

The **NASA** Journal

VOLUME XLVIII NUMBER 5

MAY 2004



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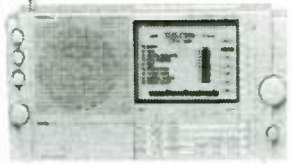


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The cool down period from the very successful **Winter SWL Festival** in beautiful downtown Kulpsville last month continues. This year's event continues to be talked about throughout the hobby world. If you have never attended a Winter SWL Festival, you need to make a commitment because you are really missing something special. In just ten months we will gather once again in Kulpsville. So, mark your calendar to be in beautiful downtown Kulpsville for the 2005 Winter SWL Festival on 11 and 12 March 2005. Watch the *Calendar of Events* and catch the latest news in Rich Cuff's *Easy Listening* column.

NASWAN **Tim Noonan** informs us that the 11th Annual Madison-Milwaukee Get-Together for DXers and Radio Enthusiasts will be held on Saturday, August 21, 2004 from 1:00 PM until whenever at Sheridan Park, Cudahy WI, on the Lake Michigan shore at Layton Avenue in south suburban Milwaukee. This is an all-band event, and everyone interested in the radio hobby is welcome. Please feel free to be in touch with Tim at <DXing2@aol.com> or 414 762-2702 with any questions. I attended last year's event at **Bill Dvorak's** and had a great time meeting many folks for the first time. If you can make it to the region, I strongly recommend you try to attend this gathering.

Speaking of radio-related events, **Simon Spanswick**, Chief Executive of the Association for International Broadcasting (AIB) informs us that the AIB will hold its third global media conference 12-13 May 2004 in Prague, Czech Republic bringing together public and commercial international broadcasters. The 2004 Conference will revisit the contentious issue of the relationship between broadcaster and government as well as examining a host of other significant subjects that international broadcasters and

the industries that support them have to address. The goal of the Conference is to help define strategies for all sectors of the industry. **Nik Gowing**, main presenter on BBC World, will chair a major debate on the resilience of broadcasters' businesses at a time of Terror and Conflict. Can the industry survive the pressures being exerted by the state, or those seeking to control the state? The 2003 Conference was held in London and attracted more than 170 delegates from around the world to discuss and debate a range of issues affecting the broadcasting industry. This is the only conference specifically designed to address the issues facing the international broadcasting industry from audiences to program formats, to delivery mechanisms and production. Whether you want to meet colleagues from around the world (the AIB has registrations from Australia, New Zealand, Canada, the USA, the UK, France, Sweden, Germany and a range of other countries), find out about the way in which colleagues from organizations are coping with the problems facing broadcasters in today's uncertain world, or to sample the wonders of Prague, the AIB Global Media Business Conference is the key event in the broadcast calendar this spring.

The Danish Shortwave Listeners Club in Denmark is about to release its 2004 edition of their popular *Domestic Broadcasting Survey* edited by well-known International DXer **Anker Petersen**. The *DBS* is published in PDF format and is available for EUR 5 or US\$5.00 from club Treasurer **Bent Nielsen**, Egekrogen 14, DK-3500 Vaerloese, Denmark. This booklet has been an excellent resource for tuning in tropical band, domestic stations and clandestine stations for the last six years. As a DXing resource, it's on my "must have" list. We anticipate having a review of the *DBS* in the near future.

OUR MOTTO IS - "UNITY AND FRIENDSHIP"

Have you ordered your clothing gear from **Mike Wolfson's Company Store**? Mike carries a full line of tee shirts, sweatshirts and coffee and beer mugs. The Company Store is making this stuff available by mail order. Catch the important details in Mike's *Company Store* column so keep an eye open for Mike's column for the important details. **Please note that the prices for t-shirts and sweatshirts on the back cover this month are incorrect.** The actual prices are: T-shirts \$14 each for sizes S-XL, \$16 for size XXL.; and Sweatshirts \$22 each for sizes S-XL; \$24 for size XXL. Postage remains the same.

Don't forget that the best way to stay on top of breaking shortwave news and information is with the club's electronic *Flashsheet*. There is no better way of staying on top of the ever-changing DX situation than with the electronic *Flashsheet*. You can participate by sending your latest logs to the electronic *Flashsheet* edited by **Sheryl Paszkiewicz**, spasz@dataplusnet.com or P.O. Box 716 Manitowoc, WI 54221-0152. Each week the electronic *Flashsheet* brings a lot of exciting, late breaking DX news and informa-

tion to our members. The electronic newsletter is an excellent supplement to the monthly *Journal* for the timely dissemination of DX loggings and breaking news. This is a service that is only available to members. Deadlines are posted in the *NASWA Flashsheet* each week. If you are a current member of the club and want to receive the electronic *NASWA Flashsheet* just drop **Rich D'Angelo** (rdangelo3@aol.com) a note with your e-mail address, location and membership expiration date from your mailing label.

Remember to please direct all communications about subscriptions, bulletin delivery issues, the use of PayPal as a payment method, etc. to **Bill Oliver** at the club's Levittown address or to his electronic address, weoliver@comcast.net. The regular postal address is the familiar 45 Wildflower Road, Levittown, PA 19057. Inquires sent directly to me in Wyomissing only slow down the process. Thanks!

That's it for this month. Enjoy this month's edition of the *Journal*; it's another good one. **SW**

FRENDX: Twenty Five Years Ago (April 1979)

Roll Call featured the names of 89 new and rejoining members including Terry Klasek (a recent rejoin 25 years later) and Serge Neumann. Mac Leonhardt announced that Ed Shaw's fourth edition of "*DXing According to NASWA*" was available. A four-page centerfold provided ordering instructions. The seven-chapter guide featured 144 pages of material was available by fourth class mail for just \$4.50. In Jerry Lineback's *Shortwave Center*, James Smallwood wrote about Radio Cultural (TGNA) in Guatemala, Victor Jaar provided an update to the Current Haitian Broadcast Scene, while Aaron Hywarren provided a comprehensive report about the total solar eclipse and listening conditions. *Awards* Chairman Dan Henderson noted that Gerry Bishop, Chris Lobdell and Kent Magill all achieved 150 countries verified. Sam Barto's *QSL Report* featured 108 countries and a number of good QSLs from "south of the border." Nick Pappas substituted for Dan Robinson as *Log Report A* editor.

Contribute!

Send your loggings and QSL information off to our Distributing Editor, **Bob Montgomery** (Address: P O Box 1458, Levittown, PA 19058). He will forward them to the appropriate editor. Remember, Bob also distributes QSL report information and totals for the **Scoreboard** column. He can also be reached through the Internet at: **RMonty23@netzero.net**. Please note, this is a **new e-mail address**. The AT&T e-mail address has been discontinued.

Calendar Of Events

May 12-13, 2004 Conference. AIB Global Media Business Conference. Association of International Broadcasting will hold its third global media conference 12-13 May 2004 in Prague, Czech Republic bringing together public and commercial international broadcasters. Radio Free Europe/Radio Liberty will host the conference at its Prague central offices. The 2004 Conference will build on the previous AIB conferences tackling the problems and concerns of the international broadcasting industry. Further details to follow.

May 21 Meeting. Philadelphia Area NASWA Chapter. Kulpsville Holiday Inn, Kulpsville, PA at 7:30 PM. For more information contact Dan Cashin at 610-446-7831 or Internet: dcsckp@aol.com.

May 21 Meeting. Boston Area NASWA Chapter. The Boston Area DXers have found a new location for meetings. Inquiries about the BADXers may be sent to Paul Graveline at 978-470-1971 or Internet: ctreditor@aol.com. The URL for the BADX guys is <http://www.anarc.org/naswa/badx/>

Jun 4-6, 2004 AGM and DX Camp. The Danish Shortwave Club International will hold its **Annual General Meeting (AGM) and DX Camp** at Vejers Brach on 4-6 June 2004. Further details will follow.

Jun 12 Meeting. The Cincinnati/Dayton Monitoring Exchange (MONIX) meets at the Lebanon Citizens' National Bank (LCNB), 425 West Central Avenue (Ohio 73), Springboro, Ohio at 7:00 PM. For more information contact Mark Meece at 937-743-8089 or e-mail at <antennapig@siscom.net>. For additional information about MONIX, check out their web site at <<http://www.siscom.net/~mmeece/monix.html>>

Jul 23-25, 2004 Convention. The **2004 International Radio Club of America (IRCA)** convention will be held at the Rodeway Inn (115 North Curtis Road, Boise, ID 83706 or 1-800-272-5003) from 23-25 July 2004. Room rates are \$59.95, which includes a continental breakfast. Convention fee is \$25.00 to Frank Aden, 4096 Marcia Place, Boise, ID 83704. E-mail inquires can be sent to IRCA2004@aol.com.

Aug 2004 Get-together. The 11th annual **Madison Get-together for DXers and Radio Enthusiasts** will be held on a Saturday in August 2004 beginning at 1:00 PM CDT in Milwaukee, WI. This is an all-band event. Further information will be provided as we get closer to the event.

Aug 2004 Convention. The **10th Annual Mexican National DX Meeting** for DXers and radio listeners is scheduled for Veracruz. Further details will be published as received.

Mar 12-13, 2004 Convention. The **17th Annual Winter SWL Festival**, sponsored by NASWA, will be held at the *Best Western—The Inn at Towamencin* (Kulpsville to the rest of us), located at Exit 31 on the Northeast Extension of the Pennsylvania Turnpike, on 12th and 13th March 2004. Richard Cuff and John Figliozi co-chair the organizational committee. It's never too early to begin planning. See you there!

Members are invited to submit items to be included in this calendar to Rich D'Angelo (Internet: rdangelo3@aol.com) or Ralph Brandi (Internet: ralph@brandi.org).

N4C16b

Visit our club home page on the World Wide Web at <http://www.anarc.org/naswa/>

Musings

This column provides a forum where members can express comments, ideas, and thoughts about NASWA or the SW radio hobby. Please feel free to comment on anything presented this month (or previous months). Opinions expressed here are solely those of the submitters. Please submit all Musings to Richard A. D'Angelo, 2216 Burkey Dr., Wyomissing, PA 19610 or via email: rdangelo3@aol.com.

Tim Noonan <DXing2@aol.com>, Milwaukee, WI

This is the first announcement of the 11th Annual Madison-Milwaukee Get-Together for DXers and Radio Enthusiasts. I am sending it mainly to past attendees and the *NASWA Journal*, and a more widespread mailings will follow. Please make a note of the date and location: Saturday, August 21, 2004 from 1:00 PM until whenever at the Sheridan Park, Cudahy WI, on the Lake Michigan shore at Layton Avenue in south suburban Milwaukee.

This is an all-band event, and everyone interested in the radio hobby is welcome. The first ten of these annual events took place in Madison, hosted either by Bill Dvorak or myself. Though I moved with my wife and sons to Oak Creek in south suburban Milwaukee in July 2003, my commitment to the event remains. Thus, the August get-togethers will alternate between venues in the Milwaukee and Madison areas beginning this year.

I will be preparing and mailing or e-mailing detailed invitations over the next couple months. These will supply directions, dinner plans, etc. Please feel free to be in touch with me at <DXing2@aol.com> or 414-762-2702 with any questions. Tell your radio friends about it, and make your plans early to join us for another fabulous day of visiting with your fellow radio hobbyists.

73, Tim

Sheryl Paszkiewicz, <spasz@dataplusnet.com>, P.O. Box 716 Manitowoc, WI 54221-0152

What a great turnout for Musings last month! I would like to comment on Rich Hankison's.

Rich has a good point—the radio stations are in **business**. We are “just” hobbyists. We do have a lot of stations relaying via Canada and Bonaire these days making program listening from many countries possible. I have the XM Radio and love it. It does not have WRN but does have BBC World Service 24 hours a day. I'm hoping XM will add more stations at some point. For instance RCI has developed programming specifically for their satellite feed, but it is not available in North America. I have given in and listened to stations via the Internet when I could not receive them on the radio due to poor propagation. Program listening will evolve. Ian McFarland once said (probably more than once) that once we are done DXing a station and collecting our QSL cards, we will become program listeners. After all that is why the stations are on the air. I guess it's a matter of adapting our hobby.

On the flipside, I still have the DX bug. I cannot DX a satellite. However, I hope that a number of smaller stations will retain shortwave for us hobbyists.

I also enjoyed Eric Bueneman's musing. I too believe that whatever stations do retain analog shortwave transmissions will be obliterated by digital and/or BPL. May I take this opportunity to thank Joe Buch for all he is doing for the rest of us.

Sheryl

Larry Vipond <la3r3ryv@extremezone.com>, Mesa, Arizona

After an absence of many years I have rejoined NASWA. I marvel at the dedication of NASWA members who, like yourself, have kept the Club going these many years.

Living in the Southwest as I do make it almost impossible for me to get to the SWL Festivals. The best I can look forward to is the many reports on each Festival as they appear in the *Journal*.

It's obvious many excellent speakers attend the Festivals each year. Wouldn't it be great if those wonderful speeches could be gathered together and printed in a separate booklet for distribution to any and all members that wished to purchase a copy? Such a publication would also serve as a wonderful historical document.

Just an idea.

Sincerely, Larry

Bob Fraser, 255 Lincolnville Avenue, Belfast, ME 04915-7404

Richard Hankison made the statement that short wave radio is a business not a hobby. But what is its business? I agree with the idea of Walter S. Lemmon whom I consider the "Father of International Broadcasting." Lemmon was a young Coast Guard radio operator on the vessel carrying President Woodrow Wilson home from the 1919 Peace Conference in Switzerland. Wilson told Lemmon that if the peoples of the world could understand each other's cultures and feelings, there would be no more wars. With money from his invention of the multi-ganged variable capacitors making tuning a radio by only one knob, Lemmon founded the World Wide Broadcasting Foundation and created the World Radio University, which broadcast high quality educational programs and information about the United States.

Domestic radio with its short range can easily be controlled by its government. Short wave radio can and does cover the whole planet and the only way to stop it is by jamming or physically destroying the transmitter, which is an overt act of war.

Lemmon's idea quickly caught on and other nations of the world soon had short wave stations to tell others all about themselves as well being in contact with their countrymen living and working in foreign lands. The BBC went one step farther by making sure that any news broadcast was the absolute truth regardless. The dark side is that any tin god can use the media to spread lies and discontent.

Anyone listening to foreign broadcasts quickly realize that everyone is the same the world over. This is why I decry those nations who shut down their short wave stations. I feel every country needs a seat in the UN and an international voice. If not, who then will tell the truth about them?

As for a profit on short wave, seems to me that listeners would be interested enough and know enough about a country to want to visit it as a tourist and even set up a business there.

But short wave is old hat, it is a century old. Like all simple things, it works. One can make a workable receiver with a box of junk and a few instructions. Just about everyone interested in radio has done this.

Progress calls for change but I'm not too happy with the alternatives. Maybe it is too soon to judge them.

The internet: it is hard wired subject to power failures and government censorship. I notice computers crash and freeze up at the slightest provocation and sometimes just for the fun of it. We are assured by officials after each power failure that it will never happen again. And we seem to get a "Storm of the Century" every other year now. BPL sounds wonderful on paper but in real life?

Satellite radio with digital signals seems the better way. I understand that with certain equipment, one can blank out or override satellite signals and change programs. And the massive solar flares, which wipe out short wave signals for a few days seem to destroy the very expensive satellites.

I am not against progress, quite the contrary. I do remember the early days of TV with the highly unstable pictures. It, too, was to replace radio as we knew it. It also took years to perfect and then to shrink down so that they were portable. To me, satellite digital radio is the answer but not yet. Nor do I believe short wave radio will cease to exist. It will change into something different yet remain the same.

Radio of all kinds are a business, ever changing. It's future is bright.

73, Bob

Richard A. D'Angelo <rdangelo3@aol.com>, 2216 Burkey Drive, Wyomissing, PA 19610

Although I missed it, the big news was the irregular appearance of the weather reports for the China Hong Kong Yacht Race that takes place in the spring. In the past 3940 kHz was the frequency of choice but this year's event was on 8749 kHz. Due to business and personal travel commitments, I had only one shot at the yachting weather report and I didn't hear a thing. Others on the East Coast reported reception but it seemed that antenna orientation was a big issue.

73, Rich

On the Short Waves Update by Jerry Berg

<www.ontheshortwaves.com> Update, March 26, 2004—Under "Articles, Research, etc.," "Potpourri," photos of several radio "wheels" that were used as aids in tuning. The Hallicrafters wheel is simply a means of telling what time it is in other places. You set the pointer for your location to point to your local time and then you can read the time in other places around the wheel. The Lines & Fitzpatrick wheel is similar; then you turn it over and find a list of stations arranged by frequency. The Crosley wheel is fairly ingenious. You set the arm over the station you want to hear and the lines under the station name then correspond to the EST and the days of the week when the station broadcasts. Stations are listed alphabetically by country on the back. "Like the magic carpet of fairy-tale lore, the new Crosley American-Foreign and All-Wave Radios are carrying radio adventures into lands far-flung over the face of the globe. . . ."

<www.ontheshortwaves.com> Update, April 4, 2004—Under "Articles, Research, etc.," "Full-Text Articles," the first part of a two-part article on Radio Swan that was published in Popular Communications in November and December 1985. The second article will be posted next week. Thanks to PopComm <<http://www.popular-communications.com/>> for permission to post these.

Easy Listening

Richard D. Cuff • 42 North 37th Street • Allentown, PA 18104 • rdcuff@mochamail.com

Switzerland and Slovakia leave shortwave

Switzerland

Switzerland's departure from shortwave in English has been painfully gradual, as target areas, transmitters and frequencies have all been closed down. Their last English broadcasts were April 12th, and, disappointingly, involved neither fanfare nor retrospective. Shortwave programming was changed abruptly to a music fill, with a brief announcement regarding shortwave closedown. I had frankly expected on-demand audio to continue, but that, too, is now kaput. Archived video is available, but this is not produced on a daily basis. Music programming intended for a domestic Swiss audience and distributed via satellite remains available via webcast, in pop, jazz, and classical genres. I enjoy the classical channel, just because I enjoy classical music, but there nothing particularly Swiss about it.

Swiss Radio International, to me, filled a particularly relevant niche in times of international and domestic conflict, due to the heritage of Switzerland as the headquarters of the International Committee of the Red Cross, and due to Switzerland's heritage of political neutrality. In SRI's absence, the closest English language broadcaster to this heritage, in spirit, would be the CBC, in my opinion anyway. SRI will be missed. Now, the only way to get a current "Swiss Fix" will be textual, from the Swissinfo website.

Slovakia

While we've had years to lament the impending departure of SRI from shortwave, **Radio Slovakia International's** departure was much more abrupt. First word was published in Glenn Hauser's *DX Listening Digest* e-zine on April 3rd; the program was scheduled to leave shortwave as of May 1st.

Unlike SRI, which covered subjects further afield than Switzerland, RSI focused just on Slovakia, so its loss is more localized.

I found RSI's broadcast to have an intimate feel to it, much like Belgium's **Radio Vlaanderen International (RVI)**. With family living in the region, I enjoyed listening in every now & then to RSI to hear what was new in their part of Europe.

Unlike Swiss Radio International, Radio Slovakia International will continue to produce an English language program, though it will air only via the World Radio Network's (WRN's) satellite and redistribution agreements. RSI airs in the live WRN North American stream Tuesdays-Saturdays 0030-0100 UT and daily at 1630 UTC, available via webcast and Sirius satellite radio. The program is also available on demand at the WRN website, <http://www.wrn.org>, and at the Slovak Radio website, <http://www.slovakradio.sk/rsi/index.html>.

DX Listening Digest published information from RSI as discussed on RVI that suggested a budget cut of 70% was to blame, and that eliminating shortwave altogether, though keeping satellite and Internet availability intact, was deemed to be the best that could be done with a bad, shortsighted situation. I have never done the financial analysis myself, but if I were facing the same budget reality, I'd probably make the same decision.

Budget cuts reduce Radio Netherlands English language output as well

One of the positive outcomes of the BBC World Service decision to abandon shortwave was the introduction of two new editions of **Radio Netherlands** programming targeting North America in the mornings

via RCR's Sackville, Canada transmitter site. Here in Eastern Pennsylvania those broadcasts were as reliable as anything I've heard on shortwave. Alas, Radio Netherlands has now reduced those two daily editions to one, and it now originates from Radio Netherlands' Bonaire relay facility at 1100 UTC on 11675 kHz.

Radio Netherlands continues to produce some of the best radio on radio, and the spring season shows no letup. To its credit, by using a weekly e-mailed programming guide, along with a weekly "Media Network" newsletter, Radio Netherlands continues to communicate upcoming programming highlights to its listeners. You can register for the programming e-newsletter by clicking the "Newsletter" icon at <http://www.rnw.nl/en/index.html>; if you only have e-mail access, a note sent to the usual feedback address of letters@rnw.nl will get you on the right track.

As for May programming, the *Documentary* schedule is available; the *Documentary* airs to North America Wednesdays at 1130, Thursdays 0030, 0130 and 0430, and Sundays at 1900.

May 5/6/9: *Soldiering On*: Throughout the history of warfare, technology has changed rapidly. What hasn't changed are the underlying emotions of the soldiers who must fight those wars. Chris Chambers looks at the experiences in battle of two soldiers from the Second World War and how their emotions can be seen as a template for soldiers through the ages.

May 12/13/16: *Hopes and Fears, the Story of Digna Ochoa*: This program examines human rights in Mexico. Digna Ochoa was an outspoken defense attorney who took on Mexico's old order and exposed police corruption, torture and abuse by the authorities. She paid for her defense of human rights with her life. What does her death and that of other lawyers say about president Vicente Fox's election promise to wipe out corruption and make human rights a priority?

May 19/20/23: *Biodiversity*: To mark International Biodiversity Day on May 22, Anne Blair Gould raises questions such as: what is biodiversity, how is it measured and why is it so important?

May 26/27/30: *Girl At the Window* is the title of a painting that has fascinated Anna Yeadell ever since she was a child. Recently she decided to find out more about the painter who to her delight was still alive and living in Germany. The program is a fascinating and moving account of the meeting with the artist, who is now in her 90s.

In addition to shortwave, all of Radio Netherlands' programming is available via live and on-demand webcast from Radio Netherlands as well as via live webcast on WRN and Canada's *CBC Overnight* service on CBC Radio One. The quickest way to get live webcast times for the Weekly *Documentary* is to visit Kevin Kelly's "Public Radio Fan" website; the URL of <http://www.publicradiofan.com/cgi-bin/program.pl?programid=774> will take you right to the page of webcast times for the weekly *Documentary*.

Radio Australia Rolls On

Even though Roger Broadbent no longer tells us what's new each week on *Feedback*, **Radio Australia** otherwise continues to air some of the best English language programming on shortwave. Summertime in the northern hemisphere generally improves Radio Australia reception in local evenings, as well.

Some new programs have made their way onto the Radio Australia schedule in recent weeks including:

Mondays through Thursdays, 1835, repeated weekdays 0535 and 0735: *On The Mat* is a feature within the Radio Australia-produced *Pacific Beat* newsmagazine that discusses issues of regional interest. It appears some *Pacific Beat* features are available via on-demand webcast, but not all.

Sundays through Thursdays, 1935: *The Best of Breakfast* is a daily 25-minute sampling of some of the best features from the domestic three-hour Radio National morning current affairs magazine program; the program considers itself "serious, fun, topical and diverse without being overwhelming". The morning news magazine *AM* is embedded within *Breakfast* on Radio National.

