

**NASA**

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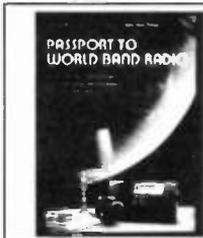
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Volume XXX, Number 10  
October, 1990

# UNIVERSAL RADIO

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# NASWA Notes

**Bob Brown**

238 Cricklewood Circle  
Lansdale, PA 19446  
Compuserve 74756.1557



**A**NARCON 90, held September 14-16 in Virginia Beach, VA., is history. Gail and I had a good time renewing old acquaintances and making new friends. Our thanks go out to those who made those good times possible.

As you may or may not know by now, it looks like ANARC, as we know it, is also history. Sheldon Harvey, interim Executive Secretary of ANARC, made an announcement at the banquet that ANARC will be disbanding. Some of those attending the ANARCON expressed surprise at the announcement, others were not so surprised. It appears that ANARC may have outlived its original purpose.

According to information via Jeff White on Media Network, less than 100 persons registered for the convention. Declining club membership, timing of the event, and travel costs were stated as reasons for the small registration. The troubles with ANARC were discussed often during the past few years. After Bob Horvitz resigned earlier this year due to work obligations, Sheldon Harvey agreed to serve as interim Executive Secretary until the ANARCON convention in Virginia Beach. In Virginia Beach, a decision was to be made concerning the appointment and election of an Executive Secretary, and the future of ANARC. During the five months preceding ANARCON, less than a half-dozen of the 16 member clubs responded to the reorganization proposals presented in writing to them by Sheldon. Only three clubs, NASWA, SPEEDX, and CIDX supported the convention by manning club booths at the convention. It was impossible to conduct ANARC business and choose an Executive Secretary. No one volunteered to hold a 1991 convention. Clearly there is a decided lack of interest in keeping the organization alive. The interim director cannot adequately wear the two hats of a club president and an executive director. Accordingly, Sheldon made the an-

nouncement at the Saturday night banquet that the functions of the ANARC organization would be suspended and that this was probably the last ANARCON.

The original purpose of ANARC when founded in 1964 was to promote closer ties among radio clubs; to promote the interchange of information and ideas among member clubs; to work for the common good of listeners; and to provide a medium to speak out for radio clubs and listeners in North America. These original purposes of ANARC, including the reduction of inter-club friction, have been met in past years. After 25 years ANARC seems to have lost its organizational focus. While such a national organization is useful to respond to political situations, as was done with the ECPA and proposed labeling of receivers, there is no reason that individual clubs cannot continue to respond to such issues and continue to communicate with each other in the sharing of information.

It appears that the time has come to close this organization. Certain clubs and individuals will continue to speak out, but clearly there is no incentive to do so through this organization.

## Staff Notes

I'm pleased to announce that Dr. Charles A. Wooten will be the new editor for Listener's Classroom starting with next month's Journal. Charley has been an ardent SWL/DXer since Bastille Day 1972. While living in Morocco he edited a bi-monthly newsletter for the base newspaper. Returning to the States he became more involved in NASWA eventually taking the editorship of (then) Short Wave Center in January 1975. He became a member of NASWA in 1972 and still has every copy of the FRENDEX JOURNAL since then.

Almost concurrently he was Chairman of the Frequency Recommendation Committee of ANARC. In the mid-80's Charley

took the utility editorship with DSWCI which helped round-out his hobby communications experience.

Rowland Archer has been conducting DXer's Forum since June, 1988. I think that you will agree that those columns contain some of the best material that have ever appeared in the SW hobby. Because of the added responsibilities of his new position at work, Rowland has decided that it he can no longer write DXer's Forum. The November DXer's Forum will be Rowlands' last column. Please join me in thanking Rowland for a job well done.

Assuming the role of DXer's Forum in December will be Kevin Atkins. DXer's Forum requires a knowledgeable and currently active DXer and Kevin meets those criteria very well. Kevin started DXing MW in '71 on a GE tableradio; discovered SW and the hobby proper in '73, and joined NASWA the same year. Other club affiliations include Fine Tuning where he is co-

editor of the newsletter and on the editorial staff of Proceedings; DX South Florida; and OZDX. His specialties are dawn DXing of Southeast Asia/Pacific region, particularly Indonesia; and Andean South America, particularly Bolivia. Kevin's idea of heaven is "being connected to a thousand feet of antenna wire in a low-noise environment." He recently served NASWA as a member of the Graphics Committee.

Welcome aboard Charley and Kevin! Members can write to our two new editors at the following addresses:

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

Kevin Atkins  
6165 Lakeside Drive  
Pinson, AL 35126  
Compuserve 71021,3212

### Welcome to the following new NASWA members -

Randy J. Alsid, Virginia Beach, VA  
Fritz Anderson, WT9T, Indianapolis, IN  
Dean P. Briggs, Watertown, MA  
John Cardillo, Pittsburgh, PA  
Arnold Chassen, Philadelphia, PA  
James C. Clifford, APO New York,  
Dale Clubb, Concord, NC  
Robert Cochran, Spartenburg, SC  
John Craig, Pearland, TX  
Dick Eberlein, Clio, MI  
John Forman, Shawnee Mission, KS  
MatthiasFrehner, Muttenz, SWITZERLAND  
Carl Leonard Gast, Highland Park, IL  
Edward Gibbs, Virginia Beach, VA  
John Groarke, Calgary, Alberta CANADA  
Armond Hall, Clearwater, FL  
Harold Hausenfluck, Richmond, VA  
Holme Hickman, Columbia, MO  
John H. Huber, III, Metairie, LA  
John M. Hunt, Rogers, AR  
Gus Hurlbut, Omaha, NE  
Robert L. Iverson, Detroit, MI  
Bill Javurek, Rolla, MO  
Robert S. Jedrusiak, Hamilton Square, NJ  
Don C. Johnson, Tecumseh, MI  
Tom Johnston, Uniontown, OH  
Larry Jones, Martinez, GA  
Zainab S. Khan, Los Angeles, CA  
Earl Kogler, Longwood, FL

John Kountz, Laguna Beach, CA  
Bob Kuplin, Sinking Spring, PA  
Bob Lowry, Scottsdale, AZ  
Clifford E. McCloy, Jr., Little Rock, AR  
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Mr. Raouf A. Mikhail, Flint, MI  
Bob Milne, Hackensack, NJ  
Timothy J. Morse, Clay, NY  
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Michael Nissenbaum, Sharon, MA  
Henry O'Meara, Honeoye, NY  
Alex Orten, Dallas, TX  
Dean F. Peaks, Chicago, IL  
Louis R. Pennisi, Lodi, NJ  
James Perillo, Oakville, CT  
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Joseph M. Rice III, Covington, KY  
Floyd O. Ritter, Sarasota, FL  
Joel D. Shoemaker, St. Louis, MO  
Andrew Steinberg, Lexington, KY  
Albert Lee Strickland, Ojai, CA  
Philip A. Trent, South Bend, IN  
Dan A. Unruh, Ellensburg, WA  
Ernest Watts, Hixson, TN  
Dan Welton, Shelton, CT  
Jason Whitney, Courtney, B.C,CANADA  
Henry D. Wilkinson, Pinehurst, NC  
Elsie H. Williams, Zolfo Springs, FL

# DXer's Forum

**Rowland Archer**  
5524 Hawthorne Park  
Raleigh, NC 27613  
Compuserve 70075.117



I received my copy of fine tuning's **Proceedings 1990** this month and had a great time reading this year's collection of articles. I contributed two articles this year so I can't claim to be an objective reviewer, but I can say that the other authors did a super job. If you enjoy DXer's Forum, and would like to read a collection of feature articles written by your fellow hobbyists, get a copy of **Proceedings '90**. It's \$21.50, postage paid in North America, from Fine Tuning Special Publications, RRT #5 Box 14, Stillwater, OK 74074.

**Where is AFRTS when you need it?!** Mike Stone sent a clipping from the 8/30/90 **Washington Post** titled "Bush Salutes US Forces in Radio Pep Talk." President Bush gave a talk saluting the US Forces in Saudi Arabia as "the world's best hope for peace." Only one problem — the President's speech was not heard by most troops on the ground "because the radio network does not have a transmitter there." The article doesn't mention that shortwave service would have filled the gap. Tapes of the speech will be made and distributed to the troops.

A new contributor to DXer's Forum, but a long-time (over ten years) NASWA member **Bill McMahon** sent a copy of an interesting article from the September issue of **Forbes** titled "Netty Douglass' Impossible Task." Ms. Douglass is the CEO of the Christian Science Publishing Society. She is "credited with rapidly and efficiently putting together the shortwave radio network. The broadcasts reach 7 million listeners around the world, but ... there are no commercial revenue-producing possibilities. Church members have already been asked, twice, to cover the radio service's \$38 million capital costs with contributions." The article concludes with: "Asked if the church can really afford shortwave operations that have no revenue prospects, [Harvey Wood, chairman of the church board of directors] replies, 'Sure. We keep getting more wonderful letters from listeners around the globe.'" Thanks for the contribution, Bill.

With all the media attention focused on the Middle East, this month we have two timely contributions focused on the media. Those of us in NASWA know that shortwave radio is far from dead, but here's proof that its role goes beyond that of a hobby or technical curiosity. Shortwave radio plays a key role in communicating news around the globe. When we're abroad, especially in countries with government-controlled media, it provides a vital source of news. When we're at home, it can provide direct-from-the-source news before the local media gets the scoop. Thanks to Ken MacHarg and Steve Forrest for the articles.

## Shortwave Listening Abroad

By *Kenneth D. MacHarg*

When one lives outside of their own country, especially in a place where English is not widely spoken, media resources take on an entirely new dimension.

The average Dixer or Shortwave listener in North America has access to a multitude of media outlets, and will use international broadcasting more as a supplement or alternative to local broadcast stations or newspapers. In Louisville,

for example, there is one daily newspaper printed locally, plus at least four out-of-town papers available on the streets every day. Nearly 24 radio stations and seven television stations provide 24-hour programming. Add to this cable stations, magazines, bookstores and other outlets and the supply of information will soon overwhelm anyone.

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*For global coverage you really  
do depend on the BBC*

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On the other hand, in Costa Rica where Spanish is the major language, just trying to obtain daily news in English is not easy.

The daily Miami Herald and International Herald-Tribune are available for around \$540 a year each (home delivery of the Louisville Courier-Journal is about \$150 per year). The Sunday New York Times is available for \$8 per issue.

No local stations broadcasts the news in English (TIFC has a daily hour in English but carries no news) so one must depend on the international stations for up-to-the minute coverage.

Here is where the search of the shortwave bands becomes different than for the casual DXer at home. The shortwave stations are one's lifeline. Propagation forecasts are more important than weather prognostications. To miss one's transmission is like skipping breakfast on an important business day.

What is available to the English language listener in Latin America?

Of course the normal international biggies are always present: BBC, Voice of America, Deutsche Welle, Radio Australia, RCI, HCJB, etc.

But the average *Gringo* wants to hear both world news and information from back home. So here is where he tunes:

**World Service of the Christian Science Monitor.** This, it turns out, becomes the most important lifeline. Why? First because it is available just about all day with a clear signal. Second, because it carries news not only on the hour, but on the half hour as well. Third, it covers both global

and U.S. news, and gives some indication as to what is happening in the world of sports.

**Voice of America.** This is the voice from back home, and in addition covers Latin America as well. Of course it is off the air in the morning before I get up, but its 00:00 UTC broadcast comes right at 6 P.M. local time, so instead of Dan Rather I catch up on the world through the VOA.

**BBC.** One cannot ignore this news giant, but I place it third because now as an expatriate U.S. news is also important to me. Don't misunderstand, I still depend on the BBC as *the* authority on world news, but I have expanded to the other stations to broaden my coverage. Besides, it is difficult to hear the BBC here during the daylight hours. However, the recent Persian Gulf crisis has reminded all of us that for global coverage you really do depend on the BBC.

**WWCR.** Who would have thought about this new station from Nashville? Its strong point is that it carries USA Radio Network on the hour almost every hour, giving me that "back home" feeling. Reception is excellent during nighttime hours, and fair to poor during the day. The disappointment here is that WWCR does not carry the USA network sportscasts, and news is often dropped on the weekend.

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*WWCR carries USA Radio Network on the hour almost every hour, giving me that "back home" feeling.*

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**KVOH.** This California station recently switched from UPI Audio Network to USA Radio Network and then back to UPI again. The use of UPI gives the overseas listener another option, but KVOH carries so much Spanish that it is hard to tell when to expect to hear the news.

**HCJB.** I would be remiss for a variety of reasons if I did not mention HCJB. The signal here is A#1, and their nightly News (both Latin America and World) can

# The Indos are Coming!

by Kevin Atkins

*Ed note: In the Fall in North America, there is a one or two month period of improved Indonesian reception, usually centering around mid-October. Kevin Atkins, of Pinson, AL, enjoyed an early taste of this Fall's Indo season recently and wrote up the highlights.*

**T**his morning (9/20) was a pretty good one for Indonesians here; the "sweet spot" seems to have shifted slightly westward. Up until this, I was hearing largely Irian Jaya; today, had useable audio from Dili, Palu, etc.

Still mostly hets from Java and points west.

I'm consistently getting a het on 3934.7 at dawn; reportedly Semarang. It fits, because the het is always of comparable strength with Bandung, Surabaya, & other known Javan hets. Come on, November!

I noted Sorong's English program again last Sunday, while on DXpedition at Grandma's Farm...from t/in around 1115 until back to Indonesian language at 1130.

The same day, I heard a nice signal from Lao National Radio on 6129.8v, fading in around 1130 (dawn here) and lasting past 1200, with mentions of Vientiane at the top of the hour, followed by the classic seven notes on the big gong.

9/21 was a bonafide 3-1/2 star Indo morning here. Useable audio from the Javan RPD (Sumedang) on 2706.3 that several of us chased last year; Ed Kusalik recently reported a QSL from them in Sam Barto's column.

RPDT2 Ngada on 2904.8 at very nice level; RRI Surabaya quite good on 3976.2; unfortunately, still no audio on reported Semarang (3934.7), despite better-than-usual (for me) Javan reception. Hope they don't turn out to be another Dili...whopping big carrier with no modulation.

I heard from John Bryant in Stillwater and Guy Atkins in Issaquah that conditions in their respective QTHs were equally good. For those who have become fascinated by the John Bryant / Dave Clark Propagation article in Proceedings '90 and are now keeping up with such things, best reception this AM came from an area approximately 1 hour behind the Indonesian sunset terminator at my local dawn...all of the above noted between 1115-1145.

Happy Hunting!

\* \* \*

hardly be beat for a comprehensive summary of what is going on. But then I may be biased!

**Family Radio.** This powerhouse seems to have dropped their occasional IMS newscasts on the domestic service relayed from Florida. They would provide a real service with their power and global reach if they would offer the news on their international service.

What about WRNO and KUSW? The problem with these, especially the first, is reception. WRNO is just plain hard to

hear here. KUSW is a bit easier, but shortwave is not really a music medium, especially on a marginal signal, and the newscasts on both stations are so infrequent and shallow that I don't bother trying to tune in. I would like to hear some of the public affairs programs which both stations offer, and will be trying those out when I have time. The questionable reception here of both WRNO and KUSW seems to affirm that those stations aren't really in the *international* broadcasting business, but their prime audience

is domestic—despite FCC regulations. On the other hand the quality signals from the Christian Science Monitor stations as well as WYFR, WHRI, and KGEI show that their target is international in intent.

One disappointment. In the U.S. one program I seldom missed was the 11:30 UTC twelve minute world, Caribbean and U.S. newscast on Trans World Radio, Bonaire. The problem here: poor reception. Utility interference and directional signal to the north make this one tough on either frequency. Besides, 11:30 UTC is 5:30 AM here!

On Medium Wave, I have heard that outside of San Jose some U.S. stations are audible. Here in the city, with over 60 stations on the band, hearing anything from more than 25 miles is a real trick, even with my new Radio West Loop antenna. I have heard the VOA from Antigua, the Caribbean Beacon, the Cayman Islands on 1555, AFRTS Panama on 1420 and the Bahamas on 1540, but other than that, *nada* as they say in Spanish. However, from the Atlantic coast I have heard WCKY, WHAS, WOWO, WFLA, and WIOD.

What is missing among all of this? Of course, it is the now-defunct AFRTS on shortwave. When we lived in Panama fifteen years ago, that was probably the #1 listened to station among ex-pats. What a shame that NPR, NBC, ABC, CBS, sports

and other good features are no longer offered by this service to either Americans or others outside of the U.S.

And what an opportunity for some enterprising U.S. businessman and farsighted advertisers. There is an audience out here, not only ex-pats, but others as well who want to know more about the U.S., who want to hear play-by-play sports, who enjoy Bob Edwards and Morning Edition, who want to hear Paul Harvey, and Charles Kuralt, Dick Osgood and Larry King. I wonder why Ted Turner hasn't considered a shortwave transmission of CNN radio? What happened to the proposed NPR outlet near Washington, D.C.? Why not try a spruced-up version of the old AFRTS?

Actually, WRNO or KUSW could, and do provide some of that type of programming. But with their log-periodic antennas pointed to Canada (read New York), their signal is not of the highest quality in Latin America. And they could take hourly newscasts much more seriously.

So for me right now, it's hats off to the Christian Science Monitor, the VOA, the BBC, and WPCR for keeping me in touch with the world and life back home.

\* \* \*

## Shortwave Listening for News

by: Steve Forrest

I think my executive producer probably (and unwittingly) summed it up best: He warned me, while I was getting ready to monitor Radio Baghdad for a story for our TV newscast, not to make the story "goofy."

I assured him I would not; after all, the Gulf crisis had brought the world to the brink of war...news organizations and governments around the world were listening to the same broadcast I promised him I could monitor for some glimmer or insight into the thinking of Saddam Hussein, and all he could think of was not to make the resulting story "goofy."

The trouble is, that kind of thinking is prevalent in too many newsrooms, let alone other places around the U.S. We have such a wide variety of places, from which we can get our news, that many don't know about the options of SWL'ing. Or, if they do, they tend to regard it as just another electronic gizmo that only slide-rule carrying, plastic-pocket-protecting geeks use.

But, in our newsroom, I've managed to show many of the people who work there that shortwave is a useful tool...and several have even become SWL's themselves! Allow me to share some of their most common questions, and a few experiences of my own with you.

The Irish Republican Army bombs the hotel where British Prime Minister Margaret Thatcher, and her Conservative party are holding a conference. Our newscaster leads the broadcast, with a report that Mrs. Thatcher is unaccounted for. I jump out of bed, run and tune in the Beeb (5975kHz), in time to hear the anchor say Mrs. Thatcher has been seen being led away, apparently uninjured. I call the station, and tell them, "Get it on...the BBC says Thatcher's OK." Comes back the reply, "What's the BBC?" Even with that shining display of ignorance, the story gets on the air...and we've scooped our competition, even the AP, for that matter!

Much more recently, Iraq's invasion of Kuwait has piqued the interest of a number of people who want to know how we're able to get information from so many different sources. I've gotten questions, like, "How do you know what they're saying?" (Easy, they're broadcasting in English, much the same way the VOA broadcasts in foreign languages to other countries.) And, "Can I just turn on the radio and listen in?" (No, different stations broadcast on different frequencies at different times of day. — my executive producer still can't figure that one out.)

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*Different stations broadcast on different frequencies at different times of day. — my executive producer still can't figure that one out*

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A fellow reporter kept peppering me with questions about how shortwave worked, and what there is to hear. So, I reached into my desk, pulled out my old,

news battle-scarred Sony 7600-A and gave it to him. (If you're wondering why I have one of those sitting around in my desk, it's because the radio also receives channel 5 TV audio—which makes it perfect for me to use on live "in the field" broadcasts.)

He took the radio home, and a couple of days later, he came back to me saying, "You'll never guess what I've been hearing!" He told me about Moscow, London, Madrid...all simple countries to hear, but for a newcomer to the hobby, an absolute miracle!

Since then, he's offered to buy the '7600 from me...an offer I've refused. Instead, I've told him to continue using the radio until he feels he wants to buy one. At that point, I'll advise him on an inexpensive digital...probably a DX-440.

I also feed sound from broadcasts to local radio newsrooms. Several have used them, although one reporter wanted to know if he could legally re-broadcast the transmissions. I told him if it was good enough for AP Radio (thanks Paul Courson), it should be good enough for him. It's that kind of activity that SWL's everywhere should not overlook. The BBC can be a prime source of "sound information" for broadcasters...since the relays come through so clearly, and are most often of broadcast quality.

If that idea interests you, let me repeat: the better the SIO, the better you have a chance of getting your tape taken. My advice is to stick to the major broadcasters, like the BBC, Radio Moscow, and the VOA (the advisory they put out to Americans in Kuwait and Iraq was of prime news value.) Also, get a pair of "alligator clips," so that you can feed the tape directly down the line, without losing any sound quality by holding your receiver up to your tape recorder's speaker.

Some newsrooms may even pay for this...although I wouldn't expect them to do so. More likely, they'll thank you for the tape, maybe use it once or twice, if that, and move on. You will, however, have accomplished something: if there's a major international story...they may call you for sound, and they'll certainly have another way of thinking about sources for

news. By the way, your best bet for this will be the station that prides itself on being your area's "news leader": it's more likely to accept your offer.

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*Almost every journalist alive is an information junkie, who simply cannot get enough information on a given topic*

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Much of the reason I got into shortwave listening in the first place was because I wanted to hear for myself what other countries were saying. I didn't want to depend on Tom Brokaw or my local anchorman telling me what the Iraqis were announcing. I assume you're the same way. With that in mind, understand that almost every journalist alive is an

information junkie, who simply cannot get enough information on a given topic, especially a major one like the Gulf situation.

Chances are, if you let them know you're listening, and what you're able to share with them, they may use it. Heck, they may even do a story on you! Don't forget, though, you may have to convince the fellow who's technically ignorant, and who, like my producer, thinks what you're doing is "goofy"

The end result will be two-fold: first, you'll help a newsroom gather information. Second, you'll help spread the word about shortwave radio to the general public. And isn't that how we convince more and more people that we're anything but "goofy?"

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ANNOUNCING:  
The A\*C\*E Pirate QSL Awards Program

The Association of Clandestine radio Enthusiasts is pleased to introduce the Pirate QSL Awards Program, open to all. We have obtained suitable-for-framing black on goldenrod certificates that you will be proud to display in your shack, and are issuing them to qualified DXers. There are three categories of awards: (1) number of different stations verified on frequencies below 2 MHz and FM in increments of 10; (2) number of different stations verified on frequencies between 2 and 30 MHz in steps of 20; and (3) number of different countries verified with a minimum of three. To qualify for one of these 8.5x11" beauties, send copies of your Free Radio QSLs with US\$1 and a first class stamp to: A\*C\*E Awards, RD#1 Box 15A, Belfast, NY 14711. If you would like your certificate sent unfolded, kindly enclose some additional postage.

# Easy Listening

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



With just a few exceptions (notably Sunday), this month's column is dedicated to night owls and early risers, those dedicated shortwave listeners who are up in the wee hours of the morning tuning in the world.

## SUNDAY

- 1730-1900 Musical Friends (CBC). A potpourri of folk, jazz singer-songwriters hosted by Marie Hammond. (9.625) (This report was sent in by listener Dan Cashin).
- 2130-2200 Vassily's Weekend (Radio Moscow). Vassily Strelnikov hosts a half hour of rock music requests, including the most popular rock music on the western charts as well as Soviet rock music. (11.840) (This report was sent in by a reader whose name I have misplaced. I am grateful for this information and humbly beg the readers apology for not being able to give credit where credit is due).

## MONDAY

- 0445-0450 New Ideas (BBC). A program investigating a number of different as they apply to medicine, science and everyday life. Information about the inventions mentioned on the program is available on request by just mentioning the edition number. (5.975).
- 0535-0550 Show Business (Spanish Foreign Radio). A rundown of the latest happenings in the Spanish world of show business, including films, television, rock music, popular music, etc. (9.630).

## TUESDAY

- 0500-0530 Morning Strike (Voice of Nigeria). Some of the best in African popular music, including information about the groups and the performers and a lot of good songs. (7.255 Daily).
- 0930-0950 Agri News (Radio Australia). Issues and topics in agriculture in Australia and the Pacific region. (9.580).

## WEDNESDAY

- 0430-0445 Off The Shelf (BBC). Readings of famous novels, especially abridged for the program. Past novels have included Trollope's *The Warden*, V.S. Naipul's *A House For Mr. Bishwars*, Turgenev's *On the Eve*, and John Le Carre's *Russia House*. (5.975).

- 0510-0533 European Journal (Deutsche Welle). A look at issues concerning Europe in the broadest sense (like the present Gulf crisis and European response to it), but the majority of the program is usually devoted to the issues involved in German reunification. Includes Economic News. (9.670 M-F).

#### **THURSDAY**

- 0509-0530 Twenty Four Hours (BBC). A daily run down on the most important news events of the day. Recently, of course, the program has focused largely on issues surrounding the Gulf Crisis, but the topics from South Africa, Liberia and Burma have also been included. (5.975 Daily).
- 0535-0550 Science in Spain (Spanish Foreign Radio). Topics and issues in science involving Spain. The program seems to concentrate largely on environmental issues, but topics from medicine, chemistry, astronomy, etc. are also discussed. (9.630).

#### **FRIDAY**

- 0410-0413 Spotlight on Latin America (Radio Havana Cuba). This is Radio Havana Cuba's editorial spot, and past issues have included negotiations in El Salvador, the recent strikes in Nicaragua, and the privatization of industry in Uruguay. Knowing RHC, one can pretty well predict what their editorial opinion on a topic is likely to be. (9.710/9.750/11.760/11.820 Daily).
- 0600-0615 Economic Scene (Voice of Nigeria). A look at the economics in Nigeria. Past programs have featured Nigerian exports, the banking industry in Nigeria, and a series of programs on Nigerian tourism. (7.255).

#### **SATURDAY**

- 0430-0845 This Australia (Radio Australia). A look at the things which make Australia the country it is today. Recently the program has run a six part series called From Huuts to High Rise about the development of Whitsunday Island from an untouched island off the Barrier Reef to the modern resort it is today. Programs have featured interviews with residents who remember what the island was like and now know what it has become. (17.795).
- 0830-0845 Sports News (Radio Australia). This program features a rundown of the day's games results in Australian Rugby League, Rugby Union, Australia Football League football, South Australian Football, etc. as well as international sports events, such as the Goodwill Games in Seattle or the men's basketball championships in Argentina. (9.580 Daily).

Admittedly, there's not a great deal directed toward the U.S. after 0400, and some of these programs (like those on Deutsche Welle or Spanish Foreign Radio can be heard earlier in the day), but if you're up at that time of the morning, the above may be a pretty good selection of what's available. Till next month,

73, Alex

# Asian Destinations

**Mitch Sams**  
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Well, the Persian Gulf is a different place since we last visited in the July ASIAN DESTINATIONS. We'll talk about that in a minute.

## THANKS FOR THE LETTER

First, a letter from Richard Hankison of Prairie Village, Kansas, just up the road from me. He is addressing the comments made in this column in July concerning the QSLing of Radio Moscow sites. He agrees that there is a bit of suspicion associated with a Radio Moscow site card. He recently has made an attempt at a Radio Moscow transmission from what he believes may be their Irkutsk transmitter site. Richard's equipment includes a Kenwood R-5000 and a Sony 2010. He uses an Evesdropper antenna at about 20-25 feet high. Thanks for the letter Richard.

## MONITORING THE PERSIAN GULF CRISIS

Since the Iraqis invaded Kuwait DXers and SWLs have been afforded a front row seat through the shortwave broadcasts directed to and originating from that area of the world. CNN and other TV news broadcasts have provided great insight into the crisis, and on a very timely basis, but shortwave still has its niche. Interesting clues to the current mood in the Gulf are provided by "who's-jamming-who". The "whoop-whoop" jamming sound so familiar during the Iran-Iraq war is now directed at countries like Egypt and Great Britain. DXers can listen to the debate raging over the airwaves from all viewpoints; from Iraq, Syria, USSR, USA, UK, Jordan, Israel, etc.

One of the most interesting events to occur on shortwave since the crisis is the appearance of the **British Forces Broadcasting Service**. These transmissions are directed to British troops in the Gulf (Operation Granby) and make for some real interesting listening, providing personal messages from home and playing rock music. 13745 kHz from 0200-0230 UTC has been one of the best bets for North America, 9640 and 7125 kHz is also used. DXers have also been hearing BFBS at 1330-1400 UTC on 15195, 17695 and sometimes 21500 kHz, or at 0930-1000 UTC on 15205 and 17695 kHz. The actual transmitter sites for each frequency have not been confirmed, except in the case of 7125 kHz which has been QSLed by Jerry Berg as Zyyi, Cyprus.

On a side note, as best I can remember this is the third time that BFBS has been active on shortwave. Most recently during the Falklands war and further back in time on 5010 kHz from Singapore/Malaysia. As I looked back in my WRTH collection I see a listing for BFBS on 5010 kHz in the late 1950s broadcasting from what was then called Malaysia. That site later became part of Singapore. That same old WWII era transmitter on 5010 kHz is still active as part of the Singapore Broadcasting Corporation, sometimes heard in North America in the mornings in parallel with the more widely heard 5052 kHz.

