

NASA

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Shortwave
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UNIVERSAL RADIO

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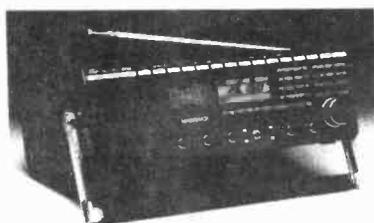


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NASWA Notes

Bob Brown

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Lansdale, PA 19446
Compuserve 74756,1557



Spring is in full swing and my fly rod, golf clubs, and son's Little League all seem to be fighting for their fair share of the leisure time that radio has consumed all winter. Guess that happens to a lot of us this time of year. Always can fit in some early morning or late night DX'ing, tho.

Members In Print

NASWA members **Bill Taylor** of Unionville, PA and **Jerry Klinck** of West Seneca, NY both sent me articles about their short-wave activities that appeared in their local newspapers during Shortwave Radio Week. Bill's article appeared in the March 15th edition of *The Kennett Paper*, Kennett Square, PA and Jerry's appeared in the March 22 *West Seneca Bee*. Both articles were very interesting and contained pictures. Jerry looked quite dapper sporting his NASWA tee shirt while pointing out locations on a world map. Very nice job Bill and Jerry!

Member **Ed Rubin** N2JBA of Port Chester, NY sent me a copy of an article that he wrote called "*Hams As SWLS And Monitors*" that appeared in the April *WECA-GRAM*, the publication of the Westchester Emergency Communications Association, Inc. Another very nice article that describes the many aspects of the SWL hobby.

Feature Articles

These articles got me thinking about trying to encourage NASWA members to write for *The Journal*. Although we occasionally have members contribute articles to editor's columns, such as *Rowlands DX'ers Forum*, we really don't have a spot for features that might be general in nature. I'd like to see a regular "Feature Article" from a member appear each month. I'm sure that we have quite a bit of untapped writing talent in the club and this kind of column could be a vehicle for that talent. With this in mind I've done a couple of things. I've asked **Kevin Atkins** to prepare a masthead that we can

use for the column, and I've asked **Harold Cones** to prepare an article for next month's *Listeners Classroom* that would explain guidelines to follow for writing feature articles. Harold will reiterate some of the points related to this that originally appeared in "DX'ing According To NASWA" which was published in the 70's. Let me know what you think of this idea.

What Happened To....?

Some members have asked why a particular column may be missing. There are various reasons. Sometimes the US Mail prevents a column from reaching headquarters on the due date which is the last Saturday of each month. Sometimes an editor's personal life or job takes precedence over their hobby activities that particular month. Twice a year, in May and again in November, the English language schedules that **Tom Sundstrom** maintains are printed in their entirety and some of the columns have to be cut back during those two months to keep us within our page count. We are looking at ways to reformat those listings to get the same information reported in less pages. If you have any ideas about this, please write and tell us.

Media Network

NASWA member **Gordon Darling** who lives in Papua New Guinea has joined the cast of *Radio Netherlands Media Network*. Gordon has been asked to do a number of stories on radio in Papua New Guinea, Indonesia, and Southeast Asia. **Jonothan Marks** puts together a very good show every week and it looks like it's going to get even better! I am looking forward to hearing what Gordon has to say from both a DX'ers and professional perspective. If you need the schedule for *Media Network*, the times and frequencies appear in this month's *English Schedules* under DX shows. Congratulations on your new assignment Gordon!

DXer's Forum

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



Although the Fall '89/Winter '90 DX season is on the decline, there are still some real gems to find in the noise — especially if you're willing and able to string up a 600' Beverage antenna. We have a full report on just such an effort at the *Atkins/Lineback/Tow Spring Equinox DXpedition* later in this DXer's Forum. Here's a couple of Kevin Atkins' loggings from this DXpedition that didn't make it into Jerry Lineback's report. Kevin's logs are from Fine Tuning number 558, dated 4/12/90: an ID'd logging of BBS Bhutan on 5023.1, from 1406-1430 on 3/17/90 with Asian pop music, EG ID at 1414, and into the EG service with more ID's. Don Moore had a tentative logging of the same station on 3/21. Nice work guys! Kevin also heard RRI Denpasar, 3945, on 3/17/90 from 1450-1502 with an ID at 1459, the Song of the Coconut Islands interval signal, and a Jakarta news relay. I'm green with envy guys!

This month brings another installment in the "On to the Middle" series, focusing on making the best of an indoor antenna.

On to the Middle, Part III

Hearing 100 Countries with an Indoor Antenna

by Rowland Archer

For the newcomers to NASWA and DXer's Forum, I got started in the "Forum Business" a little over two years ago when Chuck Rippel suggested I write an article about helping novice DXers become intermediates. This article turned into a series called "On to the Middle", a title derived from Don Jensen's excellent article on how to reach the pinnacle of DXing, "On to the Top" (available from the NASWA reprint service).

The premise of the *On to the Middle* series is that many aspects of DXing change fundamentally when you run out of powerful international broadcasters to hear and/or verify, somewhere around 50 countries. The next 50 countries present a new set of challenges: schedules are more erratic, broadcasts may not be in English, transmitters are less powerful, QSL's are harder to obtain, interference from stronger stations becomes more of a

factor, you have to learn more about propagation to know when you are most likely to hear the target station, etc.

Faced with these new challenges, the DXer trying to hear and verify 100 countries needs a lot of information on how to succeed at the quest. Providing that type of information is the goal of this series, and in fact a major goal of DXer's Forum.

EQUIPMENT ENVY

I don't know whether to blame it on our "instant gratification" culture or not, but when most of us first encounter "the wall" around 50 or 60 countries verified, the first impulse is to blame our equipment. We look at the *Contributors' Page* and check out the equipment used by the DXers who heard something we want to hear...and jump to the conclusion that the equipment is their edge. There's no denying the utility and pleasure of using top

equipment, but it's just a small part of DXing success. Knowledge, persistence, and experience play a larger role.

Ironically, the equipment that can help the most often costs the least. People tend to focus more on receivers than antennas and accessories. I'd rather have a great antenna connected to an average receiver than vice-versa.

The general rule for receiving antennas is simple: *get as much metal as you can up as high as you can*. If you can make it resonate at the center frequency of the band you want to tune, do so. The resonant length in feet is $468/\text{frequency}$ in MHz. If you can't build a resonant antenna, don't despair, you can easily reach your 100 countries goal with a non-resonant one.

The general rule for receiving antennas is simple: get as much metal as you can up as high as you can.

There are a thousand variations on this theme, and you can easily invest more time in building antennas than listening. My advice is to put up one or two good antennas and then save your energy for your post-100 countries phase. As new stations or countries get harder to log, you'll have more non-DXing time to burn and tinkering with antennas will give you something to do to keep your interest and hopes up!

LANDLORD PROBLEMS

Telling you to put up a couple of antennas is great advice... unless you live in a place with no space for an outdoor antenna or a landlord or family member who doesn't share your enthusiasm for the esthetics of a well-rigged dipole. Outdoor antennas are preferable, and not being able to put one up is frustrating, but it needn't mean the end to your quest for hearing 100 countries. When I was working on this goal, I lived in an apartment complex with a simple approach to this

issue: NO OUTDOOR ANTENNAS. Actually, I think they called them "aerials."

Besides giving me something to blame my lack of progress on, this restriction caused me to lay awake nights dreaming of various clandestine antenna schemes; could I get up into the attic and run a wire over the tops of the four adjoining townhouses to mine? Maybe a balcony flagpole with a fishing reel to lower an antenna under cover of darkness? Surely no one would notice a wire from my second story window to a nearby tree if it was a thin strand of "bell wire", coated with black enamel and hardly thicker than a coarse hair...

I never built any of these but the last idea did lead to an effective indoor antenna that got me to 120 countries and probably would have taken me further if I hadn't moved to a house where I could have an outdoor antenna. I'll save the discussion of that antenna, my "Indoor Secret Weapon", for the end of this article. First, some non-theory about antennas.

ANTENNA NON-THEORY

I group antennas into three classes: small but convenient (e.g. the whip antenna on your portable), average (tuned antennas and random wires up to 100'), and super antennas, like 1000' Beverages aimed right at your DX target or giant Delta Loops tuned right to the frequency band of interest.

Most people have space for small or average antennas. If you use a small antenna and can hear what you want to hear, great!, and you should file this article for future reference. At some point you may find that you've hit a wall and need some more antenna oomph to help your DXing progress. Otherwise, read on.

Archer's First Rule of Antenna Non-Theory: *The effectiveness of an antenna is inversely proportional to the level of expectations you have for it.*

I can't tell you how many times I've put together or bought a "killer" antenna and found its performance was the same or even less than a simpler design that was higher off the ground. This factor seems

to dominate for simple and average antennas as far as receiving goes. Height and length just seem more important than coils, tuning, impedance matching or dollars spent.

Currently my most effective antenna is a \$9 total cost, 60' random wire that's a good 30' higher up than my \$70 Alpha Delta DX Sloper (installed at the recommended apex height of 28'). I had the random wire up first, and I ordered the Sloper based on rave comments from other DXers. It's a rugged, well-made antenna with imposing looking coils and I was sure that all that tuned wire was going to blow the headphones off my 60' random wire. I now have over a year of experience with the two antennas, and I've heard two stations that came in better on the Sloper. It's a fine antenna, make no mistake, but the extra height of the random wire almost always gives me a stronger signal and with equal or better signal to noise ratio.

INDOOR LIFE

What does this have to do with an indoor antenna? Strangely enough, the same "as much metal as high as possible" rule has value in the Great Indoors, although the restrictions of staying within a building put obvious limits on what you can do.

The "as much metal" part means that the more wire you can devote to your indoor antenna, the better. The "as high as possible" part means your attic is better than your basement, and the second floor is better than the first. If you can get 20' of wire strung up near the ceiling, that's usually better than 6' under the rug.

When I was 13, my brother and I inhabited the second floor of our 1 1/2 story Cape Cod style home. Esthetics not being the most important thing to us at that point, I ran a 30' wire the length of the house, from one end of my bedroom, out the door and down the hall and to the other end of his room. I ran a downlead to my Heathkit GR-54 (a tube rig that let you guess frequencies to within 100 kHz if you were lucky!) and was in business. With this setup I happily logged such oldies but goodies as Congo Brazzaville and

the Windward Islands Broadcasting Service.

I would have achieved at least as good results by running the antenna in our attic and running a downlead through a wall and out near the rig. Consider this option if wires running down the hall runs counter to your taste in interior decorating.

Like basketball, this DXing game has a bigger mental component than most of us will admit.

Soon the 30' wire was joined by a more elaborate folded dipole constructed from 300-ohm TV twinlead. By clever cutting and tying together of the twin leads at the right distances from the center, this antenna was made to resonate at the major international bands. Sorry, I've long since lost the design, but any antenna construction book will include several folded dipole designs which you could adapt to use twinlead. The key point here is that folded dipoles fit in half the length of unfolded ones, of obvious importance to indoor construction. Secondly, you can connect several dipoles to a single downlead, and depending on the frequency you tune, the appropriate element of the dipole will resonate and be the main source of signal to your rig.

Alas, the folded dipole with all its resonance was usually beat in performance by its 30' random wire sibling. I wish I could tell you why. It was still a good antenna, and it made you feel better to know it was sitting there, quietly resonating while you searched through the static. Like basketball, this DXing game has a bigger mental component than most of us will admit.

With this combination of indoor antennas, I logged and verified 92 countries before I hit the canonical DX hobby high school hiatus at age 15.

INDOOR IDIOSYNCRASIES

Radio waves at shortwave frequencies are not stopped by woodframe buildings, but steel and concrete structures can greatly attenuate signals. Glass is transparent to shortwave as well as lightwaves, so high-rise dwellers can often get good results by locating their antennas near or in a window. If you can get some or all of the antenna out the window, try it and see if you get better reception.

Even in a wood-frame dwelling, beware of hidden signal-blocking metal. If your indoor antenna seems strangely devoid of signals, you may have to locate it away from metal flashing, aluminum siding, a metal roof, gutters, or building insulation in your walls or ceilings that contains a layer of aluminum foil.

Another problem with indoor antennas is getting two antennas in place with complementary directionality. Outdoors, this usually means running the antennas at right angles to one another. You can switch between the antennas while listening to a station and choose the one with the best signal.

Dipoles tend to favor signals arriving perpendicular to their length, while random wires give better reception of signals coming from the direction their ends are pointing. You can use these facts to enable two antennas, each running the long axis of your house or apartment, to have complementary directionality. This was an added benefit of my indoor hallway antenna duo.

INDOOR SECRET WEAPON

My favorite indoor antenna of all time is rather unconventional, and is really just a variant of the random wire. By the way, "random wires" is something of a misnomer, as it seems to imply some non-deterministic behavior. Every hunk of metal or wire has a measurable set of characteristics, including resonant frequencies and a directionality pattern. The catch is that the more you stray from a simple, regular antenna design the harder it is to come up with a simple set of

To receiver ->

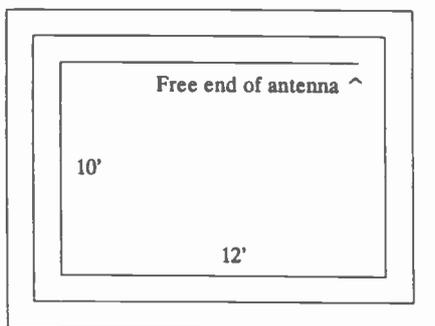


Figure 2. Packing a 132' antenna in a 10' x 12' room

formulas to predict that antenna's characteristics.

During my apartment dwelling years, I had a 10' x 12' second floor bedroom for my radio shack, and a Radio Shack DX-300 for my receiver. Although this rig got a lot of bad press, it also got a lot of us back into the hobby with the seduction of direct digital dialing. It was sure light-years ahead of my old Heathkit.

I was older and married during my second time around in the hobby, and there was no question this time of running 30' wires down the halls of our apartment. Whatever I did had to fit in that 10' x 12' room — the rule was "if you want to look at that mess, that's OK as long as you can close the door and I don't have to look at it!"

At first I tried the obvious; 10' of wire one way, 12' the other. Not bad, but not great either. Twelve feet of wire is closer to "small but convenient" than "average." While laying awake one night thinking of ways to get a "real" antenna outdoors, I hit on the idea of running a loop of wire around the ceiling. This would give me 10' + 12' + 10' + 12' or 44' of wire; but I was concerned that running it in a square would defeat the advantages of length. I can't tell you that a straight 44' wire wouldn't have worked better, but the 44' loop worked a whole lot better than the 10' or 12' straight sections. I got at least 2 or 3 S-units improvement in strength on

most signals. The feed to my receiver was a simple downlead from one end of the wire; the other end was left free, so this is really *NOT* a loop, but rather a random wire in the shape of a square with one end connected to the receiver and the other end hanging free.

Not one to leave well-enough alone, I tried two and then three turns of wire around the ceiling; things improved again! Once more, only one end of this "random square" of wire was connected to the high-impedance antenna input of my rig; the far end of the antenna was left free. The inevitable fourth turn of wire didn't do much, and the fifth made no perceptible change, so I quit experimenting at that point.

I tried two and then three turns of wire around the ceiling; things improved again!

The construction of this is simple. Any wire would do, but I found the black enamel covered "Bell Wire" to be the easiest to hang and least conspicuous. I simply stuck a brad in the molding in each corner of the room and looped the bell wire around the brads. Hooks would probably make more sense, but brads were on hand and they worked fine. Bell wire is about the thickness of a coarse hair, and is very light and unobtrusive (well, relatively).

POWERED ANTENNAS

My "random square" antenna might have gotten me past 100 countries on its own, but I'll never know. One more accessory turned my random square into my *Indoor Secret Weapon*.

An active antenna is an RF preamplifier coupled with a whip antenna element. It usually has two knobs, one for tuning and one for signal strength. The tuner resonates the whip to the frequency of

your choice, and the signal strength knob varies the gain of the RF preamp.

Some active antennas, such as the MFJ 1020 and its follow-ons, allow you to connect an external antenna element to take the place of the whip that sticks out of the active antenna box. In fact, some active antennas come with an external element, and don't even have a whip attached.

I bought an MFJ 1020, and connected my random square to its external antenna input. This gave me the ability to tune and amplify the signal from the square.

Well, I wouldn't claim this combination beats a bevy of Beverages but it sure got me past the 100 country mark with some pretty nice catches along the way, such as *Random Cook Islands*.

THE BOTTOM LINE

Don't despair if you can't put up a dazzling array of delta loops at this stage in your DXing career. You CAN hear a lot with an indoor antenna. Persistence and experience will pay off far more than buying lots of equipment. When I finally heard Greenland well enough to ID them, they were in on my Sony ICF-2001D with the whip antenna as well as on the NRD-515 with the outdoor antenna. It was getting up every day at 0955 to check for them that finally got me the prize, not having an NRD-515 instead of a less expensive radio.

RESOURCES

There are lots of good antenna construction books on the market. One of my favorites, which includes a good section on indoor antennas, is *Easy-Up Antennas for Radio Listeners and Hams*, by Ed M. Noll, published by Howard Sams & Co., 1988.

* * *

What's been YOUR experience with indoor antennas? Any designs or usage hints you'd like to pass along to help other NASWAns? Send us your thoughts and you can get published in the Journal. Thanks and see you next month.

Alabama DXpedition

by Jerry A. Lineback

Kevin Atkins, John Tow and I carried out a Spring Equinox DXpedition to western Alabama March 16-18, 1990. Kevin took us to his family's home grounds in Lamar County, Alabama. The nearest town of importance is Columbus, Mississippi. The site consists of an old barn sitting at the southeastern corner of a pasture that, in turn, is surrounded by pine forest. The diagonal measurement of the pasture is at least 600 feet. Kevin put out a typical single wire ungrounded Beverage antenna oriented NNW. John had built a double-wire Beverage which has one line grounded at the far end and the other at the near end. This allows switchable directionality. It was supported by a series of three foot high miniature telephone poles. This antenna was oriented NW-SE.

It had been raining very hard for more than 24 hours before we arrived and the creek was out of its banks. This prevented putting out any longer antennas. Noise levels were quite low in the area. We set up in the barn on Friday evening using batteries and a Coleman lantern as the barn has no electricity. We determined that the antennas worked well and that the double-wire Beverage was quite directional. Performance was best on medium wave but a considerable attenuation of Latin stations could be noted on the northerly wire through 60 meters. We logged some Latin and African stations in the evening and then retired until 0800. As soon as the terminator reached Papua New Guinea and Australia, we knew we would have a good time. Australasian and Indonesian stations began to boom in at local levels as nightfall swept across that region. It was a veritable feast of DX. We noted signal enhancements during both sunset in Australia/SE Asia and during local sunrise in Alabama. We repeated the experience the next night with even better results as 120 meters opened up on Sunday morning. While none of us heard any new countries and probably no new stations, I, at least, have never heard so much so well in so short a time. Stations I noted included:

| | | | | | |
|--------|-----------------|--------|-------------------|--------|-------------------|
| 1620 | Australia | 3320 | N Korea | 4945 | RRI Ambon |
| 2310 | Australia | 3335 | R E Sepik | 4871 | RRI Wamena |
| 2325 | Australia | 3345 | RRI Ternate | 4874 | RRI Sorong |
| 2410 | R Enga | 3345 | R Northern | 4875 | China |
| 2485 | Australia | 3365 | R Milne Bay | 4890 | NBC Pt Moresby |
| 2695 | RPD Ende | 3375 | R W Highland | 4895 | RTM Sarawak |
| 2850 | N Korea | 3385 | RRI Kupang | 4915 | China |
| 2904.8 | RPD Ngada | 3385 | R E New Britain | 4920 | Australia |
| 3205 | R W Sepik | 3395 | R E Highlands | 4930 | Haiti |
| 3214.8 | RRI Manado | 3440 | N Korea | 4970 | RTM Kota Kinabalu |
| 3220 | R Morobe | | complete w/jammer | 4975 | China |
| 3222.8 | RRI Mataram | 3654 | RPD Luwu | 4990 | China |
| 3235 | R W New Britain | 3904.8 | RRI Merauke | 5005 | RTM Sarawak |
| 3245 | R Gulf | 3925 | Japan | 5030 | RTM Sarawak |
| 3260 | R Madang | 3945 | Japan | 5046 | RRI Yogyakarta |
| 3265 | RRI Gorontalo | 4000.2 | RRI Kendarl | 5052 | Singapore |
| 3275 | R S Highlands | 4607.3 | RRI Serul | 5055.4 | RRI Nabire |
| 3290 | R Central | 4753 | RRI Ujung Pandang | 5075 | China |
| 3305 | R Western | 4789.8 | RRI Fak Fak | 5145 | China |
| 3306 | RRI DIN | 4810 | USSR | 5275 | Taiwan |
| 3315 | R Manus | 4835 | RTM Sarawak | 5320 | China |

We also heard a carrier and probable audio on Tonga (5030).

Kevin's grandmother lives on the old home place and he brought his mother along for a visit. Well, the ladies decided that those poor boys out there in that cold wet barn needed some nourishment, so they fixed several country-style dinners and breakfasts for the crew. Something I would recommend for all DXpeditions.

Easy Listening

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



RADIO VILNIUS

Of all the Soviet Republic broadcasters, the one which probably holds the most interest for the average SWL right now has to be Radio Vilnius. Since the current situation in Lithuania appears on the nightly news just about every single night these days, listening to Radio Vilnius adds a sense of perspective one will not get from purely domestic sources in the U.S. And since the last time I listened to Radio Vilnius (about eight months ago or so), the station has indeed gone through some radical changes, so much it's hard to even consider the station a Soviet broadcaster anymore. It's obvious that the station personnel do not. Radio Vilnius has wholeheartedly embraced the independence movement in that country, and news and commentary have often referred to Lithuania as "an occupied territory".

Quite naturally, most of the news is devoted to the politics of independence and confrontation with Moscow. Just recently the station broadcast an urgent appeal from the leaders of the Lithuanian Parliament for international recognition of the country's independence and pressure on Moscow not to use force to quell the independence movement. To be fair, however, the station has also reported faithfully on dissent within the country—especially that of Russian and Polish minorities who demanded that the independence question be put to a referendum rather than merely being decreed by the Parliament. Reports have not only featured the demonstrations these minorities have held but also many residents of a non-ethnic Lithuanian section of Vilnius have been interviewed.

Despite the even-handedness, however, the stations editorial policy is certainly and squarely in favor of independence. "Letterbox", which has aired as often as twice a week, has responded to some listeners' suggestions that perhaps Lithuania has been moving too fast and by doing so threatens

Gorbachevs hold on power and thus the entire reform program underway in the Soviet Union. The fear expressed is simply that if Gorbachev is thrown out of power, hardliners may take over, and then Lithuania will be in even worse shape than it is now. The commentators response has invariably been that when a people have suffered for so long, any delay becomes intolerable. In fact, most of the Lithuanian politicians interviewed by Radio Vilnius have expressed the opinion that the real danger facing the country is not in moving too fast, but in moving too slowly and too cautiously.

Radio Moscows response was probably predictable as well. On March 17 and 18 (a Saturday and Sunday), Radio Vilnius broadcasts were replaced by the broadcasts of Radio Moscow World Service in English. Radio Vilnius, however, was back on the air on Monday, March 19, but with notably poorer reception. The station gave an explanation of the blockade of its broadcasts and how it got back on the air, but reception was so poor that I was not really able to follow it. Even to this day (Sunday, April 1, 1990), Radio Vilnius's reception is notably poorer than that of Radio Kiev which uses the same frequencies at a later hour. At 2300 today, the signal on 12.060 was quite strong, but the station was so undermodulated that it made following the broadcast impossible. One suspects that Radio Moscow is doing some subtle sabotage of its own.

The emphasis on Radio Vilnius's programming now is, of course, news and politics, but a few old programs have still been retained. "Letterbox" has been expanded to twice a week, and "Around Lithuania" still airs every other Monday. Other features that have been retained are "History of Lithuania" and "Lithuania by Radio", as well as any number of untitled features on Lithuanian folk music and folk culture. The impulse behind these programs is obvious: to portray Lithuania as a country with a cul-

ture, history, and development uniquely its own as opposed to Soviet culture and society. One new addition is a weekly (sometimes bi-weekly) feature, "News From Estonia and Latvia" where political developments in these countries, also eager for independence from Moscow but content to move more slowly towards that goal, are reported and become the subject of commentary.

What is likely to happen to Radio Vilnius in the next few weeks is anybody's guess. By the time this article appears in *The Journal* there is even a chance that there will be no more Radio Vilnius or that the Soviets will have cracked down completely and the current station personnel have been replaced by journalists more amenable to the Soviet line. But for now, Radio Vilnius is a notably independent (in the true sense of the word) broadcaster within borders most of the world recognizes as Soviet territory.

RADIO KIEV

Far more conservative in its editorial policy is Radio Kiev. The station does report on events in Lithuania but does so from the general Soviet perspective and using the Soviet rhetoric (that is dubbing the independence forces in that country as "extremists"). Very little, if anything, is mentioned about the Ukrainian independence movement, itself much smaller than in Lithuania, although the station did report an appeal from the Ukrainian Party leadership for independence-minded political groups to stop holding meetings and rallies and thus "threatening the stability of the republic".

More noticeable in Radio Kiev's broadcasts than any change in news or editorial policy is the complete revamp of programming. Up until 1990, Radio Kiev's daily programming was ten minutes of news, followed by fifteen minutes of "The Ukraine Today", which included a number of various, unrelated features. Weekend programming included "The Dialogue" a mailbag program (the only one retained in Radio Kiev's new format, by the way), and a "DX Club" on Sunday nights. Now, however, Radio Kiev offers a different feature program for every night of the week.

The beginning of the broadcast is much the same as before, five minutes of national

and international news, followed by five minutes of purely Ukrainian news. But new feature programs include "The Land and the People", a program on agriculture and the environment, "People and the Economy", "Society", (a focus on changes in Ukrainian society), "Midweek", (a current affairs program), and "The Human Factor" (focus on individuals shaping the new direction for the Ukraine). In later editions of the column, I hope to feature some of these new programs at greater length and depth. Sunday nights feature "Sunday With Radio Kiev", a collection of untitled features, "Tourism", and "DX Club". "The Dialogue" still airs on Saturdays.

RADIO TASHKENT

I'm afraid I can say very little about Radio Tashkent since reception of this station has traditionally been the poorest of the major Soviet Republic broadcasters. Recently, however, Radio Tashkent has been coming in at a moderate level in English on 15.470 at 1200 and less well but still audible at 1330 on the same frequency.

Very little seems to have changed with Radio Tashkent since the last time I was able to follow it clearly enough to report on it. Most of the feature programs, like "Life In the Village", "The Life of Soviet Muslims" and "Music Program" (a good source for some exotic music early on Thursday mornings) have remained unchanged as the editorial policy of the station seems to have as well. Of course, saying that the editorial policy of the station does not seem much changed must be taken in context with the general editorial policy of Radio Moscow as a whole, a far different station itself than it was just five years ago.

One thing considerably different, however, is "Radio Tashkent Advertisements", a two to three minute program which airs just after the news at ten minutes into the hour (or half hour depending on when you're listening). Like Radio Moscow, Radio Tashkent is now permitting limited advertisement (good Lord, Capitalism with a capital "C"!) of traditional Uzbeki handicrafts, such as wooden columns and wooden boxes. The ads themselves, however, could learn a lot from Madison Avenue.

A S I A N Destinations

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Off to Asia this month where we will take a look at Indonesia, and ramble on about some other things. First, a letter (and a nice postcard) from Michael Healey of Johnston, Rhode Island commenting on All India Radio discussed in the January Destinations column. Michael says that it was a coincidence that he recently became interested in India and Indian culture when the January column discussed India. He purchased a book on the subject of India and then began looking for AIR on the shortwave bands. He continued "...reception from All India Radio on 7412 kHz from 2100 - 2200 UTC has been totally outstanding". Michael uses the old popular Panasonic RF-2800 with an MFJ antenna 16010 attached to a 200' long wire. He's now considering purchasing an NRD-525. Well, thanks for your letter Michael. I'd like to hear from some more you out there.

I just got the latest issue of OZDX, a very informative newsletter from Australia (*19 Jilian Avenue, Highett, Victoria 3190, Australia*) that is a good source of Asian and Latin news. As I mentioned in the January column India continues to add new sites and frequencies to it's domestic shortwave network. The following information is from the latest OZDX: Robert Palmer of Spokane, WA provided this data. Future plans - New 10 kw SW stations at Itanagar (Arunachal Pradesh) and Gangtok (Sikkim). Upgrade to 50 kw is in progress at Guwahati A, Hyderabad, Madras, and Kohima. New 50 kw SW stations will be set up at Thiruananthapuram (Kerala) and at Imphal (Manipur). Additional channels are allocated for Port Blair, Andaman Isls on 6085 and 9600. Port Blair and Leh (Kashmir) are both using 4760 on a non-interference basis pending these new allocations.

I continue to hear on occasions a station on 4760 underneath the Chinese regional and sometimes-utility with subcontinental music and Hindi. But, I can't pull enough details on it to determine which Indian regional it might be, either one would be a nice catch. By the way, if you do hear Port Blair, the verification signer, as reported by Geoff Cosier is R. Venugopal, Station Engineer.

More futer plans: 3255 Shillong is likely to move to 4790. Leh, Kashmir has been allocated two frequencies; 3330 kHz and 6000 kHz. The ID for Leh is "Radio Kashmir".

That reminds me, we need a followup on my listing of 90 meter band Indian regionals from the January column. I had indicated which stations had been logged in North America in the last few years. No sooner had I done that when the status changed on two entries. 3277 Srinagar, Kashmir was logged by Dave Clark, Sheryl Paskiewicz, John Bryant, Kevin Atkins, myself and no doubt some other folks in North America during January. In addition, Dave Clark in Ontario also reports very probable reception of AIR-Simla on 3223, and a very tentative AIR-Jammu on 3345.

Dave Clark comments in NU on these sub-contintall openings on 90 meters - "...signals for the most part came up late (1245+) and stayed in very late, resulting in first time logs of 3295 Delhi and tentative Jammu - 3345. Apparent signal path was a definate factor. Virtually indaudible on "best" sub-continental NE beverage antenna; came up and stayed best on NW beverage, suggesting a non-great circle path, quite likely through the donut hole. Geomagnetic field was relatively quiet - Aindex = 8, 1200 K index=2, while flux

had been stable at a relatively moderate level of 173 for 2 consecutive days". I've noticed a similar occurrence with Indonesian reception on 90 meters. Normally, from Kansas, peak directivity for Indonesian reception is via great circle in a west/northwesterly direction. However sometimes peak reception tends to drift a bit further south, say 5 to 10 degrees, from the great circle direction.

On March 17th several DXers in three or four locations across North America got together for a DXpedition. I believe this all got started when John Bryant planned a DXpedition in Washington state. Pretty soon other DXers decided to pick the same weekend, then someone suggested this was a timely occurrence for Shortwave Week. DXers in Alabama, Virginia, Oklahoma and Washington got together. One benefit, it was suggested, was the ability to compare notes on DX conditions across the country during the same 24 hour period. I haven't seen all the results, but I did talk to Kevin Atkins about their group's experiences in western Alabama (he was joined by Jerry Lineback and John Tow). The comparison of what was heard in Alabama vs what was heard in Oklahoma by Kirk Allen and myself was surprising. Kevin and crew had a logging of the very rare RRI Merauke, Irian Jaya, Indonesia on 3904.7 while we had not a whisper of it here. Several more Papua New Guineans were heard the morning of the 18th in west Alabama than was heard in north Oklahoma. We heard about three or four, while they had a full band. We noted unid Indonesians on 3415 and 3428, not heard in Alabama, and there was a difference in the number of 2 MHz Indonesians logged from the two different DXpedition locations. Latin and African reception appeared to be very similar. What does all this mean? I'm not sure, it's difficult to correlate, but it does seem to say that differences between DX locations are more noticeable for polar or near-polar path propagation.

That brings up another interesting test of tropical band DX versus the DXer's location. I wonder if DXers on the east coast of North America realize what an incredibly good catch RRI-Bukittingi (3232 kHz and 4911 kHz) and RRI-Banda Aceh (4955) are? It has been several years since I've heard either one of those two in the midwest. Yet the reports from the east coast indicate that reception can be somewhat reliable and even decent at times, during the east coast late afternoon (2200-2300 UTC)! Who said Asian DX can't be good out east?!

What intrigues me is the apparent disparity in signal strength from these two Sumatran stations, as reported on east coast and out here. I never hear more than a carrier out of 3232 anymore, same with 4911 and 4955 (even rarer). Yet loggings in Pennsylvania of these stations report decent signal levels. I can't think of any reason why the transmitter power would be changed dramatically from evening to morning broadcasts. It would only mean that this is a very good example of what grayline propagation can do for received signal-to-noise ratios. I've experienced this afternoon grayline to Indonesia only about 6 times in the last 10 years and only with reduced signal levels over what was heard the previous morning from those same stations.

Thanks to Joe Farley of Downers Grove, Illinois I may now have a better chance of hearing RRI-Bukittingi on 3232 kHz. I am now the proud owner of the Farley Loop, a directional 2'X2' amplified loop for the tropical bands. At times I am able to null the utility which is also on 3232 kHz, and which I now know is located within a one-hop distance south of my location.

One last thing - it was great visiting with several of you at the SWL Fest in Philly. Good show Brown, Field, Cones, et al.

73zzzzz, Mitch Sams

L A T I N Destinations

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Like most SW hobbyists, when I started SWLing in September, 1971, the first Latin American station I heard was HCJB. Soon every evening I was tuning in "Studio Seventy", a predecessor of today's "Passport". However, one evening, February 15, 1972, I didn't hear the familiar news, light pop music, and short chatty features. Instead, there were just the precordded hourly IDs and instrumental music. The next morning, in my high school library's "New York Times", I learned there had been a bloodless military coup overthrowing President Jose Velasco Ibarra's government, and Quito was under curfew. Five times Velasco had been elected or appointed president. Only once did he complete his term of office without being overthrown.

On September 11, 1973, one of Latin America's bloodiest coups ever grabbed the DX world's attention when the Chilean military overthrew President Allende's elected Socialist government. DXers listening to the then many Chilean SW stations noted nothing unusual in the days before the coup - although all stations by that time had been highly politicized. After the coup, the stations supporting Allende were used briefly to broadcast military propaganda, then taken off SW.

Latin America's governments have been no model of stability. Every country has been under military dictatorship several times. The most unstable country has clearly been Bolivia. According to John Gunther's excellent Inside South America, from 1825 to 1961 Bolivia had 179 changes of government - an average of about one every eight months. Several Bolivian presidents lasted just a day before being overthrown. Once Bolivia had three presidents in three days; the first two were assassinated, and the third, assumedly, very nervous. As recently as 1978-1982, Bolivia went through ten presidents and several coups. Honduras and Venezuela, among others, have been only slightly more stable, while still other countries, such as Guatemala and Paraguay, achieved stability through a series of long term dictatorships.

Just days after the 1973 coup in Chile, another type of Latin American politics appeared on the radio. At that time, Venezuela was king of the sixty meterband, with easily heard stations almost every ten kilohertz. Suddenly, it became impossible to tune sixty meters without hearing an upbeat jingle for Carlos Andres, presidential candidate for the Accion Democratica party in Venezuela's 1973 elections. Andres had decided to blanket Venezuela with an extensive radio campaign, which helped lead to his November electoral victory.

Perhaps because we focus on the different and violent, we sometimes forget that Latin America also has some very strong democratic traditions. In most countries after independence, two political parties quickly emerged: the Conservatives, who favored an active collaboration between the government and the Catholic Church, and the Liberals, who admired a revolutionary named Thomas Jefferson and believed in strict separation of church and state. In some places the differing parties battled in partially-honest elections, in other places they resorted to the gun. Regardless, this was a struggle between members of the elite; the common masses had no role, except as soldiers who fought and died when politics turned violent.

Beginning in the late 1800s and early 1900s, a small middle class of merchants, teachers, and government workers emerged in the cities. Unlike the peasants, they challenged the elite for political control. The elite didn't share power easily; countries such as Guatemala, Venezuela and Paraguay remained firmly under powerful caudillos. But in some countries democracy did prevail and free elections were held. In 1889, Costa Rica began 100 years of free elections. Colombia, Chile, Uruguay, and Argentina, among others, had several decades of

mainly stable democratic government. In several countries the traditional parties absorbed the middle class and evolved into modern parties; in others, they died out and new ones were born.

Unfortunately, the Great Depression of the 1930s hit Latin America hard. Europe and the United States no longer bought Latin American exports, throwing millions out of work. With civil unrest and the threat of Fascism or Communism growing daily, the army moved in and took firm control of most countries. Ecuador had twelve presidents from 1930-39. Dictators like Vargas of Brazil, Ubico of Guatemala, and Andino of Honduras began over a decade of rule. Rafael Trujillo took over the Dominican Republic, ruling until his 1961 assassination. The Somoza family began nearly fifty years of rule in Nicaragua. Dictatorship took a firm hold. Only Costa Rica, Colombia and Mexico's one-party quasi-democracy remained unscathed.

Democracy began to blossom again briefly in the late 1940s, but soon Cold War politics quashed it back down. Even Colombia succumbed to a hardline general, despite over 60 years of democratic rule. At one point, tiny Costa Rica was the only democratic country in the entire Caribbean. In the late 1950s and early 1960s, democracy once again made gains. In 1958 ruthless dictatorships were replaced by democratic governments in Venezuela and Colombia. Those two countries have consistently held free elections ever since. But democracy in other countries, such as Argentina, Brazil, Peru, and Honduras, did not fare as well. By the mid-1960s, dictatorship was once again on the rise, reaching a peak in 1977, when only five Spanish-American countries were ruled by civilian governments.

Starting in 1978 democracy rebounded, as populations demanded more freedom and military establishments realized they were not suitable for governing in the modern age. First there were elections in Ecuador and Peru; then the fall of Nicaragua's Somoza dynasty in 1979 shook dictatorships everywhere and led to that country's first free elections in 1984 and 1990. In 1982 to 1983, civilian democracy returned to Bolivia, Honduras, El Salvador, and Argentina, followed by Brazil and Uruguay in 1985 and Guatemala in 1986. In the past year, Paraguay, Panama, and Chile returned to democratic government. Today, Castro's Cuba, Haiti, and Surinam are the only dictatorships in this hemisphere. The military and wealthy elite still exercise considerable behind-the-scenes control in some countries, especially in Central America, but never has the hemisphere been so free.

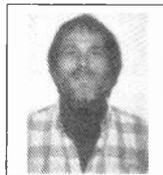
Perhaps I'm optimistic, but I'll predict that never again will DXers hear a Latin American coup, unless it comes from Cuba, Haiti, or Surinam. That OK, though. Coups are never announced in advance, but elections are, so we can plan to tune them in. For SWLs who understand a little Spanish, it's a chance to hear something of another country's political culture, and for DXers, it may mean extended schedules or reactivations of otherwise hard-to-hear stations. Last month's April 9 elections in Peru nicely coincided with enhanced Andean propagation. It could be coincidence, but the morning after the election I logged three new Peruvian stations. Although conditions were even better the following day, I didn't so much as hear a carrier from any of them.