Fridays, 0620: *Inside Out*, A weekly program that brings out personal views from the Pacific region and stories gathered in Australia, within Pacific communities, produced by Radio Australia (not by Radio National). John Figliozzi's Radio Australia weekly e-mail highlights indicate the program is available on-demand, but so far I haven't found a link to the program's audio.

RCI: Shuffling priorities and shuffled programs

Most who listen to **Radio Canada International** in English in Europe, South Asia or Africa now get targeted versions of *Canada Today* designed for each region; RCI determined that our interests in North America would be better served by *The World At Six* instead of *Canada Today*. I disagree—I felt that *Canada Today* was particularly good at explaining the domestic references that an American would miss if they weren't familiar with Canadian current affairs and culture (though Canadians wouldn't miss these).

While *Canada Today* now airs live to these regions, I think we in the USA would have accepted the latest version on tape. Instead, RCI now airs two editions of *The World At Six* on shortwave targeting North America: 2100 (weekdays) and 0100 (Tuesdays–Saturdays).

Interestingly, if you want hear for yourself how the European, African and Indian versions of *Canada Today* differ, all three versions are archived for on-demand listening at the RCI website. Wojtek Gwiżdża hosts the Indian version at 1500 UTC; Lynn Desjardins the African edition at 1800, and Jim Craig

the European version at 2000 UTC—which should be audible in North America for frequencies originating in Sackville (13700, 17870).

It's a Saturday morning and you're stuck at the kitchen sink...

Speaking of Canada, while most shortwave listening in North America is probably during evenings, I occasionally am stuck in the kitchen on weekends cleaning up stuff that accumulated during the prior week. Thankfully the time isn't totally wasted—I often will tune into the CBC's **Northern Quebec Service**, on 9625 kHz, which is generally audible here in eastern Pennsylvania.

Native Inuit and related languages are prominent during the week, but the weekend schedule is mostly English—to 1800 UT Saturdays, 1600 UT Sundays. The program mix is different from the **Radio Canada International** service, which airs from 1300 to 1600 UTC on weekends, targeting North America.

Here's the Northern Quebec Service Saturday schedule:

1100–1300 *All in a Weekend* (Quebec-focused events / activities magazine)
1300–1400 *The House* (Canadian politics; also airs on RCI at 1300)
1400–1530 *Go* (recreation / outdoor pursuits across Canada)
1630–1700 Varies; generally a current events satire program; currently *The CBC Festival of Comedy*
1600–1700 *Quirks and Quarks* (science and technology; airs on RCI at 1600)
1700–1800 *Definitely Not the Opera* (Canadian culture; first hour is on short-wave)

On Sundays, here's what you'll find:

1100–1300 *Fresh Air* (Ontario-focused events / activities magazine)
1300–1600 *The Sunday Edition* (long-running current affairs / potpourri magazine; also airs on RCI)

BBC World Service highlights

Since the last edition of *Easy Listening*, the world lost Alistair Cooke, the venerable host of *Letter From America*. His career longevity, and that of *Letter From America*, sparked many articles in the press, and the World Service is airing past editions of the program Sundays at 0432 and 1132 UTC. No word on how long these will last; it does not appear these editions from the archive will be available on-demand as most World Service programs are.

Weekdays, 1306 and 2306, plus Tuesdays-Fridays, 0306: *Outlook* is a long-running magazine program featuring a mix of personalities, music, and other features. I find it a nice diversion from the weightier stories that often fill out *Newshour* or *The World Today*. Outlook regularly solicits story ideas from listeners, and an entire week of Outlook in May is devoted to story ideas pitched by listeners. The only problem is that, as of press time, the week to be reserved for listeners' stories hasn't yet been chosen. If I get an update as to the schedule for this special week, I'll pass it along in the NASWA *Flashsheet*.

Weekdays 0345, 1345, and 2345: *Off The Shelf* is a favorite of many who drift off to sleep being read to—just like my 7-year old, I might add. Sorry, couldn't resist. Stories to be recited in May include *One Man's Justice* by Akira Yoshimjura, set in the immediate aftermath of World War II, from May 10th through May 21st; *Tales from a Near Continent*, a series of short stories from European authors including Matthew Kneale and Chris Stewart, from May 24th through May 28th, and *Martha Gellhorn—A Life*, by Caroline Moorhead, an account of the life of this novelist, essayist and journalist who covered the Spanish Civil War, the liberation of Dachau and the Vietnam war, beginning May 31st.

Wednesdays, beginning May 19th, 1406, repeated Thursdays, 0006: *All In A Day's Work* returns for a four-part series look-

ing at the lives of individuals in different countries who have similar jobs. This series profiles undertakers, policemen, sex workers, and midwives.

Wednesdays, beginning May 19th, 1545, repeated Thursdays 0145: *New Gods* is a new four-part series in *Heart and Soul*, the program about beliefs, values and religion. This series explores religious conversion and interviews people who have converted religions and have converted lifestyles as part of the process.

Mondays, May 24th and 31st, 1406, repeated Tuesdays, 0006: *After Blue Star* is a two-part documentary marking the 20th anniversary of the storming of the holiest shrine of India's Sikhs, the Golden Temple in Amritsar, code named *Operation Blue Star*. That action prompted the assassination of Prime Minister Indira Gandhi and was followed by widespread anti-Sikh violence.

Non-shortwave Tip of the Month

ABC's **Radio National** has a variety of interesting documentaries and features that don't show up on the Radio Australia schedule, but are interesting listening nonetheless.

The weekly Radio National program *Radio Eye* showcases documentaries and features from Australia and elsewhere. If you're listening live, *Radio Eye* airs on Radio National Saturdays 0405, repeated Wednesdays 0305. On-demand archives are available; the program's website is <http://www.abc.net.au/rn/arts/radioeye/>. At the website you'll not only find program archives but also upcoming program topics.

That's all for May; I am always looking for programming suggestions from NASWA members, so please get in touch via the mail or e-mail, or even fax: If you have access to a fax machine, you can send a fax my way at +1 206 666 2456.

See you in June—Richard



Shortwave Center

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Station Profile: China Radio International International Broadcasting from the Mainland

By Richard A. D'Angelo

As the world continues to evolve, the need for news and opinion from a variety of sources becomes more essential each day. China Radio International (CRI) provides the Chinese mainland point of view with regularly scheduled English language programs to a worldwide audience. The station broadcasts home and world news, reports, commentaries, and features on current events. However, the real highlight is an opportunity to enjoy the culture of Mainland China when music features are presented.

Background

China is located in Eastern Asia, bordering the East China Sea, Korea Bay, Yellow Sea, and South China Sea, between North Korea and Vietnam. Geographically, it is the world's fourth-largest country after Russia, Canada, and the United States. It has a population of about 1.3 billion people.

China's climate is extremely diverse; tropical in the south to sub-arctic in the north. The terrain of the country is mostly mountains, high plateaus, deserts in the west with plains, deltas, and hills in the east. China is beset with frequent typhoons, about five per year along southern and eastern coasts, and damaging floods, tsunamis, earthquakes, and droughts.

For centuries China stood as a leading civilization, outpacing the rest of the world in the arts and sciences. But in the 19th and early 20th centuries, civil unrest, major famines, military defeats, and foreign

occupation overwhelmed China. After World War II, the Communists under Mao Zedong established a dictatorship that, while ensuring China's sovereignty, imposed strict controls over everyday life and cost the lives of tens of millions of people. After 1978, his successor Deng Xiaoping gradually introduced market-oriented reforms and decentralized economic decision-making. Output quadrupled by 2000. Political controls remain tight while economic controls continue to be relaxed.

Economy

In late 1978 the Chinese leadership began moving the economy from a sluggish, Soviet-style centrally planned economy to a more market-oriented system. The authorities switched to a system of household and village responsibility in agriculture in place of the old collectivization. Also, it increased the authority of local officials and plant managers in industry, permitted a wide variety of small-scale enterprises in services and light manufacturing, and opened the economy to increased foreign trade and investment. The result has been a quadrupling of GDP since 1978.

In 2002, with its 1.3 billion people but a GDP of just \$4,400 per capita, China stood as the second-largest economy in the world after the United States (measured on a purchasing power parity basis). Agriculture and industry have posted major gains, especially in coastal areas near Hong Kong and opposite Taiwan, where foreign investment has helped spur output of both domestic and export goods. As a result of its hybrid system, the government has

often experienced the worst results of socialism (bureaucracy and lassitude) and of capitalism (windfall gains and growing income disparities). China thus has periodically backtracked, tightening central controls at periodic intervals.

The government struggles to collect revenues due from provinces, businesses, and individuals and to reduce corruption and other economic crimes. In addition, the government continues to keep afloat the large state-owned enterprises, many of which had been shielded from competition by subsidies and had been losing the ability to pay full wages and pensions. Over 100 million surplus rural workers are adrift between the villages and the cities, many subsisting through part-time low-paying jobs. Popular resistance, changes in central policy, and loss of authority by rural cadres have weakened China's population control program, which is essential to maintaining long-term growth in living standards. Another long-term threat to growth is the deterioration in the environment, notably air pollution, soil erosion, and the steady fall of the water table especially in the north. China continues to lose arable land because of erosion and economic development.

Major industries include iron and steel, coal, machine building, armaments, textiles and apparel, petroleum, cement, chemical fertilizers, footwear, toys, food processing, automobiles, consumer electronics, telecommunications. Resources consist of coal, iron ore, petroleum, natural gas, mercury, tin, tungsten, antimony, manganese, molybdenum, vanadium, magnetite, aluminum, lead, zinc, uranium, hydropower potential (world's largest). China's major agriculture products include rice, wheat, potatoes, sorghum, peanuts, tea, millet, barley, cotton, oilseed, pork and fish.

The Station

China Radio International was founded on 3 December 1941. As China's only state-run overseas broadcaster, CRI aims at promoting understanding and friendship between the

people of China and people throughout the world.

When CRI was first founded, there were only 15-minute Japanese programs each day. Now, over sixty years later, CRI broadcasts 211 hours of programs each day on a worldwide basis in 38 foreign languages, four Chinese dialects and standard Chinese. Covering the globe, CRI's programs include news, current affairs, and features on politics, economy, culture and science and technology.

The English Service of China Radio International offers over 60 hours a day of broadcasts for listeners around the world. The English Service broadcasts are heard by millions worldwide and focus on satisfying its listeners with informative, timely and interesting programs. In 2002, the English Service received approximately 160,000 letters from more than 100 countries.

In 1984, the English Service launched a domestic program broadcasting 22 hours a day in the Beijing area. Today, CRI provides English coverage to around 20 cities domestically within China primarily targeted to people visiting China for tourism and/or trade. The programs focus mainly on news but include a variety of features and music shows.

In recent years CRI has rented AM and FM transmitter time in foreign countries to supplement its shortwave broadcast output. The station continues to work with foreign broadcasting stations to exchange transmitter hours and to jointly produce some programming. CRI exchanges transmitting facilities with Radio Canada International, Radio France International, Radio Exterior de España and the Voice of Russia. Also, CRI maintains relay facilities in Brazil, Cuba and Mali.

In 1990, China Radio International introduced its now popular bimonthly newsletter, *The Messenger*. The newsletter provides feature items about current events in China, short, informative interviews with leaders or personalities, cooking tips and nice photographs of Chinese life. With an eye toward strengthening ties with

listeners, *The Messenger* always features a selection of listener letters.

China Radio International broadcasts in English to Europe, North America, the Caribbean Sea, Southeast Asia, South Asia, the South Pacific, East and South Africa and West and North Africa. Check out Mark Fine's *English Schedules* and Al Quaglieri's *Listeners Notebook* column for the latest times, frequencies and transmission sites for English language broadcasts from China Radio International.

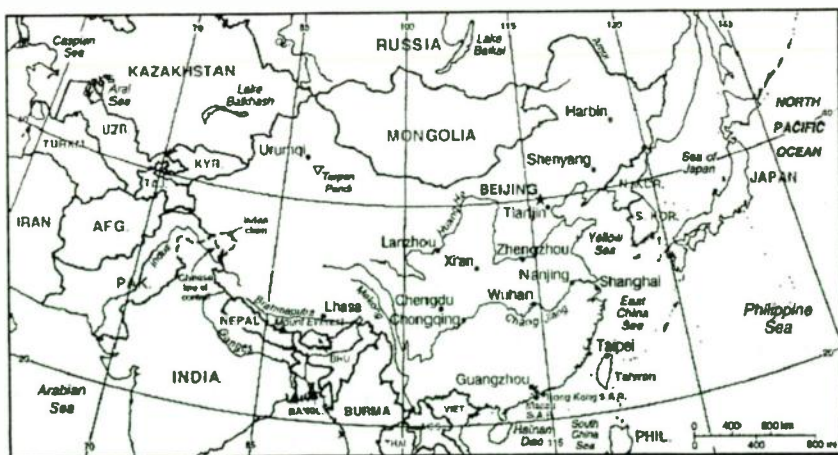
Daily programs begin with news and other reports such as China related news, world news, sports, business news science news or press clippings. Generally, this segment runs for about 30 minutes in each broadcast. Other rotating features include *People in the Know*, *Biz China*, *China Horizons*, *Voice from Other Lands*, *Life in China*, *Cutting Edge*, *Listeners' Garden*, *Reports on Developing Countries* and *In the Spotlight*. Traditional Chinese music can often be heard between featured programs. Although the program lineup doesn't sound too exciting, CRI is worth listening to for another news perspective from one of the world's fastest growing economies.

The station is very listener friendly and encourages listeners to write to them with comments and suggestions. The English Service of China Radio International is

very friendly and encourages listener reception reports. They maintain a website (www.crienglish.com). CRI's website (CRI online) was officially launched at the end of 1998. The station's English Section can be reached electronically at . Of course, the station can also be reached through traditional postal service at: crieng@cri.com.cn

China Radio International
The English Service
P. O. Box 4216
CRI-2
100040 Beijing
China

Although not a true DX Target like so many of the stations featured in the Shortwave Center over the years, China Radio International provides an interesting perspective about life in this East Asian country. The station is very friendly and encourages correspondence from its listeners. Give China Radio International a listen and remember to report your China Radio International logs to electronic *Flashsheet* editor Sheryl Paszkiewicz and Dan Ferguson and Wallace Tribel for the *Log Report*. Those interesting QSL verifications should go to Sam Barto for inclusion in the *QSL Report* column. Also, remember to provide some in-depth programming analysis to Rich Cuff's *Easy Listening* column to share with other club members.



RCI Sackville Site:

Relay Hub for International Broadcasters

By Brian Rogers, P. O. Box 3301, Melvindale, MI 48122-0301

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Much as Detroit, Minneapolis and Memphis are hubs through which Northwest Airlines passengers pass on their travels to destinations in North America and the world, international broadcasters use Radio Canada International's Sackville, New Brunswick, transmitters to reach listeners with signals stronger than those that might arrive without a relay boost enroute.

According to the 2004 *World Radio TV Handbook (WRTH)*, besides Radio Canada International itself, China Radio International, Radio Japan, and Radio Nederland are among the broadcasters using Sackville.

Situated on approximately 360 acres of marshland about two miles from Sackville, the facility is on the Trans Canada Highway near a neck of land that connects New Brunswick with Nova Scotia, near the Bay of Fundy and the Northumberland Strait.

The location near Sackville was picked after engineering studies conducted by the Canadian Broadcasting Corporation between 1939 and 1941 determined that

the high electrical conductivity of the saltwater marsh and easy access to utilities and transportation provided a favorable place for the transmission of shortwave radio signals.

There are presently seven Thomcast transmitters in the 25,000 square foot main building. Each has a maximum power of 250 kilowatts and can be tuned to any frequency between 3.95 and 26.6 MHz in 12 seconds. The transmitters are said to be twice as efficient as their Collins predecessors.

Also present are three Harris 100 kilowatt transmitters manufactured in Quincy, Illinois, and installed in 1985 which can be tuned to ten different preset frequencies in ten seconds.

Both the Thomcast and Harris transmitters are cooled by air and deionized water that circulates through their interiors.

A good view of Sackville's transmitting towers is available from the nearby Fort Beausejour National Historic Site. The fort was built by the French in 1751 to defend their North American interests. It fell to the British in 1755, who renamed it Fort Cumberland. In 1926, it was named a national historic site.

Thanks, but keep it coming

Your Shortwave Center Editor thanks those who have submitted material in the past month. Nevertheless, you need to keep it up and send more material so that future Shortwave Centers can be filled.

Articles on stations, DXpeditions, DXing techniques, historical perspectives, and any other material relating to shortwave listening and DXing will be appreciated.

Thanks, but keep it coming-JAL



Technical Topics

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NASWA To File BPL NPRM Comments

As this issue of the NASWA Journal goes to press, NASWA is getting ready to submit its comments to the FCC on the BPL NPRM, ET docket 04-37. Comments are due by May 3. If you have not yet filed, there are three requests for time extension currently being considered by the FCC so you may still have time. BPL is currently being deployed under existing Part 15 rules. Hopefully the points in the draft NASWA response will help you formulate your own response. There is strength in numbers. The FCC thinks only hams are worried. Be a squeaky wheel and maybe you can help us get some grease.

International Agreements

The FCC is required to observe the rights of other nations to broadcast directly, without interference, to listeners in the United States on frequencies allocated by the ITU (International Telecommunications Union) exclusively for this purpose. The United States is a member of the ITU, an international organization within the United Nations system and a signator to its most recent radio regulation convention.

ITU Radio Regulation 4.11 reads: "Member States recognize that among frequencies which have long-distance propagation characteristics, those in the bands between 5 and 30 MHz are particularly useful for long-distance communications; they agree to make every possible effort to reserve these bands for such communications. Whenever frequencies in these bands are used for short-range or medium-distance communications, the minimum power necessary shall be employed."

ITU Radio Regulation 15.12 reads, "Administrations shall take all practicable and necessary steps to ensure that the operation of electrical apparatus or installations of

any kind, including power and telecommunication distribution networks, but excluding equipment used for industrial, scientific and medical applications, does not cause harmful interference to a radio-communication service and, in particular, to a radionavigation or any other safety service operating in accordance with the provisions of these Regulations."

ITU regulations allocate certain frequencies between 2 and 26 megahertz for the exclusive use of international broadcasters. Early experimental testing has shown some BPL systems will interfere with international broadcast transmissions if not protected by FCC regulations.

The FCC Proposal Is Impractical

In its NPRM the FCC acknowledges that the present Part 15 emission limits will often be inadequate to protect listeners to the International Broadcast Service from BPL interference. Instead of addressing the interference issue directly by adopting either of NASWA's previous recommendations in response to the NOI Docket 03-104, the FCC proposes a complex and, what NASWA considers to be, impractical procedure to hopefully minimize the impact of the interference. (NASWA previously recommended that Part 15 radiation limits be tightened to avoid interference to the International Broadcast Service or BPL transmissions be relocated to frequencies outside the 2-26 MHz range.) The FCC's failure to address the root problem will eventually result in the failure of BPL as a viable competitor for DSL and cable TV broadband. That is not what NASWA, the BPL industry, nor the FCC desire.

The FCC's proposed procedure is impractical for the following reasons:

- The FCC proposes to impose on the victim the burden of identifying, reporting, proving and following up on complaints of interference. In this case the victim is the largely non-technical international broadcast listener. In theory, once notified, the BPL service provider must quickly activate dynamic frequency agility in order to move the energy to a frequency that does not cause interference to the entity that complained. Of course the energy may now be interfering with another user of the 2-26 MHz spectrum who will then complain. An endless feedback loop could thus be formed. Each complaint will result in a change to the energy-density spectrum and each change could result in a new complaint.
- As a class, international broadcast listeners are not technically astute. Most listeners know only how to pull up the whip antenna on their radio, activate the "on" switch, select the frequency they want to listen to, and adjust the volume. Unlike amateur radio or professional operators who are required to demonstrate a certain level of technical competency in order to obtain an FCC license or employment, broadcast listeners are not licensed (nor should they be) and cannot be expected to know the interference they are receiving has the identifying signature of a BPL signal. If such naïve persons are able to figure out to whom to complain, it is inevitable that their complaints will often be in error. The result will be skepticism, disbelief, and denial by the BPL industry. The cost to investigate erroneous interference reports will be borne by either the BPL industry or the FCC or both. The burden of proof will be on the unskilled listener to demonstrate to the BPL provider or the FCC enforcement function that the interference claim is valid. To expect unskilled listeners to prove that BPL is the cause of their interference problem is unreasonable and makes the FCC proposal impractical. A better solution must be found.
- International broadcasters change frequencies as a function of time of day, season of the year, and time within the eleven-year solar sunspot cycle. If the FCC insists on implementing its proposed approach, BPL providers will incur significant costs as they react to these changes in real time. If BPL is ever to become a viable alternative to cable and DSL broadband access, operating costs must be minimized. The FCC's proposal has the opposite effect. To be effective, the FCC's proposed rules will require BPL operators to incur increased costs by mandating near-real-time response to interference complaints and a staff standing by the telephone to receive and act upon such complaints.
- If the FCC insists on implementing its proposed approach, the FCC must mandate a specific response time for interference complaints to be resolved. In the NPRM the FCC proposes no particular response time for the BPL provider to react to interference complaints. Any interference to international broadcasting is illegal under both international radio regulations and the FCC's own Part 15 regulations that require that interference must be promptly terminated. The BPL provider could delay its response indefinitely as they tell the victim that the problem is being investigated or that the interference is not coming from their BPL signals. The response time should be as fast as possible. Ten minutes is suggested as a reasonable time delay for correction of a problem. If the problem is not corrected within the specified time, the BPL service must cease operation, as required by the FCC Part 15 regulations, until the problem can be corrected or a third party arbitrator can make a determination.
- If the FCC insists on implementing its proposed approach, fines must be prescribed in the FCC Part 15 regulations to enforce timely response to interference complaints. NASWA suggests \$10,000 per day per complaint not resolved within the prescribed time limit would be sufficient incentive to the BPL industry to

respond in a timely way. This suggested fine amount is consistent with fines levied upon other licensed services that willfully violate FCC regulations.

- If the FCC insists on implementing its proposed approach, the FCC must mandate that industry “customer service” representatives and technicians be on duty 24 hours per day and 7 days per week to take interference complaints and be able to quickly activate frequency agile technology to eliminate the interference. The industry “customer service” representatives must also be fluent in major foreign languages as many who rely on international radio broadcasts in the USA are not fluent in English. The cost to the BPL providers of such overhead and the general lack of foreign language fluency in the USA labor pool makes the FCC’s proposed procedure impractical.
- The FCC does not propose any third party entity to arbitrate disputes. If the FCC insists on implementing its proposed approach, it is likely that the enforcement function of the FCC will become that *de facto* arbitrator. The FCC will become burdened with such complaints if BPL systems proliferate and BPL providers, themselves overloaded with complaints, fail to respond in a timely manner. The additional burden on the FCC enforcement function will raise the cost to the taxpayer and possibly raise FCC user fees to the BPL industry as the cost of arbitration is transferred to the industry that is causing the added expense. Such disputes will make implementation of the proposed procedures burdensome and impractical.

Many international broadcast listeners are tourists, foreign students or immigrants to this country with limited English language ability. These people use short-wave radios to keep in touch with events in their country of origin by listening to foreign broadcasts in their native language. These victims of BPL interference cannot be expected to arm themselves with knowledge about BPL

interference signatures, industry data base(s), identities of local BPL providers, whom to call to register a complaint, or to whom to appeal when no action results from their complaint. NASWA believes that is asking too much of people who are not proficient in BPL technology, the English language, or FCC bureaucratic procedures.

