

NAASA

The
Journal
of the
North
American
Shortwave
Association

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INTERCEPT THE WORLD

Universal M-7000



Never before has such monitoring sophistication been available to the private listener. The M-7000 retains all of the earlier M-6000 series features including more modes, more speeds, more shifts, more sophisticated features to let you listen to the exciting world of radioteletype and FAX on shortwave and satellite! This is the only device you can buy to intercept ARQ-Moore (Time Division Multiplex), ARQ-E and ARQ-E3 used by diplomatic, military and aeronautical concerns worldwide. The M-7000 has calibrated variable Baudot speeds with calibrated variable shifts. The M-7000 has three user programmable sel-cals. You punch in one, two or three words (or codes) which will automatically activate your printer when they are received. Think of the potential for this feature! The M-7000 can be completely remote controlled by a terminal or computer permitting full automation. The M-7000 itself is very automated, utilizing a micro-processor to control shift tune and selection. Press a key and the M-7000 tunes the mark, finds the space, and displays the approximate shift. Tuning couldn't be simpler! The M-7000 offers a user selectable initialization format and ten multi-function memories to store your most frequently used operating parameters. Other features include: on-screen tuning indication, printer & video squelch, High-Low Tone select, 1050 and 1800 Baud ASCII, 85 and 1200 Hz shifts, six ASCII shifts, parity select on ASCII, automatic gain control (three settings). Instructive LEDs for: Mark, Space, Power, Buffer, Morse Lock, Autostart, IPI, Squelch, Idle, Sel-Cal, Data, Tuning Error and Data Error (helpful in determining correct speed, protocol and sync). Other refinements you have come to expect from Info-Tech include: automatic threshold control, unshift-on-space, built-in diagnostics, Bit Inversion (Baudot), speed readout, status line (reverse video), scope output. Both serial and parallel printer outputs are provided! Serial output is provided in eight baud rates and the 8th bit is selectable. When you are ready for the ultimate in RTTY, you are ready for the Universal M-7000. Nothing else even comes close! Physical: 16.4"W x 3.5"H x 12.75"D. Black metal cabinet. 9 Lbs. (12 Lbs. ship). 115 or 230 VAC, 50 or 60 Hz. Manufactured in the U.S.A. by Digital Electronic Systems. It requires a composite video monitor (and compatible printer for FAX). Supplied with complete owner's manual (with schematic). A second "Getting Started" manual is also supplied for new RTTY listeners.

- Standard Baudot Shifts - 170/425/850
- Extended Baudot Shifts - 85/1200
- ASCII Shifts - 85/170/425/850/1200
- ARQ Split Screen
- ARQ Surveillance - Multi-channel
- Speed Readout: Indicates the incoming RTTY transmission rate (± 2 baud)
- Auto Baud: Automatic Baud rate selection
- Auto Shift: Automatic Shift Selection
- Auto Tune: Automatic Baud, Shift, Sense
- Aural Beep At: 1-Keypress 2-Sel-Cal 3-Bel char.
- Dual Metering & Status Line Tuning
- Direct Entry of Baud and Shift
- Sel-Cals: 3 User programmable sel-cals for automatic printer start-stop upon receipt of keywords
- Scope Output
- Autostart Output
- Screen Print and Screen Save
- Help Screen

- Filtering Control: Wide-Narrow-Normal
- Limiter
- Diversity Reception
- MSI Multiple Scroll Inhibit: Eliminates blank space on screen and/or printer.
- ATC Automatic Threshold Control for improved copy during fading
- AGC Automatic Gain Control determined by unit or selectable ± 15%.
- UOS Unshift On Space auto shift to letters case after blank received.
- Self Test: Built-in diagnostics
- Squelch selectable for screen and/or printer.
- Input Gain Control
- Status Line with on-screen tuning bar.
- Four Alphabets: ITA, MIL2, TELEX, Cyrillic
- Remote Terminal Operation
- Video Scroll up-down - 4 standard TTY pages.
- OPI Over Print Inhibit feature.

RECEPTION MODES

- Morse Code with auto speed ranging 5 to 120 W.P.M.
- RTTY Baudot - Standard Speeds: 45, 50, 57, 74 and 100 baud 60, 66, 75, 100 and 132 W.P.M.
- RTTY Baudot - Non-Standard Speeds: 37 to 251 baud.
- RTTY Baudot - Bit Inverted. Manual or automatic sequencing.
- RTTY ASCII - Low Speed Standard: 75 and 110 baud.
- RTTY ASCII - High Speed Standard: 150, 300, 600 and 1200 baud.
- RTTY ASCII - High Speed Non-Standard: 1050 and 1800 baud.
- Sitor A - (ARQTOR, Armior A)
- Sitor B - (FECTOR, Armior B) Collective and Selective
- VFT (FDM) - (8, 12, 16, 24 channel)
- ARQ (Moore Time Division Multiplex) Two Channel 86, 96, 100 baud
- ARQ (Moore Time Division Multiplex) Four Channel 172, 192, 200 baud.
- ARQ-E 48, 64, 72, 86, 96, 144 and 192 baud.
- ARQ-E3 48, 64, 72, 86, 96, 100, 192, 200 baud
- Packet Radio 300 and 1200 baud (AX.25 Protocol)
- Facsimile (FAX) - AM & FM 60, 90, 120 & 240 LPM. Line or Gray (To Parallel Printer Port only)
- Russian Third Shift Cyrillic Actual Cyrillic Characters Displayed (To Video Port only)
- Literal Mode This feature uses special symbols to represent normally non-printing characters. (To Video Port only)
- Databit Mode This feature converts the incoming datastream into zeros and ones.

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M-7000 Basic Unit	\$1149.00	\$999.00	\$10.00	#2436
M-7000 With Video FAX Option	\$1239.00	\$1129.00	\$10.00	#2458
M-7000 With Video FAX & Real Time Options	\$1299.00	\$1159.00	\$10.00	#1842

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NASWA Notes

Bob Brown

238 Cricklewood Circle
Lansdale, PA 19446
Compuserve 74756,1557



The weather is getting hot and the Phillies are fadin' so it must be July! I have some NASWA news to pass along to you but it has been quite slow this month. If you have any news for your fellow members, please send it along. Let's get started with some member news.

Ed Kusalik of Coaldale, Alberta Canada sent along a feature about himself and the SW hobby that appeared in his local paper. Ed is quite an enthusiastic DX'er and that enthusiasm came through in the article quite well.

Chuck Roswell of TWR Bonaire makes mention of a "DXpedition Bonaire" that might possibly be arranged for 1991. He is inquiring now for info from travel agents/hotels/airline (ALM) to see if a special low cost package could be arranged. Besides visiting TWR and R. Netherland xmters, the island offers great opportunities for DXing, swimming/snorkeling/SCUBA and relaxing. Gail and I have had the pleasure of visiting Bonaire a couple of years ago for SCUBA diving and it is an absolutely wonderful island to visit. Very low key, friendly, and beautiful. If your looking for Club Med and glitzy night life, this is NOT the place for you. As Chuck has more info, he will announce it on Bonaire Wavelengths: Saturdays 1130 UTC on 15345 //11815 and Sundays 0330 UTC 11930 //9535. If you are

interested, please let Chuck know. Drop a note to him at TWR, Bonaire, Neth. Antilles.

Listener's Notebook editor Bruce MacGibbon is now giving SW listening tips on the 3rd Sunday of the month on Radio Japan's DX Corner. Best heard here UTC Monday at 0130 on 5960 or via Gabon UTC Sunday 1530 on 21700.

Listener's Library editor John Bryant is spending time recuperating from major surgery in which he had (as he described it) "a remanufactured diaphragm, lower esophagus and upper stomach valve." On behalf of NASWA I wish you a speedy recovery John!

While we are talking about editors, I'd like to announce an editorial change. Due to additional demands made on his time, Tom McEly has resigned as editor of NASWA Portraits. Thank you Tom for your service to NASWA and helping us learn more about our members through the Portraits column. Our new Portraits editor is Jerry Klink of West Seneca, NY. I'll let Jerry tell you all about himself in the Portraits column but I will say that Jerry is quite an avid DX'er and SWL and we look forward to having him on board. Why not put together a short bio about yourself and send it to Jerry? Address it to 43 Lein Rd., West Seneca, NY 14224.

Welcome to the following new NASWA members -

Howard R. Bailen, Manhasset, NY
Tom Boza, Phoenix, AZ
Warren Chamberlin, Big Bear Lake, CA
Byron Chard, Waterloo, NE
Joseph Czarnecki, Lititz, PA
Jaime Davidovich, Cottekill, NY
Glenn G. Grossbier, Sr., Milwaukee, WI
Sabra S. Hill, Freeport, PA
Suzanne Ferree King, Chicago, IL
Carroll A. Kruger, Rego Park, NY
Michael T. Laird, Cameron, MO
Paul LeVine, Belmont, MA
John Litterio, Drexel Hill, PA
Sean Mahar, Pinedale, WY
Jon Maples, Carrollton, GA

William Olsen, Burbank, CA
Tom Patterson, Plover, WI
Christine Paushan, Briarcliff, NY
C. Pieterman, Federal Way, WA
Gordon T. Pratt, Glendale, AZ
Michael E. Rees, Blaine, MN
Luther V. Rhodes, M.D., Allentown, PA
Steve M. Smith, Sunnyvale, CA
Andrew M. Smith, Seneca, SC
Mark C. Spallone, New Rochelle, NY
M. B. Stokes, Atlanta, GA
Gale A. Stone, Mellen, WI
Michael R. Stout, New Haven, IN
Francis R. Szulkowski, Pittsburgh, PA
Kenneth R. Wells, APO San Francisco

DXer's Forum

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



Summer = no DX, right? Wrong! For East Coasters like myself, African DX heats up and stays hot right through the summer. Although you do have to struggle with the static a bit more than in the winter, many Afro stations are best heard in the summer months, usually at their local sign-on times, ranging from 0300 - 0600 and beyond. This means some late-night DXing but the results can be well worth it. Use the "11 months ago" idea I mentioned in last month's column — drag out FRENDEX's and other DX bulletins from last August and see what was heard in July 1989.

An example of the Afro DX you might hear now: in *Fine Tuning 566*, ODXA QSL Editor John Fisher reports rare *La Voix du Zaire*, Lubumbashi on 7202.9 from 0421-0506 on 5/20/90 with Afro mx, FR annmcs, LV du Zaire ID at 0453, mentions of Lubumbashi and more local mx. A male announcer spoke at 0501, then a drum IS and probable nxcst in FR. This counts as a separate country according to NASWA rules, giving John #217 heard — congrats!

When Mom sends a contribution to the column, you print it! An intriguing article titled "*Let's Bring Back Shortwave*", by Sara Fletcher Luther, appeared in the *Pine Plains, NY Register Herald* of 3/28/90. The opening sentence asks "With all our abundant electronic technology, why are shortwave radios so hard to find? Only one store in Poughkeepsie [NY] carries them; hardly anyone asks for them." The article goes on to suggest that we have become so used to our network news feeds that we no longer even wonder if there are other viewpoints available. Ms. Luther points out that indeed, they are readily available if you have discovered shortwave radio. The rest of the article gives a detailed look at one such voice: *Radio For Peace International*. I was pleased to see that Ms. Luther included the RFPI broadcast frequencies in her article; all too often the popular press omits such useful details. Thanks for the contribution, Mom!

This month we lead off with a fine contribution by fellow Journal editor and Latin American travelling DXpert Don Moore. The subject of DXing while travelling has triggered considerable interest among Forum readers. Excerpts from Don's article, together with many other contributions on the subject of DXing on the Road, will appear in the 1990 issue of *Fine Tuning's Proceedings*, due out in a couple of months. Thanks for the article, Don!

NOTES ON DX TRAVELING

by Don Moore

As DXing and traveling are two of my favorite hobbies, it only seems natural to combine them. However, because of my Peace Corps experience, my method of traveling is a lot different than the way most Americans travel. It's more vagabonding than traveling. It involves

frequently moving from town to town via local bus and train services, visiting out-of-the-way places, and staying in cheap no-frills hotels. My traveling DX techniques are based on that kind of travel in Latin America. Hopefully most of it will be applicable to better hotels!

Equipment

My favorite travel receiver is the Sony ICF-7600D (a.k.a. 2002, 2003). The 2010 is much too big for constantly hopping from bus to bus with a duffel bag and knapsack. The receiver is supplemented with the usual small cassette recorder (a digital counter is a must), blank cassettes, and two of all needed cables and adapters. Outside of major cities, replacements can be hard to find. Rather than carrying headphones, I take two earphones & a Y-adaptor. It's more compact, and allows Theresa and I to both listen to the radio without disturbing others. Some of these small items fit nicely into 35mm film canisters.

Antennas

I use 50-75 feet of hookup wire for an antenna. By my next trip I plan to add a small MFJ passive antenna tuner. [Ed. Note: Don informed me that since writing this article, he acquired the AC-1 Active Antenna from Inline Components, Inc., 4521 Campus Drive, #113, Irvine, CA 92715, instead of the MFJ tuner. He is very pleased with the AC-1's performance on shortwave, although he noted some overloading on mediumwave in San Jose. It is very low cost and small enough to roll up and put in your pocket. Send a SASE to Inline for details.]

if natural or political disaster strikes, knowing where to find BBC or CBC news quickly could be life-saving.

Insulated antenna wire is a must, and the way Theresa and I travel, it does double duty. Self-service laundromats are unheard of in most of Latin America, but most cheap hotels have facilities for doing laundry by hand. However, few have adequate clothesline space for all their guests, so our drying-clothes get draped over my antenna wire, which is strung across our room. Tile and cement floors are a definite advantage here. I've

probably DXed from over 50 different hotels and pensions.

At least for the cheap places we stay at, the hotel's location usually doesn't have much effect on reception. I had surprisingly good reception in downtown Quito, Lima, and Asuncion. However, where the room is in the hotel can make a difference. Basically, the higher the room, the better. Also, it should have a window. Many cheap hotels have windowless inner rooms, which are considered safer and therefore more frequently given to foreigners.

Besides asking for a room on the top floor, a good trick to improve signal strength and get away from manmade QRN is to DX from the hotel roof. In cheap hotels, it's easy to get to - usually that's where the clotheslines are. It's just a matter of stringing up the antenna wire, and, of course, bringing along a flashlight. An alligator clip can be used to attach the wire to a support, or to spouting or metal pipes that might serve as antennas.

Power

While for short trips it is possible to carry enough batteries to last the vacation, for longer, or more DX-intensive trips, that's clearly impossible. Alkaline batteries are imported and expensive in most of Latin America, so I use AC for the Sony whenever possible. There is an easy way to check the voltage of an outlet. If your room has a lamp, check the voltage of the bulb. If it says 220 & you plug it in to 110, it will be very dim. If you plug a 110 bulb into 220, it will light up very brightly for a fraction of a second. If there's no lamp in your room, borrow one from the hallway. Do not rely on the voltage of a ceiling light; sometimes they are wired differently from the wall outlets.

Resources

I take along the back-of-the-book WRTH frequency list, at least up through 10MHz. This is either torn out or photocopied. I also photocopy the country sections for the region I'm visiting. Several weeks before leaving, I begin going through recent *Fine Tunings*, *Numero Unos*, *NASWA Journals*, etc &

Promoting Radio Listening via Radio Broadcasting

Another Pirate Radio Program Airs on the WERE-AM Joel Rose Show

by *George Zeller*

On May 10 at 1800 UTC, I was a live guest on the Joel Rose Show call-in talk program over WERE (1300 kHz) in Cleveland, OH. This was the third time that Joel has opened up his microphones to a discussion of pirate radio; earlier shows aired in 1985 (on WWWE, 50 KW on 1100 kHz) and 1989 (on WERE). Joel's program is currently the top-rated talk show in its time slot within the metro Cleveland radio market.

Joel, myself, and several callers discussed a number of issues related to pirate radio monitoring and general DXing. There was also some general conversation about shortwave listening, international broadcasting, clandestines, numbers stations, amateur radio, and local sources of DX books and receiving equipment. Joel even graciously permitted a plug for the 1990 edition of *The Pirate Radio Directory*. Three segments of pirate programming were broadcast as part of the show. These included a fanfare Radio Clandestine sign-on tape featuring R.F. Burns, a Stan Huxley identification announcement, Farty the Seal interval signal, and Friendly Freddie's Budget Burial ad from the Voice of Laryngitis, and a rare off-air recording the WHBH best announcement by the FCC from Richmond, VA.

Joel Rose, N8JR, plugs shortwave radio listening from time to time on his commercial radio program. He even has occasionally sold advertising to a local ham retail store, Amateur Electronic Supply in Wickliffe. Joel announced over the air that two pirate station QSL's are a part of his own collection of radio verifications! On behalf of the NASWA membership, I want to thank Joel in writing for his continued interest in the promotion of shortwave listening to the general public in Northeastern Ohio.

Sheldon Harvey of CIDX, the current acting Executive Director of ANARC, has been a longtime advocate of the local promotion of shortwave radio listening by DXers. Sheldon frequently appears on local radio shows in the Montreal area, as well as on a number of programs carried by international broadcasters. Harold Sellers and ODXA have a solid track record of similar work throughout Ontario, particularly in the Toronto area. This concept is worthy of serious consideration by all of us. Local media, including radio, television, and print journalism, are often hungry for feature material. NASWA members might think about organizing a presentation covering shortwave listening that could be done in their local area. (Some NASWA members successfully accomplished this during Shortwave Radio Week earlier this year). Activities like this can benefit both the general public, which is often relatively ignorant of the benefits and fun that can be derived from SWL'ing, and also the existing active DX community. This idea is certainly worth some thought by all of us.

taking notes on anything interesting. Usually the relevant info can be condensed to two or three pages.

I also include the addresses for Glenn Hauser and other DX editors to mail my DX news to. Blank log sheets and note

paper complete my DX resources. In addition, I would never go anywhere without a current list of English broadcasts & frequencies. Not only is such a list useful for entertainment listening, but if natural or political disaster strikes, knowing where

to find BBC or CBC news quickly could be life-saving. All these items easily fit into a pocket folder.

Portability

My traveling DX shack easily fits into a knapsack, with room left over for a few books and some snacks for long bus rides. The radio and tape recorder are each wrapped in a shirt or pair of pants, both to protect them from being kicked around, and to assure me of dry clothes upon reaching my destination (bus drivers aren't always efficient at covering rooftop luggage with the canvas tarp).

Border Crossing

I have never had a problem taking my Sony across borders. Few customs officials have unpacked my bags enough to uncover it, and those who have ignored it. Yet, as I frequently cross borders at out-of-the-way places, I sometimes worry about what the officials will think of it. Digital push-button radios could become a lot of things in the minds of semi-literate border guards raised on a steady diet of James Bond movies. Before crossing a border, I always preset the memories to local AM stations at the crossing point. Hopefully that will calm anyone who finds the radio suspicious.

Door-to-Door DXing

Of course, if you're going to do some traveling in Latin America, or anywhere else for that matter, you might as well do a little "door-to-door DXing" and drop in on the local broadcasters. Theresa named it that one day while we were roaming the streets of Chota, Peru in search of Radio Acunta. Usually, though, it's not too difficult to find local radio stations. They are usually downtown, even in the largest cities. If looking for a particular station, a good place to ask for directions is any other radio station you come across. Everybody knows where the competition is located.

Most stations will be quite excited at having a foreign visitor. Lack of interest usually indicates an overworked staff. After introducing myself, I always ask to see the manager. It's not always easy to see the manager, though, especially in the

larger more professional city stations. It may be necessary to make an appointment and come back. Usually in that situation, I just visit with whomever is available, the secretary, an announcer, or an engineer. Obviously the best time to visit is during office hours, Monday to Friday, but it never hurts to stop by in the evening or on a weekend. Sometimes I've hit it lucky, other times I've been asked to come back the next day. On a few occasions I had an interesting conversation with an otherwise bored DJ.

Language is only a problem if the traveler chooses to make it one.

Language is only a problem if the traveler chooses to make it one. Obviously, the more Spanish (or whatever) one speaks, the easier it will be, but throughout Latin America we met numerous people who knew no Spanish. They got along fine carrying just a smile and a phrase book. Latin Americans are very patient and understanding with people who make an honest attempt to use Spanish and are willing to laugh at their own mistakes. I've seen these smile-and-a-phrase-book people have real conversations in restaurants, parks, and markets, and there doesn't seem to be any reason it can't happen in a radio station as well.

Traveling QSLing

As to getting a QSL, many of the same rules for sending reports apply to personal visits: be polite and chatty, but specific in what you want. Shortwave stations will usually have some idea of what a QSL is, but if you pick up a local MW or FM station in your hotel and decide to stop by and get an unusual veri, remember they may have never seen a reception report before. But then you may end up with the only QSL in existence for that station! A few copies of the National Radio Club's 'Broadcaster's Guide to DXing' pamphlet

Almost a Great QSL

by *Kris Field*

I received the letter below in response to a reception report to Radio Pyongyang, North Korea. You can imagine how excited I was walking back from the mailbox and reading the return address from Radio Pyongyang. My excitement was short-lived when I read the letter....

Radio Pyongyang
External Service
Pyongyang, DPRK

Mr. Kris Wm. Field
Ambler, PA 19002
USA

Dear Mr. Field

I am writing this letter personally and therefore I cannot give you a satisfactory answer to your request concerning QSL card and so on.

We are now engaged busily in the works to counter South Korean allegation that it discovered an underground tunnel along the Demilitarized Zone dividing two Koreas and that the tunnel was being dug by our side. South Koreans and U.S. imperialist claim that they unmasked the first of such tunnels in 1958 and that this is the fourth of its kind. Their allegation is that the People's Republic of Korea has dug the tunnel for the purpose of infiltrating into South Korea its guerrilla forces in case of a war.

Due to a U.S.-South Korea joint military exercise which is being held annually on the soil of Korea, and due to U.S. - South Korea propaganda regarding the tunnel discovery, our country is now in a state of emergency.

Under these conditions our people are engaged in staging anti-U.S., anti-South Korea mass rallies everywhere and every day. Probably you have read some newscasts that reported that Pyongyang airport is closed for all foreigners for the time being. But this is not the first emergency state that we have experienced in the past. Our people are accustomed to that kind of state, so it is not unusual in our country.

As a member of our organization, I sincerely want to convey my appreciation for your expressing interest in our radio programs. But it's not an adequate occasion for us to give you a satisfactory answer. Please wait. With best regards,

Sincerely,

Han Min Nam

The only postmarks on the letter were Nigata, Japan. I still want to QSL North Korea!

* * *

This letter certainly sheds some light on why Radio Pyongyang has been so tough to verify for North Americans. Arthur Ward of the World DX Club in the UK has had a 100% success rate so far — he has generously assisted members of WDXC by forwarding their reports to Radio Pyongyang and QSL's back to members. The UK address seems to make the difference.

DX TRAVEL LIST

- | | |
|---|---|
| <input type="checkbox"/> Portable receiver | <input type="checkbox"/> Flashlight |
| <input type="checkbox"/> Headphones | <input type="checkbox"/> WRTH/PWBR |
| <input type="checkbox"/> Antenna wire | <input type="checkbox"/> DX Notes |
| <input type="checkbox"/> Antenna tuner or | <input type="checkbox"/> Log sheets |
| <input type="checkbox"/> Active antenna | <input type="checkbox"/> Note paper |
| <input type="checkbox"/> Portable tape recorder | <input type="checkbox"/> English broadcast list |
| <input type="checkbox"/> Cassettes | <input type="checkbox"/> Patch cords & adapters |
| <input type="checkbox"/> AC/DC adapter or batteries | |

(available in English, Spanish & French) can be quite useful here!

Of course be sure to ask the station if it has any pennants or stickers. Remember, however, that even if there is one on the wall, they may have none left to give away. But they might give you that last one left, if you make a good impression - it happened to me on several occasions. If there is a quantity of pennants or stickers, it doesn't hurt to ask for "two or three more for my friends". You won't be turned down, and probably will be given many more. However, asking for a large quantity, like a dozen, may make you look very greedy and sour the station towards DXers.

While in Honduras, I verified a number of local stations for DXers, and well in advance of my South American trip, I got in touch with some other DXers who valued Latin American QSLs and offered my services. It's not that difficult to solicit a few extra QSLs for DX friends, and I hope anyone planning to visit stations will take along reports for more than just themselves.

Remember, however, that if you have only one or two reports, it is not unreasonable to ask the station to type up a veri letter or two. However, with three or more, that can be quite a chore. The best thing to do is either bring some prepared card QSLs along with the reports, or buy some attractive local postcards & write

the veri information on the back. Using postcards impresses the stations more. Theresa wrote most of the postcard verifications for me in South America, and I suspect she holds the world's record in having one's handwriting on QSLs from the most different

stations! Whether with plain pps or postcards, the station manager just has to sign and rubber stamp the cards. Of course as the person bringing the reports, you can ask for a special letter verification to commemorate your visit!

Finally, if you're planning to do some station visits, be sure to bring along some little gifts for the stations. These can include the usual enclosures of postcards, shack or family photos, and hometown travel brochures. It's also a good time to bring along things that aren't as easily sent, such as records & tapes, sports pennants, local picture books, and calenders. The Norman Rockwell type calenders given out by insurance companies and banks make especially nice free gifts, even if the year is already half gone. The pictures will probably end up on the station wall or in somebody's home.

In sum, I encourage all hobbyists to do a little "door-to-door DXing". It's a great way to get a first hand view of what the other end of the hobby looks like. Also, while traveling it is very difficult to meet and interact with the "common people" in other countries. The common interest in radio seems to bridge a gap, and on occasion even opens up peoples hearts and homes.

* * *

That brings us to the end of another DXers Forum — sorry we didn't get to use all the contribs — maybe next month! 73's

Easy Listening

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



SUNDAY

- 1125-1140 **Music Album** (Radio Beijing). A collection of Chinese music, usually tied together by some common theme, such as folk songs played on traditional instruments, modern arrangements of old songs, or a given performer (17.855. Repeated at 1225 on the same frequency, at 0025 on 17.705/15.100 and at 0325 on 9.690).
- 0050-0105 **Feature Program** (Vatican Radio). Although this program has no official title, each week Vatican Radio presents a dramatized version of some Christian martyr or saint. Past dramatizations have included "The Trial of St. Jerome" (a fictionalized and dramatized canonization proceeding), "The Story of Bernadette of Lourdes" and, believe it or not, "Pinnochio" (chosen for its emphasis on moral values). Some weeks the program is replaced by "Letterbox". (15.180/11.780/9.605).

MONDAY

- 1230-1255 **Innovation Canada** (RCT). Part of "North Country" this program is really two programs. The first half is devoted to new inventions in Canada, the second half to a "Business Report" which is further subdivided into business and financial news, the latter covering the rise and falls of the stock market (Canadian and American), the Canadian and American dollar, and gold and silver prices. (17.820/11.855/9625).
- 0220-0230 **Ecology** (Radiobras). Features steps taken by the Brazilian government to preserve the rain forest and other ecologically sensitive areas of Brazil. Past programs have featured the poaching of alligators in the rain forest area, the conflict between conservation and development, and a bio of Chico Mendez, the ecological activist who was murdered in 1988. (11.745).

TUESDAY

- 0040-0045 **Agriculture Report** (VOA). One day a week, this program replaces the usual "Science Report" and is in special English. Past programs have featured a variety of agricultural concerns, particularly in third world countries, such as the problem of waterweeds in rainy areas, the discovery of the New World Screw-worm Fly in Libya (where it had not been found before), and pesticide-free methods of insect control. (5.995).
- 0245-0300 **Music Time** (Radio Portugal). Unfortunately reception of this program is seldom heard very well, but is usually best on 9.705 where it still suffers heavy interference. The program usually presents Portuguese songs per program, either pop, rock, or traditional depending on the week, sometimes, but not always, tied together by a common theme or group. (11.840/9.705/9.680).

WEDNESDAY

- 1140-1155 **Idioms and Their Stories** (Radio Beijing). A very good way to learn a few characteristic Chinese expressions. Each week presents two Chinese idioms or proverbs, spells, pronounces, and translates them into their English equivalents, and tells the story that lies behind their idiom. Each program also includes a brief review of last weeks lesson. Not a language program exactly, but probably better than most of those. (17.855. Repeated at 1240 on the same frequency, at 0400 on 17.705/15.100 and at 0340 on 9.690).