Two elections are coming up this month. On May 16 the Dominican Republic will hold what could be called the geriatric elections. Joaquin Balaguer and Juan Bosch, two popular eighty-plus year old politicians of days gone by, are contesting the presidency. Look for a possible reactivation of Radio Mil on 4930, or maybe Radio Clarin will preempt the Cuban exiles for a day of local news. Then, on May 28 presidential elections will be held in Colombia. The principal candidates are Liberal Cesar Gaviria Trujillo and Social Conservative Rodrigo Lloredo Caicedo. For some election coverage, Colombian style, tune in CARACOL on 5075. It's easily heard evenings and mornings, and could stay on all night for the elections. DXers should check normally inactive Colombian frequencies, such as Radio Guatapuri's 4818 kHz. In the meantime, of course, listen for political advertisements. They make great details for reception reports!

To finish off, here are a few upcoming station anniversaries. A reception report with a birthday card included might just do the trick! 5/14/43 R Guarujá, Brazil; 6/12/52, R Paz y Bien, Ecuador; 6/16/57, R Atlántida, Peru; 7/2/45 R Reloj, Costa Rica; 7/17/72 R Panamericana, Bolivia; and 7/26/80 R San Martín, Peru. HASTA LUEGO! *JM*

Listener's Classroom

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This month, Listener's Classroom will be devoted to a report sent by NASWA member Guy Atkins. Guy helped organize the "Grayland DXpedition," held at Grayland, Washington, 16-19 March. For those of you that have never taken part in such an event, Guy's article will teach you a bit about what goes on and what you can expect.

I believe it was NASWA Board member John Bryant who coined the phrase "DXhaustion"...I now know what he means, because I'm still recovering from three nights of superb DXing at Grayland Beach State Park, near Grayland, Washington.

This state park is south of the shipping port of Aberdeen, Washington, and is located right on the Pacific Ocean. About 300 yards of marshland, scrub pine, and dune grass lie between campsites and the sandy beach.

In attendance at the DXpedition were Terry Palmersheim, Bruce Portzer, John Bryant, David Clark, Craig Siegenthaler, and myself. We were also visited by four other DXers from Oregon and Washington.

Our equipment line-up included three NRD525s, one NRD515, a modified FRG-7 and R-1000, a Grundig Satellit 500, and five (!) Kiwa Electronics' Multiband AM Pickup (MAP) units. Using splitters and impedance matching transformers, the six of us shared three Beverage antennas between 700 and 3500 feet long. These antennas were "aimed" at Australia/NZ/Tonga, South Pacific/PNG/Irian Jaya and along the China Coast/Sumatra. John Bryant required a pair of size "XXL" chest waders when he stretched antenna wires across a portion of a swamp! John's a truly dedicated DXer.....

Mediumwave and tropical band short-wave DX reception both were excellent. Highlights on the mediumwave frequencies included audio, IDs, etc. from Tuvalu, multiple outlets on Fiji, both Solomon Islands MW stations, literally dozens of Japanese and Australian stations, Tonga, Marshall Islands, and other international MW DX. Some of these catches were of startling quality. Particularly unbelievable was the FEBC Korean station HLAZ 1566kHz in Chenju, South Korea which was broadcasting in Russian to the USSR. This station was monitored in full-bandwidth AM mode on our receivers, with absolutely no static or interference, one and one-half hours after Washington sunrise! We did not lose audio on this station until three and one-half hours past sunrise...amazing reception!

Shortwave DX catches included a number of Indonesian outlets. RRI Denpasar was heard with a very good signal, and the "mystery" INdo on 4898.4 turned out to be RRI Gorontalo wandering around the band. RRI Merauke was received at great levels, too. TBC Tonga was heard on 5030 (// 1017); it is interesting that they were on the air during their Sunday evening (normally off on Sundays) with short religious-sounding broadcasts in language(s) that DID NOT sound at all like Tongan. In fact, between 0600 and 0615 TBC was broadcasting what sounded like Koranic chanting! IDs and the RA news relay at 0700 confirmed that this was indeed Tonga with this out-of-the-ordinary programming mix.

The great DX we listened to at the Washington Coast was there for any individual with the right equipment and antennas. The real reason for the DXpedition was to experience it as a group, to share the fun with others. I'm glad I went!

Listener's Library

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Welcome back to Listeners' Library. With spring in full bloom at this point, many of us will have a chance to do some experimenting with new antennas. If you fall in that category, one of our contributions this month is just for you; if you are a owner/operator of a PC, we have a guest review of real worth; and finally, our new Executive Director, Bob Brown, weighs in with a review of a new book on Papua New Guinea. That book, by the Cousteau Group, was recommended to us all by four different individuals within two weeks (David Clark, Harold Cones, Bob Brown and my wife!) This one is in the "Must Have" category!

Speaking of "must have" books, I practically ordered each of us to buy the biography of Dr. Harold Beverage (*Genius at Riverhead*) in the February column and then didn't give you a complete address. Sorry! The correct information on how to get one of the last few copies is in the bibliography below.

Excellence... Right Under Your Nose

A brief aside before we get started: I am writing this just a few days before the April issue of the Journal hits the streets. Go back and find your copy of the March 1990 Journal. Take a look. In my opinion, the March issue was the finest single issue of a monthly radio hobby publication ever published, bar NONE! Every single columnist hit a home run! The content was broad and deep. I know that there are parts of the March issue that I will study for a long time to come. It is darned easy to see why our membership is escalating so rapidly when the general trend of club populations has been downward. Its a real pleasure and honor to be even a small part of such an excellent service to the hobby!

One of the most common "other" interests among shortwave listeners is a fascination with maps. The advent of PCs at home and in

schools has fostered the development of a good number of PC-oriented mapping and atlas programs. The Library is fortunate to have several reviews in hand of the best of these programs. NASWAN Doug Thompson of Hartland, Vermont is a long-time computer and map enthusiast and a relative newcomer to the radio hobby. He has reviewed a shareware program called GEOCHRON for us this month. Reviews of WORLD29, PCGLOBE 3.0, and WORLD ATLAS are also on file. If you would like to read the other reviews, send the old Librarian a note requesting them and a #10 SASE at the address on the masthead.

GEOCLOCK: A Review

By Douglas F. Thompson

GEOCLOCK is shareware program available from a top-notch outfit called Public Brand Software. You may order by mail or by phone. The GEOCLOCK system requires a graphics board, and has different versions for Hercules/CGA and EGA/VGA. With the higher resolution graphics boards it requires 256K of memory and provides color output with excellent detail. At present there are about 30 maps available for registered users (registration is \$30, from Joseph R. Ahlgren, 2218 N. Tuchahoe St., Arlington, VA 22205-1946).

GEOCLOCK produces maps that each show current areas daylight and night and the twilight terminator, based on the current time in the computer, or for any specified time and date you choose to input. The program updates the twilight line in real time, or it can be speeded up to show the variations in daylight at any location for any day. (It was from using this program that I finally realized that on the first day of spring and the first day of autumn every spot on the globe has 12 hours of sunlight. I suppose I should already have known that, but the graphical output made it obvious. Where were personal

computers when I studied 9th grade science! The answer is—they hadn't been invented.)

The \$5 demo disk from PBS contains three maps: Rectangular projection World and USA maps plus a polar projection centered on the North Pole. Maps distributed to registered users include the world, eight or ten detailed maps of the US, at least one map of each continent, and a couple of my personal favorites, maps of the Arctic and the Antarctic. Additional maps can be generated for \$30 each from the author.

For those of you familiar with the computerized version of the DX Edge, the similar program from MFJ or the shareware "TERMINATOR" program, GEOCLOCK is similar, but offers the advantage of being able to see the terminator position in great detail on some of the regional maps. Those DXers who use sunrise or sunset enhancement at the transmitter as a DXing technique will love this program!!!

Country names are not included on the maps, but you can customize your maps to show locations in a cities file you generate using a text editor. For registered users two extra features are available, including the capability to point to a location with a mouse and then zoom in or out (depending on the map files available—this is particularly effective if you select New York City and zoom in from the world view). Registered users also have the capability of measuring distances between locations they select (again by use of the mouse) on any of the program's maps. DOS's GRAPHICS.EXE program will not give you a useable picture of any maps from GEOCLOCK. Perhaps a reader could suggest a way to get print-outs from this program—I've not found one that gives quality results.

In summary, GEOCLOCK is a beautiful mapping program, a real-time DXing tool and a great bargain at \$30! Highly recommended.

Cousteau's Papua New Guinea Journey

Reviewed by Bob Brown

Occasionally the Book Of The Month Club has some great bargains and when I saw the listing for a book called "Cousteau's Papua New Guinea Journey," I didn't hesitate ordering it. This fascinating 224 page book was published in 1989 by Harry N. Abrams, Inc., New York and written by Jean-Michel Cousteau and Mose Richards. Filled with beautiful color photographs, the book tells the tale of the 1988 expedition of the Cousteau Society to explore the rich aquatic and land environments and the diverse cultures of the eastern half of the large Pacific island of New Guinea known today as the independent nation of Papua New Guinea. The group travels throughout the Bismarck, Solomon, and Coral Seas to explore places with names that should be familiar to SW DXers who enjoy listening to this part of the world. New Ireland, New Britain, Bougainville, Madang, Milne Bay, and Port Moresby are visited as well as the account of their journey up the fabled Sepik River, the river of the Crocodile Men.

Ecological problems are studied and the book explores how the Cousteau team was able to help educate villagers about potential threats to their environment. Exciting discoveries including an account of men who fish with nets made of spider webs and the tribal rituals of the Mud Men are also explored.

This region's role in World War II is also covered in this book. In August 1942, a titanic battle erupted across the peaceful islands and seas of New Guinea that would determine the course of the war and the destiny of millions of people. After buying the book, I have since seen the PBS special about this expedition. It was shown as a 2 part series and will probably show up again some time on your local PBS station. In the mean time, I recommend picking up this book. If you have any interest at all in this area, you won't be disappointed.

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Cousteau, Jean-Michel and Richards, Mose, (New York, H.N. Abrams, Inc. \$39.95) 1989

Technical Topics

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ANTENNAS PROJECTS FOR THE LANDED GENTRY

When radio enthusiasts think of antennas, they often think of huge arrays occupying acres of land. We have all seen photos of the curtain arrays of, say, Radio Netherland or Deutsche Welle. What most people don't realize is the concept of give and take can be used to their advantage.

If the transmitting end of things erects huge antennas, then the receiving end is not obliged to do so. Of course, if both the transmitting and receiving ends had optimum antennas it would be ideal. But most broadcasters (and I use the term for one-way and two-way radio sources) assume that the receiving end will have a less-than-ideal antenna. For example, most European broadcasters are aiming at people with portable receivers with whip antennas. They know that their audience has little spare acreage for large outdoor antennas. Likewise, in the U.S., many people live in urban areas or locations in which outside antennas are forbidden.

So when people ask me "what is the best antenna I can put-up?" I reply "how much room do you have?". It literally boils down to how many resources you have available to you. If you own an R.J. Reynolds aluminum franchise, or a few hundred acres of land in Texas, then the type of antenna you can (and should) put up will be quite different from someone with a 1/4 acre lot in the city. The best antenna you can put up is the best antenna you are able to put up.

The antenna plans that follow will work well for anyone with a moderate amount of space (like a

typical urban lot). Those with more space can use it to get the antennas higher in the air. Those with less space can experiment adapting the antennas to fit what is available. It won't lessen performance too much if the plans are not followed exactly.

WARNING!

No matter how many times you have built or installed antennas please read the following carefully.

As a former Deputy Coroner, I have seen far too many people killed while erecting an antenna. This is our hobby, folks. The closest I ever want to see someone come to death from SWLing is from staying up all night to catch an Indonesian station (right, Bob?). Literally all the deaths I saw from antenna accidents were from poor planning (or no planning). Before you even start, sit down and look at your installation. Where will the antenna go? What will be in the way? Never go up a tree or onto a roof without someone there with you. A neighbor of mine once died on his roof from a stroke. He died there after several hours because no one knew he was there, nor saw him have the stroke. Never put an antenna up where it can contact a power line - even if it would have to fall down to do so. While putting up an antenna do not let any part of it go near a power line. Don't forget the "service line" that goes from the pole to your house. It carries 220 volts - quite enough to kill most people. If you drop an antenna,

LET IT GO! You can always untangle it later - and it's easier to untangle an antenna than a human body. Only when you are certain that you are ready to go should you start to put up your antenna.

PREFACE TO CONSTRUCTION

One of the most important factors in the performance of wire antennas is the height at which they are placed above the ground. There are a couple of reasons for this: ground cancellation and angle of radiation.

In ground cancellation, part of the signal coming toward the antenna hits the ground first, then bounces up to the antenna. Unfortunately, some of that same signal also went directly to the antenna. The "bounced" signal will partially cancel the direct signal, depending on the distance the bounced signal had to travel up from the earth (the height of the antenna). The higher the antenna, the less significant ground cancellation becomes.

The angle of radiation is the angle between the earth and the arriving radio signal. If the signal arrived from directly overhead, the angle of radiation would be 180° ; if it arrived from the horizon, the angle would be 0° . If your signal source is close by, the optimum angle of your antenna is irrelevant - there's enough signal at all angles to go around. But if your signal is quite distant, such as Europe, the angle is critical. High angle signals will arrive, but they will be quixotic, and prone to fading. There will be more signals arriving at a low angle, and they will be more stable (on the average). Placing your antenna as high as possible will make it most sensitive to signals arriving at a low angle.

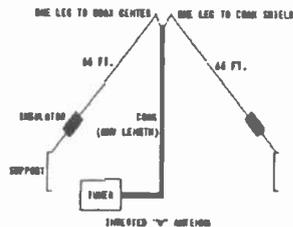
AN INVERTED "V"

There are many antennas available for individual bands of frequencies that out-perform

multiband antennas. Unfortunately, unless you only listen to a particular band, or have the resources to put up an antenna for each band you listen to, the multiband is a necessary compromise.

The inverted "V", so called because of its shape, is an excellent broadband antenna. Many antennas have optimum performance over a very narrow range of frequencies (150 KHz, for example). Such antennas might do very well between 7.5 to 7.65 MHz, but poorly anywhere else. Obviously, this won't do for most SWLs. "Broadband" means that an antenna will do well across a wide range of frequencies - but not necessarily on more than one band. By adding an inexpensive antenna tuner to the inverted V described below, the antenna can be made to cover continuously from 1.5 MHz to about 30 MHz. This means that one antenna gives you all the International Shortwave Bands (including the tropicals) as well as the Utility frequencies. A partial list of tuner manufacturers appears at the end of this column.

A distinct advantage of the inverted V is that it only requires one high, central support. The ends can come to within 6 feet of the ground, although for safety I recommend you keep them at least 8 feet off the ground. The antenna is essentially omni-directional. This means that it will receive equally well in all directions



Use 14 or 16 gauge stranded or hard-drawn copper wire for the antenna legs. It is best if the central support is not metal, but it is not essential. Just be certain that the antenna legs can't touch the support if it is metal. Be sure to observe the angle between "legs" of the inverted V. Too much angle makes the antenna behave like a dipole antenna; too little angle makes it behave like a vertical antenna.

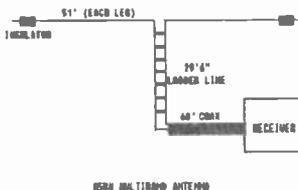
This antenna is normally fed with "ladder line" type of feedline. This is similar to the TV "twinlead" we've all seen, but is generally much wider (it is a different impedance than the TV type). Most of the tuners available can accommodate ladder line, but some don't, and it is getting increasingly difficult to obtain. In these cases, coax can be used. 50 or 75 ohm coax will work, but should be used with a balun. Any 1:1 balun can be used, and again, several suppliers are listed at the end of this column. A balun simply matches both halves of the balanced antenna to the unbalanced coax.

G5RV MULTIBAND ANTENNA

This is a classic multiband antenna, named after its designer, amateur radio operator Louis Varney, G5RV. It has the advantage that it does not need a tuner to work well, but it does require a little more construction, as well as 300 ohm ribbon lead cable and at least 68 feet of coaxial cable. One other advantage is that the end of each leg can be bent directly downward if space is at a premium. This antenna will give you complete coverage from the tropics on up to 30 MHz. The antenna is somewhat directional, with best reception broadside (off the sides, not the ends) to the antenna.

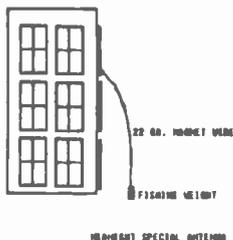
You should keep the twinlead section as straight as possible, and at right angles to the antenna legs.

The 68 foot length of coax is very important - it acts as a matching section to convert the 300 antenna impedance to the 50-75 ohm input of your receiver. You can add more coax if needed to get to your receiver, and you can coil up excess coax and secure the coil with tape or nylon cable ties.

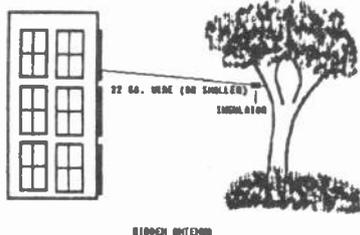


If you have very limited space, or are not permitted to place a permanent antenna outside, there are several options available. Both follow the adage that if no one sees the antenna go up, no one notices it. If you live more than two stories above the ground, there is the "midnight special" antenna. This is a length of very fine wire, such as #22 magnet wire (available at Radio Shack, for example) with a small fishing weight at the end of the antenna. The antenna is called a midnight special because it can be discretely reeled-out after dark, then reeled-in when not in use. In fact, you can use an inexpensive fishing reel to wind the antenna wire onto, and use an alligator clip to attach the antenna to your tuner when in use. You must use the type of antenna tuner designed for "random-wire" or "long-wire" antennas (these tuners have a single binding post for the antenna connection), and you must connect the ground post of the tuner to a ground - if nothing else the ground screw of your electrical wall plate. Use enough wire to get the far end of the antenna close to the ground, but not closer than about 8 feet. Be sure that the wire will not

block any entry or exit ways when it is let out - you don't want anyone tangled-up in the wire.



The second "low-profile" antenna is the basically the same as the one above, but is designed to remain in place permanently. Using the same small-gauge wire you attach the far end of the wire to a tree or some other tall structure that isn't likely to move. By using small gauge wire the antenna will be almost invisible - unless someone is looking for it they may never see it. Be very careful that this antenna does not go over or under any electrical lines. Also be careful that if the antenna wire should break and fall (remember, it is very thin) that it won't fall where it could harm anyone - such as across a parking lot or sidewalk.



SUPPLIERS

The following is a partial list of companies that supply antenna tuners, baluns, or coaxial and twinlead cable. They all have interesting catalogues, so why

not write and request one - even if your construction plans are in the future? And don't forget to tell them you saw their address in *The Journal!*

All Electronics Company
15004 Oxnard St.
Van Nuys, CA 91411

Antennas Etc./Unadilla
P.O. Box 215BV
Andover, MA 01810-0814

DX Radio Supply
P.O. Box 360
Wagontown, PA 19376

Grove Electronics
P.O. Box 98
Brasstown, NC 28902

MFJ Enterprises
P.O. Box 494
Mississippi State, MS 39762

Mouser Electronics
2401 Hwy 287 N
Mansfield, TX 76063

Radiokit
P.O. Box 973
Pelham, NH 03076

ERRATA

In last month's column, the formula for calculating the impedance of coaxial cable was not quite correct. The "square root" sign was omitted from the formula and the sample equation. The correct formula should read:

$$Z_{\text{Coax}} = (138 \times \text{LOG}_{10} D1/D2) / k$$

The correct sample equation would be:

$$(138 \times \text{LOG}_{10} .5/.07) / 2.3 = 77.7$$

I hope this did not cause too much confusion to those of you who followed the equation through.

Until next month, then, good listening, and don't hesitate to write about ideas for future *Technical Topics Columns*.

Listener's Notebook

Bruce MacGibbon
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Gresham, OR 97030



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ANDAMAN AND NICOBAR ISLANDS - According to Mr. R. Venugopal, Station Manager at AIR, Port Blair, the testing phase of the new 10 kW HF transmitter is over. Since Independence Day (15th August 89), regular transmissions are on the air as per following schedule: 07-0850 on 7180 and 1030-1630 on 4760. There are plans to extend the schedule to include morning transmissions as follows: 0010-0215 on 4760 and 0230-0345 on 7180. 7180 is still used by AIR Bhopal during local afternoons. Until now this kinda co-allocation was limited to only mediumwave. Earlier at Port Blair, a 7.5 kW HF transmitter was lying with its manufacturers at Bharat Electronics Ltd. (BEL), Bangalore. AIR, Port Blair is testing on 3330 kHz in the mornings, but it is not readable here. Another example of dual allocation as AIR, Leh also uses the same channel for the same time stretch. Reports are lazily verified by a QSL letter from the following address: Mr. R. Venugopal, Station Engineer, All India Radio, Port Blair-744 101, Andaman Islands, India. Cable: Akashvani. Tel: +91 3192 20682. (Manosij Guha in his "DX Grapevine #36)

AUSTRALIA - Offshore Transmitting Site investigated:

It has been recommended by the Radio Australia Review Group that an offshore transmitting site be investigated, to give a better signal into north Asia. Mr. Richard Broinowski, General Manager of Radio Australia, is visiting Thailand to discuss such a possibility with the Thai government. He will be assessing the chances of having a transmitting base in Thailand and meeting with officials to gauge Thai response to the proposal. If this visit is productive, there will need to be continuing discussion and negotiation which may eventually lead to RA having offshore transmitting capacity. I stress that it is only a proposal at this stage. (Keith Synnott, Publicity Officer, Radio Australia) Note: The way I heard about this was I tuned into the middle of an interview between Rob Hoskin of RA and Mr. Richard Broinowski, General Manger of Radio Australia. (bmm) and AFP agency, Hong Kong, in English 1039 gmt 30 Mar 90. Excerpt from report in Bangkok:

Radio Australia is exploring the possibility of setting up facilities in Thailand to strengthen its signal in the region, particularly to China and the Indian subcontinent, the radio's head Richard Broinowski told reporters here (on) Friday (30th March).

Richard Broinowski said he had preliminary discussions with Thai officials on the possibility of installing transmitting facilities that would allow the publicly-funded radio to use signals comparable in strength to the British Broadcasting Corporation (BBC) or the Voice of America (VOA).

Potential sites, he said, could be in Udon Thani province, some 560 km (330 miles) northeast of here, or closer to the Thai capital, in Pathum Thani province, about 45 km (27 miles) north of here.

Mr. Broinowski, who took over as Radio Australia's head earlier this year, said it would also look at possibilities in other countries in the region, such as the Philippines and Vietnam, but he added: Thailand is our preference"... (WBI 4/6)

The J90 draft Operational Sked for Radio Australia effective 0000 from 6 May 90, shows widespread use of frequencies in the extended SW bands. A proposed NF is 12000, from Carnarvon (250 kW) 1330-14 Vietnamese and 14-17 General EE service. The Brandon facility is scheduled: Transmitter "G" 10 kW: 21-08 Gen EE (02-0730 Sats

Sporting Service); 6020 08-0930 Pacific English, 0930-11 Tok Pisin, 11-21 Gen EE. Transmitter "J": 6035 0730-08 Gen. EE, 08-0930 Pacific EE. 0930-11 Tok Pisin, 11-21 Gen. EE. Planned operations in the 22 mb are: 13605 Darwin 21-22 CC, 22-01 Gen. EE; 13745 Carnarvon 1430-17 Gen. EE, Shepparton 1930-2115 Gen. EE. My thanks to Hugh Murray, Frequency Manager of RA for details. (Shortwave Station News Edited by Mick Ogrizek in ADN 4/90)

CANADA - Northern Quebec Service on 9625 heard with news and signoff at 0510 (one hour early because of Daylight Saving Time). Q: How does one save daylight in the Canadian Arctic in the summer? A: In a snow bank. (via Mike Fern, CA)

COLOMBIA - 6035.2, 1015-1032, La Voz del Guaviare, SP, Music llanera. 1031 ID "Desde San Jose del Guaviare, Colombia, escuchan a La Voz del Guaviare compania." Recently *1000V-. (Yoshinori Sano via 'Nishi-Tokyo DXers Circle (NTDXC) Tune' No. 75 edited by Junichi Nishikawa)

COSTA RICA - 5953.5, -1040-. R. Casino, SP, LA pops program. Drifted here from 5953.8 recently. Fair to poor on 4/9. (Yoshinori Sano via 'NTDXC' Tune' No. 75, 4/90)

CUBA - The Radio Havana, Cuba program "DXers Unlimited" has moved one hour later to 0335 and 0535 UTC Sundays. Best west coast reception on 11820 kHz. As heard on 4/15. (Mike Fern, CA)

Radio Havana, Cuba in French for Canada and the Antilles 03-04 on 11760 & 9750 as heard on 4/17. (WRTH90 had 5965 which 9750 replaces). (Mike Fern, CA)

Sheryl Paskowicz, Editor of 'Tropical Band Loggings' in NASWA asked why Radio Rebelde on 5025 was sometimes on and sometimes off while the new transmitter (now on 3360) was testing. I believe 5025 and 3360 are on the same site. If that is the case, then 5025 was turned off deliberately so it would not interfere with antenna measurements and signal strength measurements in the immediate neighborhood. The 90m Antenna is a simple dipole but the height was chosen so that low-angle radiation (best for DX) would be reduced in favor of good reception on the Cuban islands. 3360 is all but buried under strong c.w. QRM here. (Mike Fern, CA)

CYPRUS - The Cyprus Broadcasting Corporation, at Nicosia, has a special programme in Greek, for listeners in the United Kingdom, on Fridays, Saturdays, and Sundays from 2225 until 2245. This broadcast may also be heard throughout the world, and it uses facilities provided by the British Broadcasting Corporation's East Mediterranean Relay on Cyprus. Two freqs are in use, 9650 and 7205, and Bob Padula, in Victoria, advises that both outlets give good reception in Melbourne. (via Radio Australia's Japanese DX Time 4/14)

CZECHOSLOVAKIA - Radio Prague has suspended its English, French and some other programs for three to four weeks starting Apr. 1. Ian McFarland of RCI phoned Karel Stary of Radio Prague on Thursday. Stary said the suspension is due to a reorganization of Radio Prague shortwave services. The changes are necessary to get ready for the 90's and get away from the old propaganda approach. If more than four weeks are needed, that will be up to the director of the service. (McFarland suggested writing Radio Prague a letter of support.) & Bill Westenhaver, Montreal says Radio Prague-Inter Program still heard in Czech and Slovak on 6085 and 13715 kHz from 23-0055 UTC. (via RCI's SWLD 4/8 via Mike Fern, CA)

Interview w/Vladimir Feltman, senior editor in the English section of Radio Prague, on Radio Nederland's Media Network on 4/12 and thanks to Mike Fern, CA for this:

Mark: Last week we mentioned in passing that Radio Prague appeared to be off the air. We reached Vladimir Feltman, senior editor in the English section of Radio Prague this week. He's a regular voice on the air. So I asked him, what's the official story?

Feltman: Radio Prague went off the air on the first of April under a program of major organizational changes. It was (thought?) by the director-general of Czechoslovak Radio we are external broadcasts of

the Czechoslovak radio as such. Now, in the communique, our director charged Radio Prague with a role in what they call "the export of revolution," meaning that Radio Prague has lost its legitimacy as the voice of Czechoslovakia. So major organizational changes amount to deep cuts in our broadcasting time, time when we will not resume our broadcasts until the seventh of May.

M: And when they do so, Radio Prague will consist of 150 people. That's around 45 per cent of the previous size. The station disappeared from the airwaves at the start of this month without any explanation being allowed. It seems though that the board of directors wants to make a completely fresh start.

F: More than 300 people at Radio Prague are facing a very insecure future. We are going now through a strange kind of selection which the management prefers to call "competition" but it's not a public competition anyway, it's an internal one, and there will be no interviews. Decisions will be made behind the scenes and those people who will be found, um, discredited will have to leave. The apparent assumption is you can't have the same kind of people broadcasting different themes or different points of view after the 15th of November. Which means that they are completely unaware of the contents of our broadcasts (and they were put out?) for the last at least ten years.

M: So what is happening at the moment? Are 300 people staying at home?

F: Well, partially, yes. We're coming to work, doing nothing. Here and there we are helping out. If you know Inter Program Radio Prague, that is one of the services of Radio Prague for domestic consumption, we are helping them out with the news, different materials here and there. But that keeps only a couple of people busy here and there, but actually, we are doing nothing. We are not writing anything because we're -- I must say that we're all down anyway. There are two reasons: carrying out such a drastic decision. But the fact is that if there are some discredited people here with connections to secret police, with whatever, you have to prove that. They can't prove anything.

M: So in other words they are saying that everybody is guilty.

F: Yeah. (Radio Prague internal signal)

M: The situation remains confused there. Radio Prague will return with 14 1/2 hours of broadcasting a day. Some of the rest of the available air time may be given over to other broadcasters. A report from the Czech capital suggests that the U.S.-financed Radio Free Europe may be interested.

F: They decided to reward people, 29 of them, in the Czech section of Radio Free Europe by inviting them to Czechoslovakia, offering them one of our transmitters, medium wave, to give them a chance to broadcast from Czechoslovakia, for how long nobody knows. This information comes from independent sources, in particular Czechoslovak Television, where people from Radio Free Europe, Czechs who worked for Radio Free Europe, themselves said they are going to broadcast from Czechoslovakia.

M: Radio Free Europe in Munich tells Media Network that they are in the process of opening a bureau in Prague to send material to their studios in southern Germany. They are in close touch with the Czech government on other matters, but are not a liberty to disclose details at this stage. Meanwhile, staff at Radio Prague are openly asking for support.

F: If there is a petition or some kind of request on behalf of DXers from Europe, around the world, probably from America as well, the DXers associations, bombarding, let's say, Vaclav Havel as president, because my personal instinct of a journalist tells me that this decision is really political and it originated somewhere very high up, you know in the government or even the Prague Council.

M: Because the existence of the shortwave external service is not very well known inside the country, Radio Prague is worried about its long-term existence. It's regarded by some politicians there as an expensive luxury.

F: The reduction, I must say, won't be carried out so much at the expense of the English service as at the expense of the Spanish service, the Italian and French.

English Language SW Broadcast
Schedule
and
English Language DX Show
Schedule

Compiled by
Thomas R. Sundstrom

Prepared 04/26/90 at 1:35 PM

Thanks to **John Carson** (OK), **Kris Field** (PA) and **Gordon Darling** (Papua New Guinea), **David Alpert** (NY) for the many schedules and press clippings received. Special thanks to **Brent Allred** of **HCJB** for the fax received at deadline.

Notes

Dubai at 22-24 according to its printed schedule is now using 6170 in lieu of 13605, but only 9600 is heard here. **Iraq** on probably the first week of April shifted its broadcasts an hour earlier. **Czechoslovakia's** international services disappeared during the month of April, but (according to an interview heard on RCI's SWL Digest) are expected to return by May 1. A complete reorganization of services was offered as the reason for the disappearance. **R Havana Cuba's** DX Corner and **R Japan's** DX Corner have expanded to 15 and 20 minutes respectively. **ORF's** NA service to NA at 1130 on 21490 has been clobbered since at least mid-April by the **BBC's** (special) English to Africa that runs to 1145. The **BRT's** Radio World reports that **R Moscow** has dropped its DX Program (airing Mon-Tue to NA) due to a lack of qualified staff but I haven't had to time to confirm this yet.

HCJB Ecuador

From May 6th there are a num-

ber of changes in the English language programming. All Quito-produced programming is combined into a one-hour block called **Studio 9**. It will begin with a 5-minute newscast focusing on Latin America seven days a week.

On M-F news, current affairs, features and features will occupy the next 15 minutes, and daily feature programs will begin at 20 minutes into the program. This means **Passport** is dropped and **Happiness Is** is cut back in time.

The daily feature programs are **Dateline 90** (M), **Happiness Is** (Tu & Th), **Ham Radio Today** (W), and **Musica del Ecuador** (F).

Saturday will have **Focus 2000** and **DX Party Line**, and Sunday will air **Get Set** and **Saludos Amigos**.

Studio 9 will air to NA 0030, 0230, 0500; to Eu 0730, 1900; and to S Pac 0730, 1000.

In addition to **Studio 9** programming, **Musical Mailbag** will air Saturdays 0130, 0330 and 0600 to NA, 0700 and 2130 to Eu, and 0830 to the Pac. **Music in the Night** can be heard in NA at 0630 on MWF.

If **HCJB** follows their usual pattern in announcing, these are the days in the target areas, i.e., for NA it will be the next UTC day. A complete English program schedule will be published in June.

South Africa

R RSA is scheduled to undergo a major change in its external services in May. Budgetary problems appear to be the cause of the action. Most of its programming will be targeted to Africa. The new schedule is unknown at this time. One casualty in its program lineup, announced April 14, is **Amateur Radio Spectrum**. The decision, announced April 9th, was apparently made after the printed May 5-September 1 schedule was mailed to Monitoring Panel members; the schedule gives no clue to the reorganization and cuts announced in early April. I sent faxes to two offices trying to solicit the new schedule, but no responses by deadline. The schedule within the accompanying listing is a guess; it is the residue of the received D90 schedule. I have no idea what is happening to **DX Corner**, so I have left the times as they were for the residue schedules. Check the Pinelands RBBS' SWL conference for updated information.

Pinelands RBBS News

Michael Murray of the **European DX Council** has been sending me the monthly **EDXC** newsletters on diskette. These are available for download, listed in the SWL directory. The latest issue is April: **EDXC0490.TXT**.

A **PROPagation "door"** has been added to the FidoNet mail door. Daily solar flux and A-index values may be viewed through a database. The data is updated every couple of days, and the data goes back to September 1, 1977.

New Zealand

Noel Brown of Chicago sent a fax on **R New Zealand Interna-**

tional's schedule, but it seems to conflict with other information here. **RNZI** has been difficult to hear since early April when the high-powered transmitter failed and I am not sure if it is back on the air as we go to press. I still hear audio on 17680 kHz but the signal level at 0130 UT on April 26 is quite low. Reportedly one of the old 10 kw transmitters was activated on 17680 until a part could be obtained from France.

According to the information Noel sent, the **RNZI** schedule for May 6 - September 1 is as follows: Polynesian Service 1800-2000 and 0430-0700 on 15485 (backup 15150 or 11780). Melanesian Service 2005-2200 on 15485 (backup 17730 or 15150) and 0730-1030 on 9850 (backup 11780 or 15485). General Service 22-01 on 17730 (backup 17680 or 15485). Noel comments that he regularly hears **RNZI** sign on at 0430 on 17680, contrary to the information derived from the monthly bulletin of the **New Zealand DX Radio Association**. For the moment I have opted not to change the schedule in the accompanying listings and leave it as it was, but you may wish to check this out as we move into mid-May.

Icom R-71A For Sale

The R-71A with pass-band tuning has all accessories: high-stability oscillator, SSB and 500 Hz CW filters, FM, remote control, voice module, UX-14/CX-17 computer interface, and a service manual. Aligned and tweaked by authorized factory service in December 1989. \$995 plus UPS shipping and insurance. Call evenings or weekends 609-859-2447 or use the fax, BBS or MCI Mail.

