITI, 4VEH, 21/1, 2237 w/ID 2240, rel tlk (D'Angelo-PA)
- 4980 VENEZUELA, Ecos del Torbes, 10/1, 1035 w/nx, fanfare, "El Mejor de los Andes" (MacHarg-IN)
- 4991 PERU, R. Ancash, 22/1, 0010 w/echo IDs (Prath-FL)
- 5010 SINGAPORE, SBC, 12/1, 2302 EG nx, ID (Johnson-GA)
- 5050 SINGAPORE, SBC, 10/1, 0351 w/lang lesson, ID (MacHarg-IN)
- 5055 FRENCH GUIANA, RFO Cayenne, 31/1, 0450 FR mx ID (Klinck-NY)
- 5560 CLAND, R. Miskut, 10/1, 2346 (Renfrew)
- 5800 PERU, R. Nuevo Cajamarca, 27/1, 0125 (Howell-CA)
- 5875 SAUDI ARABIA, BSKSA Dirriya, 17/1, 1634 AR (Park-HI)

International Band Loggings

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



- 5930 CZECHOSLOVAKIA R. Prague in EG 0100, nx, cmntry, feature (Carson OK, Levison PA)
 5950 YEMEN ARAB REP. R. Sana'a in AR 2059, ID, nx, Koran, NA, f (Lackmann VA 1/14)
 5960 WEST GERMANY Deut. Welle in EG 0537, Larry Wayne & Randon Selection (Carson OK)
 5960 CANADA RCI in EG 0030, "As It Happens" (Ryan NY 1/19)
 5965 EAST GERMANY RBI in EG/FR 0607, brief nx in EG, then into FR (Carson OK 1/8)
 5965 CUBA RHC IN EG 0603, nx re return of Cubans from Panama (Carson OK 1/8)
 5965 MALAYSIA RM Kajang in Bahasa Malaysian 1611, pop & rock mx, f (Rydzewski CA 1/27)
 5967 ECUADOR LV del Upano (t) in SP 0255, tlk, no ID at 0257 s/off (Johnston KY 1/12)
 5980 SIERRA LEONE SLBS in EG 2128, NA, ID, QSL info, f-g (Streitmatter IN 1/21)
 6005 WEST GERMANY Berlin RIAS in GM 0625, US pop mx, nx (Renfrew NY, Kohlbrenner PA)
 6005 SEYCHELLES IS. BBC relay in EG 2205, nx, QRM from CFCX, p (Tuchscherer WI 1/20)
 6005 CANADA CFCX Montreal in EG, ID, nx, tlk, wx, mx, ads (Dunn, Ryan NY, Kremer IN)
 6010 BRAZIL R. Inconfidencia in PT 0131, pop mx, ads, p (Rydzewski CA 1/22)
 6011 VENEZUELA R. Los Andes in SP 1105, nx, commercials, deep fades (Taylor PA 2/9)
 6030 CANADA CFVP Calgary in EG 0442, pop "Countdown", ID, p (Rydzewski CA 1/17)
 6055 CZECHOSLOVAKIA R. Prague in EG 2205, nx, cmntry, f (Carson OK 1/15)
 6080 EAST GERMANY RBI in EG 0215, rpt re arms reduction in the GDR (Prath FL 1/14)
 6085 PORTUGAL Deut. Welle relay in EG 0309, nx, "Newslines Cologne", g (Park CA 1/3)
 6090 LUXEMBOURG RL in EG 0115, DJ w/mx by the Doors & European rock (Howell CA 1/28)
 6090nf? WEST GERMANY Sueddeutscher Rundfunk in GM 0533, ezl & soft rock, nx from Reuters (Taylor PA 2/12) ED: Could this be a move from listed 6030?
 6125 CYPRUS BBC relay in EG 2130, "English by Radio", //7125 (Taylor PA 2/11)
 6130 CANADA CHNX Halifax in EG 1810, pop mx, TC, ID, ads (Karcheski MA)
 6135 POLAND RP in EG 2240, mx request pgn: "Request Concert", //7270 (Prath. FL 1/21)
 6140 AUSTRALIA ABC Perth in EG 1235, local folk mx pgn (Klinck NY 1/16)
 6150 COSTA RICA R. Impacto in SP 0320, nx re Noriega's surrender (Howell CA 1/5)
 6165 SWITZERLAND SRI in EG 0735, nx, "Dateline", g (Carson OK 1/23)
 6180 CYPRUS BBC relay in EG 2027, "Voice of Faith", pgn review, ID (Rugg QUE 2/3)
 6190 VATICAN CITY VR in EG 2101, nx, ID, s/off 2109, IS played once (Ryan NY 1/19)
 6190 WEST GERMANY FBSFB Bremen in GM 0630, light pop mx, f/o 0640 (Renfrew NY 2/3)
 6200 PERU LV de Huamanga in SP 2340, excited tlk, ID, ads (Johnson GA 1/22)
 6210nf? CANADA R. Japan relay in EG *0259-0350*, nx, ID, cmntry, JP pop mx (Frodge MI, Karcheski MA, Alexander PA) NOTE: According to G. Hauser 6210 is possibly a mixing product between R. Japan relay on 5960 and DW relay on 6085 (both from Sackville). Alexander rpts he is also hearing both DW and RJ together on 5835. Note that 125 khz separates 5835, 5960, 6085, and 6210. Confused enough already?
 6230 ECUADOR HCJB Quito in EG 0600, "DX Partyline" re Utility stns (Carson OK 2/6)
 6250 EQUATORIAL GUINEA RN Malabo in SP 2203*, ID, SP & Afr mx, tlk, "Flashdance" theme at s/off, NA (Alexander PA, Karcheski MA, Kremer IN, Renfrew NY)
 6280 LEBANON "King of Hope" in AR 0418, children's mx, tlks, sermon (Karcheski MA)
 6570 BURMA Burmese Army Station(t) in lang 1204, classical mx, tlk (Cichorek NY 1/11)
 6895 PERU R. Sensacion in SP 0030, nice Flute tunes, ID's (Johnson GA 1/16)
 7115 BULGARIA R. Sofia in EG 0400, cmntry, nx, tlk on weather in Bulgaria, features (Levison PA, Carson OK, Rydzewski CA)
 7120 AUSTRALIA RA in CH 1250, mx, tlk, ID, //11765 (Prath FL 1/6)
 7135 CYPRUS BBC relay in EG 0215, cmntry on current events, Big Ben, ID (Howell CA)
 7180 CYPRUS Cyprus BCC in GK 2210, 16 note IS, ID, 2 men shouting, f (Taylor PA 2/11)
 7210 USSR Byelorussia Minsk in RS 0300, IS, NA, ID, tlks, class mx (Johnson GA 1/21)
 7215 IVORY COAST RTV Ivoirienne in FR 2300, discussion in FR (Klinck NY 1/17)
 7215 YUGOSLAVIA RY in EG 2200, IS, ID, nx, cmntry, //9660 (Prath FL 1/20)
 7225 RWANDA Deut. Welle relay in EG 0413, nx, Ham QRM splash (Tuchscherer WI 1/27)
 7255 NIGERIA VON in EG 0539, local & Afr nx, cmntry, ID (Rydzewski CA, Schulze FRG)
 7255 BOTSWANA RB in EG/Vern 0357, fam anncts, IS, nx, Ham QRM (Rydzewski CA 1/19)
 7265 WEST GERMANY Sudwestfunk Rohrdorf in GM 0640, rock mx, TC, ads (Taylor PA 2/10)
 7289 MALI RTVM Bamako in FR *0659, ID, lcl military band mx, tlk (Alexander PA 1/21)
 7300 ALBANIA R. Tirana in SP 0341, local mx, ID, g (Rydzewski CA 1/12)
 7345 CZECHOSLOVAKIA R. Prague in EG 0300, IS, ID's, pop mx, tlk, nx, cmntry, features (Purdue MN, Royston HI, Carson OK)