- 1220-1225 Faith in Finland (Radio Finland International). Radio Finland's program devoted to all the various religions in the country though mostly emphasizing the Christian faith and especially the Lutheran denomination. Past programs have featured the amounts collected by Finnish churches for development aid to third world countries, surveys indicating rises and falls in church memberships, and surveys revealing Finni's belief (or lack of belief) in an afterlife. (21.550/15.400. Repeated at 1320 on the same frequencies.).

THURSDAY

- 0030-0100 Now Music USA: Top 10 (VOA). A rundown of the top 10 hits in the United States for the past week, beginning with brief tidbits or rock music news, and ending with a list of the top 10 albums as determined by Billboard Magazine. The program doesn't necessarily play all ten top hits, but it does play most of them in their entirety. (9.455. Not on other frequencies to the Caribbean at this time).
- 0130-0145 Folk in Britain (BBC). A loose collection of the most popular folk hits in Britain at the moment, not tied together by any particular theme that I can tell. Past programs have featured the 20th anniversary of Steeleye Span, the death of Ian McDonald, and a few Canadian folk artists making it big in Britain. (5.975/6.175/7.325/9.915). Every other week.

FRIDAY

- 0020-0040 Let's Sing Together (R. Korea). This program is probably a lot easier to hear on the west coast now that Radio Korea has dropped its 1400 hour transmission to the US on 15.575. The program features a Korean pop song each month, plays it through in its entirety, then breaks the song down into phrases which it translates into English, and at the end of the month, listeners are invited to send in tapes they have made of themselves singing the song. The last couple months of the year is a review of the previous songs for the year. It's an innovative idea in programming, certainly, but not one which appeals to me personally. But that's just my bias. (15.575).
- 1545-1600 Music Program (Radio Sweden International). I'm not sure this program has an official title, but each Friday, the last fifteen minutes of "Weekday" are devoted to Nordic music, usually pop music. Some programs, however, have featured Swedish troubadour songs translated into English, and one program featured nothing but Icelandic rock. (21.500/17.880).

SATURDAY

- 0040-0045 Words and Their Stories (VOA). This is in some ways like Radio Beijing's "Idioms and Their Stories" but designed for non-English speakers, and is in Special English. Some programs might be boring for North American listeners since they simply list expressions we're all familiar with anyway (one program, for example, explained expressions using "neck"--like "rubber-necking", "a pain in the neck" or "sticking your neck out"). Other programs, however, like the one that tried to trace the etymology of "okay" can be rather entertaining. (5.995).
- 0100-0200 Play of the Week (BBC). Probably the last refuge of good, old-fashioned radio drama, and some pretty fine ones at that. "Play of the Week" features not only drama (like the Chinese play "The Caucasian Chalk Circle" or "Principia Scriptoria", about two prisoners in a Latin American jail), but also comedy, like the Christmas presentation of "Bad King Wenceslas" or the recent edition of "The Ultimate Invention" (which turned out to be a bicycle). One series of plays featured a dramatized version of "The Mystery of Edwin Drood" (Charles Dickens' unfinished novel, now finished by a modern author and playwright). (5.975/6.175/9.915).

Asian Destinations

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I've been out of town the last two months on temporary work assignment in Philadelphia and Orlando, which I thought would put a halt to my DXing activities. This has, to a certain degree, but I managed to come up with a pretty good backup receiver and antenna which allows me to keep up with things.

ASIAN DX SUMMER SURVIVAL KIT

Now that we, in North America, are officially into summer my DXing interest does wane abit. But, this summer I decided to get a decent shortwave portable and an active antenna.

I bought a Sangean ATS-803 portable shortwave receiver (same as the Radio Shack DX-440) and an Inline Components, inc. AC-1 active antenna. The setup does quite well, even from a hotel. My next plan is to make the Farley directional shortwave loop, that I have portable so I can take it on the road with me. While at home in Wichita a few weeks ago I plugged the Farley loop into the \$190 Sangean. Even without a notch filter pass band tuning or quality IF filters the Sangean with Farley loop could hear just about everything the HQ-180 or FRG-7 could hear. With the scan function on the Sangean I stepped through several of the Papua New Guineans on 90 meters. The loop provided good gain with the directionality. Nanchang, China on 5020 kHz was audible and so was Surakarta, Indonesia on 4932 kHz. That evening I again turned on the Sangean and pointed the loop towards South America. Tuned the receiver to 5100 kHz and hit the scan up button. Eventually the receiver landed on a broadcast station on 5272 kHz. I didn't get an ID and I still don't know who it was, but it did sound a lot like a Peruvian.

To make the loop portable and allow easy transportability Joe Farley suggested I take the two small electronics boxes off of the wooden loop frame and construct a second loop out of Tinker Toys! Then you simply attach the electronics and your up and running in no time. This means I won't have to miss the real sunrise asian DX when I'm out of town on business during the winter, especially when it's to the west coast. This also applies to the fairly frequent trips we take home to Arkansas to visit the folks.

Summer-time Asian DX. With the arrival of summer the lower frequencies become increasingly filled with atmospheric noise. The longer days and changing sunrise/sunset patterns make propagation from North America to Asia less likely. But, don't give up entirely. There's still alot of Asian stations to tune in the frequencies above 6 MHz. There are over 30 countries from Asia (per NASWA country list) that can be heard in this area on a somewhat regular basis.

From the Mideast area there are about a dozen countries who are regular catches in the international bands. Several of these, such as Syria, Oman, Qatar, Jordan and the United Arab Emirates, have obtained high powered transmitters making reception more reliable. It's possible to sit outside on the deck in the summer sun with a portable receiver and listen to Syria in English on 15095 kHz in our local afternoons.

Turning our attention eastward there are about 20 Asian countries in the Far East that are active on the international shortwave bands. Such as. . . . *India* is fairly regular on the international bands. Recently they've been heard on 15165 kHz in Burmese (17785 kHz) at 1215 UTC; 17387 kHz in Tamil at 1210 UTC, //15335 kHz. English can be heard at 1045 on 21735 kHz, parallel to 15050, 15335 & 17387 kHz. *Indonesia* used to be very regular around 11790 kHz in the mornings, but after changing things around in their schedule they seem to be less reliable in North America. Try 11751.8 kHz around 1200 UTC, parallel to 11784 kHz. Different languages are used in this Voice of Indonesia service. An interesting catch reported by Terry Krueger in NU #1066 is a relay by Radio Moscow of *RTV Nationale Laos*. The relay site is given as Tula. Programming was in French. Try it from 1100 UTC sign-on until 1130 UTC sign-off. A little more difficult.....

Bangladesh can be heard around 17852 kHz at 1230 UTC in English. They've also been heard on 15040 kHz at the same time or around 1830 UTC. How about Chinese music? Tune 12200 kHz for *CPBS, Beijing* around 1200 UTC - heard in eastern North America. With the recent political upheaval in the communist world tuning to *Radio Ulaan Baator, Mongolia* may prove interesting. Try 9615 kHz at 1100 sign-on in English or 12015 kHz at 0900 UTC also in English.

Chinese regional outlets above 6 MHz are always interesting to tune and provide a challenge all year long. There are several listed in the WRTH or PWBR, so give them a try. I've been hearing 15030 kHz, not actually a regional, from Beijing at different times during the day. Also 11330 kHz makes it in during our local late mornings. Another country, North Korea, makes use of odd out-of-band frequencies as well.

I don't really have the room to go into a detailed listing, but, in any event give it a try. You might be surprised what DX lurks amongst the international bands from Asia.....

Soviet sites and QSLing. One thing I've thought of doing this summer is to raise my QSL total by going after some Radio Moscow transmitter sites in the international shortwave bands, many of which are audible all year up there. There are several "radio countries" in which Radio Moscow programs are broadcast from, such as Azerbaijan, Georgia, Kazakhstan, Tadzhikistan and Turkmenia to name some of them. One can hear these countries, with varying levels of difficulty, on the tropical bands during the winter months here. The tropical band outlets are intended for local and regional audiences and broadcast in area languages, in other words, no English. Not only are they more difficult to hear than most of the Radio Moscow outlets, but they are very difficult to QSL directly. A few QSLs have come out of Radio Baku in Azerbaijan in the last two years but other regional tropical banders are very rare if not "impossible".

I guess one of the reasons why I have saved the Radio Moscow site cards till last is the suspicion with which I view them. Radio Moscow hops frequency and transmitter location very regularly during the year and it is pretty difficult to be certain of the site for a given frequency. Even Radio Moscow seems not to be sure. It's happened more than once that a DXer will QSL a time and frequency as, for example, Dushanbe, while another DXer will get a different site acknowledged on the QSL for the same time and frequency. And this is for two reception reports within a few days or weeks of one another.

It would be more fun, it seems, to QSL direct for a regional outlet who's location is well established (over several years) than for a random shot at a Radio Moscow transmitter site. But, who's to say the Radio Moscow sites aren't correct? What's a QSLer to do, ha?

What's ahead in the next three months? If conditions are similar this year to last year, and it looks that way so far as I compared my notes with last summer, then we should see spotty appearances from Papua New Guinea on 90 meters all summer. Be ready to go after Indonesians early in the season say around August.

Listener's Classroom

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Welcome to Listener's Classroom for July. If your summer is going like mine, you are hot and your radio reception not. This is the time of the year when I check my antennas, retube my receivers and get started on the writing projects that have been piling up over the winter. In the hope that you are also considering writing a feature for *The Journal*, I will continue the discussion started last month dealing with writing and submitting articles to NASWA. I have already discussed the mechanics of article submission and would now like to share some ideas on topics you may want to write about, and, give you some advice on how to go about it.

First of all, you are not expected to be a professional writer. Any article you submit should be in your own style and words. It would be a good idea, of course, to have someone proof it before you send it along, but something uniquely you is much more desirable than something "pumped up" to impress the troops. The accuracy of the information contained in your feature is much more important than a comma splice or two. So don't worry about any special style--just share your information with us as if you were telling us directly.

I am frequently asked about how to write for *The Journal*, and just as often, I am asked what to write. The possibilities, of course, are endless. I have assembled a short list of the kinds of things we would like to see more of in *The Journal*, along with some "how-to" suggestions that might get your creative juices flowing.

Experiences: Have you ever visited a shortwave station, or do you know a shortwave "personality" you could interview? There never seem to be enough of these kind of articles to satisfy the hunger of NASWA members, who frequently request "more station profiles." If you decide to write on one of these topics, be certain the station gives you permission to publish any information they provide you, and all interview-

ees know that what they say will be published in *The Journal* for all to see. Other experiences dealing with shortwave are welcome. Try to be clear with your descriptions--paint a written picture that is easily followed by the reader.

Techniques: Have you developed a shortwave technique that others might find interesting? Tips and techniques are always valuable to a broad spectrum of our readers. Just be sure that what you write about is proven and will not damage a piece of equipment.

Reviews: Do you use a super piece of equipment that you wish others knew about? Why not write a review? The only basic guideline here is to be sure you know the equipment thoroughly and how it should be properly used. Information on modifications can be combined with reviews, but they are better handled via a technical article.

Technical Articles: Do you have some technical knowledge that you would like to share with the NASWA gang? The key to writing a technical article for *The Journal* is to remember that not all our members are technically oriented, so you should try to explain things as clearly and jargon free as possible. You must also make schematics and drawings professionally--computer drawing is preferred. Our print process reduces and tends to lighten drawings, so take special time with them.

These are just a few ideas for starters. Remember as you write, the motto of the North American Shortwave Association is "Unity and Friendship." We will not publish negative comments about countries, stations or individuals, nor will we publish political opinions.

Your contribution to *The Journal*, of course, is not just limited to writing feature articles. You are always welcome to contribute to any of the editors, especially the report sections, such as the QSL Report, Loggings or Scoreboard.

Listener's Library

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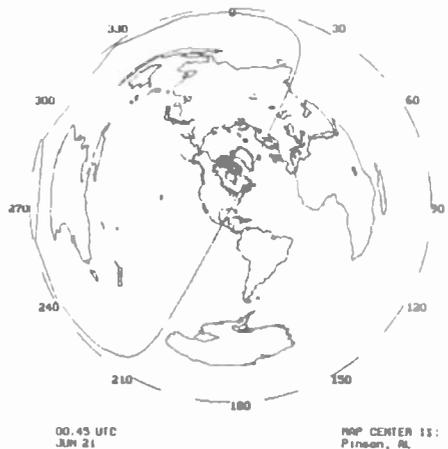
Last month, Doug Thompson of Vermont reviewed the GEOCLOCK program. Well, your old Librarian went out and bought a registered version of GEOCLOCK for himself. That software is extraordinarily helpful for DXers, particularly the Tropical Band variety. It has become a regular part of my DXing kit, even on DXpeditions! If you own an IBM PC compatible of any sort and haven't at least gotten the \$5.00 shareware version of this program, you must not have read Doug's review in the Listener's Library. About the only thing that GEOCLOCK won't do is Azimuthal-Equidistant projections. However, the software designer, Joseph Algren of Virginia, is working on it and should have that capability available shortly. Dig out the May issue of the Journal, look at Doug Thompson's review of GEOCLOCK in this column and at least get the \$5.00 shareware version.

Eureka!

I've finally found what I've spent three years looking for...an inexpensive program that will generate Azimuthal Equidistant world maps. The Azi-Equi map is often called a 'polar projection' map. Actually, it is similar to a polar projection, but it shows the entire planet, rather than a hemisphere, and all distances from the center are at the same graphic scale. The center of an Azi-Equi map may be any spot on the planet (your radio room, for instance). The major attribute of an Azi-Equi map is that all straight lines drawn from the center to the periphery are great circles. Since most radio propagation occurs via great circle paths, you can use an Azi-Equi map centered on your location to orient directional antennas, among other things. That plus some direction finding and propagation work that a number of us are doing for Fine Tuning's *Proceedings 1990* sent me on

a three-year quest to find mapping software that would make Azi-Equi Maps.

Until last month, my only "source" for such maps was professional cartographic software from the University of Wisconsin at \$400 per copy! Then I saw an announcement in Peter Oldfield's DX AID in *DX Ontario*. It's the answer to a DXer's prayers at \$20 postpaid in the U.S. and Canada (Peter Oldfield, P.O. Box 152, Piedmont, Quebec J0R 1K0). DX AID will also calculate range and bearing to any target, and sunrise/sunset times at any location. As you will note from the map centered on Pinson, Alabama, the DX AID will also draw the day/night terminator for any day and time on the Azi-Equi Maps. [Contributed, and very highly recommended, by the Librarian and David Clark.]



Azimuthal-Equidistant projection centered on Pinson, Alabama. Produced with DX AID and printed from a PCX file via a "graphics grabber" utility.

Asian Samplings

The New Yorker Magazine runs a series from time to time called "A Reporter at Large." Two years ago, they published a two-part series on Indonesia--its current culture, politics, economy, politics, people, politics and religion. It was titled "A Reporter at Large--The New Order, Parts I and II," by Raymond Bonner, and is found in the June 6 (pp 45-79) and June 13 (pp 72-91), 1988 issues. It is the finest reference on the current affairs of Indonesia that either David Clark or I have ever seen. By inference, it also gives us all a clearer picture of what will likely happen when President Suharto is no longer the President of the Republik of Indonesia. The best testimonial for this almost 40 page article is the fact that several of your Librarian's Indonesian students faxed copies of the entire article home so that their families could be better informed! If you are interested in Southeast Asia, this is the one to read.

Also, I just discovered a series of wonderful books on Asia. They are the "Oxford in Asia Historical Reprints." The book that I have has a current title: *A Voyage to New Guinea and the Moluccas, 1774-1776*, by Thomas Forrest. It is a beautiful reproduction of the original book in its archaic type and with all 30 copper plate etchings (fold-out) faithfully reproduced. The maps alone are worth the trip to the library. The full title is "A Voyage to New Guinea and the Moluccas from Balambangan Including an Account of Magindano, Sooloo and other Islands, and Illustrated by 30 Copper Plates. Performed in the Tartar Galley belonging to the Honorable East India Company. During the Years 1774, 1775, and 1776." Talk to the inter-library loan staff!

Recently, I was given the privilege of reading numerous books on the history of

East Asia and the Pacific. I have done much of that reading in archaeological texts, since my field of study is the ancient architecture of the non-Western world. Absolutely the best book that I found was *Man's Conquest of the Pacific: the Pre-History of Southeast Asia and Oceania*, by Peter Bellwood. Since archaeology in most of this area only started after 1945, Professor Bellwood's book is the first to document, with artifacts, the great migratory sweeps across Asia and the Pacific after the last ice age. The book is lavishly illustrated, well and plainly written, and still the only "tour of the horizon" book available on the pre-history of this half of our planet. If you ever wondered why the languages of Madagascar sound similar to those on WSZO, Marshall Islands, or why a PNG sing-sing and an authentic Polynesian luau also sound similar, then this book is for you.

A Few Thank-You's...

There are two people that need to be thanked for serving as godfathers to this column: Don Jensen and Don Moore. Like me, they are both "news junkies, culture freaks and library rats." They each helped me see that most folks hooked on short-wave also share at least two of those interests. Their support gave Harold Cones nerve enough to try this somewhat unusual column and gave me the fortitude to try to write/edit it.

Further, Kevin Atkins has been this column's midwife from its inception. Since I have been "on the road" for six months--mostly in Washington State--I have been writing my column on my laptop computer. I then modem it via the CompuServe net to Kevin and he performs computerized typesetting and prepares the final camera-ready copy for our publisher--a time-consuming and thankless task. Thanks, Kevin!

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Technical Topics

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FURLONGS PER FORTNIGHT (and other elusive units of measurement)

It is fortunate that in our age one doesn't have to know about every aspect of something in order to use it. When it comes to some of the units of measure we are stuck with in radio this "need to know" rule can be a blessing.

Of course, like any other hobby, the more you know about the intricacies, the more you can do on your own. And these days doing something on your own can mean better performance and less cost.

So let's take a painless journey into the world of electronic mathematics. We'll look at that misunderstood measurement, the decibel.

DECIBELS

Alexander Graham Bell, inventor of our telephone, did considerable research in the world of audio, including work in hearing aids and teaching speech to the deaf. It is only fitting that Mr. Bell have a unit of audio measurement named after him. The "bel" is not just an audio measurement, though. It is actually a measurement of relative power. You say that the "Watt" is a good enough power measurement for you? True, power amplifiers are often rated in Watts of output. But for many purposes this unit of measure is not very convenient. For example: say you have a stereo with an output power of 10 watts. You want to buy an amplifier that will let you play your tapes at twice the volume. You need an amplifier that will produce 20 Watts, right? Wrong! The human ear interprets sound in a logarithmic way.

LOGARITHMS

The previous example of something doubling from 10 to 20 is a linear function. If you plot a linear function you get a straight line (see Figure 1). We don't hear audio this way. In

order for us to perceive that sound volume has doubled, our 10 Watts would have had to increase to 100 Watts! In a logarithmic scale, each doubling of power means that you have increased the original level by 10 times. To double 100 Watts, you would need 1000 Watts. Not only does audio power behave this way, but so does R.F. energy, including transmitted power and field strength around an antenna. So someone who goes to great pains to increase their transmitter power from 10 to 20 Watts will be wasting their time. They will have to go to 100 Watts before noticing a difference!

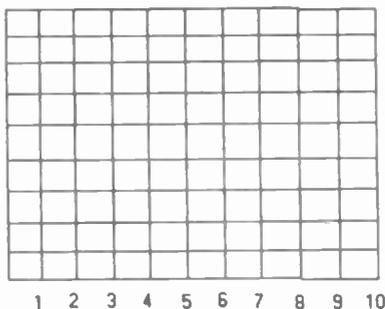


Figure 1. Linear Scale

I won't go into the details of logarithms, because most calculators determine them for you automatically. In the "old days" you had to look them up in very cumbersome charts and handbooks. Ain't science wonderful?

Figure 2 shows what a logarithmic scale looks like. Note that as you go up from each decade (10, 100, 1000, etc.) the individual lines get squished together (if they were evenly spaced this would be a linear graph). An interesting thing about a logarithmic scale is that if you

plot a logarithmic function, like relative power, on a "log" scale you get a straight line!

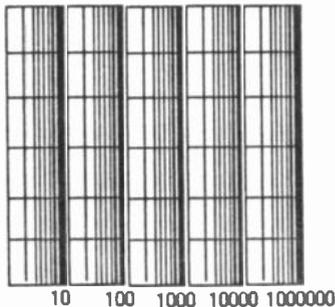


Figure 2. Logarithmic Scale

It turns out that the bel is not a very convenient unit for measurement, because in practice it yields a lot of answers to the right of the decimal point. To simplify things, the decibel, or "dB" is used instead. To obtain a decibel you simply multiply the bel by 10. By the way, most people can just detect a 1 decibel change in audio level.

WHY BOTHER?

About now things are starting to sound a little complicated. Be patient - you are about to learn some things that will amaze your friends and devastate your enemies.

Up until now I have used audio power as examples. That was because we are most familiar with sound. But decibels can also be applied to radio transmission and reception. Earlier I used the term "relative power." This is because the decibel is actually a ratio of two numbers, an "in" and an "out." You can't simply say that an amplifier puts out 20 decibels. It wouldn't mean anything. But if an amplifier can double the power of a signal fed into it, it can be called a 3 dB amplifier. Obviously, if all you are interested in is the raw power an audio amplifier or shortwave transmitter can produce, then the Watt is sufficient. But if you want to look at changes in power levels, like doubling the power of a transmitter, or improving the sensitivity of your receiver by adding a preamp, then you must use decibels.

NO FUSS FORMULAS

There are three rather painless formulas for calculating decibel levels. One is for power, the second is for voltages, and the third is for current. That's right, decibels can also be used to specify changes in voltage and current.

$$\text{dB} = 10 \times \text{LOG} \frac{\text{Power Out}}{\text{Power In}}$$

$$\text{dB} = 20 \times \text{LOG} \frac{\text{Voltage Out}}{\text{Voltage In}}$$

$$\text{dB} = 20 \times \text{LOG} \frac{\text{Current Out}}{\text{Current In}}$$

To obtain the LOG of a number with a calculator, first enter the number (if you have a fraction, like 6/4, perform the division first - you would get 1.5). Then simply press the LOG key. The answer is the LOG of 6/4, in this example.

Let's look at a couple of practical examples of how to calculate dB power levels, then we will see why this bother is warranted.

Example 1. We have a receiver front-end amplifier that can increase a 10 milliwatt signal to 250 milliwatts. How much dB of gain did we get:

$$\text{dB} = 10 \times \text{LOG} \frac{250 \text{ milliwatts}}{10 \text{ milliwatts}}$$

Note that because both the input and output figures are in the same units (milliwatts) the milliwatt part cancels out, making the rest a little simpler:

$$\begin{aligned} &= 10 \times \text{LOG} \frac{250}{10} \\ &= 10 \times \text{LOG } 25 \end{aligned}$$

= 14 (approx.)

So we have a 14 dB amplifier, or a gain of 14 dB. Example 2 will show why this figure is so convenient.

Example 2. Our new preamplifier just arrived from the Acme Radio Mail Order Company. In its specifications, it says that the preamp will provide 20 dB of gain. How much gain will the combination of this preamp and the amplifier of example 1 give us? 34 dB. Why? because if you have two or more power, voltage, or current gains specified in dB, the total is simply the sum of all of them.

Example 3. We have a string of amplifiers connected in series. The first gives a gain of 20 dB, the second gives 10 dB, and the third is defective, with a "gain" of -5 dB. What is the total gain of the string, and what the heck is -5 dB? The -5 dB isn't really a gain, it's a *loss*. Loss, or attenuation, is expressed the same way as gain, but with a minus sign. Why? Because it *subtracts* from the total gain just like the other gain figures *add*. So our total gain is equal to:

$$20 + 10 - 5 = 25 \text{ dB.}$$

Can dB figures tell you anything at a glance? Yes, they can. Most engineers have common dB values memorized, and you can too. A figure of 3 dB means you have doubled your power. A figure of 6 dB means you have quadrupled your power, and 10 dB means you have increased power 10 times. Many popular preamps for shortwave receivers can provide gains of 20 dB. 20 dB means that the preamp will increase the power of your input signal by 100 times!

GOING BACKWARDS

It is often just as useful to be able to go backwards in our decibel calculation - that is, to be able to determine the actual voltage, current, or power level increases (or decreases) when we know the dB figure.

To go "backwards" it is necessary to invoke the mathematical concept of the "anti-log." Don't panic! All calculators that have a LOG function also have an anti-log function as well. It is often labelled "Inverse Log," "1/LOG," or

"10." The LOG formula can be re-written to isolate the voltage, current, or power ratio from the LOG portion:

$$\text{ANTILOG } \frac{\text{dB}}{10} = \frac{\text{Power Out}}{\text{Power In}}$$

$$\text{ANTILOG } \frac{\text{dB}}{20} = \frac{\text{Voltage Out}}{\text{Voltage In}}$$

$$\text{ANTILOG } \frac{\text{dB}}{20} = \frac{\text{Current Out}}{\text{Current In}}$$

The following examples show how the above formulas can be used to interpret dB figures, such as those furnished with receivers and amplifiers.

Example 4. A preamplifier claims a *power* gain of 25. How much will this increase the power of an input signal? First, note that I specified *power* gain. Sometimes voltage or current gain is specified, and these have slightly different formulas. Substitute the values as shown below:

$$\begin{aligned} \text{ANTILOG } \frac{25}{10} &= \frac{\text{Power Out}}{\text{Power In}} \\ &= 316 \text{ (approximately)} \end{aligned}$$

This means that our amplifier will increase our input signal by about 316 times!

Example 5. We buy a length of coaxial cable for our monoband dipole. In the band of frequencies we monitor, the coax has a rated power loss of -1 dB per 100 feet (not very good cable). We need to run this stuff to our mast located on the nearby hill 250 feet away. If we have a 300 mW (that's milliwatt) signal entering our coax from the antenna, how much of it will make it to our receiver?

Well, first we need to figure the total loss in dB of our coax. This part is easy. We know from the specifications that the loss of the coax is 1 dB for every 100 feet used. Our total loss, then, is:

$$\frac{250}{100} = 2.5 \times 1 = -2.5 \text{ dB}$$

Remember, the negative sign in the answer is there to show a loss.

Now, let's fill-in the equation for power using what we already know, and solve for the unknown:

$$\text{ANTILOG } \frac{-2.5}{10} = \frac{\text{Power Out}}{250}$$

$$0.56 = \frac{\text{Power Out}}{250}$$

$$0.56 \times 250 = \text{Power Out}$$

$$140 = \text{Power Out}$$

Note that the power we feed into the coax at the antenna is the "power in" and what we get out at the receiver end is the "power out." We see now the reason for good coax! We have lost over half our signal before it even got to the receiver. Perhaps we should look for better coax...

Example 6. We have trouble with front-end overload from a nearby broadcast station, so we buy a "trap" described as attenuating BCB power up to 60 dB. How much attenuation is this in more familiar terms?

$$\text{ANTILOG } \frac{-60}{10} = \frac{\text{Power Out}}{\text{Power In}}$$

$$0.000001 = \frac{\text{Power Out}}{\text{Power In}}$$

$$\text{Power In} \times 0.000001 = \text{Power Out}$$

Holy mackerel! That poor AM station won't stand a chance here. Whatever the power input to our trap is from the AM station, the receiver will only see about one *millionth* of it!

20 OVER S-9?

Those of us who have "S-meters" on our receivers know that S-9 is just about as strong as a station can be. Yet there are other markings *above* S-9 on most of these meters. What do they mean?

Way back in the golden days of radio, when semiconductors were made of glass and had built-in pilot lights, the "S" unit was established as a rough measure of how well a signal was being received. Each S unit was supposed to represent about 6 dB of voltage gain, with S-9 representing 50 uV (microvolts, or a millionth of a volt) across a given resistance. For signals above S-9 the voltage gain was stated as "dB over S-9." How much, then, is "20 dB over S-9?" Well, this means a 20 dB increase above 50 uV. And we know how to figure this out:

$$\text{ANTILOG } \frac{20}{20} = \frac{\text{Voltage Out}}{50 \text{ uV}}$$

$$10 = \frac{\text{Voltage Out}}{50 \text{ uV}}$$

$$500 \text{ uV} = \text{Voltage Out}$$

So "20 dB over S-9" in theory means 500 uV. In practice, this is not the case, because most S meters are not accurately calibrated to any standard. Instead, they are simply designed to give a relative indication of signal strength. Odds are that two receivers attached to identical antennas at identical locations, and tuned to the same station, will give different S meter readings.