- The FCC has elected not to standardize the modulation format for BPL transmission. The spectral signature of BPL interference will be different for each type of modulation. There will likely be as many interference signatures as there are BPL equipment manufacturers. Even if international broadcast listeners could be reached with instructive material to teach them what BPL interference sounds like, the many different BPL interference signatures will make it impossible to conduct such training on anything other than a local level. It is unlikely that power companies or third party BPL service providers will be particularly interested in conducting such training for the general public in their service areas.
- Many international broadcast listeners use portable receivers when traveling around the USA. Such listeners cannot be expected to know the contact information for reporting BPL interference in each area they travel through. The proposed procedure is impractical.

Can BPL Broadband Access Replace International Broadcasting?

Some may argue that the broadband access provided by wide deployment of BPL will allow listeners to access overseas media via the Internet so they will not need international broadcasting to provide a link. Today, access to foreign broadcasts is free for the price of a portable short-wave radio selling in the neighborhood of \$100 or less. The suggestion that immigrants, often living at or near the poverty level, should be forced to subscribe to an Inter-

net service to receive what they now get for free is unfair and discriminates against many of the poorest people in our society. The suggestion that tourists need to lug a computer with them to listen to the news in their native language is unrealistic. Some listeners prefer to listen to international broadcasts while traveling in their cars. There is presently no way to access such broadcasts via broadband services including BPL from a moving automobile.

The Best Solution

In view of the impracticality of the procedure proposed by the FCC in the NPRM, NASWA suggests that the FCC withdraw the subject NPRM, revisit the issue and address the actual problem. The problem is that current Part 15 radiation limits are insufficient to prevent BPL interference to duly authorized international broadcasters operating between 2 and 26 MHz on receivers of a type normally used and marketed in the USA for in-home reception.

There are two possible technical solutions. One possible solution is for the FCC to mandate that BPL systems permanently suppress the use of frequencies that are allocated by the ITU for international broadcasting. Because every user of the HF spectrum, like amateur radio operators, aircraft communications, Federal Emergency Management Agency and the Department of Defense, will likely request similar protection, few frequencies would remain for BPL below 30 MHz.

The second possible solution, and the one which NASWA prefers, would be to confine BPL emissions to frequencies above 30 MHz with appropriate notches in the spectrum to protect local public safety, broadcasting, aeronautical, amateur radio, space research, personal and industrial communications, and ITU-allocated radio astronomy frequencies in this range. For example, in a given area only about half the VHF television channels are occupied at most. Four vacant 6 MHz channels, out of the 12 VHF channels available, would allow a BPL provider a bandwidth of 24 MHz and obviate

the need to use the 24 MHz between 2 and 26 MHz. Even in the crowded Washington DC-Baltimore or New York City TV markets, for example, channels 3, 6, 8, 10 and 12 would be available for BPL.

Unlike HF international broadcasters, who change frequencies often, frequencies used by VHF services are relatively stable over time. Because VHF allocations do not shift with time of day, season of the year, or state of the eleven-year solar sunspot cycle, there would be no need for the BPL provider to establish a costly system of dealing with interference complaints in near-real time. Once notches are established for a given local area, there should be little need to change them for years. BPL providers could then avoid most of the cost of dedicating personnel to operating dynamic, frequency-agile systems in real time in response to telephone complaints and international broadcaster frequency changes. By minimizing operating costs the BPL industry will be more likely to achieve the FCC's desired result by becoming economically viable competitors to broadband cable and DSL services.

So there you have it. You should express your concerns in the first person. If you are intimidated by the FCC's proposed rules, tell them that. If you have other reasons you do not think the FCC's proposed rules will not work, be sure to bring them up. You can read the NPRM at

http://hraunfoss.fcc.gov/edocs_public/attachmatch/fcc-04-29A1.pdf

You can file comments at:

<http://www.fcc.gov/cgb/ecfs/>

Click on "Submit a filing" in the upper right column. You will get a fill in the blanks form. In block 1 enter 04-37. Fill in the blanks and attach either a MSWord file or type in your comments at the bottom of the page. Thanks in advance for your help. The rights you save may be your own. Stay tuned.



Pirate Radio Report

Chris Lobdell • P.O. Box 146 • Stoneham, MA 02180-0146 • clobdell@comcast.net

Hello and welcome to the *May 2004* edition of the *Pirate Radio Report*.

I'm very sorry that the column was missing last month but I screwed up, getting it to Ralph Brandi too late for inclusion. I'll try not to let that happen again, duh! To make up for that, here's a double issue, hi!

Winterfest a Blast!

I am happy to say that the year's edition of the SWL WinterFest was one of the best ever. John Fisher and I had the pleasure of driving down together to attend this annual event. If you didn't have the opportunity to attend this year, you should start making plans now for 2005.

Pirate CDs Sold at the Winterfest

If you were at The Fest and bought an MP3 CD and it is defective, please return it to me and I'll replace it ASAP. Sorry!

The Mysterious Europirate Transmitter on 6220 kHz

This station first appeared on April 3rd around 2100 fade here in NA. They relayed **Crazy Wave Radio** around 2200 UTC but after the CWR relay was over the transmitter continued to remain on over the weekend playing non-stop disco and pop music. They were back on Easter weekend as well, both times with a strong AM signal.

Who are they and where are they located? Italian DXer Dario Monferini says that they seem to be located in NE Italy as the signal is a powerhouse all day in Treviso, Italy as heard by Italian DXer Luigi Basso. This might be the same station known as "rs" that was noted some weeks ago on 6275 kHz. [Maroti-NY, Comeau-MA, Monferini-Italy]

Loggings!

Many thanks to the following fine folks who submitted their logs this month. Ralph Brandi-NJ, Ross Comeau-MA, Rich D'Angelo-PA, Warren George-PA, Fred Kohlbrenner-PA, George Maroti-NY, and George Zeller-OH.

Alfa Lima International, the most active Dutch pirate these days was heard on both 6304.7 kHz at 2320 on April 10th and also on 15069.7 kHz at 1600 on April 11th. Station op Alfred was playing some music, greeting those who had emailed him and had joined him on MSN chat.

Antonio Radio from Holland was logged on 6275.13 kHz at 2335 on April 17. Programming was 60s music, mostly instrumental, lots of IDs, finally figured out it the ID was "Antonio Radio". Off at 2359 (Brandi-NJ)

Captain Morgan was logged on 6949.95 kHz on April 7th at 0033 UTC with BTO's "Taking Care Of Business" at tune in. They IDed at 0048. [Kohlbrenner-PA]

KRMI/Radio Michigan International was nice enough to entertain us with a St. Patrick's Day broadcast. Noted on 6925 kHz USB at 0146 sign on March 18th with such notable tunes as "The Worst Day Since Yesterday" and "Kiss My Irish Ass". Nice signal. [Lobdell-MA][D'Angelo-PA]

Oxycontin Radio, was logged on 6925 kHz operating in the AM mode on April 18th from 0024 tune in till 0059 sign off. WHY? James Brownyard was the guest DJ. They played mostly rock music with IDs mixed in. [Zeller-OH]

Radio Borderhunter from Holland was heard at 0100 UTC on April 11th on 6210 kHz. Mellow music, ID and off at 0120 with transmitter troubles. [Maroti-NY]

Radio Patti, noted on 6925.4 at 1300 to 1306 sign off April 11th with the song "Easter" by Patti Smith. [Maroti-NY]

Radio Sicily, a new one, was relayed by **Big Thunder Radio** on 6925 kHz USB at 0110 UTC on April 9th. It seemed to be Italian opera music and as the Big Thunder announcer said "I didn't understand a word they said!" [Lobdell-MA]

Shadow Radio was logged here in MA at 0130 UTC on March 1st on 6925 kHz in USB featuring the old time radio program "Space Patrol" with cereal Ads from Rice and Wheat Chex. [Lobdell-MA]

Sunshine Radio was noted at 1804 UTC sign on 6925 kHz in the USB mode, April 11th. This was a test program and there were occasional QSOs with other pirates. [Zeller-OH]

TIE/Take It Easy Radio, the station that usually ends its broadcasts with "Take It Easy" by The Eagles was noted on 6925 kHz USB from 0130 to 0218 sign off. Music featured on this show was by AC-DC along with a stand up comedy routine about Mississippi. SIO-353+ The email contact is: takeiteasyradio@yahoo.com [Zeller-OH]

The Voice of Pancho Villa made its usual appearance at 0500 UTC on March 14th on 6925 kHz USB. Signals were exceptionally strong in the Kulpsville, PA area! The original Pancho returned to the mike to host this annual broadcast. [D'Angelo-PA]

Undercover Radio, Dr. Benway's Station was logged on 6925 kHz USB on Feb. 28th at 2313 past 2320. This program featured a computer voice from Mars issuing warnings to Earthlings to stop sending their spacecraft up to Mars. [Zeller-OH]

Voice Of Captain Ron Shortwave. Captain Ron was heard on March 8th from 0050-0110 sign off on 6925 kHz USB. The programming was rock music. [Zeller-OH]

Voice of Pink Puma [or Pubah] Radio An apparent new one, was heard on March 26th at 0235 UTC on 6925 kHz in the AM mode. Just one ID. Lots of Spanish music played. [Lobdell-MA]

WBMRR-Black Mountain Radio. This new station has been putting out a nice AM signal these days. They were logged on April 18th at 0204 with some odd folk type instrumental music, blues, etc. They announced an email address of: wbmrradio@hotmail.com for reception reports. [Zeller-OH]

WHYP-The James Brownyard Memorial Station. JB was back to entertain us with some recordings made at this year's Fest, including various obscene acronyms by Tony Straka, beeps from a minidisc recorder, and complaints about Weiner hogging the pirate forum, etc. Logged on March 18th at 0020 UTC on 6925 in Grenade modulated AM! [Lobdell-MA]

WMPR [Micro Power Radio] was noted on March 15th from 0005 past 0022 UTC on 6955.2 in the AM mode. It was the usual "techno-dance" format with a sound byte "We are the United States Government". Started strong and slowly faded out and conditions changed. [Miller-MI]

WMPR. The station owned and operated by James Brownyard continues to be the most active North American pirate these days. They were noted on April 16th at 0200 UTC with a marathon broadcast on 6925 kHz. The usual cast of characters, Uncle Schleckstein, Jay and the gang with a repeat of a Halloween show. [George-PA]

Until next month, Happy Pirate DX! 



QSL Report

Sam Barto • 47 Prospect Place • Bristol, CT 06010



Radio Réveil & Paroles de Vie

Les Chapeaux 4
CH-2022 Bevaux /NE
Tél. +41 -32 846 16 55
<http://www.paroles.ch>



sticker and a fistful of program guides for various ABC Services. All in 22 ds. for 2 IRCs. v/s Barbra Lilliebridge, Administrative Officer.

BANGLADESH: Bangladesh Betar 7185 f/d ltr. w/ schedule in 79 (Barbour-NH) ds. for 2 IRCs. v/s Ahmed Quamruzzaman, Station Engineer. (Barbour-NH).

BRASIL: Radio Capixaba 4935 my rpt. was returned "AO Remetente" (to the sender) after just 2 wks. in the postal system. Usually, bad addresses kick around for considerably longer periods of time before being returned to the sender. I used the following address: C.P. 509, 29000-000 Vitória, Espírito Santo, Brasil. Any suggestions? (D'Angelo-PA). Radio Guaíba 11785 frequency only cd. w/ thank you in 29 ds. for \$1.00. The station signed and stamped my prepared cd. The QSL message was in five different languages. (D'Angelo-PA). Radio Cultura de Sao Paulo 9615 p/d ltr. w/ station booklet in 116 ds. via registered mail for a PT rpt, w/ cassette tape and \$1.00. (Klinck-NY).

ABU DHABI: Adventist World Radio 15385 f/d cd. in 11 ds. (Pasz-kiewicz-WI).

ANGUILLA: Caribbean Beacon 6090 f/d cd. in 375 ds. for \$1.00. v/s Doris Hussington. Addr: The Caribbean Beacon, POB 690, Anguilla, BWI. (Wood-TN).

ASIATIC RUSSIA: Voice of Russia 6415(?) f/d "assumption Cathedral and Receiver" cd. in 1 mo. (Craighead-KS)...6415 was typed on your report...did you mean 6145?...Sam. Khabarovsk site

AUSTRALIA: VLBA 2310 via Alice Springs nice package w/ brief, p/d verie ltr., bookmarker,

CANADA: Voice of Vietnam 6175 f/d "Map and Logo" cd. in 10 wks. (Craighead-KS).

CLANDESTINE: Democratic Voice of Burma 5945 p/d ltr. w/ cd. in 15 ds. v/s Myat Ht-ay Kyi. (Pasz-kiewicz-WI). via Deutsche Telekom-Julich p/d ltr. w/ postcard in 26 ds. (D'Angelo-PA).

* Deqar Voice 7125 via Chita p/d ltr. in 17 ds. for a rpt. to Montagnard Foundation, Inc., POB 171114, Spartanburg, SC 29301-0101 I was especially interested in the logo on their letterhead; it includes a woven back-basket and a gourd jug. I was given similar items on one of my recent visits to Vietnam and I display them in my living room. (Craighead-KS)...Interesting. When I came back from the Nam in 1970 I brought back a Montagnard chicken carrier (looks like a

RADIO RÉVEIL PAROLES DE VIE

Les Chapeaux 4 - CH-2022 BEVAUX (Suisse) Tél. 052 846 16 55 - Fax 052 846 85 47

Monsieur
D'ANGELO Richard A.
2216 Burkley Drive
Wyomissing, PA 19610
U.S.A.

Bevaux, le 15 décembre 2003

Dear Mr. D'Angelo,

Thank you very much for your letter and the money.

We are glad that you were able to listen to our program. Radio réveil makes christian radio programs that are listened mainly in Europe. We also send the message of our programs to all those who want to have the opportunity to read it later.

We are glad to send you our card QSL that proves that you heard our program.

Hope you can read french so that you can know a little bit more about us.

Truly yours,



**ASIA RELAY STATION
THAILAND**

This notice confirms that your reception report of

BBC ASIA RELAY STATION 13470 kHz.

from 1410 to 1428 GMT on 7 October 2001

corresponded with our station log of the same day. Thank you for your interest. Further reports are welcome.

BBC Asia Relay station is operationally managed by Merlin Communications International Ltd. For information about our range of services:

- Facilities management
- Global transmission rental
- Comprehensive satellite services
- Project management

Please call : +44 171 969 0000 Fax : +44 171 396 8283 or visit our website
www.merlincommunications.com



From: Miss. Sukanya C.
BBC Asia Relay Station
P.O. Box 20, Muang
Nakhon Sawan 60000 Thailand

To: MR. SAMUEL BARTO
47 PROSPECT PLACE
BRISTOL CT
06010 U.S.A.



birdcage) and a handmade crossbow for hunting small birds complete w/ quiver and many arrows...Sam.

* Radio Free Cascadia International 15045 via Mexico f/d cd. w/ form ltr. and a CD of "Five Days over Seattle" in 182 ds. The form ltr. indicates that they verified rpts from several countries and States. The CD documents a guerrilla FM radio operation

organized around the Seattle anti-WTO mobilization of November/December of 1999. (D'Angelo-PA)...I always wondered where all the bird and bunny people from the 60s and 70s wound up...Sam.

DENMARK: Radio Denmark 7560 via Sveio, Norway f/d cd. w/ stickers and a small toothpick size flag in 22 ds. (D'Angelo-PA).

GERMANY: Radio Reveil Paroles de Vie 11840 brief ltr. in 53 ds. indicating Julich as the transmitter site. Addr: Les Chapons 4, CH-2022, Bevaix, Switzerland. (D'Angelo-PA).

GREECE: Radio Free Iraq 9690 via Kavala f/d "50 Years" cd. in 3 wks.

KALININGRAD: Voice of Russia 6235 e-mail reply in 1 day w/ reply that postal QSL is on the way. v/s Elena Osipova, Letters Department. It seems that the VOR keeps all of the ltrs. ever sent to them. Its nice to know that in today's budget cuts someone still has that old shortwave charm. (d'angelo-PA)...Radio Tashkent is the same...Sam.

LIBYA: Voice of Africa / Radio Jamahiriya 15435 n/d ltr. on VO Africa stationary in 853 ds. This arrived in an ornate, green glossy report form mailed in a hydroliphic / fresco embossed (front and back) envelope from the Tripoli address. (Barbour-NH)...I'm not too sure what you talking about but it sounds delicious...Sam.

MEXICO: Radio Universi-
dad 6045 n/d ltr. w/ 65th anniversary station pen in 18 ds v/s L.C.C. Ma. Leticia Zavala Perez. (Paszkievicz-WI).

MOROCCO: Radio Farda 9805 p/d cd. in 37 ds. after a f/up rpt. My rpt. was sent to Washington DC but the reply came from the Prague office. (Paszkievicz).

NORTHERN MARIANAS: Radio Free Asia 15510 f/d cd. in 151 ds. for a taped rpt. (Klinck-NY).

RUSSIA: Vatican Radio * 6205 via Atamanovka f/d "Technical HQ" cd. in 3 wks. (Craig-head-KS).

SOUTH AFRICA: Educational Development Center "Mustaqbal" 17565 via SENTECH



Bayrak Radio & Television Corporation

Dr. KUCUK biv. Lefkosa, Turkish Republic of Northern Cyprus, via Mersin - 10, TURKEY
Tel : +90 (392) 225 55 55, Fax : +90 (392) 225 45 81
www.bayrak.com.tr

our ref : RTV - 030 - 031 - 05/02

date : 08 January 2002

your ref : _____

Mr. John Sgrulletta
337 Bullet Hole Road
Mahopac, New York
10541-2605 - USA

Dear Mr. Sgrulletta,

Thank you for your reception report of 18th December, 2001.

The broadcast details you have provided confirms that you have received Radio Bayrak International, as verified by our Programmes Department. Verification details are given below.

Please find enclosed a BRTK QSL card. Some informative material about Bayrak Radio & Tv Corporation and the Turkish Republic of Northern Cyprus will also be mailed to your address.

Once again, we thank you for your interest in our transmissions.

Yours Sincerely,

Mustafa TOSUN
Head, Transmissions Dept.



KID'S KARD ART CONTEST QSL SERIES

During the World Convention of the Seventh-day Adventist Church in the Students and Counselor Centre in Toronto, Canada in July 2001, Adventist World Radio conducted an art contest for children. The three winners in this international art contest are honored with the reproduction of their art drawings in this multi-color of "Kid's Kard QSLs".

Artist: Neil Wong - Workers, New York

AWR QSL Card #12 July 2001

to SAMUEL BARTO
We are pleased to verify your reception of our station
Date OCTOBER 2ND 2001 THE LANGUAGE
Time (UTC) 03:20-03:31 WAS "TIGRINYA",
Power (kW) 350 IN CASE YOU WERE
Freq. (MHz) 11.945 STILL WONDERING
Method THANKS FOR YOUR
Transmitter location AL DHABBAYA,
ABU DHABI (UAE)

www.awr.org
• Program schedules
• Real Audio program
• Photos of AWR van



e-mail reply in 3 hrs. w/ a n/d statement. The broadcast is intended for the Somali Region No. 5 in Ethiopia. (D'Angelo-PA).

SRI LANKA: Radio Free Afghanistan
19010 via Iranawila f/d "RFE/RL Headquarters" cd. in 10 ds. (Craighead-KS). **Radio Liberty** 15525 via Iranawila f/d cd. in 734 ds. (Glotzbach-NM).

SWEDEN: Radio Sweden

International 13590 f/d "Stockholm" cd. in 5 ds. for an e-mail rpt. for the "Bandy Championship" special transmission. Maybe my rpt. to TERACOM will fare better. (Barbour-NH). (Craighead-KS).

TAIWAN: Radio Free Asia 11065 (?) f/d "Dalai Lama" cd. in 4 mos.

THAILAND: Radio Liberty 9620 via Udorn f/d "50th Year" cd. in 1 mo. (Craighead-KS).

URUGUAY: Radio Oriental 11735 f/d ltr. in 1164 ds. (Glotzbach-NM)

USA (Pirates): WMPR 6925 f/d cd. of "Dance Party Robot" sheet in 160 ds. for a rpt. posted on FRN or FRW. My QSL was one of several found in a stack left for George Zeller at the front desk of the SWL Fest. Thanks for forwarding the QSL. (Barbour-NH). **Indira Calling** 6925 f/d QSL sheet in 279 ds. for SASE (used) to the "Calcutta" RI maildrop. v/s Vijay Nehru. (Barbour-NH)...If you buy 2 packs

of Marlboros you get the third for free...Sam. **Radio Free Speech** 6950 p/d multi-colored ltr. in 65 ds. from Bill O. Rights. (D'Angelo)

* **Radio Free Cascadia International** 15045 "Studio Scenes" QSL cd. w/ f/d ltr. and a CD (as described under Clandestine) in 172 ds. for \$1.00. Addr: POB 703, Eugene, OR 97440. (Wilkins-MO).

VATICAN CITY: Radio Vaticana 7365, 9660 and 11625 large envelope stuffed w/ QSL cds., one for each freq., stickers, booklets, poster and

Estimado Señor: John L. Sgrulletta

Los trabajadores de Radio Marañón le agradecemos su informe de recepción. Tenemos el gusto de confirmar su escucha de nuestra emisora con las siguientes características:

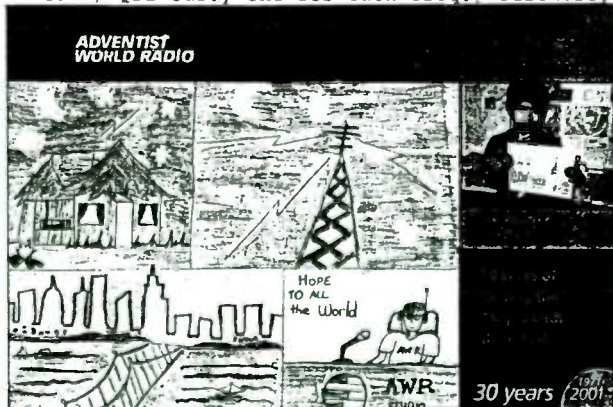
Fecha: 29-Dic-2001 Hora: 23:43 a cc: 59 UTC
Frecuencia: 4835 kHz Banda internacional de: 6765 metros
Potencia: 1 CC kW

Francisco Minguito Ibarra, S.J.
Director

Francisco de Orellana 343 Ap. 50 Vía Jahn Chicleyo, Jata, Peru
(51-44) 72 1147 / 722148
e-mail: comunicacion@radioaranon.org.pe
<http://www.radioaranon.org.pe>

program guide. Also rcvd. a friendly personal ltr. from Festus Tarawalie on behalf of the English-African Team. This in 55 ds. for 1 IRC. (Barbour-NH).

If you haven't noticed there have been no rpts. from your Editor in the past several mos. There is a very strong possibility that my wife and I will be moving..Sam



Net Notes

Tom Sundstrom • P.O. Box 2275 • Vincentown, NJ 08088-2275 • Fax: 609-859-3226 • trs@trsc.com
http://www.trsc.com

Liberals and Conservatives

The US airwaves have become very interesting in April. For years, liberals complained that conservative voices (e.g., Rush, Liddy and many others) dominated the airwaves.

The balance changed somewhat on March 10 with a press release announcing a new national "Air America Radio" progressive talk radio network to "hit the airwaves on March 31st." Read the complete press release at www.carnivalpower.com/WLIB/wlib_1190_new_format.htm; WLIB in New York City, WNTD-950 Chicago, and KBLA-Los Angeles were the initial players.

