

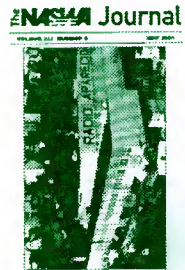
The **NASAA** Journal

VOLUME XLI NUMBER 12

DECEMBER 2001



Holiday Greetings



North American Shortwave Association — America's Shortwave Broadcast Club

Universal Radio - Quality Equipment since 1942.

TEN-TEC RX-350

The new Ten-Tec RX-350 brings you the world of IF level digital signal processing in a powerful desktop SWL receiver unlike anything that has come before it. What benefit does IF-DSP provide the shortwave listener? Cleaner signal readability. Plus DSP can eliminate heterodynes and limit spurious broadband noise instantly by pushing buttons. Take advantage of the wide variety of DSP filter choices built-in to the receiver to suppress undesired adjacent interference. Use these same filters to tailor the response of the receiver to your needs - from a wide 8 kHz for pleasing SAM or AM audio to a tiny 300 Hz for digging weak CW and digital mode signals out of the noise. There are 34 of them built-in. That's right, 34, not 2 or 3 built-in, and not sold as expensive options! IF-DSP also allows Flash ROM updating of your receiver with the latest features and functions. Free! If new functions and features are added to the RX-350, simply visit the Ten-Tec website, download the latest version of the receiver, connect it via a serial port cable to your RX-350 and it's as if your radio rolled off the assembly line minutes earlier.

The RX-350 features a clean, modern look featuring a large multifunction LCD graphics panel for display of all receiver functions. Push-button operation of major receiver controls are provided from the receiver front panel. Simple, logical layout of front panel controls allow operation of the radio without having to constantly refer to the instruction manual. Never has such a powerful receiver been so easy to operate.

RX-350, covering 100 kHz to 30 MHz, supports operating modes tailored to the dedicated shortwave listener. Selectable sideband, synchronous AM detection allows higher quality reception of AM signals especially under conditions of severe fading. DSP automatic notch filter for suppressing unwanted carriers in voice modes. Push-button DSP noise reduction to suppress unwanted broadband noise. The built-in 34 bandwidth filters from 360 Hz to 8 kHz are instantly selectable by turning a knob. All filters are independent of mode - use any available filter in any receive mode. Mode selection via dedicated push buttons rather than 'mode-cycling' with a single control. 'FAST UP' and 'FAST OWN' buttons for quick large-step frequency changing. FAST UP and FAST DOWN buttons are user-configurable for step sizes, 1 MHz, 500 kHz, 100 kHz up or down. Main tuning knob can be adjusted in 7 user-selectable step sizes from 1 Hz to 100 kHz steps. Passband tuning and manual notch control are available in all modes, including synchronous AM.

Momentary 'SWEEP' function shows band activity in 8 selectable coverage rates. Find the signals without even being on frequency! Simply tune to a desired frequency, select one of 8 SWEEP ranges, and press the SWEEP button. Signals will be shown on the bar graph on opposite sides of the starting frequency. A cursor will appear and allow you to tune RX-350 to any signal visible on the screen. Easy!

128 memories that retain frequency, mode and bandwidth information. Memories are grouped into several banks for easy storage of frequencies from different bands. An alphanumeric tag function of up to 8 letters allows memories to be tagged with specific names like "WSEV 830" or "VOA", etc.



Scan functions allow scanning of band segments or memory banks. Memory bank scan feature includes a memory lookout function for skipping of constantly busy channels. Band scanning is user-programmable; set the start and stop frequencies, push a button and the radio starts to scan between the two frequencies.

Built in clock displayed on LCD screen displays hours, minutes, and seconds in user-selectable 12 or 24 hour format. Timer circuitry and a squelch-activated output allow for monitoring and/or tapping of band activity even when the user is not present. Timer function allows the radio to be set in a 'wait' mode, to power on at a specific time and to send a control signal for actuation of accessory equipment. Two separate timer outputs are provided for connection of two separate devices to be actuated by the timer circuit. The squelch-activated output allows the radio to be left on and squelched on a given frequency. When a signal is present to open the squelch, an actuation signal is sent via a rear-panel jack.

Rear panel Hi-Z and Lo-Z antenna inputs allow connection of virtually any antenna to the RX-350. Built-in AC switching power supply allows operation of RX-350 from either 115 or 230 VAC. Separate DC power input jack can be used for 13.8 VDC operation. AC and DC supply can be connected at the same time for backup. Plug the RX-350 into the wall and connect to battery supply. If the AC power goes off, the connected DC source automatically takes over power to the receiver. Mute function for muting of receiver if used with a companion transmitter. 12.125x5x13 inches.

An optional remote encoder knob/keypad, model 302, is available for armchair operation of the RX-350. Simply plug the 302 into the rear panel of the RX-350 via the provided 6 foot cable. The 302 provides a duplicate of the main tuning knob of the receiver, a direct frequency entry keypad, and three functions buttons that can be user-assigned to control various receiver functions like mode switching, main tuning knob step size, SWEET actuation, etc. The main tuning knob on the receiver front panel and all other receiver functions are active even when the 302 is in use. Sit back and relax!

No other shortwave receiver packs this much value 'under the hood'. To top it off, it's MADE IN USA and competitively priced! Put the RX-350 side-by-side with your present HF receiver and see for yourself why Ten-Tec is the fastest growing name in high-quality shortwave receivers. One year limited warranty. This product is expected to ship in early December. *14.95 UPS shipping in 48 states. Universal is accepting orders now.

Ten-Tec RX-350 Order #0350 *1199.00

Please visit www.universal-radio.com for complete specifications, color photos and further technical information.

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- Informative On-line Catalog
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www.DXing.com

- Glenn Hauser's Continent of Media
- Glenn Hauser's DX Listener Digest
- Favorite Tube Type SW Receivers
- Don Schimmel's Radio Intrigue
- Joe Carr's Tech Notes
- Modern SW Receiver Survey

Season's greetings to all members and their families. It's never too late to sneak a **Universal Radio** catalog in front of a family member with the appropriate pages folded and specific items circled as a reminder of what you want. I almost fell off the sofa the other day when my wife asked me if I would be interested in a small Grundig portable that she saw in a magazine for the holidays.

Big Announcement Department: For the last couple of months the club's Executive Council has been busy. After extensive discussion, Executive Council determined that to enhance the value of NASWA membership it would launch an electronic newsletter to supplement the monthly *Journal* for the timely dissemination of DX loggings and breaking news, which would only be available to members. An electronic supplement to the *Journal*, carrying only logs and breaking station news, is anticipated to be a very valuable resource to the shortwave listener that is connected to the Internet. We hope that most of our members with Internet capability will find it a valuable addition to their hobby resources and enhance the overall value of being a member of our club. The editor of the electronic *NASWA Flashsheet* will be our very capable Log Report A editor, **Sheryl Paszkiewicz**, spaszkwicz@yahoo.com (or P.O. Box 716 Manitowoc, WI 54221-0152 for non-electronic submissions). Sheryl's first deadline is Saturday, December 15, 2001 at 2000 UTC. Future deadlines will be posted in the *NASWA Flashsheet*. If you are a current member of the club and want to receive the electronic *NASWA Flashsheet* just drop me a note with your e-mail address.

After many years of service, some of them good ones too, **Fred Kohlbrenner** needs to step down as Manager of our Awards Pro-

gram. Thanks Fred for a job well done. Thankfully, **Gary R. Neal** (7410 Orchard Hills Lane, Sugar Land, TX 77479-6122) has volunteered to step forward to fill this position. Gary is a frequent contributor to the pages of the *Journal* and a Winter SWL Festival regular so he is familiar to many of you. Please show your support for Gary in his new position by bombarding him with awards applications, hi! Welcome aboard Gary!


If you have not responded to the club's survey contained in last month's *Journal*, please do so as soon as possible. Tabulator **Mike Wolfson** is just about done and reports brisk returns but looks forward to receiving your last minute response too. We plan to have a tabulation of the results for you in the January *Journal*. The survey is designed to gauge how electronically capable the membership is at the moment and whether members would be interested in electronic projects to enhance the overall value of being a part of the club. Here is a brief rundown of the information we are seeking: 1) Name, 2) Postal Address, 3) Do you have e-mail capability? 4) What is your e-mail address? 5) Would you like to receive information about the club from time-to-time via e-mail? 6) Would you be interested in receiving "hot" DX news and loggings electronically? 7) Would you like your name and e-mail address included on a membership list on our website? Return by postal mail or electronically to: Mike Wolfson, 1842 Mifflin Avenue, Ashland, OH 44805 or E-mail: mwolfson@bright.net. Thank You!

There is a new club in Australia that is growing rapidly and attracting new faces to the hobby scene. Shortwave Australia ("SW-AUS"), under the guidance of long time NASWA member Bob Padula, formed earlier this year. SW-AUS is an innovative hobby club

intended to support shortwave radio monitoring and listening from Australia. The club's services include free membership, electronically delivered news and information (as posted by members), electronically delivered support information, and postal-mailed references and publications at a nominal cost. The club publishes electronically *The Australasian Shortwave News*. Unfortunately for many of us, membership is available only to people who reside in Australia or its territories. If you are interested, general correspondence and inquiries should be sent to Bob Padula at sw.aus@bigpond.com. Also, check out the club's

website at <http://www.users.bigpond.com/sw.aus.htm>. NASWA is an associate member of this fine organization.

Please don't forget that all communications for NASWA Headquarters should be directed to our Publisher/Business Manger **Bill Oliver** at the new electronic address, naswa@earthlink.net, or to the familiar 45 Wildflower Road, Levittown, PA 19057 address.

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

FRENEX: Twenty Five Years Ago....

The new proposed charter and constitution was mailed to all members. There were 503 ballots cast of which 458 voted in favor of it being adopted. M. R. Leonhardt, in the *Headquarters Report*, noted that 1977 would be the club's 15th anniversary year. In the *Shortwave Center*, Ed Shaw does an evaluation of the McKay Dymek DA-100 all wave-receiving antenna. Kim Andrew Elliott provides a comprehensive list of 20 or so Ph. D. dissertations dealing with some aspect of international radio. David Ball wrote about a tale of exotic DX, FIBS-Falkland Islands. Kim Andrew Elliott reported the results of the NASWA Survey in which 753 (75.3%) of members responded; about 28% of members were students! The average NASWA member spent 53.8% of his time (97% male vs. only 3% female) DXing and 46.2% listening to program content. In the *Scoreboard* column, Myron Cohen offered congratulations to Bill Sparks and Dan Henderson for obtaining 200 countries verified. In the *QSL Report*, Bill Oliver noted "only" 88 countries reported in December with John Campbell reporting Andorra and Timor. Dan Robinson was kept busy with reports from 92 members to *Log Report A* (up to 4900). Joe DiLeo stepped in for a recuperating Sam Barto to prepare *Log Report B* (4900-6200).

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.

Don Rhodes <donrhodes@pac.com.au>, Melbourne, Australia

Dear Fellow DXers,

Refer to my note re a refund from the *BBC on air* magazine due to deletion of SW from Australia (September *Journal*, page 5). I now have received a refund cheque for 10 UK pounds from them, about 25 Aussie dollars. I'll re sub, when they provide me with a service I can use.

Regards, Don

George L. Glotzbach <atgglgsfnn@earthlink.net>, 5 Herrada Court, Santa Fe, NM 87505

I need an audio list of SW station identifications. I seem to recall seeing an ad for an audiotape or CD of station IDs. Do any members know where I can get one? For instance, 13 November I heard an 8-tone chime at 0000 on 6060. SINPO was 22311 and I could not identify the language or understand the IDs interspersed between chimes. I am hoping an audio list will help, please.

73, George

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

Our first DXpedition of the season, and tenth overall, to French Creek State Park is now history. This DXpedition was another Wednesday through Saturday event with the group arriving Wednesday afternoon. The crew consisted of Fred Kohlbrenner, Bob "Mr. Coffee" Montgomery, Ed Mauger, Kris Field and me. This DXpedition saw us in Cabin #2 which was okay except the slope behind the cabin for antenna stringing was a little steeper than the other cabins. Thankfully, the weather was outstanding so the trip up and down the "mountain" was uneventful.

Conditions the first day and evening were well below normal thanks to an untimely solar flare. Unfortunately, things didn't improve much over the next few days although Saturday morning did see a nice opening to the Pacific region. We struggled to the point that Uncle Fred treated us to some Benny Hill DVDs on his new laptop. There were two black and white television sets in use from time-to-time. Although I would like to report some TV DX was underway, the program Law and Order, the evening news and a hockey game were seen. A sure sign that propagation was far from desirable.

Each DXpedition seems to have one special situation that "marks" that adventure from the others. After Friday evenings-traditional pasta dinner, we had a small accident. Some of the equipment I use (plastic utensils such as a colander and ladle) were sitting in the big pot ready to be packed off to the car in the morning when Kris Field decided to turn on a burner to boil some water for tea. Unfortunately, he turned on the burner under the big pot, which contained the plastic items. A short while later, a strange smell was noticed as plastic utensils slowly melted in the pot. It was a very messy situation.

Over the years we often we kidded each other about how things would deteriorate in the future (the bands and us). We are quickly discovering that the future is here today. With the deteriorating situation on the tropical bands and bad listening conditions, interest in DX matters dwindled while we were at the DXpedition site. Books, steak dinners, television sets, DVD movies are now essential options that accompany shortwave rigs and reference materials. Maybe one day we will just leave the shortwave equipment at home?

73, Rich

NASWA

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

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: RMonty3@worldnet.att.net.

Calendar Of Events

Dec 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.

Dec 21 Meeting. Boston Area NASWA Chapter. The Lexington Club, Rts. 4 & 225, Lexington, MA at 7:30 PM. The location is 1/4 mile west of Rt. 128, Exit 31. For more information contact Paul Graveline at 508-470-1971 or Internet: 74007.3434@compuserve.com. The URL for the BADX guys is <http://www.anarc.org/naswa/badx/>

Jan 11 Meeting. The Cincinnati/Dayton Monitoring Exchange (MONIX) meet at the Lebanon Citizens National Bank on U.S. Route 42 in Mason at 7:00 PM. For more information contact Mark Meece at 513-743-8089 or e-mail at [<mmeece@siscom.net>](mailto:mmeece@siscom.net). For additional information about MONIX, check out their web site at [<http://www.siscom.net/~mmeece/monix.html>](http://www.siscom.net/~mmeece/monix.html)

Mar 8-9, 2002 Convention. The 15th 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 8th and 9th March 2002. Richard Cuff and John Figliozzi co-chair the organizational committee. It's never too early to begin planning. See you there!

May 3-5, 2002 Annual General Meeting. The Danish Shortwave Club International will hold its **Annual General Meeting and DX Camp** at the Scout Camp Vardeborg on the weekend of May 3-5, 2002. The possibilities for DXing are ideal in the sand dunes at the West coast of Jutland. Further details later on.

Aug 16-18, 2002 Convention. The annual **European DX Council Conference** is tentatively scheduled at a camp near Pori, Finland on 16-18 August 2002. More details to follow.

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).

FOR SALE: MuRata CFR-455J high quality 11-element ladder-type ceramic filter. New, never used and an ideal replacement for inexpensive factory-style filters or for receiver modification. For 455 kHz IF usage with a bandwidth of 3 kHz @ -6db and 9 kHz @ -70db down. Will e-mail picture upon request. Price \$50.00 plus UPS shipping cost. Rick Krzemien, 5398 Concerto Circle, Concord, CA 94521- 3250. Phone (925) 408-1812.

Easy Listening

Richard D. Cuff • 42 North 37th Street • Allentown, PA 18104 • rd cuff@sprintmail.com

Domestic vs. International Media: Noticing the Difference

As the war against terrorism continues, differences in reporting and emphasis regarding developments in Afghanistan continue to be noticed by mainstream media and international broadcasting enthusiasts. While we shortwave enthusiasts continue to bemoan the BBC's deemphasis of shortwave to North America, Australia, and New Zealand, the BBC is nonetheless earning high marks for its coverage. Thankfully, some of the BBC's correspondents show up on US public and commercial radio; one recent morning, over the span of 90 minutes, I heard a dispatch from the BBC's Owen Bennett-Jones on the BBC World Service, NPR's *Morning Edition*, and CBS Radio.

Some observers have suggested the US media has been guilty of jingoism in its coverage, but I would argue that the slant in domestic coverage is to be expected since targets on US North American soil were the locus of the September 11th attacks. After all, the US went 189 years without being attacked in North America by a foreign foe. Here is yet another example of a "window of opportunity" for us to share the diversity of perspectives found on shortwave with friends and family unfamiliar with the medium. Here are some examples:

§ The **Voice of Russia** and **China Radio International** to both have interesting perspectives given their roles in the Coalition against terrorism, particularly with Russia's attempts to curry favor with the US government

§ **Radio Australia** and **Deutsche Welle** have also had stories emphasizing the plight of Afghan refugees in their countries which wouldn't have aired elsewhere.

§ **Radio Netherlands** now has dispatches from its own journalist in Kabul in *Newsline*, and *Newsline's* emphasis on the "story behind the story" makes for interesting listening. By the way, *Newsline* is a decent alternative to domestic news programming in the mornings in the USA, airing at 6:30 AM and 8:00 AM EST and PST (1130, 1300, 1430, and 1600 UT) on 5965 kHz (1130 and 1300 editions) and 15220 kHz (1430 and 1600 editions). These were two of the former BBCWS transmissions vacated in July. Andy Sennitt tells me that Radio Netherlands received substantial feedback during their July "takeover" of the BBC frequencies that Americans appreciated the news programming in the mornings, and this was one reason a morning service was retained after the early July experiment.

§ The BBC World Service often uses its long-form news analysis programming—*Assignment and Analysis*, along with *From Our Own Correspondent*, for extended assessment and analysis of developments in Afghanistan. It seems that typical short-attention-span radio in the US, both public and commercial, can't or won't put the effort into analysis the BBC is willing to invest.

One of the challenges posed by the war on terrorism is that domestic news assignment editors tend to emphasize war-related developments while other stories normally of interest get short shrift. For example, **Radio Tirana** featured coverage of Kosovo elections that was ignored in most other quarters.

It would seem to me that international broadcasters struggling for reasons to be relevant since the end of the Cold War could find ample reason to exist solely to emphasize their country's role in the New World Order.

Deutsche Welle: How to Trash a good Radio Website in the Interest of Multimedia

With much fanfare, **Deutsche Welle** launched a new, spiffy multimedia website in November at the new URL <http://dw-world.de>. The old URL redirects you to the new site as well. If I were them, I'd try to get my money back from the consultants in Hamburg and Austin, TX who helped design and implement the new site. The old website was reasonably well laid out, especially for someone (like myself) fond of audio on demand. It was relatively easy to find a program of interest and then find the audio file as well. I considered the old website inferior only to the BBCWS website with respect to easy access to audio content. This is no longer the case, as the new website is much more complex than the old site.

This new website was designed and implemented as part of a new content management system as well. Supposedly, this new system is supposed to make it easier for program producers do their thing, but program consumers have been inconvenienced. There are some nice features—including an interactive map to find frequency information—and text versions of features are widely available. While I can get to the live audio stream with no difficulty, I have yet to find on-demand programming. If you have been inconvenienced by the new website, be sure and use the handy “feedback” features to tell DW management of problems you experience in using their site. Hopefully the investment sunk into the new website won't detract from the traditionally first-class program content.

The new site reminds me quite a bit of the look and feel of the BBC World Service website, but at least the links to on-demand content on the BBC's website generally work.

Radio Canada International—Still Worth a Listen

I mentioned the launch of the new daily RCI “theme programs” last month, and I had a chance to listen to the *Media Zone* program the other day. If you are fond of how media present topical issues, it's worth a listen. I must give the program's producers credit: a recent edition focused on Canadian Foreign Minister John Manley's recent trip to the Middle East, and generally had the opinion that Manley didn't convey much of a message on the trip. Why is that noteworthy, you ask? It's because Manley's department funds RCI, and one might have expected the program to not bite the hand that feeds it. For what it's worth, a recent nonscientific web poll found 82% of respondents generally liked the new RCI programming; my own initial impression is favorable as well. These new theme programs air at 2130 and 0230 UTC via shortwave, and are available via satellite, live webcast, and on-demand webcast.

While not a part of the RCI reorganization, the I also highly recommend the domestically-targeted *Dispatches* program; this program is also relayed over RCI Thursdays 0030 UT. The program features various CBC correspondents with interviews and analysis from the field. A recent edition featured a mix of domestic and international features, but the domestic features had an internationally-oriented subject. The subjects were off the beaten path, a welcome diversion these days, in my opinion.

Christmas and New Year's Programming

I recently contact a sampling of broadcasters to understand their holiday programming plans; here's a summary of what you can expect:

Deutsche Welle

A Christmas special will air on December 24th in the English language editions airing from 0900 onward, and on December 25th through the 0600 English release. One version of the special will air December 24th at 09, 11, 16, and 19 UT; the second edition will air December 24th at 20, 21, and 23 UT and also December 25th hourly from 01 to 06 UT, including the North American releases at 01, 03, and 05 UT. Also, **Deutsche Welle** will air a New Year's special on December 31st and January 1st using the same approach described above.

Detailed content descriptions weren't yet available at press time.

Also, the German language service typically focuses on seasonal music around Christmastime, and one doesn't need to know German to appreciate good music!

Radio Australia

Radio Australia's schedule will see significant seasonal alterations in December and January as several programs take summer breaks.

Specifically, at Christmastide, Radio Australia will link with a domestic network for most of our day—a combination of Radio National and Metropolitan networks. Expect the special programming to begin at 2100 UT on December 24 and continue until 0900 UT on December 25. Their format will be similar to previous years with religious specials, Christmas music, Christmas stories and talkback with Australians as they celebrate Christmas Day. Each Australian state will contribute a couple of hours to the broadcast.

Other December / January changes include the following:

The current affairs program **PM** is scaled back to 20 minutes on December 14th and from December 31st to January 18th. From December 17th to the 28th a series of current affairs specials replaces **PM**.

The World Today—the noontime current affairs program—is on hiatus from December 17th through January 11th.

Australia Talks Back also takes summer recess on December 17th and returns January 21st.

Correspondents' Report takes a break from December 16th and returns January 27th.

Asia Pacific is on break from December 24th and resurfaces January 14th.

Business Report is on holiday from December 22nd, returning January 19th.

Bush Telegraph leaves the scene from December 17th, and returns to air January 21st.

What isn't clear—yet—is what will replace these programs in their absence. If you're interested in the details, your best bet is to frequent one of the newsgroups or E-mail lists (such as *swprograms*) where John Figliozzi posts thrice-weekly schedule updates.

Meanwhile, **Pacific Beat** continues to air, but the features take on more of a magazine format, since hard news in the Pacific islands is hard to come by over the holidays.

Cricket will continue on selected frequencies, with a 3-test series between Australia and South Africa beginning December 14th. A series of one-day meetings between Australia, New Zealand, and South Africa begins in January and runs through early February.

Also, a new education series, **Time to Talk**, a 13-part series dealing with governance in the Pacific region, starts up on the weekend of December 8th, replacing **In the Pipeline**, which finishes its run the weekend of December 1st. These education series are among the best-produced series anywhere, if you ask me.

BBC World Service

Friday, December 14th, 1405 and Saturday, 0105: *Omnibus* visits King's College as the choir prepares for its annual Christmas Eve broadcast on the World Service (see below).

Monday, December 24th, 1500 and 2230: *A Festival of Nine Lessons and Carols* is a long-standing World Service tradition from King's College, Cambridge. The 1500 airing is live.

Wednesday, December 26th, 0205: *Her Majesty the Queen's Christmas Message* airs to the Americas; this year her annual reflection is followed by a special airing of the short story *And Women Must Weep* by Henry Handel Richardson.

Thursday, 0205, December 27th, repeated Friday, 1505: *Sports Review of the Year* features a review of the year's highs and lows in sports, hosted by Mike Costello.

Thursday 0230, December 27th, repeated Friday 1530: *Pick of the World* features "the best of the best" in its final edition for 2001. You're always welcome to nominate program segments you've particularly enjoyed; you can reach the program at pick@bbc.co.uk or by fax at 011-44-20-7557-2531.

Other non-holiday related programming highlights include the following:

Saturdays, 1330, all month: *Welcome To My World* is a new six-part series with stories from the world's youth, ranging from an 18-year-old mother in New York

City to a young Israeli who doesn't want to join the army.

Tuesday, December 18th, 0405: *Brain of Brains 2001* is a special edition of *Brain of Britain* featuring the winner from 2001 (crowned one week earlier) and the winners from 1999 and 2000 in a "champion of champions" contest hosted by Robert Robinson and "Mycroft".

Saturday, December 29th, 0205, repeated Tuesday, 1505: *Discovery* airs a special program celebrating the centenary of Guglielmo Marconi's first transatlantic transmission, December 12th, 1901. This event was considered the birth of international broadcasting.

Why aren't stations more willing to publicize upcoming programming?

Sad to say, while I was able to get decent responses from a few broadcasters regarding holiday programming, I was unable to get a timely response from the likes of **Radio Sweden, Radio Netherlands, HCJB, Radio Canada International, or Radio New Zealand International**. Station management wonders why listenership is down; they need look no further than their own Audience Relations/PR departments.

May the Holiday season and 2002 find you in good health and spirits, cherishing family and friends. Best wishes for a happy, healthy, and prosperous New Year!

73 DE Richard



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 Figliozzi, and comes from his book, *The Worldwide Shortwave Listening Guide*. Visit the Guide at <http://www.anarc.org/naswa/swlguide/>.



Shortwave Center

Jerry Lineback • 506 South Lawrence Avenue • Scranton, KS 66537 • jalinebk@satelephone.com

The Biggest Aspidistra in the World

By Mike Burden, Newark, Notts. (Originally published in the *World DX Club Contact Magazine* beginning in February, 2000, and continued here from the November, 2001, *NASWA Journal* beginning with Part 4.

Part 4

By 1943, with "Gustav Siefried Eins" well established, it was time for British submarine radio operations to branch out. "GS1" had, of course, always purported to be a clandestine German station, but now it was time for an operation in the guise of an official German station, this idea having been mooted by the British Admiralty at the end of 1942.

For the benefit of their forces in the occupied territories and at sea, the Germans set up a number of stations broadcasting popular music of the time, greetings and news from home, etc. So for the benefit of the German naval forces serving in the Atlantic Ocean, "Deutsche Kurzwellensender Atlantik" (or "Atlantiksender") began broadcasting on the 22nd of March, 1943. A constant flow of news, information and entertainment was provided in no less than eighteen half-hour daily broadcasts. But this was in point of fact no official German station; it was operated by the British Political Warfare Executive, using four 7.5 kw shortwave transmitters as well as new studios in a two-story brick building in a five acre tract at Milton Bryan, near Woburn Abbey, Bedfordshire.

The launching of this new "Navy" station "Atlantiksender" meant that fresh talent had to be engaged. A number of German emigres joined the new broadcasting team, including a one-time Berlin art dealer and a pre-war Austrian diplomat who became expert news writers. But the star announcer of "Atlantiksender" was Vicky, the "Sailor's

sweetheart" who sent birthday greetings to her "dear boys in blue," congratulated them on the birth of a son or daughter, and discussed the problems of their wives and families. From the sweetness of her voice, nobody could suspect that Vicky had in fact lost half of her family in the gas chambers of Auschwitz.

The topical material used by Vicky and the other announcers was gathered from German newspapers and from letters being sent out and received by German prisoners-of-war. The prisoner-of-war camps were now proving to be a valuable source of information, much of which was provided by hidden microphones and recorders in the camps. Soon, a number of the broadcasters themselves would be drawn from the prisoners-of-war too. The whole operation was backed up by a team of researchers and continually expanding archives. One of the researchers was C. E. Stevens ("Thomas Brown"), an Oxford ancient history don who as co-director of the intelligence unit, was in Delmer's words "a walking encyclopedia."

Stevens, in a meeting of the V Committee planning the "V for Victory" campaign on the BBC European Service, was the man who had suggested the idea of using the opening of Beethoven's Fifth Symphony.

As "Atlantiksender" became established and gained a large audience, Sefton Delmer recommended that the station should be expanded so as to serve the German forces in France too, and to soften them up before D-Day. Until now, all of the operations of "GS1" and "Atlantiksender" had used relatively low power shortwave transmitters only, but now Delmer pressed for the use of "Aspidistra" to expand the scope of his operations. After endless arguments with the BBC, who were using "Aspidistra" for their European

Services, Delmer was eventually allowed to use the superpower Medium Wave transmitter at least part of the time.

So on the 14th of November, 1943, "Soldatensender Calais," the new station for the German forces in France began broadcasting nightly from 8 p.m. to 11 p.m. on a wavelength of 360 metres. By this time "Atlantiksender" had expanded its output too and was broadcasting for 12 1/2 hours nightly, from 6:30 p.m. through to 7 a.m. the following morning. "Soldatensender Calais" reached an enormous audience in France as the superpower signals drowned out all other signals on the small insensitive radio receivers issued to the German servicemen in France. The broadcasting hours of the station were gradually increased throughout late 1943 and 1944; in February 1944, the schedule was extended to midnight nightly and by D-Day, June 6, 1944, it was on the air nightly from 8 p.m. through to 5 a.m.

Meanwhile, the "clandestine" station "Gustav Siefried Eins" had disappeared. During his two-and-half year long stint at the microphone, "Der Chef" had made some 700 broadcasts, but by November 1943, four days after "Soldatensender Calais" had made its debut, it was time for the final transmission of "GS1." And it certainly was a brilliant piece of radio theater with a big finish! Listeners were amazed to hear his talk interrupted by a burst of machine gun fire and the shout of "Got you, you swine!" as the Gestapo tracked him down at last! It was, however, most unfortunate that the impact was rather lost as it had been forgotten that the same broadcast was due to be repeated later in the evening. Listeners therefore heard "Der Chef" being assassinated twice within about an hour!

Part 5

"Soldatensender Calais" carried on entertaining the German Armed forces in France from November 1943, just as "Atlantiksender" catered for the German naval forces serving in the Atlantic. Star announcer of the Soldatensender was probably Sepp Obermeyer, an outspoken Bavarian who had

served with the Luftwaffe, but had become disaffected with the Nazis and defected by flying a Messerschmitt night-fighter through British Radar and anti-aircraft defenses to land it on an Essex airfield. In his career as a broadcaster, Obermeyer wrote all his own talks, full of gossip, aircraft news, and denunciations to his "fellow Luftwaffe officers" of the impossible conditions under which they were expected to fight the enemy.

"Atlantiksender" had its counterpart in Eddy Mander, a former U-boat wireless operator from Hamburg. Mander had been captured in the Atlantic, along with U-boat code book containing all the current ciphers. He had a wonderful gift of German naval slang and a forte for thinking up new grouses and "tips" on how the men serving on the U-boats might delay the departure from port of their vessels.

Music was a very important part of the broadcasts. To indicate to the Germans that their security measures were inadequate, "Atlantiksender" would often play "special request numbers" for a German submarine which the Admiralty had informed the station was likely to have been on a cruise. Some of the records played on "Atlantiksender" and "Soldatensender Calais" were the latest German hits flown over from Stockholm, and from time to time, arrangements were made for such German-speaking artists as Marlene Dietrich to make special recordings. But many of the records used were specially made for the stations by a German band that had been touring North Africa when they were captured and sent back to Britain.

News was the most vital part of the output and carefully selected news items could be the most subversive propaganda of all, especially if given an emphasis or twist that was never originally intended. Such Psychological propaganda was a feature of many of the news broadcasts from "Soldatensender Calais." Accurate reporting of terror raids by Allied bombers on German cities must have impressed the listeners in the way that they gave detailed street-by-street accounts of

the extent of damage caused by each raid. These details were in fact compiled from photographs brought back by Allied reconnaissance aircraft, interpreted with the aid of stereoscopic viewers and guides and plans of the cities concerned. And naturally, in case servicemen were worried for the safety of their families back home, they were advised on how to apply for compassionate leave. And once on leave, it was possible that they would consider the possibility of desertion, in which case they were encouraged—obviously not by direct appeals—but by subtle repeated suggestions on the lines of “the authorities do not know who is missing because he has been killed or because he has deserted.” Methods used by soldiers fleeing to neutral countries were deplored—but in thorough and informative detail!