I hope you have enjoyed this month's column. Next month I promise something a little lighter.

73's

Ted Benson

Company Store

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



Coming home from the office and rummaging through the mail is a familiar theme common to all QSL hounds. Imagine checking out the stack and finding a letter from Papua New Guinea among the usual assortment of bills. The heart pounds faster as you check the return address and note it's from the "Spectrum Management Department" in Port Moresby. Certainly this must be one of the open PNG stations in my QSL totals finally verifying one of my recent follow ups!!! Imagine my surprise to find it was "only" a letter from NASWA member Gordon Darling asking for a catalogue. Recently I have had the pleasure of receiving letters from a number of overseas members with requests for items from the Company Store. Besides Gordon, I have received nice letters from Alf Brimming and Edwin Southwell in England, Lim Kong Jin from Malaysia and M. Dalrymple from Australia. One of the benefits of this job is receiving mail from interesting people from around the world in addition to all the wonderful letters received from North American members. All are gratefully received.

I have received a number of inquires from members about actually visiting the Company Store. Although I enjoy meeting and talking to club members, the Company Store is not a store in the traditional sense of the word. We provide strictly a mail order service for club members. There is no inventory of club merchandise in the D'Angelo household. I'm lucky to have a place to set up my receiver and store my papers. Telephone calls and letters from members inquiring about Company Store services are always welcome.

Do you know the man pictured to the right? He is Dave Turnick, Reprint Distribution Manager. If you have ordered reprints from the Company Store Reprint Catalogue, then Dave has probably handled your order.



Speaking of our reprint catalogue, edition #1 is still available from the above address for only US\$1.00. It includes approximately 100 reprints of articles that have appeared in the pages of the club's bulletin over the years. Subject areas include receivers, general DXing/SWling, antennas, other equipment and technical information, Latin America, computers, propagation, history and humor. Pricing for reprints is on a per page basis with a US\$2.00 minimum order. Complete ordering information is contained in the catalogue.

A reminder that we still have The Spectrum Log - International Broadcast Band Edition available for only US\$7.00 and The Spectrum Log - Tropical Band Edition available for only US\$3.50. Order both at the same time for only US\$8.50. The International Band edition covers 49, 41, 31, 25, 21, 19, 16, 13, and 11 meter international broadcasting bands. The Tropical Band edition covers 120, 90, 75 and 60 meter tropical broadcasting bands. The sheets included in The Spectrum Logs are intended to be master originals for the user to photocopy for personal use.

It's time to order from the NASWA Clothing line: T Shirt - US\$11.00; Sweatshirt - US\$20.00; Lined Windbreaker Jacket - US\$24.00. All three are available in small (S), medium (M), large (L) and extra large (XL). For extra, extra large (XXL) there is an additional US\$1.00 charge for the T Shirt and US\$2.00 charge for the Sweatshirt and Jacket. Don't forget the Poplin Golf Hat - US\$14.00. Orders are shipped direct from our supplier via UPS. Shipping costs to Canada require an additional US\$3.50. All items are in NASWA Royal Blue with the club logo in white.

73 - RAD

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

Listener's Notebook

Bruce MacGibbon
2295 Juniper Avenue
Gresham, OR 97030



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AUSTRALIA - Radio Australia - Some fine-tuning is being done to several of the English Frequencies effective 0000 UTC on 17 June.

13705 replaces 13700 (Cook Islands and environs); 15240 extended to 0900 (New Zealand etc); 9655 starts later at 0930 (New Zealand etc); 7215 starts later at 1400 (New Zealand etc); 11800 replaces 12000 (Bangladesh etc); 11720 to Africa extended to 1330. In the UK listing, 15240 will be timed 07-09. In the US listing, 13705 replaces 13700. In the South America listing, 9655 will be timed 0930-1130. (via Keith Synnott, Publicity Officer, Radio Australia.)

BOTSWANA - Gordon Darling, Papua New Guinea received a letter dated 4/9 from Jerry Masete for/Director of Information and Broadcasting at Radio Botswana.

Dear Sir/Madam,

We acknowledge receipt of your letter.

It has been a great pleasure to learn that Radio Botswana's signal is heard as far afield as Hawaii in U.S.

We however regret to inform you that we cannot immediately provide you with "our Programme Guide or Radio Botswana Stickers" since they are being redesigned and updated.

We sincerely assure you that as soon as they are ready for distribution, some will be sent to you.

Finally, Radio Botswana can be heard on the following frequencies.

Freq	Band	From(local)	To(local)
7255	41m(sw)	06.00	20.00
3356	90m(sw)	06.00	07.30
5955	49m(sw)	07.30	17.30
3356	90m(sw)	17.30	23.00
4830	60m(sw)	06.00	23.00
621khz	MW	06.30	19.00
972khz	MW	06.00	23.00

BRAZIL - At least 6 ZYs are active on 31m evenings. The following Brazilians were heard from 0030 on 5/18 w/strong signals: R Novas de Paz 9515; R. Universo 9565; R. Cultura 9615; R. Bandeirantes 9645; R. Cancao Nova 9675; R. Nacional Rio 9705. (Ernie Behr, Kenora, Ontario)

Radiobras-Radio Beijing relay agreement; newspaper criticises government action - 'O Estado de Sao Paulo' in Portuguese 20 May 90 - Excerpts from report:

It has been announced that Radiobras will sign an agreement with the Chinese government that will turn Brazil into a transmission base for Radio Beijing in the southern cone, the northern part of South America and Central America. The reasons behind this strange association, which will turn Brazil into a diving board for a regime that is completely opposite to anything connected to the improvement of democracy and the construction of an economic order based on freedom of enterprise, are not clear.

Radio Beijing transmissions to Latin America, directly beamed from the Chinese capital, are of poor quality. Radiobras will offer Radio Beijing an opportunity to improve the quality of its transmissions. Radio Beijing will without doubt strike a good deal. Radiobras controls the domestic service that is broadcast to Brazil, to Amazonia and to Brasilia. The radio station in the extreme north (Amazonia) already has 10 million listeners in the 54-degree longitude part of the national territory and its shortwave signals are heard clearly by the whole world.

The government should explain the political meaning of the association that is about to be made. The business transaction on its own does not justify the initiative. In the 80s, Brazilian official transmission stations were rented to the Voice of America, the BBC and radio stations from Surinam, the FRG and Switzerland. None of these stations ever disseminated ideas completely opposed to the ideals of freedom followed by the Brazilian political process. Radio Beijing is currently the spokesmedia of the most reactionary political and economic policies...

It has been reported that the contract document that will turn Radiobras and Radio Beijing into sisters has already been written. Therefore there is only a little time to reconsider the decision, or to verify if it will harm important interests by attending to minor ones. Unfortunately, this reflection will not effect the signing of this contract. The nature of the current administration does not save it from committing errors and the best it can do is to correct itself after having made the mistake. (WBI 6/1)

Private radio stations ask not to carry 'Voice of Brazil' news programme. 'O Globo', Rio de Janeiro, in Portuguese 24 May 90. Excerpt from report.

A document proposing that the programmes "The Voice of Brazil" and "Minerva Project" no longer be carried by private radio stations will be submitted to President Collor de Mello and Senator Nelson Carneiro, president of the National Congress, in the next few days. This decision was made yesterday by presidents of radio and TV broadcasting associations of six states (Minas Gerais, Rio Grande do Sul, Sao Paulo, Rio de Janeiro, Rio Grande do Norte, and Bahia) at the first National Meeting of Radio Broadcasters that was held for two days at the Copacabana Palace Hotel. The announcement was made by Jose Roberto Marinho, vice president of Radio Globo Network and president of the Rio de Janeiro Radio and TV Broadcasting Association.

The proposal to discontinue these programmes is based on an IBOPE survey, which shows that people are not interested in these two programmes. Marinho said that our proposal is based on three reasons. Firstly, private radio stations are not forced to carry similar programmes in other countries; secondly, the people are not interested in these programmes, in accordance with opinion polls conducted by IBOPE. Thirdly, the dissemination of these programmes by radio stations only is discriminatory. We do believe, however, that government-owned radio stations should continue to air these programmes.

Marinho also commented on the impact these programmes are having on private radio stations. He said that private radio stations have been losing prime-time advertisements during these programmes. (Editorial note: "The Voice of Brazil" is a one-hour weekday news programme produced by Radio Nacional and carried by all radio stations throughout Brazil). (WBI 6/1)

Radiobras closes 22 offices, dismisses employees - 'O Estado de Sao Paulo' in Portuguese 16 May 90. Text of report from Brazil.

Yesterday (15th May) Radiobras closed 22 offices throughout the country, maintaining only its office in Rio de Janeiro, where Radio Nacional is located. The offices will be replaced by six subsidiaries, one of which will be in Manaus to focus on ecological issues. One hundred and ten employees were dismissed as a result of the reorganisation, and another 140 will be removed from their posts. (WBI 6/1)

BULGARIA - Radio Sofia Broadcasting Sked from May-Nov: Albanian: 0330-04 1224, 6070, 7255, 9700; 1330-1415, 1545-1630, 1845-1930 1224, 9700/6160*. Greek: 03-0330 1224, 6070, 7255, 9700; 04-05 (only on Sunday) 6070, 7255, 9700, 15290, 11750*; 05-0530 (except Sunday) 1224, 6070, 7255, 9700, 11700, 15290/11750*; 08-0825 (only on Sun) 9700, 11700, 11720, 11860, 15290/11750*; 09-0925 9700, 11720, 11750, 11860; 1415-15, 1630-1715 1224, 9700/6160*; 1930-2015 1224, 7155, 9700/6160*. Serbo-Croatian: 04-05 (only on Sun) 1224; 0530-06 (except Sun), 0630-0755 (only on Sun) 1224, 6070, 7255, 11700, 15290/11750*; 15-1545, 1715-18 1224, 9700/6160*; 2015-2055 1224, 7155. Turkish: 04-05 (except Sun) 1224, 6070, 7255, 9700, 15290/11750*; 05-0630 (only on Sunday) 1224, 16070, 17255, 9700, 11700, 15290/11750*; 0930-1030 11720, 11750, 15310, 15385, 17780, 17825; 12-13 11720, 15310, 15385, 17780, 17825; 1430-16 11785, 11800, 11870, 15330, 15385; 1730-19 11870, 15385. Arabic: 1030-12 11720, 15310, 13380, 17780, 17825; 16-17 11800, 11870, 15385; 1930-2030 11870, 15385; English: 0630-07

11720, 15100, 17825; 1830-19 11660, 11785, 15330; 2030-21 11660, 11785, 15350; 2130-2230 11660, 15330. English for North America: 23-24 11660, 15330; 03-04 11720, 15290/11750*. Spanish for Spain and South America: 2030-21 15310; 21-22, 23-24, 01-02 11710/15370*, 15110, 15310, 17825. Spanish for Central America: 04-05 11700, 11720. Italian: 17-1730 11765, 15330; 1930-20 11660, 11765, 15330; 21-2125 1224, 9700, 11765, 15330. German: 0530-06 11720, 15160, 17825; 16-17 11785, 15330; 19-1930 11860, 11765, 15330. * - From 9/2. (via Ed Kusalik, Coledale, Alberta)

CHILE - Region XI of the General Carlos Ibanez del Campo is the newest in Chile. It is located between the 44th and 49th parallels, south latitude. It is an area of approximately 110,000 square kilometers, or fifteen percent of the country. In the heart of this regional is located Coyhaique, its capital, and Radio Santa Maria. The station is owned by the Apostolic Vicarage of Aysen. Its history began on November 7, 1977, when the Ministry of Telecommunications by judicial decree authorized the station. The decree was published in the Official Diary of the Ministry on January 2, 1978, and broadcasting started on September 12, 1979. The first director was Padre Alfonso Masiqnani. The current one is Carlos Wagner Catalan. The station has twenty other employees. Radio Santa Maria operates two Wilkinson transmitters simultaneously, one of 10,000 watts on medium wave and one of 1000 watts on shortwave. 6030 kHz is its shortwave frequency; 840, its medium wave one. There is a third transmitter for emergencies. The "reason for being" of the station is to help with work of the Catholic Church. To aid it in accomplishing its objective the station has various departments--commercial, information, musical programs, recording, pastoral, public announcements, and DX. Recently the station joined the ARCA, the Association of Catholic Stations. By being part of this organization, Radio Santa Maria obtains information on the latest events from all parts of the country. As a result, on more than one occasion it was able to transmit urgent messages from one family member to another. This service is of special importance when one considers that Radio Santa Maria is the only source of information in this part of Chile where overland communication is the most difficult of any province in the country. Reception reports may be sent to the station at Apartado 1, Coyhaique, Chile. At the present time the station sends a pennant when verifying. (Translated from an information sheet sent to me by the station, Marlin A. Field, MI)

CHINA - Radio co-exists with TV in China ... by K.K. Chadha, Hong Kong in "Asia-Pacific Broadcasting Dec 89 via Gordon Darling, Papua New Guinea.

For nearly 40 years after its found in 1940, the Central People's Radio Station (CPBS), China's sole government-run national broadcasting network, had no rival.

Then came television and people began to wonder if radio could compete with the new crowd-drawer.

But the staff at CPBS kept their cool and capitalised on certain advantages they had over television. One of the advantages was its range of listeners, far vaster than the national TV network.

The rapidly growing urban centres have become a promising market for radio, too, as, for many, radio is their first source of information.

CPBS also noted trends abroad. In the United States, for instance, the number of radio stations, which had declined seven years in a row in the early 1980s, increased to about 10,000 in 1986.

"This demonstrates that radio broadcasting can co-exist with TV," said Yang Zhengquan, director-general of CPBS. "We decided then that we should not follow our foreign counterparts in reducing the hours on the air or affiliate stations but to survive on quality."

Today, the station has 481 affiliates and broadcasts 107 hours of programmes a day over six channels. It took CPBS a few years in the early 1980s to work out a new format aimed at attracting more listeners. The new programming began three years ago.

Among the new programmes, "8*30 in the Evening," a one-hour show featuring music, opera, literature, history and other theatrical performances, has proved a hit as it allows listeners to select what they want to hear through a regular feature called "Listeners' Mailbox."

Listeners can make requests or send brief messages. Mr Yang said about 500 million people tune in to this programme.

CPBS has also increased news and service programmes between 06.00 and

08.00 hours daily, radio's prime time. In comparison, TV's first news show is at 08.30 and it is a re-broadcast of the previous evening's news.

Mr. Yang said about 60 per cent of the population -- 800 million people -- listen to the half-hour news summary at 06.00 or 07.00 hours. By contrast, the evening news has a low rating.

Since 1987, CPBS has tried to update news regularly throughout the day. It has also started investigative reporting, offering in-depth news, Mr. Yang said.

Radio Beijing, set up in 1947, is China's only overseas radio station, and now broadcasts worldwide in 38 languages, including French, Japanese, Russian, Spanish, German, Arabic, standard Chinese and four Chinese dialects.

Its daily broadcasting totals more than 142 hours, ranking third in length in the world, after the Soviet Union and the United States. There are nearly 480 million radio sets. In addition there are about 84 million loudspeakers connected to the wire-broadcasting stations in the Chinese countryside.

A multi-level, multi-channel and multi-purpose rural radio and television network has been set up in China. It consists of wire-broadcasting stations, frequency modulation stations, satellite earth stations, radio and television stations.

The wire-broadcasting stations have become a powerful instrument for county and town governments to disseminate policies and instructions.

The 370-odd TV stations broadcast for more than 16,500 hours a week. The national station, China Central Television Station (CCTV), broadcasts for more than 30 hours a day.

There are more than 800 TV transmitting and relaying stations, each with a power of one kilowatt or more. TV broadcasts cover about 80 per cent of the country. There are about 135 million TV sets in the country, with about half of the Chinese families owning TV sets.

The number of earth stations has risen from 1,600 in 1986 to more than 5,000, and research is intensifying on high-rate telecommunications and broadcasting satellites.

TV commercials are filtering into the lives of more than half of China's 1.2 billion people. Now more than 210 TV stations run advertisements, and ad revenue has risen by 30 per cent every year, topping 310 million yuan (about US\$83.3 million) this year.

The potential of TV commercials, first introduced in Shanghai in 1979, is being increasingly recognised by Chinese manufacturers.

Ninety per cent of the ads shown on TV are made by television stations. The rest are provided by advertising agencies and even advertisers themselves.

Some film professionals are also making commercials, and these are usually of better quality. Poor equipment also affects the quality of commercials. Many stations still use 1/2 inch video tape.

Few of them have computers that can compose special effects. Some high quality commercials shown in China were made in Hong Kong.

Despite all the difficulties, CCTV officials envision a big boom in China's TV advertising business. Earlier, TV advertising was looked down as a dispensable sideline.

But as government financing decreases, the TV stations have begun to feel the benefits of running more commercials.

Today, more than 40 per cent of CCTV funds come from advertising. The commercial income is used to enrich entertainment programmes.

Money from foreign advertisers is used to buy foreign TV programmes, films and TV equipment.

To improve modelling in TV ads, CCTV runs a performing arts class with people selected through examinations.

Amateurs who include students, workers, hotel employees and even policeman, learn the basics of modelling and acting and participate in the shooting of commercials.

On the technical side, China has made a breakthrough in the research of key technology for cable transmission of TV programmes on neighbouring channels.

The Beijing TV Equipment Plan has developed a device that is able to eliminate mutual interference of neighbouring channels.

As a result, a TV set with a 12-channel system can receive programmes on all of them, instead of only six or seven channels at the present.

2952.0, UNID CC language station noted from 1720-1740 w/continuous talk

by W. No music, pauses, etc...just non-stop talk. No//SWBC freqs noted. A check of possible BCB fundamental freqs did not yield a //freq. This on 5/28. Excellent level. Not noted since. (Mike Hardester, Okinawa)

CONGO - Congolese radio continues experimental shortwave transmissions - Monitoring research 3 June 90.

The Voice of the Congolese Revolution announced at 2020 gmt on 3rd June that it was operating experimentally on shortwaves according to the following schedule:

Tuesday to Thursday: 07-11 on 9610, 7105; 11-17 11710, 9610. Friday to Sunday: 07-11 9715, 7175; 11-17 15190, 9715; 17-21 4765, 3265.

Reception reports were requested to be sent to the General Mangement of the Congolese Radio and Television, PO Box 2241, Brazzaville, People's Republic of Congo. (WBI 6/8).

3265, Rdiff-TV Congolaise, *17-21*, since 6/4, poor to good, FR, reactivated after many years' absence!!! Test transmission by using new high power transmitters. Programs of Afro-pops, news, etc.//4765.0 kHz. Sometimes canned full ID as "Ici Brazzaville, la Voiz de la Revolution Congolaise. Vous ecoutez en ce moment notre programme experimental en ondes courtes. Nous emetton de mardi a dimanche de 8 heures a 22 heures locales, ... 7 heures a 21 heures GMT, temps universel ...: de mardi a jeudi 8 heures a 12 heures 7105 kHz bande de 41 metres 9610 kHz bande de 31 metres, 12 heures a 18 heures 9610 kHz bande de 31 metres 11710 kHz bande de 25 metres, 18 heures a 22 heures 3265 kHz bande de 90 metres 4765 bande de 60 metres; de vendredi a dimanche 8 heures a 12 heures 7175 kHz bande de 41 metres 9715 kHz bande de 31 metres, 12 heures a 18 heures 9715 kHz bande de 31 metres 15190 kHz bande de 19 metres, 18 heures a 22 heures 3265 kHz bande de 90 metres 4765 bande de 60 metres, ... rapport d'ecoute a la Direction Generale de la Radiodiffusion Television Congolaise, Boite Postale 2241, Brazzaville, Republique Populaire du Congo." Other IDs are heard as "Radio Nationale", "la Voiz de la Revolution Congolaise, programme experimental", "II est a present XX heures XX minutes a Brazzaville." etc s/off w/NA. (Jun'ichi Nishikawa, Editor of "Nishi-Tokyo DXers' Circle" (NTDXC), Tune No. 77, June 1990)

COSTA RICA - The latest listener ratings put evangelical radio TIFC in forth place among the 80 or so stations in Costa Rica, according to LAM missionary, Hugh Worsfold. Begun by LAM in 1948 as the second missionary station in the world (HCJB, first), TIFC years ago, became an independent Costa Rican minstry. (Taken from the "Latin American Evangelist", Apr.-June, 1990 via Marlin A. Field, MI)

CUBA - Radio Havana Cuba's announced EE Sked on 6/11: 0000-06 on 11820, 11760; 02-0450 on 9710; 04-06 9750; 06-08 11835 (bmm) 3365, 0330, R. Rebelde, SS, M talk into music then W & M talk//5025 on 6/7 (bmm)

ECUADOR - One of the new programs during HCJB's Studio 9 segment is 'Dateline 90' hosted by Jan Shober (Sp?). The first program was on bias in the media and included a very informative panel discussion. The most recent edition consisted of an interview with a Russian language announcer of HCJB's on conditions for the ordinary people in the Soviet Union. He had just returned from a trip to the Soviet Union and he had some rather interesting observations. Try 17875 kHz at 0055 UTC Tuesdays. (Hans Johnson, Maryland)

FEDERAL REPUBLIC OF GERMANY - R. Free Afghanistan heard on 6/3 on 17895NF via Biblis, at 0230-0330 in Pashto/Dari//15370 via Holzkirchen, 11770 L6 9555 via Gloria. (Ernie Behr, Kenora, Ontario)

FINLAND - Yleisradio's external service, Radio Finland, introduced a number of programme and frequency changes on 1st June. Apart from Radio Finland's external-service programmes, an amalgam of YLE 1, 2 and 3 programmes is now relayed by external-service transmitters at various times. The main periods for listeners in Europe as follows:

23-03 on 963, 558 and 252 kHz; 03-0415 on 6120, 963, 558, and 252 kHz; 07-0930 on 11755, 6120, 963, 558 and 252 kHz; 0945-12 on 11755, 963, 558 and 252 kHz. 12-1430 on 11755, 6120, 558 and 252 kHz; 16-1830 on 11755, 6120, 963, 558 and 252 kHz. The Swedish-language programmes are carried on

6120 kHz between 0930 and 12 gmt. (WBI 6/8)

GREECE - Voice of Greece Transmission Sked effective 6/15-9/30: Europe: 0630-07 GK, IT 9395, 9425, 11645; 19-1950(3) GK, EG, FR, GM 9395, 11645. Balkan Countries: 16-17 Albanian, Servocroatian, Bulganan, Romanian 9395, 9425, 11645; 20-2050 (Same languages as 16-17) 9395, 11645; Soviet Union & Poland: 13-1350 11645 GK, RS; 17-1750 9425, 11645, 12105 GK, RS, Polish. Japan: 10-1050 15625, 17535 GK, EG. Australia: 08-0850 15625, 17535 GK, EG; 21-2150 9400, 9425, 11645 GK; 2150-2250 11645 GK. Arabia & Indian Ocean: 104-0450 9395, 9425, 9935 GK; 14-1450 9425, 12105, 15625 GK, AR. Cyprus & Turkey: 05-0615 7430, 9395, 9425 GK, Turkish; 11-1120 9800, 11645 Turkish. Egypt-Libya: 1130-1150 9800, 11645 AR. Central & South Africa: 13-1350 12105, 15625 GK; 18-1850 11645, 15625 GK, EG. Azores Zone: 09-0950 11645, 15625 GK. South & Central America: 22-2350 9395, 11645 GK, PT, SP, EG; 23-2350 9425 GK, SP. North America & Sweden: 0000-0350 GK, EG 9395, 9420, 11645; 12-1250 GK, EG 15625, 15650, 17535; 15-1550 GK, EG, SW 11645, 156256. (2 = Only on Weekends and Greek Holidays. 3 = The portion 19-1930 UTC is also transmitted on 792 kHz (mediumwave))

News Bulletins: AR: 1130 and 1435. Albanian: 16 & 20. Bulganan" 1630 and 2025. GM: 1640. EG: 0130*, 0340*, 0840, 1040, 1235, 1530*, 1840*, 1920* & 2335* (*: except Sundays). FR: 1930. GK: 0000, 0145, 02, 04, 05, 0630, 081, 09, 10, 12, 13, 14, 15, 17, 18, 19, 21, 22 & 23. IT: 0715; PT: 2305. Polish: 1740. RS: 1335, 1725. Romanian: 1645 & 2035. SP: 2320, 2340. Servocroatian: 1015 & 2015. Swedish: 1540. Turkish: 06 & 11.

Radiophonikos Stathomos Macedonias, Thessaloniki Sked: All in Greek. Europe: 05-09(2); 09-2155 11595; 18-21 9425. Middle East: 05-09(2) 9935; 09-2155 9935. (via John Carson, OK)

GUAM - 11705NF, 1506, TWK, "Search for Truth" program. At 1515 "Pacific DX Magazine" with Bill Damick (who keeps reminding us that he is leaving TWR for TWR Swaziland at end of June.) At 1530, 'Children's Bible Hour' on 6/9 ex 11650. (bmm) 15420NF, 2157-2326, KTWK, ex 15055. (Arthur Cushen via RNZI 'Mailbag' on 6/4 via Mike Fern, CA)

HAITI - The era of pre-tuned radio has returned, reports OMS missionary, Claude Beachy. Pre-tuned radios were used by HCBJ and Radio 4VEH (OMS' station), in both Ecuador and Haiti in the 1960's. Says Beachy: "Now, thanks to modern technology, there is a solar-powered, pre-tuned radio. About the size of a regular pack of cigarettes, they are designed to operate for at least three years without attention. One solar charge maintains the radio's function for three years. To date, 40,000 of these have been 'fed' into 'restricted areas' of the world where missionaries cannot enter. These are pre-tuned to a missionary radio station covering the specific area." (via Mar/Apr issue of "OMS Outreach" via Marlin Field, MI)

ICELAND - Rikisutvadpid in Reykjavik is now operating according to the following schedule. To Europe 1215-1245 on 11418, 13830, 15770 and 17493 and 1855-1930 on 3295, 11418, 13855 and 15770; North America: 1410-1440, 1935-2010, and 23-2335 all on 13855, 15770 and 17440. (Bernd Trutenau, West Germany via "Sweden Calling DXers" #2095 dated 5/22 in Print)

INDIA - 3235.0, 1550-1600, AlR(t), EE program on production and policies in India. Noted in //3295 and 3315. Announcement by M for "...India Radio," or else wishful thinking! At 1600, into lang. 3235 programming separate. Stations on 3295, 3315, 4760 (Port Blair or Leh?), 4800, 4860 and 4920 noted//w/sigs ranging from good (4760) to poor (3315). (Mike Hardester, Okinawa)

INDONESIA - 3398, RRI, Singaraja, nice verie letter and PPC in one month for a 2nd follow up for a '85 report and have no plans to return. Use now only 1080 MW with 10 kW power. V/s: Ketut Aswin B.A. Kepala Stasiun. (Ed Kusalik, Coledale, Alberta) 3231.8, 1455-1539*, RRI Bukittinggi, Sumatra(t), Indo, noted w/prayers(?) to 1500 when local/national(?) news program began. RRI ID noted, but location not heard. News ended at 1514 w/RRI ID (again location not heard). Into prayers(?) and then to play/drama(?) w/3 men. Into s/off announcement at 1530., anthem 1536:30-1537:50 (vocal). Carrier off at 1538:40. S10 343 (Mike Hardester, Okinawa) (bmm) 4990, 1304, UNID Indo, Jakarta Relay on top of Hunan PBS//

4775 RRI Jakarta, 4753 Unjung Padang. At 1307 Anthem then M at 1309* both 4990 and 4753 on 6/10 (bmm) 4989, 1503-1555*, RRI, Gorontalo, Jakarta News till 1515, then popular song program. Closing announcement w/Love Ambon. Drift from 4977 on 5/13 (Hiroyuki Ishii, 'NTDXC Tune' No. 77, June 90). Apparently my UNID heard on 4990, but note the different s/off times. (bmm)

IRAQ - PLO doubles broadcasting output from Baghdad with new morning programme. Monitoring research 27-29 May and 2 Jun 90.

At 1922 gmt on 27th May, the Voice of Palestine programme, produced by the PLO and carried on facilities provided by Radio Baghdad, announced that it was adding a morning transmission, to be broadcast from Wednesday 30th May from 0330-0630 on 9705. This was in addition to the evening programme broadcast from 1630-1930 gmt on 1035 kHz.