All Records Included

ENGLISH LANGUAGE SW BROADCAST SCHEDULES: By Start Time
Compiled by Thomas B. Sundstrom, W2IQ

| Start Band | Time | Station | Freq #1 | Freq #2 | Freq #3 | Freq #4 | Freq #5 | Freq #6 | Freq #7 | Freq #8 | Target Area | Notes | Record Last Updated |
|------------|-------|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|--------------------|---------------------|
| (UTC) | (UTC) | (UTC) | Country | | | | | | | | | | |
| 0000 | 0030 | Australia | | 17140 | 17795 | 17750 | 17630 | 15465 | 15240 | 15160 | 15130 | As/Pac/PapMG | 03/03/90 |
| 0000 | 0100 | China | | 17855 | 17705 | 15100 | | | | | | EMA | 03/27/90 |
| 0000 | 0200 | Cuba | | 11820 | | | | | | | | Americas | 03/26/89 |
| 0000 | 0115 | India | | 17725 | 15110 | 11745 | 11715 | 9910 | 9535 | | | 00S/As | 05/24/89 |
| 0000 | 0030 | Israel | | -15640 | 11605 | 9435 | | | | | | WA | 03/18/90 |
| 0000 | 0200 | Mariana Is | | 15435 | | | | | | | | Phil/Indon/PapMG | 03/19/90 |
| 0000 | 0200 | New Zealand | | 17680 | | | | | | | | General Svc | 03/27/90 |
| 0000 | 0050 | North Korea | | 15180 | 15115 | | | | | | | Am | 12/25/89 |
| 0000 | 0030 | Norway | | 15165 | | | | | | | | SA | 04/25/90 |
| 0000 | 0100 | South Korea | | 15575 | | | | | | | | Am | 03/15/90 |
| 0000 | 0100 | Spain | | 11880 | 9630 | | | | | | | WA | 11/05/89 |
| 0000 | 0100 | USA | | 15205 | 11740 | 11695 | 11740 | 11580 | 9815 | 9775 | 9455 | Caribbean/Americas | 04/03/90 |
| 0000 | 0200 | USA | | 9850 | | | | | | | | W Afr | 08/13/88 |
| 0000 | 0200 | USA | | 9495 | 7315 | | | | | | | Bu/CA/SA | 03/19/90 |
| 0000 | 0300 | USA | | 7355 | | | | | | | | WA/CA | 157/42 deg |
| 0000 | 0200 | USA | | 13760 | 9410 | | | | | | | CA/SA/NE Canada | 03/19/90 |
| 0000 | 0100 | USSR | | 17720 | 17700 | 17605 | 15425 | 12050 | 11950 | 11735 | 9720 | EMA | 02/25/90 |
| 0000 | 0045 | Yugoslavia | | 15105 | 11735 | 7215 | | | | | | W Bu/WA | 167/25 deg |
| 0030 | 0100 | Australia | | 21740 | 17795 | 17750 | 17630 | 15465 | 15320 | 15240 | 15160 | As/Pac/PapMG | 03/03/90 |
| 0030 | 0430 | Ecuador | | 17875 | 15155 | | | | | | | WA | 04/25/90 |
| 0030 | 0230 | England | | 12095 | 9915 | 9590 | 7325 | 6175 | 5975 | | | VS: MA/CA/Carib | 03/16/90 |
| 0030 | 0100 | Hungary | | 15160 | 11910 | 9835 | 9585 | 9520 | 6110 | | | WA | 03/15/90 |
| 0030 | 0125 | Netherlands | | 15315 | 6165 | 6020 | | | | | | EMA | 04/12/90 |
| 0050 | 0110 | Vatican State | | 15180 | 11780 | 9605 | | | | | | WA | 06/05/89 |
| 0100 | 0200 | Argentina | | 11710 | | | | | | | | Americas | Tu-Sa |
| 0100 | 0130 | Australia | | 21740 | 21525 | 17795 | 17750 | 17715 | 17630 | 15465 | 15320 | As/Pac/PapMG | 03/03/90 |
| 0100 | 0200 | Canada | | 13720 | 11840 | 11845 | 9755 | 9535 | | | | LA | & 15130, 11880 |
| 0100 | 0150 | Fed Rep Germany | | 15105 | 11865 | 9565 | 6145 | 6040 | | | | WA | Su-Mo |
| 0100 | 0145 | German Dem Rep | | 13690 | 11890 | 6080 | | | | | | EMA | 03/15/90 |
| | | | | | | | | | | | | | 03/26/90 |

| | | | | | | | |
|------|------|-----------------|------------------|---|---------------------|-----------------------|----------|
| 0100 | 0130 | Israel | Kol Israel | 15640 11605 9435 | NA | NA | 03/18/90 |
| 0100 | 0120 | Italy | RAI | 11800 9575 | NA | NA | 03/19/88 |
| 0100 | 0200 | Japan | R Japan | 17845 17835 17810 17765 5960 | GOS/Asia/NA | #4 -01:10:45 v Canada | 04/08/90 |
| 0100 | 0200 | Spain | Spanish Mat'l R | 11880 9630 | NA | NA | 11/05/89 |
| 0100 | 0130 | Sweden | R Sweden | 17860 15405 | As/Pac | As/Pac | 04/05/90 |
| 0100 | 0300 | USA | EUSW | 11695 | Canada | Canada | 03/19/90 |
| 0100 | 0200 | USA | KVOH | 13695 | CA/Carib | CA/Carib | 11/08/89 |
| 0100 | 0200 | USA | VOA | 15205 11740 11580 9815 9775 9455 6130 5995 | Caribbean/Americas | Caribbean/Americas | 09/24/89 |
| 0100 | 0300 | USA | WPR | 11720 9505 5985 | NA | NA | 03/15/90 |
| 0100 | 0200 | USSR | R Moscow | 17720 17700 17605 15425 12050 11950 11735 9720 | BNA | #243 Network M-Sa | 03/15/90 |
| 0130 | 0200 | Australia | R Australia | 21740 21525 17795 17750 17715 17630 15465 15320 | As/Pac/PapNG | 6000 & 6045 v Cuba | 03/15/90 |
| 0130 | 0200 | Austria | ORF | 13730 9875 3870 | NA/SA | & 11890 | 03/03/90 |
| 0130 | 0138 | Greece | V of Greece | 11645 9420 9395 | NA/Sweden | News/Bog ex Su | 04/05/90 |
| 0130 | 0145 | Hungary | R Budapest | 15160 11910 9835 9585 9520 6110 | NA | Tu/W/F/Sa | 03/15/90 |
| 0130 | 0230 | Iraq | R Baghdad | 11810 9515 | Ind/Pakis/NA/SA | often delayed start | 04/02/90 |
| 0145 | 0230 | German Dem Rep | R Berlin Int'l | 15125 11890 11785 6080 | BNA/WNA | 03/26/90 | 03/26/90 |
| 0145 | 0200 | Vatican State | Vatican Radio | 15180 11750 9650 | As/Aus/NZ | 03/22/90 | 03/22/90 |
| 0200 | 0400 | Australia | R Australia | 21740 21525 17795 17750 17715 17630 15560 15465 | As/Pac/PapNG | & 15160, 11860 | 03/03/90 |
| 0200 | 0250 | Brazil | R Bras | 11745 | NA/CA | Tu-Sa | 02/28/88 |
| 0200 | 0300 | Canada | R Canada Int'l | 13720 11940 11845 9755 9535 | LA | 03/16/90 | 03/16/90 |
| 0200 | 0400 | Cuba | R Havana | 11820 9710 | Americas | 05/20/89 | 05/20/89 |
| 0200 | 0330 | Egypt | R Cairo | 9675 9475 | NA | 07/20/86 | 07/20/86 |
| 0200 | 0250 | Fed Rep Germany | R Deutsche Welle | 15265 11945 11835 9690 9615 7285 | S As | 03/15/90 | 03/15/90 |
| 0200 | 0300 | Guan | ESDA | 13720 | As | Sa-Su 1 300 deg | 03/19/90 |
| 0200 | 0255 | Romania | R Romania Int'l | 11940 11830 9570 9510 6155 5390 | NA | 11/04/89 | 11/04/89 |
| 0200 | 0330 | Switzerland | Swiss R Int'l | 17730 12035 9885 9725 6135 6095 | NA | 17730 v Brazil | 11/12/88 |
| 0200 | 0200 | Taiwan | V of Free China | 15345 11860 11740 9765 9680 7445 5950 | NA/Jap/As/CA/Aus/NZ | #3,5,7 v WPR | 08/05/89 |
| 0200 | 0230 | USA | VOA | 15205 11580 9815 9775 5995 | Caribbean/Americas | Tu-Sa | 04/03/90 |
| 0200 | 0400 | USA | WCN | 13775 | B Afr | 75 deg | 02/25/90 |
| 0200 | 0400 | USA | WRI | 9495 7315 | Bu/CA/SA | 157/42 deg | 03/19/90 |
| 0200 | 0400 | USA | WSB | 13760 9455 | CA/Canada | 167/315 deg | 03/19/90 |
| 0200 | 0600 | USA | WRC | 7320 | NA | 03/27/90 | 03/27/90 |
| 0200 | 0230 | USSR | R Kiev | 17690 17665 15180 12060 12005 11770 | NA | 03/15/90 | 03/15/90 |
| 0200 | 0300 | USSR | R Moscow | 17720 17700 17605 15425 12050 11950 11735 9720 | BNA | 6000 & 6045 v Cuba | 03/15/90 |
| 0230 | 0300 | Albania | R Tirane | 11825 9760 | NA | 12/16/89 | 12/16/89 |
| 0230 | 0330 | England | BBC | 12095 3915 9590 7325 6175 5975 | ES: NA/CA/Carib | #2 Bethany | 03/15/90 |
| 0230 | 0315 | German Dem Rep | R Berlin Int'l | 15240 13610 9730 | Caribbean | 03/26/90 | 03/26/90 |
| 0230 | 0245 | Pakistan | R Pakistan | 21490 17725 17660 15115 9545 | SESE As | Slow-speed news | 12/24/89 |
| 0230 | 0300 | Portugal | R Portugal | 11840 9705 9620 9600 | SA/NA | Tue-Sat | 11/17/88 |
| 0230 | 0300 | Sweden | R Sweden | 15295 11705 | NA | 04/05/90 | 04/05/90 |

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|------|------|----------------------|---------------------|-------|-------|-------|-------|-------|-------|---------------------|----------|
| 0250 | 0300 | USSR | R Tehran | 17690 | 17665 | 15180 | 12060 | 12005 | 11770 | WNA | 03/15/90 |
| 0255 | 0430 | Netherland Antilles | Trans World Radio | 11930 | 9335 | | | | | NA/Carib | 11/30/89 |
| 0300 | 0400 | Bulgaria | R Sofia | 15310 | 15160 | 11765 | 11735 | 11720 | | Afr/WA | 03/15/90 |
| 0300 | 0400 | China | R Beijing | 17855 | 15100 | 11715 | 9690 | | | WNA | 03/26/90 |
| 0300 | 0350 | Fed Rep Germany | R Deutsche Welle | 15205 | 11810 | 9545 | 6095 | | | NA | 03/15/90 |
| 0300 | 0345 | German Dem Rep | R Berlin Int'l | 15125 | 13690 | 11785 | | | | WNA/EWA | 03/26/90 |
| 0300 | 0425 | Guatemala | TGHC | 3300 | | | | | | | 12/23/87 |
| 0300 | 0330 | Japan | R Japan | 21610 | 17835 | 17825 | 17810 | 17765 | 15395 | 11905 | 04/01/90 |
| 0300 | 0520 | South Africa | Radio 5 | 4880 | | | | | | 05/08/89 | |
| 0300 | 0505 | South Africa | Radio Orange | 3215 | | | | | | 09/08/89 | |
| 0300 | 0400 | Taiwan | V of Free China | 15345 | 11745 | 9765 | 9680 | 7445 | 5950 | NA/Jap/As/Aus/NZ | 08/05/89 |
| 0300 | 0350 | Turkey | V of Turkey | 17880 | 9445 | | | | | Aus/NA | 03/15/90 |
| 0300 | 0500 | USA | KUSW | 9815 | | | | | | Canada | 11/06/89 |
| 0300 | 0430 | USA | VOA | 11835 | 9575 | 9525 | 7280 | 6035 | 3990 | NA/CA | 04/03/90 |
| 0300 | 0600 | USA | WRHO | 6185 | | | | | | Africa | 03/15/90 |
| 0300 | 0500 | USA | WFR | 9505 | 6065 | 5985 | | | | NA | 03/15/90 |
| 0300 | 0330 | USSR | R Moscow | 15180 | 12050 | 12010 | 11710 | 9890 | | WNA | 03/15/90 |
| 0310 | 0327 | Switzerland | Int'l Red Cross | 12035 | 9885 | 9725 | 6135 | | | NA/CA | 03/18/89 |
| 0310 | 0330 | Vatican State | Vatican Radio | 11725 | | | | | | NA | 06/05/89 |
| 0315 | 0645 | Costa Rica | R for Peace Int'l | 7375 | | | | | | Tu&Pr after last Su | 01/31/90 |
| 0315 | 0345 | France | R France Int'l | 11395 | 11705 | 9800 | 9790 | 9745 | 9550 | Tu-Sa,USB aode | 12/03/89 |
| 0330 | 0430 | England | BBC | 9915 | 5975 | | | | | P2 v Fr Guinea | 03/16/90 |
| 0330 | 0400 | Japan | R Japan | 17835 | 17825 | 17810 | 17765 | 15195 | | US: NA/CA/Carib | 04/01/90 |
| 0330 | 0425 | Netherlands | R Nederland | 9590 | 6165 | | | | | GOS/Asia | 03/15/90 |
| 0330 | 0400 | United Arab Emirates | R Dubai | 17890 | 15435 | 15400 | 11940 | | | WNA | 10/29/89 |
| 0330 | 0430 | USSR | R Moscow | 15180 | 12050 | 12010 | 11790 | 11710 | 9890 | NA | 03/15/90 |
| 0340 | 0348 | Greece | V of Greece | 11645 | 9420 | 9395 | | | | NA/Sweden | 04/05/90 |
| 0345 | 0430 | German Dem Rep | R Berlin Int'l | 15125 | 11785 | | | | | WNA | 03/26/90 |
| 0350 | 0410 | Italy | RAI | 17795 | 15330 | | | | | S As | 11/03/89 |
| 0400 | 0500 | Australia | R Australia | 21740 | 21625 | 17795 | 17750 | 17715 | 17630 | 15560 | 03/03/90 |
| 0400 | 0500 | Austria | R Canada Int'l | 15275 | | | | | | As/Pac/PapMG | 03/16/90 |
| 0400 | 0500 | China | R Beijing | 11840 | 11685 | | | | | HB | 03/26/90 |
| 0400 | 0600 | Cuba | R Havana | 11820 | 11760 | 9710 | 5965 | | | WNA | 10/28/89 |
| 0400 | 0450 | Fed Rep Germany | R Deutsche Welle | 13790 | 11765 | 9765 | 9565 | 7245 | 7150 | Americas | 10/30/89 |
| 0400 | 0415 | Israel | Kol Israel | 17630 | 15640 | 12077 | 11655 | 11605 | 9435 | SEC&R Afr | 03/18/90 |
| 0400 | 0600 | N Mariana Is | KHBI | 17780 | | | | | | Aus/As/NA/B Bu/W Bu | 03/18/90 |
| 0400 | 0700 | New Zealand | R New Zealand Int'l | 17680 | | | | | | China | 03/27/90 |
| 0400 | 0450 | North Korea | R Pyongyang | 17765 | 15180 | 13650 | | | | R Pac | 01/01/90 |
| 0400 | 0455 | Romania | R Romania Int'l | 11940 | 11830 | 9570 | 9510 | 6155 | 5990 | SE As | 11/04/89 |
| 0400 | 0430 | Switzerland | Swiss R Int'l | 12035 | 9885 | 3725 | 6135 | | | NA | 05/24/86 |

| | | | | | | | | | | | | | | |
|------|------|----------------------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|----------------------|----------|
| 0400 | 0530 | USA | VOA | 15205 | 11735 | 7200 | 7170 | 6140 | 6040 | 5990 | 3980 | HE/W Af/Eu | #6 0500- | 04/03/90 |
| 0400 | 0600 | USA | WCSN | 9840 | | | | | | | | S Afr | 105 deg | 01/20/90 |
| 0400 | 0600 | USA | WHL | 9495 | 7315 | | | | | | | Bu/CA/SA | 157/42 deg | 03/19/90 |
| 0400 | 0700 | USA | WMLK | 9465 | | | | | | | | CA/Canada | Mo-Sa | 08/30/89 |
| 0400 | 0800 | USA | WSFB | 13760 | 9455 | | | | | | | | 230/315 deg | 03/19/90 |
| 0400 | 0410 | Zambia | R Zambia | 4910 | | | | | | | | | news/English M-P | 01/14/89 |
| 0425 | 0440 | Italy | RAI | 9575 | 7275 | | | | | | | Mediterranean | #2 v Antigua | 02/19/90 |
| 0430 | 0500 | England | BBC | 9915 | 5975 | | | | | | | VS: NA/CA/Carib | #2 v Antigua | 03/16/90 |
| 0430 | 0500 | Swaziland | Trans World Radio | 9760 | 3610 | 9550 | 7285 | 7255 | 7200 | 5055 | 4760 | S Af | only 1 freq/bnd used | 06/05/89 |
| 0430 | 0600 | USA | VOA | 9575 | 3540 | 9525 | 7280 | 6035 | 3990 | | | Africa | #2 0500-#3 -0500 | 04/03/90 |
| 0430 | 0530 | USSR | R Moscow | 15180 | 12050 | 9890 | 7340 | 7230 | 7210 | 7180 | 7170 | WNA | | 03/15/90 |
| 0432 | 0505 | Seychelles | F89A | 17820 | 15325 | | | | | | | SB As | #1 #2 1 Sa #2 | 12/16/89 |
| 0500 | 0600 | Australia | R Australia | 21740 | 15255 | 17795 | 17750 | 17715 | 17630 | 15560 | 15465 | As/Pac/PapMG | # 15160, 11880 | 03/03/90 |
| 0500 | 0700 | Ecuador | RCJB | 17875 | 15155 | | | | | | | NA | | 04/25/90 |
| 0500 | 0530 | England | BBC | 9915 | 9640 | 6195 | 5965 | | | | | VS: NA/CA/Carib | v Antigua | 03/16/90 |
| 0500 | 1200 | Equatorial Guinea | R East Africa | 9585 | | | | | | | | Af | Sa & Su 1 Sa -1500 | 10/06/89 |
| 0500 | 0530 | Fed Rep Germany | R Deutsche Welle | 11845 | 9700 | 9670 | 6120 | 5960 | | | | NA | | 03/15/90 |
| 0500 | 0545 | German Dem Rep | R Berlin Int'l | 15440 | 13690 | 13610 | 9760 | 6115 | 5965 | | | Af/NE/Bu | | 03/26/90 |
| 0500 | 0600 | Japan | R Japan | 17825 | 17890 | 17810 | 17765 | 15195 | | | | GOS/As/NA/Oceania | | 02/19/90 |
| 0500 | 0800 | Uwait | R Kuwait | 15345 | | | | | | | | Par B/SAB As/Aus/NZ | | 04/18/87 |
| 0500 | 0600 | Spain | Spanish Mat'l R | 5630 | | | | | | | | NA | | 07/09/89 |
| 0500 | 0700 | Swaziland | Trans World Radio | 11835 | 11760 | 11740 | 7285 | 7255 | 7200 | 5055 | 4760 | S Af | only 1 freq/bnd used | 06/05/89 |
| 0500 | 0700 | USA | ESW | 6175 | | | | | | | | Canada | 70 deg;Su only | 11/06/89 |
| 0500 | 0530 | USA | VOA | 15205 | 11745 | 9715 | 9700 | 3670 | 7200 | 7170 | 6140 | HE/W Af/Bu | | 10/29/89 |
| 0500 | 0600 | USA | WFR- | 17640 | 15566 | 11580 | 9505 | 6085 | 5985 | | | Bu/Af/NA | #4-6 Network M-Sa | 03/15/90 |
| 0500 | 0530 | Vatican State | Vatican Radio | 21650 | 17730 | 17710 | 3645 | 6195 | | | | EAS Afr/Bu | #4&5 -0520 | 03/22/90 |
| 0510 | 1640 | South Africa | Radio Orange | 7285 | | | | | | | | | | 09/08/89 |
| 0515 | 0700 | Canada | R Canada Int'l | 17840 | 11775 | 9750 | 7295 | 6150 | 6050 | | | | #-P;#1,2,4,6 v UK | 03/16/90 |
| 0515 | 0600 | German Dem Rep | R Berlin Int'l | 15240 | 11970 | | | | | | | | | 03/05/90 |
| 0525 | 1630 | South Africa | Radio 5 | 11885 | | | | | | | | | | 09/08/89 |
| 0530 | 0600 | Albania | R Tirana | 9500 | 7300 | | | | | | | | | 03/31/90 |
| 0530 | 0600 | Canada | ORP | 6015 | | | | | | | | | | 03/18/90 |
| 0530 | 0730 | England | BBC | 9640 | 5975 | | | | | | | | VS: NA/CA/Carib | 03/16/90 |
| 0530 | 0600 | Italy | AME Europe | 7125 | | | | | | | | | | 03/15/90 |
| 0530 | 0555 | Romania | R Romania Int'l | 21550 | 17790 | 17745 | 17730 | 15340 | 11840 | | | | | 12/09/89 |
| 0530 | 0600 | United Arab Emirates | R Dubai | 21700 | 17775 | 15435 | 11730 | | | | | | | 06/04/89 |
| 0530 | 0600 | USA | VOA | 15205 | 11745 | 9715 | 9700 | 3670 | 7200 | 7170 | 6140 | HE/W Af/Bu | # 5965 | 10/29/89 |
| 0530 | 0700 | USSR | R Moscow | 12050 | 3690 | 7340 | 7260 | 7230 | 7210 | 7180 | 7170 | WNA | | 03/15/90 |
| 0555 | 0802 | Liberia | ELWA | 4760 | | | | | | | | | | 05/14/89 |
| 0555 | 0825 | Malaysia | V of Malaysia | 15295 | 9750 | 6175 | | | | | | | | 04/30/89 |

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|------|------|-----------------|-------------------|---|--------------------|-----------------------------|
| 0600 | 0630 | Australia | R Australia | 21740 21525 17715 17630 15560 15465 15240 11880 | Am/Pac/PapMG | 03/03/90 |
| 0600 | 0800 | Cuba | R Havana | 11835 | Americas | 04/08/89 |
| 0600 | 0650 | Fed Rep Germany | R Deutsche Welle | 17875 15185 13790 11765 | W Afr | 09/30/88 |
| 0600 | 1000 | Lebanon | V of Hope | 6280 6215 | MR | 01/25/90 |
| 0600 | 0800 | Mariana Is | KRBI | 17855 17780 | Phil/China | 02/25/90 |
| 0600 | 0650 | North Korea | R Pyongyang | 15180 13650 | SB As | 01/01/90 |
| 0600 | 0630 | Norway | R Norway | 15165 | Pac | 04/25/90 |
| 0600 | 0700 | USA | VOA | 11745 11805 7325 7200 7170 6140 6095 6060 | RE/W Af/Bu | 10/29/89 |
| 0600 | 0800 | USA | WGSN | 9840 | Bu | 03/19/90 |
| 0600 | 0800 | USA | WHR | 3620 9495 | Bu/CA/SA | 03/19/90 |
| 0600 | 1200 | USA | WRMO | 6185 | NA/CA | 42/157 deg |
| 0600 | 0800 | USA | WSBB | 11980 9455 | CA/Canada | 02/15/88 |
| 0600 | 0700 | USA | WYPR | 17640 15566 13760 7355 6065 5985 | Bu/Af/NA | 245/315 deg |
| 0601 | 0700 | USA | VOA | 11915 9375 9540 9330 7280 6125 6080 6035 | Africa | 16 Network M-Sa |
| 0630 | 0700 | Australia | R Australia | 21775 21740 17715 17630 15560 15465 15240 11880 | Am/Pac/PapMG | 03/03/90 |
| 0630 | 0700 | Belgium | BR1 | 13675 11895 6035 | Bu/Bu | 03/03/90 |
| 0630 | 0700 | Bulgaria | R Sofia | 17825 15160 11720 | W Bu | 03/15/90 |
| 0630 | 0655 | Finland | R Finland | 11755 9560 6120 | Bu/BR/Afr | 03/15/90 |
| 0630 | 1000 | Liberia | ELWA | 11830 | CAW Afr | 05/14/89 |
| 0630 | 0700 | Poland | R Polonia | 3675 7270 | Bu | 08/15/89 |
| 0630 | 0700 | Switzerland | R Swiss R Int'l | 21770 17570 15430 9535 6165 3985 | Afr/Bu | 04/18/90 |
| 0630 | 0700 | Vatican State | Vatican Radio | 21650 17730 17710 | CA5 Af | 03/22/90 |
| 0645 | 0715 | Romania | R Romania Int'l | 21550 17905 17720 15365 15250 11940 | Pac | 11/04/89 |
| 0655 | 0832 | Liberia | ELWA | 4760 | Su | 05/14/89 |
| 0700 | 0730 | Australia | R Australia | 21775 21740 17715 17630 15560 15465 15240 11930 | Am/Pac/PapMG | 03/03/90 |
| 0700 | 0830 | Ecuador | ECJB | 15270 11835 9610 | Bu | 04/25/89 |
| 0700 | 0800 | Japan | R Japan | 21690 21500 17890 17810 17765 | GOS/As/Am/Oc/Bu/WR | 10/26/89 |
| 0700 | 0750 | North Korea | R Pyongyang | 5340 11335 | SB As | 01/01/90 |
| 0700 | 0835 | Swaziland | Trans World Radio | 11835 11760 11740 7285 7255 7200 | S Af | only 1 freq/bad used |
| 0700 | 0800 | Taiwan | V of Free China | 5950 | NA | 06/05/89 |
| 0700 | 1100 | USA | KUSW | 6135 | Canada | via WYPR 08/05/89 |
| 0700 | 0800 | USA | WYPR | 15566 13760 7355 6065 5985 | Bu/Af/NA | 70 deg/Su only 11/06/89 |
| 0730 | 0800 | Australia | R Australia | 21775 17715 17630 15560 15240 11930 11880 | Am/Pac/PapMG | 15 Network M-Sa 03/03/90 |
| 0730 | 0800 | Austria | ORF | 21490 15410 13730 6155 | RE/Bu | 03/18/90 |
| 0730 | 1130 | Ecuador | ECJB | 11925 3745 | S Pac | 04/25/90 |
| 0730 | 0815 | England | BBC | 9640 | NS: NA/CA/Carib | 04/06/89 |
| 0730 | 0825 | Netherlands | R Nederland | 3715 9630 | WZ/Aug | 03/15/90 |
| 0740 | 0925 | Monaco | Trans World Radio | 3485 | UK | 12/08/89 |
| 0740 | 0757 | Switzerland | Int'l Red Cross | 21695 17670 13685 3560 | Australasia | Su -1015, Sa -0955 |
| 0745 | 0830 | German Dem Rep | R Berlin Int'l | 21465 15240 3730 7185 6115 6040 | Par B/DNA/Bu | MoTh after last Su 03/18/89 |
| | | | | | | 03/26/90 |

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|------|----------------------|-------|-------|-------|-------|-------|-------|-----------------------|----------|
| 0800 | Australia | 21775 | 17750 | 17715 | 17610 | 15240 | 15160 | As/Pac/PapMG | 03/03/90 |
| 0800 | Bangladesh | 15195 | 11705 | | | | | Bu | 12/30/89 |
| 0800 | Finland | 21550 | 17800 | | | | | Aus | 03/15/90 |
| 0800 | Guam | 15200 | | | | | | Per East | 01/05/90 |
| 0800 | H Mariana Is | 17855 | 9530 | | | | | Aus/NZ/Japan | 10/14/89 |
| 0800 | North Korea | 15180 | 13650 | 11830 | | | | SR Ae | 03/27/90 |
| 0800 | Norway | 25730 | 15165 | | | | | F East/Aus/Pac/NA | 02/16/90 |
| 0800 | Portugal | 9670 | | | | | | Bu | 03/15/90 |
| 0800 | South Korea | 13670 | 7550 | | | | | Bu | 10/03/87 |
| 0800 | USA | 11715 | | | | | | As | 03/15/90 |
| 0800 | USA | 9840 | | | | | | Bu | 10/26/89 |
| 0800 | USA | 7355 | | | | | | Bu/CA/SA | 03/19/90 |
| 0800 | USA | 13760 | 9455 | | | | | Canada/SA | 03/19/90 |
| 0810 | 0840 Mongolia | 12015 | | | | | | Aus | 03/15/90 |
| 0827 | 0957 Guam | 11805 | | | | | | Aus | 04/05/90 |
| 0828 | 0855 Netherlands | 9770 | | | | | | Aus | 09/16/88 |
| 0830 | 0900 Australia | 21775 | 17750 | 17715 | 17610 | 15240 | 15160 | 5995 As/Pac/PapMG | 03/03/90 |
| 0830 | 0930 China | 17710 | 15440 | 11755 | | | | S Pacific | 04/29/89 |
| 0830 | 0855 Finland | 21550 | 17800 | | | | | B Ae | 04/07/90 |
| 0830 | 0925 Netherlands | 21485 | 17575 | | | | | Asia | 09/19/86 |
| 0830 | 0900 Switzerland | 21595 | 17670 | 13685 | 9560 | | | Aus/NZ | 10/14/89 |
| 0840 | 0848 Greece | 17535 | 15625 | | | | | Aus | 04/07/90 |
| 0900 | 0930 Australia | 21825 | 21775 | 17715 | 15240 | 15160 | 9760 | 5995 As/Pac/PapMG | 03/03/90 |
| 0900 | 0925 Belgium | 21810 | 13675 | 6035 | | | | Afr/Bu | 03/18/90 |
| 0900 | 0950 Fed Rep Germany | 21660 | 21550 | 21500 | 17820 | 17760 | 15410 | 9650 Aus/Af/SECRG Afr | 03/15/90 |
| 0900 | 0945 German Dem Rep | 21465 | 17880 | 15240 | 11890 | | | Per B/GWA | 03/26/90 |
| 0900 | 0915 Hungary | 15220 | 15160 | 11925 | 11910 | 9835 | 3585 | Per East | 03/15/90 |
| 0900 | 1000 Japan | 17830 | 17810 | 15270 | | | | GOS/Am/Oc | 09/08/89 |
| 0900 | 0930 Norway | 17840 | | | | | | F East/Aus/NZ | 04/25/90 |
| 0930 | 1030 Afghanistan | 17720 | 15350 | | | | | SASG As | 01/25/90 |
| 0930 | 1000 Australia | 21825 | 21775 | 17715 | 15240 | 9760 | 3580 | 5995 As/Pac/PapMG | 04/09/90 |
| 0930 | 1030 China | 17710 | 15440 | 11755 | | | | S Pacific | 03/29/89 |
| 0930 | 0945 Hungary | 15220 | 15160 | 11925 | 11910 | 9835 | 9585 | Per East | 03/15/90 |
| 0930 | 1000 Italy | 7230 | | | | | | Bu | 03/15/90 |
| 0945 | 1030 German Dem Rep | 6115 | | | | | | Bu | 03/26/90 |
| 0945 | 1000 Hungary | 15220 | 15160 | 11910 | 9835 | 9585 | 7220 | Bu | 03/15/90 |
| 1000 | 1030 Australia | 21775 | 15240 | 9580 | 7205 | 5995 | | As/Pac/PapMG | 03/03/90 |
| 1000 | 1600 Guam | 3830 | | | | | | China | 10/21/89 |
| 1000 | 1100 Guam | 13720 | | | | | | Af | 03/19/90 |
| 1000 | 1100 India | 21735 | 17860 | 17387 | 15335 | 15050 | | GOS/NE As/Aus/NZ | 12/02/89 |

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|------|------|----------------------|-------------------|-------|-------|-------|-------|-------|-------|-------|--------------------|-----------------------|----------|
| 1000 | 1030 | Israel | Kol Israel | 21780 | 21745 | 17590 | 17575 | 15650 | 15405 | 11585 | W Eu/B Eu/Aus/As | 03/18/90 | |
| 1000 | 1200 | W Mariana Is | EBBI | 15115 | 9530 | | | | | | Phil/Indon/China | 10/14/89 | |
| 1000 | 1030 | Switzerland | Swiss & Int'l | 21695 | 17670 | 13685 | 9560 | | | | Aus/NZ | 04/17/89 | |
| 1000 | 1200 | USA | VOA | 15120 | 11915 | 9590 | | | | | Caribbean/American | 04/03/90 | |
| 1000 | 1200 | USA | WSBB | 9495 | 9455 | | | | | | SA/Canada | 03/19/90 | |
| 1000 | 1100 | USA | WFFR | 5950 | | | | | | | NA | 03/15/90 | |
| 1000 | 1030 | Vietnam | V of Vietnam | 15010 | 12020 | 9840 | | | | | As/Pac/PapMG | 11/07/89 | |
| 1030 | 1100 | Australia | R Australia | 21775 | 9580 | 7205 | 5995 | | | | As/Pac/PapMG | 03/03/90 | |
| 1030 | 1100 | Austria | ORF | 21490 | 15450 | | | | | | Aus/As | 03/18/90 | |
| 1030 | 1100 | Canada | R Korea | 11715 | | | | | | | EMA | 03/15/90 | |
| 1030 | 1045 | Hungary | R Budapest | 15220 | 15160 | 11910 | 9835 | 9585 | 7220 | | Bu | 03/15/90 | |
| 1030 | 1125 | Netherlands | R Netherland | 11890 | 6020 | | | | | | Aus/Carib | 10/26/89 | |
| 1030 | 1110 | United Arab Emirates | R Dubai | 21605 | 1775 | 15435 | 15120 | | | | v Bonaire | 06/22/89 | |
| 1040 | 1048 | Greece | V of Greece | 15630 | 11645 | | | | | | Pac | News/Eng | 12/23/89 |
| 1040 | 1057 | Switzerland | Int'l Red Cross | 21770 | 17830 | 15570 | 13635 | | | | Pac East | MoTh after last Su | 03/09/90 |
| 1050 | 1115 | Finland | R Finland | 21550 | 15400 | | | | | | -NA | M-P | 03/15/90 |
| 1055 | 1257 | Netherlands Antilles | Trans World Radio | 15345 | 11815 | | | | | | EMA/Carib | Sat - 1400/Sun - 1332 | 05/31/89 |
| 1100 | 1230 | Australia | R Australia | 21775 | 11930 | 11800 | 9710 | 9655 | 9580 | 7205 | As/Pac/PapMG | 03/03/90 | |
| 1100 | 1200 | China | R Beijing | 17855 | | | | | | | EMA | 03/27/90 | |
| 1100 | 1200 | England | BBC | 11775 | 9740 | 9515 | 6195 | 5965 | | | WS: NA/CA/Carib | 03/16/90 | |
| 1100 | 1150 | Fed Rep Germany | R Deutsche Welle | 21600 | 17800 | 17765 | 15410 | | | | W Afr | 17800, 15410 v Kigali | 09/30/88 |
| 1100 | 1145 | German Dem Rep | R Berlin Int'l | 17780 | 13690 | 9685 | 6115 | | | | Bu/MB | 03/26/90 | |
| 1100 | 1200 | Japan | R Japan | 11840 | 11815 | 6120 | | | | | GOS/Asia/NA | 09/08/89 | |
| 1100 | 1130 | Mongolia | R Ulan Bator | 12015 | 3615 | | | | | | Am | 03/15/90 | |
| 1100 | 1150 | North Korea | R Pyongyang | 11735 | 9917 | 9645 | | | | | Am | 01/01/90 | |
| 1100 | 1115 | Pakistan | R Pakistan | 21575 | 17555 | | | | | | V Bu | 01/20/90 | |
| 1100 | 1156 | South Africa | R Radio RSA | 11805 | 9555 | | | | | | Afr | Slow-speed news | 04/25/90 |
| 1100 | 1200 | South Korea | R Korea | 15575 | | | | | | | BB/Afr | 10/03/87 | 03/18/89 |
| 1100 | 1130 | Switzerland | Int'l Red Cross | 7210 | | | | | | | Bu | last Su of month | 03/18/89 |
| 1100 | 1130 | Switzerland | Swiss R Int'l | 21770 | 17830 | 15570 | 13635 | | | | SE As/Aus/NZ | 01/29/89 | 05/13/89 |
| 1100 | 1200 | Taiwan | V of Asia | 9845 | 7445 | 5980 | | | | | SE As | 70 deg, Su only | 03/19/90 |
| 1100 | 1300 | USA | EUSW | 9850 | | | | | | | Canada | 157/157 deg | 03/19/90 |
| 1100 | 1400 | USA | WBFI | 11790 | 9495 | | | | | | Bu/CA/SA | 03/15/90 | 03/27/90 |
| 1100 | 1200 | USA | WFFR | 11580 | 5930 | | | | | | NA | 03/27/90 | 03/18/90 |
| 1130 | 1200 | USSR | R Moscow | 21725 | 17810 | 17700 | 15500 | 15475 | 15460 | 15175 | World Service | 03/18/90 | 03/15/90 |
| 1130 | 1165 | Belgium | BRF | 21490 | 15430 | 13730 | 6155 | | | | BWA/As/Bu | 04/25/90 | 03/26/90 |
| 1130 | 1200 | Canada | ORF | 21810 | 17555 | | | | | | SE As/NA | 03/15/90 | 03/09/90 |
| 1130 | 1200 | Canada | BCB | 11740 | | | | | | | NA | 03/15/90 | 03/09/90 |
| 1130 | 1215 | German Dem Rep | R Berlin Int'l | 21465 | 17880 | 15440 | 11970 | | | | Am | 03/26/90 | 03/09/90 |
| 1130 | 1225 | Iran | R Tehran | 11790 | 9695 | 9610 | 9520 | | | | S&SE As/NE/India | 03/09/90 | |

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|------|------|----------------|-------|-------|-------|-------|-------|-----------------|---------------------|----------|------------------|----------|
| 1130 | 1225 | Netherlands | 21520 | 21480 | 17575 | 3715 | 5355 | Bu/WB/As | #2 v Madagascar | 03/15/90 | | |
| 1130 | 1200 | Sweden | 21610 | 21570 | 17740 | | | As/Pac | | 04/09/90 | | |
| 1130 | 1230 | Thailand | 11905 | 9655 | | | | SE As | | 07/23/89 | | |
| 1200 | 1300 | Canada | 17820 | 11855 | 9635 | | | Carib/JSA | M-P | 03/16/90 | | |
| 1200 | 1300 | China | 17855 | 15450 | 11660 | 11600 | 9530 | BWA/S Pac/SE As | | 03/27/90 | | |
| 1200 | 1400 | Costa Rica | 11870 | 9725 | | | | | | 12/14/89 | | |
| 1200 | 1630 | Ecuador | 17830 | 15115 | 11740 | | | NA | #3 -1500 | 04/25/90 | | |
| 1200 | 1400 | England | 11775 | 3915 | 3740 | 3515 | 6195 | WS: NA/CA/Carib | | 03/16/90 | | |
| 1200 | 1225 | Finland | 21550 | 15400 | | | | NA | M-P | 03/15/90 | | |
| 1200 | 1300 | Ivory Coast | 17830 | | | | | AF | Su only | 02/28/88 | | |
| 1200 | 1315 | Jordan | 13655 | | | | | W Bu/NA | | 03/15/90 | | |
| 1200 | 1400 | Mariana Is | 15285 | 3465 | | | | Aus/Pap/SG As | 188/270 deg | 10/14/89 | | |
| 1200 | 1230 | Norway | 15165 | | | | | NA/CA | Bug Sun only | 04/25/90 | | |
| 1200 | 1225 | Poland | 11815 | 5095 | | | | Su | | 08/15/89 | | |
| 1200 | 1230 | Romania | 17720 | 15340 | | | | AS | | 11/04/89 | | |
| 1200 | 1256 | South Africa | 21590 | 11900 | 11805 | 9555 | | SES Afr | #3 to Namibia | 04/25/90 | | |
| 1200 | 1230 | Switzerland | 12030 | 9545 | 6165 | | | Su | | 03/27/90 | | |
| 1200 | 1400 | USA | 9715 | | | | | NA/CA | 20 deg (Su only) | 10/21/89 | | |
| 1200 | 1400 | USA | 11930 | 3495 | | | | CA/NR Canada | 182/25 deg | 03/13/90 | | |
| 1200 | 1500 | USA | 17750 | 13695 | 11550 | 6015 | 5350 | NA | #1-3 Network M-Sa | 03/15/90 | | |
| 1200 | 1300 | USSR | 21785 | 17810 | 17730 | 17700 | 15550 | 15460 | World Service | 03/25/90 | | |
| 1200 | 1225 | USSR | 17745 | 15470 | 11785 | 5500 | 7325 | AS | | 04/22/90 | | |
| 1200 | 1215 | Vatican State | 21515 | 17855 | | | | AS/Aus/NZ | Pr only | 03/22/90 | | |
| 1200 | 1230 | Vietnam | 15010 | 12020 | 3840 | | | NA/Aus/Sar B | | 02/23/90 | | |
| 1200 | 1230 | Yugoslavia | 25795 | 21555 | 17740 | | | AS | | 03/31/90 | | |
| 1215 | 1330 | Egypt | 17595 | | | | | AS | | 06/18/88 | | |
| 1215 | 1300 | German Dem Rep | 15240 | 11705 | | | | BR | | 03/26/90 | | |
| 1215 | 1315 | South Korea | 9750 | | | | | AM | | 04/08/90 | | |
| 1230 | 1300 | Australia | 21775 | 21525 | 11330 | 3655 | 3550 | 7240 | 205 | 5080 | As/Pac/Pap/MG | 03/03/90 |
| 1230 | 1300 | Bangladesh | 17850 | 15040 | | | | Su | | | | 03/25/90 |
| 1230 | 1255 | Belgium | 21815 | 17555 | | | | SE As/NA | #1 M-P/#2 M-Sa | 03/15/90 | | |
| 1230 | 1255 | France | 21645 | 21635 | 17650 | 15135 | 15455 | 11670 | 3305 | | As/Afr/Ind/As/Eu | 11/1/89 |
| 1230 | 1300 | Poland | 15120 | 11840 | 3525 | | | AF | News & fest/English | 08/15/89 | | |
| 1230 | 1300 | Turkey | 17785 | | | | | SW As | | 03/15/90 | | |
| 1235 | 1248 | Greece | 17635 | 15630 | 11645 | | | NA/Sweden | News/Eug | 04/07/90 | | |
| 1240 | 2205 | Liberia | 11830 | | | | | CAW Afr | Su | 05/14/89 | | |
| 1245 | 1330 | German Dem Rep | 21465 | 17880 | 15440 | 11970 | | AS | | 03/25/90 | | |
| 1300 | 1400 | Australia | 21775 | 21525 | 11930 | 9655 | 9580 | 7240 | 205 | 6030 | As/Pac/Pap/MG | 03/03/90 |
| 1300 | 1600 | Canada | 17820 | 11955 | | | | Carib/NA | | 03/16/90 | | |
| 1300 | 1400 | China | 11660 | 11600 | 9530 | | | SE As | | 11/07/89 | | |