News items generally ran a few phony or distorted items amongst otherwise genuine material. The genuine news was in fact provided by the DNB, Dr. Goebbels' news agency. The DNB had set up a fast and efficient wireless teleprinter service to cover all of its offices all over Europe. On the outbreak of war, the DNB's London correspondent had left his “Hellschreiber” teleprinter behind, so this meant that the British could receive Dr. Goebbels' news at the same time as the German newspapers and radio stations, and put it on the air (via Soldatensender Calais) quicker than they could. This straight news consisted of decorations and promotions in the services, communiqués and speeches of Nazi leaders and officials, sports news, etc. But among all the genuine material would be a phony item, e.g., “praise and tributes to doctors at camps housing civilians bombed out of German cities, their dedicated work having reduced the death rate due to cholera and typhus to only 60 a week.”

Also making appearances from time to time on Soldatensender Calais were Dr. Goebbels or even the Fuehrer. When they delivered important speeches, these were picked up from German stations and relayed over “Aspidistra,” often immediately after Sepp Obermeyer or Vicky had been at the microphone.

With its huge signal, Soldatensender Calais gained a large audience, not only among German forces but also among the civilians too. A letter of March 1944 from the local Munich division of the SS to its high command gives an illumination insight into the influence of the station on the civilian population in Munich and Upper Bavaria. It indicates that large proportions of the population believe Soldatensender Calais to be a genuine German station run for the armed forces, and preferred it to their home service because they believed that the German authorities and their propaganda machine could not deceive the soldier at the front with the same propaganda as was given to the civilians at home! According to this letter, Soldatensender Calais gained a particularly large audience in Munich and Bavaria in September 1943 when the local Reichssender station at Munich, instead of broadcasting the home service, had been required to broadcast the Italian Fascist Republican Radio Service for northern Italy during the evening hours. The result was that many Munich listeners had tuned elsewhere for information and discovered Soldatensender Calais with a strong signal on a nearby frequency. It had therefore been decided by the authorities that the station should be jammed, but it seemed that the jamming had unpleasant consequences too. For when Munich resumed broadcasting its normal home service during the evenings, it seemed that the noise of the jammer made reception of the Munich station impossible in many localities to. However, the Soldatensender, by virtue of “Aspidistra's” ability to change frequency at an instant and avoid the jammers, could usually be heard clearly. Moreover, according to the letter, some local people believed that the jammer was operated by the enemy who wished to drown out the German station Calais!

German servicemen also continued to be taken in. For instance, indisputable evidence was received from prisoners-of-war that a Wehrmacht sergeant had broadcasts from the station wired into all his men's recreation huts. Only when a senior officer reprimanded him did he realise that he had been entertaining his comrades with a for-

bidden enemy station. Such was the fame and notoriety of Soldatensender Calais, but naturally, it was realised that many listeners would soon be aware that it was not an official German armed forces station. But even when its "cover was blown" Soldatensender could be just as effective. For instance, interrogators of German prisoners-of-war noticed that their captives were more ready to talk, the Soldatensender's broadcasts having convinced them that "the British know it already, so I may just as well talk."

A Korvettenkapitan attached to the Officer commanding the Cherbourg Peninsula, who was taken prisoner after D-Day landings, indicated that he had listened to nothing except Soldatensender Calais while in France because the radio sets issued to the troops had been too poor to receive anything else and Calais drowned out every other station. He also indicated that the station had the great advantage of broadcasting throughout the night when all other stations were off the air, and it was so cleverly camouflaged that the listener's first reaction was "that can't be an enemy station." Sefton Delmer had maintained that, even if a German listener believed correctly that the Soldatensender was a subversive British operation, he would continue to listen and be influenced by it because of its unequalled entertainment and information content.

Such a listener was Luftwaffe Squadron leader of a unit stationed at Cognac in France, who said that in January, 1944, he and his fellow officers listened regularly. They were obliged to stop other ranks from listening, but could not prevent them from doing so. He added that he sometimes listened in with naval officers he met in Bordeaux. An interesting story was related by a Luftwaffe Captain sent under conditions of utmost secrecy to interview blockage runner captains waiting in the Gironde. Returning to his quarters he heard on the Soldatensender a programme of Japanese music and verbatim repetition of the instructions he had just delivered to the captains of the blockage runners, adding that it made him laugh and laugh until tears ran

down his cheeks. But British naval intelligence knew that armed blockage runners in the Gironde were preparing to sail to Japan and the Soldatensender's broadcast was made at just the right time.

The head of the BBC German Service, Hugh Carleton Greene, made the following comment after the war. "Looking back at the broadcasts of Soldatensender Calais, they were so funny that I have often wondered whether they did not raise, rather than depress, morale." but at least the Soldatensender had this distinct advantage over the BBC German Service—to many listeners it would seem to be speaking from a point of view held by a large and increasing number of German citizens.

Part 6

On D-Day, Soldatensender Calais grabbed a scoop! It was the first station to give news of the Allied invasion of the Normandy beaches. At 4:50 a.m. on 6th June, 1944, a Calais announcer interrupted the station's dance music programme to flash a report that the invasion had begun. It was so graphic that Swedish monitors picking up the broadcast decided that the radio station must be either in the invasion area or very close to it.

What had actually happened behind the scenes was this. Donald McLachlen, the only member of the Milton Bryan team to be in on the secret of D-Day, had spent most of the day at the SHAEF headquarters. In the evening he reported to Sefton Delmer that the invasion would be going ahead the following morning. So the Milton Bryan team decided to go ahead with their plan too—to prepare reports based on the disclosed invasion plans and projections of what would happen, and then to wait for the DNB Hellschreiber to give them the signal to put them on the air. Later that evening, the chief newswriter on Soldatensender Calais was let in on the plan, or rather, correctly guessed that something was in the offing. And that is how the station came to capture what should have been Dr. Goebbels' greatest scoop. For when the DNB flash came through on the tele-

printer tape, Delmer's team were fully prepared and immediately put out the following flash: "The enemy is landing in force from the air and from the sea. The Atlantic Wall is penetrated in several places. The command has ordered Alarm Grade 3." It was at least twelve hours in advance of any official news release.

As the invasion progressed, the breakdown in the German's field communications became so grave that many of their commanders began tuning in to Soldatensender Calais for situation reports, and using them to constantly update the changing order of battle on their staff maps. The reports, obtained directly from SHAEF headquarters, were accurate 99 times out of 100. The hundredth time came when some false information was inserted at the request of tactical deception experts, to send the enemy headlong into a trap!

The Germans were often puzzled by the speed at which the Soldatensender was able to broadcast news not only of the invasion operations, but also of events inside Germany or even news which emanated from the Fuehrer's headquarters. Allied intelligence service stated that there were now indications that the German authorities were convinced that Calais had special information as to what was going on inside Germany. In a private conversation, a senior German official in Sweden said it was believed that Calais had many correspondents in Germany, and people were checking statements in the hope of catching informants. As an example, he quoted the Calais statement that the German naval attaché in Stockholm, von Wahlert, was implicated in colonel Von Stauffenberg's unsuccessful attempt to assassinate Hitler on 20 July 1944. In consequence, some of the legation officials decided to investigate the matter secretly and came to the conclusion that the report was probably true. Moreover, soon after the July 20th putsch attempt, the very large telephone installation at Hitler's headquarters was occupied by 200 signals specialists who searched diligently for secret parallel lines which would transmit conversations to unauthorized destinations, but found nothing suspicious.

Part 7

In the final days of the war "Aspidistra" was used for another of "black" radio's most ambitious schemes. Until March 1945, the BBC and Voice of America in their broadcasts to Germany had been advising the civilian population not to evacuate as the Allied armies approached, but to stay put. This was in accordance with a directive given to them by SHAEF, the Allied High Command. But when Winston Churchill learned of this, he blew his top, maintaining that the Allies should instead be driving the German civilians out onto the highways to impede the strategic communications of German armies, just as the French civilians had hampered their armies in the German invasion in 1940.

However, since the BBC and Voice of America could not go back on what they said, it was decided to use "black" radio for this dirty work. "Aspidistra," with its ability to make lightning changes of frequency and hop all over the Medium Wave band to occupy any German domestic channel, was ideally suited to the job. The way that "Aspidistra's" frequency skipping ability was used to "capture" German stations was as follows: The German home service networked programme was broadcast on several Medium Wave stations in a variety of locations all over Germany, but at the approach of Allied bombers to a certain city, the local transmitter there would be switched off so as not to serve as a navigational beacon for the enemy aircraft, leaving the frequency vacant. "Aspidistra" could however pick up the German broadcast from another transmitter in the network and continue to broadcast in on the vacant frequency, with hardly a break. Then with the continuity established the genuine programme could be interrupted with bogus "special announcements: supposedly from the local authorities.

The first such "intruder" operations were carried out on the evening of 24th March 1945, in close conjunction with the military operations, for on the previous evening Field Marshall Montgomery's 21st Army Group began to cross the Rhine at four places between Rees and a point south of Wesel. The first "Intruder" operation with "Aspid-

istra" was on the Civil Defense Channel of 599 kHz at 2019 GMT with the interval signal used by the Germans during their commentaries of the movements of Allied aircraft, the commentaries having been so effectively counterfeited in the "Operation Dartboard" of late 1943. But this time a bogus announcement was repeated twice—supposedly from the Reich Defense Commissioner of Gau Dusseldorf. These announcements limited the evacuation to a very small number of people. About thirty minutes later "Aspidistra" went off the air.

The second operation followed about an hour later the same evening, with Reichssender Cologne the target. The PWE's radio monitors who kept watch on German stations had always been able to predict with great accuracy the exact time at which the approaching Allied bombers would force the station to go off air. So when Cologne closed down that evening at the expected time of 2140, "Aspidistra" immediately appeared on its frequency of 658 kHz with a relay of the German home service as received from other transmitters. Bogus special announcements supposedly from the Gauleiters and Reich Defense commissioners of Essex, Dusseldorf, Westphalia North and Westphalia South, were inserted into the programme.

These announcements were designed to create panic and depress morale among the civilian population, despite the fact that the enemy was almost upon them, and that only those who could "carry on the struggle" would be evacuated. The majority would be forced to stay behind were warned that although they were threatened with all the horrors of modern warfare and the possibility of complete destruction, they should "stick it out and if need be face death bravely." This "intruder" operation on the Cologne channel continued for twenty minutes, and then "Aspidistra" finally left the air.

Part 8

"Intruder" broadcasts on the German home service channels, of which there were prob-

ably no more than a dozen in all, continued in late March and early April 1945. On the evening of 25th March, "Aspidistra" intruded on the Frankfurt frequency at 2045 hours, relaying the German Home Service interspersed with its own bogus announcements giving positions of Allied columns, and also advice to doctors, Red Cross workers, and even butchers. This intruder broadcast continued for over three hours, until midnight, and included about fifteen false announcements in all. On the following evening another intruder operation on the Frankfurt channel ordered the diversion of evacuation columns to avoid allied positions which, if fact, did not exist as well as the arrival of non-existent relief trains at certain stations. The Germans responded on 27th March when announcements in their Forces programme stated that the Allies were broadcasting on German wavelengths. Two days later, they began to confine all civil defense and evacuation instructions to their Long Wave Deutschlandsender station, into which "Aspidistra" did not have the capability to intrude.

On the evening of 30th March, "Aspidistra" intruded into the Berlin and Hamburg frequencies warning that the Allies were trying to spread confusion by sending false telephone messages from occupied towns to unoccupied towns. The message advised that, from now on, any instructions or reports received by telephone should not be believed or acted upon immediately, but should be confirmed by telephoning the supposed source of the call. This instruction, if fully followed, would have seriously delayed the carrying out of orders and placed extra strain on the already half-crippled German telephone network. On the evening of 8th April, "Aspidistra" intruded into the Hamburg and Leipzig channels to warn of forged banknotes in circulation. Then on the following evening, there were announcements encouraging people to evacuate to seven bomb-free zones in central and southern Germany, where it was claimed that they would be safe from further enemy air attacks. By now, the following announcements continued to be broadcast by the

German radio stations: "The enemy is broadcasting counterfeit instructions on our frequencies. Don't be misled by them. Here is an official announcement of the Reich authority." But, of course, these same announcements began to precede any bogus messages broadcast by "Aspidistra" too!

Meanwhile, in late 1944, with the fall of Calais to the Canadians, "Soldatensender Calais" simply renamed itself "Soldatensender West" and continued as before. It still had a lot more to say on the progress of the war, and in its role as "spokesman for the decent fighting front line soldier" was now demanding an end to the war, in order to save Germany. The target of the Soldatensender's attack was now Hitler, who previously had never been criticised directly. The station reported how he had been reduced to a shambling, nervous wreck, kept alive only by repeated injections of drugs. "The enemy can wish for nothing better than to have us led by a man who, in his conceit and ignorance, interferes in everything and everywhere," proclaimed a speaker on the station, "A fellow like that is for the Allies, an ally."

By now the war was in its final stages, but before the end, the Soldatensender played a role at the famous bridge at Remagen over the Rhine, left intact by the Germans as they retreated in the face of the Allied advance. Units of the U.S. 1st Army crossed the bridge on 7th March 1945. On the following day, the German Chief of Army Operations reported to the Fuehrer that two naval demolition teams had been assigned to destroy the bridge, but apparently the Admiral responsible knew nothing of this. However, the teams were being sent to Remagen early on the following day. Meanwhile, Soldatensender West announced on 11th March 1945, that the Germans planned to destroy the bridge by exactly the same methods in a fabricated story that, quite fortuitously, turned out to have anticipated the German's intentions. Admiral Doenitz reported to the Fuehrer that he knew of this report on the Soldatensender, but that he intended to proceed with the operation. However, as the Americans had already been tipped off by

the report, the frogmen sent to carry out the mission surfaced and surrendered before getting near the bridge.

With Germany finally disintegrating, it was now felt that the Soldatensender had outlived its purpose. If it was purporting to be the station it claimed, then it now appeared to be the last vestige of the German military machine functioning with any degree of coherence, according to Delmer. The German defenses and lines of communication were steadily collapsing and, on 23rd April, one of the station's main news sources disappeared when the DNB (German news agency) services ceased and the Hellschreiber receivers finally went silent. So, on the morning of 30th April, 1945, Soldatensender made its final broadcast and went silent. There were no announcements that the station was closing; it just faced away. Britain's "black broadcasters" had done their job and it was now time for the staff at Milton Bryan to have a final farewell and celebration party. Soon, many of them would be returning home to Germany or liberated Europe.

An interesting postscript to the final broadcast of the Soldatensender is that Harold Robin recorded it on large glass-backed discs, which were then stored in the attic of his house for 36 years before being transferred to the archives of the Imperial War Museum in 1981. The two most important news items in the final broadcast are a report on the death of Mussolini at the hands of Italian partisans on 28th April, and an account of the meeting at Lubeck on 27th April between Heinrich Himmler and the Swedish Count Folke Bernadotte. This latter story had been leaked on 28th April from the U.S.A. to Reuters in London. Harold Robin's recordings are the only ones of the Soldatensender known to exist, but the style and techniques of its broadcasts have, since the end of World War Two, been copied by radio propagandists in political and military conflicts in many parts of the world.

(Note: Mike Burden's article is available from a link on the Empire Radio Website:

<http://members.aol.com/skywave48/> 

Equipment Reviews

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Ten-Tec RX-340 HF DSP Receiver

The Ten-Tec Company has been producing high-quality amateur radio equipment for several decades. They have also manufactured professional grade equipment for the military and commercial markets with the most recent model being the RX-331 "black box" receiver. This receiver is completely controlled by an external computer and the majority of receiver functions are managed by digital signal processing. The RX-340 is essentially the same receiver as the RX-331, being packaged in a larger cabinet and provided with a comprehensive front panel for local manual control of the receiver. Consumers have had the opportunity to experience Ten-Tec's implementation of DSP with the computer controlled RX-320, which is an outstanding receiver, both in performance and value.

The RX-340 is a multi-mode, general coverage receiver covering the frequency range of 5 kHz to 30 MHz with frequency resolution to one Hertz. The frequency display uses a bright blue-green fluorescent display with one-inch high characters. All reception modes, including ISB and sideband selectable synchronous detection are supported. There are 57 available I.F. filter bandwidths, ranging from 100 Hz to 16 kHz, with a typical shape factor of 1.5:1 or better. A one-half octave preselector is built-in. There are four selectable AGC characteristics—Fast, Medium, Slow and a Programmable mode in which the user can select his choice of attack, hang and decay times. Other features include a tunable notch filter, noise blanker, all-mode squelch and passband tuning.

The magic of DSP

The front half of the '340's circuitry consists of analog circuits that provide preselection, selectable pre-amplification/attenuation and three high level mixers that yield intermediate frequencies of 45.455 MHz, 455 kHz and 16.75 kHz. The 16.75 kHz IF is routed to

an analog-to-digital convertor with a 66.66 kHz sample rate. The digital stream is then sent to the Digital Signal Processing unit which provides signal detection, filtering, automatic gain control (partially—some AGC is handled in the analog mixer circuitry), notch filter, noise blanker, BFO and passband tuning. The digital signal is then converted to analog audio and sent to the internal or external speaker, headphone jack and balanced or unbalanced line outputs. For those that are familiar with the outboard DSP audio filters, it should be noted that the RX-340 DSP does not provide adaptive noise reduction or automatic notch filtering.

DSP represents a major advance for two reasons—one is the increased number of functions, such as having 57 filter bandwidths available, as well as the ability to reprogram the DSP for additional or enhanced functions. The RX-340's software is contained on three Read Only Memory chips (EEPROMs) which can be exchanged to increase the receiver's performance. The latest software revision at this writing is 1.10A with a release date of April, 2001 for the Front Panel, Logic and DSP EEPROMs. A few of the features added with the latest chip set are a noise blanker, 9 kHz tuning step and expanded notch filter tuning range of ± 6 kHz (previously ± 2 kHz).

Meet the RX-340

This is a big radio—the front panel is a three unit rack panel, which translates to being 5.25 inches high and 19 inches wide. Unlike the Watkins-Johnson HF-1000, which was 19 inches deep with a lot of empty space inside the cabinet, the RX-340 is only 12.5 inches deep, including front panel knobs and rear panel connectors. Since there is a lot of space on the front panel, all the controls are of reasonable size and are easy to use without accidentally affecting other controls. The controls are grouped into four "islands"

highlighted by darker gray against the lighter gray of the front panel. On the right are the main tuning knob and keypad. The tuning knob is large and has a soft rubber grip ring on its circumference and a tuning dimple. The keypad is laid out in the format used on computer keyboard keypads, rather than on a telephone. Frequencies may be entered in either MHz or kHz format, depending on which Enter key is used. The keypad also has Up/Down buttons which will change the receive frequency in the chosen step size. Above the keypad are the step select buttons—the currently available choices are 1, 10, 50 or 100 Hertz; 1, 5, 9 or 10 kHz and 0.1 and 1 MHz. Tuning step size is displayed to left of the main frequency display. Reception mode is also displayed on the main display and is selected by two pushbuttons below the display. One interesting mode that is provided is “CW1”, which is CW mode with a BFO offset fixed at 0 Hertz—I’ve found this useful for zero-beating AM mode signals to find the exact center frequency. “CW” mode has an adjustable BFO with a range of ± 8 kHz in 5 Hz steps. The display is very high contrast and can be adjusted from dim to bright in 100 steps (but apparently cannot be completely extinguished). Toward the center of the front panel are the preamp/attenuator select switch and the rotary knob to adjust the IF gain.

Just to the left of center are two “islands” of contrasting darker gray color. Each has a rotary knob, a dot-matrix display and several push-buttons. The top one is the “Auxiliary Parameters” group, which controls the receiver’s operating characteristics such as bandwidth, AGC, PBT, Notch, BFO, Squelch and Noise Blanker. There are two additional pushbuttons labelled “OPT1” and “OPT2” for future functions. The rotary knob selects the parameters for the function that has been selected by the pushbuttons and the display shows the status of the parameters. The lower group works the same for the memory and scan functions. One interesting feature is that the keypad can be used to input a distinct numeric value for a parameter, such as the notch frequency, in addition to adjustment by the rotary control.

The left side of the front panel holds the power switch, a large, well-illuminated s-

meter (which reads in both s-units and dBm) and the audio control group. The last cluster contains separate rotary volume controls for the speaker output and headphone jack ($\frac{1}{4}$ inch, stereo or mono headphones can be used) and the pushbutton and indicator lights for selecting USB/LSB/Both when in synchronous detection or ISB mode.

The back panel has BNC jacks for antenna input, IF out (455 kHz DSP processed), Signal Monitor (455 kHz, 16 kHz bandwidth, pre-DSP), 1st and 2nd mixer outputs and external frequency reference input. There is a DB-25 jack for RS-232 remote control and a DB-15 connector for two 600 ohm balanced line outputs, AC and DC coupled unbalanced audio output, muting control and 4 digital level user outputs. There is a $\frac{1}{4}$ inch phone jack for an external speaker (plugging in an external speaker disables the internal speaker, which is a top-mounted 4 inch unit). The power connector is the standard computer type—the radio’s power supply will automatically adapt to voltage over the range of 90–264 volts AC, at frequencies of 48–400 Hertz.

There is a fairly comprehensive manual included with the radio, apparently being a work in progress since there are a few details missing. For instance, in the theory of operation section, Figures are referenced with blanks, since there are no figures. There is no mention of how to dim the display (press the “Setup” button in the Memory/Scan group and turn the associated knob) and no pinout diagram of the DB-15 connector which has the line level audio outputs (use pins 2 and 9 for an AC-coupled unbalanced line level output to an external audio amplifier or tape recorder).

Features

The RX-340 offers a great deal of operating flexibility and the large, well-positioned operating controls invite the user to tweak the controls to maximize reception. However, all functions are not available in all modes, so I will step through the features and try to explain the idiosyncracies.

Tuning—This is the best keypad I’ve ever used due to its large buttons with a solid

feel. Frequencies can be entered in a MHz or kHz format by pressing either the "MHz" or "kHz" button to enter the frequency. I use the kHz format to avoid having to press the decimal point key. When I first got the radio the "0" button would bounce, inputting two zeros when I wanted only one, but this has resolved with use. The Step switches allow for quick changes between rapid and fine tuning and the Up/Down switches allow for stepping through channels, i.e. 9 or 10 kHz on medium wave or 5 kHz on shortwave, although the same effect is obtained by the main tuning knob when the appropriate step size is chosen. The main tuning knob is nicely weighted and has a very nice feel with its rubber surround. When I first got the radio, the main tuning was very stiff—I improved the feel by removing the knob and loosening the locknut on the tuning encoder shaft.

Filters—There are 57 filter bandwidths available, ranging from 100 Hz to 16 kHz, with a shape factor of 1.5:1 or better. For bandwidths of 4 kHz or less, a "Fast Filter" option can be selected for use with delay-critical digital modes such as SITOR or QPSK. The Fast Filter program reduces signal latency and degrades skirt selectivity. Ultimate rejection is rated at greater than 70 dB, which is somewhat low for a receiver of this caliber, but I couldn't detect any significant "blow-by" (signals sneaking past the filter's skirts). I did notice a very interesting phenomenon—I tend to use much wider bandwidths for program listening than I do with other radios. Typically, for the major broadcasters, I use the 9.6 and 10.4 kHz bandwidths in synchronous AM mode for maximum fidelity. There is very little adjacent channel interference, despite the wide filter, and, if present, it can usually be coped with by selecting the opposite sideband. I can only attribute this to the steep slopes of the DSP filters. In SAM mode, the minimum filter bandwidth mode is 4 kHz, but all values above this are available. All filter bandwidths are available in the other modes, with the exception of ISB, which is fixed at 3.2 kHz. Bandwidths are independent of mode, meaning that if you are listening in AM mode with a bandwidth of 6 kHz, and then switch to USB, the filter remains at 6 kHz. In USB/LSB mode the audio is muted

briefly as the filter selection crosses between 4.4 and 4.0 kHz.

Synchronous AM—The sync detector works well—it locks quickly and holds lock well, although it is not quite as tenacious as the sync on the Drake R8B and SW8 receivers. Lock is indicated by periods between the letters S, A, and M in the mode display window. The isolation between sidebands is excellent. The Notch and Passband Tuning features are not available in SAM mode.

Passband Tuning—PBT is available in SSB, CW and AM modes and has a tuning range of ± 2 kHz. It is selected by pressing the PBT button and then adjusted in 5 Hertz steps with the Aux Parameters knob. Alternately, a specific numeric value can be entered via the keypad and pressing the PBT button a second time. This is a useful way to reset the PBT to zero offset, as the tuning rate via the knob is relatively fast.

Notch—With the latest set of EEPROMs the notch filter's tuning range is ± 6 kHz, but it works only in SSB and CW modes, not in AM or SAM modes. What's more, it only works if the bandwidth value is 4 kHz or less so the wider tuning range of the notch is superfluous, due to the tight filter skirts. Enabling the notch in AM mode and with wider filter bandwidth values would be a major improvement for SWling.

AGC—The RX-340 has three standard AGC settings: Fast, Medium and Slow, which differ in their release rates: 1600 dB/second, 100 dB/second and 25 dB/second, respectively. There is no AGC off setting, but the AGC can be temporarily disabled by pressing the "Dump" button. The current AGC settings are restored when the Dump button is released. To change the AGC setting, the AGC button is pressed and the edit knob is rotated to select the desired setting. Pressing the AGC button again will show the attack rate, hang time and decay rate for the selected setting. There is also a programmable AGC setting which permits user setting of AGC parameters with a range of 0.01 to 1.0 millisecond/dB for the attack, 0.00 to 99.9 seconds for the hang and 0.01 to 99.9 ms/dB for decay. I've been experimenting with setting a long hang time and a slow decay rate to try to

minimize the effects of fading for program listening. As far as I know, the Japan Radio NRD-545 is the only other receiver that allows for variable AGC, but it allows adjustment only in SSB/CW modes and appears to only allow adjustment of decay time.

One problem I have noticed since installing the latest version of the firmware is that switching between USB/LSB modes or selecting PBT or Notch functions while in USB or LSB swamps the AGC, muting the audio until the AGC recovers, which of course varies with the AGC setting, being about three seconds of silence with a slow AGC setting. This only occurs with bandwidth settings of 4 kHz or less. This isn't too much of a problem when listening to the ham bands, where one doesn't need to switch modes, but is quite annoying when listening to broadcast stations in ECSS modes when switching between sidebands to minimize interference. I have contacted TenTec about this and they have been able to duplicate the problem and will address it with the next firmware revision.

Squelch—There is a squelch control to eliminate unwanted background noise when no signal is present. It is tied to the AGC line and can be adjusted by the Edit knob or by entering a specific numeric value via the keypad.

Noise Blanker—The all-mode noise blanker is designed to reduce pulse-type noise and has 10 selectable pulse widths, selectable via the Edit knob or keypad. This is solely for pulse type noise and not for hiss or "frying" type noise.

Memories

Although the manual states that there are 100 memory channels available, in addition to an un-numbered scratchpad channel, my receiver has 200, plus the scratchpad. Each channel stores frequency, bandwidth and basic operating parameters. The RX-340 has several interesting capabilities to scan and recall memory channels. These functions are selected from the "Memory/Scan" subpanel. Frequencies are stored by pressing the Store key, selecting the desired memory channel via the keypad or the memory Edit knob and pressing Store a second time. Alternatively,

pressing the Store key twice will put the tuned frequency in the lowest numbered empty memory channel. The Scratchpad memory is loaded by pressing Store followed by Scratch. Recalling frequencies in memory uses the same protocol: press Recall, select the desired memory channel and press Recall again. Once a memory channel is recalled, the receiver may be tuned and operating parameters may be changed—these actions will not affect the information stored in the memory channel unless it is specifically overwritten. The contents of memory channels can be previewed by engaging either the Scroll or the Tune buttons. In Scroll mode, the memory display shows the frequency, mode and bandwidth of each loaded channel as the Edit knob is rotated. The Tune mode temporarily activates each channel as the Edit knob is turned. The front panel is locked during this operation—to restore normal operation, the selected channel must be fully recalled by pressing the Recall key. One aspect of the RX-340's memory scheme that I didn't like was the inability to return to the original tuned frequency when the scratchpad memory is recalled, short of retuning the radio to the original frequency or storing the two frequencies of interest in memory channels. Being able to toggle between the original tuned frequency and the scratchpad memory with a single keypress would make checking parallel frequencies much easier.

Scanning

The RX-340 has two scanning modes: memory channel scanning and program scanning, which will sweep a selected frequency range. The ability to vary the various scan parameters reflects the RX-340's design as a receiver for professional monitoring applications. The following parameters can be adjusted by the user: DWELL TIME—the length of time that the scan will stop on an active frequency (Program Scan mode) or memory channel (Memory Scan mode), adjustable from 0.1 to 29 seconds or infinite; DEAD TIME—the length of time that the receiver stays on a channel/frequency once the signal goes off-air or the squelch drops, useful for two-way communications or when there are pauses in programming due to fading, adjustable from 0.1 to 29 seconds and GAZE

TIME—the time that the scan will stay on a channel with no activity, adjustable from 0.1 to 29.9 seconds.

In memory scan mode, any range of channels can be selected and undesired channels locked-out. Program scan mode includes a unique feature—Frequency Lockout which permits exclusion of individual frequencies (specified by both center frequency and bandwidth) from the scan.

Impressions

This is my first experience with a modern (solid-state) professional grade receiver and I must admit the radio is a pleasure to use and listen to. The wide open front panel invites experimentation and tweaking to maximize signal intelligibility. It is less convenient to have to push a button and then adjust a control as opposed to the single knob per function of a Drake or JRC receiver, but the buttons are adjacent to the control knob, which means that the operator's hand doesn't have to jump all over the front panel to make an adjustment. The RX-340's control scheme is faster and more intuitive than stepping through menus as in the AOR 7030. The control which I used quite frequently was the manual gain control to reduce background noise.


The filtering is outstanding, with outstanding skirt selectivity and a wide range of available values. I tended to use wide bandwidths for shortwave broadcast signals (usually 8.8 to 10.4 kHz) with almost no adjacent channel interference on most signals. On the other hand, I was easily able to copy hams in SSB mode with filter values of 1.6 kHz. ECSS tuning of tropical band broadcasters is excellent because of the radio's outstanding stability and the ability to tune in one Hz steps. In ECSS mode I usually used bandwidths of 3.4 to 3.6 kHz. I was unable to detect any signs of "monkey chatter" due to filter blow-by or DSP intermodulation distortion as has been reported with the JRC NRD-545, another DSP receiver.

I used a Grove SP-200 external amplifier/speaker in place of the receiver's built-in speaker and would rate the sound quality excellent. In addition, I ran the line out to

a stereo amplifier and two Radio Shack Minimus speakers, which I use for program listening. I was able to listen to the radio for long periods of time with no fatigue. I noted no digital "artifacts" as can be noted with external audio DSP filters. With the ability to run the bandwidth "wide open" I found the sound of the RX-340 to be equal to the AOR AR7030 and the Drake R8B for program listening. Conversely, the RX-340 did a great job in recovering audio from very weak and noisy signals by narrowing the bandwidth and shifting the passband tuning for best audibility.

The RX-340 is the most expensive receiver I own, but I do not regret spending the money. It is a pleasure to operate and a pleasure to listen to. TenTec has addressed several performance issues with the newer ROMS, but areas I would still like to see addressed would be enabling the notch filter in AM and SAM modes, improving lock in SAM mode and fixing the AGC hang in SSB modes. I would also like the option of tying bandwidths to mode which switching modes. Due to its robust construction and upgradability via firmware, I anticipate that the RX-340 will have a place in my shack for many years to come.

Some people will want to put the RX-340 in a cabinet for appearance and protection. Ten-Tec makes a beautiful cabinet which is available from Universal Radio for \$200, however, this cabinet is 18.5 inches deep, which was too large for my radio desk. I found a Hammond cabinet that is 13 inches deep from DigiKey for \$92.05—the DigiKey part number is HM-638ND for a gray/beige color. The color match is awful—the cabinet is much more yellow beige than gray. So get out the spray paint or get the HM-625ND, a similar cabinet in black for the same price. Check www.digikey.com. There is also a true grey cabinet listed on the Hammond website in the RCBS series (www.hammondmfg.com) but I don't know who sells them in the U.S.