The VOA has provided some interesting listening as well. The night of August 20th I decided to listen to the news from the VOA at 0400 UTC on 9575 kHz. At 0405 UTC this announcement was made: *"This is a State Department advisory for US citizens in Kuwait. US citizens should stay in contact with the US embassy by phone, do not attempt to visit the embassy. Ambassador Howell and his staff continue working."* The broadcast went on to describe the locations

of Iraqi troops around the embassy. At the end of the 4 or 5 minute broadcast this was heard: *"Those planning overland trips from Kuwait should plan as carefully as possible. It has been confirmed that one person has died attempting the escape. Unconfirmed reports say others have died. Stay tuned to the VOA and BBC for further information."* I can imagine that this broadcast is one of the precious few direct contacts that the US citizens trapped in their homes and apartments in Kuwait have with the west. On the night of August 23rd NBC Nightly News broadcast this same message while showing a shortwave receiver picking up the broadcast.

During a plane trip last week from Philadelphia to St. Louis I sat next to a couple from Muscat, Oman. I had a most interesting conversation for the next hour or so about the situation in the Gulf. They consider Iraq to be completely in the wrong and hope for it's downfall. In Muscat things have not changed since the invasion. Life goes on as if nothing has happened, there is no panic that is evident on the streets or in the local shops in Muscat. They also told me that citizens in Oman turn to the BBC's English and Arabic services for the "real" news. They consider the BBC to be the most reliable source of news, even more so than Radio Oman! They accused Radio Oman of glossing over the situation and being too politically slanted.

I've been listening to Radio Baghdad at 0130 UTC on 11830 kHz and 2100 UTC on 13660 kHz, both are reliable. In NU Terry Krueger and Jerry Berg had a very interesting report of the "Tokyo Rose" style broadcasts to US troops that had been reported on CNN. They heard it at 2100 UTC on 11860 kHz, not parallel to and also weaker than 13660 kHz. This broadcast is sked on 11860 kHz from 2000-2200, 1000-1200 and 1600-1800 UTC. From Berg's report a quote from the transmission: *"To the American soldier in the Saudi Arabian desert...your children are waiting for you. You might have a lover. She's also waiting for you. Why are you here? ...You must know that Iraq has the strongest army in the region. Iraqi soldiers are the best trained in the whole world, and are ready to sacrifice their lives. What is your interest in fighting such a great country?...The people you come to defend do not represent us."* I doubt that many US troops have shortwave receivers to pick this stuff up. Besides, I've heard reports that the US military is readying several low-powered portable medium wave and/or FM transmitters for AFRTS service to the troops.

Radio Australia has also started special broadcasts to the Gulf. 21775//17630 kHz from 1300-1500 UTC. Very interesting with messages to Australians in the Gulf from families and loved ones back home. (Per Berg in NU).

**Other broadcasts from Iraq:** VO the Masses 17720, 15160, 12025 at 2200; 11755, 12050, 12025 at 0230 QRMing Egypt's broadcasts on some of these frequencies and to top it off, a bubble jammer present on most of these frequencies. (Per Krueger in NU). 9704 kHz at 0330 UTC is Sowt Al-Filistine in Arabic. Holy Mecca Radio, 2125 UTC on 9720 kHz, jammed and cochannel to Saudi Arabia. (Per Johnson in FT). Radio Baghdad in English on 11830 kHz at 0130 UTC (per Potter in DXSF). More interesting information out of the latest issue of DXSF: 13620 kHz (sometimes 13610 kHz) is Iraqi Radio from Kuwait (Al-Kuwayt province of Iraq for now) 1350 past 1400 UTC and parallel to 15495, 12050 kHz, or 13800 kHz. But watch out on 15495 as Saudi Arabia is now using that channel at 2100 UTC. 13680 kHz carries Iraqi domestic service in Arabic around 2030 UTC. Iraqi clandestine on 15170 kHz is Voice of Arabist Egypt, from Iraq at 2125 UTC. Also heard at 1930-2000 sign-off and parallel to 15150 kHz.

Syria has an anti-Iraq clandestine broadcast, Saut al-Iraq (Voice of Iraq) at 0300 UTC in Arabic on 12085 kHz.

The hobby press has done a fine job of covering the Gulf crisis as it unfolds over the airwaves. Each newsletter or magazine I subscribe to offers something new and different on the situation. Stay tuned!

# Listener's Library

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Welcome back to the NASWA Library. Rather than heading immediately for the New Book Shelves with you, I'd like to bend your ear for a bit about the book business and its impact on your hobby activities. The book business is just that...a business. It wasn't always so to this degree, but the publishing business today is very much bottom-line oriented and is seemingly committed to maximizing short-term profits. Further, people in "the trade" tell me that the 1986 Federal tax overhaul now makes it prohibitively expensive for major publishing houses to hold books in inventory. The short term profit strategy coupled with the new tax structure means that most books for special interest groups are printed in one press run only. Basically, the publisher makes an educated guess as to how many copies of a new title they can wholesale in 12 to 18 months and prints that many and no more. The publisher will consider a second print run only if the book is a runaway best seller. Thankfully, the foregoing does not apply to a few dedicated specialized publishers like Tiare Publications, Fine Tuning and ARRL.

## DID YA MISS'EM ???

What does all of this mean to us? We get hit with a double whammy! The SWL community is so small in most cities that municipal libraries cannot justify buying many of "our" books for their patrons' use. Essentially, our only long-term access to most of the "hard-core" hobby books is if we buy them ourselves. So...if you see a new hobby book that you want to be able to use over the years, you ought to BUY IT WITHIN 12 MONTHS OF ITS INITIAL PUBLICATION.

Why am I bent out of shape right now? I learned last month that three of the most important hobby books around just went out of print!! As a bookaholic, I luckily own all three. If you don't, it may be too late. The three books are Gerry Dexter's *Shortwave Radio Listening with the Experts*, Harry Helms' *Shortwave Listening Handbook* and Ed Noll's *Easy up Antennas for Radio Listeners and Hams*. Dexter's book is an absolute classic

published by Howard Sams in 1986. Somehow editor-honcho Dexter and a coterie of heavy hitters from ALL of the listening hobbies (SWBC, Utes, Hams, MW and even FM) put together a 518 page book that is both a general hobby primer for beginners and at the same time has plenty of meat in it the long-time enthusiast. If I were marooned on a desert island with a radio and one book, this would be the book! If you don't have a copy of this beauty, call as many hobby outlets as you can; you may yet find one on some vendor's back shelf.

Harry Helms' book is (or was) the latest in a long tradition of general introductory texts for our hobby. It is/was more up-to-date than most and is written in a wonderful no-nonsense style. Harry obviously knows his way around the hobby and the hardware, and really tells it like it is. We desperately need a book like this continually available to assist beginners and those wishing to move into more than casual listening. Again, there may be copies of this book left somewhere-grab one for the next friend who starts getting interested in this hobby.

Probably the biggest loss is Ed Noll's *Easy-Up Antennas*. Ed is a life-long shortwave listener (1933) and ham (W3JQJ-1935) and has been both a broadcast professional and a university faculty member in telecommunications. He is a prolific author and highly regarded antenna design and construction columnist. What I like about Ed's work is that he writes about complex subjects in such clear terms that anyone can understand the material. Even more importantly, you can build almost all his antennas with PVC pipe and cheap wire. Ed is our kinda guy! What's more, the vast majority of the thoroughly documented designs are receiver-only SW and MW antennas. This book represents 50 years of thoughtful, no-nonsense antenna design and experimentation...a lifetime of ideas...and it is OUT OF PRINT (multiple expletives deleted). This is the second book I'd take to that desert island. See if you can find a copy before they are all gone.

## BETTER'N EVER !!!

Since I am involved with *fine tuning's* PROCEEDINGS 1990, too, I will leave it to others to review. However, I can't help but talk about one of the feature articles: *The Library as a DX Reference Tool*. That article was submitted in an embryonic form by Destinations Co-editor Don Moore. Since I had always dreamed of writing such an article myself, Don kindly consented to do a collaborative effort. The result is as fine an explanation of how to get the most out of a library as you will ever see.... However, the real gem is a truly giant bibliography that was mostly put together by Don. It is the best bibliography of books of vital interest to the hobby that I have ever seen. Did you know that there was a book on the history of broadcasting in Papua New Guinea? There is. Did you know that there was one on India, too. Yep! That and many more. There are some gems for the technical bunch, too. My favorite is a scholarly article on using the Papaya tree as an antenna! It is a superb article and covers many many things that I have never seen discussed elsewhere.

I honestly think that the Proceedings team outdid themselves again this year. The articles cover the full range from a monster propagation article through some fine equipment reviews and an extremely complete compendium of mods to the Sony ICF-2010. Along with the Library article, the features also include cutting edge articles on SWBC in Central America and Northern Africa as well as two collections of items on the traveling DXer and DXpeditioning by real experts in the field. Super articles on collecting antique communications receivers and on international MW DXing from the West Coast round out the collection. You might tell Santa about Proceedings 1990.

## GIVE 'EM A RING, NOW!

Before you leave the Library today, let me persuade you to call or write for a new catalogue from a new supplier of electronic goodies. Their target market is folks involved in amateur or commercial radio or SWling. I got a catalog courtesy of NASWAN Chuck Mitchell who is works with the fairly new Industrial Communications Engineers (ICE) of Indianapolis. ICE is a bunch of uniquely qualified Hoosiers who think that there are people around who are willing to pay just a little more for real quality. Further, the people behind the products are either SWBC DXers and/or radio amateurs. What first caught my eye were "project" boxes. I am sick of putting my home-built splitters and such in boxes from the local outlet of a certain national chain. The darn things are made of beer can metal, look awful and are impossible to weatherproof. ICE's boxes are made from heavy extruded and milled plate aluminum. The screws are counter-sunk stainless steel. The boxes cost only about a dollar more than Brand X.

Of immediate interest to me were active signal splitters for receive-only antennas. These little beauties will allow one antenna to serve either two (Model 112-2) or four (Model 112-4) receivers. I've needed these for years.. finally ICE is making them! There are a ton of other goodies. If you would like a copy of their catalogue, give the ICE men a call at 1-800-423-2666 or write to I.C.E., P.O. Box 18495, Indianapolis, IN 46218-0495. They'll be happy to send a catalog to any NASWAN. Be sure to tell 'em the Librarian sent ya.

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Bryant, John H., et al, ed. *fine tuning's PROCEEDINGS 1990*. Stillwater, OK: Fine Tuning Special Publications, Rt. 5, Box 14, Stillwater, OK 74074., 1990.

Dexter, Gerry L., ed. *Shortwave Radio Listening with the Experts*. Indianapolis: Howard W. Sams and Co., 1986.

Helms, Harry L. *Shortwave Listening Handbook*. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1987.

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# Technical Topics

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## THE MYSTERIES OF PROPAGATION

Perhaps the only subject less understood in shortwave listening than antennas is propagation. How do the signals we hear get to us across all that distance? Why can we receive a signal one day, and not at all the next? These are but a few of the effects of propagation we must contend with. And as with other aspects of our hobby, the more we know about it, the better chance we have of taking advantage of it.

### PROPAGATION

The word "propagation" means literally the spreading of something. In our case, it means how a radio signal is spread once it leaves the transmitting antenna.

### THE WAVE

The wave is not something crowds do at football games. It is the form our shortwave signals take as they travel from the transmitter antenna to the receiver antenna. It is ironic that for many years radio was developed and used without the slightest idea of what radio waves really were! Tesla, my personal hero, felt that radio waves travelled through the earth, and indeed made plans to use the earth as a giant conductor. Other, including Marconi, were convinced that radio waves travelled in straight lines above the earth, with little or no interaction with the ground. They were both right - and both wrong.

Maxwell proved that electromagnetic waves - including radio waves - travelled in two complementary parts. In one plane, a magnetic wave travelled in a straight line. Exactly perpendicular to this plane was a second plane, bearing the electrical wave. Energy was moved by the combination of these waves, and hence the name "electromagnetic waves." Fortunately, we have only to pick one component of these waves - the electrical - to receive the signals the waves carry.

### MULTIPLE CHOICE

All radio signals travel as electromagnetic waves, regardless of their frequency. But the waves themselves can travel in different ways. The different ways they travel forms the basis for propagation.

### GROUND WAVES

The term ground wave can be a bit misleading. The wave may well travel in occasional contact with the ground, but not through it. In a broader sense, a ground wave is one that doesn't leave the lower atmosphere. Since we know that radio waves travel in more or less straight lines, and it is pretty much agreed upon that the earth is not flat, ground waves don't travel very far without enormous amounts of power. Ground waves are also severely attenuated at higher frequencies, so far all practical purposes they are not a factor in shortwave radio.

### SURFACE WAVES

Surface waves are akin to ground waves. They actually travel in contact with the earth's surface, and as such are quickly attenuated. Like ground waves, there distance is limited, and have little significance in shortwave radio.

### SPACE WAVES

If ever a term was a misnomer, this one is. Space waves don't travel to or from outer space. They travel through space - specifically, the space directly between two antennas. The term is really meant to distinguish these waves from ground or surface waves, but it's a lot of bother for nothing, in my opinion. Since the earth curves rather sharply, antennas that can "see" each other must be either close together or very high. Again, not much help to SWLs.

## SKY WAVES

Here's where things begin to get interesting! Most of the long distance communication we hope for is propagated, or spread, by the means of sky waves. Sky waves travel exactly as the name implies, up in the sky. But this is where simplicity ends, and propagation begins.

If we were to travel straight up from the earth's surface, we wouldn't notice much change for the first few miles. After that, the air would get thin, and we would have trouble breathing. Water would take much longer to boil, and we would receive more ultraviolet light from the sun than at the earth's surface (even in California). At about 4 miles up, we would cross an imaginary line, and enter the ionosphere. Here the air - what there is of it - behaves differently than at lower altitudes. The air is so thin that it is easily disturbed by various forms of radiation. Light from the sun bombards the widely separated air molecules with ultraviolet energy. This form of energy is often called "ionizing" radiation because it causes atoms to become ions. In a normal atom, the number of *protons* (positive particles) is balanced by the number of negative *electrons*, and the atom is stable. But when ionizing radiation strikes this atom, it can cause the atom to either gain or lose electrons. This imbalanced atom is an ion, and behaves differently than before. It will constantly attempt to regain lost electrons, or lose excess ones. The electrons that were freed when the ions were formed are also floating free, until they are reclaimed by the ions. The ions themselves congregate in layers, some more dense than others. The denser the region, the more transient the effect of sunlight upon it. In other words, the more it is affected by sunrise and sunset. This is because there are many ions available for the freed electrons to recombine with, once the sun sets and the ionizing radiation has gone with it. The height and thickness of each layer varies constantly - by the hour, day, month, and season. Each layer affects radio waves differently, and each particular frequency of the radio wave affected to a different extent.

### D LAYER

Between around 40 and 60 miles above the earth exists the "D layer." Since this layer is rather dense, it is affected dramatically by sunrise and sunset. As the sun strikes the layer, many ions are created, supplying an abundant supply of electrons. Radio waves travelling through this layer use up a lot of their energy striking ions and free electrons. The affect of this attenuation is directly related

to wavelength, so lower frequencies are much more limited during local daylight than higher frequencies. So look to lower frequencies in the evening and night.

### E LAYER

Between about 60 and 70 miles above the earth we find the "E layer." This layer is neither thin nor dense, but is affected by local sunrise and sunset much as the D layer. It also attenuates lower frequency signals during local daylight, making it better for evening and night communications.

### F LAYER

This layer varies so much, its height can't be accurately given. The layer has often been known to split into two layers - the F1 and F2 layers. It is ironic that the best layer for long-distance communications is also the most quixotic.

### SKIP

A term familiar to shortwave listeners is "skip." But what exactly is skip? Looking at the Figure 1, note that signals travel away from the transmitter antenna in a straight line. As mentioned earlier, with rare exceptions, at shortwave frequencies radio waves travel in straight lines. If the earth curves, how do radio waves travel much farther than the horizon? They do this by bouncing, or "skipping" off of one or more layers in the ionosphere. A single skip can result in the signal being received several hundred miles away. Some signals, though, may make more than one skip, being bounced between the earth and sky several times. On rare occasions such skips have resulted in signals being heard more than half way around the earth!

The distance and number of skips a signal can make depends in part on the angle at which the radio wave hits the various layers in the ionosphere. Figure 2 shows the "critical angle," and the affect it has on skipping radio waves. If the radio wave leaves the antenna at too high an angle, it goes right through the ionosphere and into space. Perhaps in some future century we will receive a reception report from another galaxy. But until then, these signals are wasted. Signals leaving the antenna at high angles - but below the critical angle - are most likely to make multiple skips, but with each skip will lose considerable

strength. Radio waves at medium angles will travel great distances, and may make one or several skips. Radio waves that leave the antenna at low angle almost always make only one skip if at all. They can cover great distances and arrive at the other end with considerable strength. This is the reason that for long-distance communications most stations erect antennas that send or receive signals at the lowest possible angle of radiation. When using vertical antennas, this is best accomplished by gaining as much height as possible.

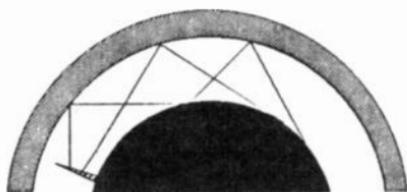


Figure 1. Single and Multiple Skips

### SHORT PATH AND LONG PATH

On many occasions, signals can arrive at your antenna from two different routes - the short path and the long path. The short path is the shortest straight line distance between the transmitter and the receiver. This path, though, is often not the most effective - or even useable - route. Because of gray line (see the next section), skip, and various auroral conditions, the most effective route is often the longest. The long path can stretch the long way around the earth, and often crosses the North or South pole. In some cases, a distance of less than two thousand miles has been more effectively linked by a signal that stretched six thousand miles the back way around the earth!

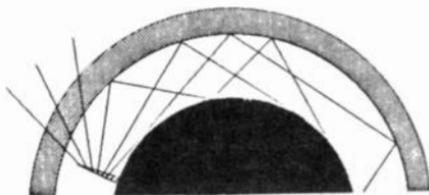


Figure 2. Critical Angle

### GRAY LINE

The imaginary line that occurs between night and day is known as the "gray line." As previously mentioned, the height and thickness of the ionospheric layers is affected by the presence of the sun over that area of the earth. The most disturbance of radio waves occurs where the sun is high; the least where it is low. For this reason, the best chance of hearing a signal is where the transmitting station is just entering or leaving sunrise or sunset, and where the opposite is true of the receiving station. Computer programs, as well as mechanical clocks and "slide rule" charts are available for determining gray line areas, and can be quite helpful when chasing DX. Figure 3 shows the gray line for a particular time and day.

### MUF

The conditions that affect the ionosphere tend to limit frequencies above a certain frequency. This frequency limit is referred to as the maximum useable frequency, or "MUF." The MUF will vary with the month, day, and time, and can usually be predicted fairly closely. Information about the MUF can be found in various communications magazines; *Monitoring*

*Times Magazine* features MUF tables each month along with its shortwave broadcast schedules.

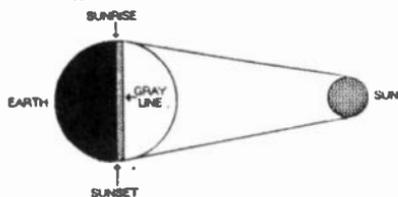


Figure 3. Sample Gray line Occurrence

### SUNSPOTS

Perhaps no other factor influences shortwave communications than sunspots. Their occurrence disrupts long-distance communications by charging the ionosphere to the point where little or nothing gets through it. Sunspots occur in greater numbers at some times, and very few numbers at others. These peaks and lulls occur in approximately 11 year cycles. We are currently in an all-time favorable part of the current cycle.

### SOLAR FLUX

Although the number of sunspots does have a bearing on propagation, the actual number changes constantly. A more useable figure is that of the *solar flux*. It was discovered in the late 1950s that noise from the sun in several bands had a direct correlation on how the various ionospheric layers behaved, and thus, on how long distance communications would fare. The solar flux index is derived by radio measurements made at a 10.7 cm wavelength (2,803 Mhz) on a regular basis.

Station WWV, the time standard station of the National Bureau of Standards, gives reports on the solar flux, as well as two other significant factors - the A and K index - at 18 minutes after each hour.

### The A Index

The A index is a measure of the earth's own magnetic field, or *geomagnetic* field. This field can influence propagation by its interaction with the ionosphere. It is not as significant, however, as the solar flux. The A index is calculated and averaged over a 24 hour period, and is brand-new only at 1800Z (that's Coordinated Universal Time, or the old GMT). This means that aside from giving a long-term trend, the figure isn't very useful for "right now" conditions. In general, the lower the A index, the better.

### The K Index

The K index is much more interesting, as it is updated every three hours. It is the local geomagnetic figure for Boulder, Colorado (what the heck - it's got to be calculated some place). This figure is much more current, giving a more up-to-date picture of conditions. The K index ranges between 1 and 9, with 9 meaning the most disruption to communications. Figure of 1-3 are excellent for our purposes.

Tom Sundstrom's excellent column in this journal gives summaries of A index and solar flux information derived from WWV broadcasts, as well as a chart showing long-term solar flux averages. The long-term chart shows some of the cyclic variation of the solar flux - a mechanism not yet clearly understood, much less absolutely predictable.

### OTHER SOURCES OF INFORMATION

Yes, propagation is a very complicated subject, but it certainly isn't the only one in our hobby. It is, however, one of the single most significant. Many excellent books are available to give more detail than this column allows. An excellent start is the *ARRL Amateur Radio Handbook*, and the *ARRL Antenna Book*, both available in stores and by mail.

Next month we will look at facsimile reception, and examine several commercially available decoders to make it possible.

# NASWA Awards

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Greetings and welcome to my first column as the new NASWA Awards Chairman.

First, I would like to thank retiring Awards Program Chairman John Kapinos for a job well done. Kap carried the Awards Program torch for many years and made the NASWA program the best in the business. I hope to carry forward that tradition. Good ol' Kap won't disappear. He is officially "Chairman Emeritus" in recognition for his outstanding performance in managing the program during his tenure as Awards Chairman. He earned it! Incidentally, when the current Awards Chairman gets around to putting together some awards applications, Kap will be the signer of my awards.

Second, I want to thank the many DXers that have taken the time to write since I became Chairman. It's a pleasure receiving mail from such a fine crew. Hopefully, I didn't misplace any questions asked.

We are all caught up with issuing awards so let's see what you, the membership, have been up to:

All Germany DXer (10 Different Shortwave Broadcast Stations in FRG and DDR)

Robert L. Landau, Secaucus, NJ

Donald J. Weber, Westlake, OH

African Continental DXer (40 African Broadcast Countries)

James W. Evans, Germantown, TN

Jerry Kilnck, West Seneca, NY

African Continental DXpert (50 African Broadcast Countries)

Sheryl Paszkiewicz, Manitowac, WI

All Continent "ORP" DXer (Lowest Powered Station from each Radio Continent)

Gregory A. Hart, Live Oak, FL (50 KW)

Robert L. Landau, Secaucus, NJ  
(25 KW)

All Voice Of America DXer (12 Different VOA Broadcast Transmitter Sites)

David J. Turnick, Sinking Spring, PA. Obviously not enough Reprint Service catalogue orders are being placed if he has time to send for verifications.

Arab World DXer (15 Broadcast Countries with Arabic as the Major Language)

Cris Hazzard, New Hope, PA

DX Centurion (100 Broadcast Countries)

Gregory A. Hart, Live Oak, FL

DX Centurion - Endorsement for 125 Countries

Thomas V. Ross, Lyons, IL

Ecclesiastic DXer (15 Religious Oriented Shortwave Broadcast Stations)

Harold Butcher, Hyde Park, MA

Royal E. Berglee, Grand Forks, ND

Richard E. Hankison, Prairie Village, KS

Gregory A. Hart, Live Oak, FL

Benjamin Krepp, Watertown, MA

William H. Taylor, Unionville, PA

Ecclesiastic DXer - 40 Station Endorsement

Paul Buer, Miami, FL

European Senior DXer (25 European Broadcast Countries)

Gregory A. Hart, Live Oak, FL

Benjamin Krepp, Watertown, MA

Master Subcontinental DXer (One Indian Station in 10 States or Districts)

Edward Kusalik, Coaldale, Alberta, Canada. Another tough one nailed down by Ed!

Master Time Station DXer (20 Time Stations in 6 Continents)

Edward Kusalik, Coaldale, Alberta, Canada. This is only the third one of these awards ever issued!

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

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Senior Brazilian DXer (20 Brazilian States)

Charles E. Hoffman, Lancaster, PA. Congratulations Charlie on obtaining this very difficult award.

Senior Ecclesiastic DXer (25 Religious Oriented Shortwave Broadcast Stations)

Benjamin Krepp, Watertown, MA

Senior China DXer (5 Different Provinces or Autonomous Regions including Taiwan)

Gregory A. Hart, Live Oak, FL

Senior DX Centurion (150 Broadcast Countries)

Reverend John C. Eckert, Collegeville, PA. This was the first award issued by yours truly.

Senior Radio Moscow DXer (25 Different Radio Moscow Transmitter Sites)

Harold Butcher, Hyde Park, MA

Alexander Durant, Albany, NY

Steven R. Lare, Holland, MI

South American Continental DXPert (13 South American Broadcast Countries)

James W. Evans, Germantown, TN

Soviet Sphere DXer (10 Soviet Broadcast Countries)

Harold Butcher, Hyde Park, MA

Senior Time Station DXer (10 Time Stations in 6 Continents)

Steven R. Lare, Holland, MI

World Wide DXer (50 Broadcast Countries)

Adrienne Barhydt, Milwaukie, OR

Sue Gerberding, Southgate, MI

Benjamin Krepp, Watertown, MA

Michael T. Laird, Cameron, MO

That was quite an array of awards from an impressive number of DXers. Thirty six (36) individual awards were issued in twenty two (22) separate categories to twenty three (23) different DXers during the period. Congratulations to all!

This month we welcome aboard five (5) new participants to the Awards Program: Adrienne Barhydt, Royal Berglee, Sue Gerberding, Greg Hart and Ben Krepp. Thanks for your participation and I look forward to receiving more awards applications from these folks in the near future. Also, returning to the Awards Program, after a ten year sabbatical from QSLing, is Charlie Hoffman. Finally, Mike Laird returns to the program. His previous awards application predates Kap as Awards Chairman. I had to dig his file out of the ancient archives. Welcome back!

Some of the above award recipients have been part of the Awards Program for a long time. After many years of collecting awards and endorsements, Paul Buer's collection is up to twenty; Steve Lare is up to twenty three; and Sheryl Paszkiewicz is now up to thirty seven. Apparently we aren't sending Sheryl enough logs if she has time to send out reception reports.

UPDATE - Country List / Awards Program Booklet

The revised 1991 edition of the NASWA Country List and Awards Program booklet is on schedule. Country List Chairman Don Jensen is undertaking a major reformatting of the country list which should make it easier to use. I have revised and updated the awards section which will include three new awards. Keep reading the JOURNAL for pricing and availability information.

Ecclesiastic DXer Award

By far the most popular award among applicants this month, the Ecclesiastic DXer award is a good way to begin your collection of awards. This award requires verifications from fifteen (15) shortwave broadcast stations that are owned and/or operated by religious organizations. The companion Senior Ecclesiastic DXer requires twenty five (25) such verifications. Endorsement stickers are available for each five additional stations. The Ecclesiastic awards series is an excellent way to begin collecting NASWA awards.

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

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NASWA Awards Program

# NASWA Portraits

Jerry Klinkck  
43 Lein Road  
West Seneca, NY 14224



Welcome to another "Portraits" column. This month we visit Reverend and William Peake, a pastor in the rural Iowa town of Buffalo Center. The highlight of this story is the way Bills' SWling is being used to benefit many others, as you will hear from him.....

"I am a pastor in the rural mid-western town of Buffalo Center, population 1000. I am married 16 years with three boys aged 9, 6 & 3. I became aware of shortwave when I was a young boy and my dad, who was a ham, could occasionally pick up R. Moscow. I can remember listening to the propaganda, not really believing the source of the broadcast was really in Russia. When I left home in upstate N.Y. to come to Iowa for college in 1971, I forgot about shortwave. It wasn't until 5 years or so ago that I thought it would be great to get my own rig, but that was still dreaming. About two years ago I was ambling through a Radio Shack store and saw a DX-440 and on a whim I bought it.



The last two years have been a lot of fun. I do not work terribly hard at DXing, I think I'm more of a SWL than a died-in-the-wool DXer, but I enjoy it at my own pace. Listening to a favorite station on a regular basis can be scheduled easily but staying up till 3 or 4 in the A.M. does not make for the best family life or work schedule. Although in the last 24 hours I have logged and sent reports to 5 new countries! I originally used the whip antenna on

on the DX 440 but then ordered the Grove indoor antenna plus preamp & preselector which gave good results. I am now using 37 feet of wire, 20 feet in the air.