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|------|------|----------------------|--|-------|-------|------------------|---------------------|-------|-------|---------------|----------|-------------------|---------------------|-----------|
| 1300 | 1330 | China | R Canada Int'l | 15385 | 11955 | SB As & India | 03/16/90 | | | | | | | |
| 1300 | 1325 | Finland | R Finland | 21550 | 15400 | NA | 03/15/90 | | | | | | | |
| 1300 | 1345 | German Dem Rep | R Berlin Int'l | 6115 | | Bu | 03/26/90 | | | | | | | |
| 1300 | 1350 | North Korea | R Pyongyang | 15180 | 13650 | SB As/Am/Eu | 03/27/90 | | | | | | | |
| 1300 | 1330 | Norway | R Norway | 9590 | | Bu | 03/30/89 | | | | | | | |
| 1300 | 1355 | Romania | R Romania Int'l | 21685 | 17850 | Bu | 03/27/90 | | | | | | | |
| 1300 | 1356 | South Africa | Radio RSA | 11805 | 9555 | Afr | 04/25/90 | | | | | | | |
| 1300 | 1500 | Taiwan | WFR | 15055 | | India | 03/26/89 | | | | | | | |
| 1300 | 1700 | USA | RUSA | 15590 | | Canada | 03/19/90 | | | | | | | |
| 1300 | 0200 | USA | WCR | 15630 | | M-P | 03/27/90 | | | | | | | |
| 1300 | 1400 | USSR | R Moscow | 21785 | 17840 | 17780 | 17760 | 15660 | 15480 | World Service | 03/25/90 | | | |
| 1300 | 1400 | USSR | R Stn Peace & Progress Int'l Red Cross | 17870 | 17840 | 17635 | 15535 | 15520 | 15420 | 15130 | 15130 | SB As | #2,5,8 from 1330 | 03/22/90 |
| 1315 | 1730 | Jordan | R Jordan | 9560 | | SASB As/Far East | Month after last Su | | | | | | | 03/18/89 |
| 1330 | 1400 | Austria | ORP | 15430 | | W Bu/NA | | | | | | | | 03/15/90 |
| 1330 | 1500 | India | AIR | 15335 | 11850 | 11810 | 11760 | 9585 | 9525 | | | | # 1,4,5 maybe tests | 03/18/90 |
| 1330 | 1400 | Switzerland | Swiss R Int'l | 25680 | 21695 | 17830 | 15570 | 11695 | 9620 | | | | #56 v China | 04/18/90 |
| 1330 | 1400 | United Arab Emirates | R Dubai | 21605 | 1775 | 15435 | 15320 | | | | | | | 06/04/89 |
| 1330 | 1355 | USSR | R Tashkent | 17745 | 15470 | 11785 | 9500 | 7325 | | | | | | 04/22/90 |
| 1330 | 1400 | Vietnam | V of Vietnam | 15010 | 12020 | 9840 | | | | | | | | 11/07/89 |
| 1345 | 1430 | German Dem Rep | R Berlin Int'l | 9730 | | | | | | | | | | 03/26/90 |
| 1345 | 1415 | Hongolia | R Ulan Bator | 15305 | 9575 | 9645 | | | | | | | | 03/15/90 |
| 1345 | 1400 | Vatican Radio | Vatican Radio | 11740 | 9645 | 7250 | 6248 | | | | | | | 03/03/90 |
| 1400 | 1430 | Australia | R Australia | 21525 | 15160 | 11930 | 9655 | 9580 | 7240 | 7205 | 6080 | As/Pac/PapNG | | 12/08/89 |
| 1400 | 1500 | China | R Beijing | 15165 | 11795 | 7405 | | | | | | S As/WNA | | 03/16/90 |
| 1400 | 1500 | England | BBC | 9740 | | | | | | | | WG: NA/CA/Carib | | 03/16/90 |
| 1400 | 1425 | France | R France Int'l | 21770 | 11925 | 7125 | | | | | | SB As | #243 v China | 11/13/89 |
| 1400 | 1500 | Japan | R Japan | 11865 | 11815 | | | | | | | GOS/Am/As | | 02/16/90 |
| 1400 | 1600 | N Mariana Is | KHBI | 15385 | 9530 | | | | | | | SB As/India/China | 285/310 deg | 10/14/89 |
| 1400 | 1430 | Norway | R Norway | 21710 | | | | | | | | Ind/S As/Aus | Bag Sun only | 08/17/89 |
| 1400 | 1556 | South Africa | Radio RSA | 11925 | 9555 | | | | | | | Afr | | 04/25/90 |
| 1400 | 1500 | South Korea | R Korea | 9570 | | | | | | | | SB As | | 03/15/90- |
| 1400 | 1430 | Sweden | R Sweden | 21610 | 17740 | | | | | | | As/Pac | 45 deg | 04/09/90 |
| 1400 | 1600 | USA | WGSN | 21780 | | | | | | | | 8u/CA/SA | 157/42 deg | 03/19/90 |
| 1400 | 1500 | USA | WBRI | 15105 | 9495 | | | | | | | NA/CA | 20 deg (Su only) | 03/19/90 |
| 1400 | 1500 | USA | WBMO | 15420 | | | | | | | | CA/Canada | 245/315 deg | 03/08/89 |
| 1400 | 1600 | USA | WGBH | 17555 | 13760 | | | | | | | World Service | #9 v Cuba | 03/25/90 |
| 1400 | 1500 | USSR | R Moscow | 21785 | 17810 | 17660 | 17585 | 15560 | 15480 | 15475 | 15305 | World Service | | 04/01/90 |
| 1405 | 1430 | Finland | R Finland | 21550 | 15185 | 11820 | | | | | | 8u/WB/Afr | | 12/19/88 |
| 1420 | 1430 | Sudan | National Unity Radio | 9435 | | | | | | | | | nx/88 some days | |

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|------|------|-----------------|------------------|-------|-------|-------|-------|-------|-------|-------|------|-----------------|------------------------|
| 1430 | 1500 | Australia | R Australia | 15150 | 11330 | 9555 | 9580 | 7240 | 7205 | 6080 | 6060 | As/Pac/Pap/NG | 03/03/90 |
| 1430 | 1500 | Austria | ORP | 21490 | 13730 | 11780 | 6155 | | | | | W AF/SE As/Eu | 04/01/89 |
| 1430 | 1530 | Bulgaria | R Sofia | 17825 | 15130 | 11735 | | | | | | AFr | 03/15/90 |
| 1430 | 1600 | Lebanon | V of Hope | 6280 | 6215 | | | | | | | # 2 alt | 01/25/90 |
| 1430 | 1525 | Netherlands | R Helderland | 17605 | 17575 | 15150 | 13770 | 5355 | | | | HE/India | 01/22/89 |
| 1430 | 1455 | Poland | R Polonia | 11815 | 9540 | 6135 | | | | | | SEB As/Eu | 08/15/89 |
| 1445 | 1500 | Canada | R Canada Int'l | 21545 | 17820 | 17795 | 15425 | 15315 | 15305 | 11935 | | Eu | 03/16/90 |
| 1445 | 1530 | German Dem Rep | R Berlin Int'l | 17880 | 11970 | | | | | | | CAF/Eu | # 2, 4, 5, 7 v Eu rly# |
| 1458 | 1600 | Seychelles | PBB | 15330 | 9590 | | | | | | | As | 03/26/90 |
| 1459 | 1601 | Guam | ZWR | 11650 | | | | | | | | SE As | 12/16/89 |
| 1500 | 1530 | Australia | R Australia | 15160 | 11930 | 9655 | 9580 | 7240 | 6080 | 6060 | 5995 | As/Pac/Pap/NG | 04/05/90 |
| 1500 | 1600 | China | R Beijing | 15165 | 11795 | 7405 | | | | | | S As/WNA | 03/03/90 |
| 1500 | 1745 | England | 9BC | 15260 | 11775 | | | | | | | MS: NA/CA/Carib | 12/10/89 |
| 1500 | 1550 | Fed Rep Germany | R Deutsche Welle | 21600 | 17765 | 15965 | 9735 | | | | | SE/CAF Afr | 03/15/90 |
| 1500 | 1600 | Japan | R Japan | 21700 | 11865 | 11815 | | | | | | GOS/As/Am/Eu/MS | 02/16/90 |
| 1500 | 1550 | North Korea | R Pongyang | 11750 | 9977 | 9640 | 9425 | | | | | Ru/MS/AF | # 1 v Gabon |
| 1500 | 1530 | Romania | R Romania Int'l | 17745 | 17720 | 15335 | 15250 | 11940 | 11775 | | | As | 01/01/90 |
| 1500 | 1555 | Seychelles | PBB | 11865 | | | | | | | | SE As | 02/19/90 |
| 1500 | 1515 | Taiwan | WPR | 11550 | | | | | | | | SaSu -1540 | 12/16/89 |
| 1500 | 1600 | USA | ZNLS | 11715 | | | | | | | | via YOPC | 03/26/89 |
| 1500 | 1700 | USA | VOA | 15205 | 9700 | 3380 | | | | | | erc Mon | 03/15/90 |
| 1500 | 1600 | USA | WFI | 21840 | 15105 | | | | | | | HE/M AF/Eu | 04/03/90 |
| 1500 | 2100 | USA | WMO | 15420 | | | | | | | | Bu/CA/SA | # 1 1600-1630 |
| 1500 | 0200 | USA | WPC | 15690 | | | | | | | | NA/CA/Eu | 03/19/90 |
| 1500 | 1600 | USA | WPR | 17750 | 13695 | 11850 | 11830 | 5350 | | | | Sa-Su | 03/19/90 |
| 1500 | 1600 | USSR | R Moscow | 17810 | 17585 | 15475 | 11840 | | | | | World Service | 03/27/90 |
| 1500 | 1530 | Vietnam | V of Vietnam | 15010 | 12020 | 9840 | | | | | | NA | # 1-3 Network M-Sa |
| 1515 | 1530 | Hungary | R Budapest | 15220 | 15160 | 11910 | 9835 | 3585 | 7220 | | | Eu | 03/25/90 |
| 1530 | 1600 | Australia | R Australia | 15160 | 13700 | 11930 | 9770 | 9655 | 9580 | 7240 | 6080 | As/Pac/Pap/NG | 02/23/90 |
| 1530 | 1555 | Belgium | BRF | 21310 | 17550 | | | | | | | AFr | 03/15/90 |
| 1530 | 1538 | Greece | V of Greece | 17535 | 15630 | 11645 | | | | | | NA/Sweden | 10/15/89 |
| 1530 | 1600 | Sweden | R Sweden | 21655 | 21500 | 17880 | | | | | | HE/WNA | 04/09/90 |
| 1530 | 1600 | Switzerland | Swiss R Int'l | 21630 | 17830 | 15430 | 13685 | | | | | HE/S Afr | 04/25/88 |
| 1545 | 1530 | German Dem Rep | R Berlin Int'l | 17780 | 15350 | 9730 | 7295 | | | | | AF/Eu | 03/26/90 |
| 1545 | 1630 | Pakistan | R Pakistan | 21740 | 21480 | 17895 | 17580 | 15605 | 13665 | | | HE/MS Afr | 03/26/90 |
| 1545 | 1600 | Vatican State | Vatican Radio | 17870 | 15090 | 11945 | | | | | | As/Aus/MZ | 03/22/90 |
| 1555 | 2205 | Liberia | ELWA | 11830 | | | | | | | | CAF Afr | 05/14/89 |
| 1559 | 1659 | Guam | ZWR | 11910 | | | | | | | | AFr/ea | 04/05/90 |
| 1600 | 1630 | Australia | R Australia | 13700 | 11930 | 9770 | 9655 | 9580 | 7240 | 6080 | 6060 | As/Pac/Pap/NG | 03/03/90 |
| 1600 | 1700 | China | R Beijing | 15130 | 15110 | 9570 | | | | | | SE As Afr | 12/09/89 |

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|------|------|----------------------|--------------------------|-------|-------|-------|-------|-------|-------|---------------|---------------------|---------------------|
| 1600 | 1650 | Ped Rep Germany | R Deutsche Weile | 21680 | 17825 | 15595 | 15105 | 7225 | -6170 | S An | 10/30/89 | |
| 1600 | 1655 | France | R France Int'l | 17850 | 17795 | 17620 | 15380 | 12015 | 11705 | 6175 | 11/13/89 | |
| 1600 | 1700 | Guan | ESDA | 11980 | | | | | | India | 03/19/90 | |
| 1600 | 1800 | M Mariana Is | EBBI | 15385 | 13745 | | | | | SR As/India | 04/25/90 | |
| 1600 | 1830 | Norway | R Norway | 21705 | 17785 | | | | | HA/CA | 08/15/89 | |
| 1600 | 1830 | Poland | R Poland | 9540 | 6135 | | | | | Bu | 10/05/89 | |
| 1600 | 1830 | Portugal | R Portugal | 21530 | | | | | | NR | 07/20/86 | |
| 1600 | 2100 | Saudi Arabia | BC Serv of Kingdom of SA | 9720 | | | | | | NR/Afr/GOS | 11/05/88 | |
| 1600 | 1700 | South Korea | R Korea | 9870 | 5975 | | | | | BAS AF | 06/05/89 | |
| 1600 | 1630 | Swaziland | Trans World Radio | 11835 | 11760 | 11740 | 5055 | 4760 | | Bu/Afr | 03/25/90 | |
| 1600 | 1640 | United Arab Emirates | R Dubai | 21605 | 15435 | 15320 | 11790 | | | R Afr | 09/24/89 | |
| 1600 | 1800 | USA | VOA | 17870 | 17800 | 17785 | 15600 | 15580 | 15445 | 11920 | 75 deg | |
| 1600 | 1800 | USA | WCSN | 21640 | | | | | | Bu/CA/SA | #2 Su, #3 M-Sa | |
| 1600 | 1700 | USA | WHRI | 21840 | 15105 | 11790 | | | | Bu/AT/NA | #3,6,7 Network M-Sa | |
| 1600 | 1700 | USA | WFR | 21615 | 21525 | 17895 | 17612 | 15566 | 13695 | 11580 | #4 v Cuba | |
| 1600 | 1700 | USSR | R Moscow | 17810 | 17585 | 15475 | 11840 | 9740 | | World Service | #345 v Bu relays | |
| 1615 | 1630 | Canada | R Canada Int'l | 21545 | 17820 | 15325 | 15305 | 11935 | | CAB Bu | 03/03/90 | |
| 1630 | 1730 | Australia | R Australia | 13700 | 11930 | 11720 | 9710 | 9655 | 9580 | 7240 | 6080 | Ar/Pac/PapMG |
| 1630 | 1700 | Austria | ORF | 21490 | 13730 | 11780 | 5945 | | | AF/Bu/Am | 03/18/90 | |
| 1630 | 1830 | Egypt | R Cairo | 15255 | | | | | | S Afr | 08/17/87 | |
| 1630 | 1725 | Netherlands | R Netherland | 15570 | 15375 | 6020 | | | | BAS Afr | 03/15/90 | |
| 1630 | 1700 | Poland | R Poland | 15120 | 11840 | 9525 | | | | AF | 08/15/89 | |
| 1630 | 1700 | USSR | R Stn Peace & Progress | 17565 | 15585 | 15470 | 12055 | 11980 | 11910 | 11850 | 9705 | Ar/As |
| 1635 | 2400 | South Africa | Radio 5 | 4880 | | | | | | | | 09/08/89 |
| 1645 | 1930 | South Africa | Radio Orange | 3215 | | | | | | | | 04/17/89 |
| 1700 | 1750 | Brazil | R Bras | 15285 | | | | | | | Bu | 03/26/90 |
| 1700 | 1800 | China | R Beijing | 11575 | 9570 | 9500 | | | | | BAS Afr | 12/08/89 |
| 1700 | 1715 | Israel | R Israel | 11655 | 11585 | | | | | | B Bu/W Bu | 03/18/90 |
| 1700 | 1800 | Japan | R Japan | 11865 | 11815 | 9695 | 9535 | | | | GOS/Ar/Am | 08/16/90 |
| 1700 | 1750 | North Korea | R Pyongyang | 11750 | 9977 | 9640 | 9325 | | | | Bu/WB/AF | 01/01/90 |
| 1700 | 1730 | Norway | R Norway | 25730 | 17765 | | | | | | Ar/NA | 02/16/90 |
| 1700 | 1730 | Sweden | R Sweden | 9615 | 6065 | | | | | | Bu/AF | 04/09/90 |
| 1700 | 1730 | Switzerland | Int'l Red Cross | 7210 | | | | | | | Bu | Mo after last Su/Mo |
| 1700 | 2200 | USA | KUSW | 15590 | | | | | | | Canada | 03/18/89 |
| 1700 | 1800 | USA | VOA | 15260 | 15205 | 11760 | 9760 | 6040 | | | NR/N Af/Bu | 33/19/90 |
| 1700 | 1800 | USA | WHRI | 15105 | 13760 | | | | | | Bu/CA/SA | 04/03/90 |
| 1700 | 2000 | USA | WLLK | 9465 | | | | | | | 157/42 deg | 03/19/90 |
| 1700 | 1900 | USA | WFR | 17885 | 17750 | 15695 | 11830 | 11580 | | | Su-Pr | 08/30/89 |
| 1700 | 1800 | USSR | R Moscow | 17810 | 17585 | 15475 | 11840 | 9740 | | | #1,3,5 Network M-Sa | 03/15/90 |
| 1710 | 1727 | Switzerland | Int'l Red Cross | 17830 | 15525 | 15430 | 11955 | 3885 | | | #4 v Cuba | 03/25/90 |
| | | | | | | | | | | | World Service | Mo/Th after last Su |
| | | | | | | | | | | | Africa | 03/18/89 |

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|-------|------|----------------|-------------------|-------|-------|-------|--------------|------------------------|
| 1715 | 1800 | German Dem Rep | R Berlin Int'l | 9730 | 7235 | 7350 | Bu | 03/26/90 |
| 1715 | 1800 | Pakistan | R Pakistan | 15693 | 11570 | | W Bu | 03/14/90 |
| 1725 | 2230 | Liberia | SLWA | 4760 | | | | 03/15/90 |
| 1730 | 1800 | Albania | R Tirana | 9480 | 7155 | | Bu | 03/31/90 |
| 1730 | 1800 | Australia | R Australia | 13700 | 11930 | 11720 | 6080 | 03/03/90 |
| 1730 | 1755 | Belgium | BRT | 13675 | 5910 | | Bu | 03/15/90 |
| 1730 | 1830 | Bulgaria | R Sofia | 15370 | 11840 | 11735 | Afr | 03/15/90 |
| 1730 | 1815 | German Dem Rep | R Berlin Int'l | 15350 | 15145 | 13610 | 9665 | 03/26/90 |
| 1730 | 1800 | Romania | R Romania Int'l | 17720 | 15365 | 15340 | 11940 | 12/09/89 |
| 1730 | 1800 | Switzerland | Swiss R Int'l | 9535 | 6165 | 3985 | Bu | 04/18/90 |
| 1730 | 1800 | Vatican State | Vatican Radio | 21650 | 17730 | 17710 | 8&S Afr | 03/22/90 |
| 1731 | 1804 | Seychelles | PRSA | 11820 | | | B Afr | 12/16/89 |
| 1800 | 1900 | Argentina | RAR | 15345 | | | Bu/Afr | 03/28/90 |
| 1800 | 1830 | Australia | R Australia | 11930 | 11855 | 11720 | 9710 | 03/03/90 |
| 1800 | 1830 | Canada | R Canada Int'l | 17820 | 15260 | 13670 | Afr | 12/09/89 |
| 1800 | 2130 | Costa Rica | R For Peace Int'l | 21566 | 13660 | | S&Su -1900 | 01/31/90 |
| 1800 | 2000 | India | AIR | 15360 | 11935 | | Sa-Su | 05/24/89 |
| 1800 | 1900 | Ivory Coast | R Cote-d'Ivoire | 7215 | | | exc Sundays | 12/05/87 |
| 1800 | 2100 | Kuwait | R Kuwait | 13610 | | | | 10/29/89 |
| 1800 | 2000 | N Mariana Is | KHBI | 17555 | 9455 | | | 03/19/90 |
| 1800 | 1830 | Norway | R Norway | 21730 | | | Eng Sun only | 04/25/90 |
| 1800 | 1856 | South Africa | Radio RSA | 21535 | 15270 | 7230 | Afr | 04/25/90 |
| -1800 | 1900 | South Korea | R Korea | 15575 | | | | 11/05/88 |
| 1800 | 2200 | USA | VOA | 15205 | 11760 | 9760 | 6040 | 09/24/89 |
| 1800 | 2000 | USA | WCSN | 21640 | | | S Afr | 08/28/89 |
| 1800 | 2000 | USA | WHR | 17830 | 13760 | | Bu/CA/SA | 03/19/90 |
| 1800 | 2000 | USA | WSB | 21790 | | | Canada | 03/19/90 |
| 1800 | 1830 | USSR | R Kiev | 7240 | 6165 | 6090 | 6010 | 03/15/90 |
| 1800 | 1900 | USSR | R Moscow | 17585 | 15475 | 11840 | 3740 | 03/25/90 |
| 1800 | 1830 | Vietnam | V of Vietnam | 15010 | 2020 | 3840 | | 11/07/89 |
| 1801 | 1900 | USA | VOA | 21485 | 17870 | 17800 | 17785 | 03/24/89 |
| 1805 | 1845 | Swaziland | Trans World Radio | 11835 | 11760 | 11740 | | only if freq/chns used |
| 1815 | 1900 | Bangladesh | R Bangladesh | 15255 | 11860 | | Bu/MB | 06/05/89 |
| 1830 | 1930 | Afghanistan | R Afghanistan | 15440 | 11830 | 9635 | Bu | 03/31/90 |
| 1830 | 1900 | Australia | R Australia | 15320 | 11930 | 11855 | 11720 | 03/03/90 |
| 1830 | 1900 | Bulgaria | R Sofia | 15330 | 11660 | 9700 | W Bu | 03/15/90 |
| 1830 | 1900 | Canada | R Canada Int'l | 21675 | 17875 | 15325 | 7235 | 03/26/90 |
| 1830 | 1900 | Ethiopia | V of Ethiopia | 3660 | | | W Bu | 01/32/89 |
| 1830 | 1845 | Finland | R Finland | 15185 | 11755 | 9530 | 6120 | 04/01/90 |
| 1830 | 1900 | Hungary | R Budapest | 15160 | 11910 | 9835 | 5885 | 03/15/90 |

| | | | | | | | | | | | |
|------|------|-----------------|-------------------------|-------------------|-------|-------|-------|-------|---------------------|----------|--------------|
| 1830 | 1925 | Netherlands | R | Mederland | 21685 | 17605 | 15560 | Afr | 13&17m Bm, 19m Madg | 04/08/89 | |
| 1830 | 1855 | Poland | R | Polonia | 11840 | 9525 | 7285 | 7125 | 6135 | 5995 | 08/15/89 |
| 1830 | 1900 | Switzerland | Swiss R Int'l | 11955 | 9885 | | | | | | 04/18/90 |
| 1830 | 1900 | Yugoslavia | R | Yugoslavia | 11795 | 7215 | 5900 | | | | 03/15/90 |
| 1840 | 1848 | Greece | V | of Greece | 15630 | 12105 | 11645 | | | | 10/14/89 |
| 1840 | 1910 | Mongolia | R | Ulan Bator | 12050 | 9985 | | | | | 03/15/90 |
| 1845 | 1945 | India | AIR | | 11620 | 7412 | | | | | 07/04/88 |
| 1900 | 2000 | Algeria | R | Algiers | 15215 | | | | | | 03/14/90 |
| 1900 | 1930 | Australia | R | Australia | 15320 | 11930 | 11855 | 9710 | 9655 | 9580 | 03/03/90 |
| 1900 | 1930 | Canada | R | Canada Int'l | 17820 | 15260 | 13670 | | | | 12/09/89 |
| 1900 | 2000 | China | R | Beijing | 3440 | 6955 | | | | | M-P |
| 1900 | 2100 | Cuba | R | Havana | 11800 | | | | | | 11/25/89 |
| 1900 | 2000 | Ecuador | ECJB | | 21470 | 17790 | 15270 | | | | 12/02/89 |
| 1900 | 1950 | Fed Rep Germany | R | Deutsche Welle | 17810 | 15390 | 13730 | 11810 | 11785 | | 04/25/90 |
| 1900 | 1930 | Israel | R | Israel | 17630 | 17590 | 15640 | 15485 | 12077 | 11605 | 10/30/89 |
| 1900 | 1930 | Japan | R | Japan | 15270 | 11865 | 11850 | | | | 03/18/90 |
| 1900 | 2200 | New Zealand | R | New Zealand Int'l | 17680 | | | | | | 02/16/90 |
| 1900 | 1930 | Norway | R | Norway | 15165 | | | | | | 03/27/90 |
| 1900 | 1930 | Portugal | R | Portugal | 11740 | | | | | | 02/16/90 |
| 1900 | 1956 | South Africa | R | Radio RSA | 15270 | | | | | | 04/09/90 |
| 1900 | 2000 | Spain | R | Spanish Nat'l R | 5595 | 15375 | 12035 | 11790 | | | 04/25/90 |
| 1900 | 2015 | Swaziland | Trans World Radio | | 5055 | 4760 | | | | | 03/17/90 |
| 1900 | 2200 | USA | VOA | | 21485 | 17870 | 17800 | 17785 | 15600 | 15580 | 06/05/89 |
| 1900 | 2000 | USA | WFR | | 21615 | 17885 | 15565 | 13695 | 11830 | 11580 | 04/03/90 |
| 1900 | 2000 | USSR | R | Moscow | 17585 | 15520 | 11840 | 9740 | 9685 | 9450 | 03/15/90 |
| 1900 | 1930 | Vietnam | V | of Vietnam | 15010 | 12020 | 9840 | | | | 03/25/90 |
| 1915 | 2000 | German Dem Rep | R | Berlin Int'l | 15350 | 13610 | 3665 | | | | 11/07/89 |
| 1920 | 1930 | Greece | V | of Greece | 3395 | 7400 | | | | | 03/26/90 |
| 1930 | 2000 | Australia | R | Australia | 15320 | 15160 | 11930 | 11855 | 9710 | 9580 | 11/25/89 |
| 1930 | 2000 | Austria | ORF | | 13730 | 12010 | 6155 | 5945 | | | 03/03/90 |
| 1930 | 2030 | Iran | R | Tehran | 3022 | 6035 | | | | | 03/18/90 |
| 1930 | 2025 | Romania | R | Romania Int'l | 3690 | 7195 | 7105 | 6105 | 5990 | | 03/31/90 |
| 1930 | 0300 | South Africa | R | Radio Orion | 4810 | 3320 | | | | | 02/19/90 |
| 1935 | 1955 | Italy | RAI | | 11800 | 9710 | 7275 | | | | 04/17/89 |
| 1945 | 2030 | German Dem Rep | R | Berlin Int'l | 6115 | | | | | | 04/08/89 |
| 1945 | 2045 | India | AIR | | 11860 | 9755 | | | | | 03/26/90 |
| 1948 | 1955 | Sudan | Sudan Broadcasting Serv | | 11635 | | | | | | 05/24/89 |
| 1950 | 2010 | Vatican State | Vatican Radio | | 3645 | 7250 | 6190 | | | | 01/25/90 |
| 2000 | 2100 | Angola | R | Mac de Angola | 9535 | 7245 | 3375 | | | | 03/15/90 |
| 2000 | 2030 | Australia | R | Australia | 15320 | 15160 | 11330 | 11319 | 11855 | 11800 | 03/15/90 |
| | | | | | | | | | | | (RHHW) |
| | | | | | | | | | | | news/Bag |
| | | | | | | | | | | | Ab/Pac/PapMG |

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|------|------|-------------------|-------------------|-------|-------|-------|-------|-------|-------|-----------------------|----------------------|----------|
| 2000 | 2100 | China | R Beijing | 15110 | 11715 | 11515 | 11500 | 9920 | 3440 | W&N Af/E&S Af/Su | #1&2 v Mali | 03/25/90 |
| 2000 | 0330 | Costa Rica | R for Peace Int'l | 21556 | 13660 | | | | | M-P | M-P | 04/18/90 |
| 2000 | 2100 | Cuba | R Havana | 11850 | | | | | | Eu/Af | v USSR | 11/29/89 |
| 2000 | 2100 | England | BBC | 5375 | | | | | | WS: NA/CA/Carib | v Antigua | 09/23/89 |
| 2000 | 2300 | Equatorial Guinea | R Africa | 7189 | | | | | | Af | | 06/17/89 |
| 2000 | 2400 | Gua | KH3W | 9840 | | | | | | China | | 10/21/89 |
| 2000 | 2030 | Hungary | R Budapest | 15160 | 11910 | 9835 | 9585 | 7220 | 6110 | Zu | often delayed start | 03/15/90 |
| 2000 | 2200 | Iraq | R Baghdad | 11720 | | | | | | Zu | | 04/02/90 |
| 2000 | 2300 | Lebanon | V of Hope | 6280 | 6215 | | | | | Bu/WB | etc Sa | 01/25/90 |
| 2000 | 2200 | Mariana Is | KH91 | 15265 | 9455 | | | | | Aus/Japan | 1807/340 deg | 03/19/90 |
| 2000 | 2050 | North Korea | R Pyongyang | 9977 | 9640 | 9345 | 6576 | | | MB/Af/Bu | | 01/01/90 |
| 2000 | 2825 | Poland | R Polonia | 11840 | 9525 | 7125 | | | | Af | | 08/15/89 |
| 2000 | 2030 | Portugal | R Portugal | 15250 | | | | | | Afr | | 04/09/90 |
| 2000 | 2050 | Turkey | V of Turkey | 9795 | | | | | | Bu | M-P | 03/15/90 |
| 2000 | 2000 | USA | KVOR | 17775 | | | | | | CA/Carib | 100 deg | 08/13/88 |
| 2000 | 2200 | USA | WCSN | 15610 | | | | | | Bu | 60 deg | 03/19/90 |
| 2000 | 2200 | USA | W5B | 17555 | 13760 | | | | | CA/Canada | 137/25 deg | 03/19/90 |
| 2000 | 2300 | USA | WPR | 17885 | 13695 | 11830 | 11580 | | | NA | #1,2,4 Network M-Sa | 03/15/90 |
| 2000 | 2100 | USSR | R Moscow | 17585 | 11840 | 9860 | 9740 | 9685 | 3600 | 7240 | #2 v Cuba | 03/25/90 |
| 2005 | 2105 | Syria | R Damascus | 15085 | 12085 | | | | | Zu/NA | | 06/17/89 |
| 2025 | 2045 | Italy | RAI | 11360 | 3575 | 7235 | | | | Near East | | 03/03/90 |
| 2030 | 2100 | Australia | R Australia | 15465 | 15320 | 15160 | 15130 | 11910 | 11880 | 9710 | As/Pac/PapNG | 03/15/90 |
| 2030 | 2100 | Bulgaria | R Sofia | 15330 | 11660 | 9700 | | | | Bu | | 08/17/87 |
| 2030 | 2200 | EGYPT | R Cairo | 15375 | | | | | | V Afr | | 04/08/89 |
| 2030 | 2125 | Netherlands | R Nederland | 15560 | 13700 | 9860 | | | | W Afr | | 11/05/88 |
| 2030 | 2130 | South Korea | R Korea | 15575 | 7550 | 6480 | | | | Bu/WB/Afr | | 11/07/89 |
| 2030 | 2100 | Vietnam | V of Vietnam | 15010 | 12020 | 3540 | | | | Carib | | 09/04/88 |
| 2040 | 2140 | Cuba | R Havana | 15340 | 11725 | | | | | Aus | News/Eng et Su | 01/25/90 |
| 2040 | 2048 | Greece | V of Greece | 9425 | | | | | | CO5/W Bu/Aus/MZ/Af | | 04/07/90 |
| 2045 | 2230 | India | AIR | 15255 | 11715 | 11620 | 9910 | 3550 | 7412 | Bu | news in English | 12/04/88 |
| 2100 | 2130 | Australia | R Australia | 17795 | 15465 | 15320 | 15160 | 15130 | 11910 | 11880 | | 03/03/90 |
| 2100 | 2125 | Belgium | BRT | 3925 | 5910 | | | | | | | 03/15/90 |
| 2100 | 2115 | Cameroon | R Cameroon | 5010 | | | | | | W Bu | | 03/16/90 |
| 2100 | 2100 | Canada | R Canada Int'l | 17875 | 15325 | | | | | S&S Af/Bu | #1&2 v Mali | 03/25/90 |
| 2100 | 2200 | China | R Beijing | 15110 | 11715 | 11500 | 9920 | | | WS: NA/CA/Carib | #1 Bethany #2 Antici | 09/23/89 |
| 2100 | 2130 | England | BBC | 17715 | 5975 | | | | | Aus/Af | | 03/15/90 |
| 2100 | 2150 | Fed Rep Germany | R Deutsche Welle | 15435 | 13780 | 11810 | 9765 | 9870 | | Aus/S&S B As/Af/WB/Bu | | 03/24/90 |
| 2100 | 2125 | Finland | R Finland | 15400 | 1755 | 6120 | | | | BWA | | 03/26/90 |
| 2100 | 2145 | German Dem rep | R Berlin Int'l | 13690 | 9730 | | | | | | News in English | 12/23/87 |
| 2100 | 2110 | Ghana | Ghana BC Corp | 3366 | | | | | | | | |

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|------|------|----------------------|-------|-------|-------|-------|-------|-------|-------------------------|----------|
| 2100 | 2130 | Japan | 17890 | 17810 | 15270 | 15230 | 11835 | 11615 | GOS/As/Oc/Bu | 02/19/90 |
| 2100 | 2125 | Romania | 9690 | 7195 | 7105 | 6105 | 5990 | | Bu | 02/19/90 |
| 2100 | 2200 | Spain | 12035 | 11790 | | | | | Bu | 03/17/90 |
| 2100 | 2130 | Sweden | 11705 | 9655 | | | | | Bu/AF | 09/20/89 |
| 2100 | 2130 | Switzerland | 3985 | | | | | | Bu | 03/15/90 |
| 2100 | 2130 | Switzerland | 15525 | 15635 | 12035 | 9885 | | | Afr | 03/30/90 |
| 2100 | 2400 | USA | 15420 | 13720 | | | | | NA/CA/Bu | 03/19/90 |
| 2100 | 2200 | USSR | 11950 | 11850 | 11840 | 11745 | 11630 | 9740 | 9685 9600 World Service | 03/25/90 |
| 2100 | 2200 | USSR | 9610 | 7360 | 7215 | 7205 | 6145 | 4795 | Bu | 03/22/90 |
| 2100 | 2115 | Vatican State | 21650 | 17730 | 17710 | | | | CBSW AF | 03/22/90 |
| 2100 | 2145 | Yugoslavia | 11735 | 9660 | 9620 | 7215 | | | AF/NA/Aus/Bu | 03/15/90 |
| 2105 | 2205 | Syria | 15095 | 12085 | | | | | NA/Aus/WZ | 03/25/90 |
| 2115 | 2245 | Egypt | 9900 | | | | | | Bu | 04/02/88 |
| 2130 | 2200 | Albania | 9480 | 7245 | | | | | Bu | 03/31/90 |
| 2130 | 2200 | Australia | 17795 | 15465 | 15160 | 15130 | 11880 | 11800 | As/Pac/PapMG | 03/03/90 |
| 2130 | 2230 | Bulgaria | 15330 | 11680 | | | | | W Bu | 03/15/90 |
| 2130 | 2200 | Canada | 17820 | 15150 | 13570 | 11880 | | | Afr | 01/21/90 |
| 2130 | 2200 | Ecuador | 21470 | 17790 | | | | | Bu | 04/25/90 |
| 2130 | 2200 | England | 5975 | | | | | | WS: NA/CA/Carib | 09/23/89 |
| 2130 | 2200 | Israel | 17630 | 17575 | 15640 | 12077 | 11605 | | AF/LA/NA/W Bu | 03/18/90 |
| 2130 | 2200 | Lithuania | 9765 | 6100 | | | | | Bu | 03/15/90 |
| 2130 | 2200 | Switzerland | 6190 | | | | | | Bu | 03/27/90 |
| 2145 | 2230 | German Dem Rep | 13690 | 9730 | 5965 | | | | BNA/Bu | 03/26/90 |
| 2200 | 2230 | Australia | 21740 | 17795 | 15465 | 15240 | 15160 | 15130 | 11880 As/Pac/PapMG | 03/03/90 |
| 2200 | 2230 | Canada | 11905 | 9755 | 5960 | | | | USA | 03/16/90 |
| 2200 | 2300 | Cuba | 7215 | | | | | | Bu | 11/18/89 |
| 2200 | 0930 | England | 12095 | 5915 | 9590 | 7325 | 6175 | 5975 | WS: NA/CA/Carib | 03/16/90 |
| 2200 | 2225 | Italy | 11800 | 9710 | | | | | Japan | 02/19/90 |
| 2200 | 2230 | Japan | 15440 | 11705 | | | | | SE As | 09/23/89 |
| 2200 | 2230 | Lithuania | 17690 | 17685 | 15180 | 12060 | 11770 | 6100 | MA | 03/15/90 |
| 2200 | 2400 | Mariana Is | 15405 | 15275 | | | | | China/Jap/Phil/Indon | 02/25/90 |
| 2200 | 2205 | Nigeria | 4990 | | | | | | 310/240 deg | 02/25/90 |
| 2200 | 2230 | Norway | 17730 | | | | | | News in Eng | 10/11/89 |
| 2200 | 2300 | Taiwan | 17845 | 15440 | 15370 | | | | W AF/SA | 04/25/90 |
| 2200 | 2250 | Turkey | 17880 | 9685 | 9665 | 9445 | | | Bu/Aus/WZ | 03/27/90 |
| 2200 | 2400 | United Arab Emirates | 11985 | 9600 | 6170 | | | | Aus/Bu/WB/NA | 03/15/90 |
| 2200 | 0300 | USA | 15580 | | | | | | WNA | 04/13/90 |
| 2200 | 2215 | USA | 15225 | 11880 | 9640 | | | | Canada | 03/19/90 |
| 2200 | 2400 | USA | 15300 | | | | | | Caribbean/Americas | 09/24/89 |
| 2200 | 2400 | USA | 17555 | 9465 | | | | | W Afr | 03/08/89 |
| | | | | | | | | | SA/WB Canada | 09/25/89 |