Information on the RX-340 is best obtained from Ten-Tec's website: www.tentec.com or the company can be reached at: Ten-Tec, 1185 Dolly Parton Pkwy, Sevierville, TN 37862; (865) 453-7172. 

Listener's Notebook

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THE COLUMN is deeply edited this month to make way for Mark Fine's terrific English Broadcast list. Although the excised parts will appear in January's column, those wishing to see all the other skeds can drop me an email request at the address above and I'll send you the file. Happy holidays to all!

AFGHANISTAN This evening, NPR gave a report from Kabul in Afghanistan regarding the re-activation of the radio station, indicating that the station has returned to the SW scene. The NPR reporter was in Kabul, in the studios of *Radio Afghanistan*. He stated that the station and its facilities were previously operated by the Taliban as "Radio Shari-ah" and the station name has been changed (reverted) to *Radio Afghanistan*. There are now two women announcers on the air reading the news, one in Dari and one in Pashto, I would imagine. They are now broadcasting music, children's programs as well as sports information. The station is operating at less than half capacity, probably program-wise as well as power output. The man who is now the manager of *Radio Afghanistan* was last week managing the small Northern Alliance station in the Panjir Valley. He has retained the previous Taliban staff, mainly due to the unavailability of experienced staff. It was also stated that SW is the best way to give coverage to all of Afghanistan thus indicating that the station is again on the air SW. The station is on the air daily beginning at 7:00pm (local time). The NPR reporter also played a cut from one of the announcers reading the news as well as some traditional Afghan music now on the air from this station. During the time I lived in Pakistan, I visited Kabul in Afghanistan more times than I can count, and on many occasions I also visited the studios and transmitter facilities of *Radio Afghanistan*. Although the reporter did not specifically state where the studios are located where he was making his report, it is clear to me from the context of his information that he was in the building on the road to the airport that has been the studio facility of *Radio Afghanistan* for the past nearly 30 years. (Adrian M. Peterson/via D'Angelo-PA)

I checked up the station reported on 9950 at 1330-1430 and here are my observations of today, 21 Nov 2001. The program started at 1330 after open carrier and test tone. The program sounded like of Afghanistan languages and new programs (segments) were heard at 1330, 1400 & 1415 (and may be at 1345 also, I did not check it). Till 1415 id was "Afghanistan...Radio" but from 1415 its ID was something like "Radio Sadayeh Afghanistan." Each segment had music, IDs, Koran recitation, music, talk etc. The station signed off at 1430 and was quite strong here at Hyderabad, India. Since

Saturday 17th. I have listened to "Radio Sharia Afghanistan" from 1330 to 1430 UT at 9950 kHz. I don't understand the language, but I think it is a Pashto broadcast transmitting from Kabul, Afghanistan. (Jacob-IND/DX Listening Digest/Hauser-OK/EDXP/Padula-AUS)

Hauser's suspicion that this broadcast is NOT re-active Sharia is borne out by BBCM's transcript of their test broadcast. Station calls itself *Radio Voice of Afghanistan*, and may emanate from a Russian transmitter. As of this writing, BBCM has yet to hear reactivated *Radio Afghanistan* on shortwave.

US "Psyops" broadcasting continues 0030-0530 and 1230-1730 on 8700usb as well as 864 and 1107 MW, all from "Commander Solo" EC-130 aircraft. Also reported on 980 MW is an airborne relay of VOA. (BBCM)

Reports and tapes of 8700 Psyops station are being accepted at:

193rd Special Operations Wing Attn: Lt. Edward Shank, Chief of Public Affairs 81 Constellation Court Middletown, PA 17057 (Reiff-GER/Hard Core DX)

ARGENTINA Here is the final sked for RAE B-01 period:

0000-0200	Portuguese	6060 11710 Mo-Fr
0200-0300	English	6060 11710 Mo-Fr
0300-0400	French	6060 11710 Mo-Fr
1000-1200	Japanese	11710 Mo-Fr
1200-1400	Spanish	15345 Mo-Fr
1900-2000	English	9690 15345 Mo-Fr
2000-2100	French	9690 15345 Mo-Fr
2000-2200	Spanish*	6060 11710 15345
2100-2200	German	9690 15345 Mo-Fr
2200-2300	Spanish	6060 11710 15345 Mo-Fr
2300-2400	Spanish	6060 11710 15345 Mo-Fr

*RAE or LRA1 Radio Nacional Buenos Aires) (Barrera-ARG)

BANGLADESH *Radio Bangladesh* External Service

1200-1300	En-GOS	7185 9550
1315-1345	Nepalese	7185 9550
1400-1430	Urdu	7185 9550
1515-1545	Hindo	7185 9550
1600-1630	Arabic	7185 9550
1630-1730	Bengali	7185 9550

1745-1815 En-VOIslam 7185 9550 15520
 1815-1900 En-GOS 7185 9550 15520
 1915-2000 Bengali 7185 9550 15520

(Gupta-IND/Worldwide DX Club/Kubiak-GER)

BELGIUM Revised and updated B-01 schedule for RVT

0400-0425 English 11985B
 0800-0825 English 5985J
 1130-1155 English 9865P
 1730-1745 French 9925A
 1745-1800 German 9925A
 1830-1855 English 9925A 13685R 13710J
 2000-2015 German 9925A
 2015-2030 French 9925A
 2030-2055 English 9925A
 2230-2255 English 13700B

A=Armavir/Krasnodar-RUS

B=Bonaire-ATN

J=Juelich, Germany

P=Petrovavlovsk Kamchatsky-RUS

R=Rampisham-UK

W=Wolvertem-BEL (Observer-BUL/Bueschel-GER/BC-DX)

BHUTAN BBS Thimphu has changed its English schedule. Their current local time is UTC +5:30, instead of UTC +6:00. The URL of their home page (very slow indeed) is: <http://www.bbs.com.bt>

0100-0500 Dzongkha 6035 Mo-Fr
 0400-1000 Dzongkha 6035 Sa/Su
 0500-0600 English 6035 Mo-Fr
 0800-1100 English 6035 Mo-Fr
 1000-1130 English 6035 Sa/Su
 1100-1230 Dzongkha 6035 Mo-Fr

(Dasgupta-IND/EDXP/Padula-AUS)

BRAZIL 4845 *Radio Ibitinga*, Ibitinga, SP (new name). 0809-0816. Local advs. ID at 0815 as: "...Radio Ibitinga...emissora integrante da..." Adv. of "Maderera Ibitinga." International news at 0816. (Slaen-ARG Oct 19/Cumbre DX/Johnson)

5990 *Radio Senado de la Nacion*, Brasilia. 0858-0910. Brazilian music. Ann. by female. Other ann. of "Brasil Regional" (station program). Full ID read by female. More Brazilian music. (Slaen-ARG/Oct 19/Cumbre DX/Johnson)

BULGARIA *Radio Bulgaria*

0000-0100 English 7400 9400
 0000-0100 Russian 7500
 0000-0100 Spanish 5900 11600
 0100-0200 Bulgarian 5900 7400 9400 11600
 0200-0300 French 7400 9400
 0200-0300 Spanish 5900 7500 11600
 0300-0400 English 7400 9400
 0300-0400 Russian 5900 7500

0400-0500 Bulgarian 5900 7500
 0500-0530 Greek 5900
 0530-0600 Albanian 5900 Mo-Fr
 0530-0600 Greek 5900 Sa/Su
 0530-0600 Turkish 6000 7400 Mo-Fr
 0600-0645 German 5800 9400
 0600-0700 Serbian 5900 Mo-Fr
 0600-0700 Turkish 6000 7400 Sa/Su
 0700-0800 Albanian 5900 Sa/Su
 0700-0800 French 12000 13600
 0800-0900 Serbian 5900 Sa/Su
 1100-1130 Bulgarian 11700 12000 13600 15200
 1100-1200 German 15700 17500
 1200-1300 English 15700 17500
 1300-1500 Bulgarian 12000 15700
 1500-1600 Russian 7500 9400 9900
 1600-1645 Serbian 5900
 1600-1700 Bulgarian 7500 9400 9900 17500
 1645-1730 Albanian 5900
 1700-1800 Bulgarian 7500 9900
 1700-1800 Spanish 9700 11700
 1715-1800 German 5800 9400
 1730-1815 Greek 5900
 1800-1900 French 5800 9400
 1800-1900 Russian 7500 9900
 1815-1900 Turkish 7400
 1900-1945 German 5800 9400
 1900-2000 Bulgarian 5900 6000 7400
 2000-2045 Albanian 5900
 2000-2100 Bulgarian 6000 7400
 2000-2100 English 5800 7500
 2045-2130 Greek 5900
 2100-2200 French 5800 7500
 2130-2215 Serbian 5900
 2200-2300 English 5800 7500
 2200-2300 Spanish 6000 7300
 (BBCM)

CHINA A couple of new frequencies from CNR's long march to ubiquity: CNR-2 noted around 1000 29 Oct on 15280 and 15355. It's possible that one or both could really be for jamming purposes, although BBC Chinese has not been on 15280 at that time for at least several weeks, and there's also no obvious target on 15355 at that time. CNR-2 was also still on adjacent 15360 which has been in use since September, co-channel with BBC WS English to E Asia. (Alan Davies/EDXP)

More Chinese changes in the 60 mb: 4800 kHz reactivated—CNR-1; heard NOV 20, 1515-1732* // 7230, 7345

3 parallel frequencies: 4905 (new) // 4920 (new) // 5240 kHz—Xizang PBS, Tibet (?); heard NOV 20, 1545-1700*; although listed in Chinese on 5240 kHz, I would say it was in Tibetan. Not // 4750 kHz (silent).

4980 and 5060 kHz silent today! (Heard NOV 17 until 1600* UTC) No more Chinese signals found in the 60 mb today between 1500-1730 UTC. (Honzik-CZE/HCDX)

Xinjiang PBS SW has been operating irregularly for some weeks, being wholly or partly off the air. Before that they had been operating with only one instead of two transmitters per lang channel.

Now they are back, not only to normal, but to double normal, with at least 16 freqs identified so far as follows (all noted 1700-1800 today, Sunday): Uighur: 3990, 4980, 6120, 7195, 9595, 9600 (yes, only 5 kHz apart) Mongolian: 4500, 6190, 7120 (covered by co-channel CRI to Europe from 1730, no coordination there), 9705 Kazakh: 4330 (lone one) Chinese: 3950, 5060, 5960, 7155, 11770. All progrs went off just before 1800.

Xinjiang PBS was well heard this morning. Contrary to earlier practice, the freqs were partly different from the evening ones, and also did not include several of the tropical band channels. Uighur: 4980, 6120, 7275, 9455, 9600, 11885, 13670 Mongolian: 7120, 7230, 9705 Kazakh: 7340, 9470 Chinese: 5060, 5960, 7310, 9560, 9595, 11770 It will probably take some time before the freqs are finally settled.) Xinjiang PBS was heard until the late morning on the higher freqs, but after that has been silent. Only one or two freqs noted in the afternoon/evening, so apparently they are still very much in a testing phase. (Olle Alm-SWE/BC-DX/Bueschel-GER)

Today (?) China switched to winter freqs and added several new ones in the tropical bands. All transmissions below monitored from 1330:

CNR-1: New on 4800.

CNR-2: New on 3985, double satellite delay, also back on old 3290, no delay.

CRI: Back on 4815, 4883 in Ru from 1300 and 1500, Mongolian from 1400.

Xinjiang PBS Ch on 5060 (also on 7155, 11770), 5060 QRM from R Tashkent-UZB in Chinese. Uighur on 4980 (also on 7195, 11885).

Tibet

Tibetan:

a) 3990, 5969.6, 7130, no satellite delay, s-off already at 1400,

b) 4905, 4920, 5240, 6200, 7385 all single satellite delay, s-off 1700,

c) 7150, 9500 double satellite delay s-off 1700.

Chinese: 5935, 7170 and with satellite delay 7550. The Tibetan channel had a DJ progr playing lots of very enjoyable modern Tibetan ballads. The a) channels had very good modern audio quality. (Olle Alm-SWE/BC-DX/Bueschel-GER)

This afternoon Tibet was not using 4905 and 5240. 3990, 5969.6 and 7130 were in \\ with other Tibetan freqs until 1400, then switched to a different progr and finally went off by 1402. These freqs also noted at 2300, again with a different progr. Could this be a Tibetan sce from another province (Qinghai or Gansu)?

3985 **CNR-2** also noted 2100-2300. 4800 **CNR-1** also noted from 2000 past 2300. Evening s-on seems to be 1230 or 1300.

CRI 4815 also active from 2300 in Russian.

Two transmitters have been testing in the afternoon on 13750 and 7470 with the now well known CD of Ch classical music. 9510 and 17800 noted earlier in the day. **CNR** transmissions are now heard on far too many frequencies.

CNR-1 on 4800 booming in from 2000 and **CNR-2** fair on 3985 from 2100. (Olle Alm-SWE, BC-DX Nov 18/19)

Three more transmitters were added in the past few days to **CNR** from a site in SoChina to listeners in NoWeChina (as I presume). At 2000 these are on 9810, 11870 and 12030. The signal strength is very good. None of the NoChina transmitters beaming to NoWeChina offers anything near the good signals of the new SoChina outlets. At 2000 the October additions to **CNR-1** are now on 6065, 9480, 11785, 13775, 15355. The September additions are on 7355, 7540, 9580, 11590, 11935. These in part serve as jammers.

When **CNR-2** opens at 2100 the new SoChina transmitters are on 9545, 9910, 11700, 11740, 11935, 15545. One of these (11935?) may be from a different site as the total should only be 5.

Two transmitters continue testing with nonstop music. This music is also used by some jammers with distorted signal, so I believe that the feed is from Beijing, not local. (Olle Alm-SWE, BC-DX Nov 19)

Last night I heard several Ch stations on Tropical Bands that were certainly not there the night before. Namely:

4905 2350 Radio Xizang, Lhasa, China (Presumed). Ch music \\ 4920 & 5240, Chinese M. 4920 2355 Radio Xizang, Lhasa, China (Presumed). Ch music \\ 4905 & 5240. Chinese M. 4815 0000 CRI, Unknown Site. ID & Annts in Unknown Language.

5240 0010 Radio Xizang, Lhasa, China (Presumed).
Western instrumental music \ \ 4905 & 4920. CC M.
Seems that they are making a marked return to the
60 mb at present. (Graham Powell-UK, hcdx Nov 18/
19/BC-DX/Bueschel-GER)

China Radio International relays B-01

Via Sackville, Canada:

0100-0157	English	9790
0300-0357	Spanish	9560
0500-0557	English	9560
1200-1257	Cantonese	11855
1300-1357	English	13650
1400-1457	English	13650
2300-2357	English	13680

Via Cuba:

0000-0057	Spanish	15210
0100-0157	English	9580
1200-1257	Chinese	9570
1300-1357	English	9570
1400-1457	English	17720
1500-1557	English	17720
2300-2357	English	5990
2330-2357	Portuguese	13650

Via Bamako, Mali:

0830-0857	Hausa	7170
1300-1357	French	13685 17880
1400-1457	English	13685 15125
1500-1557	English	13685 15125
1600-1657	Arabic	13685 17880
1700-1727	Swahili	13685 15125
1730-1757	Hausa	13685 15550
1800-1827	Hausa	13685 15550
1830-1927	Arabic	13685 15500/alt 15125
1930-1957	Portuguese	11735 15500/alt 15125
2000-2057	English	13640 15125
2100-2127	English	13640 15125
2130-2227	French	11975 15500
2230-2257	Chinese	11975 15500
2300-2357	Chinese	7170 11975

Via Russia:

1600-1657	Arabic	7130-St.Petersburg
1800-1857	Persian	7130-St.Petersburg
1830-1927	Arabic	7200-Moscow
2030-2127	French	7215-Samara
2200-2257	English	7170-Taldom

Via Montsinery, French Guiana

0000-0027	Portuguese	11850
0030-0057	Portuguese	11850
0200-0257	Spanish	13685
0300-0357	Chinese	9720
0400-0457	English	9730

Via Noblejas, Spain:

0200-0257	Chinese	9690
0300-0357	English	9690

Via Issoudin, France:

1900-1927	Romanian	7305
1930-1957	Czech	7305
2000-2027	Esperanto	6150
2030-2057	Bulgarian	6150
2100-2127	Albanian	6150
2130-2157	Hungarian	6150

(EDXP/Padula-AUS)

CHINA-TAIWAN CBS Radio Taipei International
consolidated schedule. Frequencies in clusters (separated by /) are all alternates to avoid jamming.

0000-0100a	Amoy	15440
0000-0100	Chinese-N	9640
0000-0100a	Hakka	5950
0000-0200	Chinese-V	11590 11625 11815/ 11865/11905/11970 11860/15345/15370/ 15455
0100-0200a	Amoy	11875
0100-0200a	Cantonese	5950 7520 15290 15440
0100-0200	Chinese-ES	17845
0100-0200	Chinese-N	15460
0100-0200a	Japanese	15310
0200-0300b	Amoy	11875
0200-0300a	English	5950 9680 11740 15320 15345
0200-0300	Spanish	15215 11825
0200-0500	Chinese-N	15215/15335/15440/ 15525/15290 15460
0300-0400a	Cantonese	11740
0300-0400b	English	5950 9680 11875 15320
0300-0400b	Hakka	15405
0300-0400	Korean	15345
0400-0500	Chinese-ES	5950# 9680# 15320 15405
0400-0500	Chinese-V	6265 Su
0400-0500	Spanish	11740
0400-0600	Chinese-V	11795 11625 11645/ 11970/11985 15050 15430
0400-0600	Chinese-VOA	11795
0500-0600b	Cantonese	5950 9680 15320 15405 15580
0500-0700	Chinese-N	15215/15335/15440/ 15525
0600-0700a	Amoy	15580
0600-0700	German	9355#
0600-0700	Spanish	5950#
0600-0700	Thai	15320 15405
0600-0800	Chinese-V	11625
0600-0800	Chinese-V	15050 15430 Sa/Su
0600-1000	Chinese-DWT	11795
0700-0800b	Amoy	15580
0700-0800	Burmese	15405

0700-0800 Chinese-N	9690 15215/15335/ 15440/15525	1600-1700a Indonesian	7445 11745
0700-0800a English	5950	1700-1800b English	11550
0700-0800 French	9355#	1700-1800a Hakka	11925
0800-0900a Amoy	11715	1700-1800 Russian	9955
0800-0900 Chinese-N	9690	1800-1900 Arabic	11610
0800-0900 Chinese-V	6265 11625	1800-1900a English	3955*
0800-0900 Chinese-V	6265 11625 15430 Sa/Su	1800-1900 French	17760#
0800-0900a Indonesian	15580	1800-1900 German	9955
0800-0900b Japanese	15465	1900-2000 Chinese-ES	9955 15600# 17750#
0900-0900 Chinese-V	6085 6265 11615 11625 15050	1900-2000 French	3955*
0900-1000 Chinese-ES	9610 11605 15320 15405 15580	1900-2000 German	6180*
0900-1000b Hakka	15465	2000-2100 French	9955 9355#
0900-1000 Russian	11985	2000-2100 Spanish	11665#
0900-1100 Chinese-N	7355 9640 9690	2100-2200 German	9355# 5810#
0900-1100 Chinese-V	6085 6265	2100-2200 Spanish	9955
0900-1100 Chinese-VOA	9280	2200-2300 Chinese-N	5950 9640 11635 11875 15440 15460
1000-1100a Amoy	11605 15465	2200-2300 Chinese-V	6265 11575/11725/ 11905/11985 11590 11625 15050
1000-1100a Cantonese	9610 11635 15320 15405	2200-2300a English	9355# 5810#
1000-1100b Hakka	6040	2200-2300 Thai	7445
1000-1100a Indonesian	11550 15580	2300-0000 Spanish	11720 9690
1000-1100 Mongolian	11985	2300-0000 Thai-VOA	7445
1048-1100 Chinese-VOA	7445	2300-0000 Vietnamese	11875 9960
1100-1200b Cantonese	15405	2300-0300 Chinese-DWT	9690
1100-1200 Chinese-N	7355 9610 9640 9690	2300-2400 Chinese-N	5950 9640 11635 15440 15460
1100-1200a English	11985	2300-2400 Chinese-V	11575/11725/11905/ 11985 11590 11625 15050
1100-1200b English	7445	Chinese-N=News network	
1100-1200a Hakka	6040 11635 15465	Chinese-DWT="Date With Taipei"	
1100-1200b Indonesian	11550 15580	Chinese-ES=External service	
1100-1200a Japanese	7130 11605	Chinese-VOA=Voice of Asia (service ends January 1, 2002)	
1100-1300 Chinese-VOA	9280	Thai-VOA=Voice of Asia (service ends January 1, 2002)	
1100-1400 Chinese-V	6085 6265 11615 11625 15050	Chinese-V=Variety network	
1200-1300 Chinese-ES	11605 15405 15465	(Miller Liu-TWN/WWDXC/BC-DX/Bueschel-GER)	
1200-1300a English	9610 7130		
1200-1300b Indonesian	7445 11635		
1200-1300 Tibetan	11985		
1200-1400a Cantonese	6040 11915		
1200-1800 Chinese-N	9640 9690		
1300-1400b Amoy	11635 15465		
1300-1400a Hakka	15405		
1300-1400b Japanese	7130 11605		
1300-1400 Russian	15695 11745		
1300-1500 Chinese-VOA	7445		
1400-1500 Chinese-V	6085 6265 11615 15050		
1400-1500a English	15265		
1400-1500b Hakka	11915		
1400-1500a Indonesian	11745		
1400-1500 Korean	7130 15465		
1400-1500 Thai	11635 15405		
1400-1800 Chinese-DWT	3335 6040		
1500-1600 Burmese	11635		
1500-1600 Thai-VOA	7445		
1500-1600 Vietnamese	11915 15405		
1500-1700 Chinese-V	6085 11615 15050		
1600-1700 Arabic	11955		
1600-1700a English	11550		

During some breaks (in all the cases I've noticed these have been before segments in various Chinese dialects) *Radio Taipei International*, which in Chinese calls itself 'International Voice of Taipei', has been carrying the following warning read in Mandarin by a female announcer (noted various times including around 0355-0400 28 and 29 Oct on 15405): 'Attention ships operating in the Indian Ocean and Persian Gulf. Attention ships operating in the Indian Ocean and Persian Gulf. As the US military is currently launching attacks against terrorists in countries [or 'a country'] near the Persian Gulf, for your safety please avoid as far as possible entering waters in the Persian Gulf area because they are hazardous, and keep listening to news on the subject from the Central Broadcasting Station, International Voice of Taipei and the Taiwan Area Fisheries Broadcasting Station to obtain the latest information.'

The recording is repeated several times until programming begins at the top of the hour. As far as I know, the fisheries station is on mediumwave only. (Alan Davies/EDXP)

CROATIA *Hrvatski Radio*

0500-0600 6165 7365
 0600-0800 6165 7365 9835
 0800-1000 6165 9830 13830
 1000-1815 6165 9830 13830
 1815-2200 6165 13830
 2200-2300 6165

(Rumen Pankov-BUL, BC-DX Nov 10)

CZECH REPUBLIC *Radio Prague*

0000-0020 Spanish 7345 11615
 0030-0050 Czech 7345 11615
 0100-0120 English 6200 7345
 0130-0150 Spanish 6200 7345
 0200-0220 English 6200 7345
 0230-0250 Czech 6200 7345
 0300-0320 Spanish 6200 7345 **7385
 0330-0350 Czech 7345 9435
 0400-0420 English 7345 **7385 9435
 0430-0450 English 9865 11600
 0500-0520 Russian 6055 11600
 0700-0720 French 5930 7345
 0730-0750 German 5930 7345
 0800-0820 English 11600 15255
 0830-0850 Spanish 11600 15255
 0900-0920 French 11600 15255
 0930-0950 Czech 15255 21745
 1000-1020 English 21745
 1030-1050 Czech 21745
 1100-1120 German 7345 9880
 1130-1150 English 11640 21745
 1200-1220 Czech 11640 21745
 1230-1250 Russian 6055 * 17495 21745
 1300-1320 German 6055 7345
 1330-1350 Czech 6055 7345
 1400-1420 English 21745
 1430-1450 Czech 21745
 1500-1520 Spanish 11600 13580
 1530-1550* Russian 5915 11975 13580
 1600-1620 German 5930
 1630-1650 Czech 5930 17485
 1630-1650* Russian 5990
 1700-1720 English 5930 17485
 1730-1750 French 5930 17485
 1730-1750* German 5990
 1800-1820 English 5930 7315
 1830-1850 Czech 5930 7315
 1900-1920 Spanish 5930 9430
 1930-1950 French 5930 9430
 2000-2020 Spanish 5930 9430
 2030-2050 Czech 5930 9430
 2100-2120 English 5930 9430
 2130-2150 Spanish 5930 9435
 2200-2220 Czech 5930 9435

2230-2250 English 7345 9435
 2300-2320 French 7345 9435
 2330-2350 English 7345 9435

* via Rimavsk Sobota, Slovakia** via WRMI Miami (Volk—ADDX via Bueschel-GER/Worldwide DX Club/Kubiak-GER)

EGYPT *Radio Cairo*

0030-0430 Arabic 9900
 0045-0200 Spanish 9475 9740 11715
 0200-0000 Arabic-GS 12050
 0200-0330 English 9475
 0200-1500 Arabic-HQ 9755
 0300-0600 Arabic-VOA 9855 15285
 0350-0700 Arabic-GS 9620 9770 9800
 0600-1400 Arabic-VOA 11980 15285
 0700-1100 Arabic-GS 9800 11785 15115
 15475
 1015-1100 Arabic 17745
 1100-1130 Arabic 17745 17800
 1100-1200 Arabic-GS 9800 9850 11785
 15475
 1115-1215 Thai 17665
 1130-1215 Arabic 17745
 1200-1300 Arabic-GS 9850 11785 15475
 1215-1315 Malay 17665
 1215-1330 English 17595
 1230-1330 Persian 15160
 1300-1400 Arabic-GS 9850 11785 15475
 17670
 1300-1600 Arabic 15220
 1320-1450 Indonesian 17665
 1330-1430 Bengali 17595
 1330-1530 Persian 11560
 1400-0030 Arabic-VOA 15285
 1400-1500 Arabic-GS 9850 11785 17670
 1430-1530 Azeri 9780
 1500-1600 Hindi 17690
 1500-1600 Pashto 17710
 1500-1600 Russian 6120
 1500-1800 Arabic-HQ 9755 9850 17670
 1530-1630 Afar 15155
 1530-1630 Uzbek 9620
 1530-1730 Swahili 11975
 1600-1645 Zulu 15475
 1600-1800 Albanian 9950
 1600-1800 Turkish 6100
 1600-1800 Urdu 15170
 1630-1730 Somali 15155
 1630-1830 English 15255
 1645-1730 Shona 15475
 1730-1815 Indebele 15475
 1730-1900 Amharic 15155
 1800-0030 Arabic-VOA 9700
 1800-1900 Italian 9988
 1800-2100 Hausa 9675
 1800-2400 Arabic-HQ 9755 9850
 1830-1915 Lingala 15255
 1830-1930 Wolof 15375
 1900-0030 Arabic-VOA 11665

1900-2000	German	9990
1915-2030	Fulani	9720
1930-2030	Bambara	15375
2000-2115	French	9990
2000-2200	Arabic	11990
2030-2200	English	15375
2030-2230	French	15335
2100-2200	Yoruba	9675
2115-2245	English	9990
2215-2330	Portuguese	15420
2300-0030	English	9900
2330-0045	Arabic	15590 17770

GS-General Service

HQ-Holy Quran

VOA-Voice of the Arabs (direct/Gupta-IND/
EDXP/Padula-AUS)

INDIA All India Radio External Service

0000-0045	English	9705 9950 13605
0000-0045	Tamil	4790 9835 9910 11740 11985 13795
0015-0100	Urdu	6155 9595
0045-0115	Sinhala	11985
0100-0130	Burmese	9950 13630
0100-0200	Sindhi	7125 11790
0100-0430	Urdu	6155 9595 11620
0130-0200	Tibetan	9565 11900 13700
0130-0228	Nepali	3945 9810
0215-0300	Pashto	9845 9910 11735 13620
0300-0345	Dari	9845 9910 11735
0315-0415	Hindi	13695 15075 15185 17715
0400-0430	Persian	13620 15770
0415-0430	Gujarati	15185 17715
0430-0530	Arabic	13620 15770
0430-0530	Hindi	15075 15185 17715
0530-0600	Urdu*	3620 15770
0700-0800	Nepali	7250 9595 11850
0830-1130	Urdu	7250 9595 11620
0845-0915	Indonesian	15770 17510
1000-1100	English	11585 13700 15020 15260 17510 17800 17895
1115-1200	Thai	13645 15235 17740
1115-1215	Tamil	13700 15770 17810 17860
1145-1315	Mandarin	11840 15795 17705
1215-1245	Telugu	13700 15770 17810
1215-1315	Burmese	11620 11710
1215-1330	Tibetan	9565 11695
1230-1500	Sindhi	9620 11585
1300-1500	Sinhala	9820
1315-1415	Dari	7255 9910
1330-1430	Nepali	3945 6045 7410 11695
1330-1500	English	11620 13710
1415-1530	Pashto	7255 9910
1430-1930	Urdu	3945 4860 6045
1500-1600	Baluchi	9620 11585
1515-1600	Gujarati	11620 15175
1515-1615	Swahili	13720 17670
1615-1715	Russian	11620 15140

1615-1730	Hindi	7410 12025 13720 13770 17670
1615-1730	Persian	7115 9910
1730-1830	Malayalam	7115 12025
1730-1945	Arabic	9910 13620
1745-1945	English	7410 11620 11935 13605 15155 17670
1945-2030	French	9910 13605
1945-2045	Hindi	7410 11620
2045-2230	English	7150 7410 9650 9910 11620 11715
2245-2400	English	9705 9950 13605
2300-2400	Hindi	9910 11740 13795

* during Haj season only (BBCM)

For Ramadan (ending Dec 12), **All India Radio (Radio Kashmir), Srinagar** opens early, 2330-0005 on 4950. At 0005 the transmitter goes off air and starts regular transmissions from 0120. (Jacob-IND/EDXP/Padula-AUS)

INDONESIA Current schedule of **RRI Jambi** 4925: 2155-0200, 0855-1515. Times vary by up to a few mins +/- (Alan Davies-MLA/BC-DX/Bueschel-GER)

IRAN Voice of the Islamic Republic of Iran

0000-0030	French	6135 11730
0000-0030	Mandarin	7130 7210 9635
0000-0130	Arabic	6200 11710
0030-0130	Bengali	6005 6085 6185
0030-0130	English	6065 6135
0030-0130	Spanish	9630 9650 9660
0130-0230	Kazakh	7190 9880
0130-0230	Spanish	6135 9630 9650 9660
0130-0230	Urdu	6010 6190 7210
0230-0300	Hindi	15165 17640
0230-0300	Russian	9805 9830 11780 11850
0230-0330	Arabic	7155 9640 9895 15545
0230-0330	Pashto	6095 9525 9605
0230-0330	Spanish	6065
0300-0330	Armenian	7295
0330-0430	Arabic	7155 7250 9505 9640 9895 15545
0330-0430	Swahili	13640 15125 15260 15595
0330-0530	Azeri	11720
0430-0530	Arabic	9895 15125 15545
0430-0600	Turkish	15260 15365
0530-0630	Arabic	9895 15125 15545
0530-0630	Bosnian	15235 17680 17860
0530-0630	Spanish	17590 17785
0600-0700	Hausa	17840 21810
0630-0730	Albanian	15235 17680
0630-0730	French	17590 21645 21775
0630-0730	Italian	15084 17560 17605
0630-0930	Arabic	15125 15545
0730-0830	German	15084 21770
0900-0930	Pashto	11675 17680
0930-1000	Armenian	9615 9885 15260