"In the past I have listened with regularity to WCSN/WSHB, R. Nederland, RCI, Radio RSA (which sent 3 hats for my boys). I am an avid listener of R. Berlin Int. but the soon to be unification has me worried about the future of the station. My greatest pet peeves are the Canadian broadcasters who will not respond to my reports (I know the feeling, Bill. It took me ten reports & 12 months to get a response from R. Australia-ed) and the omnipresence of WYFR. I would be interested in contacting other Iowa or S. Minnesota NASWans. I enjoy the information in the Journal. One of the ways I share my hobby is to tape the broadcasts of the Voice of the OAS which are in Spanish. The local high school Spanish teacher then uses the tapes with her more advanced students. I have found that when I tell the broadcasters of this project, they respond generously with materials in Spanish for the students and their teacher. REE has been marvelously helpful at this point with coloring books, cartoons in Spanish, pen-nants and pounds of literature. It has certainly won me a lot of good will in the community with my hobby and makes me feel wonderful inside knowing that someones' awareness of the world will be broadened a bit by my listening habits. I do get a bit frustrated with the Spanish broadcasts since I can't speak a word of it...but the music is fantastic! Also, the local paper did a feature on my hobby and the time I shared a Christmas greeting over the air on the World Service of the Christian Science Monitor."

Thanks for the visit, Bill. A most interesting and rewarding use of our great hobby! Bills' address is: P.O. Box 414, Buffalo Center, Iowa 50424 for any Iowa or south Minnesota NASWans. And that's our column for this month. I'm sure I speak for everyone when I say we'd like to hear your story soon. Till next time, 73 & GREAT DX!

# Company Store

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



Business has been brisk since we announced the first NASWA Coffee Mug last month. Frank Decker in Fayetteville, NY was the first to place an order. The next day orders for Jim Leppard in Greenville, SC; Norman Wittschen III in Columbus, OH; and Jerry Johnston in Lexington, KY arrived. Since then it has been a steady flow of orders.

## LAST CALL: NASWA COFFEE MUG

Designed by Guy Atkins, the first NASWA Coffee Mug is now available. It comes in NASWA Royal Blue with the design consisting of the club logo and a projection of a world map. The effect is truly outstanding! This item will surely become a collectors item so order yours today. The "ordering period" for this item will end on October 31, 1990.

The NASWA Coffee Mug costs only US\$7.00 for shipment within the United States and US\$8.00 to Canada. We are accepting overseas orders. The price to Europe is US\$12.00; to Australia and New Zealand - US\$18.00. As mentioned last month we are attempting to relieve some of the administrative burdens of an undertaking such as this by having an "ordering period". The "ordering period" closes on October 31, 1990. The plan is to have all orders placed on November 1st with our supplier. By December 8th Dave Turnick and I should be shipping the NASWA Coffee Mugs to our thirsty membership.

Since there will be only a few short weeks until the "ordering period" closes, I would suggest placing that last minute order today. A great holiday gift to yourself! A number of members are ordering two NASWA Coffee Mugs - one to drink out of and the other to keep in a collection. So, consider a second NASWA Coffee Mug when placing your order!

Remember, this is your last call to place an order for the first NASWA Coffee Mug which should be in the mail in early December. If the Post Office cooperates, your NASWA Coffee Mug should arrive just in time for the holidays. Ha, your favorite holiday brew in a NASWA Coffee Mug. Can't beat that!

## THE FALL LINE

It's time to briefly remind members about the NASWA clothing line. Our long sleeve sweatshirt costs US\$20.00. The short sleeve T Shirt costs only US\$8.00. The lined Windbreaker Jacket costs US\$24.00. Each item is available in small (S), medium (M), large (L), and extra large (XL). Each item comes in NASWA Royal Blue with the club's logo, in white, appearing over the heart. There is an additional US\$1.00 charge for extra, extra large (XXL) sized T shirts and a US\$2.00 extra charge for XXL Sweatshirts and Windbreaker Jackets. Our Poplin Golf Hat costs only US\$8.00. The above costs include UPS shipping in the United States. Shipping to Canada requires an additional US\$3.50 per item. Overseas members should write for information. We have filled orders for members in Australia and Canada.

If you live in Canada and you will be attending the Winter SWL Festival why not write to me about saving some shipping costs. I can order your merchandise and have it shipped to my house. I will deliver the goods to you at the Winter SWL Festival. Please write early since I will have to place your order the first week in January to receive it in time for the FEST.

## OTHER GOODIES

It's been a while since we talked about some of the other goodies the Company Store has to offer. The Spectrum Logs (International and Tropical Band editions), Propagation Predictor and The System have been favorites among the membership since they were introduced earlier this year.

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

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#### The Spectrum Log - International Broadcast Band Edition

This expanded version of the original Log was developed by Rowland Archer using Ventura Publisher and a personal computer. The International Broadcast Band edition covers the 49, 41, 31, 25, 21, 19, 16, 13 and 11 meter international broadcasting bands. The Log is 41 pages and costs US\$6.00 plus US\$1.00 shipping.

#### The Spectrum Log - Tropical Band Edition

This older sibling to the International Broadcast Band Edition is the original version created by John H. Bryant with updated graphics courtesy of Rowland Archer. The Log covers 120, 90, 75 and 60 meter tropical broadcasting bands. This version of the Log costs only US\$2.50 plus US\$1.00 shipping.

The sheets included in The Spectrum Log are intended to be master originals which the user may photocopy for personal use. For those hobbyists ordering both editions at one time, we have a special offer. Order The Spectrum Log - International Broadcast Band Edition and the Tropical Band Edition for only US\$7.50 plus US\$1.00 shipping. The NASWA/Fine Tuning Spectrum Log was contributed to the NASWA Company Store by Rowland and John.

#### The Propagation Predictor

The NASWA/Fine Tuning Propagation Predictor is designed to help listeners follow propagation trends. It consists of two master 11" x 17" originals to be photocopied. The two page Predictor divides the calendar year into 27 day segments for tracking recurring solar patterns. A highly efficient method for keeping tabs on those WWV propagation announcements at 18 past the hour.

#### The System

Consisting of four 8 1/2" x 11" originals for photocopying, The System was designed to provide high quality masters to help shortwave listeners track their hobby related information. It consists of four separate one page forms - a Reception Report - QSL Log, a Log Book, a QSL Reports, and a Program Notes form.

The Propagation Predictor and The System are priced to sell at only US\$2.00 each. You can order either item for only US\$1.00 each when placing an order for any other NASWA Company Store item.

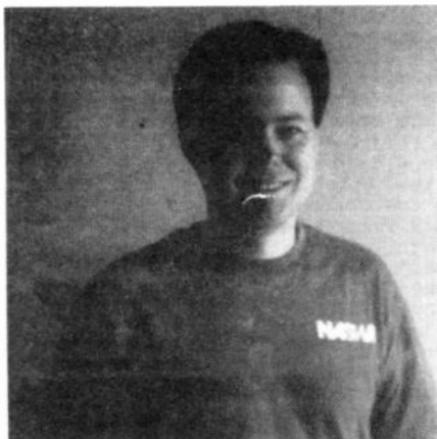
### **AWARDS LEFTOVERS**

From time to time members write in asking about where they can obtain Country List and Awards Program information. The current Country List / Awards Program booklet is out of print. However, photocopies of the booklet can be obtained for US\$1.00 from NASWA Headquarters. The new, updated Country List / Awards Program booklet is being developed. It is anticipated that it should be available in early 1991.

Award winning logo designer Guy Atkins is featured this month in our column. You may recall that Guy won the club logo contest a couple of years ago. Now Guy has moved on to Coffee Mug designing. His first Coffee Mug art work is featured prominently on our first Coffee Mug. When not DXing, designing, or working on PROCEEDINGS, Guy helps baby sit John Bryant during his adventures in the great Northwest.

Remember to order your Reprint Service Catalogue for only US\$1.00 worldwide. It's packed with approximately 100 reprints from the past. Put together by Don Moore, The Reprint Service Catalogue is a must.

That's it for another month. Remember to place those Coffee Mug orders before the end of the "ordering period" on October 31, 1990. As I said before, it is the "LAST CALL".



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

# the page

COMMITTEE TO PRESERVE RADIO VERIFICATIONS

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

**HCJB**

THE VOICE OF THE ANDES  
CABELLA 681  
QUITO - ECUADOR

Heralding Christ Jesus' Blessings

THE VOICE OF THE ANDES  
BROADCAST  
3 STATIONS

LOCAL  
570 K.C.  
1 K. W. 3 & 6 second  
Beam

PROVINCIAL  
4107 K. C. 1 K. W.

INTERNATIONAL  
13.4 Mc. C. 10 K. W.  
5 & 6 second  
Restory beam.

Co-Directors  
Clarence W. Jones  
Reuben Larson

"LA VOZ DE LOS ANDES"  
PIONEER MISSIONARY  
BROADCASTER

"HERALDING CHRIST JESUS' BLESSINGS"

South America Calling

**HCJB**

Al Sr. Arthur R. Hankins  
Le confirmamos la recepción de vuestro  
programa el día 6 de Noviembre de 1931

Con la Onda de 20 w. Potencia de 200 w.

QUITO - ECUADOR 5. Am. Agradecemos su reportaje.

LA VOZ DE LOS ANDES Director - R. L. Larson

Can you imagine a shortwave station that has gone 60 years without a change in call letters or a change in purpose? That continues to be a good friend of listeners and DXers? And that maintains high standards in verifying reports? That's HCJB, which began broadcasting in 1931. It was founded by the two persons whose names appear at the bottom of the card shown above (at

right)--Clarence W. Jones and Reuben Larson. Larson had been a missionary in Ecuador for a number of years and had felt that radio had much potential in missionary work. Jones had had radio experience in religious broadcasting in Chicago, and likewise became interested in radio in the mission field. While Larson was on furlough, the two men met and discovered their common interest.

The rest, as they say, is history. When Larson returned to Ecuador he convinced the government to give him a 25-year license for a 200 watt station. It began transmitting on 4107 kHz. on Christmas Day, 1931. From the October 1933 *Radio News*: "They are on the air every day except Monday from 8 to 9:30 p.m. (Quito time is 14 minutes behind EST). . . . The station identifies itself in Spanish and in English, with a two-tone chime." +++ HCJB is in fact the oldest station in the country because it was the first station in Ecuador to carry regular programming. A MW channel was soon added, as was a 10 kw. xmtr on 12455 kHz. 4107 kHz. was upgraded to 1 kw., and continued in operation until 1948. +++ These QSL's are HCJB classics. In the upper left is a card that is well known to many of us who began our SW listening in the 50's and 60's. The others are of earlier origin. +++ There is another interesting bit of SW history in this month's column. The card in the upper left belongs to Robert Hankins. The other two cards belong to his dad, Arthur M. Hankins. Both have contributed their cards to CPRV. How many other cases are there where DX skills have been passed along from father to son? +++ Till next time -- JB

A Committee of the Association of North American Radio Clubs

# Listener's Notebook

**Bruce MacGibbon**  
2295 Juniper Avenue  
Gresham, OR 97030



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IMPORTANT NOTICE - It took me almost a year but the dates shown in 'LN' will now be (day/month) or when I'm quoting from monthly 'SW' publications (year/month). - (bmm)

ALL INDIA RADIO CHARTS - The S-90 AIR Home and External Services frequency schedule in easy to read computer graphics will be available around 15th Oct 90 - this has been possible mainly due the massive software support from Robert R. Palmer of Spokane, USA. (A NASWA member) Efforts are underway to produce an India Handbook annually, with a midyear update. This pub will contain all broadcast related info on India. More info in the next DX Post. (via Universal DX League's 'DX Post' dtd Jul/Aug '90. (Note: According to a letter from Robert Palmer to me, these charts may be copyright and not made available for printing by 'DX Clubs (as I have done in the past by extracting the info - bmm), so I would consider buying one. (bmm) For more info on this write to: Kanwarjit Sandhu c/o Universal DX League 408 Krishna Nagar, Ludhiana - 141001, India.

MALAY AND INDONESIAN LANGUAGES INTERNATIONAL BROADCAST LIST - Available in April and October of each year. Features: Listings by country order, providing station name and contact address, broadcast information - the times in UTC, frequencies in use with their transmitter site & power output. Also included are listings of the above broadcasts in hourly order. Malay and Indonesian broadcast information listed separately. Issue in October will include program schedules. Current copy updated to June 1990. (Note: Lim, this came via 'Sea Mail'.) To receive both for the year, remit: US \$3, UK - 2 pounds, Australia \$4 in cash or 16 International Reply coupons. (IRCs) to: Lim Kong Jin, 37 Jalan Tembaga, Island Park, 11600 Penang, Malaysia. Tel: (04) 880890.

WORLD DX PROGRAMMES LIST - Programs especially designed for the radio hobbyist, shortwave listener and DXers. Available in April and October each year. Features: Listings of DX programmes in country order for 3 language broadcasts: English, German, Spanish.

For each country entry, includes information on station name and contact address, broadcast details, i.e., transmission days/times and frequencies in use.

A listing in hourly order by days of the week is also included.

English DX-programme entry includes more detailed information providing name of programme, name of the producer and presenter(s) along with information on contents of programmes - mostly checked through personal monitoring.

Issue in October will include listings for 4 additional language broadcasts in French, Italian, Japanese, Swedish and maybe more.

Price includes both the current copy (June 90) (Note: Lim unfortunately, this came via 'Sea Mail') and the upcoming October issue for this year. US \$7, UK - 4 pounds, DM - 10, Australia - \$8 or 24 International Reply Coupons (IRCs) to: Lim Kong Jin, address as above.

AUSTRALIA - Radio Australia EG Service Freqs for Sep/Oct:

Bangladesh, Bhutan, India, West Malaysia, West Indonesia, Nepal, Pakistan, Singapore, Sri Lanka:

21775 01-1330 325/C250; 21525 13-1430 290/D250, 22-24 308/S100; 17630 01-04, 05-08 325/C300, 1430-18 325/C250; 15465 11-1330 347/C250; 15240 11-1330 308/S100, 2130-24 308/S100; 13745 1530-18 325/C300; 11910 13-16

308/S100; 9710 1430-18 325/C100, 18-21 325/C250.

Brunei, Cambodia, East & Central Indonesia, Laos, East Malaysia, Myanmar, Thailand, Vietnam: 21525 02-0730 315/D250 (Saturday Only); 17750 08-10 317/D250; 17715 10-13 310/S100, 22-24 308/S100; 17630 0000-01 347/C300, 08-10 347/C300; 15240 0000-01 347/C100, 2130-24 308/S100; 15160 11-1330 308/S100; 13605 22-01 316/D250; 12000 18-21 347/C300; 11910 13-16 308/S100; 9860 13-14 347/C100; 9770 1430-18 320/S100.

China, Hong Kong, Taiwan: 21525 01-09 340/D250; 17750 0000-04, 05-06 340/D250; 17630 0000-01 347/C300, 08-10 347/C300, 23-24 342/S100; 12000 18-21 347/C300; 9860 13-14 347/C100; 9710 17-18 347/C300.

Japan, Korea, The Philippines: 21825 02-0730 003/D50 (Saturday only), 09-10, 11-13; 21740 2230-24 355/S50; 21525 01-09 340/D250 (Philippines only); 17750 0000-04, 05-06 340/D250 (Philippines only), 23-24 340/D250; 15465 22-0730 355/S100; 11800 09-10 353/S100, 1330-16 353/S100; 9710 11-1230 355/S100; 6080 11-1430 005/S100, 19-2130 005/S100.

Papua New Guinea, Solomon Islands, Federated States of Micronesia: 21740 2230-24 355/S100; 15465 22-0730 355/S100; 11930 0630-08 080/B10, 2190-24 010/B10; 11800 09-10 353/S100, 13-16 353/S100; 9710 11-1230 353/S100; 7240 11-21 010/B10; 6080 11-1430 005/S100, 19-2130 005/S100.

Nauru, New Caledonia, Vanuatu, Kiribati, Tuvalu: 17795 20-06 063/S100, 08-0830 063/S100; 15160 1930-2330 053/S100, 0030-06, 08-1230 053/S100; 11930 0630-08, 11-21 080/B10; 11855 1630-1930 063-S100; 9580 0830-1900 063/S100; 6060 15-1830 063/S100.

Cook Islands, Fiji, Tonga, Western Samoa: 17795 0000-06, 08-0930 063/S100, 2030-24 063/S100; 17715 0000-05 065/S100; 15560 05-0630; 15320 05-06, 08-0930, 20-22 073/S100; 13745 1830-21 065/S100; 13705 0630-08 065/S100; 11855 1630-1930 063/S100; 9580 0830-1900 063/S100; 6060 15-1830 063/S100.

New Zealand, Norfolk Island, Kermadec Island: 15240 0030-1030 118/S100; 9655 17-2130 118/S100.

Africa: Southern: Try 15160 (0030-03, 08-1230 and 1930-2330) and 11720 (14-1630) Eastern: Try 15320 (05-06, 08-0930 and 20-22) and 11720 (14-1630). Western: Try 17795(20-06), 17715 (0000-05), 15560 (05-0630) and 13705 (0630-08).

Middle East: Try 21775 (08-13), 17630 (1430-18), 13745 (1530-18) & 9710 (1530-21). These services are directed to Asia and reception may be affected by propagation conditions and frequency congestion.

UK/Europe: Try 21825(02-0730), 21775 (07-1330), 21525 (06-09), 17750 (08-10), 17715 (10-1330), 17630 (05-08 & 1430-18), 15240 (07-1030), 15160 (11-1330), 13745 (1530-18), 12000 (18-21), 11910 (13-16), 9770 (1430-18) and 9710 (1530-21) These services are directed to Asia and the Pacific and reception may be affected by propagation conditions and frequency congestion.

USA/Canada: Try 17795(20-04), 17715 (0000-05), 15560 (05-0630), 15320(20-21), 15160 (0030-06), 13705(0630-08), & 9580 (0830-15). These services are directed to the Pacific and reception may be affected by propagation conditions and frequency congestion. Note: (You can hear more than just these frequencies - try any RA freq listed - bmm)

South America: Try 15240 (06-1030) & 9655 (17-2130).

Mailing address for Radio Australia is: GPO Box 428G, Melbourne, VIC 3001, Australia. Tele: 61 3 881 2222; Open Line: 61 3 881 2360; Fax: 61 3 881 2346. (via Keith Synnott, Publicity Officer, Radio Australia)

9860NF, 1324, R. Australia, EE, Pop Songs, M w/weather at 1329. At recheck 1358, sports news was just ending into CC at 1400-1530 then back into EG to 1800\* on 24/9 & another frequency not listed above is 11720 heard at 1404-1630\* on 25/9. (bmm)

BOLIVIA - Radio San Miguel broadcasts on 3310 khz, from Riberalta, a city of approximately 45,000 inhabitants. Located at the junction of the Beni and

Madre de Dios Rivers, its climate is tropical in nature. The station, owned by the Apostolic Vicarate of Pando, has its goal the promotion of culture and education among its listeners. According to a letter from the station's director, Hector Salas Takana, Radio San Miguel identifies with the peasants, the poor, the youth, and popular organizations. The station's address is Casilla 102, Riberalta, Beni, Bolivia. (translated from QSL letter from the station's director) (via Marlin A. Field, MI)

CHINA - China off 'Daylight Savings Time' as CPBS-1 still on past 1630 on 9/17. (bmm) Via September-October's 1990 'The Messenger', a Radio Beijing Bi-monthly (which I hope you've written for.) "A major overhaul of a transmitter in Beijing's suburbs has been completed. This means more frequencies for many of Radio Beijing's external services. The new frequencies are included in the schedules of the English, Spanish and Portuguese services printed in this issue. New frequencies have also been added for programmes in the following languages and dialects: Japanese, Bengali, Sinhalese, Russian, Italian, Albanian, Romanian, Serbo-Croatian, Bulgarian, Hungarian, Esperanto, Putonghua, Guangzhou (Cantonese) and Hakka.

English Service change: South Pacific at 12-13 11600, 15450 & 13-14 11600 replacing 15285 12-14.

Times and Frequencies of Portuguese Service: To Brazil 14-1430 11745, 11650, 11500; 1630-17 12055, 11650, 11500; To Africa: 11-1130 9670, 9900, 11445; 1130-12 same but add 7385; To Portugal: 1130-12 7385, 9690, 11715, 15110; 1330-14 6165.

Times and Frequencies of Spanish Service: To Latin America: 23-24 9365, 9450, 11445, 15420, 15430, 11790, 15130; 0000-01 9365, 9450, 11445, 15420, 1530; 01-02 same as 0000-01 but add 15235, 17650; 02-03 same as 01-02 but add 13685; 03-04 11840; To Spain: 21-2130 6165; 21-22, 22-23 6933, 9690, 11765.

Via an 'Amnesty Int'l' list of people detained for activities related to the 1989 Pro-Democracy Movement, & this information believed to be accurate as at 10 July 1990, appears the name 'Wu Xiaoyong', Son of Vice-Premier Wu Xueqian and Vice-director of China International broadcast station. "His arrest in 1989 was unconfirmed but according to recent reports he was secretly tried and sentenced to 12 years' imprisonment. (Note: This is the gentlemen that allegedly produced the statement that was read on Radio Beijing on June 4th - bmm) (My thanks to the 'Northwest Regional China Council', Portland, Oregon for this.)

COSTA RICA - On Radio For Peace's 'Mailbag' program on 19/9: (Condensed) Debbie Latham: We just finished publishing our October/November schedule. Overall the schedule hasn't really changed very much. New Programs - Undercurrent - News program (Mon-Fri) at approximately 2215 or 0145 and then combine all those news reports on Sat and broadcast them at 2200 UTC. UNESCO Program - Wide variety of different programming on everything from literacy to aids to literary topics to deserts and oceans. Wide range of interesting programming. Heard on Tue on 2100 and repeated at 0030 UTC Wed, Thu 2200 and repeated at 0130 UTC Fri & on Sat 2130 and Sun 2300 and of course that also involves a repeat on 7375USB, but that gives you kind of an idea what days to look for their programming. "Music from Everywhere" - a Radio Earth production w/host Jim Bean - Been on Sundays at 2200 UTC (will say there) but will also have a regular place on Thursdays at 2130 & repeated on Fri at 0100 UTC. Food for the Thoughtful - regularly on Sundays (will stay there) but have a regular place on Thursdays at 2100 UTC repeated Fri at 0030 UTC. A talk by Andrew Schneider - He's with the World Peace University - Canadian Branch. A whole series of talks on a variety of topics. Breakthroughs - Believe it's a series that deals with hunger funded by the Hunger Project. World of Radio - Will have the same times.

Debbie Latham - We do have a move coming up and that is a move from our present transmitter and antenna location. The studio will stay in the same place, at least for now. In the future, we need an expanded studio site as well. At the moment, we are moving our transmitters and antennas. We need money to build a transmitter building and an additional tower, and the reason is two-fold: One is an interference problem with video-

production studio that is right next door and secondly is, looking towards an upgrade we need electricity capabilities that will allow us to upgrade and we don't have that possibility here in our present location. So we've been raising funds for the move and along with that funds to upgrade our power. We've been saying we need \$14,000 to make the move. We've raised over \$10,000 of that. We have just a short while left on our deadline to raise the rest of that and then \$46,000 to make the upgrade, a total of \$60,000 needed which we feel is very achievable. (Further on) We're really committed to the upgrade and we've looked at every possible way of doing it as cheaply as possible and making it happen and that is our #1 goal to achieve that upgrade. Max: I think we're looking now into constructing, building 2-20kW transmitters on the site here. Debbie Lathan: Said James will be at the Monitoring Times Convention. (Debbie said they will keep everyone updated on the mailbag program as to the progress of RFPFI upgrade.)

**CYPRUS** - The Cyprus Broadcasting Corporation, at Nicosia, is a station which doesn't command a great deal of interest for DX listeners outside of Europe. However, it offers an External Service; on Fridays, Saturdays and Sundays, from 2215-2245, with programming in Greek, intended for listeners in the United Kingdom. From 30 September, frequencies are listed as 9670 and 7180, using transmitters of the BBC's Cyprus Relay. The station welcomes reception reports from listeners around the world, which are acknowledged with a large multi-colored card, in English. (Radio Australia's 'Japanese DX Time' 15,16/9 edited by Craig Seager of the 'Australian Radio DX Club'.)

**ECUADOR** - A new transmitter designed and constructed by HCJB engineers and technicals was delivered to Pifo, the transmitting site of HCJB, in April. Work on the transmitter began three years ago at the HCJB Engineering Center in Elkhart, Indiana. High efficiency operation and maintenance were stressed in the design. Workers at Elkhart are now working on additional 100 kilowatt transmitters, but it will not take as long this time to construct one as it did on the one just delivered to Ecuador as the design is complete. In addition, design work has begun on a second 500 kilowatt transmitter. The first 500 kilowatt one was put into service almost ten years ago. (From 'Around the World, Summer 1990, a publication of HCJB) (via Marlin Field, MI)

(Via the same publication) - Hundreds of Quechua Indians who live in two remote Ecuadorian villages will soon have drinking water piped to their homes thanks to a joint effort of HCJB and the Swedish International Development Agency, which recently approved grants totalling more than \$22,000. HCJB will use the funds to bring a clean water supply to the two communities near Riobamba in central Ecuador. In one of them woman now spend a couple of hours each day hauling water. The project involves installing a water collection system at the spring, two 4,000-foot feeder pipelines, concrete reservoirs and a distribution system to provide each home with a spigot. HCJB is overseeing the project, while actual installation is done by community members and three Ecuador water technicians trained by HCJB and other missions. HCJB has helped install dozens of water systems and hundreds of hand-pumped wells since this aspect of community development began about 10 years ago.

**HCJB** - Starting 1/9, HCJB's main English evening transmission to North America is carried on 11775 and 15155 kHz from 0030-07 (including 30 min. Japanese transmission from 0430-05). The SSB test transmission for Europe and the South Pacific on 25950 kHz is on the air from 0030-07.

In August, HCJB moved the 13m high-power transmitter carrying its European service from 21470 kHz to 21460 kHz to escape interference from the BBC on 21470. An SSB test transmission continues on 21480 kHz. (HCJB's "DX Partyline" 1/9 by John Beck via Mike Fern, Covina, CA)

**GERMAN DEMOCRATIC REPUBLIC** - 9730, 0308, W "News from the GDR and around the world coming to you from Radio Berlin Int'l, the voice of the disappearing German Democratic Republic," followed by brief music & then W "Hello and welcome to the last but one Monday show from East Berlin."

Question from Richard Lemke, Canada. Question: What will happen to all the many attractive QSL cards that you give out to RBI DX Club members.

Will the staff be dedicated enough and complete all reception reports before they make the merger with Deutsche Welle.

Answer: W - "Well Richard, I asked our mailing department and they promised they would try to send out RBI QSL cards for the great many reception reports that reached us. But, let me remind you that RBI will cease to exist on Oct 3. In other words they will have to complete their work by that very day. However, I'm sure they will do their best in usual efficient way."

This was followed by the 'RBI' DX Club #604 (the last meeting!) M - As RBI's DX Editor, I have to inform you that on Unity Day Oct 3, 1990, the RBI DX Club will cease to exist. Consequently, this is our last DX Program, our last world meeting. Today's meeting figure #604 tells us that in its 25th year, the Radio Berlin Int'l DX Club will be buried." (Announcer then went on with history of club) Announcer suggested that you write to Radio Deutsche Welle and asked them to keep it going, on 25/9 (bmm)

ICELAND - Rikisutvarpid Shortwave Service, Reykjavik Sked: (All in Icelandic): 1215-1245 Eu 17493usb, 15770usb, 13830usb, 11418usb; 1410-1440 Eu, Am 17440usb, 15770usb, 13855usb 1855-1930 Eu 15770usb, 13855usb, 11418usb, 3295usb; 1935-2010 Eu, Am 17440usb, 15770usb, 13855usb 2300-2335 Eu, Am 117440usb, 15770usb, 13855usb.

Additional data: Rikisutvarpid's shortwave service relays RAS1. In addition to the above transmissions, sporting events and other programmes are often carried on shortwave. Rikisutvarpid's shortwave frequencies are often changed. (WBI 21/9)

INDIA - Recent changes made by All India Radio, AIR, stepped up its services in Sindhi and Baluchi for the listeners in Pakistan. The Sindhi Service is now on the air from 1230-15 and Baluchi at 15-16 on 1071 kHz (1000kW Rajkot) and on 6170 and 11620 kHz.

Consequently the Mediwave service in Dari and Pashtu has been withdrawn at 1330-1545 and this service can now be heard on 11960 (Bangalore) and on 7140 kHz. The morning service in Pashtu and Dari can be heard on 7225, 9630 and 11910 (ex 6045).

Sinhala Service can now be heard on 9700 and 15020 at 13-15 (11620 withdrawn) (Alok DasGupta, Calcutta, India)

IRAQ - Radio Baghdad General Service Sked - The choice of shortwave frequencies used - and the times of their operation - for both the General Service and Voice of the Masses is highly erratic. This schedule shows only the approximate frequency usage as observed at the beginning of September 1990.

Since the annexation of Kuwait in August 1990, Radio Kuwait transmitters have been used to broadcast both the General Service and the Voice of the Masses. These frequencies are marked with the suffix - K in this schedule.

Some MF channels may carry external-service programmes in Arabic, Persian and other languages at various times.