However, at 1904 gmt on 29th May the Voice of Palestine announced that the launch of the new morning programme had been postponed until further notice "due to a technical failure".

A further announcement at 1913 gmt on 31st May stated that the new morning programme would start on Sat 2nd June.

Monitoring research confirms that the above programme did start as stated on 2nd June. The new morning programme is not a repeat of the previous evening's broadcast although it does contain some repeated material. It contains talks, music and special messages, but no news bulletin. (WBI 6/8)

Also WAHK news agency, Manama (Bahrein), in Arabic 1100 gmt 3 Jun 90: Excerpts from report: PLO today received 25 million dollars in urgent aid from Iraq to support the popular intifadah in the occupied territories...

Iraq also decided to double the transmission hours of the Voice of the PLO from Baghdad to six hours a day on the short and medium waves to support the intifadah and to break the media seige imposed on it. (WBI 6/8)

JAPAN - If you enjoy 'DX Corner' at 0130 UTC on Mondays on 5960 kHz as I do, stay tuned! Following 'DX Corner' is a short program called 'Viewpoint'. The program is only about 5-minutes long but the personal observations contained in this program include some real gems. The latest edition focused on the different experiences of a Japanese man when he became ill overseas and how his treatment differed from the treatment he would have received in Japan. (Hans Johnson, Maryland)

KAMPUCHEA - Radio Voice of the People of Kampuchea in its overseas service broadcasts in English on 11940 kHz. from 0000-0015 and from 12-1215 UTC. (Schedule from station, and name of station as it appeared on schedule via Marlin Field, MI)

KOREA - 'From Us To You' is Radio Korea's letter program. What I especially enjoyed, however, were the extensive comments on various aspects of life in South Korea. Recent examples of this that I have heard include the following: Earth Day celebrations in South Korea; a detailed look at Seoul's springtime weather; and the latest in South Korean pop starts. This can be heard on Fridays at 1040 UTC with excellent reception via the Sackville relay of Radio Korea on 11715 kHz. (Hans Johnson, Maryland)

MALAYSIA - There are plans to increase the broadcasting hours for Radio Malaysia's domestic channels to 18 hours per day for all of the services. This would mean then that all the domestic services (with the exception of the Bahasa Malaysia channel - Radio 1 which is already coming on 24 hours would mean that all the states in the country will then have their own station to broadcast Radio 3 channel - a local regional transmission service.

There has been word that a new (and first) private radio station will be set up soon to be called 'Suara Johor'. It is a regionalized service based within the state of Johor, the southern most state in West Malaysia. The service will have music throughout with regular news updates. (via Lim Kong Jin's "SE Asia DX News" No. 8)

MEXICO - 6009/6011, Radio Mil - received 2-PPC's for 2nd follow up, sent via regular airmail. No reply to my initial registered report. V/s: Jaime Pontones, Dir. Artistico. (Ed Kusalik, Coledale, Alberta)

NEPAL - At the end of April, Radio Nepal dropped 3230 kHz and went to 7165 for the morning transmission starting at 0015 and the evening transmission beginning at 1145. EE news is at 1415 on 7165 and 5005 kHz. (Victor Goonetilleke, Sri Lanka on Radio Nederland's 'Media Network' on 5/31 via Mike Fern, CA)

PARAGUAY - R. Nacional, 9735, has new program of Paraguayan music, heard irregularly at 01-0402* since late May, also a new ID since 6/2: "R. Nacional, La Voz del Paraguay en 9735, 6025 kHz, cobertura mundial". (Ernie Behr, Kenora, Ontario)

PHILIPPINES - The English broadcast of FEBC Manila is now at 0000-02(-0230 Mon-Fri) on 15490 (ex 15480 - this change was first noted on 6/2); 09-11 on 9800 and 11850 and from 13-16 on 11850.

The DX program 'DX Update' is on Weds 1440+. It is a 15 minute feature providing DX News. Another DX program of the same nature but lasting only 5 minutes called 'DX Report' is broadcast on Sats at 0125. The DX-Editor is called Craig Edwards of Australia. Contributions are welcome and scripts of the program are sent to those who contribute to the show. Listen in for details. (via Lim Kong Jin's "SE Asia DX News" No. 8)

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

QATAR - QBS, Doha sked to 9/1: 0245-0705 11820; 08-1705 17770; 1705-2130 15265. All with 250 kW, all in AR. (Bob Padula in 'SW Station News' in "ARDXC" Jun 90)

SAUDI ARABIA - BSKSA Sked to 9/2: 03-17 AR 9570 (Network #2); 03-0830 AR 9720, 7280; 04-05 Somali 15430, 17845; 04-06 TK 15275, 11685; 05-06 Swahili 17755, 15335; 05-11 AR 15435, 15140; 06-08 AR 21505, 11730 (Holy Koran program); 08-10 AR 21505, 21665 (Holy Koran program); 10-14 AR 15170 (Holy Koran program); 10-12 Indo 17895, 21665; 10-15 AR 7220; 10-17 AR 6000; 11-17 AR 21505; 12-14 Urdu 11825, 15345; 14-16 Farsi 11730, 9640; 14-16 Farsi 11730, 9640; 14-16 FR 9720, 9705; 15-21 AR 7250 (Holy Koran program); 15-17 AR 11780; 16-17 Bengali 11825, 15345; 16-21 EG 9705, 9720; 17-18 T'stani 7145, 9730; 17-2130 AR 9870; 17-21 AR 6020 AR (Network #2); 17-20 AR 7150; 18-19 Bambara 7275, 15245; 19-21 AR 7275, 11935 (Holy Koran); 2130-23 AR 9085, 9705, 9720. (via 'SW Station News' in "ARDXC" Jun 90)

SINGAPORE - Via 'Industry Review' in "Asia-Pacific Broadcasting Jan 90 via Gordon Darling, Papua New Guinea.

Singapore Broadcasting Corporation (SBC) launched its 24-hour Music Station Radio Ten on FM 98.7 MHz on January 1, last year.

The new FM Music Service is the latest step in providing better service to the radio listeners.

With the additional Music Station, SBC is meeting the need for more entertainment without neglecting its role on information and education.

Presently, the five Radio Services provide listeners with a variety of music, information and educational programmes.

The broad base of these programmes keep Singaporeans in touch with local and international news, promote an interest in the finer things in life, eg. Music & The Arts and foster a better understanding of the social milieu.

In short, radio contributes to the national goals of a vibrant and caring society.

To enhance its role in entertainment, SBC provides a twenty-four hour service to its increasing number of radio listeners, which reached almost one million last year.

The extension of transmission on Radio One last year to 0200 hours on Fridays, Saturdays, and the eve of public holidays proved popular. (As I (bnm) mentioned in a previous DXS not doing that now on Fri & Sats)

Young and elderly listeners found that radio could provide companionship as well as be a source of information during the day and

night.

Radio Ten on FM 98.7, therefore, is part of SBC's overall plan to upgrade, improve and better service its listeners. It caters to listeners who enjoy contemporary hits as well as a touch of nostalgia.

The daily programme schedule on Radio Ten provides a guide to the variety of music that are featured.

There are public service information at selected times, et. the newsbriefs and weather reports at midnight, 6.00 am., 12.00 noon and 6.00 pm, emergency traffic reports for motorists and Diary of Events.

Non stop music is the main feature and the titles of programmes will provide listeners with an idea of what to expect.

Listeners' participation is another element in the programming format. Special programmes were planned during the launch of Radio Ten. To herald in the New Year at midnight, Radio Ten linked up with Radio One for its birthday bash.

There was an hour of fun and lively music for dancing, and the New Year spirit pervaded through the first day of broadcast with programmes such as the Class of 88, (a review of the previous year's Best singles and albums), and Yesteryears' Top 40 (a non stop selection of the top hits of the 80s).

At the end of the evening, it was "Celebration" time again till the clock struck twelve and a new programme schedule begun on FM 98.7 on January 2.

In its continuous effort to improve, Radio One also underwent changes to some of its existing programmes from January last year.

With the introduction of Radio Ten, Radio One could have better balance of music and play a greater role in providing information to the public.

The new programmes on Radio One took into consideration, the profile of listeners at various times of the day.

From listeners' feedback and the results of SBC's surveys, the following changes have been made.

There will be more programmes with uninterrupted music, eg. between 12.05 and 2.00 pm and also 4.05 to 5.00 pm from Monday to Friday; a family type programme from 2.05 to 4.00 pm on weekdays for adults at home, eg. those who work on shifts and retirees; and programmes in the late evening that are geared towards youths who not only want music, but information catering to their interests, eg. career guidance, hobbies, travel, self improvement, etc.

New sounds from Radio 1 and 10 started last October 28.

Programmes on Radio 1 and 10 were streamlined to serve the listeners better. The new pattern of broadcast also meant that listeners will have a wider choice as Radio 1 and 10 will play different types of music at different times of the day.

Since the launch of Radio 10 last January, constant monitoring and improvements have been made.

Radio 10's popularity is confirmed by the findings of an SBC survey.

According to this survey, Radio 10 garnered the highest listenership. 40 per cent of the listeners tuned in to the service.

Radio 1 and 10 combined attracted 57 per cent of listenership followed by 33 per cent for the Mandarin Service (Radio 3) and 25 per cent for the Malay service (Radio 2).

Listeners also indicated interest in the news, traffic and weather reports; information on social issues, family life and leisure matters and self development; quizzes; music of the 70's and 80's; information on artists and songs.

In a survey conducted by Frank Small & Associates from 15 June to 4 July, it was found that 7 in 10 adults listen to radio programmes on an average week.

SBC radio programmes dominate the radio market with an 87 per cent share. Radio listeners are mainly singles, young (age below 30), better educated, English educated and from the highest income group.

Radio 10 listenership has grown to 23 per cent in June 1989.

In the new year, SBC will launch two more new radio channels -- a Mandarin music service FM 93.3 and an English station which will concentrate on 'middle-of-the-road music.

Both channels will broadcast 18 hours a day, and they bright to eight the total number of radio channels broadcast by SBC.

The English service, which is yet to be named is a music channel that will complement the contemporary diet of Perfect 10.

The director of radio programmes at SBC, Chua Foo Yong said that with more people travelling, listeners are now more exposed to all kinds of music.

Except for Radio One, which has a variety format which includes quizzes, chat shows and music, the new station and other two existing ones, the classical Radio Five and the contemporary Perfect 10, are more specialised in the type of music they play.

The new station will have more ballads, country and western music and adult contemporary music.

The Mandarin pop music channel FM 93.3 will be launched on January 1. It will play popular hits and evergreens back-to-back from 6am to midnight on weekdays and to 2 am on Fridays, Saturdays and the eve of public holidays.

Other radio services will also be extended or restructured from January 1. The new channels and extensions mean SBC's broadcast hours will be increased by a total of 38 hours to 156 hours a day.

The Singapore National Trade Union Congress (NTUC) has applied to the Ministry of Communications and Information for a licence to launch its own S\$2 million radio station which will be run as a non-profit organisation.

One of the proposals to the ministry was for one main channel in English and Mandarin and a second in all four official languages to meet the ministry's regulations that requires all broadcasting in four languages.

Initial investments on the two new stations would cost about S\$2 million while operating costs are expected to run up to S\$100,000 a month.

A ministry official said that the chances of NTUC getting the licence is very good.

SWEDEN - Radio Sweden's EE transmission to SE Asia at 0100 has moved from 17680 to 11760 as of 6/2. (Sweden Calling DXers 5/29 via Mike Fern, CA)

THAILAND - The external service of Radio Thailand in EG is heard at 23-0430; 05-06 (weekends to 08) on 9655 and 11905. At 1130-1230, the two frequencies remain in use with the addition of a new outlet of 4830. (via Lim Kong Jin's "SE Asia DX News" No. 8)

According to G. Victor Goonetilleke of Sri Lanka on Radio Nederland's 'Media Network' on 5/31, the Thai Palace station, Or Sor is back on the air on 6149 at 11-12 UTC presumed in Thai. (via Lim Kong Jin, ibid.)

UNITED KINGDOM - During the program "Newsdesk" on 5/31, I heard the following news item: In the wake of the BBC by the Foreign Office, the Malay and Japanese Language services of the BBC are to be dropped. Additional broadcasts are planned for Russian, Chinese, and Vietnamese language services. (Hans Johnson, Maryland)

UNITED STATES - I received a QSL for the special test of VOA Europe that was conducted recently on shortwave. How exactly does VOA differ from VOA if at all? (Hans Johnson, Maryland)

UNITED STATES - VOA EE Sked to 9/29: East Asia, SE Asia, Pacific: 19-20; 21-01 Morning Broadcasts: 19-20 Primarily to the Pacific Islands: 9525, 11870, 15180; 21-22 Primarily to the Pacific Islands: 11870, 15185, 17735; 22-0000 1575* (from 2230), 7120, 9770, 11760, 15185, 15290, 15305, 17735, 17820; 0000-01 1575* (from 0030), 7120, 9770, 11760, 15185, 15290, 17735, 17820.

10-15 Evening Broadcasts: 10-11 Primarily to the Pacific Islands: 5985, 11720, 15425; 11-12 5985, 6110, 9760, 11720, 15155, 15425; 12-15 6110, 9760, 11715 (to 1330), 15155, 15425; 15-18 Audible in SE Asia: 1575* (1530-16), 6110, 9760 (to 17). * = Mediumwave: 1575 kHz to SE Asia.

South Asia: 01-03 Morning Broadcast: 01-03 7115, 7205, 11705, 15160, 15250, 17735, 21545; 14-18 Evening Broadcast: 14-15 7125, 9645, 9760, 15205, 15395; 15-17 1575* (1530-16), 6110, 7125, 9645, 9700, 9760, 15205, 15395; 17-18 6110, 7125, 9645, 9700, 15395. * = Mediumwave: 1575 kHz. to Bangladesh, Eastern India.

Caribbean/American Republics: 10-12 Morning Broadcast: 10-12 1580*, 9590, 11915, 15120; 22-2215; 0000-0230 Evening Broadcast: 22-2215 Mon-Fri: 9640, 11880, 15225; 0000-00030 5995, 9775, 9815, 11580, 11740, 15205; 0030-01 1530*, 15180*, 9775, 9815, 11580, 11740, 15205; 0000-01 Caribbean Programs: 1580**, 6130, 9455, 11695; 01-02 1580**, 5995, 6130, 9455, 9775, 9815, 11580, 11740, 15205; 02-0230 Mon-Fri: 5995, 9775, 11580, 15205. * =

Medium Wave: 1530 and 1580 kHz. to Central America. **Medium Wave: 1580 kHz. to the Eastern Caribbean.

Africa: 03-07 Morning Broadcast: 03-0430 621*, 3990, 6035, 7280, 9525, 9575, 11835 (11835 from 04 Sat-Sun); 0430-06 3990, 6035, 7280, 9525 (to 05), 9540 (from 05), 9575; 06-07 3990, 6035, 6080, 6125, 7280, 9530, 9540, 9575, 11915; 15-22 Evening Broadcast: 16-18 7195,m 9575, 11920, 15410, 15445, 15580, 15600, 17785, 17800, 17870; 18-19 621*, 7195, 9575, 11920, 15410, 15445, 15580, 15600, 17785, 17800, 17870, 21485; 19-22 621*, 7195, 15410, 15445, 15580, 15600, 17785, 17800, 17870, 21485. *Medium Wave: 621 kHz to Southern Africa.

Also for listeners in Central and Western Europe: VOA Europe is available 24 hours a day on several cable and FM outlets, and on 1197 kHz. medium wave at 0730-1800 Central European Time (14-18 Suns). For more information, listeners in Europe may write to VOA Europe, P.O. Box 221 220, D-8000 Munich 22, Federal Republic of Germany. (via Ed Kusalik, Coledale, Alberta)

U.S.S.R. - U.S.S.R. - Radio Moscow: On-air with perestroika in 'World Broadcast News' Feb 90 by Igor Sannikov.

The Soviet Union is one of the top international broadcasting services, speaking to the world in 77 languages from a dozen individual external services. Many of the Soviet Republics constituting the Union have external services of their own originally set up to reach their nationals living outside the U.S.S.R. These national broadcasters remain, however, part of the USSR State Committee for TV and Radio Broadcasting (Gosteleradio)

These external services are Radio Kiev, Radio Minsk, Radio Vilnius, Radio Riga, Radio Tallinn, Radio Yerevan, Radio Tbilisi (in Georgian only), Radio Baku, Radio Tashkent, and Radio Dushanbe. In addition to the national external services, there is the Moscow station Peace and Progress which expresses the views of the Soviet government.

But Radio Moscow with its 66 languages is undoubtedly the major international broadcaster of the USSR, representing the entire Union, not just Russia. It is also one of the oldest external services in the world, dating back to October, 1929.

Nowadays Radio Moscow along with the entire nation is undergoing revolutionary perestroika--presenting much more unbiased programming and including topics that heretofore were considered "closed." Cooperation with Western European broadcasters has also been accepted. For example, the German Department of Radio Moscow is now a close partner of the Deutsche Welle, the Federal Republic of Germany's external service whose Russian-language broadcasts were jammed by the Soviets just a few years ago.

However, like many other external services, the technical facilities of Radio Moscow do not get the funding lavished on domestic services. The headquarters of Vsesojuznoje Radio, the All-Union Home Services, in Ostankino is a much better place to look for the latest technology than the gloomy 10-story building at 25 Pyatnitskaya Street that Radio Moscow shares with the Gosteleradio administration.

Facilities review

The five floors occupied by the studios and control room may seem insufficient to ensure the scale of operation of Radio Moscow, although the service gets substantial aid from other organizations such as the Home Service and the State House of Broadcasting and Sound Recording. Recording studios are arranged in blocks situated in one wing of the building on each story. The other wing is occupied by production rooms. The studios are for presenters, although they are large enough to accommodate round-table discussions. Unlike the Home Service, Radio Moscow does not record its own music.

In the earlier days all the recording equipment was manufactured at the Moscow Experimental Works and some of these machines dating back to 1973 are still in use by the news room. Today the service uses Hungarian analog studio tape recorders, the Mechlabor STM-200 to STM 610 series which run quarter inch ORWO tape made in the GDR. Consoles are also Hungarian and the mics are from Austria. Reporters have Hungarian and Japanese cassette recorders. Automation has not yet reached Radio Moscow.

Sound processing to meet the requirements of short wave transmission consists of compressing the signal by 10 dB when recording, plus another 10 dB during playback. Thus speech is compressed by 20 dB and music by 10

dB before transmission.

A part of Radio Moscow broadcasts, however, is distinguished by higher sound quality. It is the World Service in Russian started in January, 1989. These programs in fact are produced in Ostankino with the equipment designed for FM broadcasting. But this clear sound will vanish when production moves to the Radio Moscow studios.

Radio Moscow staff is looking forward to the building of a new radio building planned for a nearby site. The plan provides for installation of digital equipment and the attention is to buy it from foreign manufacturers. People in the Department of Broadcasting have already set the wheels in motion. They have visited suppliers and have received visitors.

While the study is under way -- and not a single stone has been placed yet -- the leadership of Radio Moscow has to puzzle over the ways of winning audiences in the target countries with existing equipment. The proportion of music on Radio Moscow is considered too small compared to what the listeners can hear on local radio. On the other hand, music does not play well on short wave radio, especially Russian folk music.

Of course, Soviet satellites are available for external broadcasting to feed Radio Moscow signals to the relay transmitters in Cuba and Laos. Other satellite relay stations are located near Sofia and Plovdiv, Bulgaria; Leipzig, GDR; and near Ulan-Bator and Dalanzadgad, Mongolia. Radio Moscow also uses SSB feeders as a reserve. Not all the transmitters of external services are fed via satellites. In some locations, the lack of a short connecting line (3 km to 15 km) between the satellite earth station and the transmitter presents a real obstacle.

The transmitters are of Soviet make and the highest output is 1 MW, although 2 x 500 kW units are operating as well. Typical of other external services, the transmitters are worn out and funds for replacement are not available. The Ministry of Communications, which is responsible for the transmitters, has been increasing power by substituting valves in the final cascade, thus changing the output, but this is really a stop-gap effort. Detailed information on the transmitters is considered secret by the Ministry of Communications which seems to be the last to be touched by glasnost.

Trans World Radio (TWR) announced in November that it has been granted permission to set up radio production facilities in the Soviet Union, including at least three studios, a mobile recording unit and several portable recording units. TWR plans to open studios in Moscow, Kiev, and Minsk. Working with the Evangelical Alliance of the Soviet Union, TWR will staff the facilities with local Christians. The goal is to reach the Soviet people with the Gospel.

TWR began broadcasting to the Soviet Union from a station in Tangier, Morocco, in 1956. At present 42 1/2 hours per week of Russian-language programming is broadcast from a high-powered AM and shortwave transmitters in Monte Carlo. TWR hopes that at least one-half of their Russian programs will eventually be recorded or produced in the Soviet Union.

Paul E. Freed, president of TWR, added that the facilities in the Soviet Union will be available for use by other broadcasters in an effort to reach the country for Christ. (via "Decision" Feb 90, a publication of the Billy Graham Evangelistic Association via Marlin A. Field, MI)

R. Vilnius in EG from 2200, heard on 13645NF since 6/2, but weak, //11790, 15180, 15455, 15485; same freqs carry R. Minsk at 2230, R. Kiev in EG at 23.

R. Vilnius mentioned a new powerful MW station has appeared since 6/1, name "Ssovyetskaya Litvah" or "Soviet Lithuania" heard from 11 am to 8 pm local time, but no freq given. (Ernie Behr, Kenora, Ontario). WBI 6/8 says 880 kHz. (bmm)

This schedule lists Radio Moscow services in Russian for Soviet Seamen and compatriots abroad, as well as for Russian speakers outside the USSR. These services were sometimes referred to in the past as All Union Radio's Fifth Programme. Gaps between transmissions listed in this schedule are usually filled with relays of All Union Radio's Mayak programme. During winter time in the USSR all broadcasts will be heard one hour later than shown.

0000-01 RR World Service Eu,As,AU,Am 21770, 21640, 21555(to 0030), 21505, 17870, 17700, 17695, 17645, 17625, 17610, 17560, 15600usb, 15540, 15455, 15405, 15360, 15330, 15265, 15255, 15180, 15155, 15130, 13725, 12045, 12030, 12000, 11950, 11850, 11805, 11775, 11745, 11735, 11720,

11630, 9880 9810, 9755. 01-02 RR World Service (Radiostantsiya Rodina) Eu, As,Au,Am 21525, 21505, 17880, 1780, 17700, 17695, 17645, 17625, 17610, 17560, 17465, 17560, 15600usb, 15570, 15540, 15470, 15455, 15405, 15360, 15330, 15265, 15180, 15155, 15130, 13725, 12045, 12035, 12030, 12015, 12000, 11950, 11900, 11850, 11805, 11805, 11790, 11775, 11745, 11735, 11720, 11675, 11630, 9880, 9810, 9580, 9560, 7305, 7230, 1386; 02-03 RR World Service Eu,As,Au,Am 21545, 21505, 17880, 17870, 17700, 17695, 17645, 17625, 17610, 15600usb, 15570, 15540, 15470, 15455, 15405, 15360, 15330, 15155, 15130, 12035, 12030, 12015, 12000, 11915, 11900, 11850, 11790, 11775, 11720, 11630, 9880, 9810, 9580, 9560, 7305, 7230; 03-04 RR World Service Eu, Af,As,Au,Am 21760, 21725, 21545, 21525, 21505, 17880, 17870, 17740, 17735, 17696, 17665, 17645, 17635, 17625, 17610, 15600usb, 15570, 15455, 153650, 15330, 15295, 15155, 13690, 13680, 13625, 12035, 12030, 12015, 11850, 11790, 11745, 9580, 9560, 1386, 1323; 04-05 RR World Service & including at 0410-0430(Fri - alternate weeks) DX Club 21845, 21830, 21725, 21545, 21615, 21605, 21545, 21525, 21515, 21505, 17880, 17870, 17850, 17835, 17740, 17735, 17695, 17645, 17610, 15455, 15360, 15340, 15330, 15295, 13690, 11790, 9880, 9810, 9560, 1386, 1323; 05-06 RR (Relay First Programme) Eu,Af,Au, Am 21845, 21840, 21820, 21760, 21615, 21545, 21525, 21505, 21475, 17880, 17740, 17695, 17645, 17610, 15330, 12935; 06-07 RR including News (from 1st Prog); 0615-07 "For Those at Sea" (Repeat of 0045-0130) 21845, 21840, 21830, 21820, 21760, 21745, 21615, 21505, 21475, 17870, 17850, 17745, 17735, 17695, 17645, 17610, 17595, 17580, 15495, 15455, 15405, 15340, 15330, 15225, 15125, 13735usb, 13690, 13680, 13625, 12035, 12030, 12015, 11960, 9180usb, 4766Cuba, 1386; 07-08 w/Pravda review at 07-0715 Eu,Af,As,Au,Am 21845, 21840, 21830, 21820, 21760, 21745, 21615, 21555, 21545, 21525, 21505, 21475, 17880, 17870, 17850, 17745, 17735, 17695, 17680, 17660, 17610, 17595, 17580, 15495, 15475, 15460, 15455, 15330, 15295, 15255, 15225, 15125, 13735usb, 13690, 13680, 13625, 12060, 12035, 11960, 11915, 11840, 9820, 9180usb, 1386; 0715-08 RR (from Vladivostok - May include brief items in EE and FF) As,Au 21515, 21505, 117860, 117695, 17645, 17605, 17590, 15535, 15530, 15425, 15415, 15330, 15180, 13605, 12070, 12050, 11915, 11850, 11840, 11815, 990usb, 9820, 9780, 9670, 9635, 9530(Sa,Su), 7320(Sa,Sun), 7210, 5940(Sa,Su), 4485, 245; 08-0830 RR Eu,Af,As,Au,Am including 08-0830 except Tue,Fri "Radio Station Soyuz (Relay of First Programme) and Tue,Fri "For Soviet Specialists in Asia and Africa 21845, 21840, 21830, 21820, 21800, 21760, 21750, 21745, 21615, 21575, 21565, 21515, 21505, 21475, 21465, 20280usb, 17880, 17870, 17860, 17850, 17745, 17735, 17720, 17700, 17695, 17690, 17680, 17660, 17620, 17605, 17595, 17590, 17580, 15570, 15495, 15475, 15455, 15225, 15425, 15360, 15295, 15225, 15125,f 13735usb, 13690, 13680, 13625, 13605, 12060, 12050, 12035, 11975, 11960, 11815, 11805, 9635, 1386. 09-10 RR World Service Eu,Af,As, Au,Am 21845, 21840, 21830, 21820, 21760, 21750, 21745, 21615, 21595, 21565, 21545, 21475, 21465, 20280usb, 18730usb, 17885, 17880, 17860, 17850, 17760, 17745, 17735, 17720, 17700, 17695, 17685, 17660, 17645, 17620, 17595, 17580, 15570, 15495, 15475, 15455, 15360, 15295, 15225, 15135, 13735usb, 13725, 13690, 13680, 12060, 12035, 11705, 1386; 11-12 RR World Service & 1110-1130(Thu) "DX Club" (alternate weeks) Eu,Af,As,Au,Am 21820, 21760, 21750, 21745, 21565, 21475, 21465, 20280, 18730usb, 17885, 17850, 17745, 17735, 17720, 17700, 17695, 17645, 15495, 15455, 15225, 13735usb, 13690, 13680, 12060, 12035, 1386; 12-13 RR (Radiostantsiya Atlantika (from Riga except Tue,Fri when from Murmansk) 21750, 20280usb, 18730usb, 17850, 17745, 17735, 17695, 17645, 15495, 15455, 1520, 15225, 15125, 13735usb, 13680, 12035, 11860, 11705, 5935, 1386; 1215-13 Radiostantsiya Tikhyy Okean (from Vladivostok & may include brief items in EE and French) As,Au 5015, 810; 13-14 RR World Service (Radiostantsiya Rodina) Eu,Af,As,Au,Am 21750, 21735, 20280usb, 18730usb, 17735, 17695, 17645, 15420, 15225, 15135, 15125, 13735usb, 13680, 12035, 11970, 11705, 11690, 1386; 15-1545 RR News (Relay of First Programme) Eu,Af,As,Am 20280usb, 15565, 15135, 13680, 12070, 12035, 11950, 11790, 11705, 11690, 11675; 16-17 RR Eu,Af,As,Am including 16-1630(Mon,Wed) "For those at Sea (from Simferopol), 16-1630 (Thu-Sun Radiostantsiya Atlantika), 16-1630 (Tue Relay of Mayak), 1630-1645 (Thu,Sat,Sun,Mon Radiostantsiya Atlantika), 1630-1645 (Wed Relay of Mayak), 1630-17 (Tue,Fri "For Soviet Specialists in Asia and Africa"), 1645-17 (except Tue,Fri Relay of Mayak) 20280-lsb & usb, 117655, 17615, 15560, 15200, 15155, 15135, 13820usb, 13735usb, 13710, 11860, 11730, 11705, 9635, 9590, 7200, 7135, 6110, 6050; 17-18 RR World Service including 1810-1830(Thu) "DX Club" (alternate weeks) Eu,Af,As,Am 15135, 15125, 13735, 12070, 12055,

12030, 111835, 11675, 11615; 1830-1930 RR Radiostantsiya Tikhyy Okean (from Vladivostok may include brief items in EE and FF) & 1915-1930 Music As, Ay 17850, 17645, 15560, 15535, 15435, 15180, 11995, 11870, 9885, 7335, 5015 (to 1915); 19-20 RR World Service (Radiostantsiya Rodina) Eu, Af, As, Am 21555, 17635, 17610, 15200, 15125, 13735usb, 12055, 11715, 11705, 7275; 20-21 RR World Service Eu, Af, Am 21700, 21690, 21450, 17875, 17645, 17595, 15545, 15535, 15290, 15200, 15130, 15125, 13735usb, 13725, 12055, 12035, 12000, 11870, 11835, 11820, 11735, 11720, 11715, 9890, 9880, 9785, 9590, 9560, 7370, 7320, 7300, 7275, 7230, 7185; 21-22 RR (Sat) "For Soviet Fishermen" (from Kaliningrad) Eu 5950, 1494 (unconfirmed); 22-2230 (Sat) RR "For Those at Sea" (From Kaliningrad) Eu 1386; 22-23 RR World Service (Radiostantsiya Rodina) Eu, Am 17870, 117855, 17700, 17645, 17560, 15600usb, 15570, 1545, 15535, 15470, 15455, 15330, 15130, 12035, 12000, 11950, 11915, 11900, 11890, 11850, 11835, 11735, 11720, 11715, 11630, 11595, 9890, 9880, 9815, 9810, 9785, 9580, 9560, 7300, 7280, 7230, 7185, 1386, 1323, 1215; 23-24 RR including Radiostantsiya Atlantika (except Mon, Fri) (from Simferopol, Leningrad or Murmansk), 23-24 (Mon, Fri) Relay of Mayak) Eu, Am 21525, 21405, 17870, 17700, 117695, 17645, 17635, 17625, 17610, 17560, 15600usb, 15570, 15455, 1504, 15330, 15265, 15255, 15155, 15130, 15120, 13725, 122801sb, 12150, 12035, 12030, 12000, 11950, 11890, 11850, 11775, 11745, 11735, 11720, 11700, 11665, 11630, 9880, 9810, 9785, 9755, 1323, 1215. (WBI 6/8)

VIETNAM - The Voice of Vietnam is heard in Cantonese at 2230-23 on 9840 and 15010. Same freqs are used for EG broadcast at 2330-24, and the announced and listed freq 12020 is currently not in use. (via Lim Kong Jin's, "SE Asia DX News" No. 8)

ZIMBABWE - Minister supports need for external service - 'The Herald', Harare, in English 18 May 90. Excerpt from report from Victoria Falls:

Foreign currency requirements of more than 15 million dollars have been the major stumbling block to the government's wish to establish an external broadcasting service, the Minister of Information, Posts and Telecommunications, Cde (Comrade) Victoria Chitepo, said here yesterday (17th May)

Answering a question from the floor at the Zimbabwe National Chamber of Commerce's congress being held here, Cde Chitepo said about 12 million dollars would be needed to put in place the transmitter and ancillaries and three million dollars would be needed to buy studio equipment. The planned transmitter would have a power output of 500 kW and its antenna would be manufactured in Zimbabwe.