0930-1030	Arabic	15125 15545 17540 21545 21820
1000-1100	Swahili	17780 21755
1030-1130	Arabic	13675 15125 15545 17540 21545 21820
1100-1230	English	0765 15375 15385 15480 21470 21730
1130-1230	Arabic	13675 15125 15545 17540 21545 21820
1200-1300	Italian	15084 15275 17610
1230-1245	Arabic	9860 13675 15125 15545
1230-1330	Malay	15200 15585 17560 17690
1230-1330	Pashto	1098 7165 9790 11870 13775
1245-1530	Arabic	9860 13675 15125 15545
1300-1330	Armenian	9615 9885 15260
1300-1330	Japanese	9655 9880
1300-1400	Dari	7180 11675
1300-1400	Kazakh	11750 13755 15410
1330-1430	Mandarin	9810 11670 13645 15240
1330-1500	Urdu	7145 9480 9655 11775 11950 13595
1400-1500	Dari	7180
1400-1500	Russian	9575 11660 11930
1430-1530	Bengali	6090 9885 11870 15135
1430-1530	Pashto	7270
1430-1700	Azeri	6200
1500-1530	Hindi	7195 11775 11950 13745
1530-1630	Arabic	9860 15125 15545
1530-1630	English	9605 11775 11870
1530-1630	Russian	7165 7200 7230 9705 9810 11785
1530-1730	Urdu	7270
1600-1730	Turkish	7125 9735
1630-1730	Arabic	6025 6065 9860 13750
1630-1730	Armenian	6185 7230 9780
1630-1730	Pashto	3945 6005 6015 7195
1730-1830	Arabic	6025 6065 6200 9860 13750
1730-1830	Bosnian	7295 11660 11895
1730-1830	German	6180 7190 9500
1730-1830	Russian	6035 7115 7205 7305
1730-1830	Swahili	9595 11750
1830-1930	Albanian	6100 7165 9610
1830-1930	French	6180 7135 9565 9805
1830-1930	Hausa	11880 15140
1830-2130	Arabic	6025 6065 6200 7115 9860 13750
1930-2000	Italian	7295 9615 11890
1930-2030	English	6110 9890 11695 15140
1930-2030	Russian	6045 7100 7205 9805
2030-2130	Albanian	6100 11895
2030-2130	Spanish	6005 9750
2100-2130	Japanese	6125 7180
2100-2200	Dari	3945
2130-2230	Bosnian	6100 7235 9710
2130-2230	English	9780 11740
2130-2400	Arabic	6200 11710
2330-2400	French	6135 11730
2330-2400	Mandarin	7130 7210 9635

(BBCM)

Ramadan schedule, thru December 12:		
0000-0057	Tajik	3975
0100-0327	Azeri	6150
0157-0227	Arabic	5970
0200-0257	Turkish	7145
2330-0157	Arabic	5970 7225

For all of B-01, "Radio Shalom," the special service in English, is listed 2000-2027 on 7175 and 7255, retimed from 1900-1927. (Radio Bulgaria Monitoring/EDXP/Padula-AUS)

Voice of Khorasan - Mashhad Radio

0100-0230	5950
1600-1730	5950

(VoIRI Mashhad/BBCM/DXLD/Hauser/BC-DX/Bue-schel-GER)

JAPAN NHK special service to middle east:

0000-0100	Japanese	6160-Dubai
0100-0400	Japanese	6180-Dubai
0400-0700	Japanese	15470-Dubai
0700-1300	Japanese	15165-Dubai
1300-1500	Japanese	17555-Rampisham
1500-1600	Japanese	15265-Skelton
1600-1700	Japanese	15495-Skelton
1700-1900	Japanese	11880-Dubai
1900-2100	Japanese	9590-Dubai
2100-2400	Japanese	6160-Dubai

Please be advised that the schedule is subject to change. (Radio Japan/Green-UK, BC-DX Nov 5, updated Nov 16)

LITHUANIA Radio Vilnius External Service

0000-0030	Lithuanian	7325
0030-0100	English	7325
0900-0930	Lithuanian	9710
0930-1000	English	9710
2300-2330	Lithuanian	9875
2330-2400	English	9875

(BBCM)

PAKISTAN Radio Pakistan (format: planned freq/alternate freq)

0045-0115	Assami	11650/12050 15455/15600
0045-0215	Regional	7100/7300
0045-0215	Urdu	15485/15600 17895/17900
0115-0200	Bangla	11650/12050 15455/15600
0200-0245	Hindi	11650/12050 15455/15600
0245-0315	Tamil	11650/12050 15455/15600
0330-0400	Gujrati	15325/15600 17825/17900
0400-1145	Regional	7155/7300
0430-0515	Regional	7225/7300
0500-0700	Urdu	15100/15600 21460/21850
0530-0615	Regional	7225/7300
0600-1115	Tamil	9580/9900
0800-1104	Urdu/En	17520/17900 21465/21850
0900-1215	Regional	7265/7300
1000-1030	Tamil	15625/15600
1030-1115	Hindi	15625/15600

1100-1400	Regional	7320/7300
1115-1145	Bangla	15625/15600
1145-1215	Sinhali	15625/15600
1200-1230	Chinese	17895/17900
1215-1245	Nepali	15625/15600
1300-1800	Regional	7265/7300
1330-1530	Urdu	11570/12050 15100/15600
1350-1400	Regional	7335/7300
1400-1430	Turki	7375/7375 9395/9900
1420-1428	Regional	7335/7300
1430-1515	Russian	7375/7375 9395/9900
1600-1615	English	11570/12050 15100/15600 17750/17900
1630-1700	Turkish	11545/12050
1700-1745	Irani	11545/12050
1700-1900	Urdu	11570/12050
1700-1900	Urdu	9400/9900
1745-1830	Arabic	11545/12050
1800-1900	Urdu	7385/9900

(A. Volk—ADDX via Bueschel-GER/Worldwide DX Club/Kubiak-GER)

RUSSIA Radio "Voice of Russia"—Russian World Service

0200-0300	7125 7260 7330 9480 9810 12010 15595 17565 17595
0300-0400	7125 7260 7330 9350 9480 9810 12010 15595 17565 17595
1300-1400	6145 7155 7170 9450 9490 15480
1400-1500	5930 6205 7155 7315 9450 15460
1600-1700	7170 7315 12030
1800-1900	5950 7360
2000-2100	5950 7310 7360 7380 7445
2100-2200	6045 7370 9480

(Pavel Mikhaylov/RUS-DX/Worldwide DX Club/Kubiak-GER)

Radio Rossii via various sites:

CRR-1 Moscow/Kurovskaya 100 kW

0200-0500	5910
0530-1500	7250
1530-2200	5910

CRR-1 Moscow/Kurovskaya 100 kW

0200-0600	5920
0630-1500	9720
1530-2200	6060

CRR-1 Moscow/Taldom 250 kW

0200-0500	6115
0530-0800	9860
0830-1700	13705
1730-2200	7350

CRR-1 Moscow/Taldom 250 kW

0200-0500	7380
0530-0800	12060

0830-1500	17600
1530-1800	11630
1830-2200	7140

CRR-2 St. Petersburg 200 kW

1400-2100	5905
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CRR-2 Kaliningrad 160 kW

0300-0700	9450
0730-1400	15355

CRR-3 Samara 100 kW

0200-0500	6125
0530-1400	11990
1430-2200	6125

TCR-4 Krasnodar 100 kW

0200-0500	7365
0530-0900	12065
0930-1600	12005
1630-2200	5895

CRR-10 Irkutsk 100 kW

0730-1600	7440
2000-2300	7290
2330-0700	9700

Ekaterinburg Radio Centre 200 kW

2200-1800	7220
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Ufa Radio Centre 15 kW

0000-2000	4485
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Radiostation "Mayak," Moscow Khanty-Mansiysk, Okruzhnoy RTPC 5 kW

0100-2000	4520.
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(Nikolay Rudnev-RUS, via RUS Dx Anatoly Klepov/BC-DX/Bueschel-GER)

Last evening between 2129-2140 UTC I heard a Russian station called "*Radio Samorodinka*" on 3922.3 kHz with rather good signal up here in Northeastern Finland. (19 Nov/Romppainen-FIN/HCDX)

SOUTH AFRICA Channel Africa

0300-0330	English	9525
0300-0325	Swahili	9685
0330-0355	French	9525
0400-0430	English	5955
0430-0455	French	9525
0430-0455	Portuguese	3345 5955
0500-0530	English	15215
0530-0555	Portuguese	15215
0600-0630	English	15215
0630-0655	Portuguese	15215
1300-1455	English	11720 17780 21725 Sa/Su

1500-1530	English	17770	1230-1330	Albanian	11910
1500-1525	Swahili	17780	1230-1330	German	21530
1530-1555	French	17770	1300-1600	Turkish	9460 11955 15350 17745 17860-(fri only)
1600-1630	English	9525			
1600-1630	Swahili	17860	1300-1400	Urdu	17715
1630-1655	French	17860	1330-1430	English	17690 17815
1630-1655	Portuguese	3345 9525	1330-1500	Persian	11705
1700-1730	English	17870	1400-1500	Russian	11980
1730-1755	Portuguese	17870	1430-1530	Bulgarian	7140
1800-1830	English	17870	1430-1500	Serbian	11935
1830-1855	French	17870	1500-1700	Arabic	9505
(BBCM)			1500-1600	Azeri	5965
			1530-1630	Greek	6195
			1600-1700	Turkish	9460 11955 15350 17745
			1600-1700	Kazakh	7295
			1630-1730	Turkmen	9545
			1700-1800	Turkish	5980 6120 9460 9560
			1700-1730	Croatian	9595
			1700-1800	Kyrgyz	6095
			1730-1800	Spanish	11670
			1800-2000	Turkish	6120 6185 9460 9560
			1800-1900	Russian	6135
			1800-1900	Uzbek	5955
			1830-1930	German	9745
			1900-2000	Bosnian	5990
			1900-2000	Tatar	5955
			1930-2030	English	7125
			2000-2200	Turkish	5980 6120 6185 9460 9560
			2030-2130	French	6050 6140
			2130-2230	English	9525
			2200-2300	Turkish	5980 6120 6185 9460 9560
			2300-2400	Turkish	6120 7300 9460
			2300-2400	English	9655 9830
			(BBCM)		

THAILAND *Radio Thailand*

0000-0030	English	9680			
0030-0100	English	13695			
0100-0200	Thai	13695			
0300-0330	English	15460			
0330-0430	Thai	15460			
0530-0600	English	13780			
1000-1100	Thai	7285			
1100-1115	Vietnamese	7285			
1115-1130	Cambodian	7285			
1130-1145	Lao	6040			
1145-1200	Burmese	6040			
1200-1215	Malay	11805			
1215-1230	Indonesian	11805			
1230-1300	English	9810			
1300-1315	Japanese	7145			
1315-1330	Mandarin	7145	2030-2130	French	6050 6140
1330-1400	Thai	7145	2130-2230	English	9525
1400-1430	English	9530	2200-2300	Turkish	5980 6120 6185 9460 9560
1800-1900	Thai	11855			
1900-2000	English	9535	2300-2400	Turkish	6120 7300 9460
2000-2015	German	9535	2300-2400	English	9655 9830
2015-2030	French	9535	(BBCM)		
2030-2045	English	9535			
2045-2115	Thai	9535			

(BBCM)

TURKEY *Voice of Turkey*

0000-0500	Turkish	6120 7300 9460			
0200-0300	Uzbek	7115			
0400-0500	English	6020 7240			
0500-0800	Turkish	9460 11925 11955 17570 17690			
0800-1000	Turkish	9460 11925 11955 15350 17570			
0800-0930	Azeri	11835 15505			
0800-0900	Georgian	11690			
0900-1000	Macedonian	11895			
0930-1030	Persian	11795 17690			
1000-1100	Turkish	9460 11955 15350 21715			
1000-1200	Arabic	15105 15245			
1030-1130	Hungarian	17565			
1030-1130	Romanian	11930			
1100-1300	Turkish	9460 11955 15350 17860-(fri only) 21715			
1130-1230	Greek	9630 11855			
1200-1300	Mandarin	17715			
			1200-1300	English	11825
			1200-1300	Ukrainian	6020 9600
			1300-1400	Ukrainian	6020 11720 11825 15520
			1400-1500	Ukrainian	6020 7420 9610 11825 15520
			1500-1600	Ukrainian	7420 9610 11825
			1600-1800	Ukrainian	5905 7285-(from 1700) 7420 9560 9610

UKRAINE *Radio Ukraine International*

0000-0100	Ukrainian	7375 9610			
0000-0100	German	5905			
0100-0200	English	7375 7420 9610			
0200-0300	Ukrainian	7375 7420 9610			
0300-0400	Ukrainian	7285 7375 7420 9610			
0400-0500	English	7285 7375 7420 9610			
0500-0600	Ukrainian	7285 7420			
0600-0700	Ukrainian	7285 7420 9600 11720 11825			
0700-0800	Ukrainian	6020 9600 11720 11825			
0800-0900	Ukrainian	6020 9600 11720 11825 15520			
0900-1200	Ukrainian	6020 9600 11720 11825 11840 15520			
			1200-1300	English	11825
			1200-1300	Ukrainian	6020 9600
			1300-1400	Ukrainian	6020 11720 11825 15520
			1400-1500	Ukrainian	6020 7420 9610 11825 15520
			1500-1600	Ukrainian	7420 9610 11825
			1600-1800	Ukrainian	5905 7285-(from 1700) 7420 9560 9610

1800-1900 German 5905 7420 9560
 1900-2000 Ukrainian 5905 7285 7420 9560
 2000-2100 Ukrainian 5905 7240 7285 9560
 2100-2200 German 5905 7240 7375 9560
 2200-2300 English 5905 7240 9560
 2300-2400 Ukrainian 5905 7240 9560
 (BBCM)

URUGUAY 6009.71v to 6010.25v *Emisora Ciudad de Montevideo*, Montevideo. 1548-1602, November 17. Program: "A sol caliente." ID: "En su receptor, CX42 Emisora Ciudad de Montevideo, Uruguay, transmitiendo en 1370 kilohertzios. La frecuencia, que se sintoniza con mayor frecuencia." (Slaen-ARG/HCDX)

6125.1 *SODRE*, Montevideo. 1207-1215, November 17. Tangos by Carlos Gardel.

6140 *Radio Montecarlo*, Montevideo. 1846-1900, November 17. ID: "Desde Montevideo, capital de la Republica Oriental del Uruguay, transmite CX20 Montecarlo, 930am, la super radio."

9620.9 *SODRE*, Montevideo. 1157-1202, November 17. ID: "Transmite CX6, en 650 kilohertzios y CXA6 en 9620 kilohertzios, emisoras de Radiodifusion Nacional SODRE, Montevideo, Republica Oriental del Uruguay." Ann.: "...nos reencontraremos maana a partir de las 7 horas, aqui, en CX6 SODRE..." (Slaen-ARG/HCDX)

YUGOSLAVIA *Radio Yugoslavia*
 0000-0030 Spanish 9680
 0030-0100 Serbian 7115
 0100-0130 English 7115 Mo-Sa
 0100-0130 Serbian 7115 Su
 0130-0200 Serbian 7115
 0200-0230 English 7130
 1330-1400 English 11835
 1400-1530 Serbian 11835
 1530-1600 Arabic 11800
 1600-1630 Russian 6100
 1630-1645 Hungarian 6100
 1645-1700 Greek 6100
 1700-1715 Albanian 6100
 1700-1730 French 6100
 1730-1800 German 6100
 1815-1830 Bulgarian 6100
 1830-1900 Italian 6100
 1900-1930 Russian 6100
 1930-2000 English 6100
 2000-2030 Spanish 7200
 2030-2100 Serbian 6100
 2100-2130 German 6100 Su-Fr
 2100-2130 Serbian 6100 Sa
 2130-2200 French 6100
 2200-2230 English 6100
 2330-2400 Mandarin 9580

(BBCM)

WELCOME TO THE FOLLOWING NEW MEMBERS

JAMES LANG, Lawrenceville, GA
JERRY H. NEVES, San Bruno, CA
A. KELLY ATKINSON, Atlanta, GA
MICHAEL V. JENKINS, Austin, TX
KEN KRANZUSCH, Montgomery, AL
JOHN ANDREW BRASSELL, Wexford, PA
RONALD K. JACKSON, Farmdale, OH
TOD STITES, Adelphi, MD
SCOTT R. BARBOUR, Intervale, NH
KEITH McGINNIS, Winthrop, MA
PHILIP P. GREEN, Portland, OR
GARY EROVICK, Longview, WA
JOE M. BAUGHN, Lexington, KY
RICK WORRELL, Philadelphia, PA
MICHAEL PUCKETT, Walton, KY
JULIUS A. BERDINE, Sugar Grove, PA
JOHN M. O'LEARY, MD, New Rochelle, NY
HAROLD JOHNSON, Lincoln, NE
PAUL W. BECK, Ithaca, NY
JUSTIN STROH, Thornton, IL
BRUCE OESTEREICH, Waterloo, IA
RENE A. SMOLLER, Valley Village, CA
THOMAS LORENZANA, Oxnard, CA
EDWARD W. HOPE, Scottsdale, AZ
PETER DAVIS, New York, NY
DAVID B. DETTMANN, Albuquerque, NM
MARK FOREST, Bartlett, TN
KENNETH SASSADECK, Toms River, NJ

Pirate Radio Report

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

Hi, and welcome to the Christmas 2001 edition of the Pirate Radio Report, so before I forget, I'd like to thank all those who contributed during the past year and wish everyone a *Happy Hanukah, Merry Christmas and Happy New Year.*

United Patriot Radio

Station Operator Steve Anderson Still Missing, \$5000.00 Reward Remains Unclaimed. As we mentioned last month, Steve Anderson, operator of the *clandestine* station **United Patriot Radio** is still on the loose after being sought by the Kentucky State Police and the FBI for shooting up a sheriff's patrol car this past October 14th. We will keep you posted.

Loggings...

Many thanks to the following reporters: Brian Alexander-PA, Ralph Brandi-NJ, Rich D'Angelo-PA, Paul McDonough-MA, George Zeller-OH

Alfa Lima International, the Dutch Europirate has been active on 15070 kHz at 2320 UTC on October 27th. The programming was Polka Music. [Alexander-PA]

Betty Boo Radio, the Halloween version of Betty Boop Radio was logged on 1 November on 6925 kHz AM at 0131 UTC. Programming included the song "I Wanna Be Bad". [McDonough-MA]

Chameleon Radio?, tentative name was logged at 0159 UTC on October 24th on 6955 USB. Lots of sound effects of spoken phrases speeded up and slowed down. [McDonough-MA]

Crunche Radio, logged on 6955 kHz, USB was on from 0300 past 0320 with very old pop music and some sketches about Afghanistan with a "Music That Makes Sense Slogan". [Zeller-OH]

He Man Radio, the station that made Kristen Kaye into a sex symbol, was heard on November 17th at 2323 UTC on 6955 kHz USB. Rock and pop music with several IDs were heard. [Zeller-OH]

KIPM, Allan Maxwell's station was heard on 6925 kHz AM around 0058 UTC on October 28th. Another drama mentioning "flames growing higher". They announced the Box 69, Elkhorn, Nebraska maildrop. [McDonough-MA]

Paragon Radio, an apparent new station was logged on 6950 kHz on November 3rd at 0436 UTC

playing instrumental R&R music. IDed at end of song followed by sign off. [Brandi-NJ]

Psycho Radio was noted on 6955 kHz USB at 0305 kHz on November 8th with loud rock music, a string of IDs and frequency announcement at 0333. Booming signal. [D'Angelo-PA]

Radio Azteca, Bram's Stoker's station was logged at 0032 from 0102 sign off on November 9th. The mailbag featured letters from Chris Lobdell, Lee Reynolds and John Sgrulletta. They announced the Belfast maildrop. [D'Angelo-PA]

Radio 8, a new station was logged on November 17th at 0316-0335 UTC on 6955 kHz USB. The program, hosted by Cecil J. Honeycutt contained info on upcoming Afghan TV programs such as "Beat The Press" [Should have been "Kill The Press" after what happened to those Reuters Journalists]. [D'Angelo-PA]

TE/Take It Easy Radio was heard on 6950 kHz USB on October 25th playing patriotic stuff. The OM ancr sent greetings to his fellow pirate ops. [McDonough-MA]

United Patriot Militia Bingo was logged on 10/25 at 0101 UTC on 6950 kHz AM featuring random music clips and mentions of Steve Anderson being on the run. [McDonough-MA]

WACK Radio, a station that was last heard several years ago has been reactivated. They were noted at 0230 UTC on 6925 kHz in the USB mode. They were announcing a phone # of 1-888-959-8177. [Alexander-PA] Also heard on November 4th at 0006 on 6955 kHz. [D'Angelo-PA]

WHYP, the James Brownyard Memorial Station was logged on November 3rd on 6925 with their listener appreciation show at 0312 UTC. [D'Angelo-PA]

WLIS, The station that loves interval signals was heard on November 17th at 2230 until 2231 sign off on 6955 kHz USB. I just caught their sign off routine. [D'Angelo-PA]

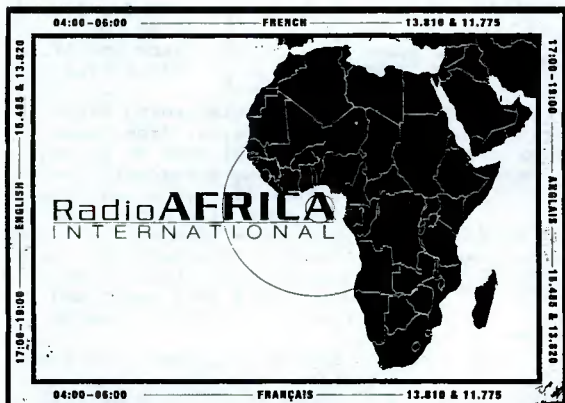
z100, the FM pirate that occasionally simulcasts on shortwave was logged on October 27th at 0326 UTC. Station IDs, jingles and old rock tunes were heard. Reports to BigZ100fm@yahoo.com. [D'Angelo-PA]

Until next month, Happy Pirate DX!



QSL Report

Sam Barto • 47 Prospect Place • Bristol, CT 06010



**ASIATIC RUSSIA: Radio Ez-
* ra 12110 via Vladivos-
tok f/d cd. w/ power
and site in 2 wks.
Personal note says
they are planning to
broadcast to the Amer-
icas at a "much more
user-friendly hour".
v/s John D. Hill.
(Craighead-KS).**

**AUSTRALIA: Radio Austr-
lia 21740 via Sheppar-
ton f/d "Sunrise Be-
hind the New Pacific
Aerial Group in Shep-
parton" cd. w/ sked.
in 84 ds. for a taped**

NOTES: Jerry Klinck says he received a very nice and detailed QSL from Radio Verdad in which they expressed sympathy for the 911 attack. He wishes everyone the best of DXing...Sam. **Woody Seymour** sent in a copy of his Radio Afghanistan QSL from the early 70s. We will run it very soon. I checked my QSLs Woody and I have one when they were known as Radio Kabul. Your comments on All India Radio are right on.....Sam.

rpt. and 2 IRCs. v/s Jon Wright. (Willshaw-NC). **Christian Voice** 21550 f/d ltr. w/ schedule in 21 ds. (Glotzbach-NM).

BELARUS: Radio Minsk 11960 via **Sasnovy** f/d "Glazed Tile" cd. w/ station sticker in 151 ds. for a taped rpt. and 2 IRCs. (Willshaw-NC)

BOSNIA: Radio Yugoslavia 7115 f/d "Map" cd. in 19 mo. (Borokowski-NY).

BRASIL: Radio Gazeta 9685 ltr. w/ stickers in 212 ds. (Glotzbach-NM).

BULGARIA: Radio Bulgaria 7500 via **Plovdiv** f/f "Plovdiv - The Roman Theatre" cd. in 88 ds. for a taped rpt. and \$2.00. (Willshaw-NC).

**CHINA, PEOPLES REPUBLIC OF: China Radio Internatio-
nal** 5880 via **Shijiaz-
huang** f/d cd. in 34 ds.
(Glotzbach-NM).

**CLANDESTINE: Ethiopians for
* Democracy** 15715 via **Ju-
lich DTK** f/d ltr. in 26
ds. (Glotzbach-NM). **Voice
* of Oromo Revolution**
15715 via **Julich DTK**
f/d ltr. in 31 ds. (Glotz-
tzbach-NM).

RADIO NOVA

Subj: Nova
Date: Sun, 16 Sep 2001 3:59:41 AM Eastern Daylight Time

From: rmi@onmail.co.uk
To: rdangelo3@aol.com

Hi Richard

Many thanks for your report. At this time our thoughts are with you all, following the tragic events earlier in the week.

It's nice to know that you received us, on what is a new frequency for us. The transmission is really only a test, with a repeat of last month's shows to give the transmitter and site a blow, and so far it seems to be OK. We usually operate on 6210 in the 48m band, and will be doing so next weekend, from sometime on Friday evening, so perhaps you may be able to try to listen at sometime over the few days that we should be on?

Hope so - thanks for once again for your report. Assume you know that we now use the Cedex France address as our mail-drop?

Kind regards & 73s..... Terry Phillips

**WALES RADIO INTERNATIONAL - RADIO RHYNGWLADOL CYMRU**

Pros Kairon, Cymrych, Pembrokeshire, SA41 3QE, Wales, UK Tel: +44 [0] 1437 563361 Fax: +44 [0] 1239 831360
 e-mail: jenny@wri.cymru.net RealAudio Web Site: http://wri.cymru.net

Dear George Glotzbach *BT 6/23/00*

We are happy to confirm that the transmission you heard on:

Date	Time (UTC/GMT)	Frequency	Transmitter	Programme
18-3-00	07:14 @ 3:30	9.735 KHz	Rampishaw	CELTIC NOTES

is a Wales Radio International programme.

Thank you for getting in touch. We hope you continue to enjoy our programmes. Do try for the WTB travel competition - you don't have to be Welsh to enter, just correct identification of the events featured and have a good reason for wanting to come to Wales. Good luck.

*I hope you manage to hear us in New Mexico. If not perhaps you could listen via our website. Best wishes from Wales
 Jenny & Bob*

COLOMBIA: Radio-difusora Nacional 9635 f/d "Antenna Photo with Country Outline in National Flag Colors" in 181 ds. for a SP rpt., tape and \$2. v/s Athala

NOTES: Adie Durden in Albany, GA checks in with some outstanding Peruvian QSLs. He obtained them thru the latest visit of Takayuki from Japan. These QSLs has fired Adie up pretty good to the point when he is considering sending out more reports. Great...**Sam. Gene Borokowski** wants to know if anyone has received QSLs from Nigeria or Yugoslavia in a while. A few have but they have been very sparse...**Sam. Gene** wishes everyone a very happy and QSL filled holiday season.



Fundada el 24 de febrero de 1958

A: Sr Jeff A. Holander

Calle 23 No. 258 e/ 1 y M Vedado
 Apartado 6277 La Habana 6, Cuba
 LB 542 y B57 Telex 511777 Telf. 32-7511

DATOS TECNICOS

24 Transmisiones en OM con 610 KW de potencia, Frecuencias entre los 670, 710, 990 KHz
 1 Transmisor en SW Onda Corta en banda tropical (60 Mts. 5025 MHz)

Transmisión continua las 24 Horas

Morris, Directora. (Willshaw)

ENGLAND: Radio Korea International 15360 via Rampishaw ltr. from Michelle Franks at Merlin Communications in 23 ds. (Glotzbach). **WYFR 13720** via Skelton f/d cd. w/ sked. calendars, bible tract and

bookmarkers in 28 ds. for SASE. (Glotzbach-NM).

EUROPEAN RUSSIA: Radio Studio / Radio Gardarica 15605 via St. Petersburg e-mail reply from Mikhail Timofeyev on the same day. (Glotzbach). 9940 f/d "St. Petersburg - The Moika River" cd. in 42 ds. v/s Dmitry Vasyliiev, Shortwave Project Manager. This was the second QSL for the same rpt. with one arriving the previous week. (D'Angelo-PA). **Voice of Russia 9810 via Krasnodar f/d "A.V. Painting - The Churches"** cd. in 84 ds. for a taped rpt. and 2 IRCs. Personal ltr. was received from Olga Thoshina. (Willshaw). **Voice of Tatarstan 11665 via Samara f/d cd. w/ station info.** and a personal note in 24 ds. v/s Ildus Ibatullin, QSL Manager. Addr: VOT, P.O. Box 134, 420136 Tatarstan Russia. (D'Angelo-PA). **Radio Canada International 15470 via Armavir "Newfoundland and Labrador"** cd. in 25 ds. (Glotzbach)

EURO PIRATES: Classic Rock Radio

- * 7470 f/d "Rohde and Schwarz Transmitter" sheet in 18 ds.
- * (D'Angelo-PA). **Free Radio Service Holland 7449.8** QSL via e-mail in 15 ds. Station promising reply to Box 2702, 6049 BE Herten, Holland. v/s Peter Verbruggen. (D'Angelo).

**RADIO TASHKENT**

#9 Khorezm Street, Tashkent, December 13, 2000

George L. Glotzbach
 5 Herrada Court Santa
 Fe New Mexico 87505
 USA

Dear Mr. George L. Glotzbach *WV 6/23/00*

It goes without saying that your letter encouraged us much.

Most pleased to read you find my letter of interest. I am very sorry for delay in writing. I was ill and I had nothing to do but recover.

How are you and your wife? It would be a great pleasure for me to know that your wife is full of energy and happiness.

Oh, you succeeded in Radio Romania International; it proves that your successful effort was aimed at knowing more, besides, your interest in the quiz helped you to answer quite well.

You must be content and satisfied as a long trip had you to miss home and feel quite well.

Thank you very much for the enclosure and added to my collection.

As a matter of fact, I don't want to take your precious time for answering my questions as you are worried and busy.

So let me congratulate you on Christmas!!! I am indeed happy to wish you and your wife success, happiness, and good health. I look forward to hearing from you very soon.

With best wishes,

Yours sincerely,

Correspondence Section Tamila USMAJLOVA

CALEI-ZAHAL
BROADCASTING STATION
OF ISRAEL DEFENCE FORCES,
MILITARY POST OFFICE 1008,
ZAHAL, ISRAEL



Hello John.

Thank you for your report on our station.

AS785 4h 19 USB
date: 26.12.2000
from: 17:55 to: 18:36 GMT

Your report has been checked
and agreed with our log.

Gratings from Journal
A.I.S.U

To:
JOHN SGRULLETTA
337 BULLET HOLE RD.
MAHOPAC, NY 10541-2605
U.S.A.

* Radio Alfa Lima International 15070 e-mail reply in @ 14 hours. The station said that they received about 40 e-mails and 20 phone calls from this transmission. (D'Angelo-PA).

FINLAND: Scandinavian * Weekend Radio 11720 f/d "Staff Photo" cd. in 38 ds. for 2 IRCs. Also rcvd. 2 stickers and a local postcard. (D'Angelo-PA).

FRANCE: China Radio International 6150 via

Issoudun p/d "Zhoukoudian Relics of Peking Man" cd. w/ paper cut and schedule in 35 ds. This for a taped rpt. and \$1.00. (Willshaw-NC).

GERMANY: Radio Ecclesia 15545 via Julich DTK f/d ltr. in 23 ds. (Glotzbach-NM).

HONDURAS: Radio Litoral 4832 * p/d paper "Logo Certificado" w/ a long form ltr. in 20 ds. for a SP rpt. and \$1.00. v/s Jerome Antonio, DJ. Much of the program I heard was in EG and so was the reply. (Brouillette-IL) La Voz Evangelica 4819.2 p/d ltr. in 592 ds. (Glotzbach-NM).

INDIA: Woody Seymour Jr. sent in some comments regarding mine about AIR from last months QSL Column. Woody sent a report to AIR at P.O. Box 500 - no reply. He then sent a report to the Indian Embassy in Washington DC - no reply. Finally a third report was sent by registered mail. He received a QSL in about a month but the card had gotten a bit wet along the way. (Maybe someone swam to the US withit...Sam).

Working Till Jesus Comes The Romans Map To Heaven

Romans 3:23- "For all have sinned, and come short of the glory of God."

Romans 6:23- "For the wages of sin is death; but the gift of God is eternal life through Jesus Christ our Lord."