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|------|------|----------------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|--------------------|----------|
| 2200 | 2300 | USSR | R Moscow | 17720 | 17700 | 17505 | 15425 | 12050 | 11950 | 11735 | 9720 | BWA | 03/15/90 | |
| 2205 | 2225 | Vatican Radio | Vatican Radio | 15105 | 11830 | 9615 | | | | | | As/Aus/NZ | 04/05/90 | |
| 2230 | 2400 | Australia | R Australia | 21740 | 17735 | 15465 | 5240 | 15160 | 15130 | 13695 | 11880 | As/Pac/PapMG | 03/03/90 | |
| 2230 | 2300 | Poland | R Polonia | 7270 | 7125 | 6135 | 5395 | | | | | Gu | 08/15/89 | |
| 2245 | 2255 | Ghana | Ghana BC Corp | 4915 | 3566 | | | | | | | News in English | 12/23/87 | |
| 2245 | 2400 | India | AIR | 15110 | 11745 | 11715 | 9910 | 3535 | *215 | | | GOS/As | 05/24/89 | |
| 2300 | 0000 | Bulgaria | R Sofia | 15330 | 11580 | | | | | | | NA | 03/15/90 | |
| 2300 | 2330 | Canada | R Canada Int'l | 11730 | 9755 | | | | | | | Carib | 09/23/89 | |
| 2300 | 0100 | Costa Rica | WR Costa Rica | 11870 | 9725 | | | | | | | | 12/14/89 | |
| 2300 | 1030 | Costa Rica | R For Peace Int'l | 7375 | | | | | | | | | 01/31/90 | |
| 2300 | 2327 | Finland | R Finland | 15185 | 11755 | | | | | | | Sa-Su,USB mode | 03/24/90 | |
| 2300 | 0100 | Guam | ESDA | 15125 | | | | | | | | SB As | 03/27/90 | |
| 2300 | 2330 | Israel | Iol Israel | 15640 | 11605 | 3435 | | | | | | NA | 03/18/90 | |
| 2300 | 2400 | Japan | R Japan | 21610 | 17810 | 17765 | 15195 | 11835 | | | | -GOS/As/Bu/MB | 04/08/90 | |
| 2300 | 0100 | Luxembourg | R Luxembourg | 5090 | | | | | | | | regional | 03/25/90 | |
| 2300 | 2330 | North Korea | R Pyongyang | 15850 | 11335 | | | | | | | Am | 12/28/87 | |
| 2300 | 2330 | Norway | R Norway | 15165 | | | | | | | | NA/CA | 04/25/90 | |
| 2300 | 2310 | Sierra Leone | SUS | 3316 | | | | | | | | Eng Sun only | 09/05/89 | |
| 2300 | 2400 | USA | WR0 | 7355 | | | | | | | | ax/Bng | 12/28/89 | |
| 2300 | 0100 | USA | WFR | 15170 | 13635 | 5385 | | | | | | 20 deg'alt freq | 08/28/89 | |
| 2300 | 2400 | USSR | R Moscow | 17720 | 17700 | 17665 | 15425 | 12050 | 11950 | 11735 | 9720 | BWA | 03/15/90 | |
| 2305 | 2355 | Poland | R Polonia | 7270 | 7125 | 6135 | 5395 | | | | | | 6000 & 6045 v Cuba | 03/15/90 |
| 2330 | 2400 | Albania | R Tirana | 11825 | 3760 | 6120 | | | | | | | | 08/15/89 |
| 2330 | 2355 | Belgium | BRT | 13675 | 3925 | | | | | | | | | 10/15/89 |
| 2330 | 0100 | Canada | R Canada Int'l | 9755 | 5960 | | | | | | | | | 03/31/90 |
| 2330 | 0300 | Costa Rica | R For Peace Int'l | 7375 | | | | | | | | | | 04/21/90 |
| 2330 | 0000 | Hungary | R Budapest | 15160 | 11310 | 3835 | 3585 | 3520 | 6110 | | | | | 01/31/90 |
| 2330 | 2400 | USSR | R Kiev | 15890 | 17655 | 15130 | 12050 | 12095 | 11770 | | | | | 03/15/90 |
| 2330 | 2400 | Vietnam | V of Vietnam | 15910 | 13320 | 3840 | | | | | | | | 03/15/90 |
| 2335 | 2345 | Greece | V of Greece | 11845 | 3335 | | | | | | | | | 11/07/89 |
| 2345 | 0030 | German Dem Rep | R Berlin Int'l | 13690 | 11390 | 5090 | | | | | | | | 08/15/89 |
| | | | | | | | | | | | | | | 03/26/90 |

SHORTWAVE LANGUAGES DX STATIONS - By Day of Week
 Compiled by Thomas R. Su-

| Shortwave DX Program | Show Xmas Start Start Time Time Country | Station | Freq #1 | Freq #2 | Freq #3 | Freq #4 | Freq #5 | Freq #6 | Freq #7 | Target Area | Notes re DX Show | Record Last Updated |
|----------------------------|--|-------------------|------------|------------|------------|------------|------------|------------|------------|--------------------|---------------------|---------------------------|
| ** DAY OF THE WEEK: Sunday | | | | | | | | | | | | |
| Dyers Unlimited | 0040 0000 Cuba | R Havana | 11820 | | | | | | | Americas | | 04/07/90 |
| DX Party Line | 0050 0030 Ecuador | HCJB | 17875 | 15155 | | | | | | NA | | 04/25/90 |
| World of Radio | 0100 2300 Costa Rica | R for Peace Int'l | 7375 | | | | | | | | | 04/18/90 |
| Communications World | 0110 0100 USA | VOA | 15205 | 11740 | 11580 | 3815 | 9755 | 3455 | 6130 | Caribbean/Americas | | 06/11/89 |
| SW Merry-Go-Round | 0220 0200 Switzerland | Swiss R Int'l | 17730 | 12035 | 9885 | 9725 | 6135 | 6095 | | NA | | 05/16/86 |
| DX Asilaves | 0230 0200 Guam | ZSDA | 13720 | | | | | | | As | | 01/16/90 |
| Dyers Unlimited | 0240 0200 Cuba | R Havana | 11820 | 9710 | | | | | | Americas | | 04/07/90 |
| DX Party Line | 0250 0030 Ecuador | HCJB | 17875 | 15155 | | | | | | NA | | 04/25/90 |
| Bonaire Wavelength | 0330 0255 Netherland Antilles | Trans World Radio | 11930 | 9535 | | | | | | NA/Carib | | 95/31/89 |
| SW Merry-Go-Round | 0420 0400 Switzerland | Swiss R Int'l | 12035 | 9885 | 9725 | 6135 | | | | NA | | 05/16/86 |
| Listeners' Corner | 0430 0400 Austria | R Canada Int'l | 15275 | | | | | | | NA | | 03/16/90 |
| Dyers Unlimited | 0440 0400 Cuba | R Havana | 11820 | 11760 | 9710 | 3965 | | | | Americas | | 04/07/90 |
| DX Party Line | 0520 0500 Ecuador | HCJB | 17875 | 15155 | | | | | | NA | | 04/25/90 |
| World of Radio | 0630 2300 Costa Rica | R for Peace Int'l | 7375 | | | | | | | | | 04/18/90 |
| Dyers Unlimited | 0640 0600 Cuba | R Havana | 11835 | | | | | | | Americas | | 04/07/90 |
| AWR DX Program | 0815 0800 Portugal | AWR Europe | 9670 | | | | | | | Bu | | 03/15/90 |
| SW Feedback | 0835 0800 South Korea | R Korea | 13670 | 7550 | | | | | | Bu | | 02/26/89 |
| Pacific DX Magazine | 0838 0800 Guam | ITVR | 15200 | | | | | | | Far East | | 04/05/90 |
| DX Corner | 0930 0900 Japan | R Japan | 17890 | 17810 | 15270 | | | | | GGG/As/Oc | | 04/05/90 |
| SW Club | 0945 0945 Hungary | R Budapest | 15220 | 15160 | 11910 | 9835 | 9585 | 7220 | | Bu | | 03/15/90 |
| Shortwave Panorama | 1030 1030 Austria | ORF | 21490 | 15450 | | | | | | Aus/As | | 03/18/90 |
| SW Feedback | 1040 1030 Canada | R Korea | 11715 | | | | | | | EMA | | 04/08/90 |
| Shortwave Panorama | 1130 1130 Austria | ORF | 21490 | 15430 | 13730 | 6155 | | | | EMA/As/Bu | | 04/01/89 |
| SW Feedback | 1135 1100 South Korea | R Korea | 15575 | | | | | | | NA/Afr | | 02/26/89 |
| DX Programme | 1200 1200 USSR | R Tashkent | 17745 | 15470 | 11785 | 3500 | 7325 | | | As | Su after 2nd Sat/no | 11/05/88 |
| Listeners' Corner | 1307 1300 China | R Canada Int'l | 15385 | 11955 | | | | | | SE As & India | occ has sked data | 03/16/90 |
| Communicator | 1430 1430 Australia | R Australia | 15160 | 11930 | 9655 | 3580 | 7240 | 7205 | 6080 | As/Pac/PapNG | | 01/25/90 |

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|--------------------|------|-------------------|---------------------|-------|-------|-------|-------|-------------------|----------|
| Shortwave Panorama | 1430 | Austria | ORP | 21430 | 13730 | 11780 | 6155 | W Afr/SB As/Bu | 04/01/89 |
| SW Feedback | 1435 | 1400 South Korea | R Korea | 9570 | | | | SB As | 11/05/88 |
| DX Corner | 1440 | 1400 South Africa | Radio RSA | 11925 | 9555 | | | Afr | 11/26/89 |
| DX Corner | 1530 | 1500 Japan | R Japan | 21700 | 11865 | 11815 | | GOS/As/Au/Bu/MB | 04/05/90 |
| SW Feedback | 1635 | 1600 South Korea | R Korea | 9870 | 5975 | | | MB/Afr/GOS | 11/05/88 |
| DX Show & Mailbag | 1815 | 1800 USSR | R Kiev | 7240 | 6165 | 6030 | 6010 | Bu | 03/15/90 |
| SW Feedback | 1835 | 1800 South Korea | R Korea | 15575 | | | | Eu | 11/05/88 |
| SWL Digest | 1836 | 1800 Canada | R Canada Int'l | 17820 | 15260 | 13670 | | Afr | 04/15/90 |
| DX Corner | 1840 | 1800 South Africa | Radio RSA | 21535 | 15270 | 7230 | | Afr | 02/05/88 |
| DX Corner | 1920 | 1900 Israel | Kol Israel | 17630 | 17590 | 15640 | 15485 | Afr/W Bu/NA | 03/18/90 |
| Message for Others | 1930 | 1900 Spain | Spanish Nat'l B | 15395 | 15375 | 12035 | 11790 | MB/Afr/Bu | 01/01/89 |
| DX Corner | 1940 | 1900 South Africa | Radio RSA | 15270 | | | | W Afr | 02/05/88 |
| World of Radio | 2030 | 1500 USA | WRMO | 15420 | | | | NA/CA/Bu | 03/19/90 |
| SW Feedback | 2105 | 2030 South Korea | R Korea | 15575 | 7550 | 6480 | | Bu/MB/Afr | 11/05/88 |
| DX Corner | 2130 | 2100 Japan | R Japan | 17890 | 17810 | 15270 | 15230 | GOS/As/Oc/Bu | 04/05/90 |
| Message for Others | 2130 | 2100 Spain | Spanish Nat'l B | 12035 | 11790 | | | Bu | 01/01/89 |
| Listeners' Corner | 2135 | 2130 Canada | R Canada Int'l | 17820 | 5150 | 13670 | 11880 | Afr | 04/15/90 |
| SWL Digest | 2136 | 2100 Canada | R Canada Int'l | 17875 | 5325 | | | W Bu | 04/15/90 |
| DX Corner | 2150 | 2130 Israel | Kol Israel | 17570 | 2575 | 15640 | 12077 | Afr/W Bu/NA, W Bu | 03/19/90 |
| Listeners' Corner | 2207 | 2200 Japan | R Canada Int'l | 15440 | 1705 | | | SB As | 03/16/90 |
| R Sofia Calling | 2215 | 2130 Bulgaria | R Sofia | 15330 | 1680 | | | W Bu | 03/15/90 |
| World of Radio | 2220 | 1800 Costa Rica | R for Peace Int'l | 21566 | 13660 | | | Carib | 02/02/90 |
| SWL Digest | 2305 | 2300 Canada | R Canada Int'l | 11770 | 9755 | | | MA | 04/15/90 |
| DX Corner | 2320 | 2300 Israel | Kol Israel | 15840 | 11005 | 9435 | | MA | 03/18/90 |
| R Sofia Calling | 2345 | 2300 Bulgaria | R Sofia | 5530 | 11930 | | | MA | 03/15/90 |
| DX Show & Mailbag | 2345 | 2330 USSR | R Kiev | 17590 | 17665 | 15130 | 13060 | MA | 03/15/90 |
| DX Corner | 0020 | 3000 Israel | Kol Israel | 15640 | 11605 | 9435 | | MA | 03/18/90 |
| Message for Others | 0020 | 0000 Spain | Spanish Nat'l B | 11830 | 3630 | | | MA | 01/01/89 |
| Listeners' Corner | 0035 | 3330 Canada | R Canada Int'l | 9755 | 5950 | | | USA | 03/16/90 |
| SW Feedback | 0055 | 0000 South Korea | R Korea | 15575 | | | | As | 01/11/90 |
| DX Corner | 0120 | 0100 Israel | Kol Israel | 15840 | 11605 | 9435 | | MA | 03/18/90 |
| DX Corner | 0130 | 0100 Japan | R Japan | 17845 | 17835 | 17810 | 17765 | GOS/Asia/NA | 04/05/90 |
| Message for Others | 0130 | 0100 Spain | Spanish Nat'l B | 11880 | 9630 | | | MA | 01/01/89 |
| DX Show & Mailbag | 0215 | 0200 USSR | R Kiev | 17890 | 17665 | 15130 | 12005 | MA | 03/15/90 |
| DX Corner | 0330 | 0330 Japan | R Japan | 17835 | 17825 | 17840 | 17765 | GOS/Asia | 04/05/90 |
| R Sofia Calling | 0345 | 0300 Bulgaria | R Sofia | 15310 | 15160 | 11765 | 11720 | Afr/NA | 03/15/90 |
| World of Radio | 0400 | 0315 Costa Rica | R for Peace Int'l | 7375 | | | | | 04/19/90 |
| Mailbag | 0430 | 0400 New Zealand | R New Zealand Int'l | 17680 | | | | | 07/30/90 |
| Message for Others | 0525 | 0500 Spain | Spanish Nat'l B | 9630 | | | | B Pac | 10/14/89 |
| Waveguide | 0530 | 0500 England | BBC | 5915 | 3640 | 6195 | 5945 | W S: NA/CA/Carib | 11/18/88 |

| | | | | | | | | | |
|-------------------------------|------|------|----------------|-------------------|-------|-------|--------------------------|-----------------------------|----------|
| Radio World | 0635 | 0630 | Belgium | BRT | 13675 | 11695 | 6035 | Sa/Bu | 03/15/90 |
| Communicator | 0730 | 0730 | Australia | R Australia | 21775 | 17715 | 17630 | As/Pac/PapMG | 11/26/89 |
| Radio World | 0905 | 0900 | Belgium | BRT | 21810 | 13675 | 6035 | As/Bu | 03/15/90 |
| DX Atlatenas | 1030 | 1000 | Guan | ESDA | 13720 | | | As | 01/16/90 |
| Radio World | 1235 | 1230 | Belgium | BRT | 21815 | 17555 | | SB As/MA | 03/15/90 |
| SW Club | 1515 | 1515 | Hungary | R Budapest | 15290 | 15150 | 11910 | 9835 9585 7220 | 03/15/90 |
| DXers Calling | 2120 | 2100 | German Dem Rep | R Berlin Int'l | 13690 | 9730 | | SWA | 03/26/90 |
| DX Programme | 2150 | 2130 | Lithuania | ATE | 15255 | 11715 | 11620 | 9910 9550 7412 | 10/26/89 |
| ARI DX Club | 2205 | 2145 | German Dem Rep | R Berlin Int'l | 13690 | 9730 | 5965 | 605/W Du/Aus/MZ/AF | 03/15/90 |
| DX Program | 2245 | 2200 | USSR | R Moscow | 17720 | 17700 | 17605 | 15425 12050 11950 11735 SWA | 03/26/90 |
| ** DAT OF THE WEEK: Tuesday | | | | | | | | | |
| ARI DX Club | 0005 | 0345 | German Dem Rep | R Berlin Int'l | 13690 | 11890 | 6080 | SWA | 03/26/90 |
| DX Program | 0645 | 0600 | USSR | R Moscow | 17720 | 17700 | 17605 | 15425 12050 11950 11735 SWA | 03/15/90 |
| ARI DX Club | 0120 | 0100 | German Dem Rep | R Berlin Int'l | 13690 | 11890 | 6080 | SWA | 03/26/90 |
| SW Club | 0130 | 0130 | Hungary | R Budapest | 15160 | 13910 | 9835 3565 3520 6110 | MA | 03/15/90 |
| DX Program | 0145 | 0100 | USSR | R Moscow | 17720 | 17700 | 17605 | 15425 12050 11950 11735 SWA | 03/15/90 |
| ARI DX Club | 0205 | 0145 | German Dem Rep | R Berlin Int'l | 15125 | 11890 | 11785 6080 | SWA/PWA | 03/26/90 |
| DX Program | 0245 | 0200 | USSR | R Moscow | 17720 | 17700 | 17605 | 15425 12050 11950 11735 SWA | 03/15/90 |
| ARI DX Club | 0250 | 0230 | German Dem Rep | R Berlin Int'l | 15240 | 13610 | 9730 | Caribbean | 03/26/90 |
| ARI DX Club | 0320 | 0300 | German Dem Rep | R Berlin Int'l | 15125 | 13690 | 11785 | WMA/SWA | 03/26/90 |
| DX Program | 0345 | 0300 | USSR | R Moscow | 15180 | 12050 | 12010 | 11710 9890 | 03/15/90 |
| DX Program | 0545 | 0530 | USSR | R Moscow | 12050 | 9890 | 7340 7260 7230 7210 7180 | WMA | 03/15/90 |
| Vareguide | 1115 | 1100 | England | BBC | 11775 | 9740 | 9515 6195 5965 | US: WA/CX/Carib | 12/19/88 |
| SW Digest | 1335 | 1300 | Canada | R Canada Int'l | 17820 | 11955 | | As/Pac | 04/09/90 |
| Sweden Calling DXers | 1410 | 1400 | Sweden | R Sweden | 21610 | 21570 | 17740 | Carib/MA | 10/26/89 |
| World of Shortwave | 1515 | 1458 | Seychellen | PRSA | 21655 | 21500 | 17880 | As/Pac | 09/21/88 |
| Sweden Calling DXers | 1540 | 1530 | Sweden | R Sweden | 21630 | 9590 | | SB As | 12/16/89 |
| DX Program | 1505 | 1500 | Poland | R Poland | 9540 | 6135 | | SW | 08/19/89 |
| Sweden Calling DXers | 1710 | 1700 | Sweden | R Sweden | 9615 | 6085 | | SW/AF | 04/09/90 |
| For Radio Amateurs | 2015 | 1930 | Romania | R Romania Int'l | 11705 | 9655 | | Bu | 04/31/88 |
| Sweden Calling DXers | 2110 | 2100 | Sweden | R Sweden | 21566 | 13660 | | SW/AF | 03/26/90 |
| World of Radio | 2230 | 2000 | Costa Rica | R For Peace Int'l | 7270 | 7125 | 6135 5995 | Bu | 08/19/89 |
| DX Program | 2235 | 2230 | Poland | R Poland | 7270 | 7125 | 6135 5995 | Bu | 04/22/89 |
| DX Program | 2330 | 2305 | Poland | R Poland | | | | | |
| ** DAT OF THE WEEK: Wednesday | | | | | | | | | |
| Sweden Calling DXers | 0110 | 0100 | Sweden | R Sweden | 17860 | 15405 | | As/Pac | 03/21/89 |
| SW Club | 0130 | 0130 | Hungary | R Budapest | 15160 | 13910 | 9835 3565 3520 6110 | MA | 03/15/90 |

DOMINICAN REPUBLIC - Radio Amanecer International (change of slogan), 6025 kHz, Santo Domingo, has an EG program between 03-04. Fair reception when Radio Nederland on 6020 is silent. (WRTH90 says sked is 1000-0300, so 0400 is an addition. (Mike Fern, CA)

ECUADOR - Marlin Field, MI received a letter from Ron Cline, President of World Radio Missionary Fellowship (HCJB)

"Today, 80 percent of the world's population has the opportunity to hear Christ's good news via radio... 213 languages from HCJB, TWR, FEBC, and ELWA... As we add just 164 (last number smudged, bmm) more major languages by (2000) that figure will jump to 97 percent."

Station Profile of Radio Popular Independiente by Tom Davis. via Andex International Vol 17, No. 1 Feb-Mar 90 and thanks to John Carson, OK for this:

Radio Popular Independiente has been operating for 30 years. The station broadcasts on the medium wave frequency of 1220 kHz and on 4800 kHz shortwave. A 5 kW transmitter is used for the shortwave service, but was off the air at the time of my visit due to equipment failure. The only person at the station when I visited was the daughter of the manager, Manena de Villavicencio, and she was not able to give me any details on the transmitter or the antenna.

A comprehensive record library was proof of how important music is to the station's programming. Senora de Villavicencio said that the station only plays Ecuadorian folk and pop music (hence the name "Popular"). The station also carries local commercials and community notices. Senora de Villavicencio said the station receives many letters from listeners outside Ecuador. She cited recent letters even from places like the Philippines and Southeast Asia.

Radio Popular Independiente will verify correct reception reports with a QSL letter, although your chances of a reply to your first report are not high. When I went into the station's office I could see why my first report had not been answered. They do not have a very orderly filing system. In fact, it took Senora de Villavicencio several minutes just to find a letterhead amongst the piles of papers and other items.

The address of the station is Radio Popular Independiente, Box Correo Central (or Av. Loja 2-408, La Gloria), Cuenca, Azuay, Ecuador. Return postage in the form of unused Ecuadorian postage stamps is highly recommended. Senora de Villavicencio understands a little English, but you would have a better chance in receiving a QSL if your report is in Spanish.

HCJB - As heard from 0030-0500* on 4/16, HCJB has resumed its Spanish-language service on 11960 kHz. Not the 500 kW transmitter, unless it is beamed to South America only. Some of the speeches one hears on this service are not sermons. HCJB sometimes carries debates from the Ecuadorian Congress after 0300 UTC.

As heard on 4/17, 9745 kHz signs off at 0200, not 0300. There may be a bug in the new antenna switching boards. On both 4/10 & 4/17, 9745 went off the air at 0200, and 11795 and 15155 also went off the air at the same time. 9745 stayed off but the other two were back on the air within minutes. (Mike Fern, CA)

HCJB will begin a new English service format on Sunday 5/6.

All programs produced in Quito will be fitted into the same one-hour blocks. This will make better use of the limited English-language staff in Quito. The format will be: (1) Latin American news; (2) Magazine; (3) Half-hour feature; (4) World News. The one-hour blocks will be called "Studio Nine."

Studio Nine will be broadcast three times daily to NA, at 0030, 0230 and 0500; two times daily to Europe, at 0730 and 1900; and two times daily to the South Pacific, at 0730 and 1000.

DX Party Line will be broadcast on Saturdays only: 0050, 0250, and 0520 to NA; 0750 and 1920 to Europe; and 0750 and 1020 to the South Pacific. (via HCJB's 'DX Party Line' on 4/17 w/Brent Allred via Mike Fern, CA)

EQUATORIAL GUINEA - 4925.9, 1945-2002, R. Nacional Bata, Vernacular, Reactivated Absent on 5004. W talk. 1949 ID "Radio Nacional". Poor on 3/17. (Junichi Nishikawa, Editor of 'NTDXC' Tune No. 75, 4/90), but

Nobuyoshi Aoi, ibid heard them on 5003.8 at 20-2010 in SP. Poor on 4/9.

INDIA - All India Information via Monosij Guha in his 'DX Grapevine' Publication #36.

AIR's External Service in Tamil to Sri Lanka is now heard on an additional HF transmitter from Madras. This is the old RCA 100 kW HF transmitter at the Avadi station near Madras, which was removed from service when a new and more efficient BBC 100 kW HF transmitter was installed to replace it in 1987. This old transmitter has now been reactivated. According to sources inside the AIR headquarters in New Delhi, tests have been sanctioned on this dilapidated transmitter for a "specific purpose". What this specific purpose is anybody's guess, hi! The newly elected Indian government is busy salvaging its loss of face after the hiatus in the Emerald Isle, by ordering a speedy troop withdrawal. These "official" clandestine broadcasts will soon be a thing of the past, as India's new foreign policies are facelifted. The Tamil propaganda broadcasts from Madras are heard as follows, which includes relays of English and Hindi News from Delhi: 2345-0330 on 1449, 7205, 7340; 07-0930 on 1449, 9910; 08-0830 on 720, 936, 1197, 1215, 7160; 11-17 on 1449, 7340; 11-1230 on 720, 1197, 1215, 4920.

7340/9910 are via the old 100 kW HF transmitter which has been reactivated. It goes without saying that they are not announced and are not listed in the official schedules. 7205 is via the newer 100 kW HF transmitter, which is normally used for the Vividh Bharati Service and also for the External Service to SE Asia. 4920/7160 are via the old 10 kW HF transmitters used for the domestic Madras A channel - this is currently being upgraded to 50 kW HF. So in all there are 3 HF transmitters at Madras. 1449 is via the clandestine 10 kW MF transmitter at Pondicherry, which is a Union Territory and is therefore not bound by the state policy of Tamil Nadu. This is significant as the state government's views on the IPKF action on Tamil rebels in Sri Lanka are different from the erstwhile central government. This station has an inverted-L type antenna put on the roof of the building. Recently that building was taken over by Doordarshan as their studio! AIR had to reduce their modulation due to interference to the TV-wallahs' recordings, etc. Additionally, these programs are also partially relayed by the domestic HF transmitters at Madras A, Madurai, Tirunelveli and Tiruchirapalli A on 720, 1215, 1197 and 936 kHz resp. This probably for local consumption as there are alot of Sri Lankan Tamil refugees scattered throughout the state of Tamil Nadu.

It is interesting that the Annual Report of the Ministry of Information and Broadcasting for the fiscal year 1988-89 states that AIR is broadcasting to Sri Lanka for 12 hours daily in Tamil, whil the bureaucratic thickheads in the Broadcasting House prefer to stay mum about this, officially that is.

Kohima - AIR Kohima on 3268 kHz now signs off at 1630, not at 1741 - being located in the far east of the country, the sun sets much earlier there. Kohima is now heard with increased signal strength and it has been upgraded to 50kW HF since 3rd Jan 90. Mr. G.C. Tyagr is the new Station Engineer.

Leh: Radio Kashmir Leh (J&K) with its new 10 kW HF transmitter is testing daily between 1130-1630 on 4760 - the frequency is shared with AIR Port Blair on a non-QRM bais. Leh is also heard in the mornings at 0120-0300 on 3330. It relays chunks of programming from the Srinager A outlet, besides relaying its own MF outlet on 1053 kHz. This station played an active role during the Buddhist unrest in the Ladakh region. Reports should be sent to this address: Radio Kashmir, Leh-194 101, Jammu & Kashmir, India. Tel:(-) 63, no direct dialling. Cable: Akashvani. The new Station Engineer at AIR Leh since 9th October 1989 is Mr. S. Sarangarajan. Leh is expected to test on 6000 kHz during the local afternoons, but this channel has not been heard so far.

Panaji: AIR ESD's station at Panaji (Goa) with 2x250 kW HF transmitters is coming up at a fast pace. Installation work is going on, and a microwave feeder link via Bombay from the studios in Delhi has been leased from the Department of Telecommunications. Once ready, this station will take over the commercialized Gulf Service,

currently being transmitted from Delhi.

Shillong - AIR Shillong is heard testing on 4790 kHz from 0025-0125. This channel will eventually replace existing 3255 kHz.

Srinagar - AIR's HF station at Srinager has been upgraded to 50 kW HF. But the new transmitter hasn't gone on air yet, as the Kashmir valley is suffering from a massive power insufficiency. A diesel power generator set is being airlifted to alleviate this problem.

Trivandrum: Renamed Thiruvananthapuram, this city of seven hills will also be on the shortwave map of India. A 50 kW HF transmitter will be installed at a cost of Rs. 20 million to serve the Malayalam speaking expatriates in the Gulf countries. The foundation stone for the transmitting station was laid in Aug '89. The antenna masts are already up, and only the transmitter remains to be installed.

Tuticorin: The MF transmitting station at Tuticorin in Tamil Nadu, to serve Sri Lanka extensively, will now have 2x100 kW MF transmitters. The antenna tower has already been erected, and transmitter installation is in an advanced stage of completion. With pressures from the Ministry, the station is expected to go on-line by Feb '90 - much earlier than planned. It will take the programming load off Pondicherry which is a stop-gap measure.

Autonomy: With the change in government, autonomy of the electronic media is once again being resurrected like a Phoenix. As promised in the election manifesto of the National Front, the newly elected Prime Minister Mr. Vishwanath Pratap Singh has reaffirmed that both AIR and Doordarshan will be granted autonomy and will be made into public corporations. This decision has been welcomed by the staff of both the media.

External Service: AIR External Service is to be expanded and improved at a cost of Rs.1000 million in the near future. Yet another transmitter site has been chosen near Pune, in Maharashtra, to install 2x500 kW HF transmitters to bolster the General Overseas Service.

Upgradation and New HF Stations: Two 50 kW HF transmitters earmarked for upgrading the Madras and Hyderabad domestic HF stations, presently 10 kW HF, are ready at the manufacturer's - BEL, Bangalore. The stations at Bhopal and Kohima are also to be upgraded to 50 kW HF. New HF stations are to be set up at Imphal (Manipur, 50 kW), Itanagar (Arunachal Pradesh, 50 kW) and Gangtok (Sikkim, 10 kW)

Vividh Bharati: Since 9th July 89, Vividh Bharati has extended by 2.5 hours on Sundays to 16.5 hours.

INDONESIA - 9853.75, 1130-1215, RRI Jambi, Indo, 1200 Jakarta news. 1214 ID. FaIr on 3/15. (Nobuyoshi Aoi via 'NTDXC' Tune No. 75, 4/90)

ISRAEL - Reshet Bhet announced sked from 3/25-8/25 on Kol Israel DX Corner: *03-2210* on 17545, 15615, 13750; 03-0510 11585; 0510-11 21760; 11-1530 21760, 17590, 11585; 1530-1630 21760, 11655, 11585.

ITALY - Arthur Cushen was notified by telegram from Rome that Italian-language transmissions to Australia and New Zealand are being suspended indefinitely. They had been broadcast at 2050 and 0830. (via RNZI 'Mailbag' program on 4/16 via Mike Fern, CA)

JAPAN - Radio Japan Broadcast Sked from 5/6-9/1: Regional Service: AR: 19-1930 ME & Naf on 15325; Burmese: 1115-1145 SE Asia on 17820, 15300; Bengali: 16-1630 S.Asia on 15235, 9535; CH: 03-04 Asian Cont. on 17835, 17765; 1130-1230 on 9580, 7210; 1245-1345 SE Asia on 15300; 15-16 Asian Cont. & SE Asia on 11840, 9580, 7210; EG: 03-0330 N.Central & SAM, Hawaii on 21610, 17825; 03-0330 CAM on 15325(French Guiana); 09-10 Oceania 17890, 15270; FR: 0630-07 Eur on 21690(Gabon), 21500; 1830-19 ME & NAfr 15325; 2030-21 Eur 21640(Gabon), 15230; GM: 06-0630 Eur 21690(Gabon), 21500; 20-2030 21640(Gabon), 15230; Hindi: 1630-17 S.Asia on 15235, 9535; IT: 0545-06 on 21690(Gabon), 21500; 2115-2130 15230; INDO: 1015-1115 SE Asia on 117820, 15300; 23-0000 on 17785, 11840; JP: 02-03 N.Central & SAM, Hawaii on 21610, 17825; KR: 1030-1130 & 14-15 Asian Cont. on 9580, 7210; Malay: 1145-1215 SE Asia on 17820, 15300; PT: 09-0930 SAM on 15390, 9675(French Guiana); RS: 05-0530 Eur on 21690(Gabon), 21500; 1230-13 Asian Cont. on 9580, 7210; SW: 0530-0545 Eur on 21690(Gabon), 21500; 21-2115 on 15230; SP: 0330-04 CAM on 15325(French Guiana), SAM on 15350(French Guiana), Central &

SAM on 21610, 17825; 0930-10 SAM on 15390, 9675(French Guiana); Swahili: 1730-18 E.Afr on 15235, 9535; Thai: 1215-1245 SE Asia on 17820, 15300, 11875; Urdu: 17-1730 S.Asia on 15235, 9535; VT: 1345-1415 SE Asia on 15300, 111875; 2230-23 on 17785, 11840.

General Service: SE Asia: 0000-0030 JP on 21610, 17810; 01-02 EG, 02-03 JP, 03-04 EG, 04-05 JP, 05-06 EG, 06-07 JP, 07-08 EG on 17810; 08-09 JP on 21610, 17810; 09-10 EG on 21610; 10-11 JP, 11-12 EG, 12-14 JP, 14-15 EG on 11815; 16-17 JP on 11815, 7210; 17-18 EG on 11815; 21-22 EG, 22-23 JP, 23-24 EG on 21610, 17810.

Asian Continent: 0000-0030 JP on 17765, 15195; 01-02 EG on 17835, 17765; 02-03 JP on 17835; 04-05 JP, 05-06 EG, 06-07 JP, 07-08 EG, 08-09 JP on 17765; 09-10 EG, 10-11 JP, 11-12 EG on 11840; 13-14 JP on 9580, 7210; 16-17 JP on 9580, 9695; 17-18 EG on 9695; 20-21 JP, 21-22 EG on 17765; 22-23 JP, 23-24 EG on 17765, 15195.

S.Asia: 0000-0030 JP, 01-02 EG, 02-03 JP on 17845; 18-19 JP on 9535.

N.America: 01-02 EG on 5960(via Sackville, Canada), 02-03 JP on 15195, 5960(Sackville, Canada), 03-04 EG on 15195; 04-05 JP, 05-06 EG, 06-07 JP on 17825, 15195; 10-11 JP, 11-12 EG on 6120 (Sackville, Canada); 12-14 JP, 14-16 EG, 16-17 JP, 17-18 EG on 11865; 18-19 JP on 17825, 11865; 19-1930 EG on 11865; 20-21 JP on 17825.

Central Am: 02-03 JP on 15325(French Guiana).

South Am: 0000-0030 JP on 21635(Gabon), 02-03 JP on 15350 (French Guiana), 08-09 JP on 15390, 9675(French Guiana); 10-11 JP on 15350(French Guiana); 22-23 JP on 9685(French Guiana).

Oceania: 05-06 EG, 06-07 JP, 07-08 EG, 08-09 JP on 17890; 18-19 JP on 11850; 19-1930 EG on 17890, 15230; 20-21 JP on 17890, 15270; 21-2130 EG on 17890; 21-22 EG on 15270.

Eur, ME, & Afr: 03-0330 EG, 04-0430 JP S.Afr on 7125(Gabon); 07-08 EG on 21690(Gabon)(ME,etc), 21500; 08-0830 JP on 21690(Gabon)(ME,etc); 08-09 JP 21640(Gabon)(Eur,etc), 21500; 15-16 EG, 16-17 JP on 21700(Gabon)(ME, etc); 22-23 JP on 15210(Gabon), 11835(Gabon)(Eur,etc); 23-24 EG on 11835(Gabon) (Direct)

LAOS - 6130, 1135-1202, National R. Vientian, Laotian, Native music program. 1200 time check & 7-note chime, then M news. Recently absent on 580kHz. (Yoshinori Sano via 'NTDXC' Tune No. 75, 4/90)

MOZAMBIQUE - 9636.8, -1500-, R. Mocambique, Vern, Afro-pops program. Reactivated! Poor due to heavy QRM from N. Korean station on 9640kHz. (Yoshinori Sano via 'NTDXC' Tune No. 75, 4/90)

PERU - 4238.1, 1046-1112, R. Inca, SP, Folk music, M talk. At 1109 M w/ID "Radio Inca". Very poor to poor on 3/28. (Kazuo Yamaguchi via 'Nishi-Tokyo DXers Circle' (NTDXC) Tune No. 75, April 90) 4495.1, 1050, SP, Poor on 4/7. (Nobuyoshi Aoi, via 'NTDXC' Tune No. 75, April 90) 4860, 1057-1100, SP, ID "El mundo de ... Radio La Hora, Peru." Poor on 4/4. (Nobuyoshi Aoi, ibid) 5025, 1025-1042, R. Quillabamba, SP, 1040 ID. M talk, Poor on 4/5 (Kazuo Yamaguchi, ibid) 5059.1, *1127-1130, R. Lircay, SP, S/on w/NA, then ID. Poor on 3/12 (Nobuyoshi Aoi, ibid) 5147.3, 1110, R. Estirella, SP, Poor on 4/9. (Nobuyoshi Aoi, ibid) 5618.2, 1030-1120, R. Ilucan, SP, Program "Cutervino Ausente"-Huayno, Huaynito Criollo music & M talk. Many IDs w/time check as "La hora de los estudios de Radio Ilucan, 6 de la mañana 43 minutos, 6 de la mañana 43 minutos en los estudios de Radio Ilucan." "La hora de los estudios de Radio Ilucan, solamente 6 minutos y tenemos 7 de la mañana ... su estudio y territorio nacional. La hora de informa de Radio Ilucan y su programa Cutervino Ausente." (Takeshi Sejimo, ibid) 6144.8, 1005-1020, R. Concordia, SP, Huayno music program. ID as "6 horas 9 minutos, music nacional de nuestro pueblo Concordia." Varying from 6150kHz. Poor on 4/7 (Nobuyoshi Aoi, ibid) 6173.85, 1004-1017, R. Twantinsuyo, SP, Folk music, pops. 1015 ID. Poor on 3/28 (Kazuo Yamaguchi, ibid) 6281.1, 1205, R. Huancabamba, SP, Poor on 4/9 (Nobuyoshi Aoi, ibid) 6895, 1110-1210, R. Sesacion, SP, Poor on 4/9 (Nobuyoshi Aoi, ibid) 9674.9, 1151-1202, R. del Pacifico, SP, Religious program. 1200 ID. Fair on 3/22 (Kazuo Yamaguchi, ibid)

PHILIPPINES - 3330.4, 1030-1045, FEBC, Taglog, W talk, music program. Fair on 4/8 (Nobuyoshi Aoi via 'NTDXC' Tune No. 75 April 90)

SOCIETY ISLANDS - R. Tahiti - Something a bit strange noted here on 3/25. Great reception (S10 444) here from RFO tune-in 0725 past 0940 (which, incidentally is past the WRTH listed sign-off time. Not bad considering my temporary student set-up of an Ambassador 2020 and a 10' long wire out the window.)