"There is a need to disseminate news and information with a national perspective within the Southern Africa region, the African continent and the world at large so that a truly Zimbabwean interpretation of events is heard internationally.

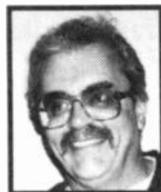
"There is also much that is positive about Zimbabwe worth promoting and we ought to put across the message to as many people as possible outside our borders"... (WBI 6/8)

CLANDESTINE - Has anyone logged Radio Venceremos as of late? Numerous attempts here in the last several weeks have yielded nothing. Perhaps all the transmitters were located in Nicaragua and have been shut down by the new UNO government. (Hans Johnson, Maryland)

UNIDENTIFIED - 4765.0, UNID French language station on 6/2 noted at 1848 tune in to 1930 tune out. M announcer. Static level too heavy to make out identifiable phrases/locations. M group w/pop music. One selection from 1850-1905:40 when M spoke briefly. Drum music/IS(?) from 1906:10-1907, and more talk. Signal seemed to peak at 1850-1855, and dropped from good signal level to fair/poor shortly after that. Ute (CW) came up on same freq at 1925 and remained. At 1930, bits of audio noted under Ute, but only barely. SIO began at 4-3 54, but at tune out, was obviously 0-1 at best. (Mike Hardester, Okinawa) 5030, UNID station on 5/16 from 1020-1050 tune out w/"live programming by 2 M in English lang. Possibly testing? Carrier on/off at varying intervals. Some recorded instrumental and vocal music noted plus one of the M did a bit of singing! Occasional laughter. One clear phrase was "Chin up mate." The name "Rebecca" was occasionally mentioned. Fair/good level. SIO 3-454. All of this in AM mode. (Mike Hardester, ibid) 73's, Bruce

QSL Reports

Sam Barto
47 Prospect Place
Bristol, CT 06010



ABU DHABI: Voice of the UAE 15435 f/d "Map" cd. w/ pennant and schedule in 1 mo. for 1 IRC and EG rpt. (Wallace-CT).

ADMIRALTY ISLANDS: Radio Manus n/d ltr. in 3½ mo. for a taped rpt. and ms. (Huniwell-NJ).

ALASKA: KNLS 7355 f/d cd. w/ pennant in 19 ds. for ms. (Turnick).

ALBANIA: Radio Tirana 9760 f/d cd. in 6 wks. for a taped rpt. and \$1.00. (Huniwell-NJ).

ALGERIA: RTVA 15215 f/d cd. in 1 yr for 1 IRC. (Hazzard-PA).

ARGENTINA: Radio Nacional LRA1 6060 cd. in 27 ds. for a SP rpt. and 2 IRCs. w/ sticker from a station in Chile. v/s Gabriel Ivan Barrera. (Barhydt-OR)...Ivan is a very good friend of we DXers...Sam.

ARMENIAN SSR: Radio Moscow 17735 via **Yerevan** cd. in 3 mo. (Barto-CT).

ASIATIC RUSSIA: Radio Moscow 21680 via **Petropavlovsk-Kamchatsky** f/d cd. in 59 ds. (Butcher-MA). 15425 f/d "Fountain" cd. in 7 wks. (Kohlbrener-PA). 17755 via **Irkutsk** cd. in 3 mo. (Barto). 15170 f/d "Arbat Square" cd. in 2 mo. (Lare-MI). 9705 f/d cd. in 2½ mo. (Lare). 21690 via **Vladivostok** f/d cd. in 2 mo. (Lare). cd. in 2 mo. (Barto). 12040 via **Novosibirsk** cd. in 2½ mo. (Barto). 9780 via **Nikolayevsk-on-Amur** f/d cd. in 2 mo. (Lare). 9875 via **Khabarovsk** f/d cd. in 2½ mo. (Lare). **Radio Rodina** 17850 via **Khabarovsk** cd. in Russian in 3 mo. (Barto). 17870 via **Chita** cd. in Russian in 3 mo. (Barto).



FEBA - Seychelles
wing 2 Kw
CONFIRMING YOUR REPORT

on 15 185 MHz, at 0350 hours, GMT
on March 22nd 1970
With thanks,
Granda Bacon
QSL Secretary

For Full Description See
P. 31, Issue 100 Volume
Available from Members Only

FEBA - Seychelles
is a member station of
FEBU Radio International

PRODUCCIONES

Radio Sirimani

BANDA 5402 MHz

30 años
1959-1989

CUSCO

PERU

BANDA 5402 MHz

BANDA 5402 MHz

BANDA 5402 MHz

AUSTRALIA: Radio Australia 6020 via **Bran- don** f/d ltr. in 1 mo. after a f/up rpt. (Renfrew-NY). 9580 n/d cd. w/ ltr., schedule and folder in 7 mo. for ms. (Klinck-NY). **VLM4** 4920 f/d ltr. in 34 ds. for 1 IRC. (Hazzard). **VLM6** 6140 via **Perth** f/d cd. in 14 ds. for a taped rpt. and 3 IRCs. (Klinck-NY).

AUSTRIA: Radio Austria International 13730 f/d "Salzburg Costume" cd. w/ sticker and schedule in 15 ds. (Russo-PA). 9875 f/d "Gail Valley Costume" cd. in 29 ds. (Davisson-OH).

AZERBAIJAN SSR: Radio Moscow 21680 via **Baku** f/d cd. in 1½ mo. w/ schedule. (Lare-MI).

AZORES: Radio Club de Angra 13584 f/d prepared cd. in 1 mo. for a PT rpt. and ms. (Lare). p/d cd. w/ prepared cd. in 2 mo. for 2 IRCs. (Renfrew-NY).

BANGLADESH: Radio Bangladesh f/d cd. in 1 mo. for 2 IRCs. This was for a f/up on an 88 reception. (Renfrew-NY).

BIAFRA: Radio Nigeria 6025 via **Enugu** f/d ltr. w/ prepared cd. and schedule in 3 wks. for 2 IRCs. (Renfrew).

BOLIVIA: Radio Cosmos 6094.6 p/d personal ltr. in 1 mo. for a SP rpt. and \$1.00. v/s Laureano Rojas Jr., Director Administrativo. Rcvd. 15th anniversary pennant, stickers, postcards, etc. (Allen-OK). **Radio Santa Cruz** 6135 f/d cd. w/ ltr. in 4 wks. for \$1.00. v/s Ma. Yolanda Marco E., Secretaria. (Moore).

NOTES: Gary Gears of Chicago, IL is a new member and contributor to the QSL Column. He uses a Kenwood R-5000, a Drake R-7 and an ICOM R-71A for receivers. Quite a good assortment of receivers. Glad to have you with us! Another new member Mark Burns lives in Somerville. He is 36 and works at WCAV-FM in Brockton, MA which is very close to Somerville. Last month was his first report to this Column. Hope to have many more from you...Sam. John Haniwell in Barnegat, NJ is enjoying the trout fishing now that the DX season has slowed down a bit.



BOLIVIA: Radio San Miquel CP114 3310.3 p/d personal ltr. in 7 mo. for a SP rpt., ms. and a f/up rpt. v/s Hector Salas Takana, Director. (Palmerheim). p/d ltr. in 36 ds. for a SP rpt., SASE and postcards. (Bar-hydt). Radio San Gabriel 6078 f/d prepared cd. w/ ltr., schedule and a station booklet in 19 ds. for a SP rpt. and \$1.00. v/s Hno. Jose Canut Saurat, FSC. (Moore).

BONAIRE: Trans World Radio 11930 f/d cd. in 26 ds. for 2 IRCs. (Brouillette). 15445 p/d cd. in 66 ds. for \$1.00. v/s Rudolf Grimm of Modula DX. (Weber-OH). 11815 f/d "Lighthouse" cd. w/ schedule in 19 ds. for 1 IRC. (Russo). Radio Nederlands 15315 f/d "Space Telescope" cd. w/ sticker in 37 ds. (Paustian-NY).

BRASIL: RadioBrae 11745 f/d cd. w/ sticker and schedule in 74 ds. for 1 IRC. (Wallace-CT). p/d form in 87 ds. w/ sticker. 9peake-IA). Radio Guaba 6000 and 11785 p/d cd. in 6 wks. for 2 IRCs. (Renfrew). Radio Alvorada 4965 8 months after receiving my original prepared cd. I received "Certificado de Sintonia" and info. on local folk festival. v/s Raimunda Ribeira da Silva, Diretora-Gerente. (Moore).

BULGARIA: Radio Moscow 9665 via Plovdiv cd. in 3 mo. (Barto-CT).

BYELORUSSIAN SSR: Radio Moscow 17700 via Orsha cd. in 2 mo. (Barto). 11745 via Minsk f/d "Friendship House" cd. in 57 ds. (Hutcher-PA).

CANADA: Radio Korea 11715 via Sackville f/d relay cd. in 3 wks. (Renfrew). * f/d "Map" cd. w/ schedule in 20 ds. (Huer-FL). RCI 9755 "Forestry Research" cd. stamped "Verified" in 14 ds. (Peake-IA).

CANARY ISLANDS: REE 17715 via Tenerife f/d cd. in 5 mo. for a SP rpt. and 1 IRC. Station brochures were received. (Hazzard-PA).

CHAD: Radiodiffusion Tchadienne 4904.5 p/d ltr. in 3 mo. for \$1.00 and a FR rpt. (Hazzard-PA).

CHILE: Radio Santa Maria CE603 6029.6 f/d "Map" cd. in 36 ds. for a SP rpt. and \$1.00. v/s Pedro Andrade Vera. Sticker and station pennant rcvd. (Palmerheim-MN)

CHINA, PEOPLES REP. OF: Radio Canada International 15385 via Xian f/d "DIY" cd. in 12 ds. (Buer). Radio Beijing 11855 f/d "Memorial Hall" cd. in 38 ds. (Ponder). 11715 cd. w/ sticker in 19 ds. (Levison-PA). Mali? 15100 f/d "Silk Figurine" cd. w/ paper cuts in 35 ds. (Paustian). Xinjiang PBS 5800 f/d cd. w/ ltr. in 55 ds. (Hazzard-PA).

CLANDESTINE: Radio Venceremos 6340 f/d ltr. in 56 ds. via NYC address. v/s Anita Ocampo. (Hazzard).

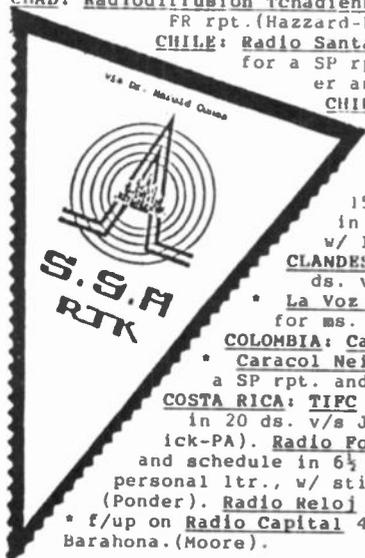
* La Voz de Fundacion 7315 via WHRI f/d cd. in 1 mo. for ms. Stickers rcvd. v/s Amoska Perez. (Palmerheim-MN).

* **COLOMBIA:** Caracol Bogota HJEU 4755 and Caracol Neiva HJDH 4945 f/d prepared cd. in 94 ds. for a SP rpt. and ms. This after 6 tries. (Palmerheim-MN).

COSTA RICA: TIPC 5055 cd. w/ pennant for a SP rpt. and ms. in 20 ds. v/s Juan Jacinto Ochoa E., Administrador. (Turnick-PA).

Radio For Peace International 25945 f/d cd. w/ ltr. and schedule in 6 1/2 mo. for \$1.00. (Klinck). Radio Impacto 5030 personal ltr., w/ sticker and pennant in 175 ds. for a SP rpt. (Ponder). Radio Reloj 6006 f/d cd. plus prepared cd. for a 1974

* f/up on Radio Capital 4832khz on visit to station. v/s Francisco Barahona. (Moore).



Verification Card

Dear Mr. John Spenser Corwin.

We thank you for your reception report. We appreciate the time you spent in listening to our station and the interest in our program. We are glad to hear that you enjoyed the program and the music. We will be glad to answer any questions you may have. We are glad to hear that you enjoyed the program and the music. We will be glad to answer any questions you may have.

FREQUENCY 1570 - 940 MHz
 UTC/GMT 1155 - 1615
16.00 - 17.00

مركز طبر استاذ
 Become excited to have friends.
 成为朋友。
 成为朋友。
 成为朋友。

♻️ Dressed in splendor reflective of the Choson Dynasty, these stations march in a parade celebrating the first anniversary of the 1988 Seoul Summer Olympics

Ⓜ 1989

Radio Korea

International 9725 f/d cd. w/ personal ltr. and schedule in 47 ds. (Ponder). f/d cd. w/ schedule in 1 mo. for 2 IRCs. (Forth).

CUBA: Radio Moscow 6045 f/d cd. in 2 mo. (Kohlbrener-PA). cd. in 2 1/2 mo. (Barto). Radio Habana 9710 p/d cd. w/ sked. and stamps in 264 ds. (Peake)

CYPRUS: BBC East Mediterranean Relay Station 15245 f/d "Station Photo" cd. w/ sticker in 80 ds. for \$1.00. (Barhydt). 6180 f/d cd. w/ sticker in 77 ds. for ms. (Turnick). Cyprus Broadcasting Corporation 7180 and 6030 f/d "Studio/Building" cd. in 3 mo. (Barto-CT).

DENMARK: Radio Denmark 15165 n/d form ltr. explaining that as of 6/1/89 * they no longer QSL. Cost me 2 IRCs to find this out. (Brouillette-IL).

ECUADOR: HCJB 17790 f/d cd. in 23 ds. for ms. (Davisson). Radio Catolica Nacional 5030 n/d form ltr. in 39 ds. for a SP rpt. and \$1.00. v/s P. Antonio Arregui, Director General. Sticker rcvd. (Weber). La Voz del Napo 3280 f/d cd. w/ ltr. in 26 ds. for a SP rpt. and \$1.00. (Hazzard).

* Radio Pastaza 3315 f/d prepared cd. w/ personal ltr. and banknote in 17 wks. for a SP rpt. and \$1.00. v/s Armando Valverde Martinez, Secretario de Economia. (Allen). Radio Federacion 4960 n/d ltr. in 2 mo. after numerous tries for 15 yrs! v/s Ruben Lopez Mamey, Dirigente de Medios de Comunicacion Social. (Moore).

ESTONIAN SSR: Radio Tallinn 5925 f/d cd. w/ prepared cd. in 5 mo. (Renfrew). f/d "DX Club" cd. w/ schedule in 81 ds. (D'Angelo-PA).

EUROPEAN PIRATE: Radio Stella International f/d "Red Deer" and "Loch Torridon" cds. in 60 ds. for 2 IRCs. v/s Jock Wilson. (Paustian).

EUROPEAN RUSSIA: Radio Moscow 17665 and 15490 via Tula cd. in 3 mo. (Barto). 17560 and 17690 via Moscow cd. in 2 1/2 mo. (Barto). 7300 f/d cd. in 3 mo. (Barto). 11980 via Armavir cd. in 2 1/2 mo. (Barto). 12010 f/d "Friendship House" cd. in 63 ds. (Butcher). 9530 f/d cd. in 50 ds. (Weber). 12010 via Serpukhov f/d cd. in 63 ds. (Butcher). 15520 and 15530 f/d cd. in 2 1/2 mo. (Barto). 15305 via Voronezh f/d cd. in 50 ds. v/s Eugenia Stepanova. Stickers and postcards were rcvd. along w/ Moscow News. (Weber-OH).

FRANCE: RFI 21770 f/d cd. w/ schedule in 23 ds. for 2 IRCs. (Brouillette-IL).

GABON: RFI 11705 f/d cd. in 94 ds. after a f/up rpt. (Turnick-PA).

GERMAN DEMOCRATIC REP: RFI 9730 and 11785 3 p/d cds. in 25 ds. (Peake). Y3S 4525 p/d cd. in 4 mo. for \$1.00. (Lare).

GERMANY, FEDERAL REP. OF: Sudwestfunk 7265 via Rohrdorf f/d "Globe" cd. in 73 ds. for ms. (returned). (Butcher).

NOTES: Tom Laskowski says its been quite a while since he has reported to the QSL Column; however, he is very pleased with his Radio Zanzibar QSL. It took me several years also Tom...Sam. Jerry Klinck says after several tries he got his QSL from RFI in Costa Rica, The v/s Debra Latham says the previous reports were answered by the station. Must be a QSL eating monster between Central America and West Seneca, NY....Sam. I remember a few years ago when DXers were having a great deal of difficulty in getting QSLs from Chad. I seem to recall an article in Time magazine that the cannibals in Chad thought the mailmen to be very tasty! David Turnick says his father was so impressed with the new Journal that he became a member. Great!

COSTA RICA: Radio Victoria 6082 f/d cd. w/ * stickers for a 1979 reception after visit to station. v/s Emilio Piedra Jimenez. * (Moore). Radio Universidad 6105 f/d prepared cd. w/ station cd. for a 1980 reception after visit to the station. v/s Marco Gonzalez, Locutor. Also rcvd. QSL for Radio Atenea 6150 which Marco used to work for! Quite pleased. (Moore). AWR - Radio Lira



RADIO REPUBLIK INDONESIA

VERIFICATION CARD

Dear Mr. Richard A.D. Angelo.

This is to verify your report dated 11 May 1988 on our programme broadcast on the frequency of 11865 KHz
 Thank for listening

Yours Sincerely

 Muzammudin Sy.
 Public Relation



GERMANY, FEDERAL REP. OF: Radio Liberty 5985 via Biblis and 7220 via Lampertheim cd. for ms. via NYC addr. (Forth).

GREECE: Voice of Greece 7430 f/d "Metheora Monasteries" cd. in 29 ds. (Davisson).

GREENLAND: Radio Greenland 3999 f/d cd. in 74 ds. after a f/up rpt. for ms. v/s H. Jorgensen. Very happy with this QSL! (Field-PA).

GUAM: KSDA 11980 f/d sticker cd. w/ postcards and pennant in 42 ds. for ms. (Butcher-MA).

GUATEMALA: Radio Tezulutlan 4835 f/d cd. w/ personal ltr. in 89 ds. for a SP rpt. and \$1.00. (Hazzard). cd. w/ form ltr. in 51 ds. for a SP rpt. and \$1.00. (Ponder). f/d cd. w/ ltr. in 3 mo. for a SP rpt. (Forth).

HAITI: Radio Trans-Artibornite 1790 (2 x 895) n/d ltr. in 7 wks. for a * taped rpt. and ms. (Huniwell-NJ).

VERIFICATION SIGNERS: Azad Kashmir Radio 4790 Abrab Ali, Engineer-Manager. Radio Educacao Rural Tefe 3375 Diacono Thomas Schwaborn. Radio Difusora Jatal 4935 Zacaridas Faleiros. Radio Tbilisi 5930 Helen Abkhadze, Foreign Service Editor. Radio Nacional de Venezuela 11695 Ivan Russa Crespo, Director & Mei Ling Talavera Riojas, Secretaria. Radio Australia 21775 Nigel Holmes, Assistant Frequency Manager. Radio Anhanquera 4905 Edison Guimares. Guangdong PES 5050 Li-Hai Ming...Addr: 12 Minzu Avenue, Nanning City, Guangxi 5300 22. Ondas del Ortopedista 4975 Norberto Plaza Vargas, Subgerente. La Voz del Rio Arauca 4895 Gloria Jeanne Silva rodriguez, Gerente.....via PLAY DX....Sam.

HAWAII: WYVH 15000 p/d folder cd. in 17 ds. (Barhydt).

HONDURAS: HRVC 4820 f/d cd. w/ stickers in 29 ds. for a SP rpt. and \$1.00. (Hazzard). Sani Radio 4755 f/d prepared cd. after a visit to the station. v/s Lic. Adania Mejia, Administradora General. (Moore).

HONG KONG: BBC East Asia Relay Station 15435 p/d cd. in 710 ds. after a f/up rpt. for \$1.00. Tnx to D'Angelo for addr: BBC, Tsang Tsai Broadcasting Station, Nim Wang, Yuen Lang, New Territories, H.K. (Field-PA). 15280 f/d cd. in 14 wks. for ms. (Klinck). (Wallace-CT).

HUNGARY: Radio Budapest 6025 f/d cd. w/ schedule in 43 ds. for 1 IRC.

ICELAND: INBS 15767 f/d cd. in 47 ds. for ms. (Turnick-PA).

ISRAEL: KOL 11605 f/d cd. w/ schedule in 37 ds. for 1 IRC. (Wallace-CT).

ITALY: Adventist World Radio - Forli 7125 f/d cd. in 3 wks. (Renfrew). f/d cd. in 34 ds. for \$1.00. v/s Lina Lega, Secretary. (Weber). European Christian Radio 6205 via Ravenna f/d ltr. w/ cd. in 2 mo. v/s John Adams, Director. (Barto-CT).

KOREA, REPUBLIC OF: RCI 9700 via Gimje f/d prepared cd. in 2 wks. (Renfrew). same in 10 ds. (Buer-FL).

KAZAKH SSR: Radio Moscow 11745 via Alma Ata cd. in 4 mo. (Barto-CT).

LATVIAN SSR: Radio Riga 5935 f/d cd. in 3 mo. (Renfrew-NY).

LEBANON: King of Hope 6280 f/d cd. w/ personal ltr. in 105 ds. for ms. v/s David Lawrence. (Field-PA).

LIBYA: Radio Jamahiriya f/d "Rainbow" cd. in 2½ mo. for a FR rpt., tape and \$1.00. (Huniwell-NJ).

LITHUANIAN SSR: Radio Vilnius 9610 cd. in 6 mo. (Renfrew)

LUXEMBOURG: Radio Tele-Luxembourg 15350 f/d "Towers" cd. in 27 ds. for 2 IRCs. (Weber-OH).

MALI: Radio Beijing 15450 f/d cd. in 5 wks. for a rpt. to Beijing. (Forth).

MEXICO: Radio Educacion 6185 f/d ltr. in 60 ds. for a SP rpt. and \$1.00. (Hazzard). Radio Mil 6010 rcvd. thank you ltr. from owner.

He said QSL will come from the Engineering Dept. in 1 mo. (Renfrew).



SOUTH AFRICA: Radio 5 4880 f/d cd. w/ schedule in 42 ds. (Levison). Radio Orion 4810 f/d "SAUK-SABC" cd. w/ personal ltr and sticker in 91 ds. (Ponder).

SPAIN: Radio Liberty 11885 via Pais p/d cd. in 1 mo. (Forth). REE 9630 f/d "Sevilla Expo" cd. w/ pennant in 57 ds. (Davisson) 11880 same cd. w/ pennant in 45 ds. for 1 IRC. (Wallace). f/d cd. in 75 ds. w/ sticker and schedule. (Levison-PA).

SUMATERA: RPDT2 Asahan 3579.8 f/d prepared * cd. in 1 mo. for an IN rpt. and SASE (used). This after a f/up rpt. v/s Sya-msul Bahri, Pimpinan. (Allen-OK). RRI Bengkulu 3264.8 f/d prepared cd. in 6 wks. for an IN rpt. and ms. (Allen-OK).

SWEDEN: RSI 11705 f/d "Stockholm" cd. in 14 ds. w/ poster and schedule. (Peake). 11785 f/d "Malmo" cd. in 22 ds. (Paustian). 11705 and 9695 f/d "SCDX" cd. in 35 ds. (Davisson).

SWITZERLAND: Red Cross Broadcasting Service 7210 via Schwarzenburg f/d cd. w/ sticker and schedule in 61 ds. for a FR rpt. and 1 IRC. (Butcher-MA). 9885 p/d cd. w/ schedule in 10 wks. for 2 IRCS. (Forth). Swiss Radio International 6135 f/d "Bellinzona - Cathedral and Castello Grande" cd. in 16 ds. for 1 IRC. (Wallace-CT). 6135 f/d "Parliament" cd. in 23 ds. (Davisson).

TADZHIK SSR: Radio Moscow 11900 via Dushanbe cd. in 3 mo. (Barto). 11800 f/d cd. in 124 ds. v/s Mrs. Tanya Lavrova. (Field-PA).