During winter time in Iraq (1st October - 30th March), all programmes will be broadcast one hour later than shown)

\*0125-2335\* overall AA ME, 00m 15495K, 15170, 15150, 13620K, 12050, 11755, 1431, 1134K, 1035, 846, 756, 684, 603, 558, 540K, VHF/FM w/Freq change at 05 17720, 15495K, 15310, 15170, 15150, 13800, 13620K, 1431, 1134K, 1035, 846, 756, 684, 603, 558, 540K, VHF/FM; Freq change at 08 17720, 15495K, 15220, 15170, 15150, 13800, 13620K, 1431, 1134K, 1035, 846, 756, 684, 603, 558, 540K, VHF/FM; 09 Freq change 13800 dropped; 10 Freq change 15495K, 13620K, 1431, 1134K, 1035, 846, 756, 684, 603, 558, 540K, VHF/FM; 11-1115 Fri Quotations from President Saddam Husayn; 1430 Freq change 15495K, 1431, 1134K, 1035, 846, 756, 684, 558, 540K, VHF/FM; 17 Freq change 17720, 15495K, 15310, 15170, 1431, 1134K, 1035, 846, 756, 684, 603, 558, 540K, VHF/FM; 19 Freq change 17720, 15495K, 15310, 15170, 15150, 13620K, 1431, 1134K, 1035, 846, 756, 684, 603, 558, 540K, VHF/FM; 20 Freq change 17720, 15310, 15170, 15150, 13620K, 1431, 1134K, 1035, 846, 603, 558, 540K, VHF/FM; 20-2220. "Voice of Egypt Arabism" (for Egypt)

15490NF (via Kuwait), 0123, R. Baghdad, Bird chirring softly, then W in AA at 0126 then National Anthem. This under Moscow co-channel ex 15495//13620 and at approximately 1400 on 13620//15490 & I guess 13620 goes off at 1430 as in sked above and 15490 continues on as heard at 1800

-approximately 2305\* on//13610 ex 13620 (from tune-in 2252) on 9/25. (bmm)  
Voice of the Masses - \*0125-2300\* AA ME Dom 6055K, 1224, 1197, 1116, 990, 909, 693; 10 Freq change 21675K, 11990K, 6055K, 1224, 1197, 1116, 990, 909, 693; 13-15 "Voice of the Peninsula and Arabian Gulf" (For Saudi Arabia and the Gulf States); 19-22 "Holy Medina Radio" (For Saudi Arabia) 21675K, 11990K, 6055K, 1224, 1197, 1116, 990, 909, 693. (WBI 7/9)

Iraqi radio reintroduces "Voice of Peninsula and Arabian Gulf" programmes. Monitoring research 29-30 Aug 90.

Iraqi radio has reintroduced its anti-Saudi, anti-Gulf States "Voice of the Peninsula and Arabian Gulf" programme after a break of 17 years.

At 1357 gmt on 29th August, the 13620 frequency - which during the previous few hours had been carrying Iraqi radio's Voice of the Masses service in Arabic - was observed to be carrying a programme entitled "Voice of the Peninsula and Arabian Gulf" (Arabic: Sawt al-Jazirah wa al-Khalij al-Arabi). Before the transmitter on 13620 suddenly went off the air at 1423 gmt, the programme had carried an interview on the repercussions of the American presence in Saudi Arabia and a commentary denouncing the "traitor of the two Holy Mosques" (a reference to King Fahd of Saudi Arabia)

On 30th August the "Voice of the Peninsula and Arabian Gulf" programme was heard to start at 1300 gmt. Announcements stated that the programme would last until 1500 gmt. The programme contained talks assailing the Saudi ruling family and the stationing of foreign troops in the Gulf area, and commentaries attacking "certain traitor Arab leaders". Transmission on 13620 kHz ended sharply at 1358 gmt.

A programme with the same name had been carried by the Voice of the Masses service between 1978 and 1983. Before that, programmes with similar names - "Voice of the Arabian Gulf", "Voice of the Arabian Peninsula" and "Voice of the Arabian South and Arabian Gulf" - had been carried by Iraqi radio since 1967. A clandestine radio, broadcasting material hostile to the Saudi ruling family from transmitters believed to be in Iraq, had also operated from 1973-1975 under the name "Voice of the People from the Heart of the Arabian Peninsula." (WBI 7/9)

IRAQ/KUWAIT - Iraqi radio broadcasts on former Radio Kuwait shortwave frequencies - Monitoring research 27 Aug - 4 Sep 90.

Iraqi radio has been observed to use 13620 kHz for its domestic services in Arabic since 27th August. Use of 6055 kHz was also noted from 29th August. Since 1st September, Iraqi radio has been observed additionally on 21675, 15495 and 11990 kHz. All these frequencies were formerly used by Radio Kuwait, and their use strongly indicates that Iraqi radio is now making use of the shortwave transmitter site in the Kabd area southwest of Kuwait city.

The former Radio Kuwait channels are used for Iraqi radio's General Service and Voice of the Masses programmes. The Voice of the Masses service had only been available on mediumwave frequencies since January 1988. (WBI 7/9)

IRAQ/SYRIA - "Liberation of Syria" and "Voice of Iraq" services continue to be broadcast. Monitoring research 3-4 Sep 90.

Iraqi radio continues to broadcast the Arabic-language service "Voice of the National Alliance for the Liberation of Syria". It was observed in progress at 2030 gmt on 3rd September on 1377 kHz. The programme ended at 2100 gmt and the frequency went on to carry Radio Baghdad's external service broadcasts in Hebrew.

On 4th September, the programme was heard from 1925-2052 gmt. Monitorable portions of the broadcast were not observed to contain anti-Syrian material. Programmes begin with a Koranic recitation followed by religious talks in praise of Iraqi policy in the Gulf. There was also a news bulletin in 2030 gmt.

Syrian radio continues to broadcast its "Voice of Iraq" service in Arabic from 17-18 gmt on 12085, 1125 and 828 kHz. Programming is confined to music and station identification. (WBI 7/9)

The Radio Baghdad English transmission beamed to Saudi Arabia on 11860 at 10-12, 16-18 & 20-22 were observed on 11/9 to be announced as "the Voice of Peace from Baghdad, Republic of Iraq" These transmissions continue to include appeals "to the American soldier in the Saudi Arabia

desert".

The Radio Baghdad English transmission to Europe on 13660, also at 20-22 gmt, continues to announce as "Radio Baghdad". (WBI 14/9) Note: On Radio Nederland's 'Media Network' on 21/9, Jonathan Marks said a couple of days ago had switched to 13600, but it was announced at end of Media Network, they were back on 13660. On 21/9 heard them on 13660 with SS at 1700, 1800 FP, 1900 GG, 2000 EE, but on 24/9 at 1832 on 13600 in FR but dropped signal at 1845 and found at 1846 on 13660, & 13600 in FR at 1803 on 9/25. & heard EG at 2000. So check both frequencies. (bmm)

JORDAN - 9560, 2321, Radio Jordan, AA, M w/News t/2330 ID then open carrier to 2332\* on 21/9 (bmm)

KUWAIT - Yuki Sakagami's (of RJ AR Section) Monitor Report on Radio Kuwait After the Iraqi Invasion - Thanks to Rika Kobayashi, Producer and Presenter of Radio Japan DX Corner for the script of this report. Some of the report was edited but I have included those parts in parenthesis.

Early in the morning of August the 2nd, the Iraqi troops that had been building up on the border region of Kuwait invaded Kuwait and occupied the country within a short time.

This news from the Middle East flashed across the world and frightened us that another large-scale war might break out. In the meantime, Radio Japan made its own news gathering by monitoring shortwave radio broadcasts from the spot.

The following is a brief report on the developments concerning the Iraqi invasion of Kuwait from the first dispatch on August the 2nd to the following day, August the 3rd.

The first dispatch that Iraq had invaded Kuwait reached Japan a little past 0200 UTC, that's about 0500 in the morning in Kuwait. It was a shock indeed and many different questions flashed over our minds.

Then we decided to listen to Radio Kuwait, instead of calling up its technical staff. But, as of 0400 UTC, no broadcast could be picked up on any of the station's regular frequencies, such as 6.055, 15495, 17.850 and 17.895 mhz.

At about 0520 UTC, some Arabic broadcast was heard faintly on 21.675 mhz for the first time in hours. The transmission consisted only of music and short comments by a male announcer. As a matter of fact, it was unusual that Radio Kuwait used this frequency of 21.675 before 0800 UTC, but it was certain from the kind of music it played that the station was Radio Kuwait.

Past 0600 UTC, the reception conditions started improving on 21.675 mhz, and we could pick up the station call in Arabic which went "Huna al Kuwait" or "This is Kuwait". Now it was evident that the station was Radio Kuwait that we had been looking for. In addition, we could catch the Arabic statement that was addressed to the people of Kuwait. It said "The people of Kuwait! The government is with you." It was indeed a meaningful statement, but it was too short to tell whether it was coming from the Emir Jaber's side or the pro-Iraq's side. We continued listening to the station.

Then another Arabic statement came through at 0902 UTC and it was repeated over and over again until about 1000 UTC. (The reception conditions were poor at that time as the overall merit was 2. But we caught that)

The statement had started like this: "The people of Kuwait, ... The Revolutionary Kuwait will stay as a member of the Arab world."

It was the first time that the "Revolutionary Kuwait" -- that's "al-Kuwayt ath-Thawri" in Arabic -- was mentioned. This term must have indicated what Iraq called the "interim free government of Kuwait". So, it was sure that Radio Kuwait was then supporting the interim government which was being formed by Iraq.

The summary of the whole statement was as follows: "The leaders of the Arab countries and their people! The Kuwaiti government had lost its faith in uruba that it would have had as a member of the Arab world. The Revolutionary Kuwait will be keeping in steps with other Arab nations as a member of the Arab world."

The term "uruba" means the "Arab doctrine" and it was frequently used in the past by the former president of Egypt al-Nasir, and now by Kadafy of Libya, Assad of Syria and Saddam Hussein of Iraq. Perhaps, Iraq suggested

its dissatisfaction with Kuwait's policy of the increased oil production thought the part of the statement which went "the Kuwaiti government had lost its faith in uruba".

There was also a statement addressed especially to the Islamites. It said, "Those who believe in Islam! Kuwait will continue developing based on the Koran."

As you know, Kuwait is an Islamic country as well as Saudi Arabia. So, the statement that emphasized the importance of the Koran as the basis of the nation-building was intentionally added to drive away the people's feeling of unrest as well as to make them support the newly-born government.

These statements were heard repeatedly until the reception conditions deteriorated in Tokyo past 1200 UTC. (Then, about four hours since Radio Kuwait had faded out in Tokyo, another monitoring was done in the western suburb of Tokyo. The frequency of 21.675 MHz could be received although its signal was so weak that the content of the broadcast could not be fully understood. The same broadcast could also be heard on the parallel frequency of 15.495 MHz.

Past 1630 UTC, however, another Arabic broadcast started coming on the air on 15.495 MHz, the frequency that Radio Kuwait was using. In other words, two separate broadcasts were received on one frequency and those broadcasts interfered each other. At first, the signal of the new comer was much weaker than that of Radio Kuwait, so its content was incomprehensible. But its signal had become strong enough to cover Radio Kuwait by 1700 UTC.

The new Arabic broadcast on 15.495 MHz sounded very much like the usual Radio Kuwait, but it was different in the following points.

First, there was an address to the people of Kuwait after every piece of music.

Second, the quality of sound of the broadcast was similar to that of a Saudi Station.

Third, one of the female announcers was the anchor person of "Jaridatul Masa" which was the main program of the original Radio Kuwait.

Fourth, the station call -- "This is Kuwait" -- was given very often.

And Fifth, the station supported Kuwait's Emir, Sheikh Jaber al-Ahmed al-Sabah, who was said to have fled out of Kuwait after the Iraqi invasion.

In conclusion, we thought that the new Arabic broadcast on 15.495 MHz was probably aired by some Kuwaitis from a transmitter in Saudi Arabia.

(As of 1800 UTC, the frequency of 15.495 MHz was carrying only the new broadcast which supported Emir Jaber and claimed itself "Radio Kuwait". Later, the same transmission became able to be heard also on the parallel frequencies of 13.610 and 13.620 MHz. It was evident, thus, that Emir Jaber and his men had become in order by then and ready to start its own broadcasts.)

(The other frequencies that Radio Kuwait had been usually using were not audible at all, owing to heavy jamming, such as 6.055, 11.955, 17.885 and 17.895 MHz. Therefore, we could not make sure which Radio Kuwait was using those frequencies although we could tell that some programs were on the air on them.)

After 2100 UTC on, Radio Kuwait was clearly heard on 13.610 and 13.620 MHz. The transmission was in Arabic and it consisted of music and the address to the people. The address said, "My dear people of Kuwait! The soldiers of the Kuwaiti troops! This is Kuwait Broadcasting Service. Our Emir Jaber and our prince are still with you. Our dear contry of Kuwait exists as long as Emir Jaber and the prince exist. (May Allah give the protection to our dear Kuwait, Emir Jaber and his sons. This is the time we must fight against our enemy that threatens the dignity of our home country.)"

This address was released in NHK's news bulletin at noon Japan time with the recording and the Japanese translation. And, it was also mentioned in the BBC's news bulletin later on the same day as the statement of the prince of Kuwait.

**MAURITANIA - 4840, 0625 w/test tones then instrumental IS then M talk in AR and suddenly at 0430 switched to their listed freq 4845 then M w/Quran on 29/5. Previously on 15/9 heard at 0701 on 4839; At 0708 on 4838 & at 0712 on 4837v. On 16/9 on 4842v at 0635 & by 0655 on 4839. (bmm)**

MOZAMBIQUE - The external service at 1100 in EG is sometimes noted on 11840 kHz, announced as 11835//11818, 9526 kHz. (Richard Ginbey on "RN's" Media Network on 6/9 via Mike Fern, Covina, CA)

MYANMAR - Voice of Myanmar, Rangoon, Main Programme (Domestic Service) Sked: 0030-02 Burmese on 7185, 577; 02-0230 EG w/News 02-0210 on 7185, 577; 0230-0330 (Weekends & holidays only) Burmese 7185, 577; 0330-07 Burmese on 9730, 577; 07-0730 EG w/News 07-0710 on 9730, 577; 0930-1430 Burmese on 5990, 577; 1430-16 EG w/Press Review on 1440-1445 & News 1445-15.

Voice of Myanmar - Nationalities Programme, Rangoon Sked:

0930-1330 Multilingual w/News in Burmese (Relay of main program on 4725. Additional data: Nationality programs are in the Shan, Kachin, Kayah, Sgaw, Karen, Pwo Karen, Chin, Mon and Rakhine languages. The timing and sequence of these minority-language programme changes every three months.

Defence Forces Broadcasting Unit, Taunggyi Sked:

02-0330 Multilingual (Programmes in Burmese and Minority languages) on 6570. 0530-0630 Multilingual on 6570. 1030-1330 Multilingual on 6570. (WBI 21/9)

Defence Forces Broadcasting Unit, Taunggyi Sked:

02-0330 Multilingual (Programmes in Burmese and Minority languages) on 6570. 0530-0630 Multilingual on 6570. 1030-1330 Multilingual on 6570. (WBI 21/9)

PORTUGUAL - Radio Portugal, Lisbon, has sent along details of its new schedule effective from 30 September until 3 November 1990. The broadcast to Timor, in Portuguese, is listed from 0800-1000 on Saturdays and Sundays, and from 10-12 from Mon-Fri, with both transmissions on 15225. Radio Portugal also broadcasts in English, as follows: 0230-03 (Mon-Fri) to Americas on 11840, 9600, 9680, and 9705; 20-2030 Eur (Mon-Fri) on 11740; 21-2130 Africa (Mon-Fri) on 15250; 16-1630 India and the Middle East on 21530. (Radio Australia's 'Japanese DX Time' 15,16/9 edited by Craig Seager of the 'Australian Radio DX Club')

SAUDI ARABIA - The Broadcasting Service of the Kingdom of Saudi Arabia (BSKSA) domestic General Service from Riyadh was observed broadcasting in AA on 15495 from approximately 1600 gmt on 10/9. The transmission was //with the scheduled freq of 21505.

Since 1/9, Radio Baghdad's General Service and Voice of the Masses service have frequently been observed on 15495, a freq formerly used by Radio Kuwait. (WBI 14/9) On 25/9 @1917-2301\*, 15495, BSKSA, AR, Kuwaiti Citizens calling into station & letting their families back in Kuwait know they were OK (That part thanks to interpreter from 'Yemen' plus news in AR w/short piece w/George Bush & James Baker in EG. On 9/26 around 1500 heard BSKSA on 15490NF ex 15495 shadowing Iraq//21505(best) (bmm)

SOMALIA - Radio Mogadishu on 7198.2 at 0351 fading after 0400. (Al Quaglieri, NY via RCI's 'SWLD' on 23/9)

SUDAN - R. Omdurman w/EE to 1530-16. One day on 11632.1, next day 11631.1 (Roland Schulze, Germany in 'Fine Tuning' via RCI's 'SWLD' on 23/9)

SWEDEN - Radio Sweden EG Sked from 9/30: 0100 Eur and Asia on 9770, 1179 kHz; 0200 & 0330 NA on 11705, 9695; 1230 Australasia on 21570, 17740, 11715; 1400 Asia on 17740, 9765; 1530 NA on 21500, 17880; 1800 Eur, ME, Afr on 11900, 9655, 6065, 1179 kHz 1930 Eur and Africa on 7265, 6065 kHz; 2200 Eur and Africa on 6065, 1179 kHz 2330 SAM on 11705, 9695.

Also starting on 9/30, Estonian language broadcasts will be extended to 15 minutes. Start time is 2130 Estonian (presumably 1930 gmt) on 254 metres mediumwave, or 1179 kHz and on 49 metres shortwave or 5975 kHz. (WBI 21/9)

SWITZERLAND - Red Cross Broadcasting Service Sked to 2/91:

Europe: 11-1130 EG, 1130-12 FR, 12-1220 GG, 1120-1240 SP on 7210 (Suns: 28/10, 25/11, 30/12, 27/01, 24/02.

Europe: 17-1730 EG, 1730-18 FR, 18-1820 GG, 1820-1840 SP on 7210 (Mons: 29/10, 26/11, 31/12, 28/01, 25/02)

Note: From Australia to South America broadcasts on  
Mons and Thus: 29/10, 26/11, 31/12, 28/01, 25/02.

Australasia: 0740-0757 EG on 21695, 17670, 13685, 9560.  
Far East: 10-1057 on 21770, 17830, 15570, 13635 & 1310-1327(via  
Beijing) on 9620.  
South & SE Asia 1310-1327 on 21695, 17830, 15570, 13635, 11695(via  
Beijing)  
Near East and East Africa: 1510-1527 AR on 21630, 17830, 15430, 13685  
Africa: 1710-1727 PE/EG on 21770, 17830, 15525, 11955, 9885.  
South America: 2210-2227 PO on 15570, 12035, 9885, 9810.

Note: North and Central America Broadcasts are Tues: 30/10, 27/11,  
01/01, 29/01, 26/02 & Fri: 02/11, 30/11, 04/01, 01/02, 03/03.

North and Central America: 0110-0127 SP on 17730(via Brazil), 12035, 9885,  
9650, 6135, 6095, and 0310-0327 EG on 12035, 9885,  
9650, 6135.  
(via Karth Forth, IL)

TANZANIA - The external service of R. Tanzania is using 5985 kHz w/EG from  
1530-1915//9684 kHz.

The National Service of R. Tanzania also has been heard in the 49mb on  
6105 kHz on occasions around 1800, and this might be the same transmitter  
that uses 5985 on other days. (Richard Ginbey on "RN's" Media Network on 6/9  
via Mike Fern, Covina, CA)

THAILAND - Broadcasts for Thai workers in the Gulf expanded - Monitoring  
research 6-13 Sep 90.

The new Radio Thailand broadcast in Thai for workers in Saudi Arabia,  
Kuwait and the United Arab Emirates is broadcast daily at 15-16 gmt on  
11905, 9655, 4830 and 927 kHz. (WBI 21/9)

TRISTAN DA CUNHA - Edward Kisarek(SP?), New Jersey of SPEEDX received a  
letter posted in May saying that 'ZLE' 40 watts on 3290 has added a  
morning transmission. \*0709-0815, 1230-13, 16-17 Mon-Fri only. During the  
summer and winter, DX reception should be possible in the Americas. (Glenn  
Hauser on RCI's 'SW Listening Digest' 16/9)

UNITED ARAB EMIRATES - UAE Radio from Dubai was observed operating in  
progress on 21675 on 11/9 from approximately 10-15 gmt//21605 & 15435. On  
12/9, 21675 was observed from approximately 0800 gmt. The 21675 freq  
apparently replaces 17865.

Between 1/9 & 10/9, Radio Bagdad's General Service and Voice of the  
Masses Service have frequently been observed on 21675, a frequency  
formerly used by Radio Kuwait. (WBI 14/9)

13675NF, 1604, UAE Radio, Dubai, EG, M talking about Islam. At 1630  
announced these freqs in use: 21675, 21605, 15400, 15320, 13675(continued  
in AR after 1640 when EG ended on 21/9 (bmm)

UNITED KINGDOM - BFBS at 1330-14 moved to 15390(via Cyprus) ex 15195 as VOA  
took over 15195. (Ernie Behr, Kenora, Ontario via RCI's 'SWLD' on 23/9)

Benjamin Krepp, Watertown, MT sent two postings on the  
'INTERNET'/'USE NET' Bulletin Board.

/\* Written 10:58 pm Aug 13, 1990 by LANG@UNB.CA in  
inmet:rec.radio.shortwave \*/  
/\*-----"British Forces Broadcasting Service"-----\*/

The British Forces Broadcasting Service has begun its shortwave  
transmissions to Saudi Arabia and the Persian Gulf for British Forces on  
"Operation Grandby." I tuned in at 02:19 with a broadcast in progress on  
7125, 9640, and 13745 kHz. Reception was fairly good on 7125 with some  
c.w. QRM and on 13745. 9640 was very weak under heavy co-channel QRM.  
This transmission ended at 02:30 and presumably began at 02:00.  
Programming consisted of IDs, announcements to particular military groups,  
time checks, and pop music. The announcer stated that they were  
"broadcasting live from London." The second broadcast of the day is at  
09:30 to 10:00 on announced frequencies of 15205, 17695, and frequencies  
to be announced in the 09:30 broadcast.

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/\* End of text from inet:rec.radio.shortwave \*/

/\* Written 2:02 pm Aug 12, 1990 by mathur@amelia.nas.nasa.gov in  
inet:rec.rad

/\*-----"BFBS programs to the Gulf area"-----\*/

Heard on the Beeb that the British Forces Broadcasting Service will be starting special half hour broadcasts for the forces in the Gulf area beginning 0230 (it's actually at 02-bmm) on UTC Monday and also between 0930-1000 and 1330-1400. The freqs are 7125, 9640 and 13745. The first program is supposed to be a music request kind of thing but the time seems to be quite odd since it would mean about 5:30 am local time. They also gave an address of BFPO 786.

Does the AFRTS have any similar plans?

Sanjay Mathur

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or nl.srm@isumvs.iastate.edu

/\*a End of text from inet:rec.radio.shortwave \*/

(Ben, SW Bulletins always talk about 'Computer Use' in the hobby. Thank you for sending me an actual posting so people that do not have access to this technology can see what it looks like - bmm)

13745, 02-0230, British Forces Broadcasting Service, Pop music program, "The Breakfast Show" with DJ Rory Higgins with greetings and dedications (such as HMS York and Battle A), many ID's, time checks for local gulf time (UTC +3 hrs). Address: "BFBS1, BFPO 786", S/off ID: "This is BFBS, The British Forces Broadcasting Service. Our next transmission from London will be at 0930-10 on 15205, 17695 and 21735 Mhz. These programs from BFBS for the British Forces in Saudi Arabia and the Gulf, on Operation Grandby." (Thanks to Fine Tuning). Noted on 3/9 w/fair signal. (Ron Howard, Carmel, CA)

The BBC, from 30/9, is listed for the following:

22mb usage: 13660(Rampisham 500 kW) - 1250-1615 AA  
13745(Rampisham 500 kW) - 10-15 HH/PO(non daily), 15-1530 PO,  
1615-2000 AA

11mb usage: 25870 (Daventry 300 kW) - 12-1245 FR

Woofferton: This site will be used additionally for a BBC program via a single 300 kW transmitter: 9915 22-0530 EG; 17855 1130-12 RS (non daily); 17875 1245-13 GK (non daily).

North American Relays: Sackville: 5965 11-1130 EE, 1130-12 EE (non-daily); 6175 22-0330 EG; 9515 11-1330 EG, 1330-14 EG.(non-daily); 9590 22-0030 EG; 11775 15-16 EG (non daily); 16-1745 EG; 15280 16-1745 EG, 15-16 EE (non-daily)

Delano: 19515 03-0430 SP; 9590 0030-0230 EG; 9690 11-1130 SP; 13-1330 SP; 11820 03-0430 SP; 15315 13-1330 SP.

Greenville: 17715 21-2115 EG(non-daily), 2115-2130 Caribbean Report(non daily).

Bethany: 117850 13-1330 SP

Antigua: 5975 0430-0730 EG, 2115-2130 EG (non-daily), 2115-2130 Caribbean Report (non-daily); 6110 0000-02 SP, 02-0215 EG, 03-0430 SP; 6195 11-1330 EG, 1330-14 EG(non-daily); 9640 05-0815 EG; 11765 2230-23 PT, 23-2330 EG by Radio; 15220 11-1330 EG, 1330-14 EG (non-daily); 117760 20-2115 EG. (Bob Padula & Don Rhodes via 'Shortwave Station News' in ADXN 90/9)

UNITED STATES - World Wide Christian Radio, Nashville, TN is now giving air-time to "Radio New York International" on Sunday nights (01-05) in NA on 7520 since 17/9. Radio Caroline, it was announced, "hopefully we'll be preceding you guys with 3 hours of Radio Caroline on that frequency and the preceding frequency." No start date yet. On 24/9 gave this new address for QSLs, etc: RNI, PO Box 270, Flushing, NY 11352. (Congrats to WWCR) - (bmm)

U.S.S.R. - Radio Moscow to reduce its Swahili service. Radio Moscow in Swahili 11730 gmt 14 Sep 90. From 30th September the Swahili Service of Radio Moscow will start implementing a new schedule for its broadcasts. The evening programme will be totally cancelled. The night programme will start at 2000 and end at 2200 (17-19 gmt) in the 16 and 25 metre bands. (WBI 21/9)

VOA may assist Radio Vilnius in maintaining overseas broadcasting - Radio Vilnius in English 2130 gmt 15 Sep 90.

Text of report - Earlier this week a report noted that a representative of Radio Vilnius recently attended a conference of international broadcasters in Washington, sponsored by the Voice of America. Among other issues she spoke at the conference about new draft laws under consideration by Moscow which in fact would prohibit broadcasts by republic stations into regions other than their immediate area. For Radio Vilnius this would limit foreign broadcasts to Poland and perhaps Scandinavia.

According to the Radio Vilnius representative, Voice of America is willing to assist Radio Vilnius in its effort to find a source of transmission outside the Soviet Union. She noted that one American businessman has in principle agreed with Radio Moscow to broadcast Moscow programming via 350 stations across the United States, beginning some time next year. He expressed interest in supplying Radio Vilnius with a similar service for United States listeners. (WBI 21/9)

VATICAN STATE - Vatican Radio reorganises and increases broadcasts to the USSR - Monitoring research 17-19 Sep 90.

Vatican Radio announced in its Lithuanian service on 17th September that from 1st October broadcasts in that language would change times to 2050 and 0700 Lithuanian time (1850 and 0500 gmt) and increase in duration from 15 to 20 minutes.

An announcement in Vatican Radio's Ukrainian service on 18th September also stated that broadcasts in that language would similarly be increased in duration. They would be heard from 30th September at 1850 and 0500 Central European Time (1750 and 0400 gmt) on 9755, 7365, and 7180.

Other Vatican Radio broadcasts to the USSR, in Armenian, Belorussian, Latvian and Russian, are likely to be affected by these changes. (WBI 21/9)

VIETNAM - 5920NF, ex 5915, 1405, Hanoi, VV, W talk & Viet vocal by M at 1413/10059 on 9/21. First heard on 20/9. ILG lists Guangxi PBS in VV here, so always check 10059 besides checking 5050 for Guangxi which is in Vietnamese. (bmm) 6616, Bac Thai, VV talks/folk music 1235 on 14/8 (David Vitak, SA via 'Shortwave Trail' in ARDXC 90/9) Note: No mention of this being a NF. Cao Bang was last reported here by Isao Ugusa to Radio Japan DX Corner on 20/5, who said back on 26/4 he heard Bac Thai on 6585. Ralph Famularo, Japan & I've also been hearing a station on 6616 but No ID heard. S/off is approximately 1400 though. (bmm)

YUGOSLAVIA - Radio Yugoslavia's EG Sked from 30/9 as announced on their 'Radio Ham's Corner' program on 23/9: from 13-1330 9720 Far East, 21715 NA, 17725 Australia, 21635 S.Asia; 1930-20 7165 S.Asia, 15165 SE & Africa, 15165 W. Eur, and 17840 SW Afr; 22-2245 5995 NW Eur & 15165 S.Afr & extra freq for Europe will 6100; 01-0145 9620, 11735 NA. (bmm)

ZAMBIA - R. Zambia is back on 3346 kHz with their General Service in the evenings UTC. (Richard Ginbey on "RN's" Media Network 6/9 via Mike Fern, Covina, CA who says via WRTH 90, possibly 1530-2205.)