Non-stop island pop records with no talk until 0800, then jingle, Tahitian ID, then more non-stop records with one more jingle and a couple FR language drop-ins. At 0830 they switched over to classical programming with announcements ever half hour or so by a woman including this ID in both breaks heard:

"Vous etes a l'ecoute de Radio France. Ces programmes remplacent ceux de Franc-Inter, France-Infos, France-Culture, France-Musique, Fip, Radio Bleue, et certaines stations locales de Radio France, obsedees par les arrêts de travail de fin de semaine." Literally:

You are listening to Radio France. These programs replace those of France-Inter, France-Infos, France-Culture, France-Musique, Fip, Radio Bleue, and certain local Radio France stations beset by the weekend work stoppages. (Nolan Stephany, NY).

SOUTH AFRICA - Via Radio Netherlands, Hilversum, in EG 1150 gmt 12 Apr.

Excerpts from "Media Network" report:

(Presenter) Major cuts will take place to South Africa's external service at the end of this month. Twenty-one of the 105 jobs at the station will go, resulting in the cancellation of all broadcasts beamed outside the African continent. Fanus Venter is the director of Radio RSA...

(Venter) Jonathan, that is quite true - as of the end April this year we will be cutting down all our overseas services, that is services beyond the borders of African continent, and the languages affected will be our German, Dutch, Spanish and Brazilian services.

(Presenter) So these will simply go off the air?

(Venter) They will go off the air completely, yes.

(Presenter) Now what will you do with the transmitters, I mean, you're using transmitters at the moment - quite high-power transmitters - to beam to these parts outside Africa, will you then re-focus them?

(Venter) I think that would be a logical conclusion. Initially I think we will just switch off all the overseas transmitters and then we have to work out new frequencies and - time is very limited until the end of the month and they must be approved by the ITU as you know - so that, I think, will take some time before some of the transmitters can be re-employed.

(Presenter) But why has this happened? Is this because of an internal discussion at the SABC?

(Venter) ... SABC was told there was not sufficient funds available to continue the overseas services.. The SABC is running other services that provide satellite broadcasts to several parts of the world including Europe and then to the United States, and it was felt that new technology has opened up more avenues to people and to listeners that obviously cannot be reached by shortwave. I must add that for Radio RSA and for myself personally this is a very, very sad decision and a sad day.

(Presenter) Those other projects that Fanus mentioned appear to be specially-made radio and TV programmes, some of which are done for the CNN "World Report" programme. (WBI 4/20) & also thank you to Mike Fern, CA for written transcript. (bmm)

On Radio RSA's 'DX Corner' on 4/16, presenters in the English service of Radio RSA have begun saying their farewells to listeners (including listeners in the U.S.). The opening announcement on DX Corner 4/16 by Cathy Fitch said that the Dutch, German, Brazilian and Spanish services will no longer be broadcast to the world at large after midnight SA time May 1. "In addition to those services, the Portuguese, French and English Services of Radio RSA will, from the end of transmissions on 30 April, be broadcasting exclusively to Africa." (via Mike Fern, CA)

(Comments from Mike Fern, CA) - This picks up the point that Jonathan Marks missed on Media Network. One reason that has not been mentioned publicly is this: Prior to March the South African

government controlled directly the domestic service of Namibia's SWABC. Now it has to try to match that domestic service, which has 10 or 11 native languages plus German.

SWEDEN - External service reorganisation to take place in autumn - Radio Sweden, Stockholm, in Swedish 0930 gmt 17 Apr 90. Excerpts from report:

(Announcer) Now we talk about our external programme Radio Sweden, which will be getting a new face this autumn, as we reported earlier. There is a new proposal from the directors of Radio Sweden as to how the reorganization may look according to the guidelines laid out by the head of Riksradio, Ove Joanson, this last winter. According to the proposals put before the directors of Riksradio today, transmissions in Estonian and Latvian will stay, increased in the autumn to a quarter of an hour a day for each language. In addition, priority will be given to transmissions in German, Russian and English. It is proposed that Portuguese transmission be dropped entirely. French and Spanish will be cut down to a quarter of an hour. So how do the changes look for broadcasts in Swedish? Head of Programmes at Radio Sweden, Goeran Loewing:

(Loewing) There won't be terribly big changes, but one thing can be noted; that is the listeners in Europe will have a chance, from the autumn, to listen to "Kanalen" on P1 at 1700 hours (1600 gmt) before "Eko"... There will be some increase in co-operation with the "Eko" programme, and we will be rebroadcasting in some direction, probably to Asia, a summary of "Eko", which goes out late in the evening here. So it can be heard an hour or so later in Asia. That is also something new compared with today.

(Announcer) Considering the whole operation of Radio Sweden, one might say this proposal is for an investment towards the east - East Europe?

(Loewing) Yes, in a marginal way that is so. But that is a very small effort within the whole country anyway, because East Europe, from Radio Sweden's point of view, plays a small part, if you look at transmissions and such is the case also in the future. What we are planning is to increase the transmissions we began in Estonian and Latvian. At the moment they have a quarter of an hour each and next year we will probably also be broadcasting in Polish, a quarter hour of a day too. So that is what the investment in Eastern Europe really means.

(Announcer) At the same time these proposals will reduce the Romance languages sharply - Portuguese disappearing completely, French and Spanish shortened in their transmission times.

(Loewing) Yes, there was a proposal earlier from the head of Riksradio that French and Spanish might be broadcast only once, for example, at the weekend, in a weekend summary, but here at Radio Sweden we found it very important for these broadcasts to continue each day, so as to have a continuity of news transmitted from Sweden. On the other hand, we were forced, so to speak, to cut the length of the broadcasts, from a half to a quarter hour each day.

(Announcer) ... Today the reorganisation proposals are being presented to the directors of Riksradio. In May, the board of Riksradio will make its final decision and the changes to Radio Sweden's broadcasts will take effect in the autumn, when we go over to winter time. (WBI 4/20)

TANZANIA - Radio Tanzania transmitter tests observed. Monitoring research 12 Mar-10 Apr 90.

Radio Tanzania is testing what appears to be a new shortwave transmitter. It was first heard at 0830 gmt on 12th March on 5985 relaying the domestic service. It was heard again on 5th and 6th April on 6105 and 5985 respectively with continuous music at around 0900-10 gmt.

On 7th April, 5985 was heard relaying Radio Tanzania's External Service from around 1100 until closedown at 1915 gmt.

The music tests were heard again around 0730-0930 gmt on 9th and 10th April, on 5985 and 6105 respectively. An announcement in Swahili broadcast on 10th April said: "This is Radio Tanzania, Dar es Salaam, broadcasting on an experimental basis on 6105 in the 49 metre

shortwave band. We call on our listeners to write to us and tell us what reception is like at their location. Tell us what time you heard us and the model of radio you are using. Our address is: Chief Engineer, Radio Tanzania Dar es Salaam, P.O. Box 9191, Dar es Salaam".

Both 5985 and 6105 have been used by Radio Tanzania in the past, although neither frequency had been observed for some time, possibly since the mid 1980's. (WBI 4/20)

UNITED STATES - Radio Free Europe/R. Liberty Broadcast Sked Effective 3/25: 3960(L9), 22-04 RR; 3985(B5), 02-0230 BR; 3990(B5), 03-04 PO;

5995(B9), 18-22 RO; 5955(G16), 0000-02 RR; 5955(B9), 05-06(Sun) RO; 5955(B9), 22-0000 RR & 02-05(Sun) RR; 5955(B9) 02-06 RO; 5970(B6) 02-0230 BR; 05-23(Sun) PO; 5970(B6), 03-05(Sun); 5985(B7), 0000-04 & t/05(Sun) RR; 5985(B7), 04-23 HU & 05-23 (Sun);

6045(B9), 06-07 RR; 6050(B6), 23-02 RR; 6105(HD), 22-01 RR; 6105(L9), 04-22 RR; 6105(G13), 0130-04 RR; 6115(G7) 20-24 CS; 6115(B2), 03-05(Sun) RR; 6115(B2), 03-06 CS; 6115(B2), 05-06(Sun) CS; 6135(HD), 01-02 RR; 6135(L4), 02-0330 RR; 6155(B3), 23-01 RR; 6170(B9), 23-02 KA; 6170(G15), 14-18 RR; 6155(L3), 20-23 RR; 6170(HD), 02-0530 in half hour segments in ES, LA, RR, LI, ES, LA and then from 0530-14 RR;

7115(G17), 03-04 CS; 7115(B5), 04-23 HU; 7115(B5), 05-23(Sun); 7130(L3), 18-20 RR; 7145(G17), 22-23 RR, 23-02 KA, 02-03 RR; 7155(HA), 17-18 ES; 7155(L5), 22-23 RR, 23-2330 TA, 2330-01 KI, 01-02 RR; 7155(HA), 18-19 BR; 7155(HA) 02-0530 in half hour segments ES, LA, RU, LT, ES, LA, LI then 0530-07 RR; 7155(HA) 19-20 LA, 20-21 LI, 21-22 ES; 7165(B1), 18-22 RO, 0000-02 RR, 05-07(Sun) RO; 7165(HA), 22-24 RR; 7165(B1) 02-05(Sun) RR; 7165(L3), 07-18 RR; 7165(B1), 02-07 RO; 7180(L6) 0000-02 AZ, 01-02 AR, 02-03 GE, 03-05 RR; 7190(G5), 23-02 RR, 03-05(Sun) RR; 7190(B3), 06-23 PO; 7190(B2), 02-0230 BR, 0230-03 RR; 7190(G5), 05-06(Sun) PO; 7190(G5), 03-06 PO; 7220(L7), 24 hrs RR; 7245(B2), 18-23 CS, 0000-01 UZ, 01-02 TU; 7245(G17), 04-05(Sun) RR; 7245(G17), 04-06 CS; 7245(G17), 05-06 CS; 7245(B2), 06-13 CS; 7255(L5), 21-22 RR; 7255(P5), 0000-02 RR; 7255(P5), 22-24 RR; 7295(B2), 13-18 CS; 7295(B8) 18-23 UK, 23-24 RR, 0000-01 UZ, 01-02 RR; 7295(B8), 02-04 UK;

9505(HD), 14-15 BR; 9505(P5), 18-19 BR, 19-20 LA, 20-21 LI, 21-22 ES; 9505(L4), 22-24 RR, 0000-01 UZ, 01-02 RR; 9505(G16) in half hour segments 02-0530 ES, LA, RR, LI, ES, LA, LI then 0530-07 RR; 9505(HD), 15-16 LA, 16-17 LI, 17-18 ES; 9520(P), 18-0130 RR; 9520(L5), 0530-18 RR; 9520(P1), 18-22; 9520(P3) 22-24; 9520(P1), 0130-0530 RR; 9555(G10), 19-22 BU; 9555(G19) 22-0230 RR; 9555(G19), 0230-03 PA, 03-0330 DA; 9565(P4), 16-18 RR; 9565(L6), 18-23 UK; 9595(G16) 18-24 CS; 9595(B3), 02-0230 BR; 9595(G14), 05-08(Sun) CS; 9595(B8), 08-18 CS; 9595(G14), 03-05(Sun) RR; 9595(G14), 03-08 CS; 9625(HD), 18-22 RR; 9625(P2), 2330-0030 RR, 0030-01 TA; 9625(P2), 22-23 RR, 23-2330 TA; 9625(B3), 01-02 RR; 9625(P5), 02-06 UK, 06-07 RR; 9660(HC), 17-23 RR; 9660(G7), 23-02 KA, 02-04 UK; 9660(B8), 04-06 UK, 06-08 RR; 9680(L4), 20-22 RR; 9680(L3) 0000-01 AZ, 01-02 AR, 02-03 GE; 9680(HA), 03-06 RR; 9680(G10) 22-24 RR; 9695(G7) 18-23 HU, 04-05(Sun) RR; 9695(B1), 07-18 HU; 9695(G13), 04-07 & 05-07(Sun) HU; 9705(G5), 18-23 PO; 9705(B5), 2330-01 KI; 9705(G10), 03-07 PO; 9705(B9), 07-18 PO; 9705(B5), 23-2330 TA; 9705(G10), 02-05(Sun) RR, 05-07(Sun) PO; 9725(G11), 23-02 RR; 9725(B4), 05-07 & 10-22(Sun) RO; 9725(G1), 02-05(Sun) RR; 9725(B4), 05-22 RO; 9725(B4), 14-22 RO; 9725(G1), 02-05 RO; 9725(B4), 07-10(Sun) RR; 9725(B4), 07-14 RR; 9725(G11), 22-23 RR; 9740(B5), 01-02 TU; 9750(L2) 21-24 RR; 9750(HC) 0000-01 TB; 9750(HC), 01-03 TB;

11725(G3), 23-24 RR, 0000-01 TB, 03-05(Sun) RR; 11725(G3), 05-23(Sun) PO, 01-03 TB; 11725(G3), 03-23 PO; 11770(G9), 2330-01 KI, 01-02 TU, 02-0230 RR; 11770(L5), 04-0530 BR; 11770(G9), 08-10(Sun) RR, 13-22 BU; 11770(G9), 22-23 RR, 23-2330 TA, 0230-03 PA, 03-0330 DA, 08-13 RR; 11770(G9), 08-13 RR; 11770(G9), 10-13 RO; 11815(HB), 23-02 UK; 11815(G2), 05-05(Sun) RO, 08-10(Sun) RR, 14-22 RO; 11815(HB), 22-23

RR; 11815(G2), 02-05(Sun) RR, 07-14 RR; 11815(G2), 02-07 RO, 10-22(Sun) RO; 11825(G2), 0000-01 UZ, 01-02 RR; 11825(G4), 08-24 CS; 11825(G20), 02-08 RR; 11855(HA), 0000-01 TB; 11855(G4), 03-05(Sun) RR, 22-24 RR; 11855(HA), 01-03 TB; 11855(G4), 05-08(Sun) CS; 11855(G4), 03-08 CS; 11875(L1), 08-11 RR, 11-12 AZ, 12-13 RU, 13-14 AR, 14-15 AZ, 15-16 RR, 16-17 GE, 17-18 AZ, 18-19 GE, 19-20 AZ, 20-24 RR, 24-01 AZ, 01-02 AR, 02-03 GE, 03-04 RR, 04-05 AZ; 11855(P6), 18-23 UK, 23-2330 TA, 2330-0030 RR, 0030-01 TA, 01-02 RR, 02-06 UK; 11855(P3), 06-18 RR; 11895(LS), 02-04 RR; 11895(G6), 05-23(Sun) HU; 11895(G6), 04-23 HU; 11905(G20) 11-16 (RR); 11915(G6), 23-02 KA, 02-04 RR; 11915(B3), 04-06 RR; 11925(P4), 14-15 BR, 15-16 RR; 11935(G18), 23-05 RR; 11935(L1), 05-07 RR; 11935(HB), 17-22 RR; 11935(G18), 22-23 RR; 11970(L6), 14-15 BR, 15-16 LA, 16-17 LI, 17-18 ES, 18-19 BR, 19-20 LA, 20-21 LI, 21-22 ES; 11970(G15), 0000-01 KI, 01-02 RR, 0530-08 RR; 11970(G15), 22-23 RR, 23-2330 TA, 2330-24 KI, 02-0530 in half-hour segments ES, LA, RR, LI, ES, LA, LI; 11970(L6), 08-11 RR, 11-14 KA;

15115(G14), 13-22 BU; 15115(G19), 0330-04 RR, 04-0530 BR, 0530-07 RR; 15130(G14), 22-2230 RR; 15130(G13), 04-0530 BR; 15130(P6), 11-14 KA, 14-15 BR, 15-16 LA, 16-17 LI, 17-18 ES; 15130(G17), 18-19 BR, 19-20 LA, 20-21 LI, 21-22 ES; 15130(P6), 06-11 RR; 15145(G8), 0000-01 TB, 03-05(Sun) RR; 15145(G8), 01-03 TB, 05-21 PO; 15145(G8), 03-05 PO; 15170(G21), 05-07 RR; 15170(G7), 1230-1330 RR; 15170(L5), 18-19 GE, 19-20 AR, 20-21 RR; 15170(G7), 07-1230 RR, 1330-14 PA, 14-1430 DA; 15170(G21), 15-1730 UK; 15215(G11), 02-07 RO, 07-10(Sun) CS, 10-22(Sun) RO; 15215(G11), 03-05(Sun) RR, 05-07(Sun) RO, 07-12 CS, 12-14 & Sun t/22 UK; 15215(G11), 14-22 RO; 15255(G12), 0000-05 RR, 05-24 CS; 15290(G21), 02-05 RR; 15290(L6), 05-08 RR; 15290(G21), 08-10 RR, then 1030-1130 half-hour segments TA, IK, TU, then 1130-1230 UZ, 1230-1330 RR, 1330-14 KI, 14-1430 TA, 1430-22 RR; 15340(L2), 0000-01 AZ, 01-02 AR, 02-03 GE, 03-04 RU, 04-05 AZ, 05-11 RR, 11-12 AZ, 12-13 RR, 13-14 AR, 14-15 AZ, 15-16 RR, 16-17 GE, 17-18 AZ, 18-19 GE, 19-20 AR, 20-21 RR; 15340(G8) 21-24 RR; 15355(G1), 05-23 HU; 15370(B4), 22-23 RR, 23-2330 TA, 2330-0030 RR, 0030-01 TA; 15370(G18), 05-06 RR; 15370(HC), 1430-15 TU, 15-16 UZ; 15370(B4) 01-02 TU, 02-0230 RR, 0230-03 PA, 03-0330 DA, 0330-05 RR; 15370(G9), 06-07 RR; 15370(HC), 16-17 TB; 15370(P5), 07-1230 RR, 1230-1330 TB, 1330-1430 RR; 15370(G19), 17-22 RR; 15380(G9), 0330-06 UK; 15380(P1), 13-1330 RR, 1330-14 KI, 14-1430 TA; 15380(G21), 1730-23e UK; 15380(P1+P2), 06-13 RR, 15-1730 UK; 15445(P1), 22-23 RR, 23-2330 TA, 2330-0030 RR, 0030-01 TA; 15445(L3), 03-04 RR, 04-05 AZ, 05-07 RR; 15445(G10), 07-13 RR; 15445(HC), 1330-14 PA, 14-1430 DA;

17612(G15), 12-14 UK; 17725(G18), 06-13 RR, 13-22 BU; 17735(G5), 06-11 PO; 17735(P4), 11-14 KA; 17735(G16), 14-15 RR, 15-18 UK; 17750(HA), 06-10 RR, 10-1030 TA, 1030-11 KI, 11-1130 TU, 1130-12 UZ, 1330-14 KI, 14-1430 TA, 1430-15 TU, 15-16 UZ; 17750(HA), 1230-1330, 16-17 TB; 17760(L4), 04-05 AZ, 05-11 RR, 11-12 AZ, 12-13 RR, 13-14 AR, 14-15 AZ, 15-16 RR, 16-17 GE, 17-18 AZ, 18-19 GE, 19-20 AR; 17770(P2), 13-15 RR; 17770(G17), 15-16 LA, 16-17 LI, 17-1730 RR; 17805(G19), 07-10(Sun) CS, 10-16(Sun) RO; 17805(G7), 16-20 RO; 17805(G19), 07-12 CS, 12-14 UK; 17805(G19), 07-16(Sun) RO; 17805(G19), 14-16 RO; 17835(B3), 0230-03 PA, 03-0330 DA; 17835(G17), 06-15 CS; 17835(G20) 6-18 RU; 17865(G7), 15-16 UZ; 17865(G19), 16-17 TB; 17895(G13), 07-10 RR, 10-1030 TA, 1030-11 KI, 11-1130 TU, 1130-1230 UZ, 1330-14 PA, 14-1430 DA, 1430-15 TU, 15-18 UK; 17895(G13), 1230-1330 TB;

21455(G14), 08-11 RR; 21455(G5), 11-12 AZ, 12-13 RR, 13-14 AR, 14-15 AZ, 15-16 RR, 16-17 GE, 17-18 AZ; 21510(HB), 07-10 RR, 10-1030 TA, 1030-11 KI, 11-1130 TU, 1130-1230 UZ, 1330-14 KI, 14-1430 TA, 1430-15 TU, 15-16 UZ; 21510HB, 1230-1330 TB, 16-17 TB; 21665(G16), 07-11 PO, 11-14 KA; 21745(G14), 11-13 RR; 21745(G10), 13-19 BU.

Languages: AR - Armenian; AZ - Azerbaijani; BR - Belorussian; BU - Bulgarian; CS - Czechoslovakian; DA - Dari; ES - Estonian; GE - Georgian; HU - Hungarian; KA - Kazak; KI - Kirghiz; LA - Latvian; LI - Lithuanian; PA - Pashto; PO - Polish; RO - Romanian; RR - Russian; TA - Tajik; TB - Tatar-Bashkir; TU - Turkmen; UK - Ukrainian; UZ - Uzbek.

Transmitter Sites: Biblis - Germany B1 to B9 100 kW; Gloria - Portugal G1 to G19 250 kW, G20 and G21 50 kW; Holzkirchen - Germany HA to HD 250 kW; Lampertheim - Germany L1 to L7 100 kW, L9 20 kW; Pals - Spain P1 to P6 250 kW. Note: Some transmitters at Pals can be operated on a combined mode resulting in twice the power output. Transmitters in the combined mode are shown for example as P1 & P2, etc. (Tetsuya Kondo, Japan & James Kline, CA)

Via "Diario de Las Americas", Miami, March 15 & thanks to Mike Fern, CA for this: The director of Radio Marti, Ernesto F.

Betancourt, has been dismissed from that job. He has been named an "investigator" for the Voice of America, parent of Radio Marti. The dismissal seems to be connected to infighting between Cuban political factions in Florida, who anticipate the early departure of Fidel Castro as head of the Cuban government. One Cuban emigre leader allegedly seeking Betancourt's dismissal is Jorge Mas Canosa, head of the Cuban-American Federation (FCA). Mas has denied this.

The Washington Post and Miami Herald have alleged that Mas worked through Betancourt to promote Mas's desire to be president of a free Cuba. Diario's editorial columnist Luis Aguilar Leon slays the FCA was the main backer of Radio Marti, that Radio Marti's programs have been objective under Betancourt's dedicated management, that Mas was personally satisfied with what Betancourt had achieved, and that only Castro will benefit because Betancourt was kicked upstairs.

FCA sponsors broadcasts to Cuba over WHRI, Noblesville, IN, and has sponsored broadcasts from Radio Clarin in the Dominican Republic.

Betancourt is said to have contacted a Cuban official named Arnaldo Coro without prior State Department clearance.

(Note: The presenter of "DX Spotlight" on Radio Habana Cuba identifies himself as Arnie Coro, C02KK. Is Arnie the same as Arnaldo? via Mike Fern, CA)

Just received a letter from "The World Service of The Christian Science Monitor" dated Mar 1990:

Dear Friends: We have news that will please many of you: Now that the construction work on our three transmitting sites is completed and our programming well established, we will be issuing formal QSL cards.

(Then an explanation of what a QSL is.)

We have enclosed not only the latest frequency information but also three cards that can be used to begin the QSL verification process for each of our three sites: WCSN, WSHB, and KHBI.

If you would like a verified QSL card, tune in to one of our broadcasts and fill in the required information on back of the corresponding card: date, time (in UTC) frequency, and enough information to make it clear to our staff that you did indeed hear us. Then, fill in your name and address, put the card(s) in an envelope, and send it (them) to us in Boston: World Service/Herald, P.O. Box 860 Boston, MA 02123 USA.

We will forward them to the appropriate station for verification and mail the card back to you, duly signed.

We hope this adds to your enjoyment of shortwave listening!

A NOTE TO ENTHUSIASTS: Once you have collected a card from each station, feel free to write in again with comments about our programming or questions for Letterbox. However, we'd rather you didn't send in further reception reports, which are not needed.

Note: When I first heard this on Letterbox program on 4/6, they said you would get these three QSL Cards if you were on their mailing list. If you are not on their mailing list, you can still get a verified QSL card(s) by listening to each of the sites and sending in your report to the above address. (bmm)

World Wide Christian Radio (WWCR) - Via Kol Israel, 'Calling All Listeners' on 4/16 and thanks to Mike Fern, CA for this:

WWCR, Nashville, TN, is *not* being paid to carry the "Israel Press Review" at 1945 UTC. This program is distributed free by the transcription service of Israel Radio.

U.S.S.R. - Observations on Estonian Radio broadcasts on 9560 kHz.
Monitoring research Mar-Apr 90. 1440-15 First Pgm; 15-16 RS-language Pgm; 16-17 Second Pgm; 18-1915 Second Pgm; 1915-20 First Pgm; 20-2030 Ext. svc in SW. (WBI 4/20). 73's, Bruce

QSL Reports

Sam Barto
47 Prospect Place
Bristol, CT 06010



ABU DHABI: Voice of the UAE 13605 f/d folder cd. in 40 ds. for 1 IRC. v/s Ahmed A. Shouly. Rcvd. 2 UAE coins. (Zobro-MI)... Thanks for the clipping on the v/s - verie interesting! Sam.

ALBANIA: Radio Tirana 9760 cd. w/ pin and postcard in 51 ds. for an EG rpt. (Terrence-NY).

ALGERIA: RTVA 15215 p/d cd. in 50 ds. for an 88 reception. (MacHarg). 17745 f/d "Tapestry" cd. in 39 ds. w/ pre-addressed report form. (McDavitt).

ARGENTINA: LOL 5000 p/d cd. in 3 1/2 mo. for \$1.00. (Lare-MI). **RAE** 11709.9 f/d cd. in 90 ds. v/s M. Campos. (Terrence-NY).

ARMENIAN SSR: Radio Moscow 17570 via **Yerevan** f/d cd. in 98 ds. (Kremer-IN). **Radio Yerevan** 15180 p/d plain cd. in 95 ds. (Peake-IA). 11675 and 11790 n/d personal ltr. w/ 2 stamps, 12 postcards and schedule in 186 ds. for 2 IRCs. This after a f/up rpt. (Woloch-QUE).

ASCENSION ISLAND: BHC 6005 f/d ltr. in 133 ds. for \$1.00. v/s Neil Johnson. (Mann-NE). 6005, 9600, 15400 and 17740 2 f/d prepared cds. in 31 ds. for \$1.00. (Rugg-QUE).

ASIATIC RUSSIA: Radio Moscow 4810 via **Vladivostok** f/d "Friendship" cd. in 2 mo. (Lare). 5980 f/d cd. in 3 mo. (Palmerheim-MN). 7315 via **Komsomolsk-on-Amur** f/d cd. in 3 mo. (Palmerheim). 7345 and 9895 via **Petropavlovsk-Kamchatsky** f/d cd. in 3 mo. (Palmerheim). 7370 via **Khabarovsk** f/d "Kremlin" cd. in 52 ds. (Butcher-USA). 15560 f/d cd.

* in 56 ds. (Butcher). 7492 f/d "Moscow State University" cd. for USA reception. (Kusalik-AlB). 12055 and 12010 f/d cds. in 47 ds. (Turnick-PA). 9745 via **Irkutsk** f/d cd. in 80 ds. (Wilkins-CO). **Radio Kiev** 15180 via **Komsomolsk** f/d "Striysky Park" cd. in 3 * mo. w/ schedule. (Butcher). **Khanty-Mansiysk Radio** 4520 f/d cd. in 3 mo. w/ sticker and schedule for reception of RS transmission. (Barto-CT).

AUSTRALIA: Radio Australia 6020 via **Brandon** f/d "Wilderness Society" cd. in 18 ds. after a f/up rpt. v/s Hugh Murray, Frequency Manager. (Weber-OH). same cd. in 1 mo. It took a phone call to get this one! (Kusalik). **VLM6** 6140 via **Waneroo** f/d cd. in 23 ds. for \$1.00. (Hart-FL).

AUSTRIA: Radio Austria International 13730 f/d "Salzburg Costume" cd. in 17 ds. w/ sked. for 1 IRC. (Brouillette-IL). 13730, 11780 and 21490 f/d "Klagenfurt Carinthie" cd. w/ sticker and schedule in 5 wks. (Barto-CT).

AZAD KASHMIR: Azad Kashmir Radio 4790.5 p/d personal ltr. in 46 ds. for ms. v/s Abrar * Ali, Engineer-Manager who mentions that "It is informed that A.K.R. transmitters are situated in Azad Kashmir." C/V #203! (Palmerheim-MN).

AZORES: Radio Club de Angra 13584 f/d cd. w/ 909 khz freq. in 2 mo. for a PT rpt. (Field).

BANGLADESH: Radio Bangladesh 15195 n/d cd. w/ ltr. in 163 ds. after a f/up rpt. (Mann-NE).

BELGIUM: BRT 9925 f/d "St. John's the Baptist Church" cd. in 90 ds. (Zobro). **RTHF Radio 1** 9925 and 25645 f/d "Grand Square" cd. in 5 wks. w/ schedule and sticker. (Barto-CT).

BENIN: La Voix de la Revolution 4870 f/d cd. in 71 ds. after a f/up rpt. (MacHarg). f/d cd. in 10 wks. for a FR rpt. and ms. (Klinck-NY). **Radio Parakou** 4870 f/d cd. in 54



ds. for a FR rpt. and 2 IRCs. (Gaharan)

BONAIRE: Radio Nederland 17605 f/d cd. in 26 ds. (Davisson-OH). 11720 f/d "Amsterdam Bridge" cd. w/ sked., pennant and sticker in 1 mo. (Kohlbrenner-PA).



Radio Bahai del Ecuador

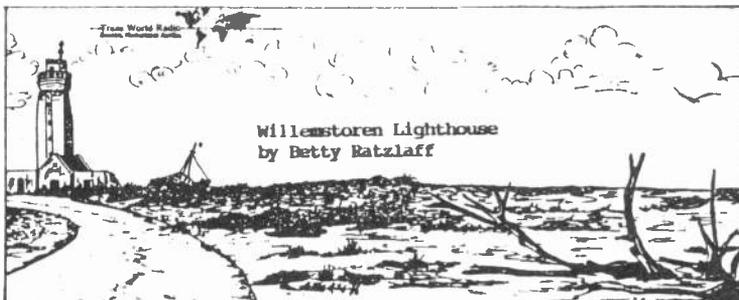
"La Emisora de la Familia"

Frecuencia: 1430 kHz MW
49.0 kHz SW 40 ms.
Emisiones: HCBN - 1
HCBN - 2

VERIFICATION SIGNERS: Radio Guaruja 5980 Ireneu Cemelli Jr., Director. Radio Educadora da Bahia 9540 Francisco Emilio de Aquino Bruno, Coodenador do Centro de Radio. Ondas del Orteguaza 4975 Norberto Plaza Vargas, Subgerente. Radio Rio Amazonas 4870 Miriam Marino, Secretaria. HD210A 7600 Victor Yepez Valarezo. Radio Atlantida 4790 Julio Reategui Trigos, Director General.



- BOINAIRE:** Radio Nederland 6165 f/d "Windmills" cd. w/ sticker and schedule in 48 ds. for 1 IRC. (Wallace-CT). Trans World Radio f/d cd. in 32 ds. (MacHarg)
- BRASIL:** Ceara Radio Clube 6105 f/d prepared cd. in
- * 54 ds. for a SASE. This was for a 78 reception. v/s Manuel Eduardo P. Campos, Director Presidente. (Moore-MI).
 - * Radio Clube de Pernambuco 6015 f/d prepared cd. w/ stickers in 27 ds. for a f/up rpt. on a 79 reception. (Moore-MI). Radio Clube Rondonopolis 4955 f/d personal ltr. in 2 mo. on my 9th try for a PT rpt. v/s Antonio Riberto Cones, Director Geral. (Field-MI). Radio Marajoara 4955 f/d prepared cd. w/ ltr. in 17 ds. for a PT rpt. and \$1.00. v/s Elizete Mados Santos Pamplona. (D'Angelo-PA). f/d prepared cd. w/ p/d ltr. and an FM station sticker in 30 ds. for a PT rpt. and \$1.00. (Wilkins-CO) f/d prepared cd. w/ stickers in 1 mo. for a PT rpt. and SASE. (Moore-MI). Radio Nacional ZYG810 4875 f/d prepared cd. w/ personal ltr. in 172 ds. for a PT rpt. and \$1.00. v/s Eudson Monteiro Lima. (D'Angelo). Radio Cultura Araraquara 3365 f/d prepared cd. w/ ltr. and decal in 7 wks. for SASE and a PT rpt. v/s Antonio Carlos Rodrigues dos Santos, Diretor Artístico. (Moore-MI). Radio TV Gaucha n/d "Tower" cd. in 14 mo. for a PT rpt. and a tape. (Huniwell-NJ). Radio Educacao Rural Tefe 3385 f/d prepared cd. w/ schedule in 3 wks. for SASE and a PT rpt. v/s Diaconio Thomas Schwamborn. (Moore). f/d ltr. w/ schedule in 3 mo. for a PT rpt. (Barto-CT). Radio Jatai 4935 f/d prepared cd. w/ ltr. and sticker in 6 wks. for a PT rpt. and a f/up rpt. v/s Zacarias Faleiros. Addr: Rua Jose Carvalhos Bastos 542. (Moore). Radio Anhanquera 4905 p/d ltr. w/ coverage map in 3 wks. for a PT rpt. and \$1.00. v/s Edson Guimaraes. (Rugg-QUE).....Great going guys!...Sam.
- BOTSWANA:** Radio Botswana 4830 f/d "Herdsboy Milking Cow" cd. in 27 ds. for \$1.00. v/s Ted Makgekgenene, Chief Engineer. (Weber-OH). f/d cd. in 26 ds. for \$1.00. (Klinck-NY). 4820 same cd. in 1641 ds. (!) after 2 f/up rpt. and 2 IRCs. (Woloch-QUE).
- BULGARIA:** Radio Sofia 7115 f/d cd. in 35 ds. (Turnick-PA). Radio Moscow 9700 via Sofia f/d cd. in 60 ds. (Watts-KY).
- BURKINA FASO:** Radio Burkina 4815 f/d prepared cd. in 6 wks. for a FR rpt., cassette tape, and ms. (Huniwell).
- BYELORUSSIAN SSR:** Radio Moscow 11745 via Minsk f/d cd. in 76 ds. (Turnick-PA).
- CAMBODIEN:** CRTV 4850 via Yaounde f/d cd. w/ schedule in 13 wks. for a FR rpt., tape and 3 IRCs. (Klinck-NY).
- CANADA:** CRZU 6160 f/d "CBC Centre" cd. in 33 ds. (Peake-IA).
- CHAD:** Radiodiffusion Nationale Tchadienne 4904.5 p/d ltr. in 11 wks. w/ sticker and schedule for a FR rpt. and 2 IRCs. (Kohlbrener-PA). (Barto-CT).
- CHILE:** CBV 8677 f/d cd. in 2 mo. for a SP rpt. v/s German Valdivia Ibarra, Capitan.
- CHINA, PEOPLES REPUBLIC OF:** Radio Beijing 11695 f/d "Silk Figurine" cd. w/ paper cuts in 23 ds. (Levendusky-CO). 11715 same f/d cd. in 22 ds. for 1 IRC. (Wallace-CT). 15125, 12110.1 and 11445 (Kunming) p/d cd. in 2 mo. w/ schedule. (Barto). 7516 via Lingahi cd. in 3½ mo. (Barto). 4815 and 4882 f/d cd. in 3 mo. for a f/up on an 85 reception. (Barto) 8260 via Beijing and 9440 via Kunming f/d "Peihai Park" cd. in 2½ mo. (Barto-CT). 7405
- * via Jejiang Province f/d cd. w/ site in 15 ds. Card was sent back for site information. (Rigas-IL).....much more to follow...Sam.



Willemstoren Lighthouse
by Betty Batzlaff

Radio Mil C. P. R. A.
CONSTITUCION FEDERAL DE LOS ESTADOS UNIDOS MEXICANOS

27 de mayo, 1969

Nombre:
 Edward A. D'Angelo,
 1514 Burbay Drive,
 Pennsylvania, PA 19018,
 U.S.A. DE NOROCCIA (USA)

Residencia de:
 Antenas recibiendo en esta de fecha 11 de Noviembre/68,
 en la cual se recibo mensaje transmitido el día 7 de Julio/68

Confirmando nuestra transmision en sus datos, para lo tenemos
 de 1180 kilohertz en la banda internacional, de 13 metros por
 en la antena Radio Cien, la cual tambien algunos por
 paises europeos, representados al que usted sepa.

Esperamos que esta informacion ademas alguna que usted
 tenga sobre el particular, para regularmente nuestra transmision en
 en la frecuencia de 1180 kilohertz AM y 105.1 MHz.

Atentamente,
 PEDRO JUSTITIANO P.
 Vice Pte. Director General.

CHINA, PEOPLES REP. OF: Radio Beijing 7820 and 9945 via Xian, 7360 via Paoding and 9785 via Beijing f/d "Velvet Ornament" cd. in 2 1/2 mo.(Barto). 9920, 15400, 15450, 11660 and 11600 f/d cd. in 3 mo.(Barto). 9365 via Kuming and 9965 and 7470 via Paoding f/d "Cocconut Hair Ornament" cd. in 2 mo.(Barto). Voice of Jinling 4875 f/d cd. in 25 ds.(Rigas). Guangpi PBS 5010 f/d cd. in 3 mo. for 833 reception.(Barto). Qinghai PBS 3950 f/d cd. in 2 wks. via Beijing.(Palmerheim). Jiangpi PBS 5020 via Nanchang f/d cd. in 22 ds.(Kusalik). Xinjilang PBS 4735 via Urumqi f/d "Memorial Hall" cd. in 22 ds.(Kusalik). Nei Menggu PBS 5981.7 and 9750 f/d cd. in 3 mo.(Barto). CPBS 5075 via Urumchi f/d "Great Wall" cd. in 21 ds.(Lare). 7440 via Lingshi f/d "Golden Thread Cloth Ornament" cd. in 3 mo.(Barto). Radio Beijing 17855 via Shijichuang f/d cd. in 3 mo.(Barto).

NOTES: Jerry Klinck likes the idea of utilizing personal photos on his reception reports. they seem to work out quite well. Marlin Field of 128 Oak St., Hillsdale, MI 49242 needs the address for Voice of the Libyan People on 9500. He used the IL address but the report was returned. Remember to send in any new address changes to the Column. Space permitting - I'll get them in...Sam. Rugg in Quebec says the DX seemed to be much better during the previous 3 winters. I agree...Sam. Don Hoemer says that he had a great deal of fun while competing in the NU/FT NADXC. Dave Turnick should have a new ICOM R71A by the time this gets printed. Hope it works well for you...Sam. Eric Svedberg sent a very detailed letter explaining how he obtained his Radio Pyongyang QSL. Eric, I forwarded your letter to Harold Cones. Very good material for the bulletin...Sam. John Sprulletta has just completed his second Graduate Course in Quantitative Methods at LIU. Let us know how you do...Sam.