7355 ALASKA KNLS Anchor Point in RS 1732, Goodman & Basie jazz, ID (Rydzewski CA 1/7)

7365 ALASKA KNLS Anchor Point in CH 1115, tlk w/short mx intervals (Levison PA 1/30)

7375usb COSTA RICA R Peace Intl in EG 0045, UN nx, freq info, g (Rydzewski CA 1/21) in EG 0630, "World of Radio" DX pgm, g (Carson OK 1/28)

7400 USSR R. Kiev in EG 0319, tlk re 5th yr of Perestroika, g (Carson OK 1/8)

7400 USSR R. Vilnius in EG 2300, cmntry, mailbag, sports (Carson OK, Kohlbrenner PA)

7400 USSR R. Yerevan in EG/AM 0330, IS, ID, tragedy of Baku, mailbag, nx, into AM 0357 w/freqs (Johnston KY, 1/21, Jordan PA 1/31, Carson OK 2/2)

7410 ISRAEL Kol Israel in AR 0500, time pips, into nx, g (Carson OK 1/29)

7460 ISRAEL Kol Israel in EG 0510, nx, wk, sked, instrumental mx (Frodge MI)

7600 ECUADOR HD210A Time Station in SP 0156, time sig each min, ID 0200 (Rugg QUE)

7670 BULGARIA Stolnik (relay of HS) in BG 2031, nx?, contemp/rock mx (Karcheski MA)

9022 IRAN VOIRI in EG 1944, nx re Noriega in custody, soft mx (Cichorek NJ 1/6)

9064 CHINA CPBS-1 Kunming in CH 2325, tlks, CH mx, ID 2330, //7935 (Prath FL 1/21)

9268nf ICELAND ISBS in IC 2328-2334*, tlk, off w/mx bridge, //11418 (Alexander PA 1/13)

9320 USSR R. Rodina in RS 0150, tlk, operatic mx, Rodina ID, IS (Taylor PA 2/12)

9345 NO. KOREA R. Pyongyang in SP 2325, tlk, choral, patriotic mx, ID (Peck NY 1/23)

9480 ALBANIA R. Tirana in EG 0449, propaganda against Yugoslavia, f (Carson OK 1/16)

9480 USSR R. Yerevan in AM 2200, IS, ID, tlk re earthquakes, riots, f (Peck NY 1/21)

9505 JAPAN R. Japan in EG 1435, Japanese language lesson, ID (Klinck NY 2/6)

9520nf? PHILIPPINE IS. R. Veritas Asia in EG 1227, ID's, into JP 1230 (Prath FL 1/6)

9530 NO. MARIANAS KHBI Saipan in EG 1152, relig pgm, ID (Klinck NY 1/16)

9535 NETHERLANDS ANILLES TWR in EG 0306, Caribbean travel feature (Carson OK 2/4)

9535 ALGERIA RTV Algerienne in FR 2145, big band mx, nx 2200 (Tuchscherer WI 1/26)

9540 USSR R. Tashkent in EG 1220, mx, "Listeners' Letters" (Prath FL 1/13)

9565 INDIA AIR Delhi in EG *1330, IS, annod //11760, pgm followed (Rippel VA 2/12)

9570 SO. KOREA R. Korea in EG 1445, ID, Korean lang lesson (Klinck NY 2/6)

9575 ITALY RAI in EG 0104, nx, ID, into mx pgm 0115 and FR 0120, g (Royston HI 12/31)

9575 MOROCCO R. Medi Un Nador in FR 0800, ID, AR nx (Johnston KY 1/10)

9580 AUSTRALIA RA in EG 1500, world & Australian nx, ID (Ryan NY 1/18)

9585 HUNGARY R. Budapest in SP 2200, IS, nx, tlks, //9835 (Prath FL 1/21)

9595 JAPAN R. Tanpa in JP/EG 0916, EG lang lesson, ID, drama (D'Angelo PA 1/8)

9610 AUSTRALIA ABC Perth in EG 1250, country and western mx, p (Taylor PA 2/11)

9620 YUGOSLAVIA RY in EG *2200, nx, possible reunif of Germany, //9660 (Prath FL 2/3)

9620 PHILIPPINE IS. VOA relay in IN 2311, //11805, 15215 (Johnston KY 1/14)

9625 CANADA CBC N. Quebec Svce in EG 1900, "Musical Friends", nx, ID (Ryan NY 1/21)

9630 SPAIN RNE in EG 0504, nx, cmntry, review of nx past week, mailbag (Carson OK)

9635 AFGHANISTAN RA in lang 1310, tlk re Baku, flutes, IS, ID (Paszkiewicz WI 1/21)

9640 SWAZILAND TWR in SH 0324, fine local mx, ID, relig pgm (Schulze FRG 1/7)

9645 NO. KOREA R. Pyongyang in EG 1145, ID, local nx (Klinck NY 1/16)

9645nf FINLAND RF in EG 0015, rpt on Finland's relations w/the Germans (Prath FL 2/4)

9655 THAILAND RT in EG 1129, ID, SE Asian nx (Klinck NY) in Khmer 1235, ID in EG, g (Schulze FRG) in EG 2358, local mx, ID, tlk, p (Alexander PA) in EG 2300, IS, NA speech not readable due to QRM from R.Rumbos 9660, p (Lackmann VA 1/28)