Air America immediately ran into legal difficulties with KBLA and WNTD. Ralph Brandi says Air America leased time on the stations starting March 1, although they weren't going to broadcast until late March. The station owner then re-leased the interim time between March 1 and the start date of AA to someone else. That time already belonged to Air America, but the station owner kept the money for himself. When the owners of Air America discovered that he was double-dipping, they stopped payment on an outstanding check. Lou Josephs tells me that AA is off KBLA, but Ralph says that a court ordered WNTD to air the programs until the end of the month.

Air America continues on a newly added station in San Jose, CA, and on the Sirius and XM satellite radio networks. You can also listen to AA with a RealPlayer at www.airamericaradio.com; a list of current stations is available atop the home page.

WLIB's Web site is a hoot: a good example of how not to maintain pages. The first page I found was (c) 2000 with a show host listing of that

year: wlib.com/station.html — and the next showed the alternate off-hour musical programming, still with an audio link that one has to enter age and sex to activate: www.broadcasturban.net/reggae/wlib.htm

For continuing coverage on the evolutionary developments of Air America Radio, watch Lou Joseph's blog at www.myjamby.com/medianetwork to see what pops up.

Software

For Mac users, the first MP3 player supporting MP3PRO (stereo) is now available. Go to panic.com and look up the details on the Audion player. At first glance, the feature set appears to bump Apple's iTunes into the back seat. The new PRO mode is often championed by Steve Coletti on his quite interesting and fun Different Kind of Oldies Show, airing Saturday evenings. See dkosmedia.com for show details.

Canada

Are you following the Stanley Cup playoffs? Expand your view beyond your local team(s). Hockey Night in Canada airs on the Canadian Broadcasting Corporation stations. It is easy to listen to the games via the CBC audio page (and click on the "Sports" menu button" on the left for the schedule of games): www.cbc.ca/audio.html

Dutch Pirate

As we were about to send this off to the Publishing Group, in came a note from someone in Germany announcing a new Web pirate station. The language is Dutch, and I cannot determine if the broadcaster is also on the air. Dates suggest the operation has been in business since July 2003. Have a look and listen. Is there a shortwave radio angle to the story in the webpiraten.com pages?

Contributors' Page

Bob Montgomery • P.O. Box 1458 • Levittown, PA 19058 • RMonty23@netzero.net

DEADLINE FOR CONTRIBUTIONS IS THE 10th OF THE MONTH

The following members sent in contributions:

Brian ALEXANDER, Mechanicsburg, PA	NRD-545 AOR AR-7030 100' LW
Scott BARBOUR, Intervale, NH	R-75, MLB-1, RS antenna system
Jerry BERG, Lexington, MA	R8A 165' LW
Luca BOTTO FIORA, Rapallo, ITALY	R7, Sat 500, Dipole, LW, MFJ1206, AT2000
Ralph BRANDI, Middletown, NJ	AOR7030, R8, 300' longwire
Jim CLAR, Rochester, NY	R8, Eavesdropper dipole, Palomar loop
Rich D'ANGELO, Wyomissing, PA	TenTec R340, Lowe HF-150, DX Sloper
Martin FIELD, Hillsdale, MI	NRD535D, Eavesdropper ant
Mark FINE, Remington, VA	NRD535D, 150' longwire
Bob FRASER, Belfast, ME	Sony ICF-2003 ICF-SW100S 2m LW
Fred KOHLBRENNER, Philadelphia, PA	Drake R8, NRD-525, Datong FL3, ANC4, sloper
George MAROTI, Mt. Kisco, NY	R8B, 2010, 30/45 m. dipoles
William McGUIRE, Cheverly, MD	DX-380
Bob MONTGOMERY, Levittown, PA	NRD535D, R390A, RX320, HF150, SE3, T2FD,
David MUEHLING, Portsmouth, NH	Sat 800, 40' long wire
Betsy ROBINSON, Clinton, TN	Sony 2010 Indoor antenna
Harold SELLERS, Shadow Lake, ONT	NRD-515, 200' long wire
Louis Crisler SMITH, Thurmond, NJ	R-75, 160' long wire
Dan SREBNICK, Aberdeen, NJ	Sat 800, 130' longwire



On the Short Waves by Jerry Berg

<www.ontheshortwaves.com> Update, April 11, 2004—Under "Articles, Research, etc.," "Full-Text Articles," the second part of a two-part article on Radio Swan that was published in Popular Communications in November and December 1985. Thanks to PopComm <<http://www.popular-communications.com/>> for permission to post these.

<www.ontheshortwaves.com> Update, April 17, 2004—Under "Articles, Research, etc.," "Philately," four new first day covers: Taiwan, 30th Anniversary of Broadcasting, 1927-1957; Austria, 50 Years of Radio Austria (1974); CBC-Radio Canada (1986); and Fiji, Birth of Radio Communications, 1996 (ZJV was the Fiji Broadcasting Corp., Ltd.).



WWW Shortwave Listening Guide

Looking for programs to listen to? You can find what programs are on for the current hour or list programs of a desired type on a given day at the **www Shortwave Listening Guide** on NASweb. The data is provided by *NASWA Journal* and *Monitoring Times* columnist John Figliozi, and comes from his book, *The Worldwide Shortwave Listening Guide*. Visit the Guide at <http://www.anarc.org/naswa/swlguide/>.




Tropical Band Loggings

Dan Ferguson • 12053 Kahns Road • Manassas, VA 20112 • troplogs@zerobeat.org

- 2325 AUSTRALIA ABC 1155 4/18 M&W in EE, dual 2310 & 2485. (Lineback-KS)
- 2390.00 MEXICO R. *Huayacocotla* 0050-0100+ ranchero music, M ID 4/8 (Wilkner-FL)
- 3205 PNG R. *Sandaun* 1141-1203* 4/18 Vern pops and talk, S/off w/NA & GSTQ, P/F. (Lineback-KS)
- 3235 NEW BRITAIN *RWNB* 1142 4/18 vern pops, very poor. (Lineback-KS)
- 3306 ZIMBABWE ZBC 0304-0318 4/14 M vern talk & native music. Very poor w/ brutal static crashes. (Barbour-NH) (presumed) at 2337 with music. Weak and fadey. Same at 0048. (4/3 Sellers-ONT)
- 3315 INDIA AIR Bhopal 0034-0047 3/22 Hindi mx & tlks, weak but improving under noise floor. (Barbour-NH)
- 3326 NIGERIA R. *Nigeria* Lagos 2252-2306* 3/16 continuous jazz-like organ music, M EE ID 2300; nx brief to 2303, tlks over choral mx, NA at s/off. Poor, noisy. (Barbour-NH)
- 3335 PNG R. *East Sepik* 1202 4/17, EE dual 4890, poor. (Lineback-KS)
- 3340 HONDURAS *HRMI* 0412-0424 4/16 M SS tlks over mx at t/in, continuous rel ballads throughout. Fair at best w/occ static & SS USB chatter. (Barbour-NH)
- 3345 MOLUCCAS *RRI Ternate* 1151 4/17 Indo pops, poor. (Lineback-KS)
- 3375 PNG R. *Western Highlands* 1125-1136 4/18 M w/vern talk & vcls, poor. (Lineback-KS)
- 3385 NEW BRITAIN R. *E.N.Britain* 1040-1114 3/23 surprisingly decent reception of local and tribal-like music w/ Vernacular talks by male anc, presumed IDs over pounding drums at 1048 and 1103. W w/ news at 1103 followed by M w/ choral music selections until f/out by 1114. Weak but steady signal, fair at best around 1100. (Barbour-NH) 1138 4/18 vern pops & talk, fair-good. (Lineback-KS)
- 3995 GERMANY DW 2325 GG mention of death of Peter Ustinov and other talk. (Good 4/3 Sellers-ONT)
- 4000 SULAWESI *RRI Kendari* 1207 4/17 RRI nx, poor. (Lineback-KS)
- 4052.47 GUATEMALA R. *Verdad* 0136-0155 3/25 rel mx, SS preacher, ID 0145. EE ID 0149 w/address, request for contributions. Fair. (Kohlbrener-PA) 0550-0601* Tune-in to rel mx. EE S/off anmts 0555 with "Radio Truth" ID & addr, SS anmts. NA at 0556. Good. (Alexander-PA 3/5)
- 4387 PERU R. *Imperio* (presumed) 0958-1016 3/29 M SS rel tlk over mx, Church svc 1000 w/occ W w/"Santa Maria's", cut-off for more M over mx 1008, back to church service. Good signal tho no ID noted. (Barbour-NH)
- 4429v PERU R. *Bambamarca* 1018-1032 3/29 SS, caliope-like music, M ID & tlk 1026, mx, fading under "sweeper" at 1032. (Barbour-NH)
- 4600.19 BOLIVIA R. *Perla del Acre* Cobija presumed at 1020-1030 some audio. "Esta la radio Perla del Acre transmitiedo todavia? Me parece que he escahado esta emisora a las 1030 y 2330 hora de GMT" 3/26 (Wilkner-FL)
- 4606.4 PAPUA *RRI Serui* 1148 4/18 Indo pops, poor-fair. (Lineback-KS)
- 4650.29 BOLIVIA R. *Santa Ana* Santa Ana de Yacuma, 1020-1040 mx, M SS ID, F/G 3/26 (Wilkner-FL)
- 4749.9 SULAWESI *RRI Makassar* 1149 4/18 W in Indo, fair. (Lineback-KS)
- 4749v PERU R. *Huanta* 1120 3/21 SS, ballads, "musica rustica" etc., Tlk and "Yo soy R. Huanta" ID's. P/F at peaks w/QRN. (Clar-NY)
- 4750 SUDAN R. *Peace* 0240-0315+ tune-in to lite mx, ID 0241, EE rel talk. ID again at 0256. Vern talk at 0257 & Ici Horn of Africa mx. Weak but readable. (Alexander-PA 3-26) (presumed) 0346-0400 4/16, vernacular, Barely audible music at t/in, signal improved slightly to hear M w/talks in language, tentative mention of "Addis Ababa". Faded under the slop by 0400. Very poor, weak under static. Need to try for listed 0230 s/on. (Barbour-NH)
- 4754.3 BRAZIL R. *Educacao Rural* 0033 4/8 M PP tlk, ID, anmts, light Brz mx w/a rustic or "folk" flavor. (Clar-NY) 4754.37 0013 3/28 ID & ZY mx; brief anmts, more mx, ID 0031. Decent level, but high QRN this night. (Berg-MA)
- 4759.98 LIBERIA *ELWA* *0555-0605+ Celeste IS. NA at 0558. EE at 0559 but modulation so low as to be unreadable. (Alexander-PA 3-13)
- 4759.98 LIBERIA *ELWA* 2225-2231* 3/12 t/i EE rel mx, closing EE anmts 2229; NA 2230; weak/poor. Also *0555-0605+ 3/13 Celeste IS. NA 0558, EE 0559 but modulation so low as to be unreadable. (Alexander-PA)
- 4765 BRAZIL R. *Rural* Santarem 220. Folk mx. Fair. (LCS MD)
- 4770 NIGERIA R. *Nigeria* 0504 4/4 M nx, EE ID; fair (Sellers-ONT) 2225 4/6 istl jazz, "EE Service" ID's. P/F. (Clar-NY)
- 4790 PAPUA *RRI Fak Fak* 1150 4/18, Indo pops, fair. (Lineback-KS)

- 4810 MEXICO XERTA 0055-0230+ 3/27 SS pops, ballads, anmts, "This is XERTA" EE ID 0224. (Alexander-PA 3-27) 1110 4/4 SS, mx, IDs, call, freq; good. (Sellers-ONT)
- 4815 BRAZIL Rdif Londrina 2350-0018 3/31 M PP rel tlk, brief rel vcl 2359; IF & fgy anmt, rel tlks & mx. (D'Angelo-PA)
- 4835 MALI RTV Malienne 2335 3/23 W ID, FF tlk over rap vocals. // 5995. (Kohlbrenner-PA) 2338-0001* 4/12 FF, continuous talks b/w 2 M over drums & wind insts; occasional breaks for brief musical bits. Barely audible ID, NA at s/off. Fair at best w/ het. (Barbour-NH) 2309 lcl mx, FF anmts (Sellers-ONT)
- 4840 INDIA AIR Mumbai 0048-0102 3/22 brief Hindi mx & tlks, presumed ID 0100, then nx by W. F/P w/splatter fmia 4845 Maurataine. (Barbour-NH)
- 4845 MAURITANIA R. Mauritanie 2349 4/2 AA vcls, W ancw w/interview; vy good. (Sellers-ONT)
- 4845.2 BRAZIL Radio Cultura Ondas Tropicais 0127-0201* 3/28 romantic vcl, formal ID & fgy anmts 0130, nx; then cont. romantic vocals. ID & s/off anmts 0156, choral NA. Fair. (D'Angelo-PA)
- 4860 INDIA AIR Delhi 0103-0114 3/22 continuous Koran like chanting & Hindi music. Poor. (Barbour-NH)
- 4870 ECUADOR LV del Upano Macas, 1012 4/12 Roman Catholic Mass. (Wilknor-FL)
- 4870 PAPUA RRI Wamena 1151 4/18, Indo pops, fair. (Lineback-KS)
- 4874.9 BRAZIL Rdif. Roraima 0250 3/31 PP tlk, pop mx, two full IDs 0300. (Brandi-NJ) Roraima Boa Vista 0225. Country Western mx! Fair. (LCS MD) 0345-0403* 3/16 continuous EE lyric pop mx to M ancw w/PP ID & fgy anmts 0358. Another M w/s/off routine 0359, choral NA. Fair. (D'Angelo-PA)
- 4876 BOLIVIA R. La Cruz del Sur (presumed) 0023-0037* 4/13 SS, "Live" up-tempo mx to cut-off mid-song 0037. No ID or anmts. F/P. (Barbour-NH)
- 4890 GABON RFI 0509 4/4 FF nx & tlk. (Sellers-ONT)
- 4890 PNG NR 1147 4/18 M in EE, poor-fair. (Lineback-KS)
- 4895 BRAZIL Radio Bare 0407-0442 3/15 romantic vocals, M PP talks, IDs 0407 & 0424; fair. (D'Angelo-PA)
- 4903.55 BOLIVIA R. San Miguel 0944-0958 3/23 M SS chatter to 0957 ID (Kohlbrenner-PA)
- 4910 ZAMBIA R. Zambia 0250 4/4 Fish Eagle IS, NA, drums, W ID, M in vernacular. Big signal. (Sellers-ONT)
- 4915 GHANA GBC Radio One 2307 4/3 M DJ taking phone calls, mix of EE & vernacular. (Sellers-ONT)
- 4919 ECUADOR R. Quito 0157 3/21 SS w/LA/HC pops and ballads, ID's ("Transmite R. Quito, La Voz de la Capital"), promos at ToH. (Clar-NY)
- 4939.7 VENEZUELA R. Amazonas 2328-2355 3/30 SS, nice mix of LA music, canned IDs/anmts 2336-2345, back to music. Weak, poor w/ lots of static. Het at 2347, India s/on? (Barbour-NH)
- 4944.9 BRAZIL Em. Rural Petrolina, 0016-0200 4/11 PP church svc, hymns, responsive prayer, most talk by W, M ment Petrolina 0155 (Paszkiwicz-WI) Em.Rural 0115 4/2 M PP tlk, ad strings, slogans, promos, IDs, jingles. Fair. (Clar-NY)
- 4950 ANGOLA RN de Angola 0231 M PP cmtry. Fair. (LCS MD) 2254-2334 4/13 PP mx & tlk at t/in, ID 2300; nx w/ments of Angola and Zambia, several sound bites and field rpts, presumed devotional 2316 w/solemn M over mx; then ballads w/talk b/w songs; poor/fair, improving by 2330. (Barbour-NH) PP 0020 4/18 w/tlk, ID & AfroPops 0025. F/P (Clar-NY) 2305 4/3 M PP tlk, mention Angola; nx 0000 recheck. Fair. (Sellers-ONT)
- 4955 PERU R. Cultural Amauta presumed at 1032 4/9; M w/long rel tlk in SS & local lang. (Quechua?). F/P. (Clar-NY)
- 4960 ECUADOR R. Federacion 0015 3/8 M w/tlk, IDs, ments Ecuador, light HC & LA mx. (Clar-NY)
- 4964.99 PERU R. Santa Monica Cusco, 0950-1020+ 3/27 OA folk mx, SS anmts; canned ID 1015. Good-strong. (Alexander-PA)
- 4965 ZAMBIA R. Christian Voice 0309-0338 4/1 mix of EE tlks by M&W ancw team & rel vcls, ID 0329, anmts, more mx. Fair. (D'Angelo-PA) 0108-0135 4/7 M&W EE, ID's 0110, pop vocals. ID/address 0128, rel discussion & vocals. Poor in noisy conditions. (Kohlbrenner-PA) 0050 4/4 W talking about reading Bible, program promos, rap music. (Fair 4/4 Sellers-ONT) 2302 4/3 talk about Jesus, ID, W ancw. Poor. (Sellers-ONT)
- 4976 UGANDA R. Uganda 0301 4/4 W "This Radio Uganda." with freqs and meter bands. Fair but big het (Sellers-ONT)
- 4980 CHINA Xingiang PBS 0030-0047 3/26 Asian music/vocals w/occ tlk in presumed Uighur. // 7195. Poor (Kohlbrenner-PA)
- 4985 BRAZIL R. Brasil Central 2311 4/2 M PP w/address; church service, chorus singing, then male speaker. //11815 fair. Vy good. (Sellers-ONT)
- 4990 SURINAM R. Apintie 0350-0510+ 3/26 US pops, ballads. EE ID 0404 "Radio Apintie-Number One", then Dutch anmts. Fair. (Alexander-PA)
- 4995.56 PERU R. Andina Huancayo, (tentative) 1045-1100 4/12 noted fading out with andean music no possibility of an ID. (Wilknor-FL)
- 5009.8 DOM.REP. R. Cristal Intl 0032 3/8 M SS ID's, promos & multiple ments. "Santo Domingo." Pgm. of LA & EE pop/rock. "Dance with the Guitar Man"; F/G. (Clar-NY)

- 5010 INDIA *AJR* Thiru 1220-1236 4/17 W in lang, TP 1230, W EE ID & nx, M in lang 1235; F/G. (Lineback-KS) 0047 4/11 Indian music, ID "Doordarshan" 0054; // Chennai 4920 (Brandi-NJ)
- 5010 MADAGASCAR *RTV Malagasy* 0319-0337 4/14 vernacular, familiar format of talks w/ brief mx b/w items, W over chime-like music b/w campfire guitar music and whistling. Music, similar to the "Miami Vice" theme, then M w/several mentions of "Madagascar". Fair. (Barbour-NH)
- 5019.88 SOLOMON IS. *SIBS* 1111 3/30 BBC relay, nx, ment death of Alastair Cooke at 95 (Brandi-NJ)
- 5019.9 PERU *R. Horizonte* (presumed) 0101 3/10 in SS; OA mx, W leading group prayer; rosary-like antiphonal responses. (Clar-NY) 5019.94 1017-1040 3/23 OA vocals, M frequent TC's, Nice signal (Kohlbrenner-PA)
- 5024.94 PERU *R. Quillabamba* 1009-1016 3/23 Andean vocals, M SS anmts over mx. ID 1016. Rebelde off. Poor (Kohlbrenner-PA)
- 5029.07 COSTA RICA *University Ntwk* 0051 3/10 Gene Scott in EE. F w/QRN. (Clar-NY)
- 5030 BURKINA FASO *R. Burkina* 2243-2305 3/24 lcl stringed instls, M in FF mentioned Niger frequently. Exotic music 2258; anmts 2300 but no ID heard. (Kohlbrenner-PA) 2341 4/4 in FF & vern; 2 M w/tlk; brief local mx flourishes, "Ici Burkin" hrd. P/F w/fading. (Clar-NY) 2255-0001* 4/1 lcl Af folk mx, Afropops, Afr drums, FF talk. S/off with possible instru NA. Fair-good. (Alexander-PA)
- 5045 BRAZIL *R. Guaruja Paulista* 2340 mx, ID 2343, ad string. Fair (Kohlbrenner-PA)
- 5054.6 COSTA RICA *Faro del Caribe* 0228 3/20 pops & Insp. mx, M w/tlk, ID. promo/slogan 0230. F-P w/noise and QRM. (Clar-NY)
- 5240 TIBET *Xizang PBS* 2353-0010 3/31 M&W CC tlk, Asian instl mx; //7385, poor (Kohlbrenner-PA)
- 5500 CLANDESTINE *V. Peace & Democracy in Eritrea* 0340-0350* 3/31, M w/tlk in Tigrinya, apparent ID and closedown 0349. Fair with //6350 poor. (D'Angelo-PA)
- 5500 ETHIOPIA *Voice of Tigrey Revolution* *0355-0412 3/31, open with repetitive flute (?) mx IS, M 0400 w/echo anmt; M w/nx in Tigrinya. P/F & //6350 deteriorating. (D'Angelo-PA)
- 5637.18 PERU *R. Peru* San Ignacio, 1040-1100 4/12 M w/mx ID as "Radio Peru" (Wilkner-FL)
- 5678 PERU *R. Ilucan* 0028 3/17 M SS tlk, promos, slogans, sfx, TC's and ID's. Fair. (Clar-NY)
- 5800 BULGARIA *R. Bulgaria* 2148 4/2; two W tlk abt BPL, address; then Bulgarian mx program. //7500 good. (Sellers-ONT)
- 5860 CHINA *V. of Jinling* 1156 3/27 CC tlk, flutes & soft CC instl mx; periodic sound of birds chirping. Pips at ToH, "Jinling" ID into W w/tlk over mx. (Clar-NY) 

Company Store

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Just a quick note this time. The prices for the t-shirts and sweatshirts listed on the inside back cover are incorrect. The correct prices appear below. Also, Farrell's Confidential Frequency List has been published in a new edition, the 13th. With this new edition, the price per copy has risen to \$28.00 plus shipping.