COLUMBIA: La Voz de Los Centauros p/d cd. in 154 ds. for a SP rpt. and ms. v/s Juan Carlos Torres Leyva, Gerencia.(Turnick-PA).

COSTA RICA: Radio Impacto 5030 p/d ltr. w/ pennant in 71 ds. for \$1.00. v/s Hector Requena C., Asesor. General. (Mann). Radio Reloj de Costa Rica 6017 p/d cd. w/ ltr. in 2 mo. for a SP rpt. on an 81 reception.(Barto-CT). AMR Radio Lira Internacional 9725 f/d cd. w/ pennant in 38 ds. for 1 IRC. v/s David L. Gregory, General Manager.(Peake). 9725 and 11870 cd. w/ personal ltr. and pennant in 45 ds. for \$1.00.(Hart-FL).

* same in 2 mo. for 1 IRC.(Butcher-MA). United Nations Radio 21566 via RPII f/d cd. in 10 ds. w/ sticker and schedule.(Weber-OH).

CUBA: Radio Moscow 6000 and 6045 f/d cd. in 3 mo.(Barto). 4765 f/d cd. in 88 ds. w/ personal ltr.(Levison-PA).

CYPRUS: BEC 6180 f/d cd. w/ sticker in 21 ds. for \$1.00. Addr: Box 219, Limassol.(Rugg-QUE).

CZECHOSLOVAKIA: Radio Praha 5930 cd. in 35 ds.(Turnick). 7345 f/d "Svihov Castle" cd. in 26 ds.(Landau-NJ). 17705, 15110, 21505 and 13715 same cd. in 6 wks. w/ schedule.(Barto-CT).

DJIBOUTI: Radio TV Djibouti 4780 p/d cd. in 3 mo. for a FR rpt. and \$1.00.(Paszkiwicz-WI). p/d cd. in 45 ds. for a FR rpt. and 2 IRCs.(Palmerheim-MN).

DOMINICAN REP: Radio Amanecer 6025 p/d cd. w/ ltr. in 4 1/2 mo. for a SP rpt., tape, ms. and \$1.00. My prepared cd. was not returned.(Huniwell-NJ).

arctic radio club

SUECIA SWEDEN

FIRST MEDIUM WAVE DX CLUB IN EUROPE

10 YEARS
International pirate station since 1977

ORANG UTAN

QSL FOR :

NAME Dave Valko
RECEIVED ON 3 Dec 89
TIME 8:12 - 8:58 LTR.
FREQUENCY 6206 kHz.
SINPO poor To Fair.



► THE MONKEY OF THE NETHERLANDS ◄
ON MW WITH 200 W

ional 5030 f/d prepared cd. w/ sticker in 2 mo. for a SP rpt. and \$1.00. (Moore-MI). n/d cd. w/ ltr. in 74 ds. for ms. v/s Antonio Arreguil.(Paszkievicz). Radio Pastaza f/d prepared cd. in 6 mo. for a SP rpt., tape and ms.(Huniwell-NJ).

ENGLAND: AJE 9242.3 and 10538 p/d ltr. in 2 mo. for 80 reception of APRS USB relay. v/s * Richard L. Simpson, Radio Program Manager.(Barto-CT).

EURO PIRATES: Radio Orang Utan 6206 f/d cd. in 11 ds. for \$1.00. Sticker rcvd.(Druzak).

* Radio Atlanta 6225 n/d sheet in 46 ds. for ms.(Druzak). Radio Titanic International 6230 f/d cd. w/ sticker in 37 ds. for \$1.00.(Druzak-BEL).

NOTE: Bob Brown informs us that Ed Cockburn (WALJGO), who is a new broadcast engineer at WCSN, will be QSLing reception reports for WCSN. The address to use is: P.O. Box 130, Costigan, ME 04423. ATTN: Ed Cockburn. For the past two QSL Columns I have been illustrating the new QSL cards from Trans World Radio in Bonaire. These were received via Chuck Roswell (PJ4CR). Thanks Chuck...Sam. Norman Wittschen III sent me a copy of a letter he received from Deutsche Welle in which they requested reports in writing only - no taped reports. Interesting.

Alex Vranes, Jr. sent along a very nice letter including his remarks about the Radio Mogadishu \$50.00 scam. I guess quite a few of us are getting that. Tim Davison has 3 reports out to Radio Australia including 2 f/up reports as far back as 8/89. As far as your reports go Tim, they are in great order - keep reporting just the way you always do...Sam.

EUROPEAN RUSSIA: Radio Moscow 11880 via Moscow f/d cd. in 78 ds.(Carson-OK). 9685 f/d cd. in 49 ds.(Paszkievicz). 11710 and 15200 f/d cds. in 2 mo.(Wilkins). 9820 via Kingisepp f/d cd. in 47 ds.(Turnick). 7150 via Arnavir f/d cd. in 58 ds.(Watts). 9865 f/d cd. in 55 ds.(Butcher). 15280 via Zhigulevsh f/d cd. in 2 mo. v/s Olga Troshina.(Butcher-MA). 15305 via Veronezh f/d "Kosmos Hotel" cd. in 75 ds.(Butcher). 10344 (USB) f/d cd. in 3 * mo. (Barto). RNE39 Radio Moscow 12135 f/d cd. in RS in 2 mo. w/ ltr. v/s Eng. Pavel Mikhaylov, DX Editor. (Barto). Radio Station Peace and Progress 17635 via Moscow f/d cd. in 41 ds.(Humenyk). 11980 and 17635 f/d cd. in 3 mo.(Humenyk-ONT).

FRANCE: Radio France International 17620 f/d cd. in 36 ds.(Davisson). 17650 f/d "Maison de la Radio" cd. w/ schedule in 5 wks.(Roth).

FRENCH GUIANA: Radio France International 9800 via Montsinery f/d cd. w/ schedule in 31 ds. for 1 IRC.(Wallace). 11670 cd. w/ schedule in 1 mo. for a FR rpt.(Taylor-PA).

Hi Bill! Thanks for the newspaper item. I loved it...Sam.

GABON: Radio Japan 11835 via Moyabi n/d cd. in 5 wks.(Barto). 21635 cd. in 2 mo.(Barto).

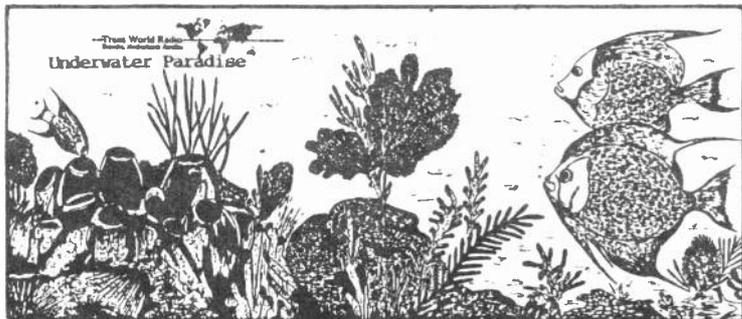
GEORGIAN SSR: Radio Moscow 21725 via Tbilisi f/d cd. in 66 ds.(Butcher-MA).

DUBAI: UAE Radio 11940 f/d "Map" cd. in 4 wks.(Roth).

ECUADOR: HCJB 15155 f/d cd. in 24 ds. (MacHarg). f/d "Mountain" cd. in 30 ds.(Gaharan). 17890 f/d "Antisana" cd. in 26 ds. for 1 IRC.(Wallace-CT).

Radio Centro 3290 p/d personal ltr. in 35 ds. for a SP rpt. and \$1.00. v/s Luis A. Gamboa T., Director-Gerente.(D'Angelo). La Voz de los Caras 4795 p/d ltr. in 97 ds. for ms. v/s Marcelo Nevarez Faggioni.(Paszkievicz) Radio Rio Amazonas 4870 n/d ltr. via registered mail in 9 wks. for a SP rpt. and \$1.00. v/s Miriam Marino, Secretaria.(Moore-MI). Radio Catolica Nac-

Radio Pastaza



GERMAN DEMOCRATIC REPUBLIC:

Radio Berlin International

11785 f/d cd. in 1 mo.
(Peake). 11785 and 6080
f/d cd. in 1 mo. (Zobro).
9730 f/d cd. in 32 ds. for
1 IRC. (Carson). 15240 f/d
cd. in 1 mo. (Zobro-MI).

PERU



CUZCO

via John Wilkins

PUERTO MALDONADO

GERMANY, FEDERAL REP. OF: Sender

Freies Berlin 6190 f/d cd.

w/ stickers and sched-
ule in 17 ds. for ms.
(Butcher). f/d cd. in
42 ds. (Goering-KS).



RADIO MADRID DE 1908 OBR 71. 6950 OBR 71. 1230 FM 92.50

Deutsche Welle 6085 n/d cd.

in 37 ds. (Carson). **Radio Free Europe** 7165 p/d "Map" cd. in 2 wks. (Roth). **Bayerischer Rundfunk** 6085 f/d "Clouds" cd. in 49 ds. (Goering).

GHANA: GEC 4915 f/d cd. w/ personal ltr. and schedule in 37 ds. for \$1.00. (Kremer-IN).

GREECE: Voice of Greece 12105, 15630 and 11645 f/d "Metora Monasteries" cd. in 2 mo. (Barto). 7430 same f/d cd. in 1 mo. (Roth).

GUATEMALA: La Voz de Atitlan 2390 f/d prepared cd. w/ personal ltr. in 32 ds. for a SP rpt., ms. and 1 IRC. v/s Juan Ajtzip Alvarade, Director. (Hart-FL).

HONDURAS: Radio Mundial 2840 (2x1420) f/d prepared cd. w/ ltr. in 40 ds. for a SP rpt. * and \$1.00. v/s Profesor Pedro Quiroz Carransa, Gerente. (Moore-MI).

HUNGARY: Radio Budapest 9585 f/d cd. w/ pennant in 25 ds. (Rugg). 9835 f/d cd. w/ decal in 62 ds. (Terrence-NY).

ICELAND: INRS 15767 f/d cd. in 3 wks. for \$1.00. (Taylor). 13859 f/d "Viti Crater" cd. in 16 ds. w/ schedule for 2 IRCs. (Brouillette-IL).

INDIA: All India Radio 11860 f/d "Lingaraj Temple" cd. in 49 ds. w/ sticker for 2 IRCs. (Brouillette). 11810 f/d "Vishnu Bronze Sculpture" cd. in 2 mo. (Barto). 9565 same f/d cd. in 1 mo. for 2 IRCs. (Roth). 11620, 7412, 11715, 11810 and 9910 f/d "Velha Goa" cd. in 2 mo. w/ sticker. (Barto). 4860 via Delhi same f/d cd. w/ sticker in 1 mo. for 2 IRCs. No answer for rpts. to Kurseong or Guahati. (Moore).

ITALY: AMR Radio - Forlì 7230 f/d sticker cd. in 35 ds. for \$1.00. (Landau). 7125 same f/d cd. w/ personal ltr. and schedule in 28 ds. for 1 IRC. v/s Lina Lega (Hart-FL).

* **European Christian Radio** 6205 f/d "Map" cd. w/ personal ltr. in 7 wks. for 2 IRCs.

v/s John Adams, Director. (Moore-MI). **IRRS** 9860 f/d cd. in 1 mo. for 2 IRCs. (Moore).

* **Voice of Europe** 7556.5 f/d cd. w/ ltr. in 5 wks. Transmitter site given as "East of Venice" and at 1 KW. Addr: P.O. Box 26, 33170 Pordenone. (Barto-CT).

JAPAN: JJY 8000 f/d cd. in 3 wks. (Taylor). 2 f/d cds. on their 50th anniversary (BG/JP) in 3 wks. for a taped rpt. and \$2.00 (Huniwell). **Radio Tampa** 9595 f/d folder cd. in 46 ds. for \$1.00 (Wilkins). 3925, 6055 and 9595 f/d cd. in 16 ds. for \$1.00 (Hart).

Radio Japan 17845, 15195, 21610, 11815 and 17810 n/d cd. in 7 wks. (Barto). 17835, 17810, 17765 and 15325 p/d cd. in 2 mo. (Barto). 9745 n/d cd. in 3 mo. (Barto). **Far East Network** 11750 p/d ltr. in 3 mo. w/ schedule for a reception while I was in RVN. v/s Darwin R. Overbeck, MSgt USAF Operations Supervisor. (Barto). **Radio France International** 17710 via Yamata f/d cd. in 32 ds. (Rigas-IL).

JORDAN: Radio Jordan 9560 f/d cd. w/ schedule in 7 wks. (Taylor). 13655 f/d cd. in 9 1/2 mo. after a f/up rpt. (Goering-KS).

KENYA: Voice of Kenya 4804 f/d ltr. in 60 ds. for 1 IRC. v/s Waweru Mwea, Engineer. (MacHarg).

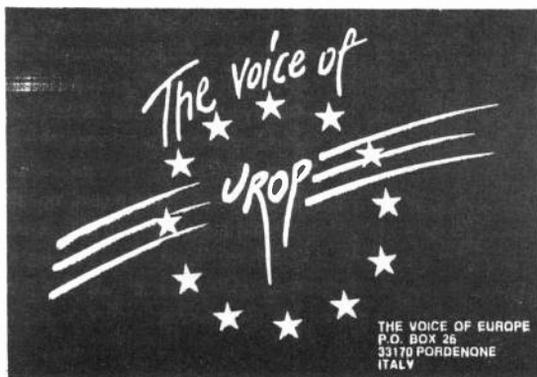
KOREA, REPUBLIC OF: Radio Korea 11725, 9870, 9570 and 15570 p/d "Staff Photo" cd. in 2 mo. (Barto). 15575 f/d "Woman Spinning Cotton" cd. in 3 wks. (Roth). 9750, 9570 and 15575 p/d "Fan Dance" cd. in 3 mo. (Barto-CT).

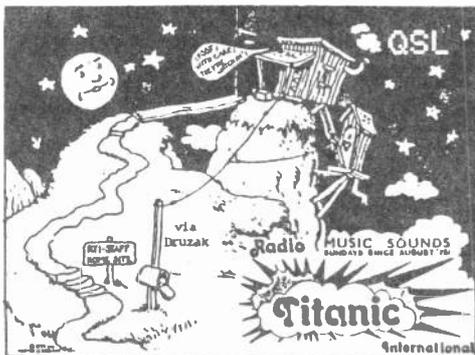
LESSER SONDA ISLANDS: RPDYK2 Man-

* **ggar Ruteng** 2962 f/d ltr. in 2 mo. after a f/up rpt. in IN for \$1.00. v/s Simon Saleh B.A. (Kus-alik-ALB).

LITHUANIA: Radio Vilnius 9610 and 11675 f/d cd. in 148 ds. for ms. (Carson-OK). 11675 via Moscow (?) f/d cd. in 190 ds. (Rigas).

LUXEMBOURG: Radio Luxembourg 6090 f/d cd. w/ stickers in 29 ds. for 1 IRC. (Wallace-CT).





MALAGASY REP: Radio Nederland 15375 f/d cd. in 39 ds. w/ schedule. (Barhydt).

MALAWI: MBC 3380 f/d prepared cd. in 32 ds. after several f/up rpts. over 5 yrs. (Paszkievicz-WI).

MALI: Radio Beijing 11715 via **Bamako** p/d cd. in 3 wks. (Roth).

MALTA: Voice of the Mediterranean 9765 f/d cd. in 129 ds. (Landau-NJ). same in 112 ds. for \$1.00. (Kusalik).

MEXICO: Radio Huayacocotla 2390 f/d prepared cd. w/ personal ltr. in 40 ds. for SASE and a SP rpt. and \$1.00. v/s Elvia Sanchez Alvarez and Javier Jaime Villanor. (Moore-MI). **Radio Educacion** 6185 f/d form ltr. w/ personal note by registered mail in 170 ds. for a SP rpt. and 2 IRCs. v/s Ing. Gustavo Carrero. and \$1.00. (Kohlbremer-PA).

eno Lopez. (Barhydt). same in 13 wks. for a SP rpt. and \$1.00. v/s N. Boldmaan, Mail Editor. (Kusalik). **Radio Uliqii** 4750 same data as above in 50 ds. for \$1.00. (Kusalik)...Great QSLs!

MOROCCO: Radio TV Morocco 15330 f/d cd. in 62 ds. for 2 IRCs. (Estes-AL).

NEW ZEALAND: RNZI 17680 f/d pennant cd. in 15 ds. w/ schedule for 3 IRCs. (Levendusky-CO).

same in 26 ds. (Gaharan). f/d cd. in 39 ds. w/ pennant for 3 IRCs. (D'Angelo). same in 24 ds. for 3 IRC (Peake). in 7 wks. for 3 IRCs. (Roth). 15485 cd. in 46 ds. for 3 IRCs. (Carson). 15485.6, 17680 and 17705 f/d paper pennant cd. in 3 mo. **Rangitaiki** site. (Barto). same in 19 ds. for 3 IRCs. (Kusalik).

NEW BRITAIN: Radio East New Britain 3385 f/d cd. in 1 yr. for ms. v/s Raka D. Saini, Manager. (Eckert-PA). same in 6 mo. for ms. (Eckert-PA).

NIGER: La Voix du Sahel 5020 f/d ltr. in 42 ds. for a FR rpt. and ms. v/s Yacouba Alwali. (Lare MI).

NIGERIA: Radio Nigeria 3326 and 4990 via **Lagos** n/d cd. in 3 mo. w/ schedule. (Barto-CT).

NORWAY: Radio Norway International 11925 p/d cd. in 44 ds. w/ sticker and schedule. (Peake). 21705 via **Sveio** f/d "Ardal Aluminium Works" cd. in 1 mo. w/ sticker. (Butcher-MA).

PAKISTAN: PBC 9645 f/d cd. in 64 ds. w/ schedule for 1 IRC. (MacHarg).

PAPUA NEW GUINEA: Radio Milne Bay n/d ltr. w/ cd. in 7 wks. w/ tape. (Hummwell-NJ).



PERU: Radio Atlantida 4975 ltr. w/ poster in 97 ds. for a SP rpt. and \$1.00. v/s Julio Reategui Triguero, Director Gerente. (Turnick).

PHILIPPINES: Radio Veritas 15445 f/d cd. in 74 ds. for 2 IRCs. v/s Ms. Cleofe R. Labindao. Station info. folder rcvd. (Landau-NJ).

PORTUGAL: Radio Portugal 11840 f/d cd. w/ sticker in 18 wks. for ms. (Klinck). **RPE** 7245 p/d "Map" cd. in 12 ds. for ms. (Barhydt-OR).

RIO MUNI: Radio Africa 7188.9 f/d cd. in 12 ds. w/ schedule. (MacHarg).

SAIPAN: KHBI 17780 f/d prepared cd. in 9 wks. (Taylor-PA).

SCOTLAND: Radio Stella International 6320 f/d "Red Deer" cd. in 18 ds. for \$1.00. (D'Angelo-PA). **MMR** 15043 f/d cd. w/ decal in 35 ds. for \$1. (Rigas). 6235 cd. w/ ltr. in 7 wks. for \$1.00. (Taylor-PA).

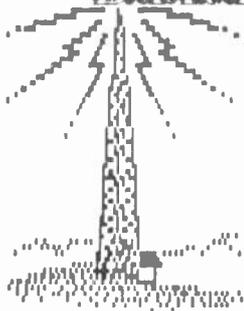
SEYCHELLES: FEDA 11865 p/d ltr. w/ schedule in 5 mo. for 3 IRCs. (Klinck-NY).

SINGAPORE: BBC 15360 f/d cd. in 40 ds. for \$1.00. (Hart-FL).

SOUTH AFRICA: Radio RSA 11935 f/d cd. w/ schedule and pennant in 21 ds. (Levendusky-CO). 9580 f/d "Rhino" cd. in 5 wks. (Roth).

ATLANTA RADIO

ELEVENTH BIRTHDAY DISC



We confirm that.....
Sreten Druzak

heard the 11th Birthday
broadcast from Atlanta
Radio.

SUNDAY 21st JANUARY
1990

Thanks for your reception
report.

We hope to hear from you
again soon.

ATLANTA RADIO 1979-1990 ELEVEN YEARS OF
BROADCASTING TO EUROPE ON 48 METRES

SPAIN: REE 9630 f/d "Arco Cuchillero" cd. w/ stickers in 49 ds. (Butcher-MA).

SPANISH MOROCCO: Radio Monte Carlo 13695 p/d folder cd. in 32 ds. for \$1.00. (Wilkins).

SRI LANKA: Deutsche Welle 17800 f/d cd. w/ site in 10 wks. v/s Peter Senger. (Rugg-QUE).

SULAWESI: KRPTDK2 Luwu 3654 2 f/d prepared cds. in 22 mo. for a f/up rpt. in IN. v/s
* John Ibrahim, Pimpinan Studio. (Kusalik). same in 87 ds. for \$1.00. v/s Arman Mailan-
gkay. This was for an 89 reception. (Kusalik). (Palmerheim-MN).

SUMATRA: WRI Bukittinggi 4910.9 f/d prepared cd. in 18 ds. for an IN rpt. and ms.

SWAZILAND: Trans World Radio 15210 f/d folder cd. in 54 ds. for 3 IRCs. v/s Carol Tat-
low. (Barhydt-OR). (Landau-NJ).

SWITZERLAND: Swiss Radio International 9535 via Sarnen f/d cd. in 12 ds. for 1 IRC.

TADZHIK SSR: Radio Moscow 15295 via Dushanbe f/d "Kremlin" cd. in 10 wks. (Butcher-MA).

TAIWAN: Voice of Free China 15345 f/d cd. w/ sticker and schedule in 55 ds. (Hart-FL).

THAILAND: Radio Thailand 9655 n/d "Emerald Buddha" cd. w/ pennant in 1 mo. for ms. and
\$1.00. It took me 15 yrs! (Huniwell-NJ).

TIBET: Xizang PBS 4035 via Lhasa f/d "Silk Figurine" cd. via Beijing in 3 wks. (Lare-MI).
Radio Beijing 9490 via Lhasa f/d "Peihai Park" cd. in 3½ mo. (Barto-CT).

TURKEY: Voice of Turkey 9445 f/d "St. Nicholas" cd. in 4 wks. (Roth). f/d "Jewelry Boxes"
cd. w/ pennant and stickers in 36 ds. for 1 IRC. (Wallace-CT).

UKRAINIAN SSR: Radio Moscow 15135 via Vinnitsa f/d cd. in 98 ds. for 1 IRC. (Carson-OK).
7115 via Ivano-Frankovsk f/d cd. in 3 mo. (Barto). 6165 via Kiev f/d cd. in 3 mo. (Palm-
ersheim). 11705 f/d "Arbat Square" cd. in 10 wks. (Butcher). 15260 f/d cd. in 75 ds.
(Butcher). 7290 via Lvov f/d cd. w/ stamps and schedule in 98 ds. (Carson). Radio Kiev
f/d cd. in 88 ds. (Carson). Radio Station Peace and Progress 4795 via Kharkov f/d cd.
in 64 ds. (Hart-FL).

URUGUAY: Radio El Espectador 11835 f/d prepared cd. w/ personal ltr. and sticker and key
chain in 18 ds. for a SP rpt. and ms. (Hart). same in 5 wks. for a SP rpt. and \$2.00.
v/s Carlos Maria Berro Collado. (Eckert-PA).

USA: WBCR 15690 n/d "Globe" cd. in 51 ds. (Wittschen-OH). same cd. in 7½ mo. after a f/up
rpt. (Huniwell). n/d cd. w/ schedule in 8½ mo. v/s Jay Litton. (Landau). same in 9 mo.
(Butcher). in 6½ mo. on my 2nd rpt. (Goering). n/d cd. w/ schedule in 2 mo. (Barto). in
63 ds. for ms. (Druzak-BEL). n/d cd. in 5½ mo. for ms. (Hart). cd. in 81 ds. The cd. is
a typical "ham" style used for many years. (MacHarg). in 72 ds. for ms. (Wilkins-CO).
cds. in 200 ds. for 2 different rpts. (Rigas-IL). cd. w/ schedule in 124 ds. (Carson).
7520 cd. in 5 ds. for ms. (Estes). WCSN 15300 f/d ltr. in 7 ds. for ms. (Weber-OH).
Voice of Free China 15215, 17845 and 9852.5 f/d "Pottery" cd. in 3 wks. (Barto). 11740
same cd. in 1 mo. (Barto). 5985 f/d cd. in 53 ds. w/ sticker and schedule. (Levison-PA).
15130 and 17805 f/d cd. in 2 mo. (Barto). 5950 f/d cd. in 11 ds. (Davisson). WBLK 9465
f/d ltr. in 33 ds. for ms. (Brouillette). KUSW 15580 f/d cd. in 29 ds. v/s Sheryl Shear-
for. (Levendusky). WRI 17830 f/d cd. in 4 mo. for ms. (Klinck). KVOH 17705 f/d cd. in
21 ds. (Davisson). KCEI 15280 f/d cd. in 1 mo. for ms. (Butcher). Radio Libertas 11790
via WRI f/d "Globe/Logo" cd. in 81 ds. for ms. v/s Vivian Gamulin. (Wilkins). same in
* 5 ds. for \$2.00. (Sellers-ONT). La Voz de la Fundacion 7315 and 9495 via WRI f/d pre-
pared cd. in 34 ds. v/s Amosla Perez. Addr: P.O. Box 440069, Miami, FL 33144 (D'Angelo).

USA (Pirates): WBBR 6250 f/d cd. in 114 ds. (Zeller-OH). Voice of Laryngitis 7415 f/d cd.
* w/ ltr. in 6 wks. (Name?) WBBH 7425.7 This is my all time favorite. First it was my 75th
QSL and secondly it came from the FCC!!! Rcvd. QSL "post-it-note" attached to FCC press
release on the bust of WBBH in 33 ds. for a rpt. to the FCC on the bust announcement.
v/s Dennis J. Everett, FCC Field Operations Bureau. (Zeller). WJAR 7425 cd. in 25 ds.
(Zeller). Samurai Radio 15052 f/d cd. in 31 ds. for ms. (Hart). Radio Garbanzo 7412 f/d
ltr. in 35 ds. for ms. (Rigas). East Coast Pirate Radio 15063 f/d cd. in 20 ds. for ms.
(Rigas). Voice of Stench 7410 f/d cd. in 60 ds. for ms. (Rigas-IL).

UZBEK SSR: Radio Tashkent 4850 f/d cd. in 2 mo. (Barto-CT). (Barto-CT).

VATICAN: Radio Vatican 11715, 6185 and 9755 f/d "Palazzo Pio" cd. in 9 wks. w/ schedule.

VENEZUELA: YVKE Radio Mundial f/d "Map" cd. w/ ltr. in 38 ds. for a SP rpt. and \$1.00.
* This was for an 83 reception. v/s Omar Espinoza. YV DXer helped me. (Wilkins-CO).

VIETNAM (South): Binh Tri Thien Radio 4678 and Nghia Binh Radio 4798 ltr. in 6 mo. (Kusa-
* lik)...Please see following...

VIETNAM (North): Bac Thai Radio 6691, Hoang Lieu Son Radio 6733, Cao Bang Radio 6575 and
Lai Chau Radio 6252 rcvd. a very nice QSL ltr. in 6 mo. v/s Dao Dinh Tuan, Director of
External Broadcasting. (Kusalik)...Verie nice!

WEST BERLIN: RIAS 6005 p/d cd. in 2 mo. for 1 IRC. (Kohlbreuner-PA).

PLEASE NOTE: As far as I can remember this is the first time I ever submitted a page w/o
an illustration! This goes back something like 15 years or more! I had to cut a few
reports but they will be in next month. The only answer is to cut down on the number
of illustrations per page. I'm getting more reports than ever and this directly re-
lates to the success of the organization. Keep the reports coming in. No one report
is more valuable than anyone elses. They will all get printed....Thank you...Sam.

Tropical Band Loggings

Sheryl Paszkiewicz
1015 Green Street
Maritowoc, WI 54220



- 1629 AUSTRALIA, 2RPH/3RPH, 11/3, 1123 fade in w/YL tlc in EG, whistling tune, dialog. Nearly gone 1130. (Clark-ON)
- 2410 NEW GUINEA, R. Enga pres., 25/3, 1052-1104 w/island mx, PD tlc, ment. PNG, drums & singing. (Field-PA) 8/3, 1155 pres., mx & watery sig. (Clark-ON) Also 25/3, 1155 w/C&W mx. (Clark-ON)
- 3205 NEW GUINEA, R. West Sepik, 11/3, 1140 in EG w/anmt abt health center, TC, ID, "R. Sundaun." Accordion mx. Very good sig. (Clark-ON)
- 3214.8p SULAWESI, RRI Manado, 1/4, 0956-1005 poor-fair w/flutes, no ID on hour, YL tlc in IN, choir, bad fading. (Ross-ON)
- 3215 SOUTH AFRICA, SABC, 6/3, 1830-1840 w/ID, instls, signal going slowly down. (Schulze-FRG)
- 3222 TOGO, R. Kara, 5/3, 0548-0602 in FR w/choral mx, M anncr, faded by 0600. (Royston-HI) 13/3, 0610 w/FR tlc (Johnston)
- 3222.9p LESSER SUNDAS, RRI Mataram, 1357-1405 strong sig w/poss. Indo sports scores, ment. Mataram. No break 1400. (Atkins-WA)
- 3230 LIBERIA, ELWA, 13/3, 0635 in vern. w/tlc, EG ID, rel pgm. (Johnston-KY)
- 3230 NEPAL, R. Nepal, 26/3, 1512-1542 in Nepali w/mx, ads, some in EG, TP 1515, nx, fair sig. (Royston-HI) 17/3, 1510-1520 w/Asian pops, 3+1 TP 1515, prob. ID, fair, //5005 after RTM Sibn s/off. (Atkins-WA)
- 3231p SUMATRA, RRI Bukittinggi, 12/3, 1425 in IN w/eeerie SEAs vcls brief anmt, vcls & Islamic-like strings. (Howell-CA)
- 3249.8 HONDURAS, R. Luz y Vida, 5/4, 0252-0325 in SP w/rel mx, very poor sig. (Barhydt-OR) 11/3, 0338-0406* in EG w/US prod rel pgm, closing anmts, call letters, FC, sked, addr, "The Old Rugged Cross." (Alexander-PA)
- 3264.7 SULAWESI, RRI Gorontalo, 17/3, 1010-1015 w/lagu melayu mx, ID 1015, OM tlc, good-very good. (Atkins-WA)
- 3265t SUMATRA, RRI Bengkulu, 14/3, 1423 in IN w/OM tlc, SEAs ballads, most likely them at this time. (Howell-CA)
- 3280 ECUADOR, LV del Napo, 3/3, 1035-1110 in SP w/anmts, ment. Tena, Napo, instls. rel tlc, fair. (Royston-HI)
- 3285 BRAZIL, R. Sentinela de Amazonia, 10/3, 0327-0402* w/Sounds of Silence, vcls, ID, FC, jingles, ID 0352, s/off w/no anthem SIO-333. Tnx Valko. (D'Angelo-PA) 1/4, 0923 pres., PT tlc, accordion mx, fair. (Moore-MI)
- 3290 ECUADOR, R. Centro, 18/3, 0906-0930 w/IDs, tlc, Andean mx, fair sig. (Bobb-MN) Hope you'll continue submitting your logs, Norman--sp. Norman mentions a number of factors may make him leave the hobby such as poor reception conditions. Hang in there! 8/3, 1048, TCs, IDs. (Johnston-KY)
- 3306 TIMOR, RRI Dili, 31/3, 1048-1125 poor-fair w/IN vcls, tlc 1058, piano 1059, ID, quick fade, then back up, choir mx. HIC 196. (Rosa-ON) Congratulations! 11/3, 1135 w/pops, fair sig, vcls, chimes, orch theme 1156, ID 1159, SCI, Jak nx. (Clark-ON)
- 3315 ADMIRALTY ISLANDS, R. Manus, 25/3, 1051 tent w/faint island mx, many other PNGs active today. (Field-PA) 3/4, 1057-1121 in PD w/rel pgm, ID, nx, ment. "Voice of Hope." (Streitmatter-IN)
- 3316 SIERRA LEONE, SLBS, 7/3, 0620-0631 in EG w/mx, ID, into lang 0630, poor-fair. (Royston-HI)
- 3325 BRAZIL, R. Liberal, 10/3, 0505-0524 w/ID after Braz. pops, ute QRM but fair when ute off. (D'Angelo-PA)
- 3325 BORNEO, 11/3, 1159 w/SCI, Jak jingle, nx, faded by 1210. Het from Guatemala & PNG absent, ute silent. Poss. ID 1159. Also 8/3, 1159. Very tough here. (Clark-ON)
- 3326 NIGERIA, FRCN Lagos, 25/3, 0501 in EG w/nx, ID, fair. (Moore) 5/3, 2305 w/TC, Nigerian Pledge of Allegiance, NA (Johnson-MD)

- 3345 MOLUCCAS, RRI Ternate, 1/4, 0943-1142+ w/IN tlc, AR like strings/flutes, singing 0944, sig dropped but back 1115. ID, rel, Qur'an, mixing w/PNG. HIC 197 (Ross-ON) Wow! Pretty soon 2001--sp. 10/3, 1158 w/lagu, ID, SCI, Jak jingle, fair. (Clark-ON) Also 1/4, 1115 w/responsive rel pgm, good. (Clark-ON)
- 3354 ANGOLA, RN Luanda, 25/3, 0324-0403 w/ballads, anmts, ment. RN, hlife 0402. Fair. (Moore-MI)
- 3355 INDIA, AIR Kurseong, 26/3, 1543-1548 in EG w/nx, tlc in lang, EG ID 1546, cmtry, poor-fair. (Royston-HI)
- 3355 NEW GUINEA, R. Simbu, 17/3, 1000-1010 w/ID, YL tlc in PD w/pres. nx. Fair-good. (Atkins-WA)
- 3356 BOTSWANA, R. Botswana, 14/3, 0425-0431 in lang w/discussion 7/4830, 7255, poor sig. (Royston-HI)
- 3359.8 CUBA, R. Rebelde, 8/3, 0401-0425 //5025 w/sports coverage by 2 OM. SIO-343. (D'Angelo-PA) 23/3, 0553-0627 w/mx, tlc, ID, fair sig. (Barhydt-OR) 21/3, 0826-0900 w/varied LAM mx, tlc, IDs, fair. (Bobb-MN) 10/3, 0928-0940 w/pops, anmts, //710. Also hrd 11/3, 0115. (Alexander-PA) 8/3, 0945 w/mx, ID. (Johnston-KY)
- 3360 ECUADOR, R. Federacion, 3/3, 1140-1201 w/mx, ment. Sucua 1200, into lang, fair. (Royston-HI)
- 3365 NEW GUINEA, R. Milne Bay, 17/3, 0750-0800 w/C&W mx, tlc in PD, ID, TC 0800, choral mx, good sig. (Atkins-WA)
- 3366 GHANA, GBC-2, 13/3, 0603 //4915 w/nx by W. (Johnston-KY)
- 3370 GUATEMALA, R. Tezulutlan, 19/3, 0206 //4835 w/marimba mx. (Johnston-KY) 31/3, 0227-0241 good w/marimba mx, tlc in Indian lang, IDs. (Ross-ON)
- 3385 FRENCH GUIANA, RFO Cayenne, 9/4, 0655-0720 in FR w/tlc, IDs, fair. (Bobb-MN)
- 3385p LESSER SUNDAS, RRI Kupang, 17/3, 1505-1511* w/Jak relay to sudden off 1511 w/o anmts or NA. Fair w/o PNG. (Atkins-WA)
- 3385 NEW BRITAIN, R. East New Britain, 1/4, 0745+ w/rel choral mx. No audio on other PNG outlets. (Clark-ON) 17/3, 0750 w/powerhouse sig, S9 sig w/perfect copy. Kids pgm. (Atkins-WA) 1/4, 0805-0835 w/PD tlc, choral mx, other PNGs not as loud or on as long. (Ross-ON) 18/3, 0945 in PD w/rel pgm, ute wrecked it but wait for ute to be off. (Howell-CA) 18/3, 1142-1201 w/EG rel mx, ID 1155. SIO=454. (Streitmatter)
- 3394.8 SUMATRA, RRI Tanjungkarang, 1/4, 1107 w/Qur'an, rel tlc, the PNG much weaker. (Clark-ON) 1/4, 1108-1119 fair but tent w/Qur'an mixing w/PNG, strings/flutes, trad mx, bad QRN 1119, best on LSB. (Ross-ON)
- 3395 ECUADOR, R. Zaracay, 5/4, 1013-1025 w/ID, TC, Andean mx, tlc, fair. (Bobb-MN)
- 3550.3 CLANDESTINE, R. Venceremos, 18/3, 0143-0205 w/non-stop LAM mx, ID, tlc 0200 //6340.lv. (Alexander-PA)
- 3607.5 JAPAN, NHK (Tokyo?) 10/3, 1122 w/JP tlc by YL, mx bridge, OM tlc, fair in USB. Poss. NHK Osaka carrier & threshold audio same time on 3377.5. (Clark-ON)
- 3900t CHINA, Hulunbei'er PBS poor w/tlc & QRM, very weak on 14/3, 1040 in CH. (Park-HI)
- 3925 JAPAN, R. Tanpa, 10/3, 1035-1105 in JP w/tlc by W, brief spots of JP pops, tone 1100, poss. nx //6055, 9595. (Alexander-PA)
- 3940 CHINA, Hubei 1, 25/3, 1134 w/operatic vcl in CH. Poor-fair No sign of Hong Kong wx broadcasts. (Clark-ON)
- 3945 BALI, RRI Denpasar, 17/3, 1450-1502 w/poss. sports rpt, ID 1459, SCI, Jak nx //3385 Kupang. Fair-good. (Atkins-WA)
- 3970 CAMEROON, R. Buea, 25/3, 0440-0501 w/choral mx, FR tlc, poor w/ARO QRM. (Moore-MI) 31/3, 2245-2305* w/Afro pops, clx mx, instls, ID 2301 plus ment. Buea. ham QRM to s/off. (Ross-ON)
- 3985.8p IRIAN JAYA, RRI Manokwari, 31/3, 1147-1159 poor-fair w/IN vcls, YL tlc, bad ham QRM, poss. ID, SCI. (Ross-ON)
- 4000 CAMEROON, R. Bafoussam, 25/3, 0436-0504 w/rel mx, FR tlc, poss. sermon or prayers. ID 0503. Fair w/some ham QRM. (Moore-MI)
- 4001p SUMATRA, RRI Padang, 12/3, 1435 w/EZL mx, tlc in IN, gone by 1450. (Howell-CA)