9660 YUGOSLAVIA RY in EG 2203, nx, ID, cmntry on Albania, science rpt (Ryan NY 1/18)

9660 VENEZUELA R. Rumbos in SP 0255, ID (Royston HI) lively mx 2243, ads (Ryan NY)

9660 ETHIOPIA VOE in EG 1830, nx - mostly African, local mx, p (Tuchscherer WI 1/22)

9675 BRAZIL R. Cancao Nova in PT 0020, pop & rock mx, ads, tlk (Rydzewski CA 1/14)

9690 ROMANIA R. Bucharest in EG 1945, cmntry on recent upheaval, mx (Frodge MI 12/29)

9690 SPAIN R. Beijing relay in EG 0307, nx about China (Klinck NY 1/16)

9700 USSR R. Vilnius in EG 2303, political pgm, //7400, p (Carson OK 2/2)

9700 GREECE VOA relay in EG 1920, rpt on India-Sri Lanka relations (Prath FL 2/4)

9710 USSR R. Atlantika in RS 0000, end of R. Rodina 2359, IS, ID, nx (Prath FL 2/4)

9719? ANGOLA R. Nacional in PT 0509, highlife mx, ref to Luanda often (Kohlbrenner PA)

9735 PARAGUAY R. Nacional in SP 0045, ID, QRM from D. Welle *0500 (Johnston KY 1/2)

9751 SOCIETY IS. R. Tahiti in TT 0518, mx, phone calls, p (Royston HI 1/15)

9760 ALBANIA R. Tirana in EG *2330-0000*, political cmntry, nx, f (Jordan PA 2/4) anti-Yugoslav tirade at 2340, into basic Albanian 2345, p (Carson OK 2/3)

9765 USSR R. Kiev in EG 0030, nx, "Society" pgm, mailbag (Kohlbrenner PA, Carson OK) in EG 0301, nx, "Ukraine and the World", tlk on ecological problems (Levison PA)

9765 USSR R. Rodina in RS 0200, IS, ID, into nx (Prath FL 1/8)

9770 MALI R. Beijing relay in EG 0000, nx, cmntry (Pyatt VA 2/8)

9785 ALASKA KNLS Anchor Point in RS 0925, "The Talking Bible", ID, jazz (Lackmann VA)

9839B VIETNAM VOV in EG 1626, address, ID, g (Rydzewski CA 1/14)

9850 NEW ZEALAND SRI in EG 0800, Commonwealth Games, nx, wx (Carson OK, Alexander PA)

9885 SWITZERLAND RNZ in EG/Esperanto 0315, ID, pgm on J. Pollock (Carson OK 2/1)

9900 EGYPT R. Cairo in EG/AR 0246, AR lang lesson, into AR pgm of nx (Carson OK 2/1)

9925 BELGIUM BRT in EG 0030, "Brussels Calling"&"Music of Flanders" (Carson OK 1/15)
9950 SYRIA R. Damascus in EG 2049, press cmntry, ID, instrumentals (Cichorek NJ 1/10)
9960nf? VENEZUELA R. Rumbos in SP 1150, ads, chimes, ID (Terrence NY 1/12) ED: Is this a second harmonic of R. Rumbos by any chance? Anyone else copy this one here?

10000 CHINA B1M Time Station in CH 1859, pips, ID by CW, YL ID in CH (Howell CA 1/21)
10245 CHINA CPBS-1 in CH 2320, tlks, CH mx, ID, //11330 (Prath FL 1/27)
11375 CHINA CPBS Minority Service in CH 0020, CH mx, //15670 (Prath FL 1/16)
11574nf? VATICAN STATE VR in EG 2056, tlks, f (Paskiewicz WI 1/28)
11605 ISRAEL Kol Israel in EG 2008, polit disc (Frodge MI) nx, ID 0105 (Royston HI)
11650 GUAM K1WR in EG 1515, relig pgm, weak but clear reception (Klinck NY 2/6)
11665nf? USSR R. Ashkabad in lang 1659, IS, ID, nx in Turkmenian? (Tuchscherer WI 1/16)
11680nf? BULGARIA R. Sofia in EG 2305, tlks re Bulgarian economy, //9700 (Prath FL 1/21)
11710 ARGENTINA RNA in SP 2246, classical mx, ID, pips, nx 2300 (Karcheski MA 1/1)
11720 AUSTRALIA RA in EG 0858, pgm review, pips 0900, intern'l rpt, g (Carson OK 1/7)
11720 NETHERLANDS ANILLES RN relay in EG 0352, "Media Network" (Ryan NY 1/19)
117342 TANZANIA VOT Zanzibar in SH 1720-2001*, drama, nx?, AR & AFR mx, pips 1900, ID, (Alexander PA, Kohlbrenner PA, Karcheski MA, Lackmann VA, Streitmatter IN)
11735nf NORWAY RNI in NO *0300, IS, ID, nx (Treibel WA 2/2) Note: Back on this frequency Last logged here in 1982.

11760 NO. KOREA R. Pyongyang in KR 1800-1830, long tlk by W, ID, brief martial mx, doleful songs, f (Treibel WA 2/3) NOTE: Apparently moved here from 11740.
11760 COOK IS. R. Cook Is.(t) in EG 0600, tlks, nx, no ID (Cichorek NJ, Karcheski MA)
11780 BRAZIL RN de Amazonia in PT 1034, PT mx, tlk, ID 1037, vg (Royston HI 1/15)
11785 EAST GERMANY RBI in EG 0400, RBI Womens' Program, cmntry (Levison PA, Carson OK)
11795 WEST GERMANY D. Welle in GM 2305, nx, polit tlks, //3995 (Prath FL 1/27)
11800nf? USSR R. Dushanbe in EG 0330, nx, language lesson (Tuchscherer WI 1/29)
11805 GREECE VOA relay Kavalla in EG 0601, nx, ID, "Newslines" (Ryan NY 1/19)
11805 BRAZIL R. Globo in PT 0100, mx, annmnts, frequent ID's (Klinck NY 2/2)
11810 INDIA AIR in EG 2106-2220, nx, mx, TC, tlk re reincarnation (Paszkievicz WI)
118215 COLOMBIA RN de Colombia in SP 2345, "Bachelors Degree by Radio" (Lackmann VA)
11835 GABON R. Japan relay in EG *2059, IS, ID, best in USB (Johnston KY 1/1)
11880 SPAIN RNE in EG 0117, SP rock mx, cmntry on SP press, ID, g (Royston HI 1/15)
11895nf? UNITED ARAB EMIRATES Abu Dhabi in EG 2201, Koran, ID, "Arabian House" (Ryan NY)
11910 HUNGARY R. Budapest in EG 1955*, IS, back at 2000 in HG (Prath FL 1/21)
11915 BRAZIL R. Gaucho in PT 0045, tlks, accordion mx, //6020 (Howell CA 1/28)
11915 SEYCHELLES IS. FEBA in AR 1900, IS, ID, overrode D. Welle in RS (Lackmann VA)
11935 SOUTH AFRICA RSA in EG 0245, nx of South Africa, ID's, exc (Klinck NY 1/16)
11950nf SOUTH AFRICA RSA in PT 1945, pips, ID 2000, g (Treibel WA 2/1)
11960 GREECE VOA relay Rhodes in AR 2059*, ID in EG at s/off (Renfrew NY 2/2)
12005 TUNISIA RTV Tunisienne in AR 2057, AR mx, ID, nx, f (Lackmann VA 1/11) in AR 2350, tlk by M w/mentions of Tunis & freqs, abrupt s/off, f (Peck NY 1/23)
12015 CHINA R. Beijing in CH 2356, tlk, CH folk mx on flute, IS, p (Peck NY 1/24)
12025 NO. MARIANAS FBBC in CH *0900, annmnts, mx, tlks, relig mx, f (Karcheski MA)
12035 SWITZERLAND SRI in EG 0201, "Dateline", "Swiss Merry-go-Round" (Carson OK 1/7) In EG *2100, nx, ID, co-channel QRM from Spain underneath (Kremer IN 1/27) NOTE: SRI uses Gabon relay from 2215-0100 on 12035. Other xmsns are from Switz.
12085 SYRIA SBCS in PT 0004, tlk, Syrian folk mx, ID "Aqui Damasco" (Peck NY 1/24)
12200 CHINA CPBS 2 in CH 2345, trad CH mx, tlk, //11040 (Prath FL 1/21, Peck NY)
13584nf AZORES R. Clube do Angra in PT 2354, pop rx, 9 pips on the hr, ID, many short mx bridges (Johnson GA) ID hrd at 2209 "A Voz do Terceira" (Kohlbrenner PA) in PT 1758-0010, variety of mx, best hrd about 2200, f/o 0010 (Alexander PA) rpt on international futebol 2030-2059 (Renfrew NY)