NASWA T-Shirts	\$14.00 S-XL
Return of a favorite in NASWA blue with the club logo.	16.00 XXL
	+4.00 s/h NAM
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International Band Loggings

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- 5905 **UKRAINE RUT** Simferopol in EG 0100, nx re Pres Kuchma, mx by accordion quartet, feature on Ukrainian culture (Robinson TN 3/26)
- 5925 **VIETNAM VOV** Hanoi in VT 1010, VT mx countdown, lite banter b/w sels, talks (Barbour NH, Clar NY)
- 59305nf **BRAZIL R Guarja Paulista**(p) in PT 2305, mx and definitely PT tlk, //5045 (Berg MA 3/27)
- 6010 **CANADA R Sweden** relay in SW 0200, IS, ID, rpt on Iraq, ment of Hans Blix, g (McGuire MD 4/1)
- 60102 **COLOMBIA LV de tu Conciencia** in SP 0353, ID, relig pgm, children's chorus, tlk (Alexander PA 3/7)
- 6015 **TURKEY V of Turkey** in EG 2227, Hues & Colors of Anatolia feature, g, //9655 (Fraser ME 3/15)
- 6025 **UNITED KINGDOM R Japan** relay via Rampisham in EG 0127, feature on spring water from Mt. Fuji region, severe adj chan QRM, //17835 poor (Clar NY 4/2)
- 60351 **COLOMBIA LV Guaviare** in SP 0945, nice lcl mx, ID, anmts, fqy drift, QRM R Marti (Alexander PA)
- 60399 **BRAZIL R Clube Paranaese** Curitiba in PT 0015, mx, tlks, echo effects, sports coverage, promos, ID's, jingles, slogans (Kohlbrenner PA 4/1, Clar NY 3/31)
- 6040 **CANADA China R Int** relay in EG 1108, feature on "China Roots"-visiting Shanghai (Sellers ONT 4/3)
- 60468 **PERU R Santa Rosa** in SP 0858, instrum'l mx, ID toh, phone tlks, "Santa Marias", f (Barbour NH 4/9)
- 6080nf **SINGAPORE R Singapore Int** in EG 1100, regional nx, rpt on four members of terrorist group and Abu Sayaan being captured in Philippines, ID 1105, mx (Brandi NJ 3/30, Sellers ONT 4/3)
- 6095D **LUXEMBOURG R Luxembourg** Junglister in GM? 2135, reception via Digital Radio Mondiale intermittent but sustained 1 to 2 min bursts w/mostly mx until destroyed by Dr. Gene Scott s/on at 6090 before 2200, audio fair to muddy at 14.56 kbps and no SBR hi-fqy enhancement (Fine VA 4/2, Brandi NJ 4/10)
- 6100 **SERBIA Int Radio of Serbia/Montenegro** in GM? 2025, tlk, several IS, into FR 2030, ID (Brandi NJ 4/10)
- 6115 **ALBANIA R Tirana** in EG 0143, IS, ID, sked, pgm notes re EG bcsts to NA, nx re Albanian President's visit to Washington, fair, //7160 better (Clar NY 4/2, Sellers ONT 4/3)
- 61152 **PERU R Union** Lima in SP 0850-0915+, Latin Am mx, tlks, ID's, good (Alexander PA, Barbour NH)
- 61348 **BOLIVIA R Santa Cruz** in SP 0920-1030, classical instrum'l's, ancmts, clear ID, monk-like chanting and alternating mx bits, brief talks, sig mixing w/weaker co-chan Brazil (Alexander PA, Barbour NH 4/9)
- 6180 **CYPRUS CBC** Limassol in GK *2215-2245*, GK mx, various sels/tlks until 2223, ID, last song cut in mid-song, good signal, //7210 fair, 9760 very good (D'Angelo PA 3/27)
- 6185 **MEXICO R Educacion** in SP 0218, ID's, QTH, rpt of Pres Bush's comments (EG clips) on anniversary of war in Iraq, ezl Spanish mx (Clar NY 3/20, Sellers ONT 4/3)
- 6188 **PERU R Oriente** Yurimaguas in SP 1025, talks, SP pops/OA mx, ID, strong signal (Alexander PA 3/27)
- 62099 **ETHIOPIA R Fana** Addis Ababa in Amheric(p) 0312-0410, tlks, tinny Horn of Africa mx w/brief tlks in between, fair w/rtty QRM, //6940 poor (Barbour NH, Kohlbrenner PA 4/1)
- 6280 **ISRAEL V of Israel** Tel Aviv in EG 0500, nx, ID, into FR 0515, f, //7545 vg (Alexander PA 3/27)
- 6348 **SOUTH KOREA Echo of Hope** in KR *1056, instrum'l mx, 3 gongs 1100, ID?, 3 musical tones and into talks by YL later alternating w/OM, poor sig, //3985 buried under ham ops (Barbour NH 3/15)
- 65361 **PERU R La Poderosa** Huamcabamba in SP 0050, many ID's, SP pops, OA mx, p-f (Alexander PA 3/7)
- 7105 **BELARUS R Minsk** in EG 2142, folk mx, nx re environmental agreements, US embassy in Belarus, and art director in Turkey, ID's, credits, s/off at 2159, fair signal, somewhat muffled audio (Barbour NH 3/23)
- 7110 **ETHIOPIA R Ethiopia** Addis Ababa in Amheric? *0259, IS, two ID's, nx(p), mx, f (Kohlbrenner PA 3/30)
- 7115 **SRI LANKA VOA** relay in EG 0122, sports rpt w/tlk re start of NHL playoffs and Masters golf tournament, ID's, fair w/QRM, //11705 fair, 11725 poor (Clar NY)
- 7125 **GUINEA RDT** Conakry in FR 2147, phone rpt, f-g (Fiora ITALY 4/10) in FR 0601, s/on ancmts, ID, nx at 0603, fair reception (Sellers ONT 4/4)
- 7170 **SINGAPORE R Singapore Int** in Tamil 1031-1101, relay of FM 96.8, pop mx in Tamil w/YL DJ, ID? 1100 followed by nx, fair signal until clobbered by loud Ham traffic during nx (Barbour NH 3/18)
- 7210 **CYPRUS CBC** Limassol in GK 2219, telephone interviews, //6180 fair, 9760 good (Sellers ONT 4/2)
- 7220 **GERMANY R Liberty** relay via Lampertheim in RS 2330, mx, Svoboda ID, nx, fair (Sellers ONT 4/3)
- 7225 **TUNISIA R Tunis** Sfax in AR 2053, popular AR mx, //7190 fair, 9720 good (Sellers ONT 4/3)
- 7250nf **SWAZILAND Trans World R** in Vern *0257, IS, ID repeated in EG, into lang 0300, f (Sellers ONT 4/4)

- 7260 **THAILAND R Thailand** in VT 1107, long tlk, light vocals, s/off ancmt followed by ID, skeds in EG, IS gongs prior to 1130 s/off, good signal (Clar NY 3/28)
- 7325 **AUSTRIA ORF Moosbrunn** in EG 0145, Viennese waltzes, ID, "Report from Austria", p (McGuire MD)
- 7445 **TAIWAN R Taiwan Int Taipei** in EG 1141, local pop mx, tlks re recent changes at top of Taiwan's pop mx charts, ID's, into more mx, p-f w/QRN problem (Clar NY 4/2)
- 7450 **GREECE R Makedonias Avlis** in GK 2120, opera in progress in unknown lang at t/in, YL ancmts 2142, mx continued 2150, ID?, nx to TOH, into classical/new age mx, very nice pgm w/exceptionally good music, strong sig w/some fades (Montgomery PA 4/9, Barbour NH 4/6)
- 8749usb **HONG KONG Weather Broadcast** in EG *1033-1040*, weather fcsts for various areas w/wind verlocity, visibility, and waves data, fqy, no ID given, f-p (Maroti NY 4/9, Barbour NH 4/10, Berg MA 4/9-11)
- 9335 **NORTH KOREA V of Korea** Kujang in EG 1028, patriotic songs, tlk re history of country's flag, //11710 (Sellers ONT 4/3) in FR 1130, tlk, martial sounding choral anthem, ID's, p, //11710 (Clar NY 4/3)
- 9365 **ARMENIA R Free Asia** relay via Gavar in Tibetan 0217-0300*, mainly tlks w/some mx interludes, EG ID 0230, f, //11695 UAE relay, vp, 11975 Wertachtel, vp, 15695 Tajikiastan, f (D'Angelo PA 4/15)
- 9400 **BULGARIA R Bulgaria** in EG *0000, IS, ID at s/on, rpt on death of Macedonia Pres., g (McGuire MD)
- 9425 **INDIA AIR Bangalore** in EG 2335, nx items re security for India vs Pakistan cricket match and Colin Powell's visit to India to meet India's PM, subcont mx, fair w/flutter (Clar NY 3/14)
- 9430nf **PHILIPPINE IS FEBC Manila** in CH 1655-1800*, sermon in EG w/CH translations, mostly CH relig tlk, some mx, ID in EG at s/off but stated frequency as 9570?? (Treibel WA 4/10)
- 9510 **SOUTH AFRICA Trans World Radio** relay in Songhai dialect 1952, tlk in lang w/some EG phrases, very impassioned sermon w/ments of "Bible" and "Jesus Christ", fair w/fading (Clar NY 3/14)
- 9540rf **VENEZUELA R N de Venezuela** in SP 1941, lite "musica tropical", ID/slogan at 1943, YL tlk, audio weak and mostly unreadable (Clar NY 4/8)
- 9575 **MOROCCO R Medi Un** in FR/AR 2358, Mideast mx, ID in FR, into nx in AR at 0000, f (Clar NY 3/18) in EG/FR 2104-2150, varied mx - power ballads, pops, FR DJ b/w sels, tlks, ID's, f (Barbour NH 3/16) in AR/FR 2114-2220, Mideast mx, tlks in both languages, EG pop lyric songs, ID, nx (D'Angelo PA 3/27)
- 9580 **AUSTRALIA RA** in EG 1057-1200, "Asia-Pacific" pgm with tlk on computer virus (Robinson TN 3/30)
- 9600 **CHINA CRI Beijing** in EG *1959, s/on w/bird call IS, ID, world nx, exc audio, S-9 (Montgomery PA 4/11)
- 9605 **ITALY RAI Rome** in EG 1939, nx including items re taxes owed by IT soccer clubs and 10th running of the Rome Marathon, ID's, mailing QTH, and FAX #, f-g (Clar NY 3/28)
- 9605 **VATICAN STATE Vatican Radio** in EG 0254, pgm re meeting of Pope John w/young people, f, //7305 vg (Sellers ONT 4/4)
- 9655 **GERMANY Christliche Wissensehaft** (Christian Science) relay via Juelich in GM *1800-1859*, sermons?, choral mx, quick ID 1854, QTH?, brief guitar strumming, classical mx, Sats only, poor (Berg MA 4/3)
- 9665 **MOLDOVA V of Russia** in EG 0102, nx re escalation of fighting in Iraq and plot to assassinate Russian military commander in Georgia, ID's, fair w/severe QRM (Clar NY 4/8)
- 9665 **BRAZIL R Nac do Brasil Brasilia** in PT 0458, lite instrum'l mx, tlks, ID's, PT ballads, fair, noted back on frequency after spending the past several weeks up around 9668 (Alexander PA 3/27)
- 9700 **BULGARIA R Bulgaria** in EG 2332, talk abt NATO membership for Bulgaria, //11700 (Sellers ONT 4/2)
- 9705 **INDIA AIR Panaji** in EG 0040, tlk, subcont mx, ID, fqy f-p, distorted audio, fading //9950 (Clar NY 3/26)
- 9705 **MEXICO R Mexico Int** in SP 0408-0445, Mexican vcls, ID, fqy ancmts at 0415 and 0438, continuous vcls b/w ID's, fair w/ slight het presumably from Ethiopia stn (D'Angelo PA 3/16)
- 9720 **PERU R Victoria Lima** in SP 1059, long ID ancmt w/slogans, mx and sfx, relig and inspirational mx, talk at 1107, fair w/QRN and fading (Clar NY 4/9)
- 9720 **GERMANY Deut Welle Nauen** in EG 2201, nx, ID 2205, website, "Newslink for Asia" (Sellers ONT 4/2)
- 97368v **PARAGUAY R Nacional** in SP 0854, opening sequence started w/vocal, full ID, QTH, prayer, usual poor audio but strong signal, drifting fqy (Berg MA 4/4) in SP 0924, tlks re America, Paraguay, and Colombia, ID, field rpt, SW fqys, vg w/mild QRM from Deut Welle and BBC (Barbour NH 3/16) in SP 0158*, canned ID's, NA at s/off, good signal but raspy audio (Kohlbrenner PA 3/18) in SP 2218-0256*, irregular - not hrd every nite, t/in to futbol match w/very excited anncr, usual excited G-O-A-L, Radio Nacional jingles, sound effects, short mx breaks, LA mx, many ID's, NA at s/off, exc (Alexander PA 3/12, D'Angelo PA 3/19)
- 9740 **SINGAPORE BBC** relay in EG 1134, discussion re gay marriage/domestic partnerships, f (Clar NY 3/28)
- 9755 **ITALY RAI Rome** in EG *1935, ID, nx re anti-terrorism summit, QRM from VOA 9760 (Fraser ME 4/17)
- 9770 **SRI LANKA SLBC Colombo** in EG 0135, inspirational mx, "Back to the Bible", pips, ID 0200, nx, p-f at peaks w/flutter and QRM Clar NY 3/25)

- 9785 **TURKEY V of Turkey** in EG *1827, IS, ID's, pips, sked, tlk re expansion of library somewhere in Turkey, into TK mx, fair signal w/QRM (Sellers ONT 4/3, Clar NY 4/8)
- 9800D **CANADA Vatican Radio** relay Sackville in EG 2018, discussion of changes in EG texts, tlk with "Latin Lover" about fine points of the Latin lang, close w/bells IS, digital reception (Brandi NJ 3/30)
- 9800D **CANADA RCI** Sackville in EG 2104, "The Roundup" discussion of old 18th century square pianos used by Bach, DRM-specific ID 2130, "Super Adventures of Mary Marvelous" (Brandi NJ 3/29)
- 9800 **CZECH REPUBLIC R Prague** in EG 0710, stories about sale of beer at sports events and foundation that supports computers for the blind, f (Sellers ONT 4/3)
- 9820 **INDIA AIR** Panaji in Sinhala? *1258-1323, IS, s/on ancmnts, ment of "Akashvani", fqy, sked, "Phashwar Bharati, mx at 1302, long tlk to 1316 re Pakistan, HD mx until t/out, choppy signal (Barbour NH 3/2)
- 9830 **JORDAN R Jordan** in AR 1748, call-ins, cmntry, AR pop mx, g (Crisler-Smith MD)
- 9870 **MONACO Trans World R** relay in EG 0645, "Family Bible Hour" just starting, g (Sellers ONT 4/3)
- 9875 **LITHUANIA R Vilnius** in EG 2250-2335, local nx, ID, rpt on induction of Lithuania into NATO, school ancmnt, anthem, into Lithuanian 2300 (Sellers ONT 4/2, Clar NY 4/6)
- 9885 **NEW ZEALAND RNZI** in EG 1125, Pacific nx, "Mailbox", new RNZI fqy, sked, g (Park HI 3/29)
- 9930 **HAWAII KWHR** Naalehu in EG 1150, preaching from Book of Jonah/Obediah to God, ID, QTH, web site etc. at TOH, f-g w/flutter (Clar NY 3/21)
- 9935 **IRAN VOIRI** Kamalabad in AR 0048, tlk, Koran chant/prayer, many ments "Ibrahim", ID (Clar NY 3/18)
- 9940 **RUSSIA R Vlaanderen** relay Irkutsk in EG 1140, pop mx, ID's, promo for a mx giveaway contest, mailing address, rpt on museum exhibition of FR/GM silver sugar spoons w/Julie Andrews singing (Clar NY 3/28)
- 9960 **ARMENIA V of Armenia** Erevan in EG 2019-2100*, national nx, mx, ID, fqy, nx w/musical flourishes between items, ment PM Blair's meeting w/Qhadaffi (McGuire MD 3/10, Clar NY 3/27)
- 9990 **EGYPT R Cairo** in EG 2139, news, ID 2142, followed by Book Review, vg (Sellers ONT 4/2)
- 11620 **INDIA AIR** Aligarh in Burmese/EG 1220, OM/YL banter over mx, contact info and pgm name in unison, ID in both languages 1230, nx in EG re various political parties, back to Burmese 1235, f-p (Barbour 3/30)
- 11620 **INDIA AIR** Bangalore in HD 0210, tradional mx, //9595 (Crisler-Smith MD 4/3)
- 11630 **CHINA CNR-1** Lingshi in CH 1248, OM/YL w/nx, interviews, sound bites, ID, f (Barbour NH 3/30)
- 11635 **FRANCE R Jamahiriya** (Libya) relay in EG/FR 1918-2035, nx of Africa, Middle East, and Pakistan, FR nx at 1921, ID, fair w/fading by t/out (Alexander PA 3/19, Fraser ME 3/10)
- 11640 **MALI China R Int** relay Bamako in EG 2037, OM/YL with "Listener's Club", ID, weak (Sellers ONT 4/3)
- 11655 **MADAGASCAR R Nederland** relay in EG 2017, "Euroquest" pgm re Irish bathhouse and revival of paganism in Denmark, ID, contact info 2030, "Newslime", weak but clear (Barbour NH 3/23)
- 11660 **CHINA CNR-2** Xi'an in CH 1323, tlks b/w brief piano bits, fanfare 1330, ID, fluttery sig (Barbour 3/30)
- 11685 **THAILAND R Thailand** in JP/EG/CH *1300, nx, mx, ID, fqy, target area ancmnt. 2 chimes, one min break and back again w/IS and EG ID. then into CH, nx, f-p (Barbour NH 4/6)
- 11690 **UNITED KINGDOM R Canada Int** relay Skelton in EG 2022, "Canada Today" re African immigrant's high suicide rates, low land gorillas in Congo, ID's, "Maple Leaf Mailbag", live bcst from the Yellowknife Caribou Festival in the Northwest Territory, p-f w/fades and ute QRM (Barbour NH 3/30)
- 11701 **ARGENTINA RAE** Buenos Aires in EG/SP 0220-0257, nx, lcl ballads, "DX Special" pgm, end of EG pgm 0257, fair reception but poor after 0230 due to adjacent chan splatter (Alexander PA 4/3) in SP 2348-0005, ments of Patagonia, mx, multi-lang ID's 2355, into PT 0000, //15345 (Kohlbrener PA 3/31)
- 11725 **EGYPT R Cairo** in EG 2330, YL tlkg about the wx w/temps at 83, Valley of the Kings (Robinson TN 4/1)
- 11765 **BRAZIL R Tupi** Curitiba in PT 2340, relig sermon w/excited preacher, vocal, //9565 (Kohlbrener PA 4/6)
- 11780 **BRAZIL R Nac da Amazonia** Brasilia in PT 2303, ID, phone #, vg (Sellers ONT 4/2)
- 11800 **ITALY RAJ** Rome in EG 0055, IS, ID, nx bulletins, political cmntry (McGuire MD 3/31, Sellers 4/3)
- 11870 **THAILAND R Thailand** in EG/IN 1202, ID and nx in EG, into IN 1215, QRM (Montgomery PA 4/10)
- 11905 **UZBEKISTAN R Tashkent** in EG 2130, IS, ID, sked, another ID and into nx, f (Sellers ONT 4/2)
- 11980 **CHINA CRI** Kunming in EG 1206, tlk re Iraq and Cheney's visit to Japan, ID, web info, promo re bcst to feature National Opera of China (Clar NY 4/10) in EG 1203, nx re 4 SARS cases this year (Sellers 4/3)
- 12005 **UNITED ARAB EMIRATES R Dubai** in EG 0329-0345*, "Images of Arabia" about coffee houses, f, not as strong on //13675 Alexander PA 4/3)
- 12065 **RUSSIA Bible Voice B/C** relay via Khabarovsk in VT/EG 1223-1245*, VT tlks, into EG 1230, tlk re same sex vs opposite sex marriage, full BVB ID and UK address at s/off, terrible audio (Barbour NH 4/6)

- 13610 **SYRIA R Damascus** in FR/EG 1936-2040, YL tlks alternating w/instrum^l mx segments, fanfare, ID and into EG around 2005 with nx, press review, poor until s/off at 2030 of stn on 13605 (D'Angelo PA 3/27) in EG 2130-2210*, nx, local ME-type pop mx, poor signal w/QRM and hum in audio (Alexander PA 3/12)
- 13780 **RWANDA Deut Welle** relay Kigali in GM 0045, rpt on fishing rights off Newfoundland, tlk on anti-terror measures in Germany in wake of bombings in Spain and Israel, ID, QTH, g (Clar NY 3/24)
- 15120 **NIGERIA V of Nigeria** Ikorodu in EG 1510, relig pgm, ID's, pgm comments, TC (Montgomery PA 4/11) in EG 1857, recorded political tlk w/bassy audio, promos for future pgms, TC 1900, ID, nx (Sellers 4/3) in EG 1745, "Sixty Minutes" pgm w/economic rpt, nx, and sports, ID (Kohlbrenner PA 3/23)
- 151498v **INDONESIA V of Indonesia** Jakarta in FR/EG 1923-2033, lite pop mx, ID's, OC from 1928-1934, C&W mx, into EG pgmg at 2000, lengthy canned ID, website, nx, QRM from WYFR s/on 1958, feature program on "Getting to Know Indonesia" (Clar NY, Kohlbrenner PA, Brandi NJ, Barbour NH)
- 15175 **GERMANY AWR Europe** relay via Juelich in Vern 1914, IS, multi-lang ID incl EG w/"Voice of Hope Network for Europe", brief inspirational mx, good sig thru QRN (Clar NY 3/28)
- 15190 **PHILIPPINES R Pilipinas** in Tagalog/EG 1930*, tlk, instrum mx, ID in EG at s/off, f (D'Angelo PA 3/27)
- 15395 **THAILAND R Thailand** in EG *0027, nx at s/on, series of gongs, features on tourism, sports, business etc. during Newshour pgm, more gongs, ID, and TC at 0100, choral anthem, f (D'Angelo PA 4/14)
- 15395 **UNITED ARAB EMIRATES R Dubai** in EG 1606, feature on the "reasonableness" and purpose of Islamic attitudes toward food, meals, and manners at the table, fair w/fading, //13675, 21605 (Clar NY 3/21)
- 15400D **NETHERLAND ANTILLES R Nederland** relay Bonaire in EG 0403, digital reception w/many dropouts, transmission beamed to Australia and New Zealand (Brandi NJ 4/4)
- 15420 **CHINA CRI** Beijing in PT 0020, nx, several ments G. Bush, ID's, trad CH mx, //11850 (Clar NY 4/1)
- 15480 **CHINA CNR-J** Beijing in CH 0146, tlk, lite Asian pop mx, f-p w/QRN, //15300, 15380 (Clar NY 3/27)
- 15505 **KUWAIT R Kuwait** in AR 1722, traditional mx, YL/OM DJ's, cmntry mixed w/mx, g (Crisler-Smith MD)
- 15525D **NETHERLANDS ANTILLES R Nederland** relay in EG 0135, digital reception, tlk abt Rwandan genocide, some audio dropouts but mostly pretty good (Brandi NJ 4/11)
- 15545 **SRI LANKA Deut Welle** relay in EG 1902, nx, ID 1905, "World of Sports", f (Seller ONT 4/3)
- 15530 **NEW ZEALAND RNZI** in EG 1130, Brothers Cazimero - a Hawaiian act, p (Park HI 3/8)
- 15605 **FRANCE RFI** in EG 1722, ending "Africa Media" and into "Health Magazine", g (Sellers ONT 4/3)
- 15660 **FRANCE R Jamahiriya** (Libya) relay in EG 1736, nx item re "Day of Mourning" declared in honor of "Fallujah martyrs", several ID's, into pgm in FR and AR, //17880 (Clar NY 4/10)
- 15680 **GERMANY Bible Voice B/C** "Voice of Hope" relay via Juelich in EG 1645, gospel mx, preaching from Matthew 27:27, crushed at 1658 by choral mx s/on WEWN? (Barbour NH 4/6)
- 15720 **NEW ZEALAND RNZI** in EG 2127, Island mx, ID, Pacific nx instead of mailbag, g (Park HI 4/12)
- 17770 **SOUTH AFRICA Channel Africa** in EG 1541, "Africa This Week" w/tlk re tobacco's use in medical Research and cmntry on upcoming elections in South Africa, fair w/fading, watery audio (Clar NY 3/21)
- 21470 **ASCENSION ISLAND BBC** relay in EG 1626, cricket scores etc., p, //21490 (Muehling NH 3/27)
- 21605 **UNITED ARAB EMIRATES R Dubai** in AR/EG 1555-1645*, Mideast mx, Koran 1607, AR tlk, into EG at 1628, ID, address, "Images of Arabia" re history of railroads in Arabia, exc (Alexander PA 4/2)
- 21630 **ASCENSION ISLAND R Japan** relay in JP *1500, JP mx, talk show w/guests, f (Muehling NH 3/27)