TONGA: TBC A3Z 5030 p/d "Coat-of-Arms" cd. in 9 wks. for \$1.00. (Allen).

TURKEY: Turkish Polis Radio 7370 f/d cd. in 1 mo. for 1 IRC. (Renfrew).

TURKMEN SSR: Radio Moscow 17740 via Ashkhabad f/d cd. in 3 mo. (Barto). 4930 f/d "Peoples Friendship House" cd. in 2 mo. for this Home Service broadcast. (Kohlbrener-PA)... Nice QSL. Sam.

UKRAINIAN SSR: Radio Moscow 17820 via Kiev cd. in 2 mo. (Barto). cd. in 3 mo. (Barto). 17565 via Vinnitsa cd. in 2 mo. (Barto). 7240 cd. in 3 mo. (Barto). 4860 via Kharkov f/d cd. in 2 mo. w/ schedule. (Barto-CT).

URUGUAY: Radio El Espectador 11835 f/d prepared cd. in 1 mo. for a SP rpt. and ms. Sticker and key chain rcvd. v/s Carlos Maria Berro Collado. (Allen). same w/ goodies in 68 ds. for a SP rpt. and \$1.00. (D'Angelo). f/d cd. w/ key chain in 5 wks. for 2 IRCS. (Renfrew-NY).

USA: WWCH 15690 n/d sticker cd. in 6 mo. for ms. (Hazzard). n/d cd. w/ schedule in 20 ds. (Ponder). f/d "Amateur Style Globe" cd. w/ schedule in 95 ds. for ms. v/s Jay Litton. (Buer-FL). WSHB 9455 f/d cd. in 2 wks. for ms. v/s Judy P. Cooke. (Kohlbrener). 9410 f/d "DIY" cd. in 1 mo. v/s Gary B. Wood. (Palmerheim). 17555 f/d prepared cd. in 109 ds. for ms. v/s Thomas H. Nickell, Manager. (Buer). 13770 f/d cd. in 1 mo. for ms. v/s John B. Wood. (Peake). WCSN 9850 f/d cd. in 20 ds. v/s E.H. Cockburn. (Palmerheim). 21780 f/d cd. in 25 ds. (Peake). HWV 15000 f/d cd. for "Leap Second" rpt. in 90 ds. (Paustian). 2500, 5000, 10000 and 15000 f/d "Folder type" cd. in 10 ds. (Ponder).

USA (Pirates): Radio Comedy Club International 7385 f/d cd. in 24 ds. Station sent studio tape because my rpt. was outstanding! (D'Angelo). Radio Mauser Worldwide 7490 f/d yellow/black "Revolutionary" cd. in 11 ds. w/ personal ltr. (Zeller-OH).

f/d cd. in 10 ds. for SASE. v/s Dr. Selsyn. (D'Angelo-PA). East Coast Pirate Radio 7415 f/d cd. in 18 ds. for ms. (Turnick-PA). 7417 cd. in 3 wks. from the Baltimore addr. (Renfrew-NY). Radio USA 7414 f/d cd. in 24 ds. for ms. (Turnick). Fourth of July Radio 7415 f/d info. sheet w/ personal ltr. in 78 ds. QSL #1. v/s Jett Johnson. (Zeller-OH). Radio Plattus 7414.8 f/d info sheet in 29 ds. (Zeller-OH).

**PAKISTAN BROADCASTING CORPORATION**
Broadcasting House, Islamabad Pakistan

Thank you for your _____
report on our World Service
from 0715 to 1130 UTC
on 1765, 21575 kHz
on _____ kHz
which is in accordance with our schedule.

If you require any further information on any of our programmes, please write at the above address.

Sincerely yours,

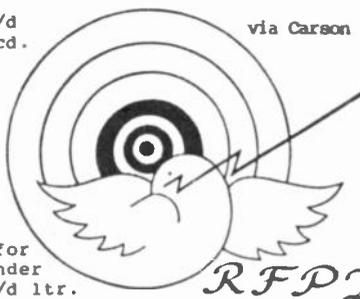
Mr. Samuel Barto,
47 Prospect Place,
Bristol, CT 06010,
UNITED STATES OF AMERICA.

(Frequency Management)

PSB - UTC - 1980



USA (Pirates): Voice of Tomorrow 6240 f/d cd. in 4 mo. (Renfrew-NY). KNBS 7412 cd. in 2 wks. for ms. (Renfrew). Radio Mexico 7425 cd. in 10 wks. for ms. (Renfrew). Radio Mexico International 7416 and 7400 n/d ltr. in 23 ds. for ms. (D'Angelo-PA). The Spectator 7415 f/d red "Logo" cd. in 77 ds. for a rpt. in ACE. QSL #2. This is the recent Gregorian Chant station. (Zeller-OH). Voice of Bono 7415 f/d cd. for initial operation in 11 ds. for ms. v/s Gary Daniels and Bono the Wonder Dog. (Paustian). Midnite Radio 7416 f/d ltr. in 34 ds. (Paustian). Rockabilly Radio 7415 f/d ltr. in 48 ds. for a rpt. to ACE. (Paustian). 7412 f/d info sheet in 46 ds. (Zeller). Radio Ganymede 7415 f/d "Promo" cd. in 38 ds. (Zeller). Tube Radio 7395 f/d orange/green cd. in 20 ds. v/s Ray Cathode (Zeller)... Innovative: One Voice Radio 7415 cd. in 24 ds. (Zeller-OH).



via Carson

UZBEK SSR: Radio Tashkent 11785 f/d cd. w/ schedule in 3 mo. (Barhydt-OR). Radio Moscow 12000 via Tashkent cd. in 3½ mo. (Barto).

VATICAN: Radio Vatican 9605 f/d "Palazza Pio" cd. in 49 ds. for 1 IRC. (Wallace). 15405 and 17870 f/d cd. w/ new style pennant in 2 mo. (Bar-
VENEZUELA: Radio Maturin YVOH 5040 f/d "Logo" cd. in 107 ds. to-CT). for a SP rpt. and ms. This was for an 85 reception after 5 tries. v/s Alonso Hurtado, Director. (Palmerseheim-MN).

VIETNAM: Voice of Vietnam 15010 f/d cd. w/ schedule in 7 mo. after a f/up rpt. (Kremer-IN). f/d cd. w/ schedule in 78 ds. (Butcher-MA). 9840 p/d prepared cd. in 62 ds. Also rcvd. 2 postcards, schedule and station pennant. (Peake-IA).

WEST BERLIN: RIAS 6005 f/d cd. in 9 wks. for 1 IRC. (Renfrew-NY).

YEMEN ARAB REP: Radio Sana'a 5950 f/d ltr. w/ stickers in 150 ds. for 1 IRC. (Hazzard).

ZANZIBAR: Radio Tanzania Zanzibar 11735 f/d ltr. in 8 mo. after a f/up rpt. for ms. v/s N.H. Suleiman, Technical Dept. (Lare-MI). 11734.5 f/d personal ltr. in 107 ds. for ms. and a recording. Addr: P.O. Box 1178, Zanzibar. (Laskowski-IN). 11734 f/d personal ltr. thanking me for the recording of popular music in 4 mo. for ms. (Eckert-PA).

NOTES: Christine Paustian is a new member and submitted his QSLs which took place during on-line teleconferencing with Havana Moon and friends on Los Numeros On-Line. Your reports and format is fine... Sam. Faleh R. Bader sent in a batch of Radio Kuwait QSL cards - samples. Should anyone desire one please send a SASE... Sam. Thanks Faleh.

Don Moore [LA DXpert] sends the following: The "Thank You Lab" is a 10 page guide to writing thank you notes to stations in SP and in PT. I put it together with the help of native speakers. It is currently available through the NASWA reprint service as reprint M-1. Price is \$2.00. All DXers who verify LA stations should have a copy and use it! I have personally visited over 100 LA stations and if we want to keep the QSL coming, we better learn some manners and begin thanking the stations. A number of stations have already stopped QSLing because they see us as a selfish, self-centered lot..... Nuff said... Sam.

Till next time best of DX and QSLing.

Sam

RADIO DUBLIN

INTERNATIONAL

Q.S.L.

TO JOHN C. ECKERT

0157 Locust St. Colleville
PHILADELPHIA AMERICA

We are pleased to confirm your reception report of Radio Dublin on 11735 KHz between 218 and 223 G M T on the 11-30-69



Contributors' Page

Kris Field
431 Babylon Road
Ambler, PA 19002-2302



LOGGINGS CONTRIBUTORS - JULY 1990 - DEADLINE 10th of MONTH

The following members contributed loggings:

Brian ALEXANDER, Mechanicsburg, PA	Kenwood R 5000
Adrienne BARHYDT, Milwaukie, OR	Panasonic RF 4900
Dale BLOOMER, Ann Arbor, MI	R70, Alpha Delta DX Sloper
Richard D'ANGELO, Wyomissing, PA	NRD 525, FL3
Kris FIELD, Ambler, PA	R71A, Multiband AM Pickup
Hans JOHNSON, Columbia, MD	NRD 525
Jerry JOHNSTON, Lexington, KY	DX 302, Zenith Transoceanic
Rufus JORDAN, Pittsburgh, PA	
W. KARCHESKI, Holden, MA	Kenwood R 5000
Jerry KLINCK, West Seneca, NY	NRD 525 + FL3
Fred KOHLBRENNER, Philadelphia, PA	
John LACKMAN, Lexington, VA	R70
Tom LASKOWSKI, South Bend, IN	ATS 803A + Attic LW
Harold LEVISON, Philadelphia, PA	Collins R390 + 75 ft. LW
Ben MANCINE, Elyria, OH	ICF 7600 + IC-1 Active Ant.
Robert MONTGOMERY, Levittown, PA	
Don MOORE, Heredia, COSTA RICA	NRD 525, R71A
Frank ORCUTT, Buffalo, NY	DX 440, 70' LW
John PRATH, Ft. Lauderdale, FL	Sony 2010 + LW
Larry ROYSTON, Pahoia, HI	D 2999
Jim RENFREW, Rochester, NY	Hallicrafters S108, DX 440
Bill TAYLOR, Unionville, PA	Sony 2010
Richard WALLACE, Danbury, CT	
Mike WOLFSON, Ashland, OH	

The summertime conditions don't seem to be hurting the loggings section yet. Another good turnout. Welcome to Ben Mancine and Dale Bloomer who are new to the contributors list. Hope to see you here again. Thanks to all of the regulars who we see here each month also.

Don Moore checks in with loggings and news from Costa Rica. Don says that Radio Columbia on 4.850 and Radio Rumbo 6.075 are off the air for the time being. Also, says Don, Radio Impacto has left shortwave for good. Thanks for the info Don, do you have any other details on Radio Impactos decision ?

Seems like now is a good time to start getting some of the follow-up reception reports out. I've found the conditions chasing me to the higher frequencies and I've been doing more easy listening than DXing lately. I'm also finding time to clean up the shack.

Hope you're all having a good summer. Happy 4th of July; remember to take your radios with you on vacation.

Until next month...

73, Kris

Tropical Band Loggings

Sheryl Paszkiewicz
1015 Green Street
Manitowoc, WI 54220



Hello again and welcome to another Tropical Bands section of the NASWA Journal. DX on the tropical bands hasn't been very good here but some of you have obviously toughed it out and tracked down some good stations. . .

- 2320h USA, WHP, Harrisburg, PA, 6/6, 0545 w/Larry King Show, "Newstalk 580" ID, 4x580 harmonic. (Taylor-PA)
- 2952 UNID, CH station 28/5, 1720-1740 w/tlk by W, no mx, no //s, no //s from MW but exc. signal, not noted since. (Hardester-OKINAWA)
- 3220 NORTH KOREA, KCBS, 28/5, 1105-1116 in KK w/enthusied speech, YL brief anmts //3350, 3920, fair-good. (Royston-HI)
- 3231.8t SUMATRA, RRI Bukittinggi, 2/6, 1455-1539 in IN w/prayers, poss. natl nx 1500, RRI ID & again 1514 but no site hrd. Drama pgm, anmts, anthem and off. (Hardester-OKINAWA)
- 3235t INDIA, AIR, 2/6, 1550-1600 w/EG tlk abt production & policies in India, ". . . India Radio," into lang 1600, //other Indians till 1600 (Hardester-OKINAWA)
- 3280 CHINA, Vo Pujiang, Shanghai, 28/5, 1125 in CH w/instl version of "Take me Home Country Roads" ID //4950, fair sig. (Royston-HI)
- 3290a ECUADOR, R. Centro, 13/5, 0620-0630 in SP w/IDs, pops, ballads, HC mx, anmts, weak. (Alexander-PA) 1/6, 1003-1005 w/Marisqueria del Pacifico ad, ID, nx. (Moore-COSTA RICA)
- 3290 PERU, R. Tayabamba, 21/5, 0845-1010 in SP w/non-descript LA mx, rapid tlk, ID, heavy QRM. (Orcutt-NY)
- 3305 NEW GUINEA, R. Western, 28/5, 0912-0920 in EG w/tlks, much QRM, ment. Daru, mx, poor sig. (Royston-HI)
- 3320 NORTH KOREA, Pyongyang BS, 28/5, 1131 in KK w/tlk by M, YL anmts, mx, //6400, fair-good. (Royston-HI)
- 3324.8 GUATEMALA, R. Maya de Barillas, 27/5, 1052-1132 w/mx, rel, fair sig. (Barhydt-OR)
- 3350 NORTH KOREA, KCBS, 22/5, 1055 w/ranting & raving by M, //11679.2, very poor w/QRM/QRN. (Park-HI)
- 3365 BRAZIL, R. Cult. Araquara, 6/6, 0630-0700 in PT w/Latin pops, YL anmts, very good. (Taylor-PA)
- 3365.1 CUBA, R. Rebelde, 2/6, 0250 in SP w/tlks, interviews, drifting up, //710, 5025. (Alexander-PA) 31/5, 0605 w/strong sig, mx, tlk. (Johnston-KY) 23/5, 0835-1030 w/exc. sig, salsa mx, IDs. (Orcutt-NY)
- 3385 BRAZIL, R. Educacao Rural, Tefe, 1/6, 1000 w/tlk, ID, fair. (Moore-COSTA RICA)
- 3385t FRENCH GUIANA, RFO Cayenne, 18/4, 0321 in FR w/tlk, folk mx, soft pop mx. (Karcheski-MA)
- 3395 ECUADOR, R. Zaracay, 12/5, 0316-0342 in SP w/live studio vcls, applause, long tlks, sev. IDs. (D'Angelo-PA) 8/5, 1027-1050 w/echo effects, tlks, messages, phone numbers, ID, xylophone tones, good. (Royston-HI)
- 3395 NEW GUINEA, R. Eastern Highlands, 8/5, 0825 in PD w/march mx, tlks, FC, ment. Goroka, poor sig. (Royston-HI)
- 3480 CLANDESTINE, Vo Natl Salvation, 28/5, 1118 in pres. KK w/speech, applause //4119, 4450, 4557 but jammed (warbler), fair sig. (Royston-HI)
- 3915 SINGAPORE, BBC Relay, 28/5, 1514 in EG w/ment BBC, opera discussion pgm, poor sig. (Royston-HI)
- 3925 JAPAN, RCI Relay, 26/5, 0835 in JP w/tlks, ID 0840 //6055, poor sig but better on 6055. (Royston-HI)
- 3945 JAPAN, R. Tanpa 2, 26/5, 0844 in JP w/tlks, //6115, poor sig, better on 6115. (Royston-HI)
- 3960 NORTH KOREA, KCBS, 27/5, 1120 in KK w/singing, YL anmts, more mx, tlk 1130, //11680, fair. (Royston-HI)

- 4000 CAMEROON, R. Bafoussam, 9/5, 0435 in lang w/tlks, Afr. Folk mx, drums 0450, poor w/ute QRM. (Royston-HI) 4/5, 2247-2307* in FR w/hilife, tlks, nx, mx interlude, ID, s/off anmts, orch NA. (D'Angelo-PA)
- 4040p ASIATIC RSFSR, Vladivostok, 27/5, 1121 w/opera, YL tk in RS. (Moore-COSTA RICA)
- 4238.2 PERU, R. Inca de Banos, 12/5, 1000-1007 in SP w/folk mx, "atenciones," carrier on & off, QRM, ID 1001, more mx, poor w/QRM. (Royston-HI)
- 4418a PERU, R. Frecuencia Lider regularly 0000-0300+ w/huaynos, comunicados, ads, slurred ID, fair-good. (Moore-COSTA RICA)
- 4460 CHINA, CPBS, 27/5, 1215-1235 in CH w/tlk //5320, 5880, 6750, 6840, 7440, 7504, 7516, 7935, 9064, 9080, 11330. (Royston)
- 4460 PERU, R. Norandina, regularly 0000-0400+ w/huaynos, tk by M, good when ute is off. (Moore-COSTA RICA)
- 4620 CHINA, R. Beijing, 28/5, 1155-1201 in KK w/ID 1200 //5975, 4020, fair-good. (Royston-HI)
- 4725 MYANMAR, Vo Myanmar, 28/5, 1210-1233 in lang w/tlk, mx, EG ID 1230, QRM from utes, poor. (Royston-HI)
- 4735 CHINA, Xinjiang PBS, 27/5, 1310-1330 in Uighur w/very exotic folk mx, very long songs! //5800, 7195. (Royston-HI)
- 4750 MONGOLIA, R. Ulaanbataar, 28/5, 1356-1402 in Mongolian w/folk mx, TP 1400, ID //4995, 7262, poor. (Royston-HI)
- 4753 SULAWESI, RRI Ujung Pandang, 26/5, 0905 in EG w/M anmts, full ID after nx, IN at 0910, fair-good. (Royston-HI)
- 4765 UNID, FR station 2/6, 1848-1930 w/M tk, static very bad. Pop mx, anmts, drum IS?, sig peak 1850-1855, ute QRM after that, fading. (Hardester-OKINAWA) Prob. Congo--sp.
- 4770 NIGERIA, R. Nigeria Kaduna, 23/5, 0510-0534 in EG w/"News Nationwide" pgm, tk abt Niger. TV Authority (Kohlbrener)
- 4777 GABON, RTV Gabonaise, 17/5, 2330-2400 in FR w/nx, cmtry, ID. (Wallace-CT)
- 4789.6 IRIAN JAYA, RRI Fak Fak, 26/5, 1026 in IN w/ID 1027, mx, fair sig. (Royston-HI)
- 4790 PERU, R. Atlantida, 13/5, 0030 comunicados, ID 0155, better sig than ever. New transmitter? (Johnson-MD) 11/5, 0250-0315 w/breezy tlks, IDs, nice mx choice, FC, promos, fair sig. (Jordan-PA) 30/5, 0325-0400* w/tlk, mx, echo ID, anthem, fair-good. (Taylor-PA) 9/5, 0930 w/ID, tlks over mx, ID, rooster, fair sig. (Royston-HI)
- 4794a ECUADOR, LV de los Caras, 27/5, 0150 w/phone in pgm, ment. ID, consistent but 1st time in awhile. (Moore-COSTA RICA)
- 4795 CAMEROON, R. Douala, 19/5, 2335 in FR w/phone in pgm, FR & EG IDs, anthem. (Mancine-OH)
- 4800 ECUADOR, R. Popular Independiente, 27/5, 0157 w/pasillos, ID, TCG, ads, fair. (Moore-COSTA RICA) 5/6, 0425 w/mx, ID. (Klinck-NY)
- 4800 LESOTHO, R. Lesotho, 21/5, 0430-0513 in Sesotho & EG w/mx, mx, ad, poor sig. (Barhydt-OK)
- 4819.7 ECUADOR, R. Paz y Bien, 12/5, 0858-0920 in SP w/choral mx, ID, ment. Ambato, "buenos dias" fair sig. (Royston-HI)
- 4821 PERU, R. Atahualpa, 22/5, 0910-1005 w/"Feliz Amanacer" pgm, "musica del campo," ID. (Orcutt-NY)
- 4824 PERU, R. La Voz de la Selva, 12/5, 0150-0202 w/ID, electronic sound effects, vcls, IDs, FC. (Jordan-PA) 30/5, 0210 w/mx, M tk, 0240 ID. (Johnson-MD)
- 4830 BOTSWANA, R. Botswana, 20/5, 0351 in lang w/barnyard IS, QRM from R. Tachira, anthem, poor audio. (Mancine-OH)
- 4835 GUATEMALA, R. Tezulutlan, 27/5, 1145 in SP w/mx, ID 1150, fair but QRM. (Royston-HI)
- 4835 SARAWAK, RTM Kuching, 26/5, 1033 in Bahasa Malaysia, anmts, mx //7145, fair sig. (Royston-HI)
- 4840 PERU, R. Andahuaylas, 11-12/5, 0205-0230+ w/pops, ballads, folk mx, IDs, echo effects. (Jordan-PA)
- 4845 MAURITANIA, ORTM, 14/5, 2350 in AR w/tlk, Qur'an, ID, anthem, s/off 0004, QRM from Brazil. (Mancine-OH)
- 4845 MOLUCCAS, RRI Ambon, 8/5, 1013 in IN w/ads, ment. Ambon, ID 1015, ads, mx. (Royston-HI)
- 4850 CAMEROON, CRTV Yaounde, 30/5, 0440 in FR w/mx, ID in FR & EG. (Klinck-NY) 19/5, 2330 in FR w/pop mx, ID, anthem to s/off (Mancine-OH)

- 4874.6 IRIAN JAYA, RRI Sorong, 26/5, 0855-0905 w/ID, tlk, ment. Irian Jaya, fair sig. (Royston-HI) 19/5, 1013-1116 w/tlk, mx, fair. (Barhydt-OR)
- 4875.5 BOLIVIA, R. La Cruz del Sur, 9/5, 0900-0930 in SP w/rel, "La Voz de la Biblia," ID, hymns, fair. (Royston-HI) 1/6, 0952-0958 w/Bolivian nx, fair w/het. (Moore-COSTA RICA)
- 4875 BRAZIL, RN Boa Vista, 11/5, 0143-0245 in PT w/lengthy tlks, ment. LA countries, vcl, ID, FC, ads, jingles (Jordan-PA) Sometime ago I also saw logs of them ID'ing as Super Radio-sp
- 4881.7 PERU, R. Nuevo Mundo, 8/5, 0843-0930 w/modern LA mx, brief atenciones, IDs, mx, fair. (Royston-HI)
- 4890 GABON, RFI Relay, 30/5, 0430 in FR w/ID, nx. (Klinck-NY)
- 4895 SARAWAK, RTM Kuching, 26/5, 1039 in Iban w/tlk, singing, 777270, fair sig. (Royston-HI)
- 4898.8 UNID, Latin station, "musica romantica," no ID on sev. occasions, 1st hrd 7/6 at 0150, signs off in middle of trans w/no anmts or anthem. (Johnson-MD)
- 4904.5 CHAD, RN Tchadienne, 30/5, 0429 in FR w/ID, mx, very good sig. (Klinck-NY)
- 4907.5 USA, KUSW, 27/5, 0309 w/rock mx, subharmonic of 9815 but 4907.5 stronger. (Field-PA)
- 4910 ZAMBIA, ZNBC, 23/5, 0240, IS, excited e/on anmts, ID in EG & tlk in vern. (Johnson-MD)
- 4915 CHINA, Guangxi PBS, 27/5, 1335 in CH w/EG lesson, mx, ID in CH by M, mx, fair-good. (Royston-HI)
- 4915 GHANA, GBC-1, 19/5, 0300-0320 in EG w/boxing match from Las Vegas. (Wallace-CT) I'm surprised that Ghana would be on this early--sp
- 4920 ECUADOR, R. Quito, 19/5, 0330 w/good sig, hrd one of longest ad strings ever hrd, ID. (Orcutt-NY) At least I think you're in NY; sorry if I goofed--sp.
- 4925 Jim Renfrew says the station rptd here in May as Radio Mam was actually on 4825. Jim and I both apologize for not catching this. Hope it wasn't an inconvenience.
- 4934 KENYA, Vo Kenya, 22/5, 0230-0300 in EG w/pop mx, nx, (Wallace-CT) 23/5, 0300 at armchair level on exc. Afr. night, EG nx abt Africa. (Johnson-MD)
- 4940p CHINA, Qinghai PBS, 1/6, 0944 w/clx mx, YL tlk in CH, gone at 1010 recheck. (Moore-COSTA RICA)
- 4940 SRI LANKA, SLBC, 28/5, 1254 in EG w/ID 1256, tlk, mx request pgm, Elton John song, poor but little QRM. (Royston-HI)
- 4950 ANGOLA, RN, 25/5, 0420-0438 in PT w/pop mx, IDs, YL seemed to be counting in PT w/mx. Tlk, fair. (Royston-HI)
- 4950 SARAWAK, RTM Kuching, 26/5, 1047 in EG w/health pgm, brief nx 777160, fair. (Royston-HI)
- 4976 COLOMBIA, R. Florencia, IDs as such on 28/4, 0012 (assume this is Ondas del Ortegaza), slogans. (Renfrew-NY)
- 4980 BOLIVIA, R. Batallon Topater, 19/5, 0330-0400 w/nx, cmtry, ID, EZL mx. (Wallace-CT) This is a great catch--sp.
- 4980 CHINA, Xinjiang PBS, 28/5, 1406-1415 in Mongolian w/singing, anmts by M //5060, fair. (Royston-HI)
- 4985 BRAZIL, R. Brasil Central, 9/5, 0815 w/modern mx, IDs, tlk, mx, fair sig. (Royston-HI)
- 4995 MONGOLIA, R. Ulaanbataar, 27/5, 1249 in Mongolian w/TP, ID 774081, 7262, fair. (Royston-HI)
- 4996 PERU, R. Andina, 28/5, 0917-0948 w/fair sig, "musica del campo," ads, DJ read list of towns where station could be hrd. (Orcutt-NY)
- 5000 SOUTH KOREA, HLA, 27/5, 1750-1801 w/minute anmts, ment. HLA. QRM from JJY, BPM, BSF. SIO-333. (Hardester-OKINAWA)
- 5005 SARAWAK, RTM Sibn, 12/5, 1045 in lang w/tlk, folk mx, fair 776050. (Royston-HI)
- 5010 MADAGASCAR, R. Madagasikara, 4/5, 0253-0336 in FR w/Afr. mx, tlks, ID 0304, 0322, 1cl mx, nx. (D'Angelo-PA)
- 5010 SINGAPORE, SBC Radio 1, 26/5, 1108 in EG w/nx, ID, wx, brief mx, pgm summaries, poor. (Royston-HI)
- 5014 CLANDESTINE, R. Truth, 5/6, 0445 in EG w/political cmtry, western mx, ID, IS, s/off 0504. (Klinck-NY)

- 5019.9 COLOMBIA, unid, 26/5, 0215-0245 in SP w/Caracol anmts, sports play-by-play //5075 but separate promos, anmts, not hrd next night. (Alexander-PA) Maybe Ecos del Atrato-sp
- 5020 NIGER, La Voix du Sahel, 6/5, 0510 in FR w/Qur'an, anthem, lcl mx, lost to QRN 0550. (Mancine-OH)
- 5020 SOLOMON ISLANDS, SIBC, 5/5, 0939 in EG w/tlk abt Nepal, mx, TC, ment. RA nx, island mx, QRN. (Lackmann-VA) 27/5, 0950-1013 in EG/PD w/island mx, ID, ABC nx, ads, ute QRM after 1009. (Orcutt-NY) 16/5, 1055-1106 in EG w/island mx, ID, FC, TP, RA nx. (D'Angelo-PA)
- 5023 BHUTAN, BBS, 28/5, 1420-1450 in EG w/nx, ID 1420 w/CW QRM, mx, lcl anmts, fair sig. (Royston-HI)
- 5030 ECUADOR, R. Catolica Nacional, 21/4, 0030 w/Hymn to Joy, Andean mx, spiritual presentation, ID. (Renfrew-NY)
- 5030 UNID, 16/5, 1020-1050 w/live pgm by 2M in EG, poss. test? carrier on & off, some records, some live singing, laughter "chin up mate." Ment. Rebecca, fair-good (Hardester-OKINAWA)
- 5034 CENTRAL AFRICAN REPUBLIC, RTV Centafricaine, 30/5, 0447 in FR w/hilife mx, IDs. (Klinck-NY)
- 5050 ECUADOR, R. Jesus del Gran Poder, 8/5, 0957-1010 w/instds, ID, mx, tlks, piano mx, fair. (Royston-HI)
- 5058a ECUADOR, R. Nac. Espejo, 27/5, 0202 w/folk mx, ID, dominating TIPC on 50551 (Moore-COSTA RICA) New frequency?--sp.
- 5058.9p ECUADOR, RN Progreso, 13/5, 0140-0330 w/LA vcls, HC mx, anmts, weak voice modulation. (Alexander-PA)
- 5145 CHINA, R. Beijing, 28/5, 1235 in Mongolian w/tlk, good sig 775850, 4815, 4883. (Royston-HI)
- 5286.2 CHAD, R. Moundou, fair 0453 w/IS, anthems, ID as in WRTH, hilife mx. (Renfrew-NY)

No, we're not giving out awards but if we were, the one for most logs contributed this month would clearly go to Larry Royston. Thanks for all your help, Larry, and everyone who sent in material this month.