13665 PAKISTAN RP in TK 1709-1745*, Mid-East mx, tlk, ID in EG 1729 (Tuchscherer WI)
13670 CANADA RCI in EG 1917, tlk re Parkinson's disease & treatment (Carson OK 1/18)
13700 NETHERLANDS RN Flevo in EG 2030, nx, "Newslines", "Media Network" (Carson 1/18)
13770 NETHERLANDS RN Flevo in EG 1502, "Media Network", f (Park CA 1/4)
13855 ICELAND ISBS in IC 2320-2334*, tlks, nx, interviews, g (Jordan PA 1/31)
15004 USSR RID Irkutsk Time Station w/time pips at 0308, p (Paszkievicz WI) 1 kw. xnter
15110 SPAIN RNE in SP 1928, s/on 1930 w/ID, nx, g (Carson OK 1/18)
15110 CZECHOSLOVAKIA R. Prague in EG 1810, DJ playing mx requests, //21505 (Prath FL)
15125 SOUTH AFRICA RSA in EG 1929, mailbag pgm, sked, //21535 (Frodge MI 1/3)
15135nf SWAZILAND TWR Manzini in EG 1627, "Amazing Grace", ID (Rydzewski CA 2/11) in EG 1620, ID, rock mx, f (Treibel WA 2/14) NOTE: Listed 15210 not heard at this hr.
15155 FRANCE RFI in EG 1245, ID, "Top Five Countdown" - pop mx (Prath FL 2/3)
15160 BULGARIA R. Sofia in EG 0738, "Socialist Horizons", DX pgm, f (Carson OK 1/20)