Romans 5:8- "But God commendeth his love toward us, in that, while we were yet sinners, Christ died for us."

Romans 10:9-10- "That if thou shalt confess with thy mouth the Lord Jesus, and shalt believe in thine heart that God hath raised him from the dead, thou shalt be saved. For with the heart man believeth unto righteousness; and with the mouth confession is made unto salvation."

Romans 10:13- "For whatsoever shall call upon the name of the Lord shall be saved."

Thanks for your reception report which was found to be correct.

DATE: 7/28/79 TIME: 2253-2315 UTC

STATION: WJLC FREQUENCY: 9370 Kcs

SIGNED: J. Romano

WJLC



via D'Angelo
WORLDWIDE
FBN
A Beacon
of Hope To a
Lost and
Dying World

NIGERIA: Voice of Nigeria

1a 7255 via Ikorodu p/d "Zuma Rock" cd. w/ sticker and sked. in 227 ds. for a tape and 2 IRCs. (Willshaw NC). f/d "New Morning" cd. in 22 mo. Station information and sticker rcvd. (Borowski-NY).

OMAN: Radio Sultanate

of Oman 15140 via Thumrait f/d folder cd. in 307 ds. for a taped rpt. and 3 IRCs v/s Saum Jameel. (Willshaw-NC).

PERU: Radio Uno 4571.4

* p/d 2 page ltr. in SP in 3 1/2 yrs. after 5 f/up rpts. This was for a January 98 reception. v/s Plutarco

NUM: CERT/DRSR/030/86.

W/M:

Objet: Accusé de réception.

A Monsieur Edouard Kasalik
2117 - 10 Street "A"
Coaldale, Alberta
Canada, T0K 0L0

Cher Monsieur,

J'ai l'honneur d'accuser réception de la copie de votre rapport d'écoute du 18 décembre 1984. Les détails que vous avez donnés ont été vérifiés et ils répondent parfaitement aux caractéristiques de notre station.

Vous ne signalez, par ailleurs, que vous avez envoyé le même message le 25 mars 1985 et le 10 août 1985. Votre rapport n'est affectivement parvenu et j'y ai répondu le 24 avril 1985 par un note n° CERT/DRSR/076/85.

Je vous remercie pour l'intérêt que vous portez à notre station et je souhaite de tout mon vœu que cette confirmation de votre rapport vous parvienne.

Veuillez agréer, Cher Monsieur, l'assurance de ma considération très distinguée.



PRÉFET DIRECTEUR RÉGIONAL
DE LA RÉGION... en mission,
MAMTA MISAËL-SHEREDI
Chef de Service.

WWCR

1300 WWCR Avenue
Nashville, TN 37218

Confirming QSO with		Day	Date	Year
Muelca. Humana		11	01	2001
UTC	MHz	RST	Mode 2-Way	
2015-2031	51885			

Chamba Febres, Gerente General. (Durden-GA). **Radio Nor Andina** 4461 f/d "Certificado de Sintonia" w/ personal ltr. in 7½ yrs after 7 f/up rpts. in SP for a May 94 reception. v/s Misael Alcantara Guevara. The station utilizes a 1 kw transmitter. (Dur-

* **den-GA). La Voz de Celendin - Radio Frecuencia VH 4485** p/d personal ltr. in 8½ yrs. after 12 f/up rpts. in SP for a 93 reception. v/s Fernando E. Vasquez Castro, Director Gerente. Station's power output is 150 watts. (Durden-GA).

* **Radio La Merced** 6755 long 2 page personal ltr. detailing the station's history from May 1990 to the present. The v/s Gerente Roberto Ramos Llatas says the SW outlet used 400 watts and went QRT in 1999. They are presently on 104.7 FM with 200 watts. Until recently they did not have AC and were operating off their generator which required bringing in gasoline on horseback from a village about three hours away. I also rcvd. photos of station staff and a tape recording of a recent transmission during which the announcer acknowledged my reception reports and sent along special greetings. This was after 9 f/up rpts. for a 93 reception....It was worth the



Islamic Republic of Iran Broadcasting
P.O. Box 15795 - 687 TEHRAN - IRAN
جمهوری اسلامی ایران - سازمان صدا و سیما

General Board of
Global Ministries
THE UNITED METHODIST CHURCH
476 Riverside Drive, New York, NY 10116



(212) 870-3600 (Cable: missions new york)

May 30, 2001

Dear Listener,

Thank you so much for your interest in Radio Africa International. We will soon have QSL cards to send out, but in the meantime, please accept this message as our verification of your reception report.

This is to confirm that your reception on May 21, 2001, was broadcast by the General Board of Global Ministries of the United Methodist Church via shortwave at 18:15 hours UTC on 15485 kHz. This was a regular broadcast from a transmitter site in Julich, Germany. The intended target area was Africa. Our programs are aired every day at the following times and frequencies:

French 0400-0600 UTC 11775 kHz
0400-0600 UTC 13810 kHz

English 1700-1900 UTC 13820 kHz
1700-1900 UTC 15485 kHz

We are pleased that you received our signal, and hope you will tune in to Radio Africa International on a regular basis. If you would like more information on the General Board of Global Ministries, please visit our website at gbgm-umc.org.

On behalf of the General Board of Global Ministries, we wish you and yours a happy and blessed New Millennium.

Sincerely,

Donald Niemann
Donald Niemann
Executive Producer
radio@gbgm-umc.org
www.gbgm-umc.org

Rafael Mbudinga
Rafael Mbudinga
Senior Producer

wait...Sam. (Durden-GA)...All of these QSLs Durden thanks TIN - Nozaki for his assistance.

PHILIPPINES: TEC4 Far East Broadcasting Company 12065 via **Bocawe** f/d "Asia Map" cd. w/ schedule, personal ltr. and sticker in 306 ds. This for a taped rpt. and \$2.00. v/s Jan Bayliss who says the station has finally cleared up its backlog and QSLs are on the way out. (Willshaw-NC).

SINGAPORE: Radio Canada International 15360 f/d cd. in 16 ds. (Glotzbach-NM).

SWITZERLAND: Swiss Radio International 9885 via **Sottens** cd. in 133 ds. for 2 IRCs. (Griffin-VA).

TAIWAN: Radio Australia 11550 via **Taipei** f/d "Kangaroo" cd. w/ schedule and rpt. form in 252 ds. for a taped rpt. and 2 IRCs. (Willshaw-NC).

WJCR World Wide



Where Jesus Christ Reigns

P.O. Box 91 Upton, KY 42784 USA

THAILAND: Radio Thailand 13695 f/d
"Thai Way of Life" cd. in 7 mo.
(Brouillette-IL).

UKRAINE REPUBLIC: Radio Ukraine International 9385 via Kiev
n/d "Easter" cd. signed by 4
staff members w/ station info.
and schedule in 113 ds. for a
taped rpt. and 2 IRCs. (Will-
shaw-NC). 12040 f/d cd. w/
schedule in 72 ds. for 2 IRCs.
(Griffin-VA).

USA: WWCW Worldwide Christian Radio 5935 f/d cd. in 1 mo. w/
schedule. (Field-MI). **WJCR** 7490
f/d "Map" cd. in 24 ds. v/s
Larry Baysinger, CPBE, Direc-
tor of Engineering. This was

for a special test transmission of WJCR transmitter #1 which was being operated at 1250 watts while repairs were being made. (D'Angelo-PA). f/d plain cd. w/o indication of the special low power test in 17 ds. from v/s Gerri Powell. An e-mail f/up to Baysinger who stated "please accept my apology for the mix-up on the special QRP QSL. There have been a number of personnel changes lately....special QRP QSL promised. (D'Angelo-PA). **WHRI** 5745

"Special 15th Anniversary" cd. in 7 mo. after several f/up rpts. v/s James L. Holycross. (Kusalik-ALB). **Voice of America** 21485 via **Greenville** f/d "Saipan Antenna" cd. in 36 ds. (Willshaw).

USA (Pirates): Ground Zero Radio 6955 QSL sheet #45 in 8 mo. for ms. (Kusalik-ALB). **KIPM** 6955 full color data poster "Illuminati Prima Materia" in 60 ds. v/s Alan Maxwell. (D'Angelo). **Radio Neptune** 6950 f/d "Planets" cd. in 3 mo. for 3 ms. Also received personal ltr. (Wilkins-MO). **Shadow Radio** 6950 n/d e-mail reply in 20 ds. Addr: shadow6950@hotmail.com (Wilkins-MO).

A few pages short this time but some extremely high quality QSLs, especially from Peru and the Europirates....Sam.

Till next time...

Sam



RADIO FRECUENCIA VH - 4TA. D.C.

"La Voz de Celendín"

CELENDIN CIELO AZUL DEL DEL EN
PROVINCIA DE CELENDIN
DEPTO. CAJAMARCA - PERU.

Sr. Adie H. Durden
Distinguido oyente del
Extranjero.

(07/OCT/01)

Muy señor mío.

De mi especial consideración, es grato el momento de saludarlo muy cordialmente y al mismo tiempo felicitarle por tener la amabilidad de escucharnos o de aceptar nuestra señal de radio Frecuencia VH "LA VOZ DE CELENDIN" en los 4,485 KHz.OC.

En breve participo a Ud. una pequeña reseña historica de nuestra participación como medio de comunicación.

Un primer aspecto Celendín es una provincia pequeña y de bajo rendimiento economico; nosotros participamos en el Eter talvez como afición o inclinación a la comunicación social y aun más porque ejercemos un poco en el ramo de la electronica presisamente esta es la razón por la cual nos iniciamos en lo referente a radio comunicación social. Inicialmente surgimos con un pequeño Oscilador como una pequeña diversión, pero viendo la acogida del público empezamos por ampliar nuestra potencia de 05 Watts. pasamos a 150 Watts de potencia, pero como nocontabamos con energia eléctrica obtiamos por funcionar con acumuladores de energia; por el día entreteniamos a la población de la ciudad con el pequeño oscilador de 5 vatios y por la noche haciamos funcionar nuestro equipo de OC. porque contabamos con fluido eléctrico algunas horas en la noche posteriormente por los años de 1,957 cuando ya contamos con fluido durante las 24 horas del día empezamos a funcionar con equipos en Amplitud Modulada con una potencia de 0.500Watts. Nuestro horario de trabajo es de apartir de las 05 horas en Amplitud Modulada hasta las 18 horas y a partir de las 18 horas empezamos a transmitir en la onda Intromecional de los 4,485 KHz, cabe indicar que en la AM. transmitimos en lo 1,440 KHz con resolución Ministerial No.291-HTC. Indicativo OCX-2H-OM. Cordenadas L. O. 78, 09, 07 -x L. S. 05 -22 -30.

En la Mayoría de nuestros programas nos caracterizamos por difundir la musica Folklorica Bernaculer del Perú profundo.

Es pues para nosotros una inmensa alegría saber que nos escuchan en los lejanos países del extranjero por eso con mucha satisfacción contestamos su amable carta que nos escriben dando por confirmado que se nos recibido muchas de sus amables correspondencias al cual una vez por todas las agradecemos y felicitamos a todos nuestros delectos radio-oyentes a la distancia dando muestras de ser fieles QSL.

En espera siempre de sus gratas noticias nos despedimos deseandó doles muchos exitos hoy y siempre.

Atentamente.



[Signature]
DIRECTOR - GERENTE

☎ (044) 853149

Net Notes

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See the text label in the chart below? The solar numbers hit the roof on November 5 and 6. For the first time in many moons, aurora was visible here and points south into the Carolinas and west to central California. See the "Sky" category at sundstrom.org for our picture, and spaceweather.com for many more images from around the world.

The activity in Afghanistan and the Middle East prompted research into foreign news sources. It is always interesting to read or hear the perspectives from other corners of the world. In early November the first edition of selected English language newspapers — about two dozen from the ME and Africa — was posted. The compilation has since tripled at www.trsc.com. Click on "My Newspaper Links".

Is there a conspiracy theory involving the "patriot movement" and the anthrax scares? Some people probably believe so. Two "patriot voices" disappeared from the airwaves within 17 days. Steve Anderson of "United Patriot Radio" was involved in a shootout with a Bell County Deputy Sheriff on October 14, disappeared into the mountains, and hasn't been seen since. The search continues. The newspapers speculate that

friends are hiding him. On November 6, William Cooper of "Hour of the Time" (heard on WBCQ) was killed in a Arizona shootout with deputy sheriffs attempting to serve a warrant for aggravated assault. One deputy was seriously wounded. See the "Musings" page at trsc.com for links to all of this.

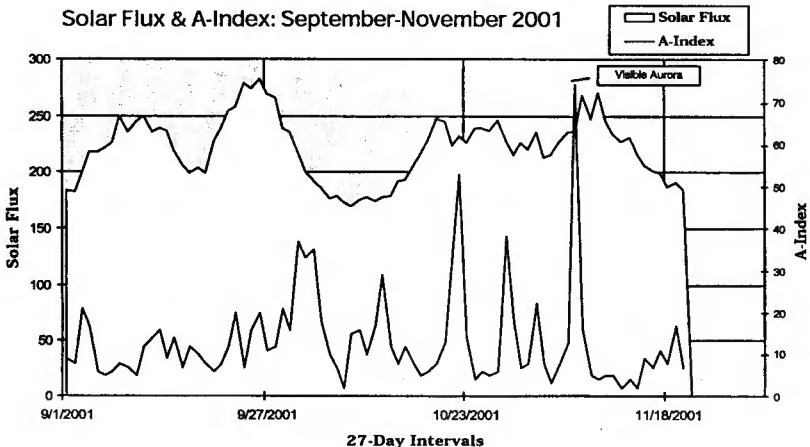
The "Hitlist" at Radio Netherlands' Media Network — a large directory of broadcaster and related links — has been reviewed and updated. If you haven't checked it in a while Andy Senitt and I suggest you do so at www.medianetwork.nl.

Remember to check out the Internet Relay Chat (IRC) Starchat channel #swl for the gathering of active listeners. It only gets really slow around 07 to 10 or 11 UTC when some regulars are sleeping. The live "chat" is particularly interesting when news is breaking. If you are not familiar with IRC, go to www.n1dk.com and click on the "IRC #SWL" menu button at the bottom of any page.

For the latest developments on the *Winter SWL Festival* see swlfest.com. The committee is looking for help; the conference agenda development is under way.

Seasons Greetings to all!

Solar Flux & A-Index: September-November 2001



Contributors' Page

Bob Montgomery • P.O. Box 1458 • Levittown, PA 19058 • RMonty3@worldnet.att.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
Jerry BERG , Lexington, MA	R8A 165' LW
Michael BEU , Austin, TX	no equipment listed
Ralph BRANDI , Tinton Falls, NJ	AOR7030, R8, 250' longwire
Paul BROUILLETTE , Geneva, IL	Drake R8, ICF2010, 60' long wire
Peter COSTELLO , Matawan, NJ	AR3030 DX-390 YB400 70' LW Tun-4A
Rich D'ANGELO , Wyomissing, PA	Drake R8B, Lowe HF-150, DX Sloper
Kris FIELD , Horsham, PA	Drake R8, long wire
Bob FRASER , Cohasset, MA	Sony ICF-2003 ICF-SW100s 2m LW
George GLOTZBACH , Santa Fe, NM	R8B ARA-60
Hugh GRIFFIN , Portsmouth, VA	DX-160, longwire
Joe HANLON , Phila, PA	SW8, EMF ant., ICF-SW7600G w/active ant.
Bob HILL , Littleton, MA	Sony 2010 120' dipole at 35'
Marie LAMB , Syracuse, NY	Drake R8B, 70' LW, MFJ 16010 tuner
Harold LEVISON , Phila, PA	Drake R8
Jerry LINEBACK , Scranton, KS	Icom 746 beverage antennas
George MAROTI , Mt. Kisco, NY	R8B, 2010, 30/45 m. dipoles
David M MARTIN, MD , Atlanta, GA	RX-320, Eavesdropper trap dipole
William McGUIRE , Cheverly, MD	DX-380
Jim MOATS , Ravenna, OH	DX398, DX440, and indoor dipoles
Bob MONTGOMERY , Levittown, PA	NRD535D, R390A, RX-320, HF150, SE3, active antenna
Gary NEAL , Sugarland, TX	Grundig YB-400
Ed NEWBURY , Kimball, NE	WJ-1000, R8, 60' sloper, 20' loop
Mike PACE , Tipton, IA	Drake SW2, MFJ1022
Karl RACENIS , MI	Icom R-9000, Eavesdropper & Datong ants
Bob RAYMOND , Nashua, NH	R8B 20m ⁵ / ₈ wave vertical
Wally RHYNE , Gastonia, NC	R8B, ICOM71A, ICF2010, longwire ant.
Betsy ROBINSON , Clinton, TN	Sony 2010 Indoor antenna
Gerald WITHAM , Keauau, HI	R8, 185' split LW, ANC-4
Mike WOLFSON , Ashland, OH	NRD535D, LWS

PLEASE READ

The DX season has started and we need to make a couple of changes to handle the load. Saving up 300 logs and sending to the editors at one time is not acceptable. There is no way the space is available for listing that many logs for one contributor. If only sending me QSL info and not logs, please send directly to Sam Barto. Please do not cut logs into strips. All hand written logs are scanned and forwarded via email to the editors. When sending via email, please observe correct format as listed. This saves the editor much time and assures placement in the Journal. Just a few tips to give the editors a break so they too can spend a little time at the radio.

Merry Christmas and a very Happy New Year to one and all. 73

Bob Montgomery



Tropical Band Loggings


Sheryl Paskiewicz • 314 Riverview Drive, Apt 16 • Manitowoc, WI 54220 • spaszkievicz@yahoo.com

- 2310 AUSTRALIA ABC 11/4, 1032, OM in EG, EG pops, Fair (Line-KS)
 2310 AUSTRALIA ABC NT, Alice Springs, 11/8 1039 male talking, pop song, very weak.
 (K.Fiel - FCDX)11/4 1125 EG weak signal; interview mx (Mart-GA)
 2325 AUSTRALIA ABC 11/4, 1032, OM in EG, EG pops, poor (Line-KS)
 2390 MEXICO R Huayacocotla 11/3 0103 s/off with NA (Beu-TX)
 2410 NEW GUINEA R. Enga, 11/7. 1145, OM in Vern, very poor (Line-KS)
 2410 NEW GUINEA R. Enga 10/17 1112-1127 Only audible on my K9AY loop, S3 signal
 strength, in parallel with 3275. SINPO 24332. (Maro-NY)
 2485 AUSTRALIA ABC, 11/7, 1153, OM in EG, poor (Line-KS) EG audible 11/4 1140
 prog content //2310 (Mart-GA)
 3205 NEW GUINEA R. Sandaun, 11/10, 1203, s/o anthem & GSTQ (Line-KS) 10/25
 1039-1045, R.Sandaun poor copy in Pidgin with long tik, ID (Mont)
 3205 NEW GUINEA R. Sandaun (pres) 10/17 1103 News read by YL. (Maro-NY)
 3220 ECUADOR HCJB 1029, OM in Vern, ID, good (Line-KS)
 3220 NEW GUINEA R. Morobe (pres) 10/17 1110 seemed //3205 (Maro-NY)
 3220 NEW GUINEA R. Morobe 11/7, 1145, vern pops, poor (Line-KS)
 3234.8 PERU R. Luz y Sonido 1028, 11/4, OM in rapid SP, poor (Line-KS)
 3250 HONDURAS Luz y Vida 11/7, 1151, SP vocals, poor (Line-KS)
 3265 SULAWESI RRI Gorontalo 11/10, 1212, YL w/RRI nx, fair (Line-KS)
 3270.1 NAMIBIA NBC (presumed) 11/7, 0406-0435 fade out EG nx (D'An-PA)
 3275 PAPUA R. S. Highlands 11/5, 1159. Vern pops, very poor (Line-KS)
 3275 PAPUA R. Southern Highlands 10/17 1105 Heard what sounded like a speech
 by an OM. SINPO 34433. (Maro-NY)
 3279.6 ECUADOR La Voz del Napo 0939-1004 11/8 long talks by male, ID (D'An) 9/5
 1000 buenos dias, prayers, nx abt Quito (Robi-TN)
 3291.4 GUYANA R Guyana-2 10/15 0135 EG 1940's big-band mx (Mart-GA)
 3315 ADMIRALTY IS R. Manus 11/1, 1152, OM in Vern, poor (Line-KS) 10/19
 1104-1121 woman with news followed by a man with an ID (D'An PA 10/17 1106
 Good carrier, but very weak mod (Maro-NY)
 3320 SOUTH AFRICA R.Sonder Grense 10/13 0315 Spandau, AK (Race-MI)
 3325 GUATAMALA R. Maya 11/4, 1023, OM in Vern, Fair under UTE (Line-KS) 9/10
 1030 ID, romantic ballads (Robi-TN)
 3325 KALIMANTAN RRI Palangkaraya 11/5, 1159, SCI poor under UTE, (Line-KS)
 3345 MOLUCCAS RRI Ternate 11/10, 1206, RRI nx by OM, fair (Line-KS)
 3365 INDIA AIR Delhi 11/10, 1231, EG nx by YL poor //4860 (Line-KS)
 3365 NEW GUINEA R. Milne Bay 11/7, 1142, YL in Vern, very poor (Line-KS) 10/19
 1103-1122 a man with the news in English, ad, island mx (D'An-PA)
 3375 NEW GUINEA R. W. Highlands 11/7, 1143, YL in Vern, very poor (Line-KS) 10/17
 1108 Talk by OM. Some type of broadband noise (Maro-NY)
 3375 NEW GUINEA R. Western Highlands 10/25, 1036-1040, Female talk (Mont)
 3905 IRIAN JAYA RRI Merauke 11/9, 1304, RRI nx by OM //others fair (Line-KS) 10/17
 1059-1103 IS, annmt, nx (Maro-NY)
 3905 NEW IRELAND RNI 11/7, 1142, vern pops, YL w/ S/Off at 1200, anthem & GSTQ
 over SCI and ARO QRM, fair (Line-KS) 10/25, 1030-1055, In Pidgin language,
 weak, C&W mx, TC, talk abt Afghanistan (Mont-PA)
 3955 ENGLAND R. Korea 11/7 2215-2230 EE with nx of world cup (Mont-FCDX)
 3976 KALIMANTAN RRI Pontianak 11/9, 1304, RRI nx by OM, fair (Line-KS) 10/17
 1118 Heard with soft pop music (Maro-NY).

- 3985 **SOUTH KOREA** *Echo of Hope (so called clandestine)* 11/9, 1303, YL in KR with nx, good (Line-KS)
- 4000.1 **SULAWESI RRI** *Kendari* 11/10, 1210, RRI nx by OM, fair (Line-KS) 11/10 1150-1210, IS at 1201 then to short talks and to mx (Mont-FCDX) 1145-1214 11/10 mix of talks and music until IS, nx (D'An-FCDX)
- 4052.5 **GUATEMALA R.** *Verdad* 10/31, 2344-, Oct 31 in SS with mx, OM (Mont-PA) 0000, SIO-211, w/ talk in SP, religious hymns, ID at 0000 (Race-MI)
- 4200 **TURKMENISTAN** *Vo The Worker* 11/4, 1055-, Mx, weak OM (Mont-PA)
- 4278.5 **USA AFRTS** 11/10 1045-1048 Fair to poor copy in EE Interview (Mont-FC)
- 4389 **PERU R.** *Imperio* 11/9 1041-1050, SS continous talk. Difficult (Mont-FCDX)
- 4421.4 **PERU R.** *Frecuencia Lider* 11/9 1034-1040 SS with continous mx (Mont) 1020-1053 11/9, nice morning program huaynos, Ids, TCs (D'An-FCDX)
- 4702.8 **BOLIVIA** *Radio Eco (p)* 11/9, 2328 UTC, OM yaks, signal very faint. (Kfiel)
- 4716.8 **BOLIVIA** *Radio Yura (p)* 11/9, 2325 UTC, YL yaks, mx (K.Fiel-FCDX) 2328-2345 11/9, noted in passing with rustic group vocals, ID (D'An-FCDX)
- 4725 **MYANMAR R** *Myanmar* 11/10, 1242, YL in presumed Burmese, pops (Line)
- 4746.8 **PERU** *Radio Huanta 2000* 11/8 1005-1017 talks, vocals. ID (D'An-FCDX)
- 4750.1 **PERU R.** *San Francisco Solano* 11/9 1040-1050 Continous mx with ID in SS at 1042 by male announcer, and back to mx (Mont-FCDX) 1042-1048 11/9, tune in to ID and freq and vocals. Poor. (D'Angelo/FCDX-PA)
- 4753.3 **SULAWESI RRI** *Makassar* 11/10, 1210, RRI nx by OM, Good (Line-KS) 10/13 , 1300, faintly heard "Song of Coconut Isles" IS (Race-MI) 2149-2202 11/9, long talk by man in Indonesian, IS, nx (D'An-FCDX)
- 4760 **KASHMIR AIR** *Leh 1230*, 11/8, EG nx by YL, poor //others (Line-KS)
- 4760 **LIBERIA** *ELWA 2153-2201** 11/7, easy listening mx, ID s/off (D'An-FCDX)
- 4770 **NIGERIA R** *Nigeria* 10/13 2200, SIO-322, pgm in EG politics, ID (Race-MI) 11/2 2150 Man talking in unknown lang, TC, hip-hop (Wolf-OH)
- 4775.0 **INDIA AIR** *Imphal* 11/10, 1315, OM & YL in lang, poor (Line-KS)
- 4781.5 **ECUADOR R.** *Oriental* 11/2 1002-1030, OM with a number of IDs (Mont) 10/14 1030, SIO-323, talk in SP, frequent time checks & ID's (Race-MI) 1000-1016 11/8, flute music intro to male vocal, ID and TC (D'An-FCDX) 10:15-10:30 10/27 musica nacional & IDs (Raym-NH)
- 4789 **IRIAN JAYA RRI** *Fak-Fak* 11/5, 1239, Indo pops, poor under ute (Line-KS)
- 4799.8 **GUATEMALA R** *Buenas Nuevas* 11/7 1105 SP mx, rel (Mart-GA)
- 4815 **BRAZIL** *Radio Difusora Londrina 2257-2305* 11/8, ID and freq (D'An-FCDX) 11/11 0002 ID, anmts (Beu-TX)
- 4820 **BOTSWANA R.** *Botswana* 11/3 0245, IS Prg started at 0301 with what I think is the NA. Female with ID ann at 0302 (Mont-PA) 10/30, 0304-0412 Jackson 5, ID, mx & EG nx (D'An-PA) 2145 with gospel vocals in EG, signal building, anmts, NA (Berg-MA) 10/30 2140 US MOR pop music, talk in vernacular, NA (Bran-NJ)
- 4820 **HONDURAS** *LV Evangelica* (Rhyn-NC) sorry I lost your details-sp
- 4824.4 **PERU** *Voz de la Selva* 11/2 , 1035-1045, Male SP ID, ad (Mont-PA) 1016-1025 11/8, ad string followed by man ID and TC at 1016. (D'An-FCDX)
- 4830 **HONDURAS R.** *Litoral* 11/3 0327-0345, ID, played full cd (Mont-PA) playing upbeat EG religious vocals at 0350 10/17, echo ID, addr (Berg MA) Religious program in English, giving toll-free 888 number and asking Hondurans to send \$4 for tapes, teenage-sounding announcer introducing Pearl Jam-ish CCM song, giving IDs, playing entire CD, break for ID @ 0340 (Bran-NJ)
- 4840 **INDIA AIR** *Mumbai* 11/9, 1256, OM in Lang, fair (Line-KS)
- 4845 **MAURITANIA RM** 0230-0605+ French talk. Some AR pop mx. (Alex-PA)
- 4850 **INDIA AIR** *Kohima* 11/10, 1232; EG nx by YL //others, poor (Line-KS)
- 4860 **INDIA AIR** *Delhi* 11/9, 1255, OM in Lang //3365, good (Line-KS) 10/21 0020-0054 Oct 21, open carrier until vocals, ID, TP, EG nx (D'An-PA)

- 4865 **BRAZIL Radio Alvoradora Londrina** 11/9, 2310-2332 nice jingle ID followed by a man with an ID prior to Voz do Brasil program. Fair. (D'An-FCDX-PA)
- 4880 **INDIA AIR Lucknow** 11/9, 1257, Subcont mx, poor (Line-KS)
- 4890 **PAPUA NBC** 11/10 1200, EG pops, YL in Vern, Trad. Singing, into EG nx by YL, only fair (Line-KS) 10/14 1141, vocal NBC nx 1200 (Race-MI) 1144 2 men talking, English heard, ID, jingle, nx (Wolf-OH) 10/17 1116 Heard at armchair levels, with OM mentioning Pina (spelling?) conference, and then a song dedication. (Maro-NY) 11/4 1100 EG NCB News report; pops and relig mx (incl gospel version of Ode to Joy); telephone call-ins and mx dedications (Mart-GA)
- 4895 **INDIA AIR Kursong** 11/10, 1233, EG nx by YL //others, poor (Line-KS).
- 4895 **SARAWAK RM Kuching** 11/2, 1235, OM w/Koran, good (Line-KS)
- 4919 **ECUADOR R Quito** 9/2 1000 ID, orchestra, Perfidia song (Robi-TN)
- 4920 **INDIA AIR Chennai** 11/10, 1230, EG nx by YL, //others, poor (Line-KS)
- 4925 **SUMATRA RRI Jambi 1303**, 11/9, RRI nx, good (Line-KS)
- 4930.1t **DOMINICAN REP R. Barahona** 11/2 0009-0040, SS playing continous mx. S7 level with frequent fades. (Mont-PA.)
- 4950 **ANGOLA R. Nacional** 10/8 man with nx at 2200 upbeat ads/promos (Berg)
- 4960 **ECUADOR R.Federacion Shuar** 11/1 2335-0004 lang, HC mx, talk (Mont)
- 4970 **INDIA AIR Shillong** 11/9, 1257, Subcont mx, poor (Line-KS)
- 4975.13 **PERU R. del Pacifico** 10/14 mediocre at best at 0920 rel vcls, ID (Berg-MA)
- 4990 **INDIA AIR Itanagar** 11/9, 1258, Subcont mx, poor (Line-KS)
- 4992.5 **PERU R.Ancash** 10/25, 1026-1033, Female SP long talk, tent ID (Mont-PA)
- 4995.6 **PERU R.Andina** 10/25, 1010-1025, Long talks, flute mx, tent ID (Mont-PA) 11/11 0048 ID followed by YL talk, fair (Beu-TX)
- 5003.4 **RIO MUNI Radio Nacional-Bata** 11/2 2148-2213* SP talk and very brief musical segments, ID, NA (D'An-PA) 10/11 2155 African music, time check for 23 hours, hora Ecuatoriana, IDs, frequencies, into national anthem until 2203:44, tone briefly, then off (Bran-NJ)
- 5009.5 **DOMINICAN REPUBLIC Radio Cristal** 11/8 1030-1039 rel, ID (D'An-FCDX)
- 5009.5 **PERU R.Altura** 11/9 0959-1030 In SS. At tune in children singing Happy Birthday. Continous mx till 1024 when ID was hrd (Mont-FCDX PA) Mx with YL's & OM's singing, 1024 ID by OM and mentions Cerro de Pasco (K. Fiel-FCDX)
- 5010 **CHINA CR Beijing 2** 11/7, 2232-2300, Noted EE lessons at tune in. Prg in Chinese. Rather weak copy at S2 level but is audible. (Mont-FCDX,PA)
- 5015 **TURKMENISTAN Turkmen R** 10/21 2200 Greek-sounding vocal ballads interspersed with brief announcements in Turkic language (Hill-MA) 11/2 0110-0120, R.Asgabad Just above noise floor, mx, poss ID (Mont-PA)
- 5019.9 **SOLOMON ISL SIBC** 11/3 1236 Man and woman talk re trade (Wolf-OH) 11/9, 1301, YL in EG w/BBC nx, poor (Line-KS) 1150-1207 11/ 8, discussion TP 1200 BBC ID, followed by Newshour. (D'An-FCDX) 11/4 1215 EG relay of BBCWS (Mart-GA)
- 5025 **BENIN Radio Parakou** 11/2 2104 Congolese mx, RFI pgm (Bran-NJ)
- 5025 **CUBA R.Rebelde** 10/31 0008 talk in SP mentioning "Imperialista" and "anti-war". Rebelde ID at 0013. //620 (Race-MI)
- 5026 **UGANDA Radio Uganda** 11/2 2058 music, ID "Radio Uganda", signoff (Brandi-NJ)
- 5770 **NICARAGUA R.Miskut** 11/1 0021-0030, Best hrd, ment anthrax (Mont-PA) 0047-0205* 11/9 continuous romantic vocals, "Miskut" IDs (D'An-FCDX)

This month instead of retyping all your logs, I cut and pasted. It was NOT quicker. I have to ask you, when submitting your logs, please indicate if it is for NASWA tropical bands, NASWA Electronic Flash Sheet or CIDX, which I also edit. Thank you.