CLANDESTINE(S) - Clandestine Stations Directed To China: - written by Tetsuya Kondo of 'Asian Broadcasting Institute' for Radio Japan DX Corner and thanks to Rika Kobayashi, Producer and Presenter of Radio Japan DX Corner for transcript and Tetsuya Kondo, Asian Broadcasting Institute for tape.

The first clandestine broadcasts aimed at China went on the air from Taiwan in 1966, the year that the Cultural Revolution began. This was explicitly aimed at opposing the Cultural Revolution. Ever since, a series of clandestine stations has been actively attacking the Chinese government.

The clandestine stations of Taiwan have passed through many names and forms, owing to the need of the times. At present, we know that they

include the Voice of Democracy, Radio Democracy and the Voice of June the 4th. In spite of the similarity of their names, the Voice of Democracy and Radio Democracy are two separate stations. The Voice of June the 4th is transmitted by way of a transmitter of Taiwan's Central Broadcasting System.

Today, in the first of a two-part series, we look at clandestine stations directed at the Chinese Continent which have been on the air during and after the upheaval at Tianamen Square in Beijing.

While China's university students and their supporters were struggling for democracy in Tianamen Square in last June, four clandestine stations maintained their service to the Chinese public from Taiwan. There were the Voice of the Liberation Army, Radio October Storm, Pseudo Central People's Broadcasting Station and the Voice of Chinese People.

Of these four, the Voice of the Liberation Army was on the air on 7.185 mHz and disguised itself as an official broadcasting station of the Chinese People's Liberation Army. Pseudo Central People's Broadcasting Station on 7.525 mHz also disguised itself. In this case as the Central People's Broadcasting Station which was transmitted all over China from Beijing. Radio October Storm on 9.270 mHz, by contrast, had remained a strong supporter of Maoist-thinking ever since its founding in 1978, and kept on urging the Chinese people not to lean to the right but to return to the true path of Maoism.

As a matter of fact, these shortwave stations were all run by a single organization which aired their programs on different days of the week. Further, it is said that the Voice of Chinese People, a mediumwave broadcasting station 1235 kHz, was also owned by the same organization.

The three shortwave stations and the one mediumwave station may have sounded quite different from each other, but all had one thing in common. There was criticism of the Chinese government of the time, including its leader Deng Xiaoping.

Since the bloodshed in Tianamen Square, many Chinese leaders have expressed their opposition to the liberalization of their country and also a renewed interest in Maoism. Either as a result of its broadcasts or by chance, China has actually been modifying its policies along the lines insisted upon by Radio October Storm.

Today, however, this and the two other shortwave stations as well as the one mediumwave station can no longer be heard. The Voice of the Liberation Army, Radio October Storm and Pseudo Central People's Broadcasting Station have not been heard since the middle of last June, and the Voice of the Chinese People since early last August.

While the old stations have ceased operation one by one, one new clandestine station made its debut in July last year. This is called Radio Democracy.

As its name indicates, Radio Democracy appeals for democracy in China and criticizes the present leaders of the country. However, it does not mention many of the things that lots of Chinese are thought to be interested in, such as the views of foreign activists for democracy and how they try to achieve their goals. Instead, it just keeps on criticizing the present leaders of China. Therefore, Radio Democracy does not seem to be directly participating in the Chinese people's struggle for democracy and freedom which arose with the death of the liberal-minded reformer Hu Yaobang and later turned into a bloodbath.

By the way, it is thought that Radio Democracy is run by the same organization which ran the four clandestine stations on mediumwave and shortwave until last year. Perhaps, the organization closed down the four previous stations to focus all its efforts on Radio Democracy, to cope with the changing conditions on the Mainland.

Both the opening and the ending music of Radio Democracy are selected from a suite that's popular in China, "The Yellow River Cantata". The part used for the ending music is called "Defend the Yellow River".

Radio Democracy can be heard daily except on Tuesdays and Wednesdays. A roughly ten-minute transmission is broadcast two to five times during the period 1000 and 1600 UTC.

The Voice of Democracy - That station was heard only from August the 12th to the 14th. Each of its transmissions lasted for 43 minutes with Miss Ling as an anchor. In spite of the length of the transmission, it included only three separate talks of five minutes, combined with Chinese popular music. All three of the talks were directed to the commanders and soldiers of the Chinese People's Liberation Army and appealed for their

democratization.

Although the station was called the "Voice of Democracy", it was clear from its contents that it did not follow the ideology of the Chinese activists for democracy or that normally attached to the Goddess of Democracy. However, it is evident from the kind of music played and the intonation of its announcer that the programs were produced in Taiwan.

The Voice of Democracy ends its transmissions with the song "The Successor of the Dragon". This song, written and sung by a Taiwanese singer Hou Dejian, describes feelings of nostalgia for the Chinese Continent. It was quite a hit not only in China but also in many countries of Southeast Asia early in the 1980's.

The singer, Hou Dejian, is known to be deeply concerned with the recent political movements of China. He fled from Taiwan to China in 1983, just after his hit. He was one of the leaders of the mass protest for democracy as a hunger striker in Tiananmen Square. However, he fled back to Taiwan in June this year -- only one year after their protest. He stated in the news conference that he could no longer stay in China as it is today. (Ed note: (bmm) - Radio Beijing interviewed Hou Dejian after the June demonstration after he surfaced from hiding, I believe, in the Australian embassy in Beijing. He agreed to do a book on behalf of the Chinese government concerning the hunger strike in Tiananmen Square. I wrote to Radio Beijing about it and 'Li Fang' in audience relations said she would help me get it, but it would be written in Chinese. I asked her to send it to me anyway. Well now the book will not be written to support the Chinese Government as Hou Dejian has fled to Taiwan, I believe, only after his wife (a prominent Chinese singer) had made it to Australia.)

By the way, the Voice of Democracy was heard on 8.057 MHz for 43 minutes each time from 1200, 1400, 1600, 2000 and 2200 UTC, but only for the three days from August the 12th to the 14th.

It is not known for sure why the station disappeared so soon. It is possible, however, that the station was only making test broadcasts in August and that regular broadcasts will commence in the near future. Anyway, it is worth keeping a close eye on 8.057 MHz, the frequency on which the Voice of Democracy was heard for those three days.

Radio Democratic Kampuchea on 11795NF at 1848 in Cambodian w/ M & W announcer & music t/1856\* ex 11760 (which I just heard here on 2/9) on 21/9 (bmm)

Radio Siboney - SP to Angola on 6100 kHz from 19-20. (Richard Ginbey on "RN's" Media Network 6/9 via Mike Fern, Covina, CA)

Radio SPLA - Sudanese Clandestine heard on 11710 at 1358 announcing an EG and AR program would follow at 1400 on 31 meters. (Al Quaglieri, NY via RCI's 'SWLD' on 23/9)

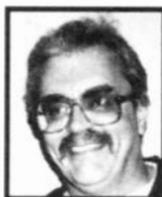
Radio Truth - Broadcasts hostile material to the government of Zimbabwe from a transmitter believed to be in S.Afr. has not been heard since 11th September. On that date, the broadcast in English was observed as normal on 5015 kHz at 0430 gmt. (WBI 21/9). Al Quaglieri, NY via "RCI's" SWLD on 23/9 heard it on 5015 at 0725 on 9/11.

Voice of the Resistance of the Black Cockerel (Portuguese: A Voz da Resistencia do Galo Negro) - Supposedly broadcasting from Jamba in southern Angola is using three SW transmitters these days. The current schedule is: 05-0830 on 6135, 4880, 7125; 11-1430 on 9850, 4880, 7125. 18-20 on 7100, 4880, 7125. 7145, 9700, 11830 kHz have been discontinued. Before settling on 4880, tests were also carried out on 11665 kHz. (Note: Al Quaglieri, NY & Ernie Behr, Kenora, Ontario have heard them on 9770.1 opening around 0456 UTC via RCI's 'SWLD' on 9/23).

The International Service of the Voice of the Resistance of the Black Cockerel is on the air Tuesdays, Thursdays and Sundays from 2015-2115 on 4880, 7100 & 7125 kHz., with half-hour programs in EG and FR. (He played an EG announcement, which makes it clear the word "Cockerel" originates with the UNITA station and is not a foreign translator's euphemism. - Fern) (Richard Ginbey on "RN's" Media Network 6/9 via Mike Fern, Covina, CA)

PIRATE RADIO - 7389v, 0510 tune-in, KMUD, said broadcasting in Northern California w/this address for QSLs: PO Box 5074, Hilo, Hawaii 96720. ID was as 'This is KMUD then spelled it out & said "Free Radio for the West Coast in Northern California" & s/off at 0525\* on 9/25 (bmm) 73's, Bruce

# QSL Reports



**Sam Barto**  
47 Prospect Place  
Bristol, CT 06010

**SWL**  
via Gordon Darling  
DE  
**RADIO**  
**ABIDJAN**

Merci pour votre report  
CONCERNANT NOTRE EMISSION  
R.S. - P.S. 710

Heure GMT

A - 01.00-01.30  
 B - 01.30-02.00  
 C - 02.00-02.30  
 D - 02.30-03.00  
 E - 03.00-03.30  
 F - 03.30-04.00  
 G - 04.00-04.30  
 H - 04.30-05.00  
 I - 05.00-05.30  
 J - 05.30-06.00  
 K - 06.00-06.30  
 L - 06.30-07.00  
 M - 07.00-07.30  
 N - 07.30-08.00  
 O - 08.00-08.30  
 P - 08.30-09.00  
 Q - 09.00-09.30  
 R - 09.30-10.00  
 S - 10.00-10.30  
 T - 10.30-11.00  
 U - 11.00-11.30  
 V - 11.30-12.00  
 W - 12.00-12.30  
 X - 12.30-13.00  
 Y - 13.00-13.30  
 Z - 13.30-14.00  
 AA - 14.00-14.30  
 AB - 14.30-15.00  
 AC - 15.00-15.30  
 AD - 15.30-16.00  
 AE - 16.00-16.30  
 AF - 16.30-17.00  
 AG - 17.00-17.30  
 AH - 17.30-18.00  
 AI - 18.00-18.30  
 AJ - 18.30-19.00  
 AK - 19.00-19.30  
 AL - 19.30-20.00  
 AM - 20.00-20.30  
 AN - 20.30-21.00  
 AO - 21.00-21.30  
 AP - 21.30-22.00  
 AQ - 22.00-22.30  
 AR - 22.30-23.00  
 AS - 23.00-23.30  
 AT - 23.30-24.00  
 AU - 24.00-24.30  
 AV - 24.30-25.00  
 AW - 25.00-25.30  
 AX - 25.30-26.00  
 AY - 26.00-26.30  
 AZ - 26.30-27.00  
 BA - 27.00-27.30  
 BB - 27.30-28.00  
 BC - 28.00-28.30  
 BD - 28.30-29.00  
 BE - 29.00-29.30  
 BF - 29.30-30.00  
 BG - 30.00-30.30  
 BH - 30.30-31.00  
 BI - 31.00-31.30  
 BJ - 31.30-32.00  
 BK - 32.00-32.30  
 BL - 32.30-33.00  
 BM - 33.00-33.30  
 BN - 33.30-34.00  
 BO - 34.00-34.30  
 BP - 34.30-35.00  
 BQ - 35.00-35.30  
 BR - 35.30-36.00  
 BS - 36.00-36.30  
 BT - 36.30-37.00  
 BU - 37.00-37.30  
 BV - 37.30-38.00  
 BW - 38.00-38.30  
 BX - 38.30-39.00  
 BY - 39.00-39.30  
 BZ - 39.30-40.00  
 CA - 40.00-40.30  
 CB - 40.30-41.00  
 CC - 41.00-41.30  
 CD - 41.30-42.00  
 CE - 42.00-42.30  
 CF - 42.30-43.00  
 CG - 43.00-43.30  
 CH - 43.30-44.00  
 CI - 44.00-44.30  
 CJ - 44.30-45.00  
 CK - 45.00-45.30  
 CL - 45.30-46.00  
 CM - 46.00-46.30  
 CN - 46.30-47.00  
 CO - 47.00-47.30  
 CP - 47.30-48.00  
 CQ - 48.00-48.30  
 CR - 48.30-49.00  
 CS - 49.00-49.30  
 CT - 49.30-50.00  
 CU - 50.00-50.30  
 CV - 50.30-51.00  
 CW - 51.00-51.30  
 CX - 51.30-52.00  
 CY - 52.00-52.30  
 CZ - 52.30-53.00  
 CA - 53.00-53.30  
 CB - 53.30-54.00  
 CC - 54.00-54.30  
 CD - 54.30-55.00  
 CE - 55.00-55.30  
 CF - 55.30-56.00  
 CG - 56.00-56.30  
 CH - 56.30-57.00  
 CI - 57.00-57.30  
 CJ - 57.30-58.00  
 CK - 58.00-58.30  
 CL - 58.30-59.00  
 CM - 59.00-59.30  
 CN - 59.30-60.00  
 CO - 60.00-60.30  
 CP - 60.30-61.00  
 CQ - 61.00-61.30  
 CR - 61.30-62.00  
 CS - 62.00-62.30  
 CT - 62.30-63.00  
 CU - 63.00-63.30  
 CV - 63.30-64.00  
 CW - 64.00-64.30  
 CX - 64.30-65.00  
 CY - 65.00-65.30  
 CZ - 65.30-66.00  
 CA - 66.00-66.30  
 CB - 66.30-67.00  
 CC - 67.00-67.30  
 CD - 67.30-68.00  
 CE - 68.00-68.30  
 CF - 68.30-69.00  
 CG - 69.00-69.30  
 CH - 69.30-70.00  
 CI - 70.00-70.30  
 CJ - 70.30-71.00  
 CK - 71.00-71.30  
 CL - 71.30-72.00  
 CM - 72.00-72.30  
 CN - 72.30-73.00  
 CO - 73.00-73.30  
 CP - 73.30-74.00  
 CQ - 74.00-74.30  
 CR - 74.30-75.00  
 CS - 75.00-75.30  
 CT - 75.30-76.00  
 CU - 76.00-76.30  
 CV - 76.30-77.00  
 CW - 77.00-77.30  
 CX - 77.30-78.00  
 CY - 78.00-78.30  
 CZ - 78.30-79.00  
 CA - 79.00-79.30  
 CB - 79.30-80.00  
 CC - 80.00-80.30  
 CD - 80.30-81.00  
 CE - 81.00-81.30  
 CF - 81.30-82.00  
 CG - 82.00-82.30  
 CH - 82.30-83.00  
 CI - 83.00-83.30  
 CJ - 83.30-84.00  
 CK - 84.00-84.30  
 CL - 84.30-85.00  
 CM - 85.00-85.30  
 CN - 85.30-86.00  
 CO - 86.00-86.30  
 CP - 86.30-87.00  
 CQ - 87.00-87.30  
 CR - 87.30-88.00  
 CS - 88.00-88.30  
 CT - 88.30-89.00  
 CU - 89.00-89.30  
 CV - 89.30-90.00  
 CW - 90.00-90.30  
 CX - 90.30-91.00  
 CY - 91.00-91.30  
 CZ - 91.30-92.00  
 CA - 92.00-92.30  
 CB - 92.30-93.00  
 CC - 93.00-93.30  
 CD - 93.30-94.00  
 CE - 94.00-94.30  
 CF - 94.30-95.00  
 CG - 95.00-95.30  
 CH - 95.30-96.00  
 CI - 96.00-96.30  
 CJ - 96.30-97.00  
 CK - 97.00-97.30  
 CL - 97.30-98.00  
 CM - 98.00-98.30  
 CN - 98.30-99.00  
 CO - 99.00-99.30  
 CP - 99.30-100.00

Note: QSLs seem to be down a bit this month. There are probably many of our younger members on their way back to college or starting in their high school studies. Contributions should pick up as the conditions improve DX-wise....Sam.

On to the QSLs.....

- ALASKA:** KNLS 11715 f/d cd. w/ ltr. in 37 ds. for ms. Also rcvd. schedule, personal ltr. and station pennant. v/s Beverly Jones.(Butcher-MA).11820 f/d cd. in 6 wks.(Craig-TX).
- ASCENSION ISLAND:** Voice of America 21490 f/d "Crosley Transmitters" cd. in 15 ds. after a f/up rpt.(D'Angelo-PA).
- ASIATIC RUSSIA:** Radio Moscow 15535 via Kenga f/d "Council of Ministers" cd. in 7 wks. w/ schedule.(Butcher-MA). Komsomolsk-on-Amur f/d "Bolshoi Theatre" cd. w/ stickers in 57 ds.(Butcher-MA).
- AUSTRALIA:** Radio Australia 6020 via Brandon VLH f/d personal ltr. in 38 ds. for \$1.00. This was after 3 tries. Also rcvd. schedule and station stickers. (Palmerheim-MN). 17795 via Shepparton p/d ltr. w/ cd., schedule & brochures in 27 ds. (Kurrasch-NY). f/d ltr. w/ "Wilderness" cd. and a schedule in 18 ds. (Backlund).
- BELGIUM:** BRT 13675 f/d "Maddona with Child" cd. in 8 wks. w/ schedule.(Butcher-MA).
- BONAIRE:** Trans World Radio 9535 f/d cd. in 19 ds. Spice Islands brochure was rcvd. v/s Sally Rork.(Paustian). f/d "Divi-Divi Tree" cd. w/ schedule stickers, personal note and travel information in 21 ds. for 2 IRCs.(Nagengast-MN). 11815 same cd. in 23 ds. w/ schedule.(MacHarg). Radio Nederland 6165 f/d "Space Telescope" cd. w/ sticker and a flag-type station pennant and 2 postcards in 32 ds.(Nagengast-MN).
- BRASIL:** Swiss Radio International 17730 via Brasilia f/d cd. in 35 ds. for 1 IRC. (Laird).
- BYELORUSSIAN SSR:** Radio Moscow 15315 via Minsk f/d cd. in 97 ds.(Paszkievicz)
- CAMEROON:** Radio Buea 3970 f/d plain white cd. in 3 mo. for \$1.00.(Lobdell).
- CANADA:** Radio Japan 5960 via Radio Canada International - Sackville n/d cd. of "Tokyo Bay" w/ report form and newsletter in 35 ds.(Nagengast-MN).

- CANADA (Pirate):** CPBN Fly By \* Night Radio 7419 f/d pink and red cd. in 1 mo. for ms. (Palmerheim-MN).
- CHINA, PEOPLES REP. OP:** Radio Beijing 9690 f/d "Temple of Heaven" cd. in 23 ds. w/ 2 paper cuts. (Levison-PA)... Could this of been their relay from Spain????...Sam.
- Chinese Peoples Broadcasting Station 3290 via Beijing f/d cd.[new style] in 3 mo. (Barto-CT).

STANDARD FREQUENCY AND TIME SIGNAL RADIO STATION

via  
Mike  
Hardester

**HILDA**

**COLOMBIA:** La Voz del Anaruco 4895.1 p/d ltr. in 7 mo. for a SP rpt. Also rcvd. two station pennants. (Terrence). La Voz del Cin-aruco 4865 p/d form ltr. in 283 ds. for a SP/EG rpt. and \$1.00. Also rcvd. station pennants and other information. (Weber-OH).

**COSTA RICA:** Radio Lira Internacional

TIAMÉ 9725 f/d "Coat of Arms" cd. in 54 ds. w/ schedule and sticker. v/s David L. Gregory. (Palmerheim-MN). f/d cd. w/ ltr., schedule and stickers in 7 wks. for \$1.00. (Kohlbrener-PA).

**CZECHOSLOVAKIA:** Radio Praha 5930 and 7345 p/d

"S. Bohemian Architecture in Jiretica" cd. in 47 ds. w/ station schedule. (Peake-IA).

**DUBAI:** UAE Radio and Television Dubai 21605 f/d

"Great Circle Map" cd. w/ glossy paper pennant and schedule in 35 ds. (Selevan-NY). f/d cd. w/ schedule in 30 ds. (Backlund).

**ECUADOR:** HCJB 25950 (USB) f/d "Mountains of Ecuador" cd. in 46 ds. for 1 IRC. Station schedule was rcvd. (Palmerheim-MN). 15155 f/d "Cotopaxi Volcano" cd. w/ schedule, report forms, postcards and other goodies in 50 ds. for 2 IRCs. (Name?). f/d cd. w/ religious information in 65 ds. (Paustian-NY). 15270 f/d "Ruco Pichincha" cd. in 17 ds. w/ postcards and report forms. v/s Glen Volkhardt. (MacHarg). 17890 and 15155 f/d cd. in 45 ds. (Peake-IA). Escuelas Radiofonicas Populares 5012 p/d ltr. in 60 ds. after a f/up rpt. in SP. v/s Juan Perez S. (Paszkiewicz-WI).

**ENGLAND:** Voice of America 7200 via Woofferton f/d cd. in 14 ds. after 4 f/up rpts. (Name?)

**EUROPEAN RUSSIA:** Radio Moscow

11630 via Moscow f/d "Friendship Fountain" cd. in 7 wks. w/ schedule. (Butcher-MA).

**EURO PIRATE:** Radio Marabu 15710

\* f/d cd. w/ ltr. in 36 ds. for 1 IRC. Transmitter maybe in Wuppertal Also rcvd. station history and photo of station equipment. (D'Angelo-PA).

**GEORGIAN SSR:** Radio Moscow 21725

via Tbilisi f/d cd. w/ schedule in 75 ds. (Turnick-PA).

**GERMAN DEMOCRATIC REP:** Radio Berlin International 13610 f/d

cd. w/ schedule in 14 ds. (Kurasch-NY). f/d "Discone Antenna" cd. w/ schedule in 53 ds. (Levison-PA). f/d cd. in 40 ds. w/ postcards. (Palmerheim-MN). 13770 p/d "Blaupunkt Superheterodyne Radio" cd. in 28 ds. (Peake-IA). 15240 f/d "Grube aus Gera" cd. in 39 ds. (Peake). Y3S Time Signal Station 4525 p/d cd. in 182 ds. (D'Angelo-PA). p/d "Schematic time/code Pulses" cd. in 64 ds. (Paustian-NY)...I guess we won't be seeing this country name used too much more...Sam.

**GERMANY, FEDERAL REP. OF:** Deutsche Welle 12105 p/d "Satellite" cd. in 45

ds. (Paustian-NY). Voice of America 3980 via Munich f/d cd. in 14 ds. after 4 f/up rpts. (Turnick-PA).

**GREECE:** Voice of America 15205 via Kavala f/d cd. in 15 ds. after 4 f/up rpts. (Turnick-PA).

**GUAM:** KTWR 11805 f/d cd. in 16 ds. for 1 IRC. (Laird).

**HONG KONG:** BBC East Asia Relay Station 21715 f/d "Night View of Hong Kong and Kowloon" cd. in 19 ds. for 2 IRCs. (Cichorek).

**HUNGARY:** Radio Budapest 11910 f/d "Popular Costume - Hotel Hilton" cd. in 29 ds. w/ sticker. (Levison-PA). 9835 f/d cd. in 45 ds. (Levison-PA).



date 5/4/78  
 time 10:00 AM  
 frequency 6.015 MHz  
 mode FM

correct reception  
 report from  
 National Geographic  
 Magazine Dept  
 1127 N  
 WASH DC  
 verified by  
 Jack Hill  
 New Britain  
 Station Manager

**QSL**  
 RADIO STEREA INTERNATIONAL

Scottish  
 Free Radio  
 on shortwave

**Radio Confusion**  
 via Druzack  
 indie sounds!

Date: 16 April 1978  
 Time: 1056 UTC  
 Freq: 6.308 MHz

FREE RADIO  
 FROM ENGLAND

**INDIA:** All India Radio 7412 f/d "Ancient Chorten at Changspa" cd. in 41 ds. (Paustian-NY). 15020 and 15050 same cd. in 36 ds. (Butcher-MA).

**ISRAEL:** KOL 15640 f/d cd. in 22 ds. (Backlund).

**JORDAN:** Radio Jordan 13655 f/d cd. in 112 ds. for ms. (Turnick-PA).

**KIRGHZIA SSR:** Radio Moscow 17775 via Frunze f/d "Moskva River near Kremlin" cd. w/ schedule in 57 ds. (Butcher-MA).

**LUXEMBOURG:** Radio Luxembourg

15350 p/d "Antenna Masts and Crest" cd. in 20 ds. for 1 IRC. (Peake-IA). 6090 same type cd. w/ f/d and 6 stickers in 27 ds. (Kurrasch-NY).

**MALAGASY REPUBLIC:** Radio Nederland 15560 f/d cd. in 56 ds. (Turnick-PA).

**MALI:** Radio Beijing 15100 via Bamako n/d "Japanese Deer" cd. in 19 ds. w/ paper cuts and a personal note stating that the site was Mali. (Peake-IA). f/d cd. in 15 ds. for 1 IRC. (Laird).

**MONACO:** Trans World Radio 9480 via Mt. Agel standard gray and blue cd. in 39 ds. w/ schedules. (Peake-IA).

**NEW ZEALAND:** Radio New Zealand International 17675 f/d "Mt. Taranaki" cd. in 19 ds. (Backlund). f/d cd. w/ schedule and paper pennant in 21 ds. for 3 IRCs. (Kurrasch-NY). p/d cd. in 30 ds. w/ yellow paper pennant and schedule. (Selevan-NY). 17680 f/d "Lake Hayes" cd. w/ pennant and schedule in 44 ds. for 3 IRCs. (Nagengast-MN).

**PERU:** Radio Cora OAZ4N 4914.6 p/d personal ltr. in 18 ds. for a SP rpt.

## RADIO AFRICA

THANK YOU FOR YOUR RECEPTION REPORT OF  
DATE July 22, 1980  
TIME 22:25-23:58 UTC via Richard D'Angelo  
FREQUENCY 7189 kHz

RADIO AFRICA BROADCASTS EVERY DAY FROM 6:00 PM  
TO 11:00 PM LOCAL TIME IN BATA (1700-2200 UTC).

FREQUENCY FROM MAY 14, 1969 ONWARDS 7190 KHZ 41 METERS

LISTEN ALSO TO RADIO EAST AFRICA, 9583 KHZ 31 METERS,  
0500-1400 UTC SATURDAY A SUNDAY

FOR MORE INFORMATION AND A PROGRAM SCHEDULE  
PLEASE WRITE

RADIO AFRICA  
10201 TORRE AVE, SUITE 120  
CUPERTINO, CALIF 95014 USA

**PORTUGAL:** Radio Portugal International 15250 f/d "Sailing Ship" cd. w/ schedule and sticker in 2 mo. (Barhydt-OR). 9600 same cd. w/ schedule and stickers in 2 mo. for \$1.00. (Kohlbrenner-PA).

**RIO MUNI:** Radio Africa 7188.8 f/d cd. in 12 ds. for ms. Also rcvd. station schedule. (Hart-FL). 7189 f/d cd. in 14 ds. w/ schedule. (D'Angelo-PA).

**ROMANIA:** Radio Romania International 5990 f/d cd. in 152 ds. (Turnick-PA).

**SAIPAN:** KHBI 9465 f/d cd. in 62 ds. (MacHarg). same type cd. in 26 ds. w/ schedule, (Peake-IA).

Q. S. L. CARD.



NATIONAL BROADCASTING  
AUTHORITY (Research Wing)  
NSA HOUSE, BANHANG AVENUE  
DHAKA BANGLADESH.

Dear Mr. Edward J. Clachrok  
Thank you very much for your reception report  
of 5-3-89 we are pleased to learn that the  
site on you heard is Radio Bangladesh operating on  
11510 KHz. (1980) 830-1900 UTC.

*A. Faridi*  
Head of Broadcasting Authority  
(Research Wing)  
NSA House, Shohbagh, Dhaka  
Bangladesh

Stamp

PLACE  
STAMP  
HERE

Mr. Edward J. Clachrok  
82 Rodney Ave  
NJ 08873  
U.S.A.

**PHILIPPINES:** Far East Broadcasting

• Corporation 9800 via Iba/Zambales f/d "FEBC Recording Studios" cd. w/ transmitter site in 85 ds. for 1 IRC. v/s Mrs. Anne Yap. (Butcher).

• Radio Veritas Asia 15325 f/d cd., w/ schedule and pennant in 632 ds. and 96 ds. after second f/up rpt. (Darling-PNG). Radio Pilipinas DUR2 9578 p/d personal ltr. in 43 ds. for \$1.00. This was after 4 f/up rpts. on a 1982 reception. v/s Jose Q. Borromeo, Chief Engineer. (Palmerheim-WA).

**PORTUGAL:** Radio Portugal International 15250 f/d "Sailing Ship" cd. w/ schedule and sticker in 2 mo. (Barhydt-OR). 9600 same cd. w/ schedule and stickers in 2 mo. for \$1.00. (Kohlbrenner-PA).

**RIO MUNI:** Radio Africa 7188.8 f/d cd. in 12 ds. for ms. Also rcvd. station schedule. (Hart-FL). 7189 f/d cd. in 14 ds. w/ schedule. (D'Angelo-PA).