- 15197v BANGLADESH RB Dhaka in EG 0800-0830*, up from nominal 15195, tlk re Islam, AR mx book review, ID, address, //11705 (Alexander PA 1/7)
- 15230nf NO. KOREA R. Pyongyang in FR 0020, nx, ID (Treibel WA 2/2) NOTE: Back on this freq after 5 year absence.
- 15285 AUSTRALIA RA in EG 0818, coverage of Commonwealth Games in N.Z. (Carson OK 1/28)
- 15350 FRENCH GUIANA R. Japan relay in JP 0244, drama, mx bits, ID (Tuchscherer WI 1/24)
- 15350 LUXEMBOURG RTL in FR 1558, ads, ID, nx, quiz show, "Le Journal" (Rugg QUE 1/28)
- 15350 EAST GERMANY RBI in FR 1559, hrd under RTL w/IS, ID, nx in EG (Rugg QUE 1/28)
- 15375 SPAIN RNE in EG 1942, disc of Antarctic experiments, mx, nx, g (Carson OK 1/18)
- 15400 FINLAND RF in EG 1403, nx, "Northern Report", ID, wx, off 1423 (Ryan NY 1/18)
- 15415 LIBYA(L) V of the Arab Homeland in AR 0220-0305, ponderous AR instrumentals solemn tlks w/refs to Libya & Iraq, f/o gradually 0245, f-p (Jordan PA 1/14)
- 15435 UNITED ARAB EMIRATES UAER Dubai in AR 1555, martial mx, ID, vocals (Rugg QUE)
- 15575 SO. KOREA RK in EG 1452, tlk on environmental protection, f (Carson OK 1/18)
- 15505 KUWAIT RK relay of R. Bahrain in AR 1145-1230, vocals & plucked strings, recitations, anthem, pips 1200, ID, 6 mins of nx, tlks, AR mx, f (Jordan PA 1/14)
- 17555nf? PAKISTAN RP in AR 0840, ID 0848, nice local mx (Schulze FRG 12/25)
- 17579nf? PAKISTAN RP in EG 1600, ID, nx, also hrd weakly on 156037 (Lackmann VA 1/20)
- 17680nf NEW ZEALAND RNZ widely rptd in EG *0300-0700+, IS, ID, coverage of Commonwealth Games, sports, mx, pips on hr, interviews, new xmtr on N. Island (Tuchscherer WI Jordan PA, D'Angelo PA, Lackmann VA, Carson OK, Simmonds WA, Harvester OKINAWA)
- 17665 USSR R. Vilnius in EG 2310, rpt re Gorbachev's visit to Lithuania (Prath FL)
- 17680 CHINA R. Beijing Kunming in RN 0845, tlks, opera vocals, CH mx, p (Jordan PA)
- 17690 USSR R. Vilnius in EG 2325, rpt re pop mx in Lithuania (Prath FL 1/20)
- 17690 USSR R. Minsk in Byelorussian 2330 after Vilnius s/off, IS, ID (Karcheski MA)
- 17765 PHILIPPINE IS. VOA relay in CH 2138, tlks, ID 2200 (Tuchscherer WI 1/20)
- 17780 NO. MARIANAS KHBI Saipan in EG, OM with world nx, f (Carson OK 1/7)
- 17800 SRI LANKA D. Welle relay in Pushto 0258, IS, site ID in EG, sked (Rugg QUE 1/14)
- 17866nf COLOMBIA RDN Bogota in SP 1215, variety of Latin AM mx, ID (Prath FL 1/6)
- 21460 BELGIUM RTBF in FR 1650, accordion jazz mx, opera song, f (Park CA 1/4)
- 21465 EAST GERMANY RBI in EG 1310, signing off in EG to SE Asia, sked (Prath FL 1/6)
- 21490 PAKISTAN RP in EG 0218, local mx, slo-speed nx (Purdue MN, Royston HI 1/15)
- 21505 CZECHOSLOVAKIA R. Prague in EG 1450, letters from Asian listeners (Prath FL)
- 21505 SAUDI ARABIA BSKSA in AR 1631, nx, soliloquy, prayer, QRM Prague (Rugg QUE 1/21)
- 21525 AUSTRALIA RA in EG 0215, international and Australian nx, p (Purdue MN 1/4)
- 21535 SOUTH AFRICA RSA in EG 1918, mailbag pgm, RSA began EG pgms 1966 (Frodge MI 1/6)
- 21555 SPAIN RNE in SP 1715, 2 men covering futbol game (Prath FL 2/4)
- 21560 SRI LANKA D. Welle relay in GM 1750, nx, political tlks, //15275 (Prath FL 1/21)
- 21565 COSTA RICA R for Peace Intl in EG 2002, pgm details, peace pgm, Glenn Hauser's "World of Radio" DX pgm (Carson OK 1/18, Ryan NY 1/19)
- 21605 UNITED ARAB EMIRATES UAER Dubai in EG 1611, AR influence in Spain, mx, TC 0830 Dubai time, nx, wx, g (Carson OK 1/18)
- 21610 SWEDEN RSI in EG 1530, "Weekday", mailbag, stamp pgm (Ryan NY 1/18, Carson OK)
- 21680 MALTA D. Welle relay in EG 1600, feature pgm, p (Pyatt VA 1/17)
- 21695 SWITZERLAND SRI in Esperanto 1315, s/on in EG, then Esperanto nx (Prath FL 1/27)
- 21700 GABON R. Japan relay in EG 1500, nx, feature pgm, f-p (Pyatt VA 1/31)
- 21705 NORWAY RNI in EG 1600, "Norway Today", nx, interview (Ryan NY 1/21) in EG 1600 Norway to give Romania 1.2 million in aid, oil spill technology tlk (Carson OK) NOTE: Both loggings were on a Sunday which is only day RNI xmts in EG, I believe
- 21740 AUSTRALIA RA in EG 0140, listeners' mx requests (Tuchscherer WI 1/28) in EG 0132 "Breakfast Show", ID, TC 0134, tlk on early days of Australia (Cichorek NJ 1/12)
- 21820? BELGIUM BRT in EG 1340, DX pgm, nx of Romania's new IS (Prath FL 1/20) NOTE: Both WRTH and PWBR list Belgium at 21815. Have they moved up 5 khz?
- 25730 NORWAY RNI in NO 1457, IS, ID in EG/NO, pgm sked, nx (Rugg QUE 1/28)
- 25790 SOUTH AFRICA RSA in EG 1509, mailbag, ID's, nx, sports (Levison PA, Rugg QUE)
- 259475 COSTA RICA R for Peace Intl in EG 1925, relig pgm, ID, Glenn Hauser's "World of Radio" DSX pgm, f-p (Frodge MI 1/6)

There has been an overwhelming number of Pirate and Clandestine loggings received during the past two months. Some of these appear to have a "half-life" of one or two days and thus it seems to be of little value to list them. Others have ridiculous station mottoes like "The Voice of Stench" or "The Voice of Laryngitis" and would seem to be the efforts of amateur pranksters. I'm not sure what the majority of members desire with this type of loggings but until I get further input, I will list only those P & C loggings that are substantive in nature and/or rptd by more than one member. The items for this month's issue are listed on the following page.