Clandestine/Opposition Stations

- 6350 **ETHIOPIA VO Tigray Revolution** in Tigrinya 0420, OM tlks, HOA mx, poor (Kohlbrenner PA 3/17)
- 71199v **MADAGASCAR VO the People** in Vern/EG 1702, nx & debate in EG, into Vern (Fiora ITALY 3/21)
- 7380 **SOUTH AFRICA VO Biafra Int** relay in EG *2100-2140, ID's, anmts for EG pgm targeted to Biafra, mx, nx analysis and cmntry "A Call to Reason: No More Presidential Projects, Please" (D'Angelo PA 3/27)
- 7460 **ALGERIA Western Sahara RSAD** in AR 2112-2235, long ranting tlks, extended interview, mx, chants, ID 2230 "Sahariyah al-Democratia", nx?, f-g signal (Clar NY 4/3, Barbour NH 3/9, Fiora ITALY 4/6)
- 9740 **USA Radio Pedar** Clandestine/Iran relay via Los Angeles in Farsi *1830, s/on over mx, anthem? 1832, ID techno/dance instrum^l mx, 20 min tlk by OM, more mx, vocals, fair (Barbour NH 3/23, Berg MA 3/25)
- 9820 **GERMANY VO Oromo Liberation** via Juelich relay in Oromo 1721, tlks re "democrati" and "Oromo", Horn of Africa mx, ID 1730, good until QRM splatter from BBC s/on at 1730 on 9825 (Barbour NH 3/2)
- 11530 **MOLDAVA VO Mesopotamia** in Kurdish 1300, mostly tlks, "Denji Mezopotamia" (Field MI 3/21)
- 11665 **UNITED KINGDOM Sudan Radio Service** via Wooferton relay in Vern 0354-0500, ancmts, flute/drums, vocals (Paszkiwicz WI 3/31)
- 17735 **UNITED KINGDOM R Pedar** (Iran) via Wooferton relay in EG/Farsi *1730, discussion in EG re women's rights w/occasional brief tlk bridges by OM in Farsi, mx, ID, fair w/fades, abrupt off 1830 (Berg MA 1/1) 

English Schedules

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0000-0015		V. of Cambodia	11940.4as						
0000-0015		Radio Japan	6145.0na	13650.0as	17810.0as				
0000-0027		Radio Prague Int'l	7345.0na	9440.0na					
0000-0030		Radio Australia	9660.0va	12080.0va	13630.0va	15240.0va	17750.0va	17775.0va	
			17795.0va	21725.0va					
0000-0030		Radio Cairo	11725.0na						
0000-0030		Radio Thailand	9570.0af						
0000-0030		Radio Ukraine Int'l	7545.0na						
0000-0030		BBC World Service	3915.0as	5970.0as	5975.0am	6015.0dr	6195.0as	9410.0as	
			9740.0as	9825.0sa	11835.0ca	11945.0as	12095.0sa	15280.0as	
			15310.0as	15360.0as	17655.0as	17790.0as			
0000-0100	smtwhf	BBC World Service	11955.0as						
0000-0030		VOA	7215.0as	15185.0as	15290.0as	17820.0as			
0000-0030	mtwhfa	Radio Serbia & Montenegro	9580.0na						
0000-0045		All India Radio, Delhi	9705.0as	9950.0as	11620.0as	11645.0as	13605.0as		
0000-0057		Radio Canada Int'l	9640.0as	15205.0as					
0000-1000		Caribbean Beacon	6090.0am						
0000-0830		ABC Alice Springs	4835.0do						
0000-0830		ABC Katherine	5025.0do						
0000-0830		ABC Tennant Creek	4910.0do						
0000-0500		CBC Northern Service	9625.0do						
0000-0500	a	Scandinavian Weekend R.	5980.0va	11720.0va					
0000-0100		Deutsche Welle	7130.0as	9505.0as	9825.0as				
0000-1000		Voice of Guyana	3291.1do	5949.4do					
0000-0500		NBC Windhoek, Namibia	3270.1in	3290.1af	6060.0af				
0000-0100		Radio Netherlands	9845.0na						
0000-0500		Radio New Zealand Int'l	15720.0pa						
0000-0700		Nat'l BC, Papua NG	9675.0do	11880.0ir					
0000-1100		SBC Radio 1, Singapore	6150.0do						
0000-1400		SIBC Solomon Islands	5019.9do	9545.0do					
0000-0100		Radio Exterior de Espana	15385.0na						
0000-0200		KALJ Dallas TX	13815.0va						
0000-0100		KTBN Salt Lake City UT	15590.0na						
0000-0400		KWHR Naalehu HI	17510.0as						
0000-0300		University Network	9890.0as						
0000-0600		WBCQ Monticello ME	5105.1na	7415.0na	9329.9na				
0000-0500		WEWN Birmingham AL	5825.0va						
0000-0500		WHRA Greenbush ME	7580.0eu						
0000-1000		WHRI Noblesville IN	5745.0va	7315.0am					
0000-0400		WINB Red Lion PA	9320.0am						
0000-0200	twhfa	WRMI Miami FL	7385.0na						
0000-0200	sm	WRMI Miami FL	9955.0am						
0000-0300		WRNO New Orleans LA	7355.0va						
0000-0100	sm	WWBS Macon GA	11910.0uf						
0000-0100		WWCR Nashville TN	3210.0na	5070.0na	7465.0na	13845.0na			
0000-0600		WWRB Manchester TN	5050.0na	5085.0na	6890.0na				
0000-0100		WYFR Okeechobee FL	6065.0na	9505.0na	15130.0sa				
0000-0600		Radio Vanuatu	3945.0al	7260.1do					
0000-0500		Christian Voice, Zambia	4965.0do						
0015-0030	twhfa	ORF Vienna	9870.0sa						
0015-0030	mtwhf	Bible Voice Broadcasting	7210.0as						
0015-0100		Radio Japan	6145.0na						
0030-0130		Radio Australia	9660.0va	12080.0va	13630.0va	15240.0va	15415.0va	17750.0va	
			17775.0va	17795.0va	21725.0va				
0030-0100	s	Pan American BC, Germany	9740.0as						
0030-0100		Radio Vilnius, Lithuania	11690.0na						
0030-0430		Sri Lanka B'casting Corp.	6005.0as	9770.0as	15748.0as				
0030-0100		Radio Thailand	5890.0na	15395.0na					
0030-0100		BBC English Teaching	9580.0as	17655.0as					
0030-0100		BBC World Service	5970.0as	5975.0am	6015.0dr	6195.0as	9410.0as	9740.0as	
			9825.0sa	11835.0ca	12095.0sa	15280.0as	15310.0as	15360.0as	
			17790.0as						
0030-0100		Bible Voice Broadcasting	7210.0as	9605.0as					
0030-0100		VOA Special English	7215.0as	9780.0as	11760.0as	15185.0as	15290.0as	17740.0as	
			17820.0as						
0045-0100	twhfa	ORF Vienna	9870.0sa						
0045-0115		Radio Pakistan	9342.6as	11565.0as					
0055-0115		RAI, Rome	9675.0na	11800.0na					
0100-0127		Radio Prague Int'l	6200.0na	7345.0na					
0100-0127		Voice of Vietnam	6175.0na						
0100-0128		Radio Budapest	9590.0na						
0100-0130	s	Universal Life, Germany	9485.0as						
0100-0130		Radio Tashkent	7190.0as	9715.0as					
0100-0156		China Radio Int'l	6140.0dr	9580.0na	9790.0na				
0100-0156		Voice of Korea	3560.0as	6195.0as	6520.0am	7140.0as	9345.0as	11735.1am	

0100-0156		Radio Romania Int'l	9690.0na	11940.0na	15430.0au	17760.0au			
0100-0159		Radio Canada Int'l	9755.0am	11990.0am	13710.0am				
0100-0300		HCJB Australia	15560.0as						
0100-0500		Radio Havana Cuba	6000.0na	9820.0na					
0100-0200		Radio Japan	6025.0af	11860.0as	15325.0as	17560.0af	17685.0pa	17810.0as	
			17825.0am	17835.0as	17845.0as				
0100-0200		Radio Netherlands	9845.0na	15525.0dr					
0100-0200		Voice of Russia	5945.0me	9665.0na	15595.0na	17660.0na			
0100-0200		BBC World Service	5975.0am	6195.0as	9410.0as	9825.0sa	11835.0ca	11955.0as	
			12095.0sa	15280.0as	15310.0as	15360.0as	17790.0as		
0100-0230		KJES Vado NM	7555.0na						
0100-1500		KTBN Salt Lake City UT	7505.0na						
0100-0200		VOA	7115.0as	9885.0as	11705.0as				
0100-0200	mtwhf	VOA	11725.0as						
0100-0300		WWCR Nashville TN	3210.0na	5070.0na	5935.0na	7465.0na			
0100-0200		WYFR Okeechobee FL	6065.0na	9505.0na	15060.0as				
0105-0115	sm	ORF Vienna	9870.0am						
0115-0120	mtwhf	Kyrgyz Radio, Bishkek	4010.0ir	4795.0ir					
0115-0130		ORF Vienna	9870.0am						
0130-0200		Radio Australia	9660.0va	12080.0va	13630.0va	15240.0va	15415.0va	17750.0va	
			17795.0va	21725.0va					
0130-0215	s	Pan American BC, Germany	9495.0as						
0130-0200		Radio Sweden	6010.0na	9435.0as					
0130-0200	twhfa	VOA Special English	7405.0am	9775.0am	13740.0am				
0135-0145	sm	ORF Vienna	9870.0am						
0140-0200		Vatican Radio	9650.0as	12055.0as					
0145-0200	s twhfa	Radio Tirana, Albania	6115.0na	7160.0na					
0145-0200		ORF Vienna	9870.0am						
0200-0215		Croatian Radio, Zagreb	9925.0na						
0200-0230		AWR Europe, Austria	9820.0eu						
0200-0230	sm w fa	Radio Minsk, Belarus	5970.0eu	7210.0eu					
0200-0300		BBC World Service	5975.0am	6195.0eu	9410.0eu	9750.0af	9825.0sa	11760.0me	
			11835.0ca	11955.0as	12095.0sa	15280.0as	15310.0as	15360.0as	
			17790.0as						
0200-0230	a	Wales Radio Int'l	9795.0na						
0200-0230	mtwhfa	WRMI Miami FL	7385.0na						
0200-0230	s	WRMI Miami FL	9955.0am						
0200-0256		Voice of Korea	4405.0as	9325.0as	11335.0as				
0200-0257		Radio Canada Int'l	15510.0as	17860.0as					
0200-0300	twhfa	RAE Buenos Aires	11710.1am						
0200-0400		Radio Australia	9660.0va	12080.0va	13630.0va	15240.0va	15415.0va	15515.0va	
			17750.0va	21725.0va					
			9700.0na	11700.0na					
0200-0300		Radio Bulgaria	11855.0na						
0200-0330		Radio Cairo	9524.9as	15149.8as					
0200-0300		Voice of Indonesia	9524.9as	15149.8as					
0200-0300		Radio Myanmar	7185.0do						
0200-0330	s a	Radio Pilipinas, Manila	11885.0me	15120.0me	15270.0me				
0200-0300		Voice of Russia	5945.0me	9665.0na	9860.0na	15595.0na	17660.0na		
0200-0300		Radio Korea	9560.0na	11810.0sa	15575.0na				
0200-0300		Radio Taiwan Int'l	5950.0na	9680.0na	11875.0as	15320.0as	15465.0as		
0200-0600		KALJ Dallas TX	5755.0va						
0200-0300	mtwhf	VOA	7115.0as	9885.0as	11705.0as	11725.0as			
0200-0300		WYFR Okeechobee FL	5985.0sa	6065.0na	9505.0as	11855.0sa	15255.0sa		
0215-0220		Radio Nepal, Katmandu	3230.0as	5005.3as	6100.0as	7164.4as			
0230-0257		Voice of Vietnam	6175.0na						
0230-0258		Radio Budapest	9790.0na						
0230-0300	s twhfa	Radio Tirana, Albania	6115.0na	7160.0na					
0230-0300		Radio Sweden	6010.0na						
0230-0330	s	BBC World Service	5875.0eu	7230.0eu	11845.0eu				
0230-0300	s	Voice of the NASB	7385.0na						
0230-0900		WRMI Miami FL	7385.0na						
0245-0300		BBC English Teaching	9610.0af						
0250-0300		Vatican Radio	7305.0am	9605.0am	9660.0af	17590.0as			
0300-0310		Vatican Radio	7305.0am	9605.0am	9660.0af	17590.0as			
0300-0327		Radio Prague Int'l	7345.0na	9870.0na					
0300-0330	s	HCJB Australia	15560.0as						
0300-0330		Radio Thailand	5890.0na	15395.0na					
0300-0330		Radio Ukraine Int'l	7545.0na						
0300-0330		BBC World Service	3255.0af	5975.0am	6005.0af	6190.0af	6195.0eu	7120.0af	
			7160.0af	9410.0eu	9750.0af	11760.0as	11835.0ca	11955.0na	
			12035.0af	12095.0eu	15280.0as	15310.0as	15360.0as	15575.0me	
			17760.0as	17790.0as	21660.0as	21830.0as			
			9620.0eu	11695.0eu					
0300-0500		VOA	6080.0af	7105.0af	7290.0af	7340.0af	9885.0af	12080.0af	
0300-0330	mtwhf	VOA	17895.0af						
0300-0350		Voice of Turkey	6140.0na	7270.0na					
0300-0356		China Radio Int'l	9690.0na	9790.0na					
0300-0356		Voice of Korea	3560.0as	6195.0as	7140.0as	9345.0as			
0300-1000		Radio Botswana	3356.0ln	4820.0do	7255.0do				
0300-0400	sm	R. Luz y Vida, Honduras	3250.0ca						
0300-0400		Radio Japan	21610.0pa						
0300-0600		Voice of Islam, Malaysia	6175.0as	9665.0as	9750.0as	15295.0au			
0300-0400		Radio Sultanate Oman	15355.0af						
0300-0400		Voice of Russia	9665.0na	9860.0na	9880.0na	15595.0na	17660.0na		
0300-0400		Channel Africa, S. Africa	3345.0af	6160.0af					
0300-0500	mtwhf	Sudan Radio Service	11665.0af						

0300-0400		Radio Taiwan Int'l	5950.0na	15125.0sa	15320.0as				
0300-0600		Radio Uganda	4976.0do	5026.0do	7196.0do				
0300-0800	mtwhf	WMLK Bethel PA	9465.0in						
0300-1500		WRNO New Orleans LA	7395.0am						
0300-0900		WRCR Nashville TN	3210.0na	5070.0na	5770.0na	5935.0na			
0300-0400		WYFR Okeechobee FL	6065.0na	9505.0na	11740.0sa				
0310-0330		Vatican Radio	9660.0af	17590.0as					
0330-0357		Radio Prague Int'l	11600.0as	15600.0as					
0330-0357		Voice of Vietnam	6175.0na						
0330-0400		Radio Dubai, UAE	12005.0na	13675.0na	15400.0na				
0330-0400		BBC World Service	3255.0af	5975.0am	6005.0af	6190.0af	6195.0eu	7120.0af	
			7160.0af	9410.0eu	9750.0af	11760.0as	11835.0ca	11955.0na	
			18095.0af	12095.0eu	12500.0as	13310.0as	15360.0as	15420.0af	
			15575.0me	17760.0as	17790.0as	21660.0as	21830.0as		
			15115.0eu						
0330-0400	a	BBC World Service	9585.0eu	11845.0eu	13745.0eu				
0330-0400	s	BBC World Service	6080.0af	7105.0af	7290.0af	9885.0af	12080.0af	17895.0af	
0330-0400	mtwhf	VDA	7245.0ir						
0345-0400		Radio Tajikistan	9435.0va	11590.0va	15640.0va	17600.0va			
0400-0415		Kol Israel	9660.0va	12080.0va	13630.0va	15240.0va	15515.0va	17750.0va	
0400-0430		Radio Australia	21725.0va						
		R. Vlaanderen Int'l	11635.0am						
0400-0430		Radio France Int'l	9805.0af	11700.0af	13610.0af				
0400-0500		BBC World Service	3255.0af	5975.0am	6005.0af	6010.0dr	6190.0af	6195.0eu	
			7120.0af	7160.0af	9410.0eu	11760.0as	11835.0ca	12035.0af	
			12095.0eu	15280.0as	15310.0as	15360.0as	15420.0af	15575.0me	
			17760.0as	17790.0as	21660.0as	21830.0as			
			9585.0eu	11845.0eu	13745.0eu	15115.0eu			
0400-0430	s	BBC World Service	4960.0af	6080.0af	7290.0af	9575.0af	9885.0af	11835.0af	
0400-0430	mtwhf	VDA	12080.0af	17895.0af					
		China Radio Int'l	6190.0na	9560.0na	9755.0na				
0400-0456		Radio Romania Int'l	11820.0na	15140.0as	15235.0na	17860.0as			
0400-0500		Deutsche Welle	7225.0af	9630.0af	11945.0af				
0400-0500		Radio Netherlands	6165.0na	9590.0na					
0400-0500	s	Radio Netherlands	15400.0dr						
0400-0500		Voice of Russia	9665.0na	9880.0na	15595.0na	17660.0na			
0400-0500		Channel Africa, S. Africa	3345.0af						
0400-0700		KWHR Naalehu HI	17780.0as						
0400-0500		Overcomer Ministries	9770.0au						
0400-0500	mtwhf	WYFR Okeechobee FL	6065.0na	6855.0na	7355.0va	9505.0na	9715.0na		
0415-0420	smt	Kyrgyz Radio, Bishkek	4010.0ir	4795.0ir					
0427-0500	a	Radio Voice of Hope	12060.0af	15320.0af					
0430-0445		BBC English Teaching	6010.0eu	9815.0eu					
0430-0500		Radio Australia	9660.0va	12080.0va	13630.0va	15240.0va	15415.0va	15515.0va	
			17750.0va	21725.0va					
0430-2300		Radio Nigeria, Enugu	6025.0do						
0430-2300		Radio Nigeria, Ibadan	6050.0do						
0430-2300		Radio Nigeria, Kaduna	4770.0do	6090.0do					
0430-1000		Radio Nigeria, Lagos	3326.0do	4990.0do					
0430-0500	mtwhf	TWR Swaziland	3200.0af	4775.0af					
		VDA	4960.0af	6080.0af	7290.0af	9575.0af	11835.0af	12080.0af	
			17895.0af						
0430-0500		Radio Serbia & Montenegro	9580.0na						
0445-0500		RAI, Rome	6110.0af	7235.0af	9875.0af				
0500-0520		Vatican Radio	4005.0eu	5890.0eu	7250.0eu	9660.0af	11625.0af	13765.0af	
0500-0530		Radio Australia	9660.0va	12080.0va	13630.0va	15240.0va	15515.0va	17750.0va	
			21725.0va						
0500-0530		Radio France Int'l	11685.0af	15155.0af	15605.0af				
0500-0530		BBC World Service	6005.0af	6190.0af	6195.0eu	7160.0af	9410.0eu	11760.0me	
			11765.0af	11940.0af	11955.0as	12095.0eu	15280.0as	15310.0as	
			15360.0as	15420.0af	15565.0eu	15575.0as	17640.0af	17760.0as	
			17790.0as	17885.0af	21660.0as				
0500-0530	mtwhf	Bible Voice Broadcasting	15460.0me						
0500-0600	mtwhf	BBS, Bhutan	5030.0al	6035.0do					
0500-0700		Radio Havana Cuba	9550.0na	9820.0na	11760.0na				
0500-1100	a	Scandinavian Weekend R.	6170.0va	11690.0va					
0500-0600		Deutsche Welle	9630.0af	9700.0af	12045.0af	15410.0af	17860.0af		
0500-0600		Radio Japan	5975.0eu	6110.0na	7230.0eu	15195.0as	17810.0as	21755.0pa	
0500-0800		Radio Kuwait	15110.0as						
0500-1600		NBC Windhoek, Namibia	6060.0af	6175.0af					
0500-0705		Radio New Zealand Int'l	9615.0pa						
0500-1100		Voice of Nigeria	15120.0ir	17800.0af					
0500-0700		Voice of Russia	21790.0au						
0500-0600		Channel Africa, S. Africa	7210.0af	9770.0af					
0500-0630		TWR Swaziland	4775.0af	6120.0af	9500.0af				
0500-0600	mtwhf	VDA	6035.0af	6080.0af	6180.0af	7290.0af	12080.0af		
0500-0600		WEWN Birmingham AL	5825.0na						
0500-1000		WHRA Greenbush ME	11730.0af						
0500-0600		WYFR Okeechobee FL	6855.0na	9355.0eu					
0500-1600		Christian Voice, Zambia	9865.0do						
0505-0530	s	ORF Vienna	17870.0me						
0515-0525		Radio Rwanda	6055.0do						
0520-0530		Vatican Radio	9660.0af	11625.0af	13765.0af				
0525-0915		Ghana Broadcasting Corp.	3366.0do	4915.0do					
0530-0545	s	BBC English Teaching	9875.0eu						
0530-0545	f	Bible Voice Broadcasting	15460.0me						