**ROMANIA:** Radio Romania International 5990 f/d cd. in 152 ds. (Turnick-PA).

**SAIPAN:** KHBI 9465 f/d cd. in 62 ds. (MacHarg). same type cd. in 26 ds. w/ schedule, (Peake-IA).

**SOLOMON ISLANDS:** SIBC 9545 f/d cd. in 15 wks. for 3 IRCs. (Klinck).

**SPAIN:** Radio Exterior de Espana 11880 f/d "Street Scene" cd. w/ pennant, schedule and sticker in 2 mo. (Barhydt-OR).

**SRI LANKA:** Deutsche Welle 15105 f/d "Transmitter Site" cd. in 40 ds. (Laird).

**SWEDEN:** Radio Sweden International 11705 f/d "Malmo" cd. in 3 wks. w/ schedule. (Barhydt-OR).

**SWITZERLAND:** Swiss Radio International 6135 f/d cd. in 26 ds. (Backlund).

CP 177

RADIO "NACIONAL" HUANUKU  
Distrito Miraflores, Huancayo, Depto. Pasco No. 1  
Calle 1/61  
GRUPO - 802/714

GRACIAS  
Por su audicion

000 ORIGINAL - 01 EN SUZUKI 01 010 010

Atento a todas las solicitudes de informacion que nos lleguen desde  
cualquier parte por medio de las direcciones de correo que estan en el  
encabezado de esta tarjeta, para que se contesten por el correspondiente  
de las oficinas centralizadas en Lima, P. O. Box 1000, Lima, Peru.

Attn: Radio 8 or 800

QSL N.  
VERIFICATION CARD

Confirmacion que el dia 22-07-80  
a las 22:25-23:58 UTC recibimos  
una CP177 de Radio Africa  
de Huanuku, Peru en 7189 kHz.  
con un mensaje de saludo.



**SWITZERLAND:** Swiss Radio International 6135, 6095, 12035, 9885 and 9650 f/d cd. w/ schedule in 19 ds.(Hart-FL).

**TURKEY:** Voice of Turkey 9445 f/d cd. w/ various assorted sticker and schedule in 15 ds.(Backlund). f/d "Silver Vessel" cd. w/ schedule in 34 ds. Station stickers were also rcvd.(Selevan-NY). f/d cd. w/ stickers and schedule in 25 ds. for 2 IRCs.(Weber-OH).

**UKRAINIAN SSR:** Radio Moscow 17810 via Simferopol f/d cd. w/ schedule in 75 ds.(Turnick-PA). 11980 via Kharkov f/d "Kosmos Hotel" cd. w/ schedule and brochure in 10 wks.(Barhydt-OR). Radio Kiev 7400 f/d cd. in 154 ds. w/ schedule.(Levison-PA).

**USA:** KUSW 15580 f/d "Utah" cd. w/ shortwave catalog in 14 ds. for ms.(Kurrsch-NY).

Voice of the OAS 11830 p/d plain postcard from the General Secretariat in 105 ds. Also rcvd. personal ltr., 2 brochures and a magazine. v/s Mario Martinez y Palacios, Senior Specialist of the Radio and Television Unit. (Peake-IA). f/d B&W cd. in 70 ds. after 4 tries since 1981. Schedule was rcvd.(Palmerheim-MN).

WCSM 9455 f/d cd. in 30 ds.(Laird). 11705 f/d cd.

in 1 mo. w/ schedule.(Barhydt-OR).

21780 f/d cd. in 26 ds. for ms.(Hart-FL).

WSRB 17555 f/d cd. in

26 ds. for ms. v/s Calvin J. Giles.(Hart-FL).

Voice of America 9815 via

Delano f/d cd. in 13 ds.

after 4 f/up rpts.(Turnick-PA). f/d "Crosley Transmitters

at Bethany" cd. w/ schedule and several blank QSL cds.

in 13 ds.(Peake-IA). WMLK 9465

f/d ltr. in 2 mo. for \$1.00. v/s Elder Jacob Meyer. (Kohlbrener-PA).

WJNB 15295 f/d cd. in 33 ds. for ms.(Laird). Voice of Free

China 5950 and 9680 via WYFR f/d "Stem Cup w/ Roses Design" in 21

ds. w/ station stickers and brochures.(Levison-PA). 5950 f/d cd. w/

sticker and schedule in 28 ds. for 1 IRC.(Laird). 9680 f/d "Vase" cd.

w/ sticker and newsletter in 24 ds. (Nagengast-MN).

**USA (Pirate):** One Voice Radio 7415 f/d cd. w/ ltr. in 29 ds. for ms.

(Turnick-PA). Radio EXP f/d "Commemorative QSL for Voice of Free FM"

w/ personal note in 20 ds. for ms.(Paustian-NY). WYPM 7415 f/d cd. in

111 ds. for ms.(Turnick-PA). Samurai Radio 7445 f/d blue on white "Samurai"

QSL in 80 ds. for ms. v/s Eddie Currents.(Paustian-NY).....Love

those v/s names: Action Radio 7414.6 date only "Logo" cd. in 62 ds.

for a rpt. to the Wells-

ville address.(Zeller-OH)

Tube Radio 7409 f/d pink

"Cartoon/Schematic" cd.

in 3 mo. for a rpt. to

the bulletins. v/s Ray

Cathode.(Zeller-OH).....

I have no idea as to

the location of the following

pirates (could be Canadian)

so I will list them

here....if anyone cares.

CFPM 7415 f/d pink "Out-

House" cd. in 58 ds. for

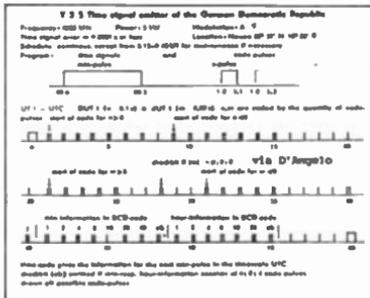
a rpt. to the Wellsville

address.(Zeller-OH).

page page  
1988 1988  
TRANSMITTING  
20 años  
ARAUCA COLOMBIA Y VENEZUELA  
la voz del cinaruto



COLOMBIA



Post Card  
Q. S. L.

To: CHRISTOPHEAU

LOBDELL P.O.B 146

STONEHAM Massachusetts 02180 USA

We are happy to confirm so correct your listening report of 26 MAY 1980

at 12 of 12 hours local time 12:12 hours GMT on the frequency 3970 KHZ on 75 meter Band 9W

Accept our sincere thanks.

The Station is:

CAMEROON RADIO-TELEVISION (CRTV) SUVA (Radio)



**USA (Pirates): CSIC 7516** f/d "FCC/DOC Cartoon Sheet" in 26 ds. for a rpt. to the Blue Ridge Summit address. QSL #2. (Zeller-OH). **CHGO 7415** f/d prepared cd. w/ personal ltr. in 12 ds. Also rcvd. a mimeo ltr. v/s Long John Silver. My report was for 4/9/90 which was "bust" night by the FCC. (D'Angelo-PA).

**Rockabilly Radio 7411.7** f/d "Rocky Rhino" sheet in 63 ds. for rpts. to the bulletins. Also rcvd. bumper sticker and a wooden nickel. (Zeller).

**USSR: Radio Moscow 15550** f/d "Arbat Square" cd. in 66 ds. w/ station stickers. (Levison-PA). 15425 f/d cd. in 94 ds. (Turnick-PA).

**VENEZUELA: Radio Mundial YVKE 5049.1** f/d B&W cd. in 130 ds. for a SP rpt. and \$1.00. This was after 3 f/up rpts. for an 88 reception. (Palmer-shelm-MN). **YVTO 5000** f/d cd. w/ ltr. in 69 ds. for an EG rpt. (Paustian)

**VIETNAM, DEMOCRATIC REP. OF: Radio Son La 4770** p/d ltr. in 2 mo. w/ pennant for a 1980 reception. (Barto-CT).

**WEST BERLIN: RIAS 6005** p/d cd. in 21 ds. for 2 IRCs. Also rcvd. schedule, stickers, short personal ltr. and postcards. (Weber-OH).

**YUGOSLAVIA: Radio Novi Sad 9620** via **Radio Yugoslavia** f/d cd. in 23 ds. for a f/up rpt. (D'Angelo-PA).

IN THE NAME OF ALLAH  
THE VOICE OF THE ISLAMIC REPUBLIC OF IRAN

Dear Edward Uchorek

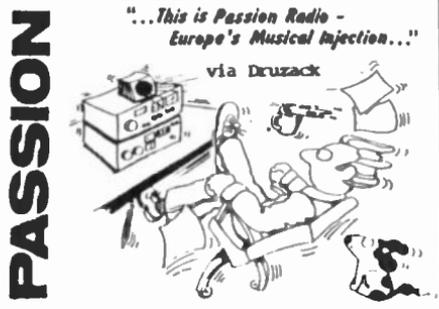
THIS IS TO OFFICIALLY CONFIRM YOUR RECEPTION OF  
THE VOICE OF THE ISLAMIC REPUBLIC OF IRAN

New received this transmission

Date	U T C		S W M W	
	From	To	m	freq
4.10.89	19:33	19:53	5	98.2
-	-	-	-	-
-	-	-	-	-

Thank you for listening to the program of the voice of the Islamic Republic of Iran. Please tune in again & keep in touch.

IRIB External Service Program P.O. Box # 3333 TEHRAN IRAN



Challenge and the ODXA DX Challenge both in November of this year. Hope you do well...Sam. Jerry Klinck of West Seneca, NY is looking forward to a great DX season this winter especially out of Africa. He raised his # one antenna another 10 feet and programmed his R-5000 receiver w/ the African station frequencies on all 100 channels! He has only 8 VICs to qualify for the African Continental DXpert award from NASWA. Go for it...Sam.

I guess that about ends it for another QSL Column. I only had enough contributions for 5 pages. I know your out there. Get those reports into the Column. Best of DX and QSLing...Sam.

**Sam**



إذاعة المملكة العربية السعودية

THE BROADCASTING SERVICE  
OF THE KINGDOM OF SAUDI ARABIA

# Contributors' Page

Vernon Hyson  
9835 Lone Eagle Lane  
Charlotte, NC 28215



## **LOGGINGS CONTRIBUTORS - OCTOBER 1990 - DEADLINE 10th of MONTH**

The following members contributed loggings:

Frank ADEN, JR Boise, ID  
Brian ALEXANDER, Mechanicsburg, PA  
Adrienne BARHYDT, Milwaukie, O  
Edward CICHOREK, Somerset, NJ  
Richard D'ANGELO, Wyomissing, PA  
Harold FRODGE, Midland, MI  
Joe HOWELL, Escondido, CA  
Rufus JORDAN, Pittsburgh, PA  
W. KARCHESKI, Holden, MA  
Jerry KLINCK, West Seneca, NY  
Fred KOHLBRENNER, Philadelphia, PA  
Harold LEVISON, Philadelphia, PA  
Jack LIMANN, Caracas, Venezuela  
Tim NOONAN, Madison, WI  
John PRATH, Ft. Lauderdale, FL  
Ronald PURDUE, Byron, MN  
Bill TAYLOR, Newlin Twp, PA  
Richard WALLACE, Dany, CT  
Mike WOLFSON, Ashland, OH  
Juichi YAMODA, Yamatokoriyama, Japan

Kenwood R5000  
FRG 8800  
R70, Alpha Delta DX Sloper  
R71A + Trap dipole

DX 302, Zenith Transoceanic

Kenwood R5000  
NRD 525 FL3 Sony 2010

Drake SPR 4, Sony 2010  
Drake SW-4A, Random  
NRD 525, R71A  
FRG 8800, DX440, AD-370 ant.  
R390A  
S108, DX440  
Kenwood R 5000, Sony 2010  
NRD 525

Because of the transition of editors, some of you will not receive the proper credit this issue...but hang in as we will catch up on contributors in November. My thanks to all who have welcomed me to my new job and to Kris for his fine work in years' past! The suggestion box is always open here so feel free to use it.

**THERE IS NO SUCH THING AS AN UNIMPORTANT REPORT ...WRITE IN EVEN IF YOU HAVE ONLY ONE LOGGING - THAT ONE LOGGING MAY HELP OTHERS!**

### **Little Known Secrets Of Dxing**

I was trying to get a 300 watt station out of the QRN & the wife wanted to see what I had gotten from The Company Store. So I put on the TShirt & noticed I had 1db additional gain! After I put on the Sweatshirt, Cap, Jacket & gotten the mug out, I was 5db above my initial reading. It worked the other way too! As I took my items off & away, the DB went down to the original level...son of a gun... who needs the filters, MAPS, tuners & beverages? Just contact the Company Store & not only look slick but listen slick! Try it.....you'll like it. (An unpaid endorsement of course)

Till next month...

73, Vern

# Tropical Band Loggings

Sheryl Paszkiewicz  
1015 Green Street  
Manitowoc, WI 54220



Hi and welcome to another Tropical Bands edition. Before we begin I'd like to thank all those who contributed this month. Onto the loggings:

- 3215 SOUTH AFRICA, R. Oranje, 16/7, 0325 w/lite pop mx, AK tkl ads, EG tkl & ID 0328. (Karcheski-MA)
- 3215 SULAWESI, RRI Manado, 17/8, 1315 in IN w/tkl by M&W abt Jakarta, filler & island mx. (Howell-CA)
- 3277 JAVA, RRI Jakarta, 17/8, 1305 in IN w/lcl ID, island mx. YL anncr. (Howell-CA)
- 3290t NAMIBIA, NBC, 19/8, 0048-0500 in AK w/tkl by W, lite instls pres. ID 0452, 0500, very poor sig. (Jordan-PA)
- 3290 PERU, R. Tayabamba, 10/9, 0900 w/shouts, drums, tkl, alti-plano mx, echo anmts, IDs, SIO=251. (Taylor-PA)
- 3316 SIERRA LEONE, SLBS, 8/8, 0608 in EG w/nx by W, tribal mx, been trying to hear this since they returned. (Howell-CA)
- 3320 SOUTH AFRICA, R. Orion, 1/8, 0034 in AK/EG w/lite rock, pop EZL mx, anmts 0048, fair sig. (Karcheski-MA)
- 3325 BRAZIL, R. Liberal, 2/9, 0607-0630 w/ballads, anmts, IDs, RTTY covered it at 0634, weak. (Alexander-PA)
- 3329.9 PHILIPPINES, FEBC, 22/8, 1055 in Filipino lang w/mx, tkl, closing anmts, NA, 1110 s/off, fair. (Yamada-JAPAN) Didn't know FEBC bx down here--sp.
- 3345 MOLUCCAS, RRI Ternate, 17/8, 1325 in IN w/sexy-voiced YL, ID, non-stop C&W mx. (Howell-CA)
- 3360 ECUADOR, LV de Nahuala, 20/8, 1113-1130 w/TC, mx, ID, fair. (Barhydt-OR)
- 3365 BRAZIL, R. Cult. Araquara, 7/7, 0250 w/nx, mx, tlks. (Wallace-CT) Any ID?--sp.
- 3370 GUATEMALA, R. Tezulutlan, 11/8, 0135-0200 w/tlks abt Guat. culture, marimbas, tlks. (Jordan-PA)
- 3385 NEW BRITAIN, R. East New Britain, 13/9, 1100 poor-fair w/ Falsetto choir & guitar, PD tkl to 1115 fade. Also 14/9 at 1053. (Taylor-PA)
- 3985 SWITZERLAND, SRI, 16/9, 0530 in FR w/time pips, ID, into GM, SIO=333. (Kurraach-NY)
- 3986p IRIAN JAYA, RRI Manokwari, 16/8, 1325 in IN w/rel? tkl, orch mx, RRI ID but no site, bassy audio. (Howell-CA) Nice one--sp.
- 4755 BRAZIL, R. Educ. Rural, 23/8, 0000-0034 w/fanfare, ID, FC, jingle, mx & tkl, ID 0030, ad string. SIO=252. (D'Angelo-PA)
- 4765 CONGO, LV de la Rev. Congolaise, 9/9, 2348-2400\* in FR w/hillife, TC, ment. Congo, 2357 full ID, IS, applause, NA. (Paszkiewicz-WI)
- 4774.7 JAVA, RRI Jakarta, 10/8, 1840 in IN w/mx, ID, tkl, fair sig. (Yamada-JAPAN) Tnx for your contributions--sp.
- 4790 PERU, R. Atlantida, 7/7, 0300-0330 in SP w/nx, tlks, mx, ID. (Wallace-CT)
- 4800 ECUADOR, R. Pop. Independiente, 23/8, 0135-0341 w/mx, M tlks, IDs, FC, QTH ref, seemed off the air 0341, sig had upgraded to fair. (Jordan-PA)
- 4800 GUATEMALA, R. Buenas Nuevas, 23-24/8, 0133-0333\* w/tlks, IDs, guitar mx, ad jingles, anmts. (Jordan-PA) These 2 must have been battling it out--sp.
- 4805 BRAZIL, Rdf. Amazonas, 3/9, 0935-0959 w/tkl, mx, ID, poor. (Barhydt-OR)
- 4810 PERU, R. San Martin, 24/8, 0244-0600\* lots of mx, ballads, Folk, 0515 promos, IDs, ads, anmts. (Jordan-PA) haven't hrd this one for awhile--sp.
- 4824.5 PERU, LV de la Selva, 1/9, 1015-1033 w/tlks, OA mx, ads, ID 1032. (Alexander-PA)

- 4835 GUATEMALA, R. Tezulutlan, 18/9, 1125 w/LA mx, tlk, ID, SIO-333. (Kurrasch-NY)
- 4844.8 GUATEMALA, R. K'ekchi', 2/9, 0228 w/tlk, mx, ID, poor. (Barhydt-OR)
- 4845.2 MOLUCCAS, RRI Ambon, 5/8, 1020 w/mx, 1030 ID, tlk, fair. (Yamada-JAPAN)
- 4850 CAMEROON, CRTV Yaounde, 8/8, 0456-0520 in FR w/tlks, nx, ID, synth melody. (Wallace-CT) 14/8, 2222 w/jazz instls, FR tlk, big band, ID 2230. (Cichorek-NJ) 10/8, 2310-2345\* w/lcl mx, tlks, IDs, sked & FC in EG to close. (Jordan-PA)
- 4860 PERU, R. Chinchaycocha, 9/8, 0320 w/ballads, TC, IDs, ment. Junin. (Howell-CA)
- 4870 BENIN, ORTB, 14/8, 2237 in FR w/soft spoken W, piano solo, ID 2244, 2302, NA. (Cichorek-NJ)
- 4870 ECUADOR, R. Rio Amazonas, 31/8, 1012-1104 w/folk mx, ID, poor. (Barhydt-OR)
- 4871p IRIAN JAYA, RRI Wamena, 2/9, 1115-1132 w/lcl mx, ment. Indonesia, poss. ID by W. (Paszkievicz-WI)
- 4889.6 ECUADOR, R. Centinela del Sur, 22/8, 0249-0356\* w/soccer game, ID, fair. (Barhydt-OR)
- 4904.5 CHAD, Rdf. Nat. Tchadienne, 5/9, 0530 in FR w/ID, hilife mx. (Klinck-NY)
- 4905.3 BRAZIL, R. Relogio Federal, 0000 w/tlk by M, usual TCs on 1/9 every min. by W. (Alexander-PA)
- 4907.5 USA, KUSW, 1/9, 0302 w/rock mx, ID, TCs. Subharmonic of 9815. (Alexander-PA)
- 4915 BRAZIL, R. Anhanguera, 15/8, 0002 w/ads, FC, ID by M with mx in back. (Cichorek-NJ)
- 4915 GHANA, GBC-1, 16/9, 0600 in EG w/ID, nx, SIO-322. (Kurrasch-NY) 10/8, 2255-2305\* in lang w/prayer, tlks, poss. ID 2300, lcl mx, closing anmts. Tentative. (Jordan-PA)
- 4915 PERU, R. Cora, 9/8, 0345 w/cmtry, ID, great sig. (Howell-CA) 3/9, \*0930-1000 w/short mx, anmts by YL, LA mx, IDs, good. (Alexander-PA) 21/8, 1006-1041 w/huaynos, many "Yo soy Cora" IDs, good. (Barhydt-OR)
- 4930 USSR, Mayak pgm, 31/8, 1435 in RS w/tlks, IS, TC, fair. (Yamada-JAPAN)
- 4970 SABAH, RTM Kota Kinabalu, 15/8, 1315 in BM w/Buddhist or Muslim devotional mx, OM anncr, hrd here very irreg. No sign of China today. (Howell-CA) Still no luck with this one here--sp.
- 4980 VENEZUELA, Ecos del Torbes, 15/8, 0007 w/discussion by 2M abt upcoming pgm. (Cichorek-NJ)
- 4991 PERU, R. Ancash, 15/8, 0325-0410 w/vcls, EZL, ballads, full ID, ad string 0330, 0400. Lively vcls & folk mx. (Jordan-PA)
- 4995 MONGOLIA, Ulaanbataar HS, 28/8, 1245 in lang w/lcl mx, tlks, 777261.5, QRM WWVH/BPM/JJY 5000. (Park-HI)
- 5000t SOUTH KOREA, HLA, 3/9, 1529-1538 in KK w/voice anmts after WWVH's, also hrd on playback of tape of VOA 1575. (Park-HI) Nice one--sp.
- 5000 VENEZUELA, YVTO, 25/8, 0258 w/time sig, under WWV, repeats twice before WWV starts. (Wallace-CT)
- 5005 NEPAL, R. Nepal, 14/8, 1340 in Nepali w/children's chorus, tlk, //7165. (Howell-CA)
- 5015 ASIATIC RSFSSR, R. Tikhiy Okean, 18/8, \*1215-1258\* in RS w/ID, tlks, songs, fair. (Barhydt-OR)
- 5015 BRAZIL, R. Brasil Tropical, 24/8, 2342-0018 w/tlks, ID, ad string, GM #s station QRM 0000. Mx pgm next. (D'Angelo)
- 5015 BRAZIL, R. Pioneira, 26/8, 0229-0300\* w/vcls, IDs 0232, 0242, s/off w/o NA. (D'Angelo-PA)
- 5015 CLANDESTINE, R. Truth, 19/8, \*0430-0450 in EG w/bird IS, "Hello listeners, welcome to another pgm in the EG lang sce. of R. Truth." Nx, SIO-343. (D'Angelo-PA)
- 5019.7 VIETNAM, Vo Vietnam, 1/9, 1425 in VT w/tlks, ID, fair. 774895, 6445, 10059. (Yamada-JAPAN)
- 5020 NIGER, ORTN, 19/8, 0530-0546 in FR w/ID, tlks, lcl mx, SIO-454. (D'Angelo-PA)

- 5030 ECUADOR, R. Catolica Nac., 18/8, 0059 w/IS, ID, ballads,  
"Come Closer to Me" in SP. (Cichorek-NJ)
- 5034.5 CENTRAL AFRICAN REP., RTV Centafricaine, 8/8, 0430-0445  
in FR w/tlks, mx-Flutes/drums. (Wallace-CT)
- 5035 BRAZIL, R. Aparecida, 31/8, 0207-0230 w/pop mx, ID,  
7/6135, fair. (Barhydt-OR)

This month's special feature again delves deeper into the tropical bands. More specifically, we will look at Ecuador. One of the NASWA awards, the Senior Ecuadorian DXer Award, calls for the verification of stations in each of 12 Ecuadorian provinces. Following are some guidelines to hearing the various provinces:

- |   |                       |
|---|-----------------------|
| 1. <u>AZUAY</u>                               | 9. <u>NAPO</u>        |
| 3286 kHz LV del Rio Tarqui                    | 3280 kHz LV del Napo  |
| 4800 R. Popular Independiente                 |                       |
| 2. <u>CHIMBORAZO</u>                          | 10. <u>PASTAZA</u>    |
| 5015 kHz Esc. Radiofonicas Pop.               | 3315 kHz R. Pastaza   |
| Currently inactive but should be<br>back soon | 11. <u>PINCHINCHA</u> |
| 3. <u>GOTOPAXI</u>                            | 3395 kHz R. Zaracay   |
| 4900 kHz LV de Saquislil                      | 12. <u>QUITO</u>      |
| Currently inactive?                           | 3220 kHz HCJB         |
| 4. <u>ESMERALDAS</u>                          | 4920 kHz R. Quito     |
| 3240 kHz R. Antena Libre                      | 13. <u>TUNGURAHUA</u> |
| 5. <u>IMBABURA</u>                            | 3290 kHz R. Centro    |
| 4950 kHz R. Baha'i                            | 4820 R. Paz y Bien    |
| 6. <u>LOJA</u>                                |                       |
| 4851 kHz R. Luz y Vida                        |                       |
| 4890 kHz R. Centinela del Sur                 |                       |
| 7. <u>MANABI</u>                              |                       |
| 4795 kHz LV de los Caras                      |                       |
| 8. <u>MORONA-SANTIAGO</u>                     |                       |
| 3360 kHz R. Federacion                        |                       |
| 4870 kHz R. Rio Amazonas                      |                       |
| 4960 R. Federacion                            |                       |

These are your best bets for logging these states but not the only possibilities. The SW picture in Latin America is often changing so it is possible that currently inactive stations will reactivate in the future. On the other hand, if you can hear a station now, you may as well log it while the opportunity is there because you never know when it may cease operations. In any case, have fun with it; remember that when it becomes a chore, the meaning of the shortwave hobby is lost. Till next month, happy hunting!