- 4040 ARMENIA, Yerevan, 27/3, 0248 w/Mayak pgm //4930. WRTH says 4040 carries lcl pgm at this time. (Johnson-MD)
- 4040p ASIATIC RSFSR, Vladivostok, 28/3, 1038-1112 w/non-stop tlk in RS, no TP or ID at hour, fair. (Moore-MI) How did you two determine these were Yerevan & Vladivostok respectively?
- 4055 USSR, 3rd pgm, 2/3, 0300 s/on w/anmt, piano concerto, no IS or ID despite several rechecks but RS tlk. (Johnson-MD)
- 4118.1t BRAZIL, Rf. Sena Madureira, 1/4, 1027-1040, ballads in prob. PT. Very poor. (Moore-MI)
- 4238.3 PERU, R. Inca del Peru, 27/3, 1056-1103 w/Cajamarca area ads, ID, fair w/occ. ute QRM. (Moore-MI)
- 4465 WEST GERMANY, RFE/RL in LSB (feeder), 19/3, 0306 w/tlk. (Johnston-KY)
- 4607 IRIAN JAYA, RRI Serui, 1/4, 1146-1205 w/EZL instls, anmt 1204, back to mx. Good. Also hrd Indos on 4719, 4874, 5055. (Moore-MI)
- 4681p BOLIVIA, R. Paititi, 1/4, 0041-0202 w/romantic mx, anmts. Too poor to pick out more than occ. words. Other Bolivians on 3473, 4600, 4649. (Moore-MI)
- 4719.3 SULAWESI, RRI Ujung Pandang, 31/3, 1126-1135 fair w/Indo vcels under a ute. Flute mx, ID, tlk over mx. Sig peaked nicely while YL tlk 1130-33. (Ross-ON)
- 4725 MYANMAR, Voice of Myanmar, 25/3, 1140-1150 in EG w/ID, then into lang & IS. (Streitmatter-IN)
- 4740 USSR, R. Afghanistan Relay, 11/3, *0125-0140 w/flute IS, anthem 0127, tlk in lang 0130. ME chanting. (Alexander-PA) 14/3, 0130 s/on //4975 w/IS, anthem. Tnx Sheedy & FT. (Johnson-MD) 3/3, 0137 in poss. AR w/Qur'an, signal lost 0149. (Leibowitz-NY)
- 4753.5 SULAWESI, RRI Ujung Pandang, 23/3, 1302-1405 w/nx, mx, tlk & ID, fair. My 1st Indonesian! (Barhydt-OR) Congratulations!
- 4760t ANDAMAN ISLANDS, AIR Port Blair, 1/4, 1150-1205 poor w/s/on w/no IS, subcont. mx, vcels, bits & pieces breaking through. Over the CH station at times. Seasonal propagation favors Port Blair, not Leh but no ID so no cigar! (Ross-ON) 11/3 virtually certain Pt. Blair at 1205 w/subcont. chants, vcels, mixing equally w/CH station. Tlk 1210. On 1/4, 1155 Hindi mx, fair but quick fade. This consistent w/rpt from Karl Forth, who hrd them while in Singapore, opening at 1200 in February. (Clark-ON)
- 4760 LIBERIA, ELWA, 13/3, 0620 in EG w/rel pgm (Johnston-KY)
- 4774.8 JAVA, RRI Jakarta, 1/4, 1401-1444 w/mx, poss. radio play, cow mooing sound effects, good. (Barhydt-OR) Your 2nd Indol!
- 4789.7 PERU, R. Atlantida, 3/3, 0149 w/tlk, mx, ID. (Leibowitz-NY)
- 4790.1 PERU, R. Atlantida, 21/3, 0332-0405 w/mx, sev. IDs, mx, poor sig. (Barhydt-OR)
- 4795p CAMEROON, R. Douala, 25/3, 0443-0505 w/hilife mx, OM tlk in FR, good. (Moore-MI) 31/3, 2237 hilife mx, FR tlk btwn 2 M ute QRM, ID. 2309 canned IDs, anmts in FR/EG, 2310 NA and s/off. (Johnson-MD)
- 4800 GUATEMALA, R. Buenas Nuevas, 29/3, 0324-0334* in SP w/EZL instls, ID 0331, anmts, brief instls. SIO=342. (D'Angelo-PA)
- 4810 SOUTH AFRICA, R. RSA, 10/3, 0350 in AK w/tlk, mx. (Klinck-NY)
- 4815 BURKINA FASO, RTV Burkina, 8/3, 2300 in FR w/tlk, ID, lcl mx. (Klinck-NY)
- 4815 CHINA, R. Beijing via Togtoh per FWBR (& IIG says Hohhot--sp) 29/3, 1547 in RS w/tlk, s/off anmt 1654, theme mx //4883. (Park-HI) Dale says atlas puts Togtoh near Hohhot so I guess both FWBR and IIG are right--sp.
- 4820.8 PERU, R. Atahualpa, 18/3, 0840-0905 w/anmts, TCs, ID, echo anmts, ads, jingles. Disappointed to hear US rap mx here. Tried to vindicate themselves by also playing LAM mx, SP pops & Andean mx. (Alexander-PA) 18/3, 0853 w/LAM & US pops, TCs, ID. (Howell-CA)
- 4824.5 PERU, LV de la Selva, 8/3, 1028 w/tlk, ads, rooster crows, IDs. (Johnston-KY)
- 4825 GUATEMALA, R. Mam, 10/3, 0435-0613 in lang, played same group of songs over and over! Fair. (Barhydt-OR)

- 4830 BOTSWANA, R. Botswana, 13/3, *0356-0420 in Setswana/EG w/farm animal IS, 0400 anthem, ID, anmts, rel tlk & hymns. SIO=343. (D'Angelo-PA) 11/3, *0357-0500 w/anmts, FC, rel hymns w/Afr. words & rhythms. (Renfrew-NY) 10/3, 0358 in lang w/singing & tlk. SIO=444. (Levison-PA) 12/3, 0450 in EG/Setswana w/lcl mx, ID, nx in Setswana & then in EG. (Klinck-NY)
- 4835 MALI, RTV Malienne, 2/3, 0606 in AR w/chanting //5995, 4783, fair sig. (Royston-HI) You're sure getting some good loggings of Africa there in Hawaii!--sp. 13/3, 0629 in FR w/tlk & AR-like mx. (Johnston-KY) 16/3, 2129 in FR w/ID, tlk in FR. (Klinck-NY)
- 4840 PERU, R. Andahuaylas, 23/3, 0201-0238 w/flashy IDs, QTH & freq. refs, ballads, upbeat mx, fair sig. (Jordan-PA)
- 4840.4 VENEZUELA, R. Valera, 23/3, 0224-0306 w/mx, many IDs, TC, fair sig. (Barhydt-OR)
- 4844 GUATEMALA, R. K'ekchi', 31/3, 0220 w/anmts, mx, ID, s/off anmt 0302. (Forth-IL)
- 4845 MAURITANIA, ORTM, 5/3, 0635-0701 in AR w/Qur'an, ID 0700, poor-fair. (Royston-HI)
- 4860 INDIA, AIR Delhi, 26/3, 1553-1557 in EG w/nx abt India, poor sig. (Royston-HI)
- 4865 COLOMBIA, LV del Cinaruco, 12/3, 0715 //4945 w/election results. (Johnston-KY) 11/4, 0844-0908 w/mostly ballads, freq. IDs, Caracol ID 0906, good sig. (Field-PA)
- 4866.5 IRIAN JAYA, RRI Wamena presumed move from 4871. 1/4, 1120 fair w/native vcls, EZL EG tune, weak 1137. Same time Sorong 4874.6 in at armchair level w/C&W mx. (Clark-ON)
- 4870 BENIN, ORTB, 2/3, 0617-0631 in FR w/tlk by M, drums 0630, more tlk, poor sig. (Royston-HI) 16/3, 2129 in FR w/ID, anmts, lcl mx. (Klinck-NY)
- 4871p IRIAN JAYA, RRI Wamena, 17/3, 0859-0920 w/drums, ME sounding mx, tlk in IN, super sig but no ID. (Atkins-WA)
- 4874.6 IRIAN JAYA, RRI Sorong, 8/4, 1040-1135 in IN except EG at 1100-1135, pgm abt development in Indonesia. QRM from ute 1114 and on and off. Anncr said goodbye in EG 1129, then mx, more ute QRM. Strong & clear but hard to understand. (Duan-ON) 1/4, 1126-1135 best ever hrd. EG pops. Serui & others also good. RTTY QRM. ID 1130. Sig so strong I left them to look for others. (Ross-ON)
- 4875.6p BOLIVIA, R. La Cruz del Sur, 27/3, 1043-1053 in Indian lang w/YL tlk in SP later. Hymn-like Andean mx, poor & fading fast. (Moore-MI)
- 4885 COLOMBIA, Ondas del Meta, 23/3, 0110-0130+ w/clear echo ID, pops, rapid-fire tlk, nx, sev. anmts. (Jordan-PA)
- 4899.9 GUINEA, RTV Guineenne, 4/3, 2355-0001* w/Afr. folk mx, FR ID by W. Instl NA 0000. (Alexander-PA)
- 4904.7 CHAD, Rdf. Nat. Tchadienne, 23/3, *0430-0446 in FR w/mx, poor sig. (Barhydt-OR) 25/3, 0440-0510 w/mx, discussions, ID 0502, poor. (Royston-HI) 25/3, 0445 w/hilife mx, ID, chit-chat, best this year. SIO=555. (Klinck-NY)
- 4910 HONDURAS, LV de la Mosquitia, 4/3, 0215-0300* in EG w/rel tlk. SP & Miskito anmts. (Jordan-PA)
- 4915 BRAZIL, R. Anhanguera, 10/3, 2330 w/ID, TC, soft pop mx. Anmts by M. (Prath-FL) 31/3, 2352 canned IDs, into mx. Nice sig. (Johnson-MD)
- 4915 COLOMBIA, Armonias del Caqueta, 31/3, 0105-0150 w/ID, QTH, brief tlks, pop mx, ads, IDs, fair sig. (Jordan-PA)
- 4915 GHANA, GBC-1, 13/3, 0529 in EG w/NA, ID. (Johnston-KY)
- 4920 ECUADOR, R. Quito, 21/3, 0416-0438 in SP w/mx, ads for Banco Central & El Comercio, fair. (Barhydt-OR)
- 4924.6 GUATEMALA, R. Mam, 10/3, 0505-0605 w/several tunes repeated sev. times--a test? tlk in some SP, ID and off. (Renfrew-NY)
- 4925 RIO MUNI, RN Bata, 10/3, 2150-2201* w/hilife mx, SP tlk, ID, s/off anmts, long NA. SIO=2+52+ (D'Angelo-PA)
- 4931.9v JAVA, RRI Surakarta, 11/3, 2220 w/mx, anmt to 2225* Very weak. Hrd them earlier in season 2210-2215 after Jak nx. That does it for afternoon Indos until September. (Clark-ON)
- 4934 KENYA, Voice of Kenya, 25/3, 0250-0316 in EG w/pop mx, ID 0300, mx. (Kohlbrenner-PA)

- 4940 COTE D'IVOIRE, RTV Ivoirienne, 2/3, 0641-0703 in FR w/ pop-type mx, FR anmts, ID 0700, fair. (Royston-HI) 11/3, 2145-0001* in FR w/pops/ballads. Afr. pops, clx mx, W anncr, very good, //7215. Yesterday only hrd Russian here w/clx piano mx. S/off with NA. (Alexander-PA)
- 4940 UKRAINE, Kiev, 11/3, 0413-0430 in RS w/tlk, pop mx, flute type IS 0414 //6020. Also hrd 2214 w/flute IS & clx piano mx under Cote d'Ivoire.
- 4945 COLOMBIA, Caracol Neiva/Bogota, 12/3, 0716. (Johnston-KY)
- 4955 BRAZIL, R. Cultura Campos, 1/4, 0845-0910 w/15-minute ad, promo & ID string, tlks, voice overs, guitar/brass pop mx, fair. (Jordan-PA)
- 4955 BRAZIL, R. Marajoara, 8/3, 0923 w/ID, EZL mx, tlk. (Johnston-KY)
- 4960.9 ECUADOR, R. Federacion, 10/3, 0055-0100* w/tlk in lang, HC mx, s/off w/march mx. (Alexander-PA) 31/3, 0045-0100* w/mx, ID, QTH in SP, martial NA 0058. (Jordan-PA)
- 4970 CHINA, Xinjiang PBS, 1/4, 1206-1210 w/tlk in Kazakh, //5440 both fair. (Moore-MI) 4/3, 1220, //5440. No sign of RTM-Kota Kinabalu which was all alone here 3/3. Also hrd separate Xinjiang pgm 5060 //4220. (Clark-ON)
- 4975 COLOMBIA, Ondas del Orteguzaza, 11/3, 0012-0028* w/nx, ads, ID, s/off anmt, partial vcl. SIO=353. (D'Angelo-PA) 8/3, 1100 w/anmts, TCs, etc. (Johnston-KY)
- 4976 UGANDA, R. Uganda, 26/3, 0403-0422 in EG w/nx, ID 0409 pgm preview, anmts, ID 0415, lcl items. (D'Angelo-PA)
- 4991 PERU, R. Ancaah, 24/3, 0635-0652 w/OA vcls, lively chatter, IDs, TCs, SIO=2+52+ (D'Angelo-PA)
- 4995 MONGOLIA, Ulaan Bataar HS, 13/3, 1553 in pres. Mongolian, tlk w/weird modulation. 1557 NA //7263.6. QRM from WWVH. (Park-HI)
- 4995.8 PERU, R. Andina, 8/3, 0948-1008 w/mx, ID 0957, song by Antonio Ramos? (Kohlbrenner-PA)
- 5004t RIO MUNI, RN Bata, poor on 21/3, 0504 w/Afr. mx, best in LSB to avoid WWVH QRM. (Park-HI) 24/3, 0523-0532 w/tlks in SP, folk mx, ID 0523, WWVH QRM made this difficult. Poor. Royston-HI Another great catch--sp.
- 5004 USSR, RID, 28/3, 1125-1129 w/time pips. (Moore-MI)
- 5005 SARAWAK, RTM Sibn, 18/3, 1450-1502 w/EZL mx, s/off routine, site ID in pres. Iban, NA, very good sig. Also could hear Nepal & RID. (Atkins-WA)
- 5005 NEPAL, R. Nepal, 26/3, 1620-1628 in Nepali, mx & tlk by W, 773230. WWVH QRM. (Royston-HI) 4/4, 1652 w/tlk, CH-style mx w/Indian singing, tent ID 1700. (Park-HI)
- 5015 BRAZIL, R. Pioneira, 2/3, 0133-0237 w/vcls, occ. IDs, TC, fair sig. (Rugg-PQ) 1/4, 0152 ID, mx through hour, TC over mx. 0202 canned ID w/FC. (Johnson-MD) 13/3, 0800 w/mx, tlk, TCs. (Johnston-KY)
- 5015 CLANDESTINE, R. Truth, 13/3, 0420-0442 w/cmtry in lang, bird IS, EG ID, nx, anti-Zimbabwe govt tlk. Noisy. (D'Angelo-PA)
- 5015.4 PERU, Estacion Tarapoto, 17/3, 1015-1105 w/lcl mx, vcls, ment. Tarapoto but no ID. (Forth-IL)
- 5020 NIGER, LV du Sahel, 15/3, 0529 in FR w/NA, flute IS, ID, Qur'an (Johnston-KY) 28/3, 0533-0601 w/tribal chant, 4 TP 0600, ID, flute/drum IS. (Streitmatter-IN) 23/3, 0537 w/folk mx, OM anncr, poor. (Royston-HI) 9/3, 0540 w/lcl mx, ID. (Klinck-NY) Also 21/3, 0545 (Klinck-NY)
- 5020 SOLOMON ISLANDS, SIBC, 18/3, 0715-0730 w/island mx, TC, sig rose from poor-superb in 15 min. Rel mx, ID, nx, ads ("10-Min. Meal. . . goes perfect with meat, taro root or vegetable") (Atkins-WA) 13/3, 0814-0905 EG econ pgm, messages (Barhydt)
- 5023t BHUTAN, BBS, 21/3, tent w/lang tlk, flutes. (Moore-MI) 17/3, 1406 w/Asian pops, CW QRM, ment. Bhutan, EG ID 1414 (Atkins)
- 5030 ECUADOR, R. Catolica Nac., 22/3, 0253 tlk btwn songs, poor. (Barhydt-OR)
- 5030 TONGA, TBC, 17/3, 0600-0710 good w/ads, wx, ID, island mx. 18/3 w/Qur'an, sermons. Usually not on Sundays. (Atkins-WA)
- 5035 BRAZIL, R. Ed. Rural, 24/3, 1000 w/NA, ID, pops. (Moore-MI)
- 5052 SINGAPORE, SBC, 9/3, 1513 EG rock mx (Barhydt-OR)
- 5286.2 CHAD, R. Moundou, 0458-0558 FR NA, chorus, drums (Johnston, Alexander) Just enough room to say thanks! Good DX!!--sp.

International Band Loggings

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



5900-30000 MHZ

- 5990 ROMANIA RRI Bucharest in EG 0240, tlk on democracy in Romania (Carson OK 3/30)
5995 ZAIRE LV de Zaire in FR/Vern 0635, relig tlk, ID, IS, nx (Streitmatter IN 3/28)
6000 BRAZIL R. Guaiba in PT 0748, BR ballads & pops, ID, //11785 (Alexander PA 3/31)
6015 TANZANIA VOT Zanzibar in SHZ 0331, tlks w/ment of capitol, ID (Royston HI 3/22)
6025 PARAGUAY R Nacional in SP 0914, folk mx, p, //9735 exc (Moore MI 4/1)
6025 NIGERIA R Nigeria in Vern 0405, nx w/ ments of Nigeria (Howell CA 3/4)
60352 COLOMBIA LV del Guaviare in SP 2332, tlk, mx, several ID's (Kohlbrener PA 3/12)
6040nf? URUGUAY R Libertad Sport in SP 2348, trop mx, complete ID, QTH (Moore MI 4/1)
6060 ARGENTINA R Nacional in SP 0501, tlks, several ID's, p (Barhydt OR 3/19)
6065 SWEDEN RS in SW 0510, press review, //15390 both g (Wood HI 3/2)
6070 CANADA CFRX Toronto in EG 0805, hockey scores, wx rpt, ID's, f (Royston HI 3/11)
60788 BOLIVIA R San Gabriel in Aymara(p) & SP 0014, Andean mx, ID, TC (Moore MI 4/1)
6085 CANADA Deut. Welle relay in EG 0312, tourist feature on Germany, g (Carson 3/26)
6085 WEST GERMANY Bayerischer Rundfunk in GM 0230-0400, mx, ID's (Klinck NY, Royston)
60883v NIGERIA RN Kaduna in Vern 2155-2301*, lcl tribal mx, chants, ID (Alexander 3/17)
6095 MOROCCO VOA relay Tangier in EG 0608, nx rpts, ID, mx (Royston HI 3/24)
60986 NICARAGUA LV de Nicaragua in SP 0754, SP pops, ID's, ex-6001? (Alexander 3/18)
6115 MEXICO R Universidad de Sonora in SP *1300, NA, freqs, ID, mx (D'Angelo TX 3/20)
6135v BOLIVIA R Santa Cruz in SP *0900, freqs, addr, ID's after each song (Moore 4/1)
6280 LEBANON King of Hope in AR 0400, inspirational mx, ID, freq, NA (Johnson MD 3/3)
65495 LEBANON V of Lebanon in EG 0220, lcl nx, ID, into AR 0230 (Kohlbrener PA 3/25)
7125 ITALY AWR in EG 0633, "Mailbag" & "DX Corner" (Renfrew NY 3/18)
7145 POLAND RP in PO 0512, tlk on Solidarity, //6095, 7285, 9525 (Wood HI 3/2)
7150 UNITED KINGDOM BBC London in EG 0613, nx, ID, TC, lcl nx, f (Royston HI 3/23)
7205 GREECE VOA relay Kavalla in EG 0230, cntry on imports (Klinck NY 3/25)
7205 CYPRUS Cyprus B/C Corp in GK 2212, IS, ID, conversation (Klinck NY 4/8)
7215 YUGOSLAVIA RY in EG *2200, ID, nx, cntry on E Bloc reforms (Prath FL 3/10)
7240nf? AUSTRALIA RA in EG 1120, mx pgm, "Matters of Faith", f-g (Forth SINGAPORE? 3/17)
ED: My long range logging register shows RA was last on this freq in 1980.
7245 PORTUGAL R. Free Europe in CZ 0446, tlk, //9725 f (Barhydt OR 3/15)
7255 NIGERIA V of Nigeria in EG 0502, pgm review, "Reflections", g (Carson OK 4/1)
7270 POLAND RP in EG 2250, rpt re Soviet military in Poland (Prath FL 3/10) in EG 2248 w/ cntry on Nazi war criminals trials, econ rpt, ID, IS (Cichorek NJ 3/17)
7270 SOUTH AFRICA RSA in EG/PT 0429, ID in EG, into PT w/nx, g (Carson OK 3/21)
7376usb COSTA RICA R for Peace Intl in EG 0432, interview, "World of Radio" (Price VA)
In EG 0435, pgm re women, hrd carrier only from 0448, g (Carson OK 4/1)
7400 USSR R. Yerevan Armenia in EG/AR 0330, class mx, nx in both lang (Levison PA)
7412 INDIA AIR in EG 2205, nx, cntry, ID, //11620 (Karcheaki MA, Prath FL 3/24)
74176 VIETNAM VoV Hanoi ending pgm in Lao 1425, 3 min silence then into CH 1430, ID, //9732 barely audible but readable (Treibel WA 4/5)
7475 TUNISIA RTVT in AR 0541, folk mx, annmts, ID, //12005, 17610 (Royston HI 3/2)
8450 CHINA R. Beijing in Lao(p) 1440, hrd //7195 but very weak (Treibel WA 4/5)
8492 BRAZIL PPR Time Sta w/pipe *2125-2130*, 60th pip sustained, no ID (Renfrew NY)
9263 ICELAND ISBS in IC 2314-2333*, tlk, annmts, //13855, 11418 (Alexander PA 3/31)
9425 GREECE VoG in SP 2340, ID, into nx pgm (Prath FL 3/31)
9475 EGYPT R. Cairo in EG 0207, Q & A pgm on agriculture, vocals (Cichorek NJ 3/18)
9510 ROMANIA RRI in SP *0000, ID "Aqui R. Romania Internacional", nx (Prath FL 3/31)
9635 PORTUGAL RP in PT 0230*, choral anthem at s/off (Wood HI 3/2)
9705 SAUDI ARABIA BSKSA in EG 1902, soft rock vocals, ID, mx, tlk (D'Angelo PA 3/10)
97197 ANGOLA RN de Angola in PT 0545, Hi-Life mx, tlk (Johnston KY 3/12)
9725 COSTA RICA AWR in EG/SP 0055, relig pgm in EG, SP sked & pgm 0104 (Forth 3/15)
9770 PHILIPPINE IS VOA relay in EG 2240, "Words & Their Stories" (Prath FL 3/17)
9810 SWITZERLAND SRI in IT 2320, answering tech questions from listeners (Prath 3/10)
9815usb ITALY IRRS in multi-lang 0615-0746*, relig pgms, ID in EG, address, Sunday only
"Midnight Cry" (Alexander PA 3/18, Kohlbrener PA 3/18) ED: New freq & time?
9860 ITALY IRRS in EG 0722, mailbag, "Perspective & Scope", ID, addr (Carson OK 4/1)

9875 AUSTRIA RAI in EG 0134, Greta Garbo's films, "Postbox", g (Carson OK 3/26)
 9885 SWITZERLAND SRI in EG 0405, nx followed by "Dateline" (Grenier CA 4/3)
 9885 SWITZERLAND Red Cross BS in EG *0308, ID, rpt on RC activities (Forth 3/2)
 9885 SAUDI ARABIA BSKSA in AR 2215, AR mx, ID, brief tlk, more mx (Prath FL 3/17)
 9900 EGYPT R. Cairo in EG 2130, nx, terrible modulation as usual (Klinck NY 4/1)
 9930nf? BELGIUM BRT in EG 2330, nx, press review (Price VA 4/2) ED: Move from 9925?
 11550 TUNISIA RTVT in AR 2150, AR mx and anncts (Klinck NY 4/1)
 11590 CHINA VO the Strait Fuzhou Haixia-1 in CH 1700, pips, CH mx, //7285 barely
 readable (Treibel WA 3/18) ED: 11590 listed as inactive WRTX 1990. Not so now.
 11600 CHINA R. Beijing in EG 1305, nx, cmntry, mx, //11660 (Prath FL 3/31)
 11605 ISRAEL Kol Israel in EG 2145, tlk on terrorism (Klinck NY) in EG 2310, mailbag
 pgm, nx (Carson OK 3/25) in EG 0105, tlk on Israeli politics, ID (Price VA 3/18)
 11620 INDIA AIR in EG 2110-2210, "Producer's Choice", mx, political discn, ID, "Quiz
 Time", nx (Forth 3/31, Klinck NY 4/1, Kohlbrenner PA 3/24)
 11645 GREECE VoG in EG 0346, activities of GK Communist party, ID (Carson OK 3/28)
 11680 BULGARIA R. Sofia in EG 2220, tlk re EG relig folklore, into FR 2230 (Prath FL)
 In FR *0100, pgm directed to the Americas, annct 25 & 19 mbs (Wood HI 3/2)
 11705 SWEDEN R Sweden in SW 0300, nx, ID (Wood HI 3/2)
 11715 INDIA AIR in EG 2200, nx, cmntry, ID's, exc (Klinck NY 4/1)
 11720 IRAQ R Baghdad in EG 2106, NA, ID, freqs, tlks on Qu'ran, nx (Jordan PA 3/18)
 11720 BULGARIA R. Sofia in EG 0338, nx, press review, exc (Carson OK 3/30)
 11725 VATICAN STATE RV in FR *0247, IS chimes, xmsn to WCNA, g (Wood HI 3/2)
 11730nf? YUGOSLAVIA RY in EG *0100, nx re Lebanon civil war, g (Wood HI 3/2)
 11734 TANZANIA R. Zanzibar in SH 1800, nx, mx, anncts at 1830 s/off (Renfrew NY)
 In SH 1740, tlk, AR-like mx, African drum mx (Howell CA 3/13)
 11735 YUGOSLAVIA RY in FR/EG 0030, nx & cmntry, f-g, //6005 (Carson OK 3/24)
 11740 VATICAN STATE RV in EG 0615, '4 voices on Teresa of Avila', IS, into IT 0620,
 'Orizonti Cristiani', //6248, 9645 all g (Wood HI 3/2)
 11755 FINLAND RF in FN 0105, 'untiset' (nx), g (Wood HI 3/2)
 11760 COOK ISLANDS RCI in Maori 0931, pop/rock mx, ID, ads (Howell CA 3/18)
 11780 BRAZIL RN de Amazonia in PT 2132, ID, tlks, BR pop mx, g (D'Angelo PA 3/24)0
 11785 EAST GERMANY R. Berlin Int. in EG 0435, "Faces & Places", f (Carson OK 3/21)
 11805 BRAZIL R. Globo in PT 0045, ads, mx, ID's (Johnston KY 3/11)
 11830 BRAZIL R. Anhanguera in PT 0720, tlk, ID's, mx (Johnston KY 3/13)
 11835 GABON R. Japan relay in EG 2318, cmntry re E Eur developmt, g (Carson OK 3/26)
 11850 PHILIPPINE IS. FEBC in EG 1015, religious pgm, ID (Klinck NY 3/25)
 11870 INDIA AIR in EG 0245, world & home nx, promo, tennis, g (Wood HI 3/2)
 11885 SPAIN R. Liberty relay in RS 0240, remote rpt, ID, nx 0300 (Forth 3/28)
 11915 BRAZIL R. Gaucha ("Gow-oo-sha") in PT 0729, mx, ID (Johnston KY 3/13)
 11925 NORWAY RNI in NO 0125, tlk on Televerket (PTT Administration), g (Wood HI 3/2)
 11930nf? AUSTRALIA RA in EG 0706, world & Australian nx, mx w/B. Seaver (Carson OK 3/30)
 11940 ROMANIA RRI in EG 0400, nx, press review, mx (Carson OK 4/1, Levison PA 3/18)
 11940 LESOTHO BBC relay in EG 0500, ID, African nx (Klinck NY 3/21)
 11970 PORTUGAL R. Liberty in RS 0600, IS, ID "Govorit R Svoboda", nx(Johnston KY 3/25)
 11990 CZECHOSLOVAKIA R. Prague in EG 0330, cmntry, interview (Carson OK, Levison PA)
 12010nf? BELGIUM BRT in EG 2210, DX items, folk mx, cmntry, f (Levison PA 3/17) in EG
 2330, IS, ID, s/on w/"Brussels Calling", heavy QRM (Prath FL 3/25)
 12010 AUSTRIA RAI in EG 1945, mailbag pgm, //13730 (Prath FL 3/25)
 12025 MONGOLIA R. Ulan Bator in EG *1200-1230*, IS hrd a second or so after R. Moscow
 IS and s/on anncts, ID?, tlks, instrumentals & vocals, bad QRM (Jordan PA 3/23)
 12035 SWITZERLAND SRI in PT 2211, IS, ID, freqs, g (Carson OK 4/4) in EG 0216, end of
 "Dateline Saturday", "Shortwave Merry-go-Round", f (Royston HI 3/11)
 12085 SYRIA R. Damascus in EG 2010, nx, ID, AR mx (Prath FL 3/25)
 13610 KUWAIT RK in EG 1800-2100, nx, rock mx, classics, interview (Bader 3/26)
 13660v COSTA RICA R for Peace Intl in EG 0215, "Caribbean Echo", UN rpt (Price VA 4/5)
 13660nf? UNITED KINGDOM BBC London in AR 1220, tlks, recitations, AR mx, ID's (Jordan PA)
 13675 BELGIUM BRT in EG 0900, ID, nx, exc reception (Klinck NY 4/2)
 13700 NETHERLANDS RN Flevo in DT 2215, sports nx and scores, //6020 (Prath FL 3/11)
 13700nf? AUSTRALIA RA in EG 0515, tlk re missiles in Israel (Grenier CA, Johnston KY)
 13715 CZECHOSLOVAKIA R. Prague in multi-lang *2300, ID, "Inter-Pgm",nx (Prath FL 3/11)
 13740nf? AUSTRALIA RA in EG 1740, mx sels, vocals, rpt, interview (Jordan PA 3/31)
 13745nf? USA WGSN Scotts Corner, ME in EG 1715-1755*, nx, ID, freqs (Treibel WA 4/17)
 13780 WEST GERMANY Deut Welle in GM 2245, lite ezl mx, anncts, //6075 (Prath FL 3/11)
 141977usb KIRIBATI R Kiribati in EG 0600, R. Australia nx, UN pgm (Atkins WA 3/17) in EG
 0618, tlk, several country mx tunes, discussion on care of Kiribati's elderly, p
 (Kohlbrenner PA 3/18) in Kiribati 0900, nx, local mx (Klinck NY 4/2)

15030 CHINA CPBS2 Beijing in EG 0650, EG lesson, 6 pips, ID, mx (Johnston KY 3/12)
15040nf? BANGLADESH RB in EG 1900*, mx, Press Review, ID, freqs (Kohlbrener PA 3/24)
15055nf GUAM TWR Agana in IN 2315-2328*, ID, move from 15420? (Treibel WA 4/3)
15095 SYRIA R. Damascus in EG 2118, nx, mx, Syrian Press Review (Kohlbrener PA 3/15)
15110 INDIA AIR in EG 0105-0115*, mx, ID's, freqs, severe QRM D.Welle (Klinck NY 4/3)
15110 CZECHOSLOVAKIA R. Prague in EG 1802, "Farmer's Corner", f (Kohlbrener PA 3/19)
15180 NORWAY R Denmark relay in DN 2159, ID in EG, nx, "Listener's Corner" (Forth 4/1)
15180 USSR R Vilnius (Komsomolsk) in EG 2300, "Dawn of Democracy" (Wolfson 3/12)
15185 FINLAND RF in FN 0520, wx rpt (Wood HI) in EG 2310, "Compass North" (Prath FL)
15220 HUNGARY R. Budapest in HG 2230, IS, ID, nx, //9835 (Prath FL 3/10)
15225 NORWAY RNI in EG (Sun only) *0000, IS, ID, nx (Johnston KY 3/26)
15230 SOUTH AFRICA RSA in EG 1805, nx, cmntry, ID (Klinck NY 3/22)
15235 LIBYA R. Jamahiriya in AR 1812, AR mx, ID's (Klinck NY 3/22)
15245 CYPRUS BBC relay in EG 0658, pgm review, ID, IS, world nx, p (Royston HI 3/10)
15250 ROMANIA RRI in EG 0704, nx, ID, mx, freqs, ancmts, //15335, f (Royston HI 3/10)
15295 MALAYSIA Voice of Malaysia in Malay 1000, ID, tlk, mx (Klinck NY 3/16)
15320 NORWAY R Denmark relay in DN 2350, tlk, IS, EG ID (Howell CA) 15325 per LN April
15325 YUGOSLAVIA RY in EG 1259, IS, ID, freqs, akeda, nx abt reforms, f (Cichorek NJ)
15395 SPAIN REE in EG 1935, "Sunday DX Spot" w/tips, tlks, //15375 (Prath FL 3/11)
15425 AUSTRALIA ABC Perth in EG 0700, ID, nx, g (Royston HI 3/8)
15425 MALTA Deut Welle relay in PT 2255, tlks, ID, freqs, nx, //15105 (Prath FL 3/4)
15475 GABON Africa #1 in FR 1717, DJ w/rock'n roll, cigarette ads (Howell CA 3/10)
15525 SWITZERLAND SRI in GM 1856, IS, nx, extreme QRM from R Moscow in FR (Carson OK)
15560nf AUSTRALIA RA in EG 0420, International rpt re govt in Israel (Grenier CA 3/12)
15605 PAKISTAN RP in EG 1600, nx, cmntry on younger generation, mx (Jordan PA 3/21)
15780 ICELAND ISBS in IC 1938, tlk, //15767 also hrd (Howell CA 3/4)
17550 GREECE VoG in EG 1238, nx re Yugoslavia, ID 1242 (Wolfson 3/23)
17680 NEW ZEALAND RNZ in EG 0242, rugby match (Carson OK) in Maori 0515 (Grenier CA)
17705nf CHINA R. Beijing (relay?) in EG 0040, mailbag, IS, ID, CH 0100 (Treibel WA 4/2)
17725 PORTUGAL R Free Europe in EG 1800, ID, nx, speech w/crowd noise (Forth 3/11)
17805nf SPAIN RNE in SP 0305, ID, //11880 also hrd, f-g (Treibel WA 3/30)
17865 UNITED ARAB EMIRATES UAER Dubai in AR 1430, Koran prayers, //21605 (Howell CA)
17880 SWEDEN R Sweden in FR 1500, tlk, ID, //21655 also hrd (Johnston KY 4/3)
21465 EAST GERMANY R Berlin Int in EG 1145, "Give Peace a Chance" (Prath FL 3/31)
In HD 0725, IS, p, //11970 also hrd (Johnston KY 3/25)
21470 CYPRUS BBC relay in EG 0754, tlk on UK textile export mkt, ID, nx (Royston 3/10)
21495 PORTUGAL RPI in PT 2014, soccer match (Howell CA 3/14) in PT 1935, pop & rock mx spot & full ID's, xmsn targets, futbol match, exc (Jordan PA 3/31)
21500nf SWEDEN R Sweden in EG 1530 after pgm in FR, nx, IS, ID (Treibel WA 4/19)
21505 CZECHOSLOVAKIA R Prague in EG 1805, "Made in Czechoslovakia", CZ mx (Prath 3/10)
21525 AUSTRALIA RA in EG 0542, "Art Rounabout", ID 0545, f (Royston HI 3/24)
21560 SRI LANKA D Welle relay in GM 1800, IS, ID, freqs, nx, //17860 (Prath FL 3/10)
21605 UNITED ARAB EMIRATES UAER Dubai in EG/AR 1629, mx, ID, nx, g (Carson OK 4/1)
25740 WEST GERMANY D Welle in GM 1220, polit tlk re unrest in Haiti (Prath FL 3/10)
25870nf UNITED KINGDOM BBC Daventry in FR *1200-1245*, nx, features, ID's, p (Jordan PA)

CLANDESTINES AND OVERSEAS PIRATES

62145 HONDURAS R 15 de Septiembre in SP 1202, political tlk, ID (Johnston KY 3/8)
62396 EURO PIRATE Rainbow Radio in EG/SP/GM 0542, loop tape w/ID's & address in several langs, 25 watts!, p (D'Angelo PA 3/11) in EG 0354, ID, p (Kohlbrener 3/18)
7340 COSTA RICA La Voz del Cid in SP 0729, ID, tlks, //6304, p (Royston HI 3/21)
9700 ANGOLA A Voz so Resistencia do Galo Negro in PT *0455, IS of cock crow alternating w/string instruments, ID's, NA, QRM D Welle & VOA (Alexander PA 3/17)
11635 COSTA RICA LV del Cid in SP 1425, tlks, patriotic vocals, polemics, ID (Jordan)
12085 SYRIA Saul-Al-Iraq in AR 0420, polemics, martial mx, ID (Jordan PA, Johnson MD)
15050 EURO PIRATE Pirate Freaks Bcting Svce in EG 0002, loop tape w/"We Will Rock You" mx, ID annoc test xmsn to NA, Australia, & NZ, address in Holland (D'Angelo 4/1)
15685 EGYPT V of Unity to Iran in Farsi(p) 1200, pips, prayer recitations, AR mx, speech monolog, no ID hrd, vp (Jordan PA 4/3) Pashto or Dari 0147 (Johnson 3/18)
17540 EGYPT V of Unity to Iran in lang 0119-0224*, flute IS 0119, chants, also hrd //1's on 12230, 15685, s/off w/flute IS and test tone (Alexander PA 4/1)

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WANTED: National HRO-500 general coverage receiver. Panasonic RF-2200 or RF-2900 or Sony ICF-5900W portable receiver. Justin W. McCarthy, 591 Beausoleil, Dieppe, N.B. Canada E1A 1C3.

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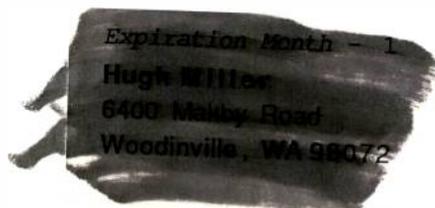
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ALSO AVAILABLE: Steve Whitt, a well-know English MW and SW enthusiast, has written a book titled "Get the Best From Your Sony ICF-2001D (or its North American equivalent the Sony ICF-2010). The book covers all aspects of operation, modification, and repair of the receiver and also addresses in detail all its weaknesses and offers practical tried and tested improvements. Some are achieved through internal modification, while others are realized through external accessories, but all are low-cost and offer considerable performance benefits. Also included is a general introduction to communications receivers and chapters on Hotrodding the 2010, Hints & Tips, and Questions & Answers. The book is 32 pages illustrated. Price for a single copy is £5.00 or 13 IRCs for Surface Mailing and £6.00 or 15 IRCs for Airmail. (Please note that all payments must be in £ sterling.) Send all orders to: Steve Whitt, 21 Cauldwell Avenue, Ipswich IPw 4EB, England.

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