 CLANDESTINES AND PIRATES

- 6215 CLANDESTINE R. Quince de Septiembre in SP 0036-0103*, cntry re liberty in Nicaragua, call for republic, "Libertad de Nicaragua" promo, patriotic cntry, mx w/occasional helicopter sounds, QRM from weak bubbler jammer (Frodge MI 1/3) also in SP 1220, ID, Spanish song w/anti-communist theme, g (Breedon NE 1/5)
- 6275 PIRATE Samurai Radio in EG *0729-0757*, piano IS, ID's, anncd 50-200 watts, targeted to N Am & Europe, p (Alexander PA) Xmas pgm IS, ID *2359 (Moore/Valko)
- 63104v EUROPIRATE Weekend Music Radio in EG 0440, spec Boxing Day pgm, ID's, some mx (Rugg QUE 12/26) test xmsn w/voice tapes 0515 (Karcheski 12/25) skeds, ID's? in RS, mx (Kohlbrenner PA 12/25) SP annmnts, Scottish mx, hellos to everyone at Fine Tuning & Frendx, //136296 & 150443 w/100 watts on each freq (Alexander PA 12/25, Moore PA 12/25) reported also on 6235 at 0705 w/freqs (Taylor PA 12/31) On 6312 from 0408-0637 w/several ID's, little mx (Field MI 12/26)
- 6315v CLANDESTINE R. Patria Libre in SP 0115*, Latin vocals, tlks, freqs, ID includes "La Voz de Nueva Colombia" (D'Angelo 1/28) in SP on 6300 w/tlk and cuckoo chimes ID (Johnson GA 1/1) 0112* in SP w/lively L Am mx, doorbell? chimes (Alexander PA 1/14) NOTE: Station also variously rptd at 6300, 6310, 6315, 6320, and 6750.
- 63196v EUROPIRATE R. Stella International in EG 0509, pop mx, many ID's, address, recent QSL rpts xmt'r is in S. Ireland (Kohlbrenner PA 1/21) DJ w/rock pgm (D'Angelo PA 1/28) 0600-0815 w/pop & rock mx, address Jock Wilson, Edinburgh, Scotland? Reception best around 0745-0810 (Alexander PA 1/28)
- 6340v CLANDESTINE R. Venceremos in SP 0220, tlk, mx, ID's, //6853 (Alexander PA 12/30)
- 68505 PIRATE Secret Society R. w/C&W mx 0200, Baltimore, MD address (Field PA 2/8)
- 7375 PIRATE WFRG International in EG *1930-2134*, rock mx, comedy ads, Peekskill, NY address, new professionally done pirate (D'Angelo PA 1/1)
- 7415v PIRATE KNBS in EG 0230, satirical Xmas songs, phony ads, gave Wellsville, PA? address (Aden ID 1/15) hrd on 74115 at 2347 (Field PA) on 7527 at 0104 (Renfrew NY 2/11)
- 74154 PIRATE (CHK) in EG 0330, rock mx, ID's, p (Alexander PA 2/3) from 0045 w/DJ and rock mx (Beatles, Pink Floyd etc.), several ID's, ute QRM (Paskiewicz WI 1/25)
- 7415v PIRATE R. Free Willy in EG 0220, jazz & pop mx, fake ads, ID's, political cntry testing w/rebroadcast of 7/23/87 show (Frodge MI 1/3) Dixieland mx, oldies, say they are in Louisiana (Pasziewicz WI 1/21, Renfrew NY 1/21)
- 7414v PIRATE Hope Radio 16 in EG 0050, ID's, comedy album, reading horoscopes, f (D'Angelo PA 12/10) Led Zeppelin rx, maniacal laugh 0048 (Karcheski MA 12/11)
- 7415v PIRATE Hope Radio International in EG 2115, ID's, 100 watts output (D'Angelo PA 12/18) comedy skits 2220, Beaver Falls, PA address (Kohlbrenner PA 12/17, Rigas IL 12/9, Frodge MI 12/17, Renfrew NY 1/1, Alexander PA 12/17)
- 9450 CLANDESTINE V. of the Libyan People in AR 2320, two 15 min blocs of frenzied polemics, Mid-East instrumentals, choral mx, f (Jordan PA 1/26)
- 9700 CLANDESTINE AV do Galo Negro Angola in PT 0455, rooster IS, guitar & drums, ID, signal covered by s/on of D. Welle at 0500, p (Royston HI 1/12)
- 9940 CLANDESTINE La Voz del Cid Guatemala? in SP 0145, nx rpts, ID, annmnts, "Mundo Cultural", mx, tlks (Price VA 12/23, Taylor PA 2/12, Karcheski MA 12/10)
- 9965 CLANDESTINE R. Caiman Guatemala in SP 1200, s/on w/"The Angels Sing", big band mx of the 50's, ID (Terrence NY 1/12) 0338-0425 (Karcheski MA, Royston HI 1/6)
- 9985 EUROPIRATE Quality Radio in EG *0900, ID's, address Holland?, lite pops, 500 watts xmt'ng power (Alexander PA 1/28)
- 11615 CLANDESTINE Iran's Flag of Freedom R. in Farsi? *0329, IS, multi-lingual ID, freqs, cntry, mx, //9045 (Karcheski MA 12/19, Alexander PA 12/30)
- 116353 CLANDESTINE LV del Cid Guatemala? in SP 2128, tlk, ID's, mx (Alexander PA 1/21)
- 15043 EUROPIRATE Weekend Music R.Scotland in EG 0458/1253, pop mx, ID (Rigas IL 12/26)
- 150504 EUROPIRATE All Music Radio in EG 0858, pop mx, address sounded like Holland, p xmt'ng to Europe (Alexander PA 12/25)
- 150635 PIRATE KNBS w/alternate versions of Xmas songs, fake ads 2057* (Pasziewicz WI)
- *****

Prepared 02/23/90 at 4:14 PM

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

Some of the M89 schedule changes are herein recorded, but the data is slow to come. More changes will appear next month. This season is complicated by both the seasonal and the summer time changes. Some changes take effect both on March 4 and March 25.

Budget Cuts

Radio Canada International has felt the first of its cuts. As of March 31, the 06-07 UT programming to Europe will be dropped. This is alternating 15-minute French and English language programming. The VOA budget cuts and loss of six languages were widely publicized on MN and Wok, but the followup a week later was not. The VOA was directed by the USIA to find the money (perhaps construction funds) elsewhere and retain the languages.

Radio Korea - RCI Swap

The swap of relays is scheduled to begin April 2. The relay agreement is for one year, and is subject to change if necessary after six months. Radio Korea relays via RCI: Spanish to SA 10-1030 and English to ENA 1030-11 on 11715. Korean to ENA 11-1130 on 6145 and 9745. RCI via Radio Korea: Chinese 13-1325

on 6150. Japanese 1330-14 on 6095 and 9700. Chinese 1430-1455 on 9700. At least for R Korea via RCI, the transmission will remain at the UTC hour when DST takes effect. I wonder what size audience they will have at that hour of the morning. This info was announced starting late January, transcribed by Bob Colyard (NJ), and Ms. Han Hee-Joo repeated the information again in SW Feedback on February 4.

Changes on Pinelands RBBS

Two new "doors" were added. Doors are a mechanism to escape from the BBS to other software programs, then return. In addition to the NET door for the shortwave echo, a PROP door allows the caller to search and browse through a database of solar flux and A-index data going back to 1977. This is the data used for the graphs that appear from time to time in the bulletin. For subscribers to the SW data files, a SKED door enables searching and browsing the schedules database on-line. No longer is it necessary to download the file(s).

Radio RSA

R RSA provided some interesting listening during the weekend of Nelson Mandela's release. Regular programming was curtailed and transmissions extended beyond normal sign-off times. M89 changes include the swap of target areas and times at 18 and 19 UT and a shift at 13 to 17710 from 17730. There are no

other English language M89 (vs D89) schedule changes.

Cleaning out the Mailbag

Organization is not always my middle name. Some material has slipped through the cracks on the desk. Thanks to Rev. John Eckert (PA) for sending a regional South African schedule last month. Robert Williams (TX) writes that he built the active antenna described in the February 1989 Radio Electronics magazine (page 51) and it works quite well on his Sony PRO-80. Using a 5 or 10K resistor to replace the stated R4 increases gain and the result is that it outperforms his MFJ-1020. The parts came to \$20.

Speaking of equipment, a friend of mine who works for SONY brought back from Japan the new ICOM IC-R1 handheld receiver. He says it is quite remarkable. It is the size of their IC-2ST 2m handheld, about half the size of a cigarette pack, covers 100 kHz to 1.3 GHz, has 100 memories and uses a 300 ma battery pack. Modes are AM, NBFM and WBFM. Although it has no SSB or CW mode. AM is tuneable in 100 Hz steps. Street price in Japan, if you can find it, is about US \$350. Most places have it backordered for 4 to 6 months. It should be here, with an English manual, by mid-summer.

Radio Japan

M89 changes include to NA the use of 11865, replacing 9505, at 14-16 UTC. 11865 continues in use at 17 and 19.

News Clippings

From John Carson, an AP story published in The Daily Oklahoman reports that Czechos-

lovakia's state radio on February 4 broadcast its first regular mass in 40 years. There is a newly formed department for religious programs and more broadcasts are planned.