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# International Band Loggings

- 5930 CZECHOSLOVAKIA R Prague in EG 0300, nx, political cmntry, g (Carson OK 24/8)  
 5950 YEMEN R Sana in AR 1652, Mideast vocals, anncmt 1702, more mx, p (Park HI 17/8)  
 5960 SOUTH AFRICA RSA in Chichewa 1644, 2 men in discussion, g (Park HI 10/8)  
 5990 ROMANIA RRI in EG 0203, RO and internat'l nx in fast EG, vocals (Purdue MN 6/8)  
 6000 BRAZIL R Gualaiba in PT 0902, mx, ID, tlk, f (Juichi JAPAN 22/8)  
 6005 WEST GERMANY RIAS in GM 0236-0400, US & Eur pop mx, QRM BBC, f (Kurraach NY 3/9)  
 6015 SO. KOREA KBS in KR 1440, fanfare segue, tlks, interview, f (Park HI 3/9)  
 6020 NETHERLANDS RN Flevo in EG 0103, various features, f (Carson NM 24/8)  
 6050 NIGERIA RN Ibadan in EG/lang 2220-2306\*, vocals, ID's, nx, NA (D'Angelo PA 21/8)  
 6055 PERU R Continental in SP 0135, continuous mx, pause for ID & QTH (Howell CA 9/8)  
 6090 LUXEMBOURG RL in EG 0020, pop mx, anti-Aids commercial, ID 0023 (Karcheski MA)  
 6155 BOLIVIA R Fides in SP 0150, nx, ads, ID's, vocals (Howell CA, Paszkiewicz WI)  
 6155 ASCENSION IS. BBC relay in FR/PT \*0430-0530\*, IS, ID, rpts, skits (Jordan PA)  
 6186 INDONESIA RRI Monokwari in IN 0943, tlk, ID, nonstop mx, f (Juichi JAPAN 10/8)  
 6190 WEST BERLIN SF Berlin in GM 2350, pop mx, ID, jingle, nx, f (D'Angelo PA 17/8)  
 6230 MONACO R Monte Carlo in GM 0058, IS, s/on info, tlks, relig mx (Karcheski MA)  
 6480 SO. KOREA RK in FR 1642, KR lessons, tlk on child care, //7550, f (Park HI 17/8)  
 7200 SWAZILAND TWR in EG \*0430, s/on w/handbell IS, ID (Howell CA 14/8)  
 7215 YUGOSLAVIA RY in EG 0038-0045\*, "Science and Technology" pgm (Prath FL 10/8)  
 7261 MONGOLIA Ulan Bator R in MG 1245, local mx, tlks, //4995, p (Park HI 28/8)  
 7270 POLAND RP in EG 2245, cmntry, Chopin mx, //9675 (Prath FL, Levison PA 10/8)  
 7270 SOUTH AFRICA RSA in PT 0423, IS, ID's in EG/PT, fanfare, preview, nx (Park 18/8)  
 7345 CZECHOSLOVAKIA R Prague in EG 0258, "Tips for Trips", "Observer", f (Carson OK)  
 7550 SOUTH KOREA RK in KR 1735, tlk on poor living conditions in N Korea (Park 10/8)  
 7620 CHINA CPBS Taiwan 1 in CH 1745, Beijing opera, //11000, p (Park HI 10/8)  
 9115usb ARGENTINA R Continental (feeder to provinces) in SP 0023-0315, cmntry, interview ID's, ads, jingles, TC on hr and 1/2 hr (Howell CA 8/15, Flynn CA 8/8)  
 9435 ISRAEL Kol Israel in EG 2305, nx, cmntry on US troop movements (Prath FL 7/8)  
 9445 TURKEY VOT in EG 0300, ID, nx on Mid-East crisis, mx (Kohlbrener PA 25/8)  
 9480 CHINA RB Beijing in Esperanto 1058, IS, ID's, preview, nx, //6955, f (Park 16/8)  
 9480 MONACO TWR in EG \*0640, "Family Bible Hour", g (Kurraach NY 8/9)  
 9480 ALBANIA R Tirana in EG 2142, ID, request mx, //7245, UTE QRM (Cichorek NJ 18/8)  
 9509 ALGERIA R Algiers in FR 1953, pop mx, ID, into SP 2005, nx, f (Kohlbrener 24/8)  
 9515 SO. KOREA RK in GM 1800, KR lessons, "Sports Panorama", //7275, g (Park HI 13/8)  
 9515 MEXICO LV de America Latina in SP 0615, folk mx, ID, UTE QRM (Howell CA 1/8)  
 9535 ANGOLA RN de Angola in PT 2251, Hi-Life mx, multi-ling ID's, IS (Cichorek 15/8)  
 9560 JORDAN RJ in AR 2305, AR mx pgm, ID "Hana Amman" (Prath FL 4/8)  
 9575 ITALY RAI in EG 0115, Italian pop mx, ID & s/off 0120 (Prath FL 11/8)  
 9565 MALTA Deut Welle relay in EG 0105, mx, "European Journal" (Prath 11/8)  
 9590 PHILIPPINE IS. VOA relay in EG 1624, current events cmntry, ID, nx (Park 7/8)  
 9605 VATICAN STATE VR in EG 0050, rpt on Mid-East developments, ID (Cichorek NJ 18/8)  
 9615 VATICAN STATE VR in PT 2330, IS, ID, nx, //15180 (Prath FL 5/8)  
 9620nf CUBA RHC in SP 0245, usual Latin Am mx, ID, //11950 (Treibel WA 3/9)  
 9630nf CUBA RHC in SP 2315-0220+, folk mx, nx, IS, cmntry, g (Jordan PA 5/9)  
 9650nf SWITZERLAND SRI in IT 0330, nx, ID, polkas, move from 9725? (Treibel WA 4/9)  
 9660nf ECUADOR HCJB Quito in RS 0350, ID, relig pgm, move from 9655, g (Treibel WA 4/9)  
 9665 TURKEY VOT in EG 2245, pgm of TK folk songs, //9445, 17880 (Prath FL 25/8)  
 9670 FINLAND RF in EG 0430, ID, "Northern Report", //11755, p (Park HI 18/8)  
 9675 POLAND RP in EG 2240, review of the week's cmntry by RP (Prath FL 4/8)  
 9670 ANTIGUA Deut Welle relay in EG 0535, "Transatlantic Diary" (Craig TK, Carson NM)  
 9700 SO. KOREA R Canada via RK in JP 1340, tlk re marijuana, exc audio (Park HI 17/8)  
 9715 USSR R Taashkent in EG 1200, nx, ID, folk mx, tlks, f (Juichi JAPAN 1/9)  
 9725 SINGAPORE BBC relay in EG 0938, EG lessons, //15280, p (Park HI 9/9)  
 9743 INDONESIA RRI Sorong in IN 0740, tlk, closing anncmt 1657, p (Juichi 15/8)  
 9750nf CUBA RHC in EG 0405, nx, propaganda, mx, //11750, g (Treibel WA 7/8)  
 9760 ALBANIA R Tirana in EG 2330\*, ID, nx, rpt on Mideast, //6120 (Prath FL 26/8)  
 9815 ITALY IRRS in EG/lang 0540-0646, relig pgm, ID, addr, QSL info (D'Angelo PA)  
 9835 HUNGARY R Budapest in EG 0030, nx, cmntry on Mideast (Purdue MN, Levison PA)

9875 AUSTRIA RAI in EG 0130, nx, ID, cmntry, //9870 (Prath FL, Levison PA 21/8)  
 9885 SWITZERLAND SRI in EG 0200, "Shortwave Merry-go-Round", cmntry (Levison 19/8)  
 9925 BELGIUM BRT in EG 2330, cmntry on German unification, g (Levison PA 13/8)  
 9945 CHINA RB Beijing in RS 1743, pop mx, s/off annmt & sked 1754, IS, g (Park HI)  
 11330 CHINA CPBS 1 Beijing in CH 1145, CH mx, tlks, pips, ID, //12120 (Prath FL 18/8)  
 11595 GREECE R Macedonia in GK 2005-2158\*, GK vocals/ballsads, nx, ID (Jordan PA 10/8)  
 11600 CHINA R Beijing in EG 1203, nx, tlk on Mideast crisis, ID's (Cichorek NJ 17/8)  
 11605 ISRAEL Kol Israel in EG 0400, ID, nx, wx, into FR 0415 (Kohlbrenner PA) in EG  
 2140, tlk, mx, nx, ID (Juichi JAPAN) in EG 0010, nx, Mideast cmntry (Frodge MI)  
 11645 GREECE VOG in EG 0130, ID, nx, GK mx (Prath FL 10/8)  
 11675 USSR R Yerevan in ARM/EG 0245, ID, nx re Armenian politics, g (Cichorek NJ 10/8)  
 11680 CZECHOSLOVAKIA R Prague in EG 0100, ID, nx, rpt on computer dating (Prath 8/8)  
 11680 BULGARIA R Sofia in EG 2343, chorals, ethnic mx, bad QRM (Levison PA 12/8)  
 11715 CANADA R Korea relay in EG 1037, world nx, cmntry, exc (Levison PA 14/8)  
 11735 NO. KOREA R Pyongyang in EG 1113, nx, mx dedicated to Kim Jong, f (Park HI 16/8)  
 11755 FINLAND RF in EG 2320, tlks re Finland during WW II, into FR 2325 (Prath 10/8)  
 11785nf GUAM KTWB in EG 1619-1631, relig mx, ID, G (Barhydt OR 17/8)  
 11790 USSR R Kiev in EG 2315, "The Land and People" re Chernobyl, f (Cantrell FL 8/9)  
 11810 JORDAN RJ Amman in EG 1500, Top 20 rx, nx, clear after DW off (Treibel WA 30/8)  
 11830 BRAZIL R Anhanguera Goiania in PT 0345, BR pop mx, ID's, ads, f (Flynn CA 23/8)  
 11830 IRAQ R Baghdad in EG 0226, nx, ID 0237, mx, f (Noonan WI 29/8)  
 11830 ROMANIA RRI in RM 0130, IS, ID, nx, //9510 (Prath FL 11/8)  
 11855 CHINA R Beijing in EG 1300, nx on Mideast crisis etc, ID, f (Cichorek NJ 17/8)  
 11865 MALTA Deut Welle relay in EG 0120, rpt on Mideast military options (Prath 10/8)  
 11905 TAIWAN CBS 6th Network in CH 1543, tlks, ads, class mx, p (Cichorek 17/8)  
 11925 BRAZIL R Bandeirantes in PT 0011, tlk, mx, ID, f (Barhydt OR 14/8)  
 11955 SINGAPORE BBC relay in IN 1108, nx re Mideast crisis, f (Cichorek NJ 17/8)  
 11980 GUAM AMR Asia in EG 1614, ID, address in Hongkong, f-p (Noonan WI 16/8)  
 12015 MONGOLIA R Ulan Bator in EG 0910, chimes IS, ID, lcl mx but mostly tlk by YL,  
 muffled audio, s/off 0938, IS again at 0950 and into CH pgm (Alexander PA 3/9)  
 12095 UNITED KINGDOM BBC London in EG 0025, financial nx, ID (Craig TX 7/9)  
 13615nf? BANGLADESH RB in BG 1757, man giving stn address, ID, off 1801, p (Park HI 14/8)  
 13625nf NO. MARIANAS KHBI Saipan in EG 1500, nx, "Curtain Call", f (Flynn CA 1/8)  
 13630usb COSTA RICA RPFI in EG 2330, mx, vocals, ID, f (Levison PA 3/8) New frequency?  
 13660 IRAQ R Baghdad in EG 2005-2148+, mx, ID, mailbag, warning against interfering  
 w/their invasion of Kuwait (Juichi, Prath, Carson, Wolfson, Karcheski, Purdue)  
 13665 PAKISTAN RP Karachi in Urdu 1510, nx?, weak modulation & hummy (Flynn CA 3/8)  
 13675 BELGIUM BRT Brussels in FR 2132, DX pgm, bad modulation (Limann VENEZUELA 18/8)  
 13730 AUSTRIA RAI in EG 0142, rpt from Salzburg, mx from Vienna, g (Carson OK 28/8)  
 in EG 1634, headline nx, ID, interview with priest, f (Cichorek NJ 17/8)  
 13745nf UNITED KINGDOM British Forces Broadcasting Services in EG \*0200-0230\*, personal  
 greetings to specific servicemen serving in the Gulf & Saudi peninsula, TC's, ID  
 peppy anncr & instrum version of Big Ben chimes, rock & pop mx, jingles, //9640,  
 7125 (Jordan, Paskiewicz, D'Angelo, Alexander, Barhydt, Carson, 20/8-1/9)  
 13770nf EAST GERMANY RBI in EG 2350, nx, rpt on reunification, //1361 (Prath FL) 0030 in  
 GM, IS, ID, nx, rock & pop (Jordan PA) in EG 0212, philatelic pgm (Carson OK)  
 13780nf? MONGOLIA R Ulan Bator in EG 1450, nx, ID, heavy RITTY QRM, p (Flynn CA)  
 15000 ARGENTINA LOL Time Station in SP 2345, CW ID & annmt every 5 mins (Howell CA)  
 15020 INDIA AIR in Sinhalese 1323, sub-continental chants, exc (Howell CA 13/8)  
 15084 IRAN VO Islam Rep in Persian 0105, lcl mx, discussion (Klinck NY 25/8)  
 15095 SYRIA R Damascus in EG 2209, ME vocals, ID, nx re Gulf crisis, g (Cichorek NJ)  
 in FR 1925, ID, nx, mx (Klinck NY) in SP 0027, AR & martial mx (Karcheski MA)  
 15105 YUGOSLAVIA NY in EG 2115, tlks w/Yugoslav musician (Prath FL 26/8)  
 15120nf? SEYCHELLES FEBA in Farsi? 1830\*, organ mx, IS, f (Flynn CA 30/8)  
 15160 HUNGARY R Budapest in EG 2330, ID, rpt on art of holography (Prath FL 4/8)  
 15190 CONGO RT Congolaise in FR/langs 1515, hi-life mx, g (Flynn CA 1/8) in FR 1545  
 w/extended cmntry, refs to "Republique Populaire", //9715 (Howell CA 11/8)  
 15195 BANGLADESH RB in EG \*1229-1259\*, ID, nx, cmntry (Kurrasch NY, Kohlbrenner PA)  
 15210 SWAZILAND TWR in EG 1635-1840, relig tlk, mx, ID, p (Juichi JAPAN, Kohlbrenner)  
 15220 HUNGARY R Budapest in SP 2200\*, IS, nx, //11910 (Prath FL 25/8)  
 15230 JAPAN RJ in EG 1310, nx, ID, local mx (Klinck NY 3/9)  
 15280 HONGKONG BBC relay in JP 2205, EG lessons, mixing w/KGEI in back, p (Park 9/9)  
 15330 BULGARIA R Sofia in EG 2220, tlk re poets & poetry in Bulgaria (Prath FL 4/8)  
 15350 EAST GERMANY RBI in EG 1626, request show, into GM 1630, //17780, f (Park 3/9)  
 15360 INDIA AIR in EG 1801, world & relig nx, cmntry on ANC in S Africa (Park 10/8)  
 15400 UNITED ARAB EMIRATES R Dubai in EG 0330, nx on Arab summit (Purdue MN 11/8)  
 15415 LIBYA R Jamahiriya in AR 2254, tlk re Iraqi invasion, anti-US (Howell CA 10/8)

15420 GUAM TWR in IN 2200, musical ID 2158, tlk, mx, f-g (Limann VENEZUELA 15/8)  
 15455 USSR R Vilnius via Far East relay in EG 2206, Letterbox, sports nx (Carson NM)  
 15640 ISRAEL Kol Israel in EG/FR 0408, nx, wx in both langs, g (Carson NM 18/8) IN  
 1930, nx, local temperatures, cmntry, g (Limann VENEZUELA 15/8)  
 17535 GREECE VOG in EG 1245, rpts from the Middle East, ID, off 1251 (Prath FL 11/8)  
 17620 FRANCE RPI in EG 1640, Letterbox pgm, mx, into FR 1652 (Kohlbrener PA 2/9)  
 17630 AUSTRALIA RA in EG \*1300-1400+, IS, ID, world & sports nx, Tasmanian Chamber  
 Orchestra, Middle Eastern Service, //21775 (Juichi JAPAN, Jordan PA, Wolfson OH)  
 17695nf UNITED KINGDOM British Forces Broadcasting Service in EG \*0930-1000\* & 1330-1400  
 pop mx, personal greetings to specific personnel serving in the Gulf/Saudi area,  
 ID, sports nx, //15205,21735 (Alexander PA 1/9, Wolfson OH 19/8, Jordan PA 21/8)  
 17710 VATICAN STATE VR in EG 1750, ID, Afr xmsn, tlk re unrest in Liberia (Prath 11/8)  
 17710 CHINA R Beijing in EG 1020, tlk on new telecom cable to serve China, p (Park HI)  
 17740 YUGOSLAVIA RY in EG 1220, rpt abt professional translators in YG (Prath FL 11/8)  
 17745 SOUTH AFRICA RSA in FR 1927, mx selections, African rhythms, p (Levison PA 24/8)  
 17830 SWITZERLAND SRI in GM 1440, tlk, polka mx, ID, p (Juichi JAPAN 13/8)  
 21495 PORTUGAL RP in PT 1700, light mx, sports nx, exc (Limann VENEZUELA 16/8)  
 21500nf UNITED KINGDOM British Forces Broadcasting Service in EG \*1325-1400\*, see 17695  
 for pgm details, //15195, 17695 but best on 21500 (Alexander PA 2/9)  
 21505 SAUDI ARABIA(p) BSKSA in AR 1135, tlks ref to Kuwait & "arabiyah", p (Park 13/8)  
 21530 PORTUGAL RP in PT 1458, IS, ID, time gong, NA, "Portugal Magazine" (Juichi 13/8)  
 In EG 1623, tlk on PT interests in Afr, guitar mx, pipe/gong (Cichorek NJ 17/8)  
 21566 COSTA RICA RFPPI in EG 2100, T-shirt ad, DX pgm promo, feature (Carson NM 21/8)  
 21595 SPAIN REE in AR 1730, tlks, ID, AR type mx, //15395 (Prath FL 11/8)  
 21635 FRANCE RPI in EG 1235, nx abt Middle East, pop mx, //17650 (Prath 18/8)  
 21665 WEST GERMANY R Free Europe in PL 0725, tlk, ID, p (Juichi JAPAN 4/8)  
 21665 ROMANIA RRI in EG 1300, ID at s/on, nx by OM, QRM (Prath FL 11/8)  
 21715 HONGKONG BBC relay in EG 0814, promo for mag "London Calling", p (Park HI 18/8)  
 21735 UNITED ARAB EMIRATES Abu Dhabi in AR 0300, ID, nx, AR mx, tlk, f (Juichi 5/8)  
 25950usb ECUADOR HCJB Quito In EG 1925-2200, ID, musical mailbag pgm, feature on how to  
 get started in Ham radio, new frequency (Barhydt OR 18/8, Levison PA 8/8)

#### CLANDESTINES AND PIRATES

6305 CLANDESTINE LW de Cid (Costa Rica) in SP 1026, mx, ID, tlk (Juichi JAPAN 22/8)  
 6315 CLANDESTINE R Patria Libre in SP \*0030-0118\*, orch NA w/chorus, ID, freqs, tlks,  
 folk mx bridges, freq drifted up 100 hz (Alexander PA 1/9, Karcheski MA)  
 6325 CLANDESTINE V of the Khmer (Kunming) in KH 1305, continuous tlk(Howell CA 16/8)  
 7215 CLANDESTINE V of the Crusader(t) Baghdad(p) in AR 0450, militant tlk & mx,  
 shouting, off 0500\*, not hrd following evenings (Howell CA 11/8)  
 7340 CLANDESTINE LW del CID (Costa Rica) in SP 0156, ID "Esta es R Camilo Cienfuegos,  
 Cadena Radial LW del CID", African chants/drums, QRM CHU 7335 (Frodge MI 15/8)  
 7401 PIRATE One Voice Radio in EG 2316, folk mx, ID, address (Alexander PA 3/9)  
 7400 PIRATE Revolutionary V of Plainville in EG 0303-0314\*, on after Hope R s/off,  
 ID, Baltimore address, mentioned several other Pirate stns, f (D'Angelo PA 26/8)  
 7415 PIRATE WORK "Workers Operating Radio Knobs" in EG 0340-0359\*, fake ads, comedy  
 bits, rock mx, Wellesville, NY address, back on air 0415 (Alexander PA 2/9)  
 7417 PIRATE R Anarchy in EG 0430, British & Swedish rock groups, mentioned enemy of  
 The State & Blue Ridge Summit, PA address (Aden, ID 8/8)  
 7435 PIRATE XERK? in EG 0315, very weak w/acme mx & repeated anncmts of taking calls  
 at 512-464-5870. Needed half hr of repeat listens to tape in order to get right  
 phone #, stn told caller was first ever, runs 60 w into LW (Aden ID 15/8)

Just for the heck of it I have noted the Solar Activity and Solar Flux levels during 190  
 out of the 365 days of the past year and have noted the following:

No. of days with zero Solar Activity	1 (10/15/89)
Highest Solar Activity level	77 (10/21/89)
No. of days with 5 or less on Solar Activity scale	21 (or 11% of time noted)
Highest Solar Flux reading	314 (8/24/90)
Lowest Solar Flux reading	122 (5/3/90)
No. of days Boulder K-Index rated 1 or zero (best listening)	32 (17%)
No. of days Boulder K-Index rated 4 or 5 (worst listening)	49 (26%)

# English Schedules

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Thanks to John Carson (OK), Kris Field (PA), Bob German (WCSN), Chuck Roswell (TWR Bonaire), Gordon Darling (Papua New Guinea), Hugh Murray (Radio Australia Frequency Management Unit), Jonathan Marks (Radio Nederland), Dale Park (HI) and Joe Hanlon (NJ) for the material received.

## Notes

Thanks to Kim Andrew Elliott of the VOA for the invitation to attend the interesting and enjoyable *International Broadcasters Conference* in Washington. Topics included methodologies of delivering programming to audiences, station reorganization issues in the light of diminishing resources and the future of SW radio. Details were aired on Radio Japan, RCI, Swiss Radio International, and Radio Nederland. I hope you had an opportunity to listen. Many broadcasters were present, and most went on to Virginia Beach for ANARCON 90.

Chuck Roswell, PJ4CR, of TWR Bonaire will be speaking to the *Boston Computer Society Amateur Radio SIG* on December 4. Roswell will be showing slides of Bonaire and the station. For more information on time and place, contact Paul Graveline, K1YUV, 9 Sterling Street, Andover, MA 01810, CIS 74007, 3434 or Prodigy MWKC51A, or Tom Walsh, K1TW, at 617-466-2392 day or 617-275-5882 evenings.

Radio Australia's new S90 schedule shows a marked decrease in use of 21740 and 15560; no use of 15380,

7215, 7205 and 6035. 7240 is scheduled 11-20 UT. No doubt we'll hear this during the fall and winter sessions of the SWL net (Sundays 10 a.m. Eastern). RA's transmissions to the Middle East are scheduled at 13-15 UT from Darwin on 17630 and 21775. Thanks to George Poppin for getting us on the engineering schedule distribution list!

On September 25 Jonathan Marks sent me a note re changes effective September 30. *"At 0030 UTC we're sticking to 15560 kHz instead of our scheduled move to 11740 kHz. 15560 is working OK at the moment, despite the predictions, and it is a clear channel. At 0330 UTC we are dropping 6165 kHz and going to 11720, with 9590 remaining in parallel."*

R Bangladesh at 1230 UT is back on 15195, but unfortunately mixes with R France Int'l. YLE Finland staffers have reminded us of telephone numbers from which the current schedule may be obtained: 800-221-9539 or 203-688-5540 (toll). Radio Ilavana Cuba has moved to 9505 (ex-9710) atop WYFR 02-06 and to 15435 (ex-longtime 11800) 19-21 UT. WRNO continues to struggle with low power and poor signals. The 22 m outlet seems to be best here.

## Germany

At the September 12 *International Broadcasters Conference*, Dieter Wernig of DW indicated no decisions had been made re the takeover of RBI facilities. As RBI personnel were being paid to until December 31, Wernig said he would not be surprised if the station would continue until the end of the October or possibly the end of the year. Some personnel would move to DW on

a case-by-case basis with decisions to be made at a later date. By month end a variety of sources suggests that decisions have now been made. RBI's identification was heard mid-month as *"Radio Berlin International, the voice of the disappearing German Democratic Republic"*. On the 17th RBI news indicated that Deutsche Welle would be taking over RBI transmitters and frequencies as of October 4. On September 24, *RBI DX Club* announcers bade farewell to the members, saying this was the final edition of the program. During this same week, both George Wood and Jonathan Marks reported that RBI would indeed close October 3. In case that doesn't happen, for the moment I have listed the RBI winter schedules. No schedule announcements have been made by DW.

## Sweden

Radio Sweden will undergo a major reorganization of its language services beginning September 30. The Portuguese service is closing, and Spanish and French are cut in half to 15 minutes each daily. The Estonian and Latvian will double from 7½ to 15 minutes daily. In SCDX 2112, George Wood writes *"In connection with the reorganization, there are changes coming in Sweden Calling DXers. The program may disappear from some, or even all of our remaining languages, or perhaps remain on the air as a general media magazine. The Electronic Edition and the printed bulletins may disappear as well. Listener comment is, of course, welcome."* If you like SCDX, write a letter.

## More Notes

Advertising on the international broadcast services in eastern Europe and the USSR is in full swing. Radio Polonia was heard at 2330 UT soliciting advertisers, and Radio Praha International's

printed schedule says *"Since May 1990, it has been possible to include advertisements for domestic and foreign companies in RPI's broadcasts."*

Many stations shift broadcast times when Europe changes from summer to standard time on September 30. I hope we have most of them covered this month.

Dale Park asks when I will get a *real* phone number instead of faxes or BBS mail. The voice phone number was included in the old masthead. Management dropped it from the new masthead. The number is 609-859-2447. It's listed in the telephone book if you lose it. Evenings 7-9 Eastern or anytime within reason on the weekends is best, otherwise you may get a machine. For this column and the Sunday 7240 SWL Net, material may be submitted via the fax line at 609-859-3226. We'll see you in Knoxville October 5-6-7. Stop by our booth - next to the NASWA booth - and say hello.

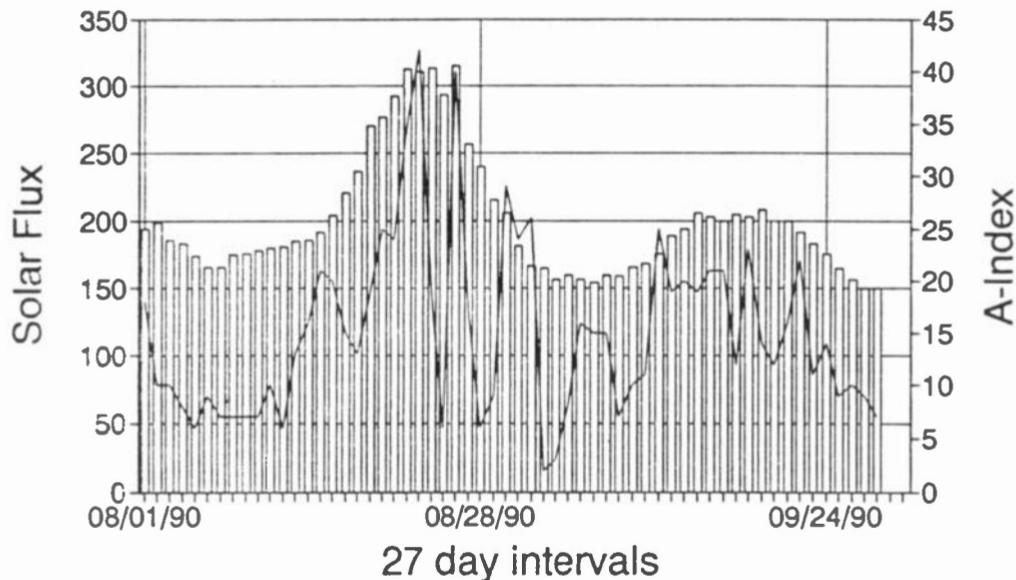
The next *Winterfest* will be held in Kulpville, PA, March 22-24, 1991. Put it on your calendars now. More details will follow later.

## Closing Comments

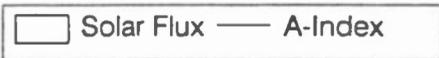
As you have heard by now, ANARC is all but closed. After 25 years the organizational focus has been lost and there is no interest to keep it alive. Attendance at ANARCON 90 was the lowest in years. Only two clubs bothered to send representatives. Less than a half-dozen clubs bothered to reply to the reorganization proposals set forth by the interim director Sheldon Harvey. One person does not constitute an organization. Without volunteers, without a quorum, without a candidate to run for the Executive Director position, and without offers to host a 1991 convention the only reasonable decision was made.

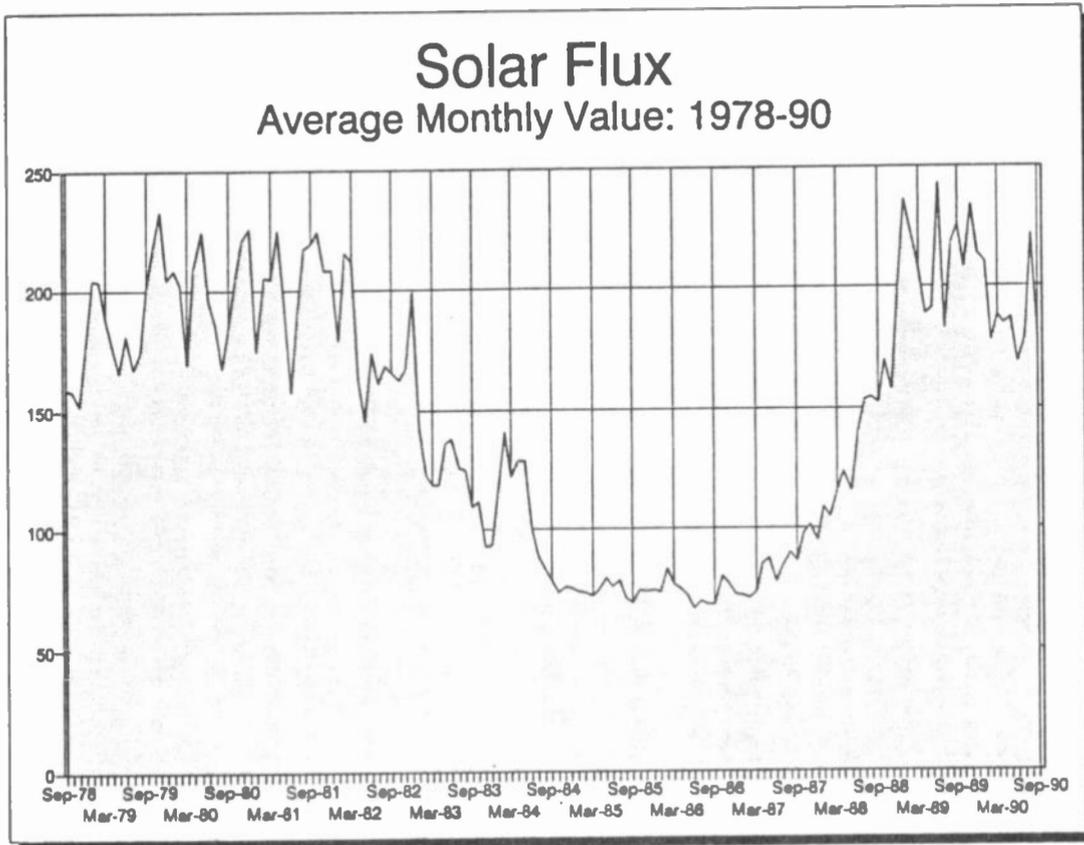
# Solar Flux & A-Index: Aug-Sep 1990

Recorded from WWV



by Sundstrom





Changes entered between 08/25/90 and 09/28/90.