(Just as a reminder, the format for logs is: **Frequency COUNTRY Station Date Time Details Contributor**. Following this format makes Sheryl's life easier, and all the programs I use to layout this column depend on this format. Thanks! -Ralph Brandi, Layout Drone. 

International Band Loggings

Wallace C. Treibel • 357 N.E. 149th Street • Seattle, WA 98155 • nwhikers@uswest.net

- 5920nf **RUSSIA R Studio** relay St. Petersburg in RS 2230*, pop mx, tlks, RS/EG ID's, fqy, E-mail address (D'Angelo FCDX-PA 11/7, Brandi NJ 11/14)
- 59539 **COSTA RICA R Casino** Limon *1030, TC, opening anmts, phone #, fqys, full ID, orch mx, bird calls and inspirational message, classic Central Amer sound (Berg MA 10/28)
- 5985 **CONGO RTV Congolaise** Brazzaville in FR 2145-2300*, hi-life vcls, long political tlk, ID, local mx, abrupt s/off, some QRM from WYFR (D'Angelo FCDX-PA 11/8, Montgomery PA, Field MI 11/8)
- 5995 **MALI R Mali** Bamako in FR 2235, mostly mx w/o conversation, local vernacular cover of Phil Collins' song "Something in the Air" (Montgomery PA, Brandi NJ 11/1)
- 6000 **CUBA RHC** in EG 0135, review of backyard antennas on "Dxers Unlimited", //9870 (Racenis MI) in SP 1234, nx, local mx, tlks by OM, jingle, ID, g (Wolfson OH 10/24)
- 6000 **BRAZIL R Guaiba** Porto Alegre in PT 2315, tlk, ads, clear ID, f (Brouillette IL 10/6)
- 6005 **GERMANY Deutschland R** Berlin in GM 0147, class mx, ID, Cuba off fqy, vg (Montgomery 11/5)
- 6020 **AUSTRALIA RA** in EG 1223, YL singing w/cmtnry abt the mx, ID, relig pgm, vg (Wolfson ONT)
- 6020 **BRAZIL R Educadora** Bahia in PT 2324, sport scores, wx, Lone Ranger fanfare (Brouillette IL)
- 6025 **UZBEKISTAN R Tashkent** in EG 1209, lcl nx, interviews of US officials abt the war, ID 1218, tlks about Islam faith, //5975, 9715 (Montgomery PA 11/4)
- 6055 **RWANDA R Rwanda** Kigali in FR 2100*, full ID's in FR/EG, fqys, tlks, mx, NA (D'Angelo FCDX, Montgomery FCDX-PA 11/7)
- 6065 **USA WYFR Family R** Okeechobee, FL in EG 0315, piano mx, reading of John's gospel, choral mx, //9505 (Witham HI 10/13, Pace IA 10/15)
- 6090 **OMAN BBC** relay in Farsi 1645, ID, rpts w/ment of Iran, Iraq, America, Afghanistan, and Pakistan, //15470 better signal (Witham HI 10/20)
- 6105 **BRAZIL R Cultura** Filadelfia in PT 2340, ID, jingle, clobbered by VOA s/on 0000 (Montgomery PA)
- 61537 **INDONESIA RRI Biak** in IN 1120, two soft ballads, audible due to exc propagation (Maroti NY)
- 6155 **UNITED KINGDOM RTE Radio Worldwide** relay Rampisham in EG *0130, ID as RTE Radio One nx, sports, traffic, ads, g (D'Angelo PA 10/18)
- 6245 **RUSSIA R Radonezh** via Samara relay in RS 1911, RS Orthodox church service, hymns, chorus, sermons punctuated by occasional bells, ID 1956, s/off 1959, p (Hill MA 10/28)
- 6300 **TAIWAN WYFR Family Radio** via Taipei in Mandarin 2218, choral mx, ID, QTH Oakland CA given by OM at excruciatingly slow pace, IS, p, //9280 (Berg MA 10/8)
- 6301v **PERU R Union** Lima in SP 0130-0430+, replaced 6351 after 10/13, tlks, ballads, usual poor, wobbly, distorted signal worse than ever (Alexander PA 10/20) ED: 3 hours of misery-type listening!
- 65202 **PERU R Paucartambo** in SP 1111, ID just above noise level, long tlks, only 250 w. (Montgomery PA)
- 6536 **PERU R Dif Huancabamba** in SP 0052, SP mx, ID 0056 hrd on peak sig, p (Montgomery PA 11/2)
- 67975v **PERU R Ondas del Rio** in SP 1045, OM hosting a pgm of rustic vocals with ad string, ID 1058, (D'Angelo FCDX-PA 11/8) in SP 2333, Peruvian mx, ID 0059, into nx (Montgomery PA 11/2)
- 6940 **ETHIOPIA R Fana** Addis Ababa in Amheric 0346, long tlks with echo effect, mx interludes but no echo. Interesting. fair signal with fades (Montgomery PA 11/3)
- 7105nf **ASCENSION ISLAND VOA** relay in EG 0315, tlk on US border security, g (Brouillette IL 10/14)
- 7120 **SOUTH AFRICA BBC** relay in EG 0320, sports rpt (boxing), //7160 Ascension (Brouillette IL 10/14)
- 71644 **NEPAL R Nepal** in Nepali 1130-1226, continuous tlks, flute mx prior to pips and ID, into nx, interview, p (Montgomery FCDX-PA 11/10, D'Angelo FCDX-PA 11/10, Maroti NY 11/10)
- 7170 **INDIA AIR** Delhi in HD/EG *0030, s/on ancmts, nx for 5 mins, into EG 0035, nx re Afghanistan situation, ment bin Laden, Kabul etc. (Hill MA 11/17)
- 7180 **MOLDAVIA V of Russia** relay in EG 0328-0405, dire advice on US sending troops into Afghanistan, tlk on Romanov's work in chemistry (Brouillette IL, Newbury NE, Racenis MI)
- 7185 **BANGLADESH R Bangladesh** Dhaka in EG 1846, subcont and pop vcls between short, muffled ancmts, s/off 1900 after short tone, f, //95506 (Hill MA 10/28)
- 7245 **ANGOLA R Nacional** Luanda in FR 2059, ID's in PT and FR, drums, pips, hilife vcl, fair and mostly in the clear w/o usual ham QRM (Hill MA 10/21)
- 7250 **ITALY RAI** Rome in Romanian 2110, bird chirp IS, ID, NA, pop mx, mentions of Italy/Pope John/& Osama bin Laden, into CZ at 2135, //5970 (Lamb NY 10/20)

- 7255 **NIGERIA V of Nigeria** in EG/Fulfulde 2103, current affairs pgm, ID, radio drama, strong signal but poor audio (Lamb NY 10/20) in EG 0609, pgm preview, request ltrs/rpts, QTH, ID 0615, "Soul Riff" w/African vcls, tlk re the media, poor audio, //15120 (Berg MA 11/4, Newbury NE 10/12)
- 7255 **THAILAND VOA** relay in lang? 1203, ment Afghanistan, bin Laden, Pakistan, America, Sri Lanka, Etc., ID 1210, jingle, fqy, ment Internet, vg (Wolfson OH 10/29)
- 7260 **VANUATU R Vanuatu** in Bislama? 0725, ID 0730, into nx, item abt local Dept of Health, also item about airports (Brandi NJ 10/16)
- 7265 **GERMANY Sudwestrundfunk 3** Stuttgart in GM 0420, GM pop/rock mx pgm (Martin GA 10/15) in GM 2148 w/ments of Germany, Pakistan, promo, f (Lamb NY 10/20) in GM 2139-2400*, ID 2140, late evenings usually into techno mx but this time mostly US pop mx, g (Montgomery PA 10/12)
- 7285 **GERMANY Deut Welle Wertachtel** in EG 0200, Afghan war nx, QRM by VOA (Hanlon PA 10/28)
- 7285 **UZBEKISTAN R Tashkent** in EG *1200, chimes, ID, nx, ham QRM, //9715 (Alexander PA 10/13)
- 7285 **THAILAND R Thailand** in Khmer? 1115, bells IS, EG ancmt, ID, fqy, mx, f (Wolfson OH 10/30)
- 7300nf **TURKEY V of Turkey** in TK 0122, TK folk mx, exc, //9460 also exc (Hanlon PA 10/28)
- 7305 **VATICAN CITY VR** in VT *2315, IS, ID in Latin, Asian mx, ments of Vatican, Italy, Mary, and Italian PM (Lamb NY 10/20)
- 7375nf **UKRAINE RUI** in EG 0400, nx, cmntry, ID "Ukraine Diary", vg, //7285 (Alexander PA 11/4) in EG 0443, soprano-tenor duet, ID, mailbag, sked, QTH, e-mail and web URL, 0459*, vg (Lamb NY 11/3)
- 7380nf **COLOMBIA Idea Radio** in SP/EG 2310+, nice sel of mx with EG/SP ancmts, QTH, e-mail, ID, fqy (Montgomery FCDX-PA 11/9, Martin GA 11/4, D'Angelo PA 11/7) in SP/EG 0712, upbeat SP vcls, ID's every 15 mins, not clear as to official status of new station (Berg MA 11/4)
- 7400 **BULGARIA R Bulgaria** in EG *0000, nx, ID, Folk Studio pgm, tlks re mushrooms in Bulgaria, mx, "Walks and Talks", Bulgarians living abroad, tourist info, QTH, IS at 0100 (Montgomery PA 10/29)
- 7410 **INDIA AIR** Bangalore in EG 1938, pop-Indian mx, nx, fqy, sked, ID (Field FCDX-MI, Rhyne NC)
- 7440 **RUSSIA V of the Mediterranean** relay Moscow in EG 2045, US pop mx, ID, contact info, pgm ended with nx and another ID, g (Wolfson OH 11/3)
- 7470 **NORWAY R Norway** in NO 0120, interviews, strong signal, //7495, 9945 (Hanlon PA 10/28)
- 7590nf **RUSSIA Eurosonor Radio** (Germany) relay via Armavir in GM *1958, multi-lingual ID's including EG at 2000, into all-GM prgmng, jazz mx with tlk, frequent ID's, TC's, fqy, mail address, and URL, abrupt ending of prgmng and s/off 2100 (Berg MA 10/13)
- 8700nf **AFGHANISTAN U.S. PsycOps** short for Pennsylvania Air National Guard with 6 EC-130J aircraft flying over Afghanistan sending prgmng to the Afghan people hrd and rptd widely in the USA. Early sked 0930-1430 and 2130-0230 in Pashto and Dari langs. Reported as follows by NASWA members: OM tlks, many ref to Taliban, Afghanistan, Pakistan, Osama bin Laden, and Iraq, mideast mx, vocals (Brandi NJ 0040 10/17, Neal TX 0154 10/21, Montgomery PA 0057 10/16, Martin GA 1235 11/4, D'Angelo PA 0030 10/18, Witham HI 0315 10/16, Beu TX 0214 11/8)
- 9445nf **CHINA CPBS** Baoji in CH/EG 2230, EG lang instruct'n pgm "Let's Talk English (Field FCDX 11/8)
- 9525 **INDONESIA V of Indonesia** Jakarta in CH *1030-1130*, YL vocalist, continuous beautiful mx w/o ancmts, ID 1128, IS for VOI, QRM from VOA s/on 1128 (Montgomery PA 10/23, Wolfson OH 11/3) in IN 1245, tlk prior to 1300* with NA matching that hrd on Internet (Brandi NJ 10/15)
- 9535 **THAILAND R Thailand** in EG *1900, bells IS, ID, OM reading list of holidays, nx w/mentions of activities of the royal family and celebrations of Mohammed's birthday, f-p (Wolfson OH 10/29)
- 9580 **AUSTRALIA RA** in EG 1225, contemporary mx, lcl political cmntry (Newbury NE, Fraser MA)
- 9650 **INDIA AIR** Aligarh in EG 2112, great mx pgm, ID, nice audio and S9+ (Montgomery PA 10/12)
- 9655 **IRAN VOIRI** Sirjan in SP 0130, fanfare, ID, ancmt, Koran readings, g (Hanlon PA 10/28)
- 9685 **GREECE VOA** relay Kavalá in Urdu *0100, ID, IS, regional nx, ment Taliban (McGuire MD 10/13)
- 96951 **BRAZIL R Rio Mar** Manaos in PT 1000, fqy list, ID, nx, QRM, strong but bad het (Brandi NJ 10/16)
- 9705 **MEXICO R Mexico Int** in SP *1256, pop mx, ID, tlks, sked w/mx background, g (Wolfson OH 11/3)
- 9705 **INDIA AIR** Panaji in EG 2252, Hindi vcls, ID, nx, p-f with QRM (D'Angelo FCDX-PA 11/9)
- 9715 **UZBEKISTAN R Tashkent** in EG 1330, lcl mx, ID's in lang/EG, nx in EG, f-p (Brandi NJ 11/6)
- 9750 **MALAYSIA V of Islam** Kajang in IN 1057, pop mx, ballad, tlk, ID, target info, g (Wolfson OH 11/3)
- 9760 **CYPRUS CBC** Limassol in GK 2234, GK tlk/mx, ment of Cyprus, vg, //6180, 7205 (Wolfson 11/3)
- 9795 **CANADA V of Vietnam** relay in SP *0300, ID, nx, ment Pres Bush, nx of Vietnam, fys, cmntry, into EG pgmng 0330, nx re US special forces in Afghanistan (Lamb NY 10/12, Newbury NE 10/21)
- 9810 **THAILAND R Thailand** in EG 1238, nx of SE Asia, tlk on econ system in Thailand and SE Asia and trade agreement w/Bahrain, tlk re growing sun flowers to export their oil, g-f (Montgomery PA 11/4)
- 9875 **LITHUANIA R Vilnius** in EG 2335, cmntry re US war on terrorism (Racenis BDX-MI 10/13)

- 9880 **RUSSIA Herald BC Syndicate (US)** relay in EG 1156, IS, ID, "Christian Science Sentinel" w/tlk abt how CS helps people deal w/problems in daily living, Bible lesson, f (Moats OH 11/3)
- 9885 **SWITZERLAND SRI** in EG 0116, pop mx, final bcst to North America, exc (Hanlon PA 10/28)
- 9925 **GERMANY V of Croatia** relay Juelich in EG 0240, nx re CR independence day, ID (Lamb NY 10/12)
- 9925 **BELGIUM RVI** in DT 2040, tlk, last bcst from Wavre, future bcsts from relays (Brandi NJ 10/27)
- 11585 **INDIA AIR** Bangalore in Sindh 1259, HD mx, nx?, ancmt, more mx, f-g (Wolfson OH 10/24)
- 11655 **PORTUGAL RDPI** Lisbon in PT 2300, NA, ID, fgy, sked, orch mx (McGuire MD, Newbury NE)
- 11665 **RWANDA D Welle** relay Kigali in EG 1625, "News Link", ID, "Africa Report" (Witham HI 10/24)
- 117341 **TANZANIA VOT Zanzibar** in SH 2000, mostly mx, 5 pips TOH, nx, flute mx until brief prayer, short orchestral NA, f-g (Montgomery FCDX-PA 11/8, D'Angelo FCDX-PA 11/9)
- 11740 **VATICAN CITY VR** in Latin 0540, Holy Mass, choral & organ mx, benediction & prayers, into IT 0600 w/ID, world nx & rpts, into FR 0615 and EG 0630, p, //9645 (Witham HI 10/23)
- 11785nf **ECUADOR HCJB** Quito in EG *2328, IS, ID, fgy, pips, "DX Party Line", skeds (Moats OH 11/2)
- 11800 **ITALY RAI** Rome in EG 0105, song in IT, OM w/love song, nx, ID (Newbury NE, Wolfson OH)
- 11820 **PHILIPPINES R Veritas Asia** in IN 2258, full ID in EG, into IN relig pgm, g (Brouillette IL 10/27)
- 11840 **INDIA AIR** Aligarh in CH *1143, IS, ID, tlk, Indian film mx, f (Hanlon PA 10/28)
- 11845 **TURKEY V of Turkey** in EG 2205, rpt on Afghanistan, ID, tlk on prehistoric Ankara, fgy data, QTH for Internet (McGuire MD 10/14, Fraser MA 10/19, Racenis BDX-MI 10/13)
- 11895 **FRENCH GUIANA R Japan** relay in JP *2200, IS, NHK ID, pips, national nx (McGuire MD 10/16)
- 11900 **BULGARIA R Bulgaria** in EG *1900, IS, ID, fgy, sked, rpt on Afghanistan, g (McGuire MD 10/14)
- 11930 **JORDAN R Jordan** in AR 2215, lively tlk, many ments Jordan, QRM R Marti (Brouillette IL 10/27)
- 11935 **SAUDI ARABIA BSKSA** Riyadh in AR 2200, prayers, quick ID, into tlk (Brouillette IL 10/27)
- 11955 **SINGAPORE BBC** relay in EG 2318, nx, current affairs, assassination of Israeli tourism minister, p (Brouillette IL 10/21)
- 119558 **ANGOLA R National 1** in PT 2200, nx, upbeat ads, tlk, //4950, both fqys p-f (Berg MA 10/8)
- 11980 **GUAM KSDA** Agat in EG 2132, "Wavescan", history of radio in Afghanistan, ID (Brandi NJ 10/14)
- 11985 **TAIWAN R Taipei Int** in EG *1100, ID, s/on ancmts, NA, nx, p-f (D'Angelo FCDX-PA 11/9)
- 12020 **VIETNAM V of Vietnam** Hanoi in EG 1020, feature re new bridge, mx, ID (Brandi NJ 11/2)
- 12065nf **RUSSIA VOA** relay Petropavlovsk in KR 2130, EG ID, IS, fqys, website, nx, //7110 (Hanlon 11/4)
- 12085 **MONGOLIA V of Mongolia** Ulan Bator in EG *1030, s/on ancmts, ID, sked, tlks, feature on military service requirements, YL ancrc speaking in halting EG seemingly unscripted, Mongolian mx, songs (Martin GA 11/4, Montgomery PA 11/4, Field FCDX-PA 11/9, D'Angelo FCDX-PA 11/9)
- 13605 **INDIA AIR** Bangalore in EG 1800, nx rpt on US-Taliban war, into relg mx, f (Fraser MA 10/10)
- 13650 **NORTH KOREA V of Korea** Kujang in EG 1200, band, chorus, nx, ID, soprano song (Robinson TN)
- 13680nf **CANADA China R Int** relay in EG 2315, nx, cmntry, CH mx (Brouillette IL 10/19, Levison PA 10/3)
- 13720 **PORTUGAL Deut Welle** relay Sines in EG 0115, cmnts on anthrax virus in Berlin (Levison 10/10)
- 13730 **AUSTRIA RAI** in EG 1155, "Weekend" pgm abt immigration, ID, URL, Strauss mx (Racenis 10/14)
- 13730 **IRAN VOIRI** Sirjan in EG 2005, interview abt bin Laden's responsibility for the US terrorist attack, ID, Mideast mx, //11670, p (Witham HI 10/13)
- 13750 **COSTA RICA World University Network** relay Cahuita in EG 0103, Dr Gene Scott tlk re Jezebel, f // 9725 (Moats OH 11/4)
- 13760 **NORTH KOREA V of Korea** Kujang in EG 1500, nx feature, ID's, fair level (Costello NJ 11/3)
- 13795 **INDIA AIR** Bangalore in HD 2304, nx, Afghanistan/Pakistan ment many times, mx (Wolfson OH)
- 13810 **GERMANY R Ecclesia** via Juelich relay in PT *1800, ID, fqys (Berg MA 10/20)
- 13855 **GERMANY WYFR Family Radio** via Juelich relay in EG 2020, relig mx, ID, choral mx, "Mailbag", plea for more letters, p (Witham HI 10/10)
- 15120 **NIGERIA V of Nigeria** Ikorodu in EG 0457, ID, IS, NA, billboard, TC, nx, tourist info, African mx (Montgomery PA 11/3) in EG 0729, discussion re events in Nigeria, sports nx (D'Angelo PA 10/28) in EG 2007, mx pgm, many ID's, OM chatting (Field FCDX-PA 11/7) in EG 2130-2300*, relig pgm re Nigerian culture, NA, //7255 (Alexander PA 11/3)
- 15125 **INDONESIA V of Indonesia** Jakarta in IN 1057, pop mx, ID at TOH, nx, NA, f (Wolfson OH 10/26) in IN *1200, Song of Coconut Islands" IS, ID, nx, p (D'Angelo FCDX-PA 11/9)
- 15135 **UKRAINE RUI** Kiev in EG 1100-1200, nx, cmntry, local folk mx, ID, g (Alexander PA 10/13)
- 15135 **RWANDA Deut Welle** relay in EG *2100, IS, ID, rpt on Pakistan, Taliban, g (McGuire MD 10/14)
- 15150 **INDONESIA RRI** Jakarta in IN 1126, ID, interview, long tlks, IN mx, nx? (Montgomery PA 10/24)
- 15160 **NEW ZEALAND RNZI** in EG 1905, world & Pacific nx, sports rpt, nx analysis, f (Hanlon PA 11/1)
- 15160 **PHILIPPINES VOA** relay in EG 1130, nx re interruption of Afghanistan bombing for Moslem Holy period (Racenis BDX-MI 10/13) in EG 1454, "VOA News Now", TC, fqys, f-g (Berg MA 10/20)

- 15250 **SRI LANKA VOA** relay in EG 0225-0300*, "VOA News Now", TC, features (D'Angelo FCDX-PA)
- 15265 **ITALY RAI** Rome in EG *2205, IS, ID, nx, ment bin Laden and Afghanistan, p (Witham HI 10/20)
- 15315 **UNITED KINGDOM R Telefis Eireann** relay Skelton in EG 1825, rpt - president of Aer Lingus assures workers of job security, g (Fraser MA 10/10)
- 15395 **THAILAND R Thailand** in EG *0030, nx, tlk on terrorism, chimes, pips, ID, g-f (Martin GA 10/14)
- 15415 **CHINA CRI** Beijing in EG 1250, "Spotlight", trad CH mx, e-mail/web URL's, g (Hanlon PA 11/4)
- 15435 **UNITED ARAB EMIRATES UAE R Dubai** in EG 0535, travelog featuring mosques—their history and unique construction, p, //17830 also p (Witham HI 10/13)
- 15435 **LIBYA V of Africa** Sabrata in EG 0132, ID, tlks re Islam, nx abt bombing of Kabul, into FR 0138 (Montgomery PA 10/14, Wolfson OH 11/3) in EG 2330, ID, nx, //17725 (Alexander PA 10/28)
- 15475 **GABON Africa #1** in FR 1916, African chanting mx, drums, OM tlks, ment Nigeria, g (Levison PA)
- 15476 **ANTARCTICA RN San Gabriel** in SP 2030-2101*, brief tlk, continuous mx and ancmts at 2056, ID, no NA noted at s/off, reception fair w/fades (Montgomery PA 11/9, D'Angelo FCDX-PA 11/8)
- 15495nf **UNITED ARAB EMIRATES R Japan** relay via Al Dabayya in JP 1600 w/nx on terrorism, ments of Kabul, Taliban, etc, exc, s-off at 1700 (Hanlon PA 11/3)
- 15520nf **UNITED ARAB EMIRATES AWR** relay Al Dabayya in EG/Somali 1630, tlk, regional vcls, instrum mx, f, //15620 g (Witham HI 10/13)
- 15555 **CYPRUS BBC** relay in AR 1620, ID, rpt w/ments bin Laden, America, Iraq, //11820 (Witham 10/20)
- 15605 **FRANCE RFI** Issoudin in EG 1640, pgm re European immigration policies, ID (Racenis BDX 10/13)
- 15640 **ISRAEL VOI** Tel Aviv in EG 1130, nx on military and Palestinian terrorist activities, Sharon cancels trip to US, wx, EG off 1135 (Martin GA 11/4) in HB 2155, jazz, ID, rpt on Palestine (McGuire MD)
- 15750 **GERMANY V of Hope** relay Juelich in EG 1750, enthusiastic preaching/audience, ID (Witham HI)
- 15820lsb **ARGENTINA R Continental** feeder in SP 0315-0430, tlks, ballads, phone, //20276 (Alexander 10/20)
- 17660 **ECUADOR HCJB** Quito in EG 1920, Studio 9 - M Twain's impressions of the Andes (Fraser MA)
- 17675 **NEW ZEALAND RNZI** in EG 0328, nx re TV sit-in in Vanuatu (Racenis BDX-MI, Newbury NE)
- 17745nf **PORTUGAL RDPi** Lisbon in PT 1558, tlks w/voice over mx, pips, ID, nx, sports (Wolfson OH 11/3)
- 17870 **SOUTH AFRICA Channel Africa** in EG *1800, IS, ID in EG/FR, nx of Africa, tlks on premarital sex & measures to curb AIDS, econ rpt, nx re ANC, immigration reform (Montgomery PA, Wolfson OH)
- 17895 **MOROCCO VOA** relay in EG 1732, nx bulletins, "Communications World", f (Moats OH 11/3)
- 17895nf **AUSTRIA R Africa Int** via Moosbrun in GM/EG 1500, URL's, hi-life mx, g (Hanlon PA 11/4) ED: Station's primary commitment is to best info re HIV/AIDS & other health issues.
- *20276lsb **ARGENTINA R Continental** feeder in SP 0210, ID, classical mx, 2+1 pips, ad string, g, //15820 f (Montgomery FCDX-PA, D'Angelo FCDX-PA 11/9)
- 21465 **PAKISTAN RP** Islamabad in EG 1100*, nx, ID, NA, //175233 (Racenis BDX, Alexander PA 10/13)
- 21470 **ASCENSION IS BBC** relay in EG 1719, "Focus on Africa", sports nx, soccer match, f (Moats 10/28)
- 21550 **AUSTRALIA Christian Voice** in EG 0300, Bible stories, ID's, relig mx, //21680 (Alexander 10/27)
- 21605 **UNITED ARAB EMIRATES R Dubai** in EG 1615, non-stop mx, nx, wx, //15395 (Martin GA 10/14)
- 21750 **SWITZERLAND SRI** in FR 0615, ID, phone interview, vocals, pips, nx, f (Witham HI 10/13)
- 29810lsb **ARGENTINA R Continental** feeder in SP 1425-2120, tlks, brief mx bks, pop mx (Alexander 10/6)

Clandestine, Tentative, Presumed, or Unknown

- 5925nf **CLANDESTINE Falun Dafa R** (site?) in CH *2100, ID's, formerly on 12075/9710, g (Hill MA 11/4)
- 6265 **TAIWAN(p) CBS Taipei** in CH 1115, long features, ID?, 2001 Space Odyssey (D'Angelo FCDX-PA)
- 6965nf **ERITREA(t) Cland V of Freedom** in AR 0330, ME mx, ID(t), tlks, mx bks, f (Montgomery PA 11/12)
- 7110 **TUNISIA(p) RTV Tunisienne(p)** in AR 2249, nx and sports?, distorted mx, vg (Wolfson OH 11/3)
- 7170 **SINGAPORE(p) RC of Singapore(p)** in Tamil? 1045, Asian mx, tlk on fone, ads (Wolfson PA 11/3)
- 7185nf **SRI LANKA R Free Asia** in Khmer *2230, EG ID, tlks, f/w/with occasional ham QRM (Hill MA 11/15)
- 9450nf **RUSSIA R Rossii** Kaliningrad(p) in RS? *0300, pips at s/on, many ID's, mx, f (Field MI 11/7)
- 97797 **YEMEN(t) Yemen RTVC(t)** in AR 0405, ID?, rty QRM, long tlks as if nx (Montgomery PA 11/8)
- 11840nf **CLANDESTINE R Rainbow** (site?) in Amheric *1859, ID, ancmts, mx segment, political tlk, Horn of Africa 1919 and 1941, s/off ancmts and off at 1959, f (D'Angelo FCDX-PA 11/9)
- 11570 **PAKISTAN(p) R Pakistan(p)** in Urdu(p) 1720, pop mx, tlks, cmntry?, ME mx, p (Wolfson OH 11/3)
- 15140nf? **UNKNOWN SITE VOA** relay in EG 0600, IS, ID, nx rpts about airstrikes in Afghanistan and the defection of Taliban soldiers, p (Witham HI 10/13)
- 15170nf **SRI LANKA R Free Asia** relay in Cambodian 2235, remote interview, mx bridges, YL tlk, ment of Washington and Islam, g, //15485 p (Witham HI 10/13)
- 15715 **GERMANY Cland R Huriyo** relay in Amheric *1630, instrum mx, ID's, long tlks (D'Angelo 10/16) ~~SW~~

English Schedules

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0000-0015	Radio Japan	6145.0na	13650.0as	17810.0as				
0000-0015	V. of Cambodia	11940.3as						
0000-0030	BBC World Service	3915.0as	5965.0as	5975.0am	6195.0as	7105.0as	9410.0as	
		9915.0sa	11945.0as	11955.0as	12095.0sa	15280.0as	15310.0as	
		15360.0as	17615.0as	17790.0as				
0000-0030	Christian Voice, Austr.	17775.0as	17850.0as					
0000-0030	Radio Australia	9660.0pa	12080.0pa	15240.0as	17580.0va	17750.0as	17775.0va	
		17795.0va	21615.0as	21740.0va				
0000-0030	Radio Cairo	9900.0am						
0000-0030	Radio Thailand	9655.0af	9680.0af	11905.0af				
0000-0030	Sri Lanka B'casting Corp.	4940.0do						
0000-0030	VOA	5995.0me	6015.0me	6105.0me	7215.0as	7265.0me	9890.0as	
		11760.0as	15185.0as	15290.0as	17740.0as	17820.0as		
		9705.0as	9950.0as	13605.0as				
0000-0045	All India Radio, Delhi	11785.0as						
0000-0100	HCJB Quito Ecuador	7400.0na	9400.0na					
0000-0100	Radio Bulgaria	5960.0na	6175.0na	9590.0na	9750.0as	9755.0na	11895.0as	
0000-0100	Radio Canada Int'l	7295.0do						
0000-0100	RTM Radio 4, Malaysia	6170.0va	11690.0va					
0000-0100	a Scandinavian Weekend R.	5995.0am	6130.0am	7405.0am	9455.0am	9775.0am	11695.0am	
0000-0100	twhfa VOA	13790.0am						
0000-0100	WYFR Okeechobee FL	6085.0na	9505.0na					
0000-0125	Radio Netherlands	6165.0na	9845.0na					
0000-0130	Voice of Hope, Germany	6040.0as						
0000-0200	R. for Peace Int'l	7445.0lr	15040.0va	21815.1uf				
0000-0200	Radio Exterior de Espana	6055.0na						
0000-0200	WSHB Cypress Creek SC	9430.0am	15285.0sa					
0000-0200	sm WWBS Macon GA	11900.0uf						
0000-0300	Christian Voice, Zambia	4965.0do						
0000-0300	University Network	9940.0as						
0000-0300	WRMI Miami FL	7385.0na	9955.0am					
0000-0300	WRNO New Orleans LA	7354.4va						
0000-0330	WINB Red Lion PA	12160.0am						
0000-0400	KWHR Naalehu HI	17510.0as						
0000-0400	Radio New Zealand Int'l	17675.0pa						
0000-0400	WWCR Nashville TN	3215.0na	5070.0na	5935.0na	7520.0na			
0000-0500	a SIBC Solomon Islands	9545.0do						
0000-0500	s a SIBC Solomon Islands	5019.9do						
0000-0600	WWFV McCaysville GA	5085.0uf	6890.0uf					
0000-0615	CBC Northern Service	9625.0do						
0000-0700	WBCQ Monticello ME	7415.0na	9335.0na					
0000-0730	Nat'l BC, Papua NG	9675.0do	11880.0lr					
0000-0800	NBC Windhoek, Namibia	3270.0af	3290.0af	7215.0lr				
0000-0830	ABC Alice Springs	2310.0lr	4835.0do					
0000-0830	ABC Katherine	5025.0do						
0000-0830	ABC Tennant Creek	4910.0do						
0000-1000	Radio Vanuatu	3945.0do	4960.0do	7260.0do				
0000-1000	Voice of Guyana	3291.4do	5949.4do					
0000-1000	WEWN Birmingham AL	5825.0na						
0000-1000	WHRA Greenbush ME	7580.0eu						
0000-1000	WHRI Noblesville IN	5745.0va	7315.0am					
0000-1100	Caribbean Beacon	6090.0am						
0000-1100	SBC Radio 1, Singapore	6150.0do						
0000-1400	KAIJ Dallas TX	5755.0va						
0000-1600	KTBN Salt Lake City UT	7510.0na						
0005-0010	Croatian Radio, Zagreb	9885.0sa	9925.0sa					
0015-0100	Radio Japan	6145.0na						
0020-0030	w Kyrgyz Radio, Bishkek	4010.0						
0030-0100	AWR Africa, UAE	6025.0as	6055.0as					
0030-0100	BBC English Teaching	9605.0as	17615.0as					
0030-0100	BBC World Service	5965.0as	5975.0am	6195.0as	7105.0as	9410.0as	9915.0sa	
		11955.0as	12095.0sa	15280.0as	15310.0as	15360.0as	17790.0as	
		17775.0as	17850.0as	21680.0pa				
		9660.0pa	12080.0pa	15240.0as	15415.0as	17580.0va	17750.0as	
		17775.0va	17795.0va	21740.0va				
		9655.0as	11905.0as	13695.0na				
0030-0100	Radio Thailand	7325.0na						
0030-0100	Radio Vilnius, Lithuania	5995.0me	6015.0me	6105.0me	7265.0me			
0030-0100	VOA	7215.0as	9890.0as	11760.0as	15185.0as	15290.0as	17740.0as	
0030-0100	VOA Special English	17820.0as						
0030-0130	VOIRI Teheran	6065.0am	6135.0na					
0030-0200	Sri Lanka B'casting Corp.	4940.0do	6005.0as	6075.0as	9770.0as	15425.0as		
0050-0056	Int'l BC Tamil	7460.0as						