0530-0550		Radio Dubai, UAE	15435.0au	17830.0au	21700.0au				
0530-0600		Radio Australia	9660.0va	12080.0va	13630.0va	15240.0va	15415.0va	15515.0va	
			17750.0va	21725.0va					
0530-0600		Georgian Radio, Tbilisi	11805.1eu						
0530-0600		Radio Thailand	21795.0eu						
0530-0600		BBC World Service	6005.0af	6190.0af	6195.0eu	7160.0af	9410.0eu	11760.0me	
			11765.0af	11760.0af	11955.0as	12095.0eu	15310.0as	15360.0af	
			15420.0af	15565.0eu	15575.0as	17640.0af	17760.0as	17790.0as	
			21660.0as						
0530-0600	mtwhf	BBC World Service	17885.0af						
0535-0600	s	ORF Vienna	17870.0me						
0600-0615		Croatian Radio, Zagreb	12110.0pa						
0600-0630		Radio France Int'l	11665.0af	17800.0af	21620.0af				
0600-0630		TWR Meyerton	11640.0af						
0600-0630		BBC World Service	6005.0af	6190.0af	7160.0af	9410.0eu	11765.0af	11940.0af	
			11955.0as	12095.0eu	15310.0as	15360.0as	15565.0eu	15575.0as	
			17640.0af	17760.0as	17790.0as	21660.0as			
0600-0730	s	BBC World Service	17885.0af						
0600-0630	s	whfa	13810.0me						
0600-0700		Bible Voice Broadcasting	6080.0af	7290.0af					
0600-0630	mtwhf	VOA	6035.0af	6180.0af	12080.0af				
0600-0700		Radio Australia	9660.0va	11880.0va	12080.0va	13605.0va	15240.0va	15415.0va	
			15515.0va	17750.0va					
0600-0700		Deutsche Welle	6140.0eu	7170.0af	15275.0af	17860.0af	21675.0dr		
0600-0700		Radio Japan	7230.0eu	11715.0as	11740.0as	11760.0as	13630.0am	15195.0as	
			17870.0pa	21755.0pa					
0600-1300		ELWA Monrovia, Liberia	4760.0do						
0600-1800		Radio Liberia Int'l	6100.0do						
0600-1000		R. Veritas, Liberia	5470.0af						
0600-0825		Voice of Malaysia	6175.0as	9665.0as	9750.0as	15295.0au			
0600-2400		SLBS, Sierra Leone	3316.0do						
0600-0700		Channel Africa, S. Africa	7210.0af	15215.0af					
0600-1300		Radio Uganda	5026.0do	7110.0do	7196.0do				
0600-0800		Overcomer Ministries	6110.0eu						
0600-0700		WBCQ Monticello ME	5105.1na	7415.0na					
0600-0900		WEWN Birmingham AL	5825.0na	7580.0eu					
0600-0700		WYFR Okeechobee FL	7355.0eu	11530.0af	11580.0eu				
0600-1000		Radio Vanuatu	3945.0al	4960.0do	7260.1ir				
0600-0700		Republic of Yemen Radio	9780.0me						
0630-0700		Vatican Radio	11625.0af	13765.0af	15570.0af				
0630-0645	mtwhf	Vatican Radio	4005.0eu	5890.0eu	6185.0eu	7250.0eu	9645.0eu	11740.0eu	
			15595.0eu						
0630-0700		Radio Bulgaria	11600.0eu	13600.0eu					
0630-0900		TWR Swaziland	6120.0af	9500.0af					
0630-0700		BBC World Service	6005.0af	6190.0af	7160.0af	9410.0eu	11765.0af	11940.0af	
			11955.0as	12095.0eu	15310.0as	15360.0as	15400.0af	15565.0eu	
			15575.0as	17640.0af	17760.0as	17790.0as	21660.0as		
0645-0715	s	TWR Tirana	11865.0eu						
0645-0715	s	TWR Monte Carlo	9870.0eu						
0700-0715	s	Bible Voice Broadcasting	5905.0eu						
0700-0726		Radio Romania Int'l	11830.0eu	15150.0eu					
0700-0727		Radio Prague Int'l	9880.0eu	11600.0eu					
0700-0730		R. Vlaanderen Int'l	5985.0eu						
0700-0730		BBC World Service	6190.0af	9410.0eu	11760.0me	11765.0af	11940.0af	11955.0as	
			12095.0eu	15310.0as	15360.0as	15485.0eu	15565.0eu	15575.0as	
			17760.0as	17790.0as	21660.0as				
0700-0800		Radio Australia	9580.0va	9660.0va	11880.0va	12080.0va	15240.0va	15415.0va	
			15515.0va	17750.0va					
0700-0800		Radio France Int'l	15605.0af						
0700-1000		Deutsche Welle	6140.0eu	21675.0dr					
0700-1200	s	Italian Radio Relay Svc	13840.0va						
0700-0830		Radio Myanmar	9730.8do						
0700-1400		Nat'l BC, Papua NG	4890.0do	9675.0ir					
0700-0900		Voice of Russia	17495.0au	17525.0au	17635.0au	21790.0au			
0700-0800		Channel Africa, S. Africa	11825.0af						
0700-0800		Radio Taiwan Int'l	5950.0na						
0700-1000		KWHR Naalehu HI	11565.0pa	17780.0as					
0700-0800		WBCQ Monticello ME	5105.1na						
0700-0800		WYFR Okeechobee FL	7355.0eu	9715.0na	9930.0af				
0705-0720		BBC English Teaching	6005.0af						
0705-1100		Radio New Zealand Int'l	9885.0pa						
0715-0745	s	whfa	5905.0eu						
0715-0750		TWR Tirana	11865.0eu						
0715-0750		TWR Monte Carlo	9870.0eu						
0730-0745	s	a	15205.0as						
0730-0800		Georgian Radio, Tbilisi	11910.0eu						
0730-1400		R. E. Highlands, Papua NG	3395.0do						
0730-1400		R. Milne Bay, Papua NG	3365.0do						
0730-1400		R. S. Highlands, Papua NG	3275.0do						
0730-0800		BBC World Service	6190.0af	9410.0eu	11760.0me	11765.0af	11940.0af	11955.0as	
			12095.0eu	15310.0as	15360.0as	15485.0eu	15565.0eu	17760.0as	
			17790.0as	21660.0as					
0730-0800	s	a	15575.0as	17885.0af					
0745-0815	mtwhf	BBC World Service	15575.0as						
0745-0815	s	KTWR Guam	15205.0as						
0745-0815	s	a	11840.0as						
		Bible Voice Broadcasting	5905.0eu						

1230-1300		Radio Sweden	13580.0as	15240.0na	15735.0as				
1230-1300		Radio Thailand	9855.0as						
1230-1320		Voice of Turkey	15225.0as	15405.0eu					
1230-1300		BBC World Service	6190.0af	6195.0va	7320.0dr	9740.0as	11760.0me	11940.0af	
			12095.0eu	15190.0am	15310.0as	15485.0eu	15565.0eu	15575.0me	
			17640.0eu	17760.0as	17790.0as	17830.0af	17885.0af	21470.0af	
1230-1300		a Wales Radio Int'l	17745.0au						
1230-1300 s		Voice of the NASB	9565.0dr						
1230-1300 s		WRMI Miami FL	9565.0dr						
1235-1245 s		a ORF Vienna	6155.0eu	13730.0eu	17715.0as				
1245-1300		ORF Vienna	17715.0as						
1245-1300 s		a ORF Vienna	6155.0eu	13730.0eu					
1300-1329		Radio Prague Int'l	13580.0eu	21745.0af					
1300-1330		Radio Canada Int'l	9815.0dr	13655.0am	17800.0am				
1300-1356		China Radio Int'l	7405.0pa	9570.0na	9650.0na	11675.0as	11760.0pa	11900.0pa	
			11980.0as	15180.0as					
		Voice of Korea	4405.0as	7505.0eu	9335.1na	11335.1eu	11710.0am		
1300-1356		Radio Romania Int'l	11830.0eu	15105.0eu					
1300-1400		Radio Australia	5995.0va	6020.0va	9475.0va	9560.0va	9580.0va	9590.0va	
			11660.0va						
1300-1800		Voice Int'l, Australia	13635.0as						
1300-1400		Deutsche Welle	6140.0eu	9655.0dr	15440.0dr				
1300-1750		Radio New Zealand Int'l	6095.0pa						
1300-1400		Radio Korea	9570.0as	9700.0as					
1300-2100		Radio Uganda	4976.0do	5026.0do	7196.0do				
1300-1400		BBC World Service	6190.0af	6195.0va	7320.0dr	9740.0as	11760.0me	11940.0af	
			12095.0eu	15190.0am	15310.0as	15420.0af	15485.0eu	15565.0eu	
			15575.0me	17640.0eu	17760.0as	17790.0as	17830.0af	17885.0af	
			21470.0af						
1300-1500		KJES Vado NM	11715.0na						
1300-1400		KNLS Anchor Point AK	11870.0as						
1300-1400		Overcomer Ministries	6110.0eu	13810.0me					
1300-1400		VOA	9645.0as	9760.0as					
1300-1500		WHRA Greenbush ME	17560.0af						
1300-1500		WHRI Noblesville IN	9850.0na	15105.0am					
1300-1400		WYFR Okeechobee FL	11560.0as	11830.0na	11865.0na	11970.0na	13695.0na	17750.0na	
1305-1315	mtwhfa	Turkmen Radio, Ashgabat	5015.0as						
1320-1330		Voice of Africa, Lihya	21675.0ir	21695.0ir					
1330-1345		BBC English Teaching	15105.0af	21640.0af					
1330-1350		Radio Dubai, UAE	13630.0eu	13675.0eu	15395.0eu	21605.0eu			
1330-1400 s		HCJB Australia	15405.0as						
1330-1400		Radio Canada Int'l	9815.0am	13655.0am	17800.0am				
1330-1400		KSDA Guam	11980.0as	15275.0as					
1330-1500		All India Radio, Delhi	9690.0as	11620.0as	13710.0as				
1330-1400		Lao Nat'l Radio	7145.0do						
1330-1400		Radio Netherlands	9815.0dr						
1330-1400		Radio Sweden	15240.0na	15735.0va					
1330-1400		Radio Tashkent	7285.0as	9715.0as	15295.0as	17775.0as			
1400-1415		FEBA	9495.0as						
1400-1415	mtw	BBC English Teaching	11860.0af	15420.0af	21490.0af				
1400-1430 s		a Pan American BC, Germany	15650.0as						
1400-1430		Radio Thailand	9830.0as						
1400-1430	fa	Bible Voice Broadcasting	7485.0as						
1400-1456		China Radio Int'l	7405.0na	9560.0as	11675.0as	11765.0as	13675.0na	13685.0af	
			13740.0na	15125.0af					
1400 1600		Radio Australia	5995.0va	6080.0va	7260.0va	9475.0va	9590.0va	9805.0va	
			11660.0va	11750.0va					
1400-1500		Radio Canada Int'l	9515.0am	13655.0am	17800.0am				
1400-1500		Radio France Int'l	9580.0as	11610.0as	15615.0as	17515.0as			
1400-1600		Deutsche Welle	6140.0eu						
1400-1500		Radio Japan	7200.0as	11730.0as	11840.0pa				
1400-1600		Radio Netherlands	9890.0as	11835.0as	12075.0as				
1400-1500		Radio Sultanate Oman	15140.0eu						
1400-1500		Voice of Russia	7390.0as	9745.0as	12055.0as	15780.0dr	17645.0as		
1400-1600		SBC Radio 1, Singapore	6150.0do						
1400-1500		Channel Africa, S. Africa	11825.0af						
1400-1500		Radio Taiwan Int'l	15265.0as						
1400-1500		BBC World Service	6190.0af	6195.0as	7320.0dr	9740.0as	11750.0as	11940.0af	
			12095.0eu	15190.0am	15310.0as	15485.0eu	15565.0eu	15575.0me	
			17640.0eu	17790.0as	17830.0af	21470.0af	21660.0af		
1400-1500		Overcomer Ministries	6110.0eu	13810.0me	17550.0as	21590.0sa			
1400-1500		VOA	6160.0as	7125.0as	9760.0as	15160.0as	15425.0as		
1400-1600		WEWN Birmingham AL	9955.0na						
1400-1500		WYFR Okeechobee FL	11560.0as	11830.0na	11970.0na	17750.0na			
1415-1420		Radio Nepal, Katmandu	3230.0as	5005.3as	6100.0as	7164.4as			
1415-1730		HCJB Australia	15405.0as						
1430-1440		Voice of Africa, Libya	21675.0ir						
1430-1445		Pan American BC, Germany	15650.0as						
1430-1600		Radio Myanmar	5040.6do	5985.9do					
1430-1500 s	fa	Bible Voice Broadcasting	7485.0as						
1430-1500	a	Bible Voice Broadcasting	5945.0as						
1445-1500	mtwhfa	BBC English Teaching	6140.0as	7205.0as	15245.0as				
1445-1500 s	a	Pan American BC, Germany	15650.0as						
1500-1515 s	w	Pan American BC, Germany	15650.0me						
1500-1515 s		Bible Voice Broadcasting	7485.0as						
1500-1530	t	Bible Voice Broadcasting	17510.0as						

1500-1527		Voice of Vietnam	7285.0as	9840.0as	12019.9as				
1500-1528	s	Radio Budapest	6025.0eu	9715.0eu					
1500-1530		Voice of Mongolia	12015.0as						
1500-1530		BBC World Service	5975.0as	6190.0af	6195.0as	9740.0as	11750.0as	11860.0af	15485.0eu
			11940.0af	12095.0eu	15190.0am	15310.0as	15400.0af	15420.0af	15485.0eu
			15485.0eu	15565.0eu	17790.0as	17830.0as	21470.0af	21490.0af	
			21660.0af						
1500-1600		VOA Special English	6160.0as	9590.0as	9760.0as	9845.0as	12040.0as	15550.0as	
1500-1556		China Radio Int'l	7160.0as	9560.0as	9785.0as	13685.0af	13740.0na	15220.0na	
			15125.0af						
1500-1556		Voice of Korea	4405.0as	7505.0eu	9335.1am	11335.1eu	11710.1am		
1500-1559		Radio Canada Int'l	15455.0as	17720.0as					
1500-1559	s	Radio Canada Int'l	9515.0am	13655.0am	17800.0am				
1500-1800	a	Scandinavian Weekend R.	5990.0va	11720.0va					
1500-1600		KIWR Guam	12105.0as						
1500-1600		Radio Japan	6190.0as	7200.0as	9505.0am	11730.0as			
1500-1600		FEBA	7365.0as						
1500-1600		Voice of Russia	4940.0me	4965.0me	4975.0me	7325.0me	7390.0as	11500.0as	
			11985.0me						
1500-1600		Channel Africa, S. Africa	11825.0af	17770.0af					
1500-1700	mtwhf	Sudan Radio Service	17630.0af						
1500-1600	s	Brigham Young University	9660.0dr						
1500-2400		KTBN Salt Lake City UT	15590.0na						
1500-1600		Overcomer Ministries	6110.0eu	13810.0me	21590.0sa				
1500-1600		VOA	7125.0as						
1500-2300		WHRA Greenbush ME	17650.0af						
1500-1700		WHRI Noblesville IN	13760.0va	15105.0am					
1500-2000	mtwhf	WMLK Bethel PA	9465.0eu						
1500-2300		WRND New Orleans LA	7395.0am	15420.0al					
1500-2200		WWCR Nashville TN	9475.0na	12160.0na	13845.0na	15825.0na			
1500-1600	mtwhf	WWRB Manchester TN	9320.0na	12172.0na					
1500-1600		WYFR Okeechobee FL	6280.0as	11830.0na	15520.0as	17750.0na			
1505-1510	s	ORF Vienna	13775.0na						
1510-1525		ORF Vienna	13775.0na						
1515-1530	s	Bible Voice Broadcasting	7485.0as	15680.0me					
1525-1530	s	ORF Vienna	13775.0na						
1530-1545		BBC English Teaching	11685.0as	15540.0as					
1530-1545		Bible Voice Broadcasting	17510.0as						
1530-1545	s	Bible Voice Broadcasting	15680.0me						
1530-1600	s	Pan American BC, Germany	15650.0as						
1530-1630		VOIRI Teheran	9635.0as	11650.0as					
1530-2130	s	Reflections Europe, Ire.	3910.0eu	6295.0eu	12255.0eu				
1530-1600		Georgian Radio, Tbilisi	6180.0me						
1530-1600		AWR Africa, UAE	15225.0as						
1530-1600		BBC World Service	5975.0as	6190.0af	6195.0as	9740.0as	11750.0as	11940.0af	15485.0eu
			12095.0eu	15190.0am	15310.0as	15400.0af	15485.0eu	15565.0eu	
			17790.0as	17830.0af	21470.0af	21660.0af			
1530-1600		Vatican Radio	12065.0as	13765.0as	15235.0as				
1535-1540	s	ORF Vienna	13775.0na						
1540-1555		ORF Vienna	13775.0na						
1545-1600		Bible Voice Broadcasting	15680.0me	17510.0as					
1555-1600	s	ORF Vienna	13775.0na						
1600-1615		Radio Pakistan	11570.0me	11640.0af	11850.0me	15100.0af	15727.6af		
1600-1630		BBC World Service	3915.0as	5975.0as	6190.0af	6195.0as	7160.0as	9410.0eu	
			9510.0as	11940.0af	12095.0eu	15190.0am	15310.0as	15400.0af	
			15485.0eu	15565.0eu	17790.0as	17820.0eu	17830.0af	21470.0af	
1600-1615		Bible Voice Broadcasting	15680.0me						
1600-1627		Radio Prague Int'l	5930.0eu	17485.0af					
1600-1627		Voice of Vietnam	7220.0as	9550.0as	11630.0af	13740.0af			
1600-1630		Deutsche Welle	6170.0as	7225.0as	17595.0as				
1600-1630		KSDA Guam	15235.0as						
1600-1635		Radio Dubai, UAE	13630.0eu	13675.0eu	15395.0eu	21605.0eu			
1600-1640	mtwhf	R. Pridnestrovya, Moldova	5960.0eu						
1600-1656		China Radio Int'l	9570.0af	11900.0af					
1600-1656		Voice of Korea	3560.0as	9975.0af	11735.1af				
1600-1700		Radio Australia	5995.0va	6080.0va	7220.0va	7260.0va	9475.0va	11660.0va	
1600-1700		Radio Ethiopia	5990.0af	7110.0af	7165.0af	9560.7af	9704.2af	11800.0af	
1600-1700		Radio France Int'l	9730.0af	15160.0af	15605.0af	17605.0af	17850.0af		
1600-1700	a	Voice of Greece	7475.0eu	9520.0eu	15630.0eu	17705.0na			
1600-2400		NBC Windhoek, Namibia	3270.1ln	3290.1af	6060.0af				
1600-2300		Radio Nigeria, Lagos	3326.0do	4990.0do					
1600-1700		Voice of Russia	5945.0as	7320.0as	11985.0af	12055.0as			
1600-1700		Radio Korea	5975.0om	9870.0af					
1600-1800		Radio Taiwan Int'l	11550.0as						
1600-1700		VDA	6160.0as	7125.0as	9700.0eu	9760.0as	9850.0af	15205.0eu	
			15225.0af	15255.0eu	15410.0af	15580.0af			
1600-1700		VOA Special English	12080.0af	13600.0af	17895.0af				
1600-1800		WBCQ Monticello ME	9329.9na	17494.8na					
1600-1700		WEWN Birmingham AL	13615.0na						
1600-2200	smtwhf	WWRB Manchester TN	9320.0na	12172.0na					
1600-1700		WYFR Okeechobee FL	11830.0na	15520.0as	17750.0na	18980.0eu	21455.0eu	21525.0af	
1600-2400		Christian Voice, Zambia	4965.0do						
1600-1900		SWR Africa, Zimbabwe	6145.0af						
1615-1630	s	BBC World Service	11860.0af	15420.0af	21490.0af				
1615-1645	s t h a	Bible Voice Broadcasting	15680.0me						
1615-1700	m w f	Bible Voice Broadcasting	15235.0me						

1615-1630		Vatican Radio	4005.0eu	5890.0eu	7250.0eu	9645.0eu	15595.0eu		
1630-1640		Voice of Africa, Libya	15660.0lr	17695.0lr					
1630-1700		Bible Voice Broadcasting	13810.0af						
1630-1830		Radio Cairo	9855.0af						
1630-1700		Deutsche Welle	6140.0dr	6170.0as	7125.0dr	7225.0as	17595.0as		
1630-1700		KSDA Guam	11975.0as	15235.0as					
1630-1700		BBC English Teaching	9530.0eu	11735.0eu	13670.0eu				
1630-1700		BBC World Service	3915.0as	5975.0as	6190.0af	6195.0as	7160.0as	9410.0eu	
			9510.0as	11940.0af	12095.0eu	15190.0am	15310.0as	15400.0af	
			15420.0af	15485.0eu	15565.0eu	17790.0as	17820.0eu	17830.0af	
			21470.0af						
1630-1700	s	BBC World Service	11860.0af	21490.0af					
1640-1650	mtwhfa	Turkmen Radio, Asgabat	4930.0as						
1645-1700		Radio Tajikistan	7245.0lr						
1645-1700	s t a	Bible Voice Broadcasting	15680.0me						
1700-1715		Kol Israel	11605.0va	15640.0va	17535.0va				
1700-1715		Radio Gaikayo, Somalia	6985.0va	9615.0va					
1700-1730		Bible Voice Broadcasting	15235.0me						
1700-1715	mtwhf	Bible Voice Broadcasting	13810.0af	17860.0me					
1700-1715	s t w fa	Bible Voice Broadcasting	15680.0me						
1700-1727		Radio Prague Int'l	5930.0eu	17485.0af					
1700-1730		Voice of Azerbaijan	6110.0eu	9155.0in					
1700-1730		Radio France Int'l	15605.0af	17605.0af					
1700-1730		Radio Sweden	5955.0dr						
1700-1800		VOA	6040.0eu	6160.0as	7125.0as	9640.0as	9700.0eu	9760.0eu	
			9850.0af	15255.0eu	15410.0af	15580.0af			
			9725.0eu						
1700-1730		Voice of Vietnam	3255.0af	3915.0as	5975.0as	6005.0af	6190.0af	6195.0eu	
1700-1745		BBC World Service	7160.0as	9410.0eu	9510.0as	9630.0af	12095.0eu	15310.0as	
			15400.0af	15420.0af	15565.0eu	17820.0eu	17830.0af	21470.0af	
			7265.0eu	7285.0eu					
1700-1755		Radio Polonia, Warsaw	9570.0af	11900.0af					
1700-1756		China Radio Int'l	5995.0va	6080.0va	7220.0va	7260.0va	9475.0va	11880.0va	
1700-1800		Radio Australia	15715.0af	17550.0af					
1700-1900		Radio Africa Int'l	3366.0do	4915.0do					
1700-2400		Ghana Broadcasting Corp.	9535.0am	11970.0eu	15355.0af				
1700-1800		Radio Japan	7320.0as	9480.0eu	9890.0eu	11510.0af	11985.0af		
1700-1800		Voice of Russia	11675.0eu						
1700-1800	s	Voice of Russia	15265.0af						
1700-1800	a	Channel Africa, S. Africa	17660.0af						
1700-1900	mtwhf	Sudan Radio Service	5870.0as						
1700-1800		Overcomer Ministries	9890.0as						
1700-2400		University Network	13615.0na	15685.0af					
1700-2000		WEWN Birmingham AL	9495.0am	13760.0va					
1700-2000		WHRI Noblesville IN	11795.0na	18980.0eu	21455.0eu	21680.0af			
1700-1800		WYFR Okeechobee FL	3200.0af						
1715-1730		TWR Swaziland	13810.0af						
1715-1730	mtwhf	Bible Voice Broadcasting	15680.0me						
1715-1800	s w fa	Bible Voice Broadcasting	17860.0me						
1715-1730	m	Bible Voice Broadcasting	15660.0lr	17635.0lr	17695.0lr	17880.0lr			
1730-1740		Voice of Africa, Libya	3390.0af	7230.0af	9525.0af				
1730-1745		BBC English Teaching	6050.0eu	11960.0eu	13650.0af				
1730-1745	m w	BBC English Teaching	7150.0af	15495.0me	17810.0af				
1730-1745	mtwhf	United Nations Radio	9925.0eu	11640.0eu					
1730-1800		R. Vlaanderen Int'l	3356.0in	4820.0do	7255.0do				
1730-2200		Radio Botswana	9500.0eu	11500.0eu					
1730-1800		Radio Bulgaria	11910.0eu						
1730-1800		Georgian Radio, Tbilisi	9385.0me						
1730-1800		KSDA Guam	4760.0do						
1730-2230		ELWA Monrovia, Liberia	11720.0me	15190.0me	17720.0me				
1730-1930		Radio Pilipinas, Manila	3200.0af	9500.0af					
1730-1900		TWR Swaziland	6065.0eu						
1730-1800	mtwhfa	Radio Sweden	15235.0me						
1730-1800	s a	Bible Voice Broadcasting	11975.0af	17895.0af					
1730-1800	mtwhf	VOA	13765.0af	15570.0af	17515.0af				
1730-1800		Vatican Radio	4930.0as						
1740-1755	mtwhfa	Turkmen Radio, Asgabat	7185.0eu	9550.0eu	15520.0eu				
1745-1900		Radio Bangladesh	7410.0eu	9445.0af	9950.0af	11620.0eu	11935.0af	13605.0af	
1745-1945		All India Radio, Delhi	15075.0af	15155.0af	17670.0af				
			3255.0af	3915.0as	5975.0as	6190.0af	6195.0eu	7160.0as	
			9410.0eu	9510.0as	12095.0eu	15310.0as	15400.0af	15420.0af	
			15565.0eu	17820.0eu	17830.0af	21470.0af			
			9845.0pa						
1750-1950		Radio New Zealand Int'l	5970.0eu	11965.0as					
1800-1815	s	Bible Voice Broadcasting	13710.0me						
1800-1845	s hfa	Bible Voice Broadcasting	11630.0af	13740.0af					
1800-1827		Voice of Vietnam	15675.0af						
1800-1830	s	Universal Life, Germany	7475.0eu	9420.0eu	15630.0eu	17705.0na			
1800-1900	s	Voice of Greece	3215.0af	3345.0af	12130.0af				
1800-1830		AWR Africa, Meyerton	3255.0af	5975.0as	6190.0af	6195.0eu	9410.0eu	9510.0as	
1800-1830		BBC World Service	12095.0eu	15310.0me	15400.0af	15420.0af	17830.0af	21470.0af	
			11940.0eu	15380.0eu					
1800-1856		Radio Romania Int'l	9530.0af	11770.0af	13730.0af	15255.0af			
1800-1859		Radio Canada Int'l	9690.0eu	15345.0eu					
1800-1900	mtwhf	RAE Buenos Aires	6080.0va	7220.0va	7240.0va	7260.0va	9475.0va	11880.0va	
1800-1900		Radio Australia	6115.0as						
1800-2100		Voice Int'l, Australia							