Notes

The printed schedule for ELWA shows no changes for M89 and projected J89. But the printed schedule from RAE does not show any broadcast at 03 UT: the second English language release to NA apparently has been dropped. Vietnam has reappeared on 15010 with an excellent signal and seemingly has dropped the 25m channel. All three outlets are still being announced, as they did while on 12018.5 and 9840. Amazingly, on the 19th I heard R New Zealand Int'l signing on at 17 UT on 17680, with the Bellbird song, invocation, and reports about a 6.8 Richter-scale earthquake near Vanuatu. Not very strong but quite readable holding about 4 s-units above the noise floor. Only the frequency of 17680 was announced. Here's a reading assignment for you, thanks to a tip from John Grimley (ON) via the ANARC SWL Net: the February 1990 Scientific American has a feature article titled "The Variable Sun" by Peter V. Foukal. It discusses the latest findings on the variability of the sun's radiation and particle output. Interesting reading. Philip Yant (MI) caught a February 17 announcement that the BRT at 22 and 0030 to NA switched to 12010 from 9925 effective the 19th. Via Hauser's World of Radio, we have the M89 schedule changes for R Sofia. R Nederland announced its M89 changes on the 22nd, but as they take effect on March 25, I will hold them for next month's update.

Changes entered between 01/27/90 and 02/23/90.

ENGLISH LANGUAGE SW BROADCAST SCHEDULES: By Start Time

Compiled by Ingeas R. Sundstrom, W2XQ

Start and 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	Australia	R Australia	21740	17795	17750	15320	15240	15140			As/Pac/PapNG		01/28/90
0000	Bulgaria	R Sofia	15320	11680							NA		02/22/90
0000	Norway	R Norway	15225								SA	Eng Mon only	02/16/90
0030	Belgium	BRT	12010	9925							NA/SA		02/19/90
0100	Australia	R Australia	21740	21525	17795	17750	17715	17600	15320	15240	As/Pac/PapNG		01/28/90
0315	Costa Rica	R for Peace Int'l	7375									Tu-Sa+USB mode	01/31/90
0330	Japan	R Japan	17835	17825	17810	17765	15195	5960			60S/Asia	46 v Canada	02/16/90
0330	New Zealand	R New Zealand Int'l	17705	17680	15485						E Pac	either #2 or #3	02/02/90
0400	Australia	R Australia	21740	21525	17795	17750	17715	17600	15320	15240	As/Pac/PapNG	4446 Sa-Su only	01/28/90
0400	Bulgaria	R Sofia	15310	15160	11765	11735	11720				Afr/NA		02/22/90
0425	Italy	RAI	9575	7275									02/19/90
0500	Australia	R Australia	21740	21525	17795	17750	17715	17600	15320	15240	As/Pac/PapNG		01/28/90
0500	Japan	R Japan	17825	17890	17810	17765	15195				60S/As/NA/Oceania		02/19/90
0600	Australia	R Australia	21740	21525	17715	17600	15240	15140	11910		As/Pac/PapNG		01/28/90
0600	Norway	R Norway	15165	9590							Pac/Eu	Eng Sun only	02/16/90
0630	Australia	R Australia	21740	21525	17715	17600	15240	15140			As/Pac/PapNG		01/28/90
0630	New Zealand	R New Zealand Int'l	17730	15485	9850						W Pac	either #2 or #3	02/02/90
0700	Australia	R Australia	21740	21525	17715	17600	15240	15140	9655		As/Pac/PapNG		01/28/90
0730	Australia	R Australia	21525	17715	17600	15160	9655				As/Pac/PapNG		01/28/90
0800	Australia	R Australia	21525	17750	17715	17600	15160	11930	9655	9580	As/Pac/PapNG		01/28/90
0800	Norway	R Norway	25730	15165							F East/Aus/Pac/NA	Eng Sun only	02/16/90
0830	Australia	R Australia	21525	17750	17715	17600	11930	11720	9655	9580	As/Pac/PapNG		01/28/90
0900	Norway	R Norway	25730								F East/Aus/NI	Eng Sun only	02/16/90
1000	Hungary	R Budapest	15220	15160	11925	11910	9835	9585			Far East	M-F	02/16/90
1030	Canada	R Korea	11715								EMA	starts Apr 2	02/16/90
1030	Hungary	R Budapest	15220	15160	11925	11910	9835	9585			Far East	M-F	02/16/90
1130	Australia	R Australia	11930	11800	9770	9710	9580	7215	6080	6060	As/Pac/PapNG		01/28/90
1200	Australia	R Australia	11930	11800	9770	9710	9580	7215	7205	6080	As/Pac/PapNG		01/28/90
1200	Vietnam	V of Vietnam	15010	12020	9840								02/23/90

1230	1300	Australia	R Australia	11930	9770	9580	7215	7205	6080	6060	6020	As/Pac/PaoMG	01/28/90
1300	1400	Australia	R Australia	21525	11930	9580	7205	5080	6060	6020	5995	As/Pac/PaoMG	01/28/90
1300	1356	South Africa	Radio RSA	21590	17710	11805						Ind/Pac/FE	02/16/90
1300	1400	USSR	R Stn Peace & Progress	17870	17840	17635	15535	15520	15420	15330	15130	As/R/Am/Aus	02/16/90
1400	1500	Japan	R Japan	11865	11815							60S/Am/As	02/16/90
1430	1500	Australia	R Australia	11930	9580	7205	6080	6060	5995			As/Pac/PaoMG	01/28/90
1500	1600	Australia	R Australia	15245	11930	9580	7215	6080	6060	6035	5995	As/Pac/PaoMG	01/28/90
1500	1600	Japan	R Japan	21700	11865	11815						60S/As/Am/Eur/ME	01/28/90
1500	1530	Romania	R Bucharest	17745	17720	15335	15250	11740	11775			±5	02/19/90
1500	1530	Vietnam	V of Vietnam	15010	12020	9840							02/23/90
1530	1630	Bulgaria	R Sofia	17825	15310	11735						Afr	02/22/90
1600	1830	Australia	R Australia	15245	11930	9580	7215	7205	6080	6060	6035	As/Pac/PaoMG	01/28/90
1600	1630	Norway	R Norway	21705	17765							NA	02/16/90
1630	1700	USSR	R Stn Peace & Progress	17565	15585	15320	12065	11980	11910	11850	9705	Af/As	02/16/90
1700	1800	Japan	R Japan	11865	11815	9695	9535					60S/As/Am	02/16/90
1700	1730	Norway	R Norway	25730	17765							Af/NA	02/16/90
1800	2330	Costa Rica	R for Peace Int 1	21566	13660								01/31/90
1800	1830	Norway	R Norway	15165								ME/Af	02/16/90
1800	1856	South Africa	Radio RSA	21535	15230	7230						Afr/ME	01/29/90
1830	1930	Afghanistan	R Afghanistan	9655	7215	6020						Eu	02/10/90
1830	1900	Australia	R Australia	11930	9580	7215	7205	6080	6060	6035	6020	As/Pac/PaoMG	01/28/90
1900	2000	Australia	R Australia	11950	9580	7215	7205	6080	6060	6035	6020	As/Pac/PaoMG	01/28/90
1900	1930	Japan	R Japan	15270	11865	11830						50S/Am/Oc	02/16/90
1900	1930	Norway	R Norway	15165								Eu	02/16/90
1900	1956	South Africa	Radio RSA	17765	15230							UK/Ireland	01/29/90
1905	2100	New Zealand	R New Zealand Int 1	17750	17680	15485						W Pac	02/02/90
1930	2000	Bulgaria	R Sofia	15330	11660	9700						W Eu	02/22/90
1930	2025	Romania	R Bucharest	9670	7195	7105	6105	5990				Eu	02/19/90
2000	2030	Australia	R Australia	9620	9580	7215	7205	6060	6035	6020		As/Pac/PaoMG	01/28/90
2000	0300	Costa Rica	R for Peace Int 1	21566	13660								01/31/90
2100	2130	Japan	R Japan	17850	17810	15270	15230	11835	11815			G0S/As/Oc/Eu	02/19/90
2100	2125	Romania	R Bucharest	9690	7195	7105	6105	5990				Eu	02/19/90
2130	2200	Bulgaria	R Sofia	15330	11660	9700						HA/Eu	02/22/90
2200	2225	Belgium	8RT	12010	5910							HA/Eu	02/19/90
2200	2225	Italy	R61	11800	9710							Japan	02/19/90
2200	0100	New Zealand	R New Zealand Int 1	17705	17680	15485						General svc	02/02/90
2200	2230	Norway	R Norway	15180								W Af/SA	02/16/90
2200	2300	USSR	R Stn Peace & Progress	9610	7360	7215	7205	6145	4795			Eu	02/19/90
2205	2225	Vatican State	Vatican Radio	11830	9615	7125						As/Aus/NZ	02/15/90