And now a feature on Portuguese broadcasts in the tropical bands. Unlike many of our DX colleagues, I am not a great Latin American DXer. But I did develop an interest in Brazilian DX sometime ago because it was easy to discern it from other Latin American countries since they speak Portuguese and not Spanish. Thus, I didn't need to learn much of the Spanish language or musical forms to figure out it was Brazil. I was hearing instead of one of the many other Latin American countries. However, that doesn't mean one should assume it is Brazil he or she is hearing when one hears Portuguese on the tropical bands; for there is a little more to be found on the bands than one might expect.

Again, I am no expert; but for starters, one might ask how one would recognize Portuguese versus Spanish when he hears it. When you see written Portuguese, you think it looks similar to Spanish but to hear it spoken is a different story. You can hear similarities but it won't be long before you will instantly be able to tell the difference. The easiest ways I've found to recognize Portuguese is that the sound of it flows smoother than Spanish; it's not as sharp sounding as Spanish, plus there are several "zh" and "sh" sounds in Portuguese which don't occur in Spanish. Also, in station IDs, the word "Radio" is pronounced like "Raajo" instead of "Radio" with the rolled r as in Spanish. So if you hear Portuguese on the tropical bands, it's Brazil, right? Well, that may be true much of the time but not always.

A few other Portuguese speaking countries which share the tropical bands with Brazil are Angola, Mozambique, Cape Verde and Sao Tome. The last two have been inactive on shortwave during the last few years but one never knows when they will show up again. Keep an ear to 3930 kHz for A Voz do Sao Vicente from Cape Verde and to 4807 or 4805 kHz for Radio Nacional de Sao Tome e Principe from Sao Tome.

For the most part, Brazilian stations can be found on odd frequencies; that is, those frequencies ending in 5 instead of 0. Generally, the 120 meter band is poor for DX but there are a couple Brazilians down here you can use as indicators to indicate that conditions to Brazil are favorable and also that the 120 meter band is open.

The 120 meter band Brazilians which are received the most often if at all are Radio Sao Carlos on 2420 kHz and Radio Difusora on 2340 but these are really good catches if you can get them.

The 90 meter band is not wide open for DX either these days so if you are getting good signals there, you have a good opening and should look further for those stations you want.

On 90 meters, the most common Portuguese broadcasters would be on 3210 kHz and 3338 kHz, both from Maputo, Mozambique; and 3375 kHz, which is shared by Radio Nacional, Sao Gabriel, Brazil and Radio Nacional, Luanda, Angola. These can be heard in the local North American evenings.

Some of the best indicators for good reception conditions on the 60 meter band are as follows, all from Brazil:

4755 kHz	Radio Difusora do Maranhao sometimes irregular <u>or</u> Radio Educacao Rural, Campo Grande
4825	Radio Cancao Nova <u>or</u> Radio Educadora Braganca
4885	Radio Clube do Para
4915	Radio Anhanguera
4955	Radio Marajoara
4985	Radio Brasil Central
5035	Radio Aparecida
5045	Radio Cultura do Para

You also may find Radio Nacional, Angola, on 4950 variable during our local evenings. As you can see, many of these frequencies are shared by more than one Portuguese broadcaster so care must be taken when getting IDs. One tricky situation is that on 3375 kHz where there is a Radio Nacional from Angola and a Radio Nacional from Brazil on the same frequency. Many Radio Nacional stations give their IDs as Radio Nacional without the city name. The location may only be given infrequently or at other times during the broadcast. Brazilians don't always ID at the top of the hour so expect an ID at any time throughout the hour. Following is a list of shared frequencies of Portuguese broadcasters, as taken from the 1990 World Radio & TV Handbook:

3375 kHz	Radio Nacional, Sao Gabriel, Brazil Radio Equatorial, Macapa, Brazil Radio Educadora, Brazil Radio Nacional, Angola
4855	Radio Aruana, Brazil
4865	Emissora Provincial, Mozambique Radio Verdes Florestas, Brazil
4885	Emissora Nacional, Maputo, Mozambique Emissora Provincial do Zaire, Angola (rare) Radio Clube do Para, Brazil Radio Difusora Acreana, Brazil
4895	Radio Bare, Brazil
4925	Emissora Provincial do Bie, Angola (rare) Radio Difusora Taubate, Brazil
4954	Emissora Interprovincial, Maputo, Mozambique Radio Nacional, Angola (variable frequency) Radio Cultura, Campos, Brazil Radio Marajoara, Brazil Radio Clube Rondonopolis, Brazil

There are even more examples where there are more than one Brazilian on the same frequency. Don't let this scare you off, though. As you read the loggings in the Journal, you will find that some stations are much more common than others while others are seldom heard. Once you are able to recognize the Portuguese language, you will find you are able to log more and more stations that may have seemed very difficult before. Hope everyone is having a good summer---sp.



International Band Loggings

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

- 5975 SINGAPORE BBC relay in EG 1702, world nx under R. Korea, //9740, 15400 (Park HI)
5995 MALI RTVM in FR 0600, NA, opening annmets, local nx, //4783 (Alexander PA 5/28)
5995 AUSTRALIA RA in EG 0912, local mx pgm, vg (Klinck NY 5/27)
6005 WEST GERMANY RIAS in GM 0253, EG rock vcls, pips, ID 0300, f (D'Angelo PA 5/17)
60055 COSTA RICA R. Reloj in SP 0614, modern mx, ID, //4832, g (Royston HI 5/12)
6010 VENEZUELA R. Los Andes in SP 0256, Latin vcls, ID, TC's, ads (D'Angelo PA 5/10)
60148 TANZANIA (t) R.Tanzania Zanzibar in SH 0351, AR mx, ID, nx? (Kohlbrener PA 6/4)
6025 NIGERIA RN in EG 2307*, TC, fqys at s/off, NA, lang annmt (Renfrew NY 4/21)
6030 BRAZIL R. Globo in PT 0935, echo effect anmets, ads, jingles, f (Royston HI 5/8)
6035 AUSTRALIA RA in EG 0805, Papua/NG svce, rock mx, ID, g (Royston HI 5/9) in Tok Pisin I039, rock mx, ID (Johnston KY 5/28)
60455 COLOMBIA R. Melodia in SP 0415, SP ballads, several ID's & TC's (Johnston 5/14) In SP I040, tlks, mx, TC, ID, p (Barhydt OR 5/11)
6060 BRAZIL R. Universo in PT w/national pgm 2320, ID, then lcl pgm (Renfrew NY 4/19)
6080 BRAZIL R. Anhanguera in PT 2330, ads, ID's, //4915, 11830 (Renfrew NY 4/20)
60946 BOLIVIA R. Cosmos in SP 0947, ID, tlks, interview, mx, f-p (Royston HI 5/8)
6135 SWITZERLAND Red Cross BC in EG *0310-0328*, rpts on famine relief (Taylor 5/29)
6160 CANADA CKZN Newfoundland in EG 2310, "Prime Time", ID, CBC nx (Orcutt 5/24)
6170 FRENCH GUIANA RFO Guyanne in FR 0710, tlks, orch mx, //5055, p (Royston 5/26)
6188 PERU R. Oriente in SP 1120, guitar mx, ID, tlks, f-p (Royston HI 5/9)
6230 MONACO TWR in GM? 0343-0415*, mx box IS, ID, relig mx, tlk (Alexander PA 5/28)
6250 EQUATORIAL GUINEA RN Malabo in SP 0510, folk & pop mx, drums, p (Royston 5/25)
6691 PERU R. Cutervo in SP 2356, folk & marachi mx, p (Karcheski MA 4/22) in SP 0058, s/loan, call letters, ID, ads, mx, IJ banter, off 0220 w/Peru NA (Renfrew 5/12)
6754nf? PERU R. La Mercad in SP 0000, folk mx, ID, variable s/off 0230-0305, annod fqys as MW 1400 (not in WRTH) and 6750, mention Cajamarca, f-g (Moore COSTA RICA)
7165 NEPAL R. Nepal in NE 1501, ads, some part EG, folk mx, //5005, f (Royston 5/28)
7170 UNITED KINGDOM VOA relay in EG 0613, "Newsline", //7200, f (Park HI 4/19)
7190 YEMEN PDR Yemen BCS in AR 0300, children singing NA, Qu'ran, f (Mancine OH 5/26)
72029 ZATRE LV du Zaire(t) in FR 0431, tlk, Afr mx, f/o 0500, ham QRM (Alexander 6/3)
7215 IVORY COAST RTVI Abidjan in FR *0555, xylophone IS, NA, ID (Carter WA 6/13)
7235 ZAMBIA RZ in EG 0508, job opportunities in Lusaka, Afr mx (Royston HI 5/17)
7255 NIGERIA VoNigeria Lagos 0459, "Morning Shuttle", ID, fqys (Klinck NY 5/30)
7265 WEST GERMANY Sudwestfunk in GM 0240, mx, ID, vocals (Klinck, Levison PA 5/20)
7270 SOUTH AFRICA RSA in PT 0530*, varied mx, tlks, band mx, f (Jordan PA 5/25)
7270 POLAND RP in EG 2235, "What We Said", nx, mx (Wallace CT 5/14, Prath FL 5/26)
7377 COSTA RICA R for Peace in EG 0205, Glenn Hauser's DX Digest (Montgomery 6/6)
7600 ECUADOR HD210A in SP 0115, time signals, annmets in SP, g (Taylor PA 6/3) 1 kw!
9480 MONACO TWR in EG 0640, relig tlk, ID, Christian Brotherh'd Hr (Alexander PA 6/3)
9475 EGYPT R. Cairo in EG 0200, education at the U. of Cairo (Montgomery 5/16)
9515 BRAZIL R. Novas de Paz in PT 0012, ID's during mx pgm (Renfrew NY 4/25)
9520 PHILIPPINE IS. R. Veritas Asia in EG 0953, mx, ID, sked, TC, f (Lackmann VA 5/9)
9520 HUNGARY R. Budapest in HG 0000, ID at s/on, nx, //9835, 11910 (Prath FL 5/28)
9530 NO. MARIANAS KHI Saipan in EG 1048, world svce CSM, interview, ID (D'Angelo PA)
9535 ALGERIA RTV Algerienne in FR 2200, ID, cmntry, exc (Klinck NY 5/22)
9540 BRAZIL R. Educadora da Bahia in PT 2258, tlks, pips, ID, fqys, pops (Renfrew NY)
9540nf? SUDAN R. Omdurman in EG 1534, nx, ID, tlks, heavy co-chan QRM (Royston HI 5/28)
9555 PHILIPPINE IS. R. Veritas Asia in langs 1145-1305, native & lite pop mx, ID, tlks seemed to be prayers (Lackmann VA, Prath FL 5/19, Royston HI 5/27)
9560 FINLAND RP in EG 0637, "Northern Report", press review, //11755 (Park HI)
9600 ALBANIA R. Tirana in EG 0430, nx re Albania & Baltic states (Montgomery 5/9)
9625 CANADA CBC in EG 2151, pgm on dealing with on-the-job stress (Montgomery 5/7)
9640 VENEZUELA Ecoes del Torbes in SP 1059, ID, fqys, nx, //4980 (Prath FL 6/2)
9665 BRAZIL R. Marumby in PT 2336, pop mx and "Marumby" ID's (Renfrew NY)
9665 SOUTH AFRICA SABC in AF 0450, tlks, pips, ID, interviews, mx (Jordan PA 5/19)
9675 SOUTH AFRICA RSA in EG 0400, nx abt S. Africa (Montgomery 5/9)
9675 BRAZIL R. dif Cancao Nova in PT 2230, lcl mx, interviews, ads, ID (Jordan 5/13)
9700 SO. KOREA R. Canada relay in JP 1337, nx, wx, ID, feature, //6095 (Park HI)

9720 SRI LANKA SLBC in EG 1231, mx, relig pgm, more mx, p (Barhydt OR 5/11)

9725 COSTA RICA TLAWR in EG 0030, "Costa Rica Today", mailbag (Laskowski IN 6/4) in EG 1159, relig pgm, ID (Klinck NY 5/23) in SP 1245, hymns, ID (Taylor PA 6/2)

9740 SINGAPORE BBC relay in EG 1210, nx, rpt on China, //11775, 15070 (Prath FL 5/28)

9750 ALASKA KNLS in EG 1515, chimes, mx, relig pgm, vp (Taylor PA 5/29)

9750 SOUTH KOREA RK in EG 1215, nx, "Seoul Calling", g (Carson OK 6/5) in EG 1245, IS ID, NA, sked, nx, tlks re HongKong & Thailand, cultural tlks, p (Jordan PA 5/23)

9760 ALBANIA R Tirana in AL *0000, ID, nx, tlk, folk mx, g (Jordan PA 5/29)

9765 MALTA V of the Mediterranean in EG 0600, "Psychology for Today" (Wallace CT 6/2)

9840 VIETNAM VOV in RS 1150, political tlk, VT mx, ID, into JP 1200 (Prath FL 5/28)

9885 SWITZERLAND Red Cross BC in EG *0312-0327*, IS, ID, RC nx (Kohlbrener PA 6/1)

9885 SWITZERLAND SRI in EG 2100, ID, nx, classical mx (Bader DC 5/13)

11655nf MONACO TWR Monte Carlo in EG 0940, relig tlks, ID, hymns, sked, p (Jordan 6/3)

116799 NORTH KOREA KCBS Pyongyang in KR 0815, choral mx, tlks, g (Park HI)

11715 ALASKA KNLS in EG 0808, ID, "Weekend Special" w/50's mx, tlk on substance abuse, (Alexander PA 5/20) "Chuck Cecil and his 'Swinging Years'" 0812 (Park HI)

11735 NORTH KOREA R Pyongyang in EG 1148*, tlks, skeds, vocals, NA, p (Jordan PA 5/23)

11735 YUGOSLAVIA RY in EG 0001, nx, "Nationalism in Yugoslavia", f (Carson OK 5/10)

11740 GREECE VOA relay in Amharic 1847, pop US mx, nx, //15165, p (Park HI)

11740 SOUTH KOREA RK in EG 1120, "World News Service", f w/ORM both sides (Park HI)

11765 BULGARIA R Sofia in EG 2130, ID, sked, nx, discussions, g (Jordan PA 6/1)

11780 COSTA RICA AWR in EG 1600, "Listener's Corner" (Montgomery 5/27)

11800 ITALY RAI in IT 2300, slow EZL vocals, YL anncr, exc, //9575 (Prath FL 5/26)

11825 ALBANIA R Tirana in EG 2330, sked, nx, tlks, //9760 (Prath FL 5/27) in EG 0235, wild Gypsy-like mx sels, all mx pgm, ID, f-p (Jordan PA 5/28)

11830 BRAZIL R Anhanguera in PT 0112, mx, many ID's, vg (Barhydt OR 5/29)

11830 IRAQ R Baghdad in EG 0230, nx, cmntry (Levison PA) in EG 0150, Mideast vocals, political & econ tlks, domestic nx, mx, g (Jordan PA 5/14)

118347 URUGUAY R Espectador in SP 1040, tlk, TC, ID (Barhydt OR 5/16)

11835 SRI LANKA SLBC in EG 1055, mx, tlk re pain treatment, ID's, f-p (Taylor PA 5/31)

11840 PORTUGAL RP in PT 2200, ID, pop mx, //9635, 9705 (Prath FL 6/2) in EG 0249, tour pgm around areas near and in Lisbon, f (Carson OK 5/15)

11865 SEYCHELLES FEBA in EG 1538, hrd under R Japan w/relig IS, vp (Lackmann VA 5/20)

11865 JAPAN RJ in EG 1546, art & promotional fund in Japan, f (Carson OK 6/6)

118798 ZAMBIA ZNBC in EG 0500, ID, local & regional nx, mx (Kohlbrener PA 5/20)

11885 WEST GERMANY R Liberty in RS 2320, tlk re Bush-Gorbachev summit, ID (Prath 5/27)

11900 SOUTH AFRICA RSA in Lozi 1456, IS, EG/Lozi ID's, fanfare, pipe, nx (Park HI)

11905 PORTUGAL D Welle relay in CZ 0429, IS, nx, site ID, f-g (Carson OK 5/14)

11940 ROMANIA RRI in EG *0200, IS, ID, fqys, pgm review, nx, p (Jordan & Levison PA) in EG 0410, ID, cmntry on free enterprise starting up, p (Park HI)

11955 CHINA R Canada relay in EG 1315, rpt on women in mgt in Canada, f (Park HI)

11990 CZECHOSLOVAKIA R Prague in EG 0005, tlk re changes at RP, to FR 0030 (Prath FL)

11990 KUWAIT RK in AR 2200-0015, ID, nx 2100, AR mx (Bader DC 5/22)

12035 SWITZERLAND SRI in EG 0415, "Dateline", "Swiss Merry-go-Round", f (Park HI)

12105 GREECE VOG in PT 2310, nx, ID, pop mx, //9395, into SP 2320 (Prath FL 5/12)

13610 KUWAIT RK in EG 1810-2000, rock mx, ID, "Mohammed the Light of Islam", into AR 2100 (Kohlbrener PA 6/5, Royston HI 5/28, Carson OK 5/14)

13620 KUWAIT RK in AR 0400-0800, ID, nx summary 0400, mx, more nx 0500 (Bader DC 5/20)

13690 EAST GERMANY RRI in EG 0104, DX pgm (Levison PA) in GM 0045, ID, mx (Prath FL)

13720 GUAM AWR in EG 1000, relig pgm, f/o at 1025 tho pgm is sked to 1100 (Wallace CT)

13770 NETHERLANDS RNW Flevo in EG 1506, "Research File", //15150, 17575 (Park HI)

15000 AUSTRALIA VNG Time Station in EG 0500+, TS under WWVH (Johnston KY, Taylor PA)

15055nf NO. MARIANAS KHBI Saipan in EG 1420, relig tlk, mx, ID, CSM nx (Alexander PA)

15084 IRAN VOIR in Persian 1759, ID, brief cmnts, Mid-East mx, g (Royston HI 5/28)

15135 FRANCE RPI in EG 0335, "Drumbeat" pgm, contest details (Kohlbrener PA 6/4)

15150 MADAGASCAR RNW in EG 1508-1525*, "C-Dutch Review", mix w/Swaziland (Park HI)

15165 PHILIPPINE IS. VOA relay in Amharic 1845, mx by Southern Pacific, f (Park HI)

15180 USSR R Vilnius (Kansomolsk) in EG 2220, pgm on Lith culture, f (Carson OK 6/2)

152155 ALGERIA RA in EG 1900+, US pop mx, ID's (Kohlbrener PA 6/6, Mancine OH 5/5)

15235 LIBYA LJB Tripoli in AR 0200, nx, cmntry, propaganda (Wallace CT 6/1)

15255v BANGLADESH RB in EG 1820+, nx, mx, ID, ex 15257, p (Park HI, Barhydt OR 5/8)

15280 HONGKONG BBC relay in EG 2109, "English by Radio", mix w/KGEI, p (Park HI)

15290 BULGARIA R Sofia in EG 0302, nx, ID 0307, mx, g (Royston HI 5/8)

15310 OMAN BBC relay in EG 1228, "Multitrack II", //6195, 9740, 11750, f (Park HI)

15325 SEYCHELLES FEBA in Nepali 1223, IS, ID's, fqys, pgm preview, nx (Park HI)

15345 KUWAIT RK in AR 0240, "Holy Qu'ran" pgm, chants, recitations, ID, p (Jordan PA)

15350 LUXEMBOURG RTL in FR 0457, nx, mx, ID (Barhydt OR 6/2, Mancine OH 5/11 at 2300)

15395 SPAIN REF in AR 2100, ID, nx, SP & AR mx, SP press review (Bader DC 5/13)
 15400 PINLAND RF in EG 1220-1301, "Northern Report", lang lesson (Carson OK, Park HI)
 15435 UNITED ARAB EMIRATES R Dubai in EG 0331, nx, discussion, address, f (Jordan PA)
 15475 GABON Africa #1 in EG/FR 1851, nx in EG then FR, pop mx, g (Mancine OH 5/6)
 16230 ALBANIA R Tirana in CH 1300, ID, theme mx, p, //fqys inaudible (Prath FL 6/2)
 17440nf? ICELAND INBS in IC *1935, tlk, f (Barhydt OR 5/8)
 17535 GREECE VOG in GK 1200, IS, ID, s/on w/nx by OM (Prath FL 6/2)
 17555 PAKISTAN R Pakistan in EG 1110, political cmtry, ID (Klinck NY 5/25)
 17550 BRIGITUM BRT in EG 1250, rpt re tourist attractions in Belgium, ID (Prath 5/28)
 17590 ISRAEL Kol Israel in EG 1900, ID, nx, "Jewish News Review" (Kohlbrener PA 5/23)
 17595 USSR R Moscow relay of Lao Nat R. in FR *1100, sked, IS, Kremlin bells, mx, tlk
 features mixed w/lively mx sels, pips 1130 (Jordan PA 6/4)
 17630 ISRAEL Kol Israel in EG 2155, tlks re continued Arab violence (Prath FL 5/26)
 17680 NEW ZEALAND RNZ in EG 0427-0600, IS, "Mailbox", nx, pgm for Tonga (Carson OK,
 Park HI) in EG 2003, nx, sports, ID, pgm reviews (Karcheski MA)
 17720 MAI.TA Deut Welle relay in SP 2315, GM lang lesson, //6145, 15105 (Prath FL 5/26)
 17745 SOUTH AFRICA RSA in FR 0505-0625, nx, pop/rock mx, requests, ID (Jordan PA 5/25)
 17750nf? TAIWAN VOC in EG 2200, ID, nx, "Learn Chinese by Radio" (Bader DC 5/18)
 17780 NO. MARIANAS KHBI Saipan in EG 0615, CSM "News Focus", nx (Alexander PA 5/28)
 17800 RWANDA Deut Welle relay in EG 1145, Afr nx, site location in FR (Klinck NY 5/25)
 17815 BRAZIL R Cultura in PT 0242, mx, TC, ID (Barhydt OR 5/18)
 17830 SWITZERLAND SRI in AR 1730, ID, nx, listeners' mail, AR mx (Bader DC 5/13)
 17850 FRANCE RFI in EG 1630, ID, mailbag pgm, //17620 (Prath FL 5/20)
 17860 RWANDA Deut Welle relay in EG 0130, nx, mx, cmtry, ID (Wallace CT 6/1)
 17865 INDIA AIR in EG 1038, "Faithfully Yours", //15050, 15335, 17387, f (Park HI)
 17880 TURKEY VOT in EG 2240, DX pgm, letters, //9445 (Prath FL 5/12)
 17875nf ECUADOR HCJB Quito in EG 0100-0400, "Saludos Amigos", relig tlk (Jordan PA 5/21)
 17875nf UNITED KINGDOM BBC in lang? *1145-1200*, repeats of 3+1 note phrase, then 5+1
 pips, BBC ID, nx bloc, interview, g (Jordan PA 5/24) ED: Not listed in May issue
 of BBC's own "London Calling" publication but that doesn't prove anything.
 17875nf SRI LANKA Deut Welle relay in CH *1214-1320*, nx, interviews, IS, ID, address,
 (Jordan PA 5/21) ED: Looks like everyone is tuning in on this formerly clear fgy
 17875nf WEST GERMANY Deut Welle in GM *1700-1755*, IS, ID, nx, tlks, mx (Jordan PA 5/20)
 21490 AUSTRIA RAI in EG 1632, "Daily Report", interview Austrian UN rep (Carson OK)
 21535 SOUTH AFRICA RSA in EG 1826, mailbag show, ID, "Sounds of Silence", p (Park HI)
 21595 SPAIN REF in AR 1800-1900, nx, "Listeners' Letters", AR mx (Bader DC 5/14)
 21600 WEST GERMANY Deut Welle in EG 1145, "Listeners' Letters", mx req, ID (Prath FL)
 21645 FRANCE RFI in EG 1240, "Focus on France" nx rpts, //17650, 21635 (Prath FL 6/2)
 21710 NETHERLANDS ANTILLES Bonaire relay of RN in AR 1730, nx, ID, AR mx (Bader DC)
 21745 MADAGASCAR RN relay in DT 0732, "Newsmagazine", //17575, 21485, f (Park HI)
 21775 AUSTRALIA RA in EG 1035, "Communicator", cmtry, g, //9580 (Park HI)
 25730 NORWAY RNI in NO 0713, "Postkassa" pgm, top 40 mx sels, p (Park HI)

CLANDESTINES

75392 ITALY V of Voice of Europe Portenone in EG 0228, rock mx, ID's (Karcheski MA)
 9700 ANGOLA Av Golo Negro in PT *0456, NA, ID, slogans, flourishes, nx (Renfrew NY)
 9940 GUATEMALA LV del Cid in SP 2155, ID on the hr, discussion (Klinck NY 5/22)
 117112 SUDAN? Radio SPLA in AR/EG 1345, AR tlk, anthem type mx, EG closing "You have been
 listening to a transmission of Radio SPLA, the Voice of the Sudanese Revolution-
 ary.... We can be back on air again tomorrow on the 31 meter band at 3 pm Sudan
 local time, that is 13 hrs GMT with news and programs in English and Arabic.
 Thank you for listening" (Vadino WA 5/14-15-17)
 12230 EGYPT V of Unity in Pashto/Dari *0120, flute IS, tlk, chants (Alexander PA 5/27)

PIRATES

62399 Voice of Tomorrow in EG 0234, ID, fqys, historical revisionism (Kohlbrener PA)
 7393 Hope Radio International in EG 0155*, ID's, req letters, cmtry (D'Angelo PA)
 7410 Voice of Slainsville in EG 0556, end of the world type bcst, addr (Alexander PA)
 74099 Voice of Tomorrow in EG 0100, white supremacy, anti-Semitic tlks (Alexander PA)
 7415 Radio Clandestine in EG 0208, rock mx, "bcstg off the NA coast" (D'Angelo PA)
 7415 One Voice Radio in EG 2119-0018*, tlks, health advice (Karcheski MA, Taylor PA)
 7445v Samurai Radio in EG 0100*, pop mx, ID's "the voice of Oriental America", QTH,
 brief QSO w/ U.S.One, joke ads, mushy audio (Alexander, Montgomery, Karcheski)

English Schedules

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



Prepared June 29, 1990 at 3:56 PM.

Thanks to John Carson (OK), Kris Field (PA), Gordon Darling (Papua New Guinea), Joe Hanlon (NJ), Fahel Bader (DC) and Mike Hardester (Okinawa) for material this month. Also thanks go to Rudi Hill of Radio New Zealand and Kieth Synnott of Radio Australia for submitting via fax the latest changes to their respective station's schedule.

Frequency Grids

Two frequency grids accompany the pages this month. The first is the full schedule of Radio Australia but note that it does not differentiate between transmitters or target areas. The grid includes changes effective 00 UT June 17. The time is broken down to the nearest 15 minutes.

You say you can't hear Radio Moscow? The second grid is a tabulation of observed Radio Moscow World Service frequencies noted during the month of June. Joe Hanlon helped to fill in the 06-09 UT time block. This listing was assembled over a series of days. Two receivers were used, matching audio of a known, strong frequency, with the other receiver band-scanning.

The grids were prepared with Borland's Quattro Pro spreadsheet. A macro parsed beginning and ending times extracted from the receiver control database, wrapping around the 24 UT/00 UT change, and drew the bars.