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						
0100-0130		AWR Europe, Austria	6160.0as						
0100-0130		Christian Voice, Austr.	17775.0as	21550.0as	21680.0pa				
0100-0130		Radio Slovakia Int'l	5930.0na	7230.0na	9440.0sa				
0100-0130		Radio Tashkent	5955.0as	5975.0as	7215.0as				
0100-0130	mtwhfa	Radio Yugoslavia	7115.0na						
0100-0130	s	Universal Life, Germany	9435.0as						
0100-0130	twhfa	VOA	5995.0am	6130.0am	7405.0am	9455.0am	9775.0am	13790.0am	
0100-0145		Deutsche Welle	6040.0am	6145.0na	9640.0am	9700.0na	9765.0na		
0100-0156		China Radio Int'l	9580.0na	9790.0na					
0100-0156		Voice of Korea	6195.0as	6520.0am	7140.0as	7580.0am	9345.0as	11734.9am	
0100-0200		BBC World Service	5965.0as	5975.0am	6195.0as	9410.0as	9525.0ca	9915.0sa	
0100-0200			11955.0as	12095.0sa	15280.0as	15310.0as	15360.0as	17790.0as	
0100-0200		Radio Japan	11860.0as	11870.0me	11880.0me	15325.0as	17685.0pa	17810.0as	
0100-0200			17835.0sa	17845.0as					
0100-0200		Radio Ukraine Int'l	7375.0na	7420.0eu	9610.0eu				
0100-0200		VOA	5995.0me	6015.0me	6105.0me	7115.0as	7200.0as	7255.0me	
			9850.0as	11705.0as	11820.0as	15250.0as	15300.0as	17740.0as	
			17820.0as						
0100-0200		Voice of Indonesia	9525.0as	11785.0as	15150.0as				
0100-0200		WYFR Okeechobee FL	6065.0na	9505.0na	15060.0as				
0100-0300	a	Scandinavian Weekend R.	5980.0va	11720.0va					
0100-0400		Radio Australia	9660.0pa	12080.0pa	15240.0as	15415.0as	17580.0va	17750.0as	
			17775.0va	21725.0as					
0100-0500		Radio Havana Cuba	6000.0na	9820.0na	11705.0uf				
0100-0600		HCJB Quito Ecuador	9745.0na	11840.0na	21455.0uf				
0130-0145		Voice of Africa, Libya	15435.0lr	17725.0lr					
0130-0200		Radio Sweden	7290.0al	9495.0as					
0130-0200		Radio Telefis Eireann	6155.0ca						
0130-0200	twhfa	VOA	5995.0am	6130.0am	9455.0am				
0130-0200	twhfa	VOA Special English	7405.0am	9775.0am	13740.0am				
0130-0400		Christian Voice, Austr.	21550.0as	21680.0pa					
0140-0200		Vatican Radio	7335.0au	9650.0au					
0200-0210		Radio Bangladesh	4882.0as						
0200-0227		Radio Prague Int'l	6200.0na	7345.0na					
0200-0230		Radio Budapest	9835.0na						
0200-0230		Radio Yugoslavia	7130.0na						
0200-0230		Voice of Hope, Germany	11785.0as						
0200-0245		Deutsche Welle	7285.0as	9615.0as	9765.0as	11965.0as			
0200-0256		Radio Romania Int'l	9550.0na	11740.0as	11830.0na	11940.0au	15290.0as	15370.0au	
0200-0256		Voice of Korea	9325.0as	11335.0as					
0200-0259		Radio Canada Int'l	6040.0am	7235.0as	9755.0am	11725.0am	11990.0am	15150.0as	
			17860.0as						
0200-0300		BBC World Service	5975.0am	9410.0me	9525.0ca	9770.0af	9915.0sa	11955.0as	
			12095.0sa	15280.0as	15310.0as	15360.0as	17790.0as		
0200-0300		Radio Korea	7275.0as	9560.0na	11725.0sa	11810.0sa	15575.0na		
0200-0300		Radio Myanmar	7185.0do						
0200-0300		Radio Taipei Int'l	5950.0na	9680.0na	11740.0va	15320.0as	15345.0as		
0200-0300	twhfa	RAE Buenos Aires	11710.0am						
0200-0300		VOA	5995.0me	6015.0me	6105.0me	7115.0as	7200.0as	7255.0me	
			9850.0as	11705.0as	11820.0as	15250.0as	15300.0as	17740.0as	
			17820.0as						
0200-0300		Voice of Russia	7180.0na	7250.0na	7335.0na	9765.0na	12020.0na	13665.0na	
0200-0300		WSHB Cypress Creek SC	7535.0am	9430.0na					
0200-0330		KJES Vado NM	7555.0na						
0200-0330		Radio Cairo	9475.0am						
0200-0400		R. for Peace Int'l	7445.0lr	15040.0va	21815.1lr				
0200-0400		WYFR Okeechobee FL	6065.0na	9505.0na					
0200-0430		Sri Lanka B'casting Corp.	6005.0as	6075.0as	6130.0do	9770.0as	15425.0as		
0200-2110		Kenya BC Corp	4935.0do						
0200-2400		RTM Radio 4, Malaysia	7295.0do						
0205-0210		Croatian Radio, Zagreb	9885.0na	9925.0na					
0215-0220		Radio Nepal, Katmandu	3230.0as	5005.0as					
0230-0257		Voice of Vietnam	6175.0na						
0230-0300		ORF Vienna	7325.0na						
0230-0300		Radio Iraq Int'l	7157.0lr	9887.0lr	11787.0lr				
0230-0300		Radio Sweden	6020.0al	9495.0na					
0230-0330	s	Radio Pilipinas, Manila	12015.0me	15120.0me	15270.0me				
0245-0300		BBC English Teaching	9610.0af						
0245-0300		Radio Tirana, Albania	6115.0na	7160.0na					
0250-0310		Vatican Radio	7305.0am	9605.0am					
0250-2210		Zambia Nat'l BC Corp.	6165.0do	6265.0do					
0300-0330		Channel Africa, S. Africa	9525.0af						
0300-0330	sm w fa	Radio Minsk, Belarus	5970.0eu	7210.0eu					
0300-0330		Radio Thailand	9655.0am	11905.0am	15460.0na				
0300-0330		VOA	6035.0af	6080.0af	7105.0af	7290.0af	7340.0af	7415.0af	
			9575.0af	9885.0af					
0300-0330	mtwhf	VOA	4960.0af						
0300-0330	a	Wales Radio Int'l	9735.0na						
0300-0345		Deutsche Welle	6020.0na	6045.0na	9640.0am	9700.0na	11985.0na		
0300-0356		China Radio Int'l	9690.0na						
0300-0356		Voice of Korea	6195.0as	7140.0as	9345.0as				

0300-0400		BBC World Service	3255.0af 9410.0eu 15280.0as 21660.0as	5975.0am 9525.0ca 11730.0af 12830.0as	6005.0af 11730.0af 15360.0as 15575.0me	6190.0af 11765.0af 12035.0af 17760.0as	6195.0eu 12035.0af 17760.0as 17790.0as	7160.0af 12095.0me 17790.0as
0300-0400	sm	R. Luz y Vida, Honduras	3250.0ca					
0300-0400		Radio Bulgaria	7400.0na	9400.0na				
0300-0400		Radio Japan	17825.0ca	21610.0pa				
0300-0400		Radio Sultanate Oman	15355.0af					
0300-0400		Radio Talpel Int'l	5950.0na	9680.0na	11875.0pa	15320.0as		
0300-0400		Voice of Russia	7180.0na	7250.0na	7335.0na	12020.0na	13665.0na	
0300-0400		WSHB Cypress Creek SC	7535.0eu					
0300-0430		Radio Cultural, Guatemala	3300.0do	5955.0do				
0300-0515		WRMI Miami FL	7385.0na					
0300-0530		Zimbabwe BC Corp.	4828.0do	6045.0do				
0300-0600		Christian Voice, Zambia	6065.0do					
0300-0600		Radio Botswana	3356.0do	4820.0do	7255.0do			
0300-0600		Radio Rwanda	6055.0do					
0300-0600		Radio Uganda	5026.0do	7196.0do				
0300-0600		Voice of Islam, Malaysia	6175.0as	9750.0as	15295.0au			
0300-0900	a	Scandinavian Weekend R. University Network	5990.0va 17765.0as	11720.0va				
0300-1400		WRNO New Orleans LA	7394.3am					
0310-0340		Vatican Radio	9660.0af					
0330-0345		Voice of Africa, Libya	15435.0lr	17725.0lr				
0330-0357		Voice of Vietnam	6175.0na					
0330-0400		AWR Africa, UAE	11795.0as					
0330-0400	m	La Voz Evangelica, Hond.	4819.2do					
0330-0400		Radio Budapest	9835.0na					
0330-0400		Radio Dubai, UAE	12005.0na	13675.0na	15400.0na			
0330-0400		Radio Sweden	9495.0na	9755.0al				
0330-0400		Radio Tirana, Albania	6115.0na	7160.0na				
0330-0400		VOA	6035.0af 9885.0af	6080.0af	7105.0af	7290.0af	7415.0af	9575.0af
0330-0830		Radio Myanmar	9730.8do					
0345-0400	f	FEBA Seychelles	11885.0af					
0345-0400		Radio Tajikistan	7245.0					
0400-0427		Radio Prague Int'l	7345.0na	7385.0na	9435.0na			
0400-0429		R. Vlaanderen Int'l	11985.0na					
0400-0430		AWR Africa, Meyerton	9650.0af					
0400-0430		Channel Africa, S. Africa	5955.0af					
0400-0430		Christian Voice, Austr.	21550.0as					
0400-0430	s	Radio France Int'l	11910.0af	11995.0af	13610.0af			
0400-0430	twhfa	Radio Mexico Int'l	9705.0am	11770.0am				
0400-0430		VOA	6080.0af 9885.0af	7170.0af 15205.0as	7290.0af	7415.0af	9575.0af	9775.0af
0400-0445		Deutsche Welle	6015.0af	7195.0af	9565.0af	9710.0af		
0400-0445		WYFR Okeechobee FL	6065.0na	9505.0na	9985.0eu	11550.0eu		
0400-0456		China Radio Int'l	9730.0na					
0400-0456		Radio Romania Int'l	9550.0na	11830.0na	15335.0as	17735.0as		
0400-0500		BBC World Service	3255.0af 7160.0af 15310.0as 21830.0as	5975.0am 9410.0eu 11765.0af 15420.0af	6005.0af 11765.0af 15575.0me	6135.0ca 12035.0af 17760.0as	6190.0af 12095.0me 15280.0as 17790.0as	6195.0eu 15280.0as 21660.0as
0400-0500		Radio Ukraine Int'l	7285.0eu	7375.0na	7420.0eu	9610.0eu		
0400-0500		Voice of Russia	7125.0na	7180.0na	7330.0na	12010.0na	12020.0na	13665.0na
0400-0500		Voice of Turkey	15595.0na	17595.0na				
0400-0530		Radio Australia	6020.0eu 9660.0pa 21725.0as	7240.0va 12080.0pa	15240.0as	15415.0as	15515.0va	17580.0va
0400-0600		WSHB Cypress Creek SC	7535.0eu	12020.0af				
0400-0700		KWHR Naalehu HI	17780.0as					
0400-0700		WWCR Nashville TN	3215.0na	5070.0na	5935.0na	7560.0na		
0400-0705		Radio New Zealand Int'l	15340.0pa					
0400-1200		R. for Peace Int'l	7445.0va	15040.0va				
0400-2400		Cameroon Radio-TV	4850.0do	6005.0do				
0405-0410		Croatian Radio, Zagreb	7285.0na	9925.0na				
0427-0525	a	Radio Voice of Hope	12060.0af	15320.0af				
0430-0457		Radio Prague Int'l	9865.0as	11600.0as				
0430-0500		Christian Voice, Austr.	21550.0as	21680.0pa				
0430-0500		Radio Nigeria, Abuja	7275.0do					
0430-0500	mtwhfa	TWR Swaziland	4775.0af	6035.0af				
0430-0500		VOA	6080.0af 15205.0as	7170.0af	7290.0af	7415.0af	9575.0af	9775.0af
0430-0530		Radio Netherlands	6165.0na	9590.0na				
0430-1000		Radio Nigeria, Lagos	3326.0do	4990.0do				
0430-1000		Sri Lanka B'casting Corp.	6130.0do					
0430-2305		Radio Nigeria, Enugu	6025.0do					
0430-2305		Radio Nigeria, Ibadan	6049.9do					
0430-2305		Radio Nigeria, Kaduna	4770.0do	6090.0do				
0445-0500		RAI, Rome	5965.0af	7235.0af				
0500-0515		Kol Israel	6280.0va	9435.0va	17545.0va			
0500-0530		AWR Africa, Meyerton	5960.0af	6015.0af				

0500-0530		BBC World Service	6005.0af 11760.0me 15360.0as 17885.0af	6135.0ca 11765.0af 15420.0af 21660.0as	6190.0af 11940.0af 15575.0as 17640.0af	6195.0eu 11955.0as 17640.0af	7160.0af 15280.0as 17760.0as	9410.0eu 15310.0as 17790.0as
0500-0530		Channel Africa, S. Africa	15215.0af					
0500-0530		Christian Voice, Austr.	21550.0as					
0500-0530		Radio France Int'l	13610.0af	15155.0af	17800.0af			
0500-0530	s	Radio Mexico Int'l	9705.0am	11770.0am				
0500-0530		Vatican Radio	9660.0af	11625.0af	15570.0af			
0500-0545		Deutsche Welle	5960.0na	6120.0na	9670.0na	11795.0na		
0500-0556		China Radio Int'l	9560.0na					
0500-0600	mtwhf	BBS, Bhutan	5030.0al	6035.0do				
0500-0600		Radio Exterior de Espana	6055.0na					
0500-0600		Radio Japan	5975.0eu 15195.0as	6110.0na 17810.0as	7230.0eu 21755.0pa	9835.0na	11715.0as	11760.0as
0500-0600		VOA	5970.0af 11825.0eu	6035.0af 11835.0af	6080.0af 13710.0af	7170.0af 15205.0as	7295.0af	9700.0af
0500-0600		Voice of Russia	7125.0na 17595.0na	7180.0na	7330.0na	12010.0na	12020.0na	15595.0na
0500-0600		WYFR Okeechobee FL	5810.0eu					
0500-0700	mtwhf	KWHR Naaiehu HI	11565.0pa					
0500-0700		Radio Havana Cuba	9550.0na	9820.0na	9830.0uf			
0500-0720		TWR Swaziland	6035.0af	7205.0af	9500.0af			
0500-0800		Radio Kuwait	15110.0as					
0500-0800		SIBC Solomon Islands	5019.9do	9545.0do				
0500-1000		Voice of Nigeria	7255.0af	11770.0af	15120.0af			
0515-1000	tw hfa	WRMI Miami FL	7385.0na					
0525-0915		Ghana Broadcasting Corp.	3366.0do	4915.0do				
0530-0545		BBC English Teaching	6010.0eu	9915.0eu				
0530-0550		Radio Dubai, UAE	15435.0au	17830.0au	21700.0au			
0530-0600		BBC World Service	6005.0af 11760.0me 15420.0af	6135.0ca 11765.0af 15575.0as	6190.0af 11940.0af 17640.0af	6195.0eu 11955.0as 17760.0as	7160.0af 15310.0as 17790.0as	9410.0eu 15360.0as 21660.0as
0530-0600	mtwhf	BBC World Service	17885.0af					
0530-0600		Radio Thailand	9655.0eu	11905.0eu	13780.0eu			
0530-0630		AWR Africa, Meyerton	15345.0af					
0530-0700		Christian Voice, Austr.	21550.0as	21680.0pa				
0530-0700		Italian Radio Relay Svc	3980.0al	3985.0uf				
0530-0700		Radio Australia	9660.0pa 17750.0as	12080.0pa 21725.0as	15240.0as	15415.0as	15515.0va	17580.0va
0530-1630		Zimbabwe BC Corp.	5975.0do	6045.0do				
0600-0615	s	KVOH Los Angeles CA	9975.0na					
0600-0615	hfa	TWR Meyerton	11640.0af					
0600-0620		Vatican Radio	4005.0eu	5885.0eu	7250.0eu			
0600-0630		Channel Africa, S. Africa	15215.0af					
0600-0630		Radio France Int'l	11710.0af	15155.0af	17800.0af	21620.0af		
0600-0630		VOA	5970.0af 11825.0eu 13710.0af	5995.0af 11835.0af 15205.0as	6035.0af 11915.0me 15335.0me	6080.0af 11930.0af	7170.0af 11995.0af	7295.0af 12025.0af
0600-0640		Radio Romania Int'l	9530.0na	11830.0na				
0600-0645		Deutsche Welle	6140.0eu	7225.0af	9565.0af	11785.0af		
0600-0700		BBC World Service	6005.0af 11765.0af 15575.0as	6190.0af 11940.0af 15575.0as	6195.0af 11955.0as 17640.0af	7160.0af 12095.0eu 17790.0as	9410.0eu 15310.0as 21660.0as	11760.0me 15360.0as 21660.0as
0600-0700		Radio Japan	7230.0eu	9835.0na	11740.0as	15195.0as		17870.0pa
0600-0700		Republic of Yemen Radio	9780.0me					
0600-0700		WYFR Okeechobee FL	7355.0eu	11550.0eu				
0600-0730	s	BBC World Service	17885.0af					
0600-0800		Voice of Russia	15275.0au	15470.0au	17655.0au	17665.0au	21790.0au	
0600-0800		WSHB Cypress Creek SC	7535.0af					
0600-0825		Voice of Malaysia	6175.0as	9750.0as	15295.0au			
0600-0830		SLBS, Sierra Leone	3316.0do					
0600-0900	s	Radio Rwanda	6055.0do					
0600-1300		ELWA Monrovia, Liberia	4760.0do					
0600-1300		Radio Uganda	5026.0do	7110.0do	7196.0do			
0600-1500		Christian Voice, Zambia	9865.0do					
0600-1530		Radio Botswana	7255.0do	9600.0do				
0600-1800		Radio Liberia Int'l	6100.0do					
0600-2305		Radio Nigeria, Abuja	7275.0do					
0605-0610		Croatian Radio, Zagreb	9470.0au					
0610-0620	mtwhf	Voice of Greece	9420.0eu	11900.0au	15630.0eu	17520.0pa	21530.0eu	
0615-0630	h	KVOH Los Angeles CA	9975.0na					
0630-0645	s	BBC English Teaching	6180.0eu	9875.0eu				
0630-0645	m	KVOH Los Angeles CA	9975.0na					
0630-0700		Georgian Radio, Tbilisi	11805.2eu					
0630-0700		Vatican Radio	11625.0af	13765.0af	15570.0af			
0630-0700		VOA	5995.0af 15205.0as 13710.0af	7170.0af 15335.0me 6035.0af	11825.0eu 11915.0me	11930.0af	12025.0af	
0630-0700	s	VOA	5970.0af 13710.0af	6035.0af	6080.0af	7295.0af	11835.0af	11995.0af
0632-0700		ORF Vienna	6155.0eu	13730.0eu	17870.0me			
0640-0656		Radio Romania Int'l	7145.0eu 11940.0eu	9510.0eu	9530.0na	9570.0eu	11790.0eu	11830.0na
0645-0700		BBC English Teaching	6180.0eu	9875.0eu				
0645-0700	m	KVOH Los Angeles CA	9975.0na					
0645-0900		Deutsche Welle	6140.0eu					

0700-0705			WWCR Nashville TN	5070.0na	5935.0na	7560.0na			
0700-0705	sm		WWCR Nashville TN	3210.0na					
0700-0705		tw	WWCR Nashville TN	3215.0na					
0700-0730			BBC World Service	6190.0af	9410.0eu	11760.0me	11765.0af	11940.0af	11955.0as
				12095.0eu	15310.0as	15360.0as	15400.0af	15485.0eu	15565.0eu
				15575.0as	17640.0eu	17760.0as	17790.0as	17830.0af	21660.0as
0700-0730			Radio Slovakia Int'l	15460.0au	17550.0au	21705.0au			
0700-0730			VOA	11915.0me	12025.0af	15335.0me			
0700-0730		a	VOA	6873.0lf	6873.0uf				
0700-0745			WYFR Okeechobee FL	7355.0eu	9985.0af	11580.0af			
0700-0756			Radio Romania Int'l	15335.0af	17720.0af				
0700-0800			Italian Radio Relay Svc	7120.0uf	7125.0af				
0700-0800			KWHR Naalehu HI	11565.0pa	17780.0as				
0700-0800			Radio France Int'l	15605.0af					
0700-0800			Radio Taipei Int'l	5950.0na					
0700-0900			Christian Voice, Austr.	17820.0as	21680.0pa				
0700-0900			HCBJ Quito Ecuador	9780.0eu	11755.0pa	21455.0uf			
0700-0900			Radio Australia	9660.0pa	12080.0pa	15240.0va	15415.0as	17580.0va	17750.0as
				21725.0as					
0700-0900			Voice of Hope, Germany	5975.0eu	21590.0me				
0700-1100			Radio Africa, Eq. Guinea	15184.6af					
0700-1100			WBCQ Monticello ME	7415.0na					
0705-0720			BBC English Teaching	6005.0af					
0705-1005			Radio New Zealand Int'l	11675.0pa					
0705-1100			WWCR Nashville TN	3210.0na	5070.0na	5935.0na	7560.0na		
0710-0715	mtwhf		Vatican Radio	4005.0eu	5885.0eu	6185.0eu	7250.0eu	9645.0eu	11740.0eu
				15595.0va					
0715-0815			KTWR Guam	15200.0as					
0720-0735	smtwhf		TWR Swaziland	6035.0af	7205.0af	9500.0af			
0730-0800			BBC World Service	6190.0af	9410.0eu	11760.0me	11765.0af	11940.0af	11955.0as
				12095.0eu	15310.0as	15360.0as	15400.0af	15485.0eu	15565.0eu
				17640.0eu	17760.0as	17790.0as	17830.0af	21660.0as	
0730-0800	s	a	BBC World Service	15575.0as	17885.0af				
0730-0800		t	Georgian Radio, Tbilisi	6080.0me					
0730-0800		h	Radio Finland	9510.0va	21670.0va				
0730-0800			Swiss Radio Int'l	9885.0af	13635.0af	17665.0af			
0730-1400			Nat'l BC, Papua NG	4890.0do	9675.0ir				
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					
0745-0755	s	a	TWR Armenia	12070.0eu					
0745-0755	s	a	TWR Monte Carlo	9870.0eu					
0750-0800	mtwhf		Voice of Greece	9420.0eu	11900.0au	15630.0eu	17520.0af	21530.0as	
0755-0920			TWR Armenia	12070.0eu					
0755-0920			TWR Monte Carlo	9870.0eu					
0800-0804			Radio Pakistan	17520.0eu	21465.1eu				
0800-0827			Radio Prague Int'l	11600.0eu	15255.0eu				
0800-0829			R. Vlaanderen Int'l	5985.0eu					
0800-0830			VOA	11995.0as	13615.0as	15150.0as			
0800-0900	s		Amateur Radio League, SAf	9750.0af	21560.0af				
0800-0900			BBC World Service	6190.0af	9410.0eu	11940.0af	11955.0as	12095.0eu	15310.0as
				15360.0as	15400.0af	15485.0eu	15565.0eu	17640.0eu	17760.0as
				17830.0af	17885.0af	21470.0af	21660.0as	21830.0as	
0800-0900	s	a	BBC World Service	15575.0as					
0800-0900	mtwhf		BBS, Bhutan	5030.0al	6035.0do				
0800-0900			KNLS Anchor Point AK	11765.0as					
0800-0900			Radio Korea	9570.0om	13670.0eu				
0800-0900			Voice of Indonesia	9525.0pa	11785.0pa	15150.0pa			
0800-0900			Voice of Russia	11770.0au	15275.0au	15470.0au	17495.0au	17525.0au	17655.0au
				17665.0au					
0800-0900			WSHB Cypress Creek SC	7535.0eu	9845.0au				
0800-1045			KWHR Naalehu HI	9930.0as	11565.0pa				
0800-1300			SIBC Solomon Islands	5019.9do					
0800-1600	s	a	Italian Radio Relay Svc	7120.0uf	7125.0af				
0800-1700			NBC Windhoek, Namibia	7165.0af	7215.0af				
0805-0810			Croatian Radio, Zagreb	13820.0au					
0815-0845	f		FEBa Seychelles	15460.0as					
0815-0900			KTWR Guam	15200.0as	15330.0as				
0830-0900			AWR Europe, Austria	9660.0eu	17820.0af				
0830-0900			AWR Europe, Forli	9765.0eu					
0830-0900			Georgian Radio, Tbilisi	11910.0eu					
0830-0900			Swiss Radio Int'l	21770.0af					
0830-0930			VOA	11995.0as	13615.0as	15150.0as	15165.0me	15235.0me	17875.0af
0830-2130			ABC Alice Springs	2310.0do	4835.0lr				
0830-2130			ABC Katherine	2485.0do					
0830-2130			ABC Tennant Creek	2325.0do					
0900-0930			AWR Europe, Austria	17820.0af					
0900-0930			KTWR Guam	15330.0as					
0900-0930			Radio Australia	9580.0va	21820.0va				
0900-0945			Deutsche Welle	6140.0eu	6160.0pa	7300.0as	11785.0af	15410.0af	17800.0af
				17820.0as	17845.0as	17860.0af	21560.0af		
0900-0956			China Radio Int'l	11730.0pa	15210.0pa				

0900-1000		BBC World Service	6190.0af	6195.0as	9605.0as	9740.0as	11760.0me	11940.0af
			11945.0as	12095.0eu	15190.0sa	15310.0as	15360.0as	15400.0af
			15485.0eu	15565.0eu	15575.0as	17640.0eu	17760.0as	17790.0as
			17830.0af	17885.0af				
0900-1000		Christian Voice, Austr.	13775.0as	17725.0as				
0900-1000	s	V. of the Mediterranean	11770.0eu					
0900-1000		Voice of Russia	11770.0au	15275.0au	15470.0au	17495.0au	17525.0au	17665.0au
0900-1000		WSHB Cypress Creek SC	7535.0eu	9455.0sa				
0900-1030		KHBN Palau	15725.0as					
0900-1100		HCJB Quito Ecuador	11755.0pa	21455.0uf				
0900-1200		Voice of Hope, Germany	21590.0me					
0900-1500	a	Scandinavian Weekend R.	6170.0va	11720.0va				
0900-2103		Radio Rwanda	6055.0do					
0910-0930	s	Voice of Armenia, Yerevan	4810.0eu	15270.0eu				
0915-1200		Ghana Broadcasting Corp.	6130.0do					
0915-1200	s	a Ghana Broadcasting Corp.	4915.0do					
0930-1000		Georgian Radio, Tbilisi	11910.0eu					
0930-1000		Radio Vilnius, Lithuania	9710.0eu					
0930-1000		VOA	11995.0as	13615.0as	15150.0as	15165.0me	15235.0me	17895.0me
0930-1100		Radio Australia	9580.0va	17750.0as	21820.0va			
0930-1130		Radio Netherlands	7260.0as	9790.0as	12065.0as			
0945-1100		Deutsche Welle	6140.0eu					
1000-1027		Voice of Vietnam	9840.0au	12019.9au				
1000-1029		Radio Prague Int'l	21745.0va					
1000-1030		BBC World Service	6190.0af	6195.0va	9605.0as	9740.0as	11760.0me	11940.0af
			11945.0as	12095.0eu	15310.0as	15360.0as	15485.0eu	15565.0eu
			15575.0as	17640.0eu	17760.0as	17790.0as	17885.0af	21470.0af
			21660.0as					
1000-1030		KSDA Guam	11705.0as	11900.0as				
1000-1030		Radio Telefis Eireann	11685.0au	15540.0au				
1000-1030		Sri Lanka B'casting Corp.	4940.0do					
1000-1056		China Radio Int'l	11730.0pa	15210.0pa				
1000-1056		Voice of Korea	9335.0am	9850.0as	11710.0am	11735.0as		
1000-1100		All India Radio, Delhi	11585.0as	13700.0au	15020.0as	15260.0au	17510.0au	17800.0as
			17895.0au					
1000-1100	s	a BBC World Service	15190.0sa	15400.0af	17830.0af			
1000-1100	s	a BBS, Bhutan	5030.0al	6035.0do				
1000-1100		Radio Japan	9695.0as	15590.0as	21755.0pa			
1000-1100	mt hfa	Vatican Radio	5885.0eu					
1000-1100		VOA	5745.0am	5985.0pa	7370.0am	9590.0am	11720.0as	15165.0me
			15235.0me	15250.0as	15425.0as	17895.0me		
1000-1100		WSHB Cypress Creek SC	6095.0am	9455.0sa	11780.0as			
1000-1100		WYFR Okeechobee FL	5950.0na					
1000-1115	mtwhfa	Radio Vanuatu	3945.0do	4960.0do	7260.0do			
1000-1200		Christian Voice, Austr.	13775.0as	17655.0as	17725.0as			
1000-1300		WEWN Birmingham AL	5825.0na	15745.0eu				
1000-1300		WHRI Noblesville IN	6040.0na	9495.0am				
1000-1300	s	WRMI Miami FL	9955.0am					
1000-1600		Radio Nigeria, Lagos	4990.0do	7285.0do				
1000-2200		Voice of Guyana	5949.4do					
1005-1210		Radio New Zealand Int'l	15175.0pa					
1030-1045	mtwhf	Radio Ethiopia	5990.0do	7110.0do	9704.2do			
1030-1100		BBC English Teaching	9605.0as	11945.0as	15280.0as	17760.0as		
1030-1100		BBC World Service	6190.0af	6195.0va	9740.0as	11760.0me	11940.0af	12095.0eu
			15310.0as	15360.0as	15485.0eu	15565.0eu	15575.0as	17640.0eu
			17790.0as	17885.0af	21470.0af			
			9965.0as	15725.0as				
1030-1100		KHBN Palau	11900.0as					
1030-1100		KSDA Guam	13675.0eu	15370.0eu	15395.0eu	21605.0eu		
1030-1100		Radio Dubai, UAE	12085.0as					
1030-1100		Voice of Mongolia	4940.0do	11835.0as	15120.0as	17850.0as		
1030-1130		Sri Lanka B'casting Corp.	4940.0do					
1045-1600	s	a KWHR Naalehu HI	11565.0pa					
1045-2230		KWHR Naalehu HI	9930.0as					
1100-1104		Radio Pakistan	17520.0eu	21465.1eu				
1100-1127		Voice of Vietnam	7285.0as					
1100-1130	mtwhf	BBC Caribbean Report	6195.0am	15190.0am				
1100-1130		BBC World Service	6190.0af	6195.0as	9740.0as	11760.0me	11940.0af	12095.0eu
			15310.0as	15360.0as	15400.0af	15485.0eu	15565.0eu	15575.0as
			17640.0eu	17700.0as	17790.0sa	17830.0af	17885.0af	21470.0af
			6195.0am	15190.0am				
1100-1130	s	a BBC World Service	5030.0al	6035.0do				
1100-1130	s	a BBS, Bhutan	6140.0eu	15410.0af	17800.0af	21780.0af		
1100-1145		Deutsche Welle	6120.0na	9695.0as	15590.0as			
1100-1200		Radio Japan	7445.0as	11985.0as				
1100-1200		Radio Taipei Int'l	5985.0pa	6110.0as	9645.0as	9760.0as	11705.0as	11720.0as
1100-1200		VOA	15250.0as	15425.0as				
1100-1200		WSHB Cypress Creek SC	6095.0am	11660.0am				
1100-1200		WYFR Okeechobee FL	5950.0na	11830.0na				
1100-1230		VOIRI Teheran	15185.0as	15385.0as	15480.0as	15575.0as	21470.0as	21730.0as
1100-1300		Radio Jordan	11690.0eu					
1100-1400		Radio Australia	6020.0va	9475.0va	9580.0va	11650.0pa	11880.0as	12080.0pa
			21820.0va					
1100-1400		Radio Singapore Int'l	6150.0as	9600.0as				
1100-1400		WOCR Nashville TN	5070.0na	5935.0na	7560.0na	15685.0na		
1100-1430		HCJB Quito Ecuador	12005.0am	15115.0am	21455.0uf			
1100-1500		KHBN Palau	9965.0as					