2230 2330 Bulgaria R Sofia 15330 11680 M Eu 02/22/90
 2300 1030 Costa Rica R for Peace Int'l 7375 01/31/90
 2500 2330 Norway R Norway 11930 HA/CA 02/16/90
 2300 2330 USSR R Vilnius 17690 15180 9765 7400 6100 01/28/90
 2330 0300 Costa Rica R for Peace Int'l 7375 M-F:USB mode 01/31/90

Changes entered between 01/27/90 and 02/23/90.

ENGLISH LANGUAGE DX SHOWS: By Day of Week
 Compiled by Thomas R. Sundstrom, W2IQ

Shortwave DX Program	Show Name	Start Time	Country	Station	Freq							Target Area	Notes re DX Show	Record Last Updated
					#1	#2	#3	#4	#5	#6	#7			
** DAY OF THE WEEK: Sunday														02/02/90
World of Radio		2230	1800	Costa Rica	R for Peace	Int'l	21566	13660						
** DAY OF THE WEEK: Tuesday														02/02/90
World of Radio		2230	2000	Costa Rica	R for Peace	Int'l	21566	13660						
** DAY OF THE WEEK: Wednesday														01/31/90
World of Radio		0200	2330	Costa Rica	R for Peace	Int'l	7375							
World of Radio		0545	0315	Costa Rica	R for Peace	Int'l	7375							
** DAY OF THE WEEK: Friday														02/02/90
World of Radio		2000	2000	Costa Rica	R for Peace	Int'l	21566	13660						
World of Radio		2330	2330	Costa Rica	R for Peace	Int'l	7375							
** DAY OF THE WEEK: Saturday														01/31/90
World of Radio		0315	2300	Costa Rica	R for Peace	Int'l	7375							
World of Radio		0645	2300	Costa Rica	R for Peace	Int'l	7375							
Pacific DX Magazine		1510	1500	Guam	KTMR		11650							
World of Radio		1930	1800	Costa Rica	R for Peace	Int'l	21566	13660						

India

PUBLISHER'S PAGE



NO COLLECT CALLS ON THESE ADS, PLEASE.

FOR SALE: Telefunken reel-to-reel recorder. Portable 10 x 11 inch size. Mint condition in original carton and never used. Cost \$140.00 in 1980, will sell for \$60.00 including shipping. ALSO: "Border Radio," a 280-page book about Mexican border stations with soundsheet, \$15.00. "Communications Receivers" 1932-1981," complete history of all tube models with 100 photos, \$12.00. Both books are like new. Prices are U.S. cash or add \$3.00 to checks. Ernie Behr, P.O. Box 1991, Winnipeg, Manitoba, Canada R3C 3R3.

WANTED: Any old Hammarlund receivers (junk ones) such as SP600, SP400, SP200, or HQ180's. Need not be complete, wanted just for parts. I will pay cost plus UPS. John Leary, 438 Hamilton, Fortville, IN 46040.

FINAL CLEARANCE SALE: "Moving to Ecuador" - An excellent, simplified introduction to the wonderful world of International SW Radio. Was \$4.95 plus \$1.00 postage, now \$1.00 including postage (\$1.50 in Canada and \$2.00 elsewhere). Send check or money order to Kenneth D. MacHarg, Box 1345, Jeffersonville, IN 47131. Offer ends April 15, 1990.

FOR SALE: Eavesdropper trapped dipole with 30' coax included. Used six months. Send \$40.00 postal money order to Jerry Klinck, 43 Lein Road, West Seneca, NY 14224. Phone (716) 675-7509 mornings.

FOR SALE: Magnavox D2935, brand new in the box, \$155.00. Karl Forster, Box 518, Munfordville, KY 42765. Phone (502) 524-3009 weekday evenings.

FOR SALE: ICOM R-70. Comes with maintenance and owner's manuals and DC power cord. Has audio, narrow AM filter, and BCB preamp-enable mods. Very clean with recent tune-up and alignment. Price \$425.00, buyer pays shipping. Lin Robertson, 1038 Turquoise #9, San Diego, CA 92109.

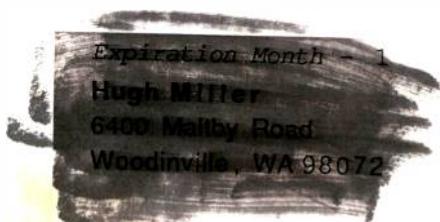
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WANTED: A used Kenwood 5000, ICOM 7000, or NRD-515 in good or excellent condition with possible a narrow band voice filter. Price must be reasonable. I will accept collect calls. Anthony Giszack, 7-08 Essex Place, Fairlawn, NJ 07410. Phone (201) 796-3512.

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