1800-1900	a	Scandinavian Weekend R.	6170.Ova	11720.Ova					
1800-2100		Radio Kuwait	11990.Ova						
1800-2200		Radio Liberia Int'l	5100.Odo						
1800-2200		R. Veritas, Liberia	5470.Oaf						
1800-1900		Radio Netherlands	6020.Oaf	9895.Oaf	11655.Oaf				
1800-1900		Voice of Russia	9480.Oeu	9745.Oaf	9890.Oeu	11510.Oaf	11630.Oeu		
1800-1900		R. Omdurman, Sudan	7200.Odo	9505.Odo					
1800 1900		Radio Taiwan Int'l	3965.Oeu						
1800-2400		KALJ Dallas TX	13815.Ova						
1800-1900		KJES Vado NM	15385.Oau						
1800-1900		VOA	6040.Oeu	9760.Oeu	9770.Oeu	9850.Oaf	11975.Oaf	15410.Oaf	
			15580.Oaf	17895.Oaf					
1800-2100		WBCQ Monticello ME	7415.Ona	9329.9na	17494.8na				
1800-1900		WYFR Okeechobee FL	11795.Ona	18980.Oeu					
1800-1900		Republic of Yemen Radio	9780.Ome						
1815-1830		Bible Voice Broadcasting	5970.Oeu						
1815-1830 s	a	Bible Voice Broadcasting	11965.Oas						
1820-1830		Voice of Africa, Libya	15205.Oir	15660.Oir	17635.Oir	17695.Oir			
1830-1845		IBRA Radio, Germany	15695.Oaf						
1830-1900 s	a	Bible Voice Broadcasting	5970.Oeu	11965.Oas					
1830-1900		Georgian Radio, Tbilisi	11760.Oeu						
1830-1900		Voice of Greece	12105.Oeu						
1830-1900		Radio Serbia & Montenegro	100.Oeu						
1830-1900		AWR Africa, Meyerton	12130.Oaf						
1830-1920		Voice of Turkey	9785.Oeu						
1830-1900		BBC World Service	3255.Oaf	6005.Oaf	6190.Oaf	6195.Oeu	9410.Oeu	9630.Oaf	
			12095.Oeu	15310.Ome	15400.Oaf	15420.Oaf	17830.Oaf	21470.Oaf	
1845-1900	mtwhfa	Radio Tirana, Albania	7210.Oeu	9520.Oeu					
1845-1915		RTVC Brazzaville, Congo	4765.Oaf	5985.Oaf					
1845-1915 s	fa	Bible Voice Broadcasting	13710.Ome						
1900-1915 s	a	Bible Voice Broadcasting	9425.Oaf						
1900-1930 s		Bible Voice Broadcasting	5970.Oeu						
1900-1927		Voice of Vietnam	11630.Oaf	13740.Oaf					
1900-1928		Radio Budapest	3975.Oeu	6025.Oeu	11720.Oeu				
1900-1930 s		Universal Life, Germany	13820.Ome						
1900-1930		Kol Israel	11605.Ova	15615.Oaf	15640.Ova	17535.Ova			
1900-2000		VOA	4950.Oaf	6040.Oeu	9760.Oeu	9770.Oeu	9850.Oaf	11975.Oaf	
			13670.Oaf	15410.Oaf	15445.Oaf	15580.Oaf	17895.Oaf		
1900-2000		VOA Spacial English	7260.Ome	9680.Ome	13635.Ome				
1900-1956		China Radio Int'l	7140.Oas	9440.Oaf	13790.Oaf				
1900-1956		Voice of Korea	4405.Oas	7505.2eu	11335.Oeu	11710.Oeu			
1900-2000		Radio Australia	6080.Ova	7220.Ova	7240.Ova	9500.Ova	11650.Ova	11880.Ova	
1900-2000	a	Scandinavian Weekend R.	6170.Ova	11690.Ova					
1900-2000		Deutsche Welle	7225.Oaf	13590.Oaf	15545.Oaf	17770.Oaf			
1900-2030		Italian Radio Relay Svc	5775.Ova						
1900-2030		Radio Netherlands	7120.Oaf	9895.Oaf	11655.Oaf	17810.Oaf			
1900-2100 s	a	Radio Netherlands	15315.Ona	17660.Ona	17735.Ona				
1900-2000		R. Central, Papua NG	3290.Oir						
1900-2000		Voice of Russia	7440.Oeu	9890.Oeu	12070.Oeu				
1900-2400		SIBC Solomon Islands	5019.9do	9545.Odo					
1900-2000	m	Amateur Radio League, SAF	3215.Oaf						
1900-2200		Channel Africa, S. Africa	3345.Oaf						
1900-2000		Radio Korea	5975.Oorm	7275.Oeu					
1900-2000	a	Sri Lanka B'casting Corp.	6010.Oeu						
1900-2045		TWR Swaziland	3200.Oaf						
1900-2000		Radio Thailand	7155.Oeu						
1900-2000		BBC World Service	3255.Oaf	6005.Oaf	6190.Oaf	6195.Oeu	9410.Oeu	9630.Oaf	
			12095.Oaf	15310.Ome	15400.Oaf	17830.Oaf			
1900-2000		WYFR Okeechobee FL	3230.Oaf	6020.Oaf	11795.Ona	17750.Oeu	17845.Oaf	18980.Oeu	
1900-2400		Radio Vanuatu	3945.Oal	7260.1do					
1915-1925		Radio Rwanda	6055.Odo						
1915-1930		BBC English Teaching	15105.Oaf	17885.Oaf					
1915-1945 s	fa	Bible Voice Broadcasting	9425.Oaf						
1920-1930		Voice of Africa, Libya	15205.Oir	15315.Oir					
1930-2000	t h	Radio Minsk, Belarus	7105.Oeu	7210.Oeu					
1930-2000		R. Vlaanderen Int'l	9925.Oeu						
1930-2030		VOIRI Teheran	9800.Oaf	11750.Oaf					
1930-2230		Nat'l BC, Papua NG	4890.Odo	9675.Oir					
1930-2230		R. E. Highlands, Papua NG	3395.Odo						
1930-2230		R. Milne Bay, Papua NG	3365.Odo						
1930-2230		R. S. Highlands, Papua NG	3275.Odo						
1930-2000		Radio Sweden	6065.Oeu						
1935-1955		RAI, Rome	5970.Oeu	9605.Oeu					
1940-2000	mtwhfa	Voice of Armenia, Yerevan	4810.Oeu	9960.Oeu					
1945-2000 s	a	Bible Voice Broadcasting	9425.Oaf						
1945-2015	f	Bible Voice Broadcasting	12050.Oaf						
1950-2050		Radio New Zealand Int'l	11725.Opa						
1950-2000		Vatican Radio	4005.Oeu	5890.Oeu	7250.Oeu	9800.Odr			
2000-2010		Vatican Radio	4005.Oeu	5890.Oeu	7250.Oeu	9660.Oaf	9800.Odr	11625.Oaf	
			13765.Oaf						
2000-2027		Radio Prague Int'l	5930.Oeu	11600.Oas					
2000-2030		Voice of Mongolia	12015.Oas						
2000-2030		VOA	4950.Oaf	6040.Oeu	6095.Oeu	9760.Oeu	9770.Oeu	9850.Oaf	
			11855.Oaf	11975.Oaf	13670.Oaf	15410.Oaf	15445.Oaf	17745.Oaf	
2000-2030		Voice of Vietnam	7220.Oas	9550.Oas					

2000-2056		China Radio Int'l	7140.0as 13630.0af	7190.0as	9440.0af	9600.0eu	11640.0af	11790.0eu	
2000-2059		Radio Canada Int'l	5850.0eu	7235.0eu	11690.0eu	13700.0eu	17870.0eu		
2000-2100		Radio Australia	6080.0va	7220.0va	9500.0va	11650.0va	11880.0va	12080.0va	
2000-2100	s	Voice of Ethiopia	7520.0va						
2000-2100		a Scandinavian Weekend R.	5990.0va	11690.0va					
2000-2100		Deutsche Welle	7130.0af	13820.0af	15205.0af				
2000-2100		Voice of Indonesia	15149.8eu						
2000-2300		Voice of Nigeria	15120.0ir	17800.0af					
2000-2200		R. Central, Papua NG	3290.0do						
2000-2100		Voice of Russia	12070.0eu	15455.0eu					
2000-2100		AWR Africa, Meyerton	7170.0af						
2000-2100	mtwhf	Radio Exterior de Espana	9570.0af	15290.0eu					
2000-2100		Radio Damascus	12085.0eu	13610.0eu					
2000-2100		BBC World Service	3255.0af 12095.0af	6005.0af 15400.0af	6190.0af 17830.0af	6195.0eu	9410.0eu	9630.0af	
2000-2100		Overcomer Ministries	9755.0af						
2000-2200		WEWN Birmingham AL	13615.0na	17595.0af					
2000-2400		WHRI Noblesville IN	5745.0va	9495.0am					
2000-2100		WYFR Okeechobee FL	3230.0af 17845.0af	6020.0af 18980.0eu	11795.0na 15195.0af	17725.0sa	17750.0eu		
2010-2030		Vatican Radio	9660.0af	9800.0dr	11625.0af	13765.0af			
2025-2045		RAI, Rome	6185.0af	9670.0af	11880.0af				
2030-2045		Radio Thailand	9680.0eu						
2030-2057		Voice of Vietnam	9725.0af	11630.0af	13740.0af				
2030-2100	t h	Radio Minsk, Belarus	7105.0eu	7210.0eu					
2030-2130		Radio Havana Cuba	9505.0eu	11760.0eu					
2030-2115		Radio Cairo	15375.0af						
2030-2100		Radio Netherlands	7120.0af	9800.0dr	9895.0af	11655.0af	17810.0af		
2030-2120		Voice of Turkey	7170.0as						
2030-2100	f	Wales Radio Int'l	7325.0eu						
2030-2100		VOA	6040.0eu 13670.0af	6095.0eu 15410.0af	9760.0eu 15445.0af	9770.0eu 17745.0af	9850.0af	11975.0af	
2030-2100	s	a VOA	4950.0af						
2030-2100		Radio Tashkent	5025.0eu	9545.0eu	11905.0eu				
2035-2045		Voice of Africa, Libya	11635.0ir						
2045-2230		All India Radio, Delhi	7410.0eu	9445.0eu	9910.0au	9950.0eu	11620.0au	11715.0au	
2050-2400		Radio New Zealand Int'l	15720.0pa						
2100-2115	mtwhf	BBC Caribbean Report	5975.0ca						
2100-2128		Radio Budapest	6025.0eu	11830.0af					
2100-2130		Radio Australia	7220.0va 17715.0va	9500.0va 21740.0va	9660.0va 9600.0eu	11650.0va	11880.0va	12080.0va	
2100-2130		China Radio Int'l	7190.0as						
2100-2130		Radio Serbia & Montenegro	6100.0eu						
2100-2130		Radio Korea	3955.0eu						
2100-2130		Radio Ukraine Int'l	7420.0eu						
2100-2130		BBC World Service	3255.0af 9410.0eu	3915.0as 11945.0as	5965.0as 12095.0sa	6005.0af 15400.0af	6190.0af 17830.0af	6195.0va	
2100-2130	s	a BBC World Service	5975.0am						
2100-2150	s	Radio Exterior de Espana	9570.0af	9640.0eu					
2100-2156		Voice of Korea	4405.0as	7505.2eu	11335.2eu				
2100-2159		Radio Canada Int'l	9800.0dr						
2100-2200		R. Nacional de Angola	3374.9va	7216.8va					
2100-2200		AWR Europe, Austria	15130.0af						
2100-2200		Radio Bulgaria	5800.0eu	7500.0eu					
2100-2200	f	Scandinavian Weekend R.	5990.0va	11720.0va					
2100-2200		Deutsche Welle	9440.0af	11865.0af	15205.0af				
2100-2200		Radio Japan	6035.0pa	6055.0eu	6180.0eu	11855.0af	17825.0na	21670.0pa	
2100-2200		Radio Netherlands	15150.0dr						
2100-2200	a	Voice of Biafra Int'l	7380.0af						
2100-2200		Radio Damascus	12085.0na	13610.0na					
2100-2200		VOA	11975.0af	13670.0af	15410.0af	15445.0af			
2100-2300		WBCQ Monticello ME	5105.1na	7415.0na	9329.9na	17494.8na			
2100-2200		WYFR Okeechobee FL	11795.0na	17725.0sa	17845.0af	18930.0eu	18980.0eu		
2115-2130	mtwhf	BBC Caribbean Report	5975.0ca	11675.0ca	15390.0ca				
2115-2200		Radio Cairo	9990.1eu	15375.0af					
2130-2145	t f	BBC Calling Falklands	11720.0sa						
2130-2156		China Radio Int'l	7190.0as	9600.0eu	11790.0eu				
2130-2156		Radio Romania Int'l	7285.0eu	9725.0eu	15285.0na	17735.0na			
2130-2200	mtwhfa	Radio Tirana, Albania	7130.0na						
2130-2400		ABC Alice Springs	4835.0do						
2130-2400		ABC Katherine	5025.0do						
2130-2400		ABC Tennant Creek	4910.0do						
2130-2200		Radio Australia	4660.0va 21740.0va	11650.0va	11880.0va	12080.0va	17585.0va	17715.0va	
2130-2200		KSDA Guam	11850.0as	11980.0as					
2130-2200		Radio Sweden	6065.0eu	9880.0as					
2130-2200		BBC World Service	3255.0af 6195.0va	3915.0as 9410.0eu	5965.0as 11945.0as	5975.0am 12095.0sa	6005.0af 15400.0af	6190.0af 17830.0af	
2130-2200		Radio Tashkent	5025.0eu	9545.0eu	11905.0eu				
2200-2229		R. Vlaanderen Int'l	11635.0am						
2200-2230		Radio Canada Int'l	5960.0am	13785.0am	15170.0am				
2200-2230		Deutsche Welle	7115.0as	9720.0as	9800.0dr				
2200-2400		VOA	7215.0as	15185.0as	15290.0as	15305.0as	17740.0as	17820.0as	
2200-2230	smtwhf	Radio Serbia & Montenegro	7230.0au						

2200-2245		Radio Cairo	9990.1eu							
2200-2250		Voice of Turkey	9830.0va							
2200-2256		China Radio Int'l	9880.0eu							
2200-2400		Caribbean Beacon	6090.0am							
2200-2300		Radio Australia	11880.0va	13620.0va	15320.0va	17585.0va	17715.0va	21740.0va		
2200-2400	f	Scandinavian Weekend R.	5980.0va	11720.0va						
2200-2400		Voice of Guyana	3291.1do	5949.4do						
2200-2300		Radio Netherlands	15525.0dr							
2200-2300		Radio Taiwan Int'l	15600.0eu							
2200-2300		BBC World Service	5965.0as	5975.0am	6195.0va	7105.0as	9740.0as	11955.0as		
2200-2400		KWHR Naalehu HI	12095.0sa	15400.0af	17830.0af					
2300-2300		Overcomer Ministries	17510.0as							
2200-2400			6045.0eu	6055.0af	9480.0sa	9490.0af	9695.0as	9730.0as		
2200-2400	mtwhfa	WEWN Birmingham AL	9745.0af	11600.0as	11935.0as	11950.0sa	12020.0ca			
2200-2300	s	WRMI Miami FL	9975.0na	15725.0na						
2200-2300		WRMI Miami FL	9955.0am							
2200-2300		WWCR Nashville TN	7465.0na	9475.0na	12160.0na	13845.0na				
2200-2300		WWRB Manchester TN	5050.0na	5085.0na	6890.0na	12172.0na				
2200-2300		WYFR Okeechobee FL	11740.0na	15695.0eu	15770.0af					
2205-2230		RAI, Rome	11895.0as							
2215-2230		Croatian Radio, Zagreb	9925.0sa							
2230-2257		Radio Prague Int'l	7345.0na	9415.0na						
2230-2300		Radio Canada Int'l	5960.0am	9525.0as	11810.0as	12035.0as	13785.0am			
2230-2300		Deutsche Welle	7115.0as	9720.0as						
2230-2300		KSDA Guam	11850.0as	15320.0as						
2230-2400		Nat'l BC, Papua NG	9675.0do	11880.0ir						
2230-2300		Radio Sweden	9800.0dr							
2245-2400		All India Radio, Delhi	9705.0as	9950.0as	11620.0as	11645.0as	13605.0as			
2300-2330		Radio Australia	9660.0va	12080.0va	13620.0va	15320.0va	17585.0va	17715.0va		
2300-2330			17795.0va	21740.0va						
2300-2330		BBC World Service	3915.0as	5965.0as	5975.0am	6195.0as	9740.0as	9800.0dr		
2300-2330			11945.0as	11955.0as	12095.0sa	15280.0as				
2300-2356		VOA Special English	9725.0as	11965.0as	12055.0as	13755.0as	15145.0as			
2300-2356		China Radio Int'l	6145.0na	13680.0na						
2300-2359		Radio Romania Int'l	7280.0eu	9590.0eu	9645.0na	11940.0na				
2300-2359		Radio Canada Int'l	5960.0am	13785.0am						
2300-2400		Radio Bulgaria	9700.0na	11700.0na						
2300-2400		Radio Havana Cuba	9550.0am							
2300-2400		Radio Cairo	11725.0na							
2300-2400		Deutsche Welle	7115.0as	9890.0as	15135.0as					
2300-2400		SBC Radio 1, Singapore	6150.0do							
2300-2400		WBCQ Monticello ME	5105.1na	7415.0na	9329.9na					
2300-2400		WHRA Greenbush ME	7580.0eu							
2300-2400	mtwhf	WINB Red Lion PA	9320.0am							
2300-2400	s	WRMI Miami FL	7385.0na							
2300-2400		WRMI Miami FL	9955.0na							
2300-2400	a	WRMI Miami FL	15725.0na							
2300-2400	s	WRNO New Orleans LA	7355.0va							
2300-2400			11910.0uf							
2300-2400		WWBS Macon GA	5070.0na	7465.0na	9475.0na	13845.0na				
2300-2400		WWRB Manchester TN	5050.0na	5085.0na	6890.0na					
2300-2400		WYFR Okeechobee FL	5985.0sa	11740.0na	11855.0sa	15255.0sa	17750.0sa			
2330-2357		Voice of Vietnam	9840.0eu	12019.9eu						
2330-2400		Radio Australia	9660.0va	12080.0va	13620.0va	15320.0va	17585.0va	17715.0va		
2330-2400			17750.0va	17795.0va	21740.0va					
2330-2400		Radio Vilnius, Lithuania	9875.0na							
2330-2400		BBC World Service	3915.0as	5965.0as	5975.0am	6195.0as	9580.0as	9740.0as		
2330-2400			9800.0dr	11945.0as	11955.0as	12095.0sa	15280.0as			
2330-2400		VOA Special English	7225.0as	7260.0as	9725.0as	11805.0as	11965.0as	12055.0as		
2330-2400			13725.0as	13755.0as	15145.0as	15205.0as				
24hr-		CFRX Toronto ON	6070.0do							
24hr-		CFVP Calgary AB	6030.0do							
24hr-		CKZN Saint John's NL	6160.0do							
24hr-		CKZU Vancouver BC	6160.0do							
24hr-		RTM Radio 4, Malaysia	7295.0do							
24hr-		ZLXA New Zealand	3935.0do							
24hr-		University Network	5029.1am	6150.0am	7375.0am	9724.9sa	11869.2am	13750.0na		
24hr-		AFRTS	4319.0uf	5446.5uf	5765.0uf	6350.0uf	7507.0uf	7590.0uf		
24hr-			10320.0uf	12133.5uf	12579.0uf	13362.0uf	13855.0uf			
24hr-		WBOH Newport NC	5920.0am							
24hr-		WJIE Louisville KY	7490.0am	11515.0n	13595.0am					
24hr-		WTJC Newport NC	9370.0na							

Key: Days:

s - Sunday
m - Monday
t - Tuesday
w - Wednesday
h - Thursday
f - Friday
a - Saturday

Target Areas:

na - North America
ca - Central America
sa - South America
am - Americas
eu - Europe
af - Africa
me - Middle East
as - Asia
pa - Pacific

Other Notes:

va - Various
do - Domestic
om - Omnidirectional
in - Inactive
ir - Irregular
oc - Occasional
al - Alternate
lf - Lower Sideband
uf - Upper Sideband
dr - Digital Radio Mondiale

Company Store

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The following items are available through the Company Store. Shipping is extra as noted.

Publications

Shortwave Listening Guidebook by Harry Helms. A beginners guide to shortwave listening covering equipment and more.	\$19.95 +2.00 s/h US/CA +3.00 s/h world
Joe Carr's Receiving Antenna Handbook A guide to high performance receiving antennas from longwave to HF and VHF.	\$19.95 +2.00 s/h US/CA +3.00 s/h world
Joe Carr's Loop Antenna Handbook Comprehensive but readable guide to understanding and building loop antennas.	\$16.50 +2.00 s/h US/CA +3.00 s/h world
Shortwave Receivers, Past & Present by Fred Osterman. Comprehensive book for anyone interested in buying or collecting shortwave radios.	\$21.00 +2.00 s/h US/CA +3.00 s/h world
Farrell's Confidential Frequency List (12th Edition) Compiled by Kevin Nice. Definitive source of information for the dedicated ute listener.	\$24.50 +4.00 s/h NAM +8.00 air world
Radio Monitoring: the How-to Guide by Skip Arey. Guide for new listeners to MW, HF, VHF and above.	17.95 +4.00 s/h NAM +8.00 air world
Passport to Worldband Radio 2004 Great source of information about shortwave stations, frequencies in use and schedules.	\$20.95 +4.00 s/h NAM +8.00 air world
World Radio and TV Handbook 2004 Long considered to be the bible for shortwave listeners.	\$27.95 +4.00 s/h NAM +8.00 air world
NASWA Country List and Awards Program Booklet	\$3.00 PP US/CA \$5.50 elsewhere
NASWA T-Shirts Return of a favorite in NASWA blue with the club logo.	\$12.00 S-XL 14.00 XXL +4.00 s/h NAM +8.00 air world
NASWA Sweatshirts Return of a favorite in NASWA blue with the club logo.	\$20.00 S-XL 22.00 XXL +8.00 s/h NAM +15.00 air world
NASWA Coffee Mugs 11 oz. white mug with the club logo on two sides. Return of a favorite with the club logo in NASWA blue.	\$5.50 +5.50 s/h NAM +10.00 air world
NASWA Beer Mugs 16 oz. clear glass mug embossed with "Fest '04" on two sides.	\$8.00 +7.00 s/h NAM +15.00 air world

Please make all checks payable in U.S. funds to "The NASWA Company Store".