R New Zealand Int'l

This station totally revamped its broadcast frequencies and adjusted some times effective June 11. While Rudi Hill did not specifically mention it, we can assume the changes were to get out from under the Russian transmitter on 17680. Unfortunately, 17675 moves very close to the AP Buenos Aires wirephoto fax on 17670. The latter's signal is very strong here and makes afternoon and evening reception of RNZI difficult at best. Changes to the schedule had been anticipated for July. In a follow-up fax message just before deadline, Hill now says there will be no such changes.

Other Notes

Radio Korea will air on the C-Span Audio Network starting July 2. C-Span now reaches 5 million cable subscribers. The Voice of Greece has modified its schedule and the target areas are in question. What I hear differs from the official schedule, effective June 15 to September 30, supplied by John Carson. Joe Hanlon says 11645 kHz is to Australia 2200-2245 with news in English 2240, but the signal seems too strong here to be directed to down under. In any case, the 2240 time slot is a new addition to the English news releases. I hear one program 2200-2250 UT on 11645 kHz and a second program 2200-2350 on 9395 and 12105 kHz. 9395 and 12105 carry news in English at 2335 UT. The official schedule shows to Australia 2100-2150 9400, 9425, 11645 and 2150-2250

11645, both in Greek only; to Central and South America 2200-2350 9395 and 11645 in Greek, Portuguese, Spanish and English, and 2300-2350 on 9425 in Greek and Spanish. Thanks to John Carson, I saw official schedules from the new **Radio Romania Int'l** and **Radio Havana Cuba**; the latter included relay sites for the first time. **Faleh Bader** observes **Radio Kuwait to NA** in English 05-08 on 15345 and 19-21 on 13610 kHz, but I note the latter opening at 18 UT with very strong signals. The edition of **Radio Beijing's The Messenger** arrived two days before deadline. If you haven't seen a copy yet, write for one. The 21 UT release has been reduced to 30 minutes. On June 27, **BRT Brussels** dropped 17550 to NA at 1130 Su and 1230 M-Sa, moving to 21810 (which is also directed to SE Asia). **Mike Hardester** sent the schedule of **Radio Korea** and comments on **Radio France Int'l's** good signal on 21770 kHz at 14 UT to SE Asia, but listed parallels via China (11925 and 7125) were not heard. Mike comments that he has 43 days remaining on "The Rock of Japan"; Mike, your letter postmarked June 25 arrived June 29.

BBS Notes

John Bryant reviewed **GeoClock** in the May 1990 *Listener's Corner*

column. Version 4.1 includes VGA support and is available for download from the Pinelands RBBS. While you are on line, take a look at the propagation programs in the *SWL* and *HAM* directories as well.

CompuServe users are reminded that there is a gateway between *EasyPlex* mail and **MCI Mail**. If you have information or questions, use the gateway. It is faster than the USPO system.

New PC Software for Kenwood R-5000

A new PC/MS-DOS program to control the Kenwood R-5000 Communications Receiver is now available. The **Event Manager** uses the PC to control the receiver in a manner similar to a television VCR 7- or 14-day event timer.

Create a list of days and times and frequencies to turn the receiver on, specify the number of minutes each event is to run, and the computer will turn the receiver on and off as prescribed. A tape recorder (or any other device) controlled by the rear apron relay contacts will also be turned on and off.

Send a business-size SASE for a brochure.

FOR SALE: Sony ICF-2010. Front end circuitry damaged by static. FM and AIR still work. Price \$75.00 or best offer. You pay shipping. Tom Laskowski, 1334 EAST Miner Street, South Bend, IN 46617. Phone (219) 234-8598 between 2300 and 0300 only.

FOR SALE: Palomar amplifier Model PA-360. Also Palomar preamplifier Model P-308. Like new. Both for \$90.00. Stanley Cabrel, 2254 62nd Avenue, Oakland, CA 94605. Phone (415) 562-2486.

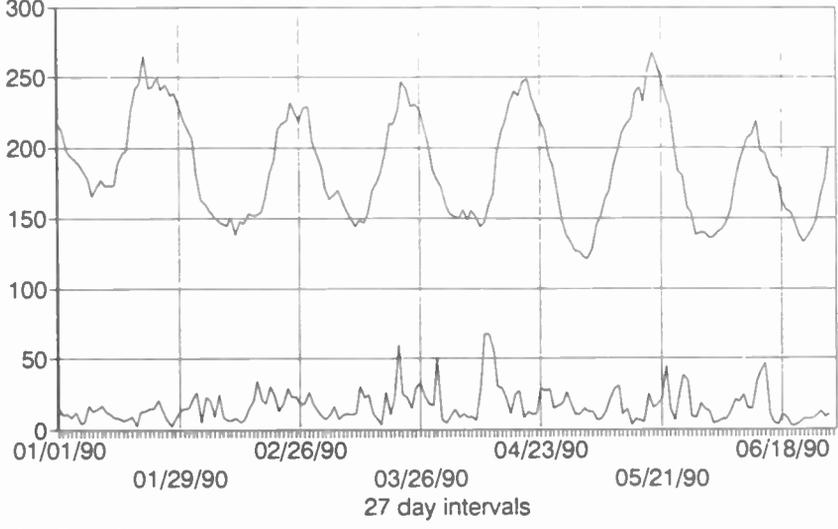
HELP! Has anyone had any luck making a home-brew T2FD antenna? If so, please advise Paul Costello, 3603 Arlington Avenue W, Yakima, WA 98902-3950. Thanks!

UTC		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
9710																									####
9800																									####
11630																							####	####	
11745																								####	####
11775																								####	####
11780																								####	####
11835	####	####																							####
11840												####	####	####	####	####	####	####	####	####	####	####	####	####	####
11890																							####	####	
11980									####	####															
12005	####	####																							####
12010					####	####	####																		
12030									####																
12040					####																				####
12050	####	####	####																	####	####	####	####	####	####
12060																									####
13605																					####	####	####	####	####
15110												####	####	####											
15130												####	####	####											
15155												####	####												
15185																				####	####	####	####	####	####
15210										####															
15230					####																				####
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15305									####	####	####														
15315					####																			####	####
15320									####																
15355																								####	####
15375									####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####
15405						####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####
15490					####																				####
15520						####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####
15535												####												####	####
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15550	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####
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15595																									
17560				####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####
17570																####	####	####	####	####	####	####	####	####	####
17600	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####
17620	####	####	####																						####
17625						####	####	####																	
17655												####	####	####	####	####	####	####	####	####	####	####	####	####	####
17665										####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####
17670																	####	####	####	####	####	####	####	####	####
17695																				####	####	####	####	####	####
17730				####	####	####										####	####								
17765						####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####
17775												####	####												
17790												####	####	####											
17815										####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####
17830												####	####	####	####	####	####	####	####	####	####	####	####	####	####
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17860						####	####	####	####																
17890	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####
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21630																									
21655																									
21690	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####
21725																									
21740																									####
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21785																									
21790	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####
21800																									

UTC		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
5995											****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
6020												****	****	****	****	****	****	****	****	****	****	****	****	****	****
6035									**																
6060																****	****	**							
6080												****	****	****	****	****	****	****	****	****	****	****	****	****	**
7205																						****	****	****	****
7215																	****	****	****	****	****	****	****	****	****
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9550										**	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
9655											**	****	**												
9710												****	**				**	****	****	****					
9760											****														
9770																	**	****	****	****	****	****	****	****	****
11720													****	**											
11800																	**	****	****	****	****	****	****	****	****
11855																				****	****	****	****	****	****
11880	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
11910													****	****	****	****	****	****	****	****	****	****	****	****	****
13605	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
13705									****	****	**														
13745																**	****	****	****	****	****	****	****	****	****
15160	**	****	****	****	****	****	****	****	****	****	**											**	****	**	****
15240	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
15320			****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
15380	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
15465	****	****	****	****	****	****	****	****	****	****	**			****	****	****	****	****	****	****	****	****	****	****	****
15560	**	****	****	****	****	****	****	****	****	****	**											****	****	****	****
17630	****	****	****	****	**	**	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
17715											****	**											****	****	****
17750	****	****	****	****	**	**	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
17795	****	****	****	****	****	****	****	****	****	****	**											****	****	****	****
21525	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
21740	**	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
21775	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
21825	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****

Solar Flux & A-Index: Jan-Jun 90

Recorded from WWV



by Sundstrom

Changes entered between 05/25/90 and 06/29/90.

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

Start Time (UTC)	End Time (UTC)	Country	Station	Freq #1	Freq #2	Freq #3	Freq #4	Freq #5	Freq #6	Freq #7	Freq #8	Target Area	Notes	Record Last Updated
0000	0030	Australia	R Australia	17795	17750	17630	15465	15380	15240	13605	11880	As/Pac/PapNG	#10 -0700	06/15/90
0000	0200	New Zealand	R New Zealand Int'l	17675								Pacific	M-F	06/20/90
0030	0100	Australia	R Australia	21740	17795	17750	17630	15560	15465	15380	15240	As/Pac/PapNG		06/15/90
0100	0200	Australia	R Australia	21775	21740	21525	17795	17750	17630	15560	15465	As/Pac/PapNG	#10 -0600	06/15/90
0100	0800	New Zealand	R New Zealand Int'l	17675								Pacific	Su	06/20/90
0100	0130	Sweden	R Sweden	15405	1176C							As/Pac		06/02/90
0200	0330	Australia	R Australia	21775	21740	21525	17795	17750	17630	15560	15465	As/Pac/PapNG		06/15/90
0200	0230	Switzerland	Swiss R Int'l	17730	12035	9885	9650	6135	6095			NA	#1 v Brazil	06/24/90
0300	0700	USSR	R Moscow	15595	15530	15455	15425	15180	13605	12050	12010	MNA	#5 -06 & 4 more freq	06/22/90
0330	0430	Australia	R Australia	21775	21740	21525	17795	15560	15465	15320	15240	As/Pac/PapNG		06/15/90
0350	0410	Italy	RAI	17795	15330	11905						S As		06/03/90
0400	0430	Switzerland	Swiss R Int'l	12035	9885	9650	6135					NA		06/26/90
0400	0500	USSR	R Moscow	21790	21630	21625	21585	17890	17860	17730	17625	WS		06/04/90
0430	0600	Australia	R Australia	21775	21740	21525	17795	17750	17630	15560	15465	As/Pac/PapNG		06/15/90
0430	0815	New Zealand	R New Zealand Int'l	17675								Pacific	M-F	06/20/90
0500	0600	USSR	R Moscow	21630	21625	21585	17890	17860	17625	17600	17560	WS		06/04/90
0600	0730	Australia	R Australia	21775	21740	21525	17630	15465	15240	13705	11880	As/Pac/PapNG		06/22/90
0600	0700	USSR	R Moscow	21725	21630	21625	21585	17890	17860	17625	17600	WS		06/04/90
0630	0645	Finland	R Finland	11755	9560	6120						Eu/NE/Afr		06/02/90
0645	1100	New Zealand	R New Zealand Int'l	9855								Pacific	Sa	06/20/90
0700	1000	USSR	R Moscow	21725	21630	21625	17560	15540	15520	15375		WS		06/04/90
0715	0830	Italy	Italian Radio Relay Serv	9815								Eu	Su	06/05/90
0730	0800	Australia	R Australia	21775	21525	17630	15240	13705	11880	6035		As/Pac/PapNG		06/22/90
0800	0830	Australia	R Australia	21775	21525	17795	17750	17630	15240	15160	13705	As/Pac/PapNG		06/22/90
0800	1000	USA	WCSN	11705								Eu	60 deg	06/05/90
0830	0900	Australia	R Australia	21775	21525	17750	17630	15240	9580			As/Pac/PapNG		06/20/90
0900	1000	Australia	R Australia	21825	21775	17715	9760	9580	5995			As/Pac/PapNG	#7 -2030	06/20/90
0900	1000	China	R Beijing	17710	15440	11755						S Pacific		05/28/90
0930	1000	Australia	R Australia	21825	21775	17715	9760	9655	9580	5995		As/Pac/PapNG		06/20/90
1000	1030	Australia	R Australia	21775	17715	9655	9580	5995				As/Pac/PapNG		06/15/90

1000	1100	China	R Beijing	17710	15440	11755								S Pacific		05/28/90
1030	1100	Australia	R Australia	21775	9655	9580	5995							As/Pac/PapMG		06/15/90
1040	1048	Greece	V of Greece	17535	15625									Japan	News/Eng	06/26/90
1100	1130	Australia	R Australia	21825	15465	11910	9710	9655	9580	6080	6035			As/Pac/PapMG		06/15/90
1100	1115	Pakistan	R Pakistan	21520	17555									U Eu	Slow-speed news	06/28/90
1130	1230	Australia	R Australia	21825	15465	11910	9710	9580	6080	6035	6020			As/Pac/PapMG		06/15/90
1130	1155	Belgium	BRT	21810										SE As/NA	Su	06/29/90
1200	1330	Australia	R Australia	11720										Afr		06/20/90
1200	1300	China	R Beijing	17855	15285	11660	9530							ENA/S Pac/SE As		05/28/90
1200	1230	Italy	Italian Radio Relay Serv	9815										Eu	Su	06/05/90
1200	1400	Mariana Is	KHBI	15255	9465									As/PapMG/SE As		198/270 deg
1200	1300	USSR	R Moscow	21785	21655	17815	17655	15585	15550	15375	15110			World Service	#8 v Cuba	06/02/90
1230	1300	Australia	R Australia	15465	11910	9580	6080	6035	6020	5995				As/Pac/PapMG		06/15/90
1230	1300	Bangladesh	R Bangladesh	15255	11710									Eu		05/28/90
1230	1255	Belgium	BRT	21810										SE As/NA	#1 M-F/#2 M-Sa	06/29/90
1235	1248	Greece	V of Greece	17535	15650	15625								NA/Sweden	News/Eng	06/26/90
1300	1330	Australia	R Australia	15465	9580	6080	6035	6020	5995					As/Pac/PapMG		06/15/90
1300	1400	China	R Beijing	15285	11855	11660	9530							S Pac/WNA/SE As		05/28/90
1300	1400	USSR	R Moscow	21785	17830	17815	17730	17655	15585	15550	11375			World Service	#9 v Cuba	06/02/90
1330	1400	Australia	R Australia	9580	6080	6035	6020	5995						As/Pac/PapMG		06/20/90
1400	1430	Australia	R Australia	9580	7215	6080	6060	6035	6020	5995				As/Pac/PapMG		06/15/90
1400	1500	USSR	R Moscow	21785	21690	17830	17815	17730	17670	15585	15375			World Service	#9 v Cuba	06/02/90
1430	1630	Australia	R Australia	13745	11800	9770	9710	9580	7215	6080	6060			As/Pac/PapMG		06/20/90
1500	1600	USSR	R Moscow	21690	17670	15585	15375	11840						World Service	#5 v Cuba	06/02/90
1530	1538	Greece	V of Greece	17535	15625	11645								NA/Sweden	News/Eng ex Su	06/26/90
1545	1630	Pakistan	R Pakistan	21530	21480	17895	17555	15605	13665					ME/E&S Afr	Slow-speed news 1615	06/28/90
1600	1640	United Arab Emirates	R Dubai	21605	15435	15320	11795							Eu/Afr		05/26/90
1630	1700	Australia	R Australia	13745	11800	11855	9710	9580	7215	6080	6035			As/Pac/PapMG		06/20/90
1700	1800	Australia	R Australia	11855	9770	9710	9580	7240	7215	6080	6035			As/Pac/PapMG		06/15/90
1700	1800	China	R Beijing	15225	11575	9570								E&S Afr		06/27/90
1700	1800	USSR	R Moscow	17695	17670	15375	11840							World Service	#4 v Cuba	06/02/90
1800	1900	Australia	R Australia	11855	9770	9580	7240	7215	7205	6080	6035			As/Pac/PapMG		06/15/90
1800	2215	New Zealand	R New Zealand Int'l	15485										Pacific	M-F (F -2200)	06/20/90
1830	1855	Finland	R Finland	15185	11755	9550	6120							Eu/ME/Afr		06/02/90
1840	1848	Greece	V of Greece	15625	11645									C&S Afr	News/Eng ex Su	06/26/90
1900	1930	Australia	R Australia	11855	9580	7240	7215	7205	6080	6035	6020			As/Pac/PapMG		06/15/90
1900	2200	New Zealand	R New Zealand Int'l	15485										Pacific	Su	06/20/90
1900	2000	USSR	R Moscow	17695	17670	15595	15540	15185	11890	11840	11630			US & UK/Ireland	JK: #1,5,6,8	06/02/90
1930	2000	Australia	R Australia	13745	11855	9580	7240	7215	7205	6080	6035			As/Pac/PapMG		06/15/90
1930	2025	Romania	R Romania Int'l	11810	9750	9690	5955							Eu		06/27/90
2000	2030	Australia	R Australia	13745	11855	9580	7240	7215	7205	6080	6035			As/Pac/PapMG		06/15/90
2000	2100	China	R Beijing	15110	11715	11500	9920	9440						E&S Afr/Eu/W&M Afr	#1&2 v Mali	06/27/90

WELCOME TO KNOXVILLE



MONITORING TIMES CONVENTION



OCTOBER 5, 6 AND 7!

Every year, thousands of people come from miles around to see fall in the Great Smoky Mountains. This year there's another reason - the 1990 *Monitoring Times* Radio Convention. Plan on spending the weekend of October 5th, 6th and 7th with your friends from *Monitoring Times*!

Check in to your room at the Holiday Inn-World's Fair Friday or Saturday. Then wander on down to the Grove Enterprises hospitality suite. It's open 24 hours a day. Grab something to drink and talk with some of your favorite *Monitoring Times* columnists. Have a chat with a shortwave broadcaster from the other side of the world. Or compare notes with fellow listeners. We'll keep the coffee on 'til the wee hours.

On Saturday morning, browse among the exhibits. It's your chance to see firsthand some of the hottest equipment and products in the industry and meet the professionals who make the radio business tick. Or join members of the International Radio Club of America (IRCA), a top-rated broadcast band (AM) club, as they hold their annual convention.

EVERYONE'S WELCOME!

Later, choose from some of the dozens of workshops, seminars and talks being presented by some of the biggest names in radio. Build an antenna. Find out how to hear exotic shortwave stations like a pro. Attend a hands-on scanner modification workshop. Learn about the excitement of military communications. For beginner or expert, from

one end of the radio spectrum to the other, it's all here.

Make plans to attend. Registration is a very affordable \$30.00. Space may be limited. So reserve your place today by sending your check or money order to *Monitoring Times* Convention, P.O. Box 98, Brasstown, NC 28902. (No credit cards, please.) Special discounts on airfare are available from Delta, the official airline of the 1990 *Monitoring Times* convention, and Holiday Inn. (Rooms will be \$50.00 a night, \$30.00 a night if you share with another person.) Do not include money for accommodations at this time. You will receive additional information along with your confirmation letter. Sign up now and assure yourself a place at the radio event of the year.

The Monitoring Times Radio Convention

It's the Radio Event of the Year!

Sign me up! Enclosed is my \$30.00 registration fee. I'll see you in Knoxville!

Name _____

Address _____

City _____ State/Prov _____ Zip _____

Phone (Optional) _____

Make your check payable to Monitoring Times and send it to P.O. Box 98, Brasstown, NC 28902.



ANARCON '90

A new decade begins...

The 1990 Convention of the Association of North American Radio Clubs

September 15, & 16, 1990 - Va. Beach Pavilion Convention Center - Virginia Beach, VA

Get ready for the biggest ANARCON ever! Yes, this September 14, 15, and 16, in the beautiful and spacious Virginia Beach Pavilion Convention Center, will be the weekend to mark on your calendar. The 1990 Convention of the Association of North American Radio Clubs will be held in conjunction with the 15th annual Tidewater Radio Conventions Amateur HamFest. Sponsored by *WNIS Radio* and coordinated by the *Old Dominion DX Association*, this years convention is the show to attend!

Featuring dealers and exhibitors from around the continent, and with attendees from around the globe. ANARCON '90 promises to be fun for everyone. With forums on technical topics, shortwave broadcasting, pirate radio, technical topics and scan-

ner topics, ANARCON '90 will have something for you!

And for your family, the Tidewater area of Virginia hold much to be seen and enjoyed. Tidewater is the seat of this country's founding, with historic Jamestown and Williamsburg

Virginia a short drive away. Norfolk is the home of the world's largest Naval Base, as well as home to the beautiful *Botanical Gardens*, site of the Annual Azalea Festival in honor of NATO. Additionally, several cultural centers are available for your enjoyment, including *The Virginia Marine Science Museum*, the *Chrysler Museum*, the *Virginia Beach Center For The Arts* and the *Mariner's Museum*. And with the warm weather still with us,

the beaches, which are just a

short 6 blocks away, will be beckoning you to their sands.

Your \$25 registration fee also includes admission to the 15th Annual Tidewater Radio Convention's HamFest/Computer Fair. The Old Dominion DX Association has been a

regular participant in this convention, to help radio amateurs discover (or re-discover) shortwave listening. So you will not only have the enjoyment of the ANARC Convention, but that of the HamFest as well. The Virginia Beach Pavilion's 80,000 square foot exhibition area will be filled to capacity with manufacturers including Icom, Kenwood, MFJ, and AEA; as well as dealers including Universal Radio, Ham Radio Outlet/EGE and others.

Saturday Banquet

Saturday night, the annual ANARCON Banquet will be held in the spacious quarters of *Captain George's Scullard Restaurant*. Transportation will be provided at no charge by



WNIS 850AM
NEWS RADIO

ANARC, and it will include riding an old-time "trolley", provided by the Tidewater Transportation District.

The menu for the banquet will consist of an all you can eat buffet.

with a heavy emphasis on seafood; the buffet also includes beef for the non-seafood lover. And be sure to save room for desert, as the desert bar is one of the best around. The banquet fee is \$27.50, and includes all taxes and gratuities. All banquet reservations **MUST** be received no later than August 15, 1990, so proper arrangements can be made with the restaurant.

Hotel Arrangements

The Radisson Hotel is the convention Hotel. Located immediately adjacent to the Pavilion Conference Center, the Radisson Hotel offers fine food and beautiful accommodations. Single/Double rooms are \$55. Triple/Quad Rooms are \$65, and Suites are available. Call in the United States 1-800-333-3333 to make your reservations today! Rooms go quickly, so don't delay. You must mention the ANARCON '90 Convention to obtain the special convention rates! Other Hotels in the area include the Holiday Inn Oceanfront, The Hilton and the Ramada Inn. All have toll-free numbers.

ICOM

Friday Evening Reception

There will be an informal reception in the Lynnhaven room at the Radisson Hotel for those arriving early. This will afford you a few moments to relax, chat with some of the

other attendees, and to pick up your convention materials. We hope that you will attend.

Registration:

Registration for ANARCON '90 may be handled in advance (the preferred method); or at the door. Remember that banquet reservations **MUST** be made by August 15, in order to make the final arrangements with the banquet hall. At convention time, registration may be done Friday evening at the Lynnhaven Room in the Radisson Hotel, or Saturday at the door in the Pavilion Convention Center. But please, make your arrangements in advance to save yourself time and possible disappointment, as hotel accommodations are first come first served.

Directions

From the North: Take I-95 or US 13 or US 17 to I-64 East, I-64 East to I-44, to the Bird-neck Road Exit. After exiting

the highway, cross the intersection and you will be in the Radisson Parking Lot.

From the South: Take I-95 or US 13 or US 17 to I-64 West, I-64 West to I-44, to the Bird-neck Road Exit. After exiting the highway, cross the intersection and you will be in the Radisson Parking Lot.

Two Meter Talk-In

The Ham-Fest will provide Talk-In on the 146.97 repeater. Autopaich capability is available, with emergency connect available.

KENWOOD

Advance Ticket Sales

It is much easier on the Convention Committee if we know in advance how many folks will be attending, so advance registration is requested. Please use the attached form, and return it as soon as possible. Remember, the deadline for Banquet Reservations is August 15, so get them in quick!

We look forward to seeing you there! 73

uniden





ANARCON '90

A new decade begins...

Convention Registration

Complete and Return With Your Remittance To:

ANARCON '90

P.O. Box 9645 · Norfolk, VA 23505-0645
United States of America

**September 14, 15 and 16,
1990**

**Virginia Beach Pavilion
Center
Virginia Beach, VA**

Please PRINT clearly the following:

Name _____
Mailing Address _____
City, State, ZIP _____
Telephone # _____

IN CASE OF EMERGENCY:

Name _____
Telephone # _____

- Age Group:**
- Under 20
 - 20-34
 - 35-49
 - 50-65
 - Over 65

- Interests:**
- SWBC
 - MWBC
 - Utilities
 - FM/TV
 - Scanning

Banquet Information:

Will you or any family members attend the Saturday evening banquet? Yes No

Names of Those Attending (including Yourself)

The Banquet will be a buffet and include seafood and beef

**Banquet Attire
is semi-formal
Jacket & Tie
recommended**

No Banquet Tickets will be available at the Door!

Convention Registration & Banquet Fees

All Amounts in US Dollars - Money Orders, Bank Drafts or Personal Cheques (faster from USA & Canada Only)

CONVENTION REGISTRATION FEE:
(\$25 per person, includes HamFest Admission) _____ tickets.....\$ _____

BANQUET FEE:
(\$27.50 per person for _____ people).....\$ _____

TOTAL AMOUNT ENCLOSED:.....\$ _____

**HOTEL ACCOMMODATIONS ARE YOUR RESPONSIBILITY.
PLEASE MAKE THEM EARLY. THANK YOU!**

ANARCON '90 is Sponsored by

**WNIS 850AM
NEWS RADIO**

with Coordination by
The Old Dominion DX Association



PUBLISHER'S PAGE



NO COLLECT CALLS ON THESE ADS, PLEASE.

FOR SALE: Kenwood R600 receiver, \$295.00. Realistic #12-655 TRF AM portable radio, \$20.00. Realistic AM stereo tuner (C-Quam), \$30.00. WRTH 1985-1987, \$6.00; 1988, \$8.00; 1989, \$10.00. Rick Krzemien, 1308 Walden Road #25, Walnut Creek, CA 94596. Phone (415) 933-1719 after 4 pm PST.

FOR TRADE: Allied (Knight) Spanmaster. Original earphones, near mint condition, but no manual. Want Hallicrafters S-38/S-120/125 series. Tom Mooningham, P.O. Box 487, Maugansville, MD 21767-0487. Phone (301) 791-0834 after 4 pm.

FOR SALE: DAIWA All Mode Active Filter, AF-606K, \$130.00. I ship. Also 10:1 matching transformers for Beverage antennas, \$17.00 each plus \$2.00 shipping. WANTED: MS4 speaker. Steven R. Lare, 824 West 25th Street, Holland, MI 49423. Phone (616) 335-2270.

FOR SALE: "Popular Communications" from Sept. 1982 (issue #1) through June 1990. Complete set. "Monitoring Times" from Dec. 1985 to June 1990 (missing June 1986). "Review of International Broadcasting" from issue #1 to #131 (1977-1990). Complete set. "DX Listening Digest" from issue #1 to #27 (1985-1990). Complete set. Most of the above publications are in excellent condition. Best offer for each set. Tom Gavaras, 10401 Cedar Lake Road #215, Minnetonka, MN 55343. Phone (612) 544-2433.

FOR SALE: Drake R7 general coverage receiver. Fully equipped with all accessories and in mint condition. Price \$875.00. I pay shipping. Victor Barz, 8198 T Drive North, Battlecreek, MI 49017. Phone (616) 965-4529 anytime.

FOR SALE: Customized Beam Headings (from/to) and Distances (MI/KM) to over 439 WRTH-90 transmitter sites. Useful in selecting alternate transmissions and choosing listening times based on distances. ITU Country Codes included. Send your location/coordinates, \$6.25. Also "Passport to World Band Radio" 1989, \$9.50. "FRENEX 1989, \$9.00. WRTH-87, \$8.25; -89, \$9.25. All items include shipping. Cashiers check or money order, please. Al Drehmann, Route 2, Box 3-B, Tryon, NC 28728. Phone (704) 894-3398.

NOTICE: We have about 20 copies of the May NASWA Journal left here containing the complete English to North America schedule by Tom Sundstrom. They are available to new members whose subscription began in June for the regular sample price of \$2.00 on a first come basis. Sent requests to NASWA, 45 Wildflower Road, Levittown, PA 19057.

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Levittown, Pennsylvania 19057

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<i>& Colombia</i>	\$25.00
<i>South America and Europe</i>	\$27.00
<i>Asia, Africa and Pacific</i>	\$30.00

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

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