ENGLISH LANGUAGE SW BROADCAST SCHEDULES: By Start Time  
Compiled by Thomas R. Sundstrom, W2XG

Start Time (UTC)	End Time (UTC)	Country	Station	Freq #1	Freq #2	Freq #3	Freq #4	Freq #5	Freq #6	Freq #7	Freq #8	Target Area	Notes	Record Last Updated
0000	0030	Australia	R Australia	17795	17750	17630	15465	15240	13605	11880		As/Pac/PapMG		08/30/90
0000	0100	Bulgaria	R Sofia	15330	11660							NA		09/19/90
0000	0025	Finland	R Finland	11755	9645							NA/SA		09/17/90
0000	0200	Luxembourg	R Luxembourg	6090								Eu		09/19/90
0000	0200	W. Mariana Is.	KHBI	17555								Phil/Indon/PapMG	270 deg	09/19/90
0000	0300	USA	WRNO	7355								NA/CA	20 deg	09/19/90
0000	0200	USA	USNB	13760	7395							CA/SA/NE Canada	167/25 deg	09/19/90
0000	0100	USSR	R Kiev	15525	15485	15455	15180	13645	11790			NA		09/19/90
0000	0100	USSR	R Moscow	17700	15355	15290	11930	11730	9530			ENA		09/19/90
0030	0100	Australia	R Australia	17795	17750	17715	17630	15465	15240	15160	13605	As/Pac/PapMG		08/30/90
0030	0055	Belgium	BRT	13675	9925							SA/NA		09/17/90
0030	0300	Costa Rica	R for Peace Int'l	7377									Tu-So USB mode	09/16/90
0030	0430	Ecuador	HCJB	15155	11775							NA		09/01/90
0030	0100	Hungary	R Budapest	15160	11910	9835	9585	9520	6110			NA	exc Mo	09/17/90
0030	0125	Netherlands	R Nederland	15560	6165	6020						ENA	#1&2 v Bonaire	09/26/90
0045	0130	German Dem Rep	R Berlin Int'l	15240	13770	13610	11890	9730	6080			CA/NA		09/27/90
0100	0200	Australia	R Australia	21775	21525	17795	17750	17715	15465	15240	15160	As/Pac/PapMG		08/30/90
0100	0200	Japan	R Japan	17845	17835	17810	5960					GOS/Asia/NA	#4 v Canada	09/17/90
0100	0130	Sweden	R Sweden	9770								As/Pac		09/18/90
0100	0200	USSR	R Moscow	11930	11730	11710	9600	9530				ENA	#5 v Cuba	09/19/90
0100	0145	Yugoslavia	R Yugoslavia	15105	11735	7215						W Eu/NA		09/19/90
0130	0200	Hungary	R Budapest	15160	11910	9835	9585	9520	6110			NA		09/17/90
0200	0330	Australia	R Australia	21775	21525	17795	17750	17715	17630	15465	15240	As/Pac/PapMG	21825 Se only -0730	08/30/90
0200	0400	Cuba	R Havana	11820	9505							Americas		09/09/90
0200	0230	Sweden	R Sweden	11705	9695							NA		09/18/90
0200	0400	USA	WCSN	9850								E Afr	75 deg	09/19/90
0200	0300	USSR	R Moscow	11980	11750	11730	11710	9600	9530			ENA	#5 v Cuba	09/19/90
0230	0245	Hungary	R Budapest	15160	11910	9835	9585	9520	6110			NA	Tu/W/F/Sa	09/17/90
0230	0430	Iraq	R Baghdad	11830	11810							NA/SA/Ind/Pakis	often delayed start	09/19/90
0245	0330	German Dem Rep	R Berlin Int'l	15240	13770	13610	11890	6080				CA/NA		09/27/90
0300	0330	Japan	R Japan	21610	17825	17810	15325	15195	7125			GOS/Asia/NA/Eu/NE/Af	#6 Gab #4 Fr Guinea	09/17/90

0300	0400	USSR	R Moscow	11980	11750	11730	11710	9600	9530	ENA	#5 v Cuba	09/19/90		
0315	0545	Costa Rica	R for Peace Int'l	7377							Tu-Sa USB mode	09/16/90		
0330	0430	Australia	R Australia	21775	21525	17795	17750	17715	17630	15465	15240	As/Pac/PapMG	#4&6 Sa-Su	08/30/90
0330	0400	Japan	R Japan	21610	17825	17810	15325	15195				GOS/Asia/NA	#4 Fr Guinea	09/17/90
0330	0425	Netherlands	R Nederland	11720	9590							UMA	v Bonaire	09/17/90
0330	0400	Sweden	R Sweden	11705	9695							NA		09/18/90
0350	0400	USSR	R Yerevan	15180	11790							UMA	News/Eng	09/19/90
0400	0500	Austria	R Canada Int'l	11925								ME		09/22/90
0400	0500	Bulgaria	R Sofia	17835	17825	15290	11735	11720				Afr/NA		09/19/90
0400	0600	Cuba	R Havana	11820	11760	9505	5965					Americas	#3 -0450	09/09/90
0400	0445	German Dem Rep	R Berlin Int'l	9730	6080							NA		09/27/90
0400	0450	Turkey	V of Turkey	17880	9645							Am/NA		09/19/90
0400	0500	USSR	R Moscow	15540	11980	11930	11710	11675	9530			US		09/19/90
0401	0900	USSR	R Moscow	17840	17700	17690	17605	15425	15180	12050	12010	UMA		09/19/90
0430	0500	Australia	R Australia	21775	21525	17795	17750	17715	17630	15465	15240	As/Pac/PapMG	#10 -0800	08/30/90
0445	0500	England	BBC	17815	15265	11760						ME	"Gulf Link"	09/16/90
0500	0600	Australia	R Australia	21775	21525	17795	17750	27630	15560	15465	15320	As/Pac/PapMG		08/30/90
0500	0700	Ecuador	NCJB	15155	11775							NA		09/01/90
0500	0700	USA	KLSW	9870								Canada	70 deg Su only	09/19/90
0500	0600	USSR	R Moscow	15540	11980	11930	11730	11675	9530			US		09/19/90
0500	0530	Vatican State	Vatican Radio	21650	17730	17710						E&S Afr		09/19/90
0530	0600	Austria	ORF	21490	15410	13730	6155					ME/Eu		09/17/90
0600	0630	Australia	R Australia	21775	21525	17630	15560	15465	11880			As/Pac/PapMG		08/30/90
0600	0800	USA	WHRZ	9495	7315							Eu/CA/SA	157/42 deg	09/19/90
0600	0800	USA	WSNB	11705	9455							CA/Canada	265/315 deg	09/19/90
0600	0700	USSR	R Moscow	21630	21625	21585	17890	17860	17625	17600	17560	US		09/19/90
0600	0620	Vatican State	Vatican Radio	9645	6185							Eu		09/19/90
0615	0700	Canada	R Canada Int'l	11840	9760	9740	7155	6150	6050			W Eu/Afr	H-F #1,3,4,6 v UK	09/22/90
0630	0730	Australia	R Australia	21775	21525	17630	15465	15240	13705	11880		As/Pac/PapMG		08/30/90
0630	0700	Switzerland	Swiss R Int'l	21770	17570	15430						Afr		09/19/90
0645	0730	German Dem Rep	R Berlin Int'l	21540	15445	13690	13610	11970	9730	7185	6115	As/Af/ME/Eu		09/27/90
0700	1100	USA	KLSW	9870								Canada	70 deg Su only	09/19/90
0700	0800	USSR	R Moscow	21725	21630	21625	21585	17890	17860	17625	17600	US		09/19/90
0730	0800	Australia	R Australia	21775	21525	17630	15240	13705	11930	11880		As/Pac/PapMG		08/30/90
0730	0800	Belgium	BRT	13675	11695	6035						Eu/Am		09/17/90
0730	0800	Bulgaria	R Sofia	17825	15160	11720						W Eu		09/19/90
0730	0800	Czechoslovakia	R Prague Int'l	21705	17840							As/Pac		09/19/90
0730	0745	Finland	R Finland	11755	9560	6120						Eu/ME/Afr		09/17/90
0730	0825	Netherlands	R Nederland	15560	9630							NZ/Am	v Bonaire	09/17/90
0730	0800	Switzerland	Swiss R Int'l	9535	6165	3985						Eu		09/19/90
0800	0830	Australia	R Australia	21775	21525	17750	17630	15320	15240	15160		As/Pac/PapMG		08/30/90
0800	1000	N Mariana Is	KNHZ	15610	9530							Am/NZ/Japan	165/340 deg	09/06/90

0800	0900	USA	KHLS	7365			Aa		09/28/90					
0800	1000	USA	WCSH	9840			Eu	60 deg	09/19/90					
0800	1100	USA	WHRI	7355	7315		Eu/CA/SA	42/157 deg	09/19/90					
0800	1100	USSR	R Moscow	21725	21630	21625	17560	15540	15520	15375	WS		09/19/90	
0828	0855	Netherlands	R Nederland	15190			Aus		H-Se			09/17/90		
0830	0900	Australia	R Australia	21775	21925	17750	17630	15320	15240	15160	9580	As/Pac/PapMG	08/30/90	
0830	0900	Italy	AMR Europe	7230			Eu					09/28/90		
0845	0930	German Dem Rep	R Berlin Int'l	21465	11785	9730	7185	6115	6040			SE As/ENA/Eu	01,3,4,6 Sa-Su	09/27/90
0900	0930	Australia	R Australia	21825	21775	17750	17630	15320	15240	15160	11880	As/Pac/PapMG		09/22/90
0900	0925	Finland	R Finland	21550	17800							Aus		09/17/90
0900	1000	Japan	R Japan	21610	17890	15270	11840					GOS/As/Oc		09/17/90
0900	1000	Portugal	AMR Europe	9670								Eu	Su	09/19/90
0930	1000	Australia	R Australia	21825	21775	17750	17630	15240	15160	11880	9580	As/Pac/PapMG		09/22/90
0930	1000	England	British Forces BC Serv	21735	17695	15285						ME		09/07/90
1000	1030	Australia	R Australia	21775	17715	15240	15160	9580				As/Pac/PapMG		08/30/90
1000	1025	Belgium	BRT	21810	13675	6035						Afr/Eu		09/17/90
1000	1045	German Dem Rep	R Berlin Int'l	21540	21465	11890	11785					Far E/ENA	#2 Sa-Su	09/27/90
1000	1015	Hungary	R Budapest	15220	15160	11925	11910	9835	9585			Far East	H-F	09/17/90
1000	1200	W Marlane Ia	KHBI	13625	9530							Phil/Indon/China	240/310 deg	09/19/90
1000	1200	USA	WCSH	13595								Eu	60 deg	09/22/90
1010	1040	Mongolia	R Ulan Bator	12015	11850							Aus		09/19/90
1030	1100	Australia	R Australia	21775	17715	15160	9580					As/Pac/PapMG		08/30/90
1030	1045	Hungary	R Budapest	15220	15160	11925	11910	9835	9585			Far East	H-F	09/17/90
1045	1130	German Dem Rep	R Berlin Int'l	6115								Eu		09/27/90
1045	1100	Hungary	R Budapest	15220	15160	11910	9835	9585	7220			Eu	Su	09/17/90
1100	1230	Australia	R Australia	21825	21775	17715	15240	15160	11930	9710	9580	As/Pac/PapMG		08/30/90
1100	1400	USA	KUSW	9850								Canada	70 deg Su only	09/19/90
1100	1400	USA	WHRI	11790	9465							Eu/CA/SA	157/42 deg	09/19/90
1100	1200	USSR	R Moscow	21785	21725	21685	17810	17790	17765	17570	9600	World Service	#8 v Cuba	09/19/90
1130	1145	Hungary	R Budapest	15220	15160	11910	9835	9585	7220			Eu	Sa	09/17/90
1130	1200	Italy	AMR Europe	7230								Eu		09/28/90
1130	1225	Netherlands	R Nederland	21520	21480	17575	9715	5955				Eu/ME/As	#2&3 v Madagascar	09/17/90
1150	1215	Finland	R Finland	21550	15400							NA	H-F	09/17/90
1200	1300	China	R Beijing	17855	15450	11660	11600	9530				ENA/S Pac/SE As		09/08/90
1200	1400	W Marlane Ia	KHBI	13625	9895							SE As/Aus/PapMG	285/195 deg	09/19/90
1200	1400	USA	WCSH	21780								Eu	45 deg	09/22/90
1200	1300	USSR	R Moscow	21800	21785	21725	21685	17810	17790	15220	9600	World Service	#9 v Cuba	09/19/90
1230	1300	Australia	R Australia	21775	17715	15240	11930	9580	7240	6080		As/Pac/PapMG		08/30/90
1230	1300	Bangladesh	R Bangladesh	15195	11710							Eu		09/09/90
1230	1255	Belgium	BRT	21810								NA		09/17/90
1230	1300	Sweden	R Sweden	21570	17740	11715						As/Pac		09/18/90
1245	1330	German Dem Rep	R Berlin Int'l	21540	21465	17780	15440	15240	13690	11970	11890	As/ME/Af/Eu	6115 to Eu	09/27/90

1300	1330	Australia	R Australia	21775	17715	17630	15240	11930	11910	9860	9580	Aa/Pac/PapMG	09/22/90
1300	1400	China	R Beijing	11855	11660	11600	9530					S Pac/WNA/SE As	09/08/90
1300	1325	Finland	R Finland	21550	15400							NA	M-F 09/17/90
1300	1330	Mongolia	R Ulan Bator	12025	11850							Japan	exc Tu&F 09/19/90
1300	1330	Switzerland	Suisse R Int'l	12030	9535	6165						Eu	09/19/90
1300	1400	USSR	R Moscow	21785	21725	21685	17830	17810	17790	15460	15220	World Service	#10 v Cuba 09/19/90
1300	1400	USSR	R Stn Peace & Progress	17870	17835	17635	17610	15480	15180	11900	11870	SE As	#2,5,7 from 1330 09/08/90
1300	1330	Yugoslavia	R Yugoslavia	25795	21555	17740						NA/Aus/Far E	09/19/90
1330	1400	Australia	R Australia	21775	17630	11930	11910	11800	9860	9580	7240	Aa/Pac/PapMG	09/22/90
1330	1400	England	British Forces BC Serv	21735	17695	15195						ME	09/10/90
1330	1400	Turkey	V of Turkey	17785								SW As	09/19/90
1400	1430	Australia	R Australia	21775	17630	11930	11910	11880	11720	9580	7240	Aa/Pac/PapMG	#6 Af 09/22/90
1400	1425	Belgium	BRT	21810								SE As	M-Sa 09/17/90
1400	1430	China	R Canada Int'l	15210	11955							SE As & India	09/22/90
1400	1425	Finland	R Finland	21550	15400							NA	Sa&Su -1445 09/17/90
1400	1430	Sweden	R Sweden	21610	9765							As/Pac	09/18/90
1400	1700	USA	KJUS	15590								Canada	70 deg Su only 09/19/90
1400	1500	USA	WHR	15105	9465							Eu/CA/SA	157/42 deg 09/19/90
1400	1500	USSR	R Moscow	21785	21685	17860	17810	17585	15460	15220	11840	World Service	#8 v Cuba 1430- 09/19/90
1430	1500	Australia	R Australia	21775	17630	11930	11910	11800	11720	9770	9580	Aa/Pac/PapMG	#6 Af 09/22/90
1430	1525	Netherlands	R Nederland	17605	17575	15150	13770	5955				S&E As/Eu	#2&3 v Madagascar 09/17/90
1445	1530	German Dem Rep	R Berlin Int'l	9730	6115							Eu	09/27/90
1445	1500	Vatican State	Vatican Radio	11740	9645	7250	6248					Eu	09/19/90
1500	1530	Australia	R Australia	17630	11930	11910	11800	11720	9770	9580	7240	Aa/Pac/PapMG	#3 Af   #9 -1830 09/22/90
1500	1600	USA	KHLS	7365								As	exc Mon 09/28/90
1500	1600	USSR	R Moscow	21785	21685	17810	17585	15460	11840			World Service	#6 v Cuba 09/19/90
1505	1530	Finland	R Finland	21550	15185	11820						Eu/NE/Afr	09/17/90
1515	1530	Canada	R Canada Int'l	21545	17820	15325	15315	13650	11935	11915	9555	C&E Eu	#3,6,7,8 v Eu rlye 09/22/90
1530	1600	Australia	R Australia	17630	13745	11930	11910	11800	11720	9860	9770	Aa/Pac/PapMG	#4 Af 09/22/90
1530	1630	Bulgaria	R Sofia	17825	15310	11735						Afr	09/19/90
1530	1600	Sweden	R Sweden	21500	17880							NA	09/18/90
1545	1630	German Dem Rep	R Berlin Int'l	17880	15240							As	09/27/90
1545	1615	Mongolia	R Ulan Bator	13780	9795							India	09/19/90
1600	1630	Australia	R Australia	17630	13745	11930	11720	9860	9770	9710	9580	Aa/Pac/PapMG	#4 Af   #7 -1830 09/22/90
1600	1700	China	R Beijing	15130	15110	9570						E&S Afr	#1&2 v Hall 09/08/90
1600	1800	St. Marians Is	KMBI	15610	11580							India/SE As	310/165 deg 09/22/90
1600	1700	USSR	R Moscow	21685	17810	17585	11840					World Service	#4 v Cuba 09/19/90
1615	1630	Hungary	R Budapest	15220	15160	11910	9835	9585	7220			Eu	M&H 09/17/90
1630	1700	Australia	R Australia	17630	13745	11930	11855	9860	9770	9580	7240	Aa/Pac/PapMG	#10 -1930 09/22/90
1630	1730	Ecuador	HCJB	21480								ME	09/07/90
1630	1725	Netherlands	R Nederland	15570	6020							E&S Afr	v Madagascar   M-Sa 09/27/90
1630	1700	USSR	R Stn Peace & Progress	21715	17655	15545	12055	11910	11775	11745	11630	Af/Aa	09/08/90

1645	1700	England	BBC	15120	11720	6040				ME	"Gulf Link"	09/16/90
1645	1730	German Dem Rep	R Berlin Int'l	17780	15350	13690	9730	7295	7260	6080	Af/ME/Eu	09/27/90
1700	1800	Australia	R Australia	17630	13745	11930	11855	9860	9770	9655	9580	As/Pac/PapMG
1700	1800	Japan	R Japan	21700	11865	11815	9695	9535			GDS/Eu/ME/As/Am	#1 v Gabon
1700	1800	USSR	R Moscow	21685	17810	17585	13625	11840			World Service	#5 v Cuba
1715	1730	Canada	R Canada Int'l	21545	17820	15325	13650	7235	5995		C&E Eu	#5&6 v Eu relays
1730	1800	Austria	ORF	13730	12010	6155	5945				Af/Eu/As	09/17/90
1800	1830	Australia	R Australia	12000	11930	11855	9860	9710	9655	9580	7240	As/Pac/PapMG
1800	2000	# Mariana Is	KHBI	13720	11580						H2/China	165/325 deg
1800	1830	Sweden	R Sweden	11190	9655	6065					Eu/Af/ME	09/18/90
1800	2300	USA	WHRI	17830	13760						Eu/CA/SA	157/42 deg
1800	1900	USSR	R Moscow	21685	17585	13625	11890	11840			World Service	#5 v Cuba
1830	1900	Australia	R Australia	13745	12000	11930	11855	9710	9655	9580	7240	As/Pac/PapMG
1830	1855	Belgium	BRT	21810	17550	5910					Afr/Eu	09/17/90
1830	1930	Bulgaria	R Sofia	17825	15310	11680					Afr	09/19/90
1830	1900	Canada	R Canada Int'l	17875	15325	11945	7235	5995			W Eu	M-F   #4&5 v UK
1830	1925	Netherlands	R Nederland	21685	17605	15560	6020				Afr	#1&2 Bon   #3&4 Med
1830	1900	Switzerland	Swiss R Int'l	11955	9885	9535	6165	3985			Afr/Eu	09/19/90
1845	1930	German Dem Rep	R Berlin Int'l	9760	9730	9665					Af/Eu	09/27/90
1900	1930	Australia	R Australia	13745	12000	11930	11855	9710	9655	7240	6080	As/Pac/PapMG
1900	2100	Cuba	R Havana	15435							Eu/Af/ME	09/22/90
1900	2000	USSR	R Moscow	17585	15375	13625	11840				World Service	#4 v Cuba
1930	2000	Australia	R Australia	15160	13745	12000	11930	9710	9655	7240	6080	As/Pac/PapMG
1930	2000	Bulgaria	R Sofia	15330	11765	11660					W Eu	09/19/90
1930	1955	Finland	R Finland	15185	11755	9550	6120				Eu/ME/Afr	09/17/90
1930	2000	Hungary	R Budapest	15160	11910	9835	9585	7220	6110		Eu	09/17/90
1930	2000	Sweden	R Sweden	7265	6065						Eu/Af/ME	09/18/90
1930	2000	Yugoslavia	R Yugoslavia	11735	9660	7215					Af/Eu	09/19/90
2000	2100	Australia	R Australia	17795	15320	15160	13745	12000	11930	9710	9655	As/Pac/PapMG
2000	2100	USA	KHLS	11700							As	09/28/90
2000	2200	USA	WCSN	13770							Eu	60 deg
2000	2200	USA	WSHB	17555	15610						CA/Canada	137/25 deg
2000	2100	USSR	R Moscow	21630	17655	17585	17570	15375	13625	11840	11695	World Service/Afr
2040	2110	Mongolia	R Ulan Bator	12050	11850						W Eu	09/19/90
2045	2130	German Dem Rep	R Berlin Int'l	15350	13610	9730	9665				Af/Eu	09/27/90
2050	2110	Vatican State	Vatican Radio	9645	7250	6190					Eu	09/19/90
2100	2130	Australia	R Australia	17795	15320	15160	11880	9655	6080		As/Pac/PapMG	08/30/90
2100	2400	Guam	KHBN	9820							China	09/19/90
2100	2130	Hungary	R Budapest	15160	11910	9835	9585	7220	6110		Eu	09/17/90
2100	2300	Iraq	R Baghdad	13660							Eu	often delayed start
2100	2130	Japan	R Japan	21610	17890	17810	15270	11815			GDS/As/Oc/Eu	09/17/90
2100	2150	Turkey	V of Turkey	9795							Eu	09/19/90

2100	2200	USSR	R Kiev	9685						Eu		09/19/90	
2100	2200	USSR	R Moscow	17840	17665	15355	11930	11840	11730	9800	9735	World Service #5 v Cuba	09/19/90
2130	2200	Australia	R Australia	17795	15320	15240	15160	11880				As/Pac/PapMG	08/30/90
2130	2200	Bulgaria	R Sofia	15330	11765	11660						Eu	09/19/90
2130	2200	Japan	R Japan	21610	17810	15270	11815					GOS/As/Oc/Eu	09/17/90
2200	2230	Australia	R Australia	17795	15465	15240	15160	13605	11880			As/Pac/PapMG	08/30/90
2200	2225	Belgium	BRT	15515	9925	5910						Afr/Eu	09/17/90
2200	2300	Canada	R Canada Int'l	15325	11945							W Eu	09/22/90
2200	2225	Finland	R Finland	15430	11755	6120						Aus/S&SE As/Af/NE/Eu	09/17/90
2200	2230	Sweden	R Sweden	6065								Eu/Af/NE	09/18/90
2200	0300	USA	KUSW	15590								Canada	70 deg
2200	2300	USSR	R Moscow	15355	12060	11930	11840	11775	11730	9610	9520	World Service	#4 v Cuba
2200	2300	USSR	R Stn Peace & Progress	11980	11830	9550	9470	5905				Eu	09/19/90
2200	2245	Yugoslavia	R Yugoslavia	15105	11735	9620	7215					Af/NA/Aus/Eu	09/19/90
2201	2230	Canada	R Canada Int'l	9755	5960							USA	09/22/90
2230	2300	Australia	R Australia	21740	17795	15465	15240	15160	13605	11880		As/Pac/PapMG	08/30/90
2230	2330	Bulgaria	R Sofia	15330	11660							W Eu	09/19/90
2230	2300	Lithuania	R Vilnius	9675	6100							Eu	09/19/90
2230	2300	Switzerland	Swiss R Int'l	6190								Eu	09/19/90
2245	2330	German Dem Rep	R Berlin Int'l	13770	9730	7295	5965					NA/Eu	09/27/90
2245	2300	Ghana	Ghana BC Corp	4915	3366								ru/English
2300	2330	Australia	R Australia	21740	17795	17750	15465	15240	15160	13605	11880	As/Pac/PapMG	09/22/90
2300	0100	Guam	KSDA	15610								SE As	270 deg
2300	2400	Japan	R Japan	21610	17810	15210	15195	11835				GOS/As/Eu/NE/AF	#3&5 v Gabon
2300	2330	Lithuania	R Vilnius	17690	17665	15180	11790	11675	6100			NA/Eu	09/19/90
2300	2310	Sierra Leone	SLBS	3316									ru/Eng
2300	2350	Turkey	V of Turkey	17880	9685	9665	9445					Aus/Eu/NE/NA	09/19/90
2300	2400	USA	WHRI	13760	9495							Eu/CA/SA	42/157 deg
2300	2400	USSR	R Moscow	17700	15355	15290	11930	11730	9530			ENA	09/19/90
2330	2400	Australia	R Australia	21740	17795	17750	15465	15240	13605	11880		As/Pac/PapMG	09/22/90
2330	2400	Sweden	R Sweden	11705	9695							LA	09/18/90

Changes entered between 08/25/90 and 09/28/90.

ENGLISH LANGUAGE DX SHOWS: By Day of Week

Compiled by Thomas R. Sundstrom, W2XG

Shortwave DX Program	Show Time	Xman Start	Country	Station	Freq #1	Freq #2	Freq #3	Freq #4	Freq #5	Freq #6	Freq #7	Target Area	Notes re DX Show	Record Last Updated
** DAY OF THE WEEK: Sunday														
Radio World	0035	0030	Belgium	BRT	13675	9925						SA/NA		09/17/90
AMR DX Program	0915	0900	Portugal	AMR Europe	9670							Eu		09/19/90
SW Club	1045	1045	Hungary	R Budapest	15220	15160	11910	9835	9585	7220		Eu		09/17/90
Listeners' Corner	1407	1400	China	R Canada Int'l	15210	11955						SE As & India	occ has sked data	09/22/90
SMA Digest	2236	2200	Canada	R Canada Int'l	15325	11945						W Eu		09/22/90
R Sofia Calling	2315	2230	Bulgaria	R Sofia	15330	11660						W Eu		09/19/90
** DAY OF THE WEEK: Monday														
Listeners' Corner	0006	2330	Canada	R Canada Int'l	9755	5960						USA	occ has sked data	09/16/90
R Sofia Calling	0045	0000	Bulgaria	R Sofia	15330	11660						NA		09/19/90
R Sofia Calling	0445	0400	Bulgaria	R Sofia	17835	17825	15290	11735	11720			Afr/NA		09/19/90
Radio World	0735	0730	Belgium	BRT	13675	11695	6035					Eu/Am		09/17/90
Radio World	1005	1000	Belgium	BRT	21810	13675	6035					Afr/Eu		09/17/90
Radio World	1405	1400	Belgium	BRT	21810							SE As		09/17/90
SW Club	1615	1615	Hungary	R Budapest	15220	15160	11910	9835	9585	7220		Eu		09/17/90
** DAY OF THE WEEK: Tuesday														
SW Club	0230	0230	Hungary	R Budapest	15160	11910	9835	9585	9520	6110		NA		09/17/90
Sweden Calling DXers	1240	1230	Sweden	R Sweden	21570	17740	11715					As/Pac		09/18/90
Sweden Calling DXers	1810	1800	Sweden	R Sweden	11190	9655	6065					Eu/Af/NE		09/18/90
Sweden Calling DXers	1940	1930	Sweden	R Sweden	7265	6065						Eu/Af/NE		09/18/90
Sweden Calling DXers	2210	2200	Sweden	R Sweden	6065							Eu/Af/NE		09/18/90
Sweden Calling DXers	2340	2330	Sweden	R Sweden	11705	9695						LA		09/18/90
** DAY OF THE WEEK: Wednesday														
Sweden Calling DXers	0210	0200	Sweden	R Sweden	11705	9695						NA		09/18/90
SW Club	0230	0230	Hungary	R Budapest	15160	11910	9835	9585	9520	6110		NA		09/17/90
Sweden Calling DXers	0340	0330	Sweden	R Sweden	11705	9695						NA		09/18/90
DX Special	0740	0730	Czechoslovakia	R Prague Int'l	21705	17840						As/Pac		09/19/90
DX Special	1710	1700	Czechoslovakia	R Prague Int'l	11990	7345	6055	5930				Eu		09/19/90
DX Special	1840	1830	Czechoslovakia	R Prague Int'l	7345	6055						Eu		09/19/90
DX Special	2010	2000	Czechoslovakia	R Prague Int'l	11990	7345	6055	5930				Eu		09/19/90

** DAY OF THE WEEK: Thursday												
SW Club	1615	1615	Hungary	R Budapest	15220	15160	11910	9635	9585	7220	Eu	09/17/90
** DAY OF THE WEEK: Friday												
SW Club	0230	0230	Hungary	R Budapest	15160	11910	9635	9585	9520	6110	NA	09/17/90
R Sofia Calling	2145	2130	Bulgaria	R Sofia	15330	11765	11660				Eu	1st of wknd series 09/19/90
** DAY OF THE WEEK: Saturday												
R Sofia Calling	0015	0000	Bulgaria	R Sofia	15330	11660					NA	09/19/90
SW Club	0230	0230	Hungary	R Budapest	15160	11910	9635	9585	9520	6110	NA	09/17/90
Radio World	0735	0730	Belgium	BRT	13675	11695	6035				Eu/Am	09/17/90
R Sofia Calling	0745	0730	Bulgaria	R Sofia	17825	15160	11720				W Eu	09/19/90
Radio World	1005	1000	Belgium	BRT	21810	13675	6035				Afr/Eu	09/17/90
SW Club	1130	1130	Hungary	R Budapest	15220	15160	11910	9635	9585	7220	Eu	09/17/90
Radio World	1405	1400	Belgium	BRT	21810						SE As	09/17/90
Radio World	1835	1830	Belgium	BRT	21810	17550	5910				Afr/Eu	09/17/90
DX Radio Tips	2120	2100	Turkey	V of Turkey	9795						Eu	Biweekly 09/19/90
Radio World	2205	2200	Belgium	BRT	15515	9925	5910				Afr/Eu	09/17/90
Listeners' Corner	2206	2200	Canada	R Canada Int'l	15325	11945					W Eu	occ has sked data 09/22/90
DX Radio Tips	2320	2300	Turkey	V of Turkey	17880	9685	9665	9445			Am/Eu/NE/NA	Biweekly 09/19/90
World of Radio	2330	2100	USA	WRND	15420	13720					NA/CA/Eu	#1 alt freq 08/30/90

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