1100-2200		Caribbean Beacon	11775.0am						
1115-1130		BBC English Teaching	11805.0eu	13745.0eu	15270.0eu	15325.0eu	17625.0eu		
1115-1130	mtwh	BBC English Teaching	9410.0eu	11680.0eu					
1115-1145		Radio Nepal, Katmandu	3230.0as	5005.0as					
1130-1135		Kol Israel	15640.0va	17545.0va					
1130-1145		Voice of Africa, Libya	15435.0lr	17725.0lr					
1130-1157		Radio Prague Int'l	11640.0eu	21745.0af					
1130-1159		R. Vlaanderen Int'l	9865.0as						
1130-1200		AWR Europe, Forl	12020.0eu						
1130-1200		BBC World Service	6190.0af	6195.0va	9740.0as	11760.0me	11940.0af	12095.0eu	
			15190.0am	15310.0as	15360.0as	15485.0eu	15565.0eu	15575.0as	
			17640.0eu	17700.0as	17830.0af	17885.0af	21470.0af		
1130-1200	f	Vatican Radio	15595.0va	17515.0va					
1130-1200	a	Wales Radio Int'l	17625.0au						
1130-1230		Radio Korea	9650.0na						
1130-1230		Sri Lanka B'casting Corp.	4940.0do						
1130-1325		Radio Netherlands	5965.0na	6045.0eu	9860.0eu				
1145-1600		Deutsche Welle	6140.0eu						
1200-1215		BBC English Teaching	7135.0as	11835.0as					
1200-1215		V. of Cambodia	11940.3as						
1200-1220	mtwhf	BBC Caribbean Report	6195.0am	15190.0am					
1200-1220		BBC World Service	6190.0af	6195.0as	9740.0as	11760.0me	11940.0af	12095.0eu	
			15310.0as	15360.0as	15485.0eu	15565.0eu	15575.0me	17640.0eu	
			17700.0as	17830.0af	17885.0af	21470.0af			
1200-1220	s	BBC World Service	6195.0am	15190.0am					
1200-1220	fa	Radio Almaty, Kazakhstan	9620.0eu	11840.0eu					
1200-1230		Radio France Int'l	15540.0af	25820.0af					
1200-1230		Radio Tashkent	5955.0as	5975.0as	6025.0as	9715.0as			
1200-1245		WYFR Okeechobee FL	5950.0na	11830.0na	11970.0na	13695.0na			
1200-1256		China Radio Int'l	9730.0as	9760.0pa	11760.0pa	11980.0as	15415.0pa		
1200-1259		Radio Canada Int'l	9660.0as	11730.0as					
1200-1300		Christian Voice, Austr.	13775.0as	17725.0as					
1200-1300		Radio Bulgaria	15700.0eu	17500.0eu					
1200-1300		Radio Taipei Int'l	7130.0as	9610.0au					
1200-1300		Radio Ukraine Int'l	11825.0as						
1200-1300		VOA	6110.0as	9645.0as	9760.0as	11705.0as	11715.0as	15170.0me	
			15250.0as	15260.0me	15425.0as	17630.0af			
			5915.0as	6095.0am	9980.0as	11660.0am			
1200-1300		WSHB Cypress Creek SC	15715.0me						
1200-1330		Voice of Hope, Germany	7460.0as						
1200-1600		Voice of Hope, China	4915.0do	6130.0do					
1200-1700		Ghana Broadcasting Corp.	13570.0am						
1200-2300		WINB Red Lion PA	9625.0do						
1200-2400		CBC Northern Service	15040.0va	21815.1uf					
1200-2400		R. for Peace Int'l	6095.0oc						
1210-1650		Radio New Zealand Int'l	17595.0as						
1215-1330		Radio Cairo	9620.0eu	11840.0eu					
1220-1240	w	Radio Almaty, Kazakhstan	6190.0af	6195.0va	9740.0as	11760.0me	11940.0af	12095.0eu	
1220-1300		BBC World Service	15190.0am	15310.0as	15360.0as	15485.0eu	15565.0eu	15575.0me	
			17640.0eu	17700.0as	17830.0af	17885.0af	21470.0af		
			15105.0af	17780.0af	21640.0af				
1230-1245		BBC English Teaching	9840.0as	12019.9as					
1230-1257		Voice of Vietnam	6155.0eu	13730.0eu					
1230-1300		ORF Vienna	7185.0as	9550.1as	15520.1as				
1230-1300		Radio Bangladesh	18960.0na						
1230-1300		Radio Sweden	9655.0as	9810.0as	11905.0as				
1230-1600		Radio Thailand	4940.0do	6005.0as	6075.0as	9770.0as	15425.0as		
1240-1300	t	Sri Lanka B'casting Corp.	9620.0eu	11840.0eu					
1240-1300	a	Radio Almaty, Kazakhstan	15535.0me						
1245-1300		FEBA Seychelles	11830.0na	11970.0na	13695.0na				
1245-1300		WYFR Okeechobee FL	17870.0as						
1300-1330		AWR Africa, UAE	15660.0as						
1300-1330		KSDA Guam	6095.0eu	7270.0eu	9525.0eu	11820.0eu			
1300-1355		Radio Polonia, Warsaw	7405.0na	9570.0na	11760.0pa	11900.0pa	11980.0as	13650.0va	
1300-1356		China Radio Int'l	15180.0as						
1300-1356		Voice of Korea	7505.0eu	9335.0na	11335.0eu	11710.0na			
1300-1400		BBC World Service	6190.0af	6195.0va	9740.0as	11760.0me	11940.0af	12095.0eu	
			15190.0am	15310.0as	15360.0as	15420.0af	15485.0eu	15565.0eu	
			15575.0me	17640.0eu	17700.0as	17830.0af	17885.0af	21470.0af	
1300-1400	s	Channel Africa, S. Africa	11720.0af	17780.0af	21725.0af				
1300-1400		KNLS Anchor Point AK	9615.0as						
1300-1400	mtwhf	Radio Canada Int'l	9515.0na	13655.0na	17710.0na				
1300-1400		Radio Korea	9570.0as	13670.0om					
1300-1400		VOA	6110.0as	9645.0as	9760.0as	11705.0as	15170.0me	15260.0me	
			15425.0as	17630.0af					
1300-1400	s	WBCQ Monticello ME	17495.0na						
1300-1400		WSHB Cypress Creek SC	6095.0na	7460.0as	9455.0am				
1300-1400		WYFR Okeechobee FL	11550.0as	11740.0na	11830.0na	11970.0na	17510.0sa	17575.0sa	
1300-1600		Christian Voice, Austr.	13660.0as	13775.0as					
1300-1600		Radio Jordan	11690.0na	17680.0al					
1300-1600		WEWN Birmingham AL	11875.0na	15745.0eu					
1300-1600		WHRI Noblesville IN	6040.0na	15105.0am					
1300-2100		Radio Uganda	5026.0do	7196.0do					
1300-2100	smtwhf	WRMI Miami FL	15725.0na						
1300-2300		WWFV McCaysville GA	12171.9uf						
1325-1400		Overcomer Ministries	6110.0eu						

1330-1345		BBC English Teaching	15105.0af	21640.0af					
1330-1350		Radio Dubai, UAE	13630.0eu	13675.0eu	15395.0eu	21605.0eu			
1330-1357		Voice of Vietnam	7145.0eu	9730.0eu					
1330-1400		AWR Africa, UAE	15385.0as						
1330-1400		KSDA Guam	11755.0as	11980.0as					
1330-1400		ORF Vienna	17855.0as						
1330-1400		Radio Finland	15400.0na	17660.0na					
1330-1400		Radio Sweden	9430.0as	17505.0as	18960.0na				
1330-1400		Radio Tashkent	5955.0as	5975.0as	6025.0as	9715.0as			
1330-1400		Radio Yugoslavia	11835.0au						
1330-1400		Voice of Turkey	17690.0as	17815.0eu					
1330-1430		Voice of Hope, Germany	15715.0me	15750.0as	15775.0as				
1330-1500		All India Radio, Delhi	11620.0as	13710.0as					
1400-1415	mtw	BBC English Teaching	11860.0af	15420.0af	21490.0af				
1400-1429		Radio Prague Int'l	21745.0va						
1400-1430		Radio Thailand	9530.0as	9655.0as	11905.0as				
1400-1430		VOA	6110.0as	7125.0as	9645.0as	9760.0as	11705.0as	15205.0as	
			15395.0as	15425.0as					
1400-1430	s	VOA	18275.0lf	18275.0uf					
1400-1430		Voice of Turkey	17690.0as	17815.0eu					
1400-1456		China Radio Int'l	7405.0na	9700.0as	11675.0as	11765.0va	13650.0va	13685.0af	
			15110.0as	15125.0af	17720.0na				
1400-1456		Radio Romania Int'l	11940.0eu	15365.0eu	17790.0eu				
1400-1500		BBC World Service	6135.0as	6190.0af	6195.0as	9740.0as	11940.0af	12095.0eu	
			15190.0am	15310.0as	15485.0eu	15565.0eu	15575.0me	17640.0eu	
			17700.0as	17830.0af	21470.0af	21660.0af			
1400-1500	s	a Channel Africa, S. Africa	11720.0af	17780.0af	21725.0af				
1400-1500		Radio Canada Int'l	9515.0na	13655.0na	17710.0na				
1400-1500		Radio France Int'l	9580.0as	11610.0as	17620.0me				
1400-1500		Radio Japan	7200.0as	9505.0na	9845.0as	17755.0me			
1400-1500		Radio Sultanate Oman	15140.0eu						
1400-1500		Radio Taipei Int'l	15265.0as						
1400-1500	s	a WBCQ Monticello ME	17495.0na						
1400-1500		WYFR Okeechobee FL	11550.0as	11740.0na	11830.0na	17510.0sa	17575.0sa	17760.0na	
1400-1530		Radio Australia	5995.0va	6080.0pa	9580.0va	11650.0pa			
1400-1600		KJES Vado NM	11715.0na						
1400-1600		Overcomer Ministries	6110.0eu	13810.0af					
1400-1600		SBC Radio 1, Singapore	6150.0do						
1400-1600		University Network	9940.0as						
1400-2200		WVCR Nashville TN	9475.0na	12160.0na	13845.0na	15685.0na			
1400-2400		KALJ Dallas TX	13815.0va						
1415-1420		Radio Nepal, Katmandu	3230.0as	5005.0as					
1430-1500		KSDA Guam	15660.0as						
1430-1500		ORF Vienna	6155.0eu	13730.0eu					
1430-1500		Radio Sweden	9430.0al	17505.0va	18960.0na				
1430-1500		VOA	6110.0as	7125.0as	9645.0as	9760.0as	11705.0as	15205.0as	
			15395.0as	15425.0as					
1430-1535		Voice of Hope, Germany	15715.0me	15775.0as					
1430-1600		KTWR Guam	15330.0as						
1430-1600		Radio Myanmar	5985.9do						
1430-1625		Radio Netherlands	12070.0as	12080.0as	15220.0na	15595.0as			
1445-1500		FEBa Seychelles	11600.0as						
1500-1515	h	FEBa Seychelles	11600.0as						
1500-1530		BBC World Service	5975.0as	6135.0as	6190.0af	6195.0as	9410.0eu	9740.0as	
			11860.0af	11940.0af	12095.0eu	15190.0am	15310.0as	15400.0af	
			15420.0af	15485.0eu	15565.0eu	17700.0as	17830.0af	21470.0af	
			21490.0af	21660.0af					
1500-1530		Channel Africa, S. Africa	17770.0af						
1500-1530		Radio Mexico Int'l	9705.0am	11770.0am					
1500-1530		VOA	7125.0as	9575.0as	9645.0as	15205.0as	15395.0as		
1500-1530		Voice of Mongolia	7380.0as	12015.0as					
1500-1556		China Radio Int'l	7160.0as	7405.0na	9785.0as	13685.0af	15125.0af	17720.0na	
1500-1556		Voice of Korea	7505.0eu	9335.0na	11335.0eu	11710.0na			
1500-1600		Radio Canada Int'l	9515.0na	13655.0na	15360.0as	17710.0na	17820.0as		
1500-1600		Radio Japan	7200.0as	9750.0as	9845.0as				
1500-1600		VOA Special English	6110.0as	9760.0as	9795.0as	12040.0as	15460.0as		
1500-1600		Voice of Russia	6205.0as	7260.0na	7315.0as	11500.0as	15735.0am		
1500-1600		WYFR Okeechobee FL	6280.0as	11830.0na	15525.0as	17760.0na			
1500-1700	smtw	a WBCQ Monticello ME	17495.0na						
1500-1700		World Beacon	15340.0eu						
1500-1745		a Scandinavian Weekend R.	5990.0va	11720.0va					
1500-2230	s	Reflections Europe, Ire.	3910.0eu	6295.0eu	12255.0eu				
1500-2400		Christian Voice, Zambia	4965.0do						
1515-1530	mtwhf	FEBa Seychelles	11600.0as						
1530-1545		BBC English Teaching	11685.0as	15545.0as					
1530-1545	smtw fa	FEBa Seychelles	11600.0as						
1530-1545		Radio Bangladesh	4882.0as	15520.1as					
1530-1600		BBC World Service	5975.0as	6135.0as	6190.0af	6195.0as	9410.0eu	9740.0as	
			11940.0af	12095.0eu	15190.0am	15310.0as	15400.0af	15485.0eu	
			15565.0eu	17700.0as	17830.0af	21470.0af	21660.0af		
1530-1600		Radio Australia	5995.0va	6080.0pa	9475.0as	9580.0va	11650.0pa		
1530-1600		VOA	7125.0as	9575.0as	9645.0as	11955.0me	13735.0me	15120.0me	
			15205.0as	15265.0me	15395.0as				
1530-1630		VOIRI Teheran	7115.0as	9605.0as	11775.0as	11870.0as			
1530-1800		Radio Botswana	3356.0do	4820.0do	7255.0do				
1535-1600		Voice of Hope, Germany	15715.0me						

1545-1600	sm	a	FEBA Seychelles	11600.Oas						
1545-1600	s	h	Radio Bangladesh	4882.Oas	15520.las					
1550-1610			Vatican Radio	9835.Oau	13765.Oau	15235.Oau				
1600-1615			Radio Pakistan	11570.Orme	15100.lme	15725.Oaf	17750.Oaf			
1600-1627			Voice of Vietnam	7145.Oeu	9730.Oeu					
1600-1630			BBC World Service	3915.Oas	5975.Oas	6190.Oaf	6195.Oas	7160.Oas	9410.Oeu	
				9740.Oas	11940.Oaf	12095.Oeu	15190.Oam	15310.Oas	15400.Oaf	
				15565.Oeu	17700.Oas	17830.Oaf	21470.Oaf	21660.Oaf		
1600-1630			Channel Africa, S. Africa	9525.Oaf						
1600-1630			Radio Mexico Int'l	9705.Oam	11770.Oam					
1600-1630			VOA	6035.Oaf	6110.Oas	7125.Oas	9575.Oas	9645.Oas	9760.Oas	
				13710.Oaf	15205.Oas	15240.Oaf	15395.Oas	15485.Oaf	17715.Oaf	
				17895.Oaf						
1600-1640			Radio Dubai, UAE	13630.Oeu	13675.Oeu	15395.Oeu	21605.Oeu			
1600-1645			Deutsche Welle	6140.Oeu	6170.Oas	7225.Oas	9735.Oaf	11695.Oas	13605.Oas	
				15455.Oaf	21840.Oaf					
1600-1656			China Radio Int'l	7190.Oaf	13650.Oaf					
1600-1656			Voice of Korea	9975.Oaf	11735.Oaf					
1600-1700			Radio Algiers	11715.Ova	15160.Ova					
1600-1700			Radio Australia	5995.Ova	6080.Opa	9475.Oas	9580.Ova	11650.Opa	11660.Ova	
1600-1700	s	a	Radio Canada Int'l	9515.Ona	13655.Ona	17710.Ona				
1600-1700			Radio Ethiopia	5990.Oaf	7110.Oaf	7165.Oaf	9560.2af	9704.2af	11800.Oaf	
1600-1700			Radio France Int'l	11615.Oaf	11995.Oaf	12015.Oaf	15605.Oaf	17605.Oaf	17850.Oaf	
1600-1700			Radio Jordan	11690.Oeu						
1600-1700			Radio Korea	5975.Oom	9515.Oaf	9870.Oaf				
1600-1700			Sri Lanka B'casting Corp.	4940.Odo						
1600-1700			VOA Special English	13600.Oaf	15445.Oaf	17640.Oaf				
1600-1700			Voice of Hope, Germany	15715.Oaf						
1600-1700			Voice of Russia	4940.Oas	4965.Oas	4975.Oas	6005.Ome	7260.Ona	7305.Oas	
				9830.Ome	15735.Oam					
1600-1700			WYFR Okeechobee FL	11830.Ona	13855.Oaf	15525.Oas	17760.Ona	18980.Oeu	21455.Oeu	
				21525.Oaf						
1600-1725			Overcomer Ministries	6110.Oeu						
1600-1800			Christian Voice, Austr.	7170.Oas	13660.Oas					
1600-1800			Radio Taipei Int'l	11550.Oas						
1600-1800			WHRI Noblesville IN	13760.Ova	15105.Oam					
1600-1800			WSHB Cypress Creek SC	18910.Oaf						
1600-2200			WEWN Birmingham AL	13615.Ona	15745.Oeu					
1600-2300			WHRA Greenbush ME	17650.Oaf						
1600-2300			WRND New Orleans LA	7394.3am	15420.6al					
1600-2305			Radio Nigeria, Lagos	3326.Odo	4990.Odo					
1600-2400			KTBN Salt Lake City UT	15590.Ona						
1615-1630	s	a	BBC World Service	11860.Oaf	15420.Oaf	21490.Oaf				
1630-1700			AWR Africa, UAE	9890.Oeu						
1630-1700			BBC World Service	3915.Oas	5975.Oas	6190.Oaf	6195.Oas	7160.Oas	9410.Oeu	
				9740.Oas	11940.Oaf	12095.Oeu	15190.Oam	15310.Oas	15400.Oaf	
				15420.Oaf	15565.Oeu	17700.Oas	17830.Oaf	21470.Oaf	21660.Oaf	
1630-1700	s	a	BBC World Service	11860.Oaf	21490.Oaf					
1630-1700			Georgian Radio, Tbilisi	6180.Ome						
1630-1700			KSDA Guam	11980.Oas						
1630-1700			ORF Vienna	17865.Ona						
1630-1700			VOA	6035.Oaf	6110.Oas	7125.Oas	9575.Oas	9645.Oas	9760.Oas	
				11950.Ome	13710.Oaf	13735.Ome	15120.Ome	15205.Oas	15240.Oaf	
				15395.Oas	15485.Oaf	17715.Oaf	17895.Oaf			
1630-1830			Radio Cairo	15255.Oaf						
1630-2200			Zimbabwe BC Corp.	4828.Odo	6045.Odo					
1645-1700			Radio Tajikistan	7245.O						
1645-1800			Deutsche Welle	6140.Oeu						
1650-1750	mtwhf		Radio New Zealand Int'l	11725.Opa						
1700-1715			Radio Galkayo, Somalia	6985.Ova						
1700-1727			Radio Prague Int'l	5930.Oeu	17485.Oaf					
1700-1727			Voice of Vietnam	12070.Oeu						
1700-1730			Channel Africa, S. Africa	17870.Oaf						
1700-1730			Kol Israel	11605.Ova	17545.Ova					
1700-1730			Radio France Int'l	11615.Oaf	15605.Oaf	17605.Oaf				
1700-1730			Radio Jordan	11690.Ona	17680.Oal					
1700-1730			VOA	6040.Oaf	6110.Oas	7125.Oas	9645.Oas	9760.Oas	13710.Oaf	
				15205.Oas	15240.Oaf	15395.Oas	15445.Oaf	17895.Oaf		
1700-1730	mtwhf		VOA	5990.Oas	6045.Oas	9525.Oas	9670.Oas	9795.Oas	11955.Oas	
				12005.Oas	15255.Oas					
1700-1745			BBC World Service	3255.Oaf	3915.Oas	5975.Oas	6005.Oaf	6190.Oaf	6195.Oeu	
				7160.Oas	9410.Oeu	9510.Oas	9630.Oaf	9740.Oas	15400.Oaf	
				15420.Oaf	15565.Oas	17830.Oaf	21470.Oaf			
1700-1756			China Radio Int'l	7150.Oaf	9570.Oaf	9670.Ova	9695.Oaf	11910.Oaf		
1700-1756			Radio Romania Int'l	9625.Oeu	11830.Oeu	11940.Oeu	15245.Oeu			
1700-1800			R. Omdurman, Sudan	7200.Odo	9200.Odo	9505.Odo				
1700-1800			Radio Australia	5995.Ova	6080.Opa	9475.Oas	9580.Ova	11880.Ova		
1700-1800			Radio Japan	9505.Ona	11970.Oeu	15355.Oaf				
1700-1800		a	Voice of Greece	9420.Oeu	11645.Oeu	15630.Oeu	17705.Ona			
1700-1800			Voice of Russia	7260.Ona	9470.Ome	9830.Ome	15735.Oam			
1700-1800	smtw	fa	WBCQ Monticello ME	17495.Ona						
1700-1800			World Beacon	9575.Oeu						
1700-1800			WYFR Okeechobee FL	13855.Oaf	18980.Oeu	21455.Oeu				
1700-1900			United Methodist Radio	11735.Oaf	13820.Oaf					
1700-1900			Voice of Hope, Germany	9815.Oeu						
1700-2000			SLBS, Sierra Leone	3316.Odo						

1900-1930		Deutsche Welle	3995.0eu 17810.0af	11765.0af	11810.0af	13780.0af	15275.0af	15390.0af
1900-1956		China Radio Int'l	9440.0af	9585.0af	13790.0af			
1900-1956		Voice of Korea	7505.0eu	11334.8eu				
1900-2000		BBC World Service	3255.0af 9740.0me	6005.0af 12095.0af	6190.0af 15400.0af	6195.0eu 17830.0af	9410.0eu	9630.0af
1900-2000		KJES Vado NM	15385.0au					
1900-2000		Radio Australia	6080.0as	7240.0pa	9500.0as	9580.0va	11880.0va	
1900-2000		Radio Korea	5975.0om	7275.0eu				
1900-2000		Radio Thailand	9535.0eu	9655.0eu	11905.0eu			
1900-2000		a Sri Lanka B'casting Corp.	6010.0eu					
1900-2000		VOA	4950.0af 11870.0pa 17895.0af	6035.0af 11975.0af	7415.0af 13710.0af	9525.0pa 15180.0pa	9690.0as 15240.0af	9760.0as 15580.0af
1900-2000	mtwhf	VOA	5965.0me 15410.0as		9840.0as	11720.0as	11970.0as	13725.0af 15205.0me
1900-2000		VOA Special English	9785.0me	12015.0me	13640.0me			
1900-2000		a Voice of Biafra Int'l	12125.0af					
1900-2000		Voice of Russia	5940.0eu 9775.0eu	5950.0eu 9830.0af	6175.0eu 11510.0af	7335.0af	7340.0eu	7360.0eu
1900-2000		WYFR Okeechobee FL	13855.0af	15565.0eu	18980.0eu			
1900-2015		TWR Swaziland	3200.0af					
1900-2100		SIBC Solomon Islands	5019.9do					
1900-2100		World Beacon	3230.0af	17850.0af				
1900-2200		R. Central, Papua NG	3290.0ir					
1900-2300		Voice of Nigeria	7255.0af	11770.0af	15120.0af			
1900-2400		Radio Vanuatu	3945.0do	4960.0do	7260.0do			
1904-1930	s	Voice of Greece	5865.0eu	7475.0eu	17705.0na			
1915-1930		BBC English Teaching	15105.0af	17885.0af				
1930-1945		Deutsche Welle	11765.0af 11760.0eu	11810.0af	13780.0af	15275.0af	15390.0af	17810.0af
1930-2000		Georgian Radio, Tbilisi	11760.0eu					
1930-2000		ORF Vienna	5945.0eu	6155.0eu				
1930-2000		Radio Slovakia Int'l	5915.0eu	6055.0eu	7345.0eu			
1930-2000		Radio Yugoslavia	6100.0eu					
1930-2000		Swiss Radio Int'l	9605.0af	13660.0af	15485.0af	17660.0af		
1930-2000		Voice of Greece	12110.0eu					
1930-2000	s	Voice of Greece	5865.0eu	7475.0eu	17705.0na			
1930-2000		Voice of Turkey	7125.0eu					
1930-2030		VOIRI Teheran	6110.0eu	9890.0eu	11695.0af	15140.0af		
1930-2230		Nat'l BC, Papua NG	4890.0do					
1930-2230		R. E. Highlands, Papua NG	3395.0do					
1930-2230		R. Milne Bay, Papua NG	3365.0do					
1930-2230		R. S. Highlands, Papua NG	3275.0do					
1935-1955		RAI, Rome	5970.0eu	9760.0eu				
1945-2000		Radio Tirana, Albania	7210.0eu	9510.0eu				
2000-2030		Kol Israel	6280.0va	9435.0va	15640.0af	15650.0va		
2000-2030		Radio Budapest	6025.0eu	7130.0eu				
2000-2030		Swiss Radio Int'l	9605.0af	13660.0af	15485.0af	17660.0af		
2000-2030		Vatican Radio	9660.0af	11625.0af	13765.0af			
2000-2030		VOA	4950.0af 11855.0af 17895.0af	6035.0af 11975.0af	6095.0as 13710.0af	7415.0af 15240.0af	9690.0as 15580.0af	9760.0as 17885.0af
2000-2030		Voice of Mongolia	7380.0as	12015.0as				
2000-2030		Voice of Turkey	7125.0eu					
2000-2045		Deutsche Welle	6180.0eu					
2000-2056		China Radio Int'l	5965.0eu	9440.0af	9840.0eu	13640.0af	15125.0af	
2000-2100		AWR Africa, Meyerton	15295.0af					
2000-2100		BBC World Service	3255.0af 11835.0af	6005.0af 12095.0af	6190.0af 15400.0af	6195.0eu 17830.0af	9410.0eu	9630.0af
2000-2100		KJES Vado NM	15385.0na					
2000-2100		Radio Algiers	11715.0eu	15160.0eu				
2000-2100		Radio Australia	9500.0as	9580.0va	11880.0va			
2000-2100		Radio Bulgaria	5800.0eu	7500.0eu				
2000-2100		Radio Damascus	12085.0eu	13610.0eu				
2000-2100	mtwhf	Radio Exterior de Espana	9595.0af	9680.0eu				
2000-2100	smtwhf	a V. of the Mediterranean	7440.0eu					
2000-2100		Voice of Indonesia	9525.0eu	11785.0eu	15150.0eu			
2000-2100		Voice of Russia	5940.0eu	5950.0eu	6175.0eu	7340.0eu	9775.0eu	
2000-2100		WYFR Okeechobee FL	7580.0eu	13820.0af	13855.0af	15565.0af	17575.0sa	
2000-2200		HCBJ Quito Ecuador	11890.0eu					
2000-2200		WSHB Cypress Creek SC	11550.0eu	15665.0af				
2000-2400		WHRI Noblesville IN	5745.0va	9495.0am				
2025-2045		RAI, Rome	7220.0af	9710.0af	11880.0af			
2030-2045		Radio Thailand	9535.0eu	9655.0eu	11905.0eu			
2030-2045		Voice of Africa, Libya	15435.0lr	17725.0lr				
2030-2057		Voice of Vietnam	7145.0eu	9730.0eu				
2030-2059		R. Vlaanderen Int'l	9925.0eu					
2030-2100		AWR Europe, Austria	5955.0eu					
2030-2100		Christian Voice, Austr.	7170.0as	9795.0as	11935.0pa			
2030-2100	t h	Radio Minsk, Belarus	7105.0eu	7210.0eu				
2030-2100		Radio Sweden	6065.0eu	9445.0au				
2030-2100		Radio Tashkent	5025.0eu	11905.0eu				
2030-2100		VOA	6035.0af 13710.0af	6095.0as 15240.0af	7415.0af 15580.0af	9690.0as 17885.0af	9760.0as 17895.0af	11975.0af
2030-2100	s	a VOA	4950.0af					
2030-2115		Radio Cairo	15375.0af					

2030-2125		Radio Polonia, Warsaw	5995.0eu	7165.0eu	7290.0eu	9540.0eu			
2030-2130		Radio Havana Cuba	13660.0uf	13750.0eu					
2040-2100	mtwhfa	Voice of Armenia, Yerevan	4810.0eu	9960.0eu					
2045-2230		All India Radio, Delhi	7150.0au	7410.0eu	9650.0eu	9910.0au	11620.0au	11715.0au	
2050-2110		Vatican Radio	4005.0eu	5885.0eu	7250.0eu	9645.0eu			
2100-2115		BBC World Service	3255.0af	3915.0as	5975.0as	6005.0af	6110.0as		
			6190.0af	6195.0va	9410.0eu	11835.0af	12095.0sa	15400.0af	
2100-2127		Radio Prague Int'l	5930.0eu	9430.0as					
2100-2130		China Radio Int'l	5965.0eu	9840.0eu	13640.0af	15125.0af			
2100-2130		Christian Voice, Austr.	7170.0as	11935.0as					
2100-2130		Radio Australia	7240.0pa	9500.0as	9580.0va	9660.0pa	11880.0va	12080.0pa	
			17715.0va	21740.0va					
2100-2145		Deutsche Welle	9615.0af	9690.0af	9765.0as	15275.0as	15410.0va	17560.0as	
			17835.0af						
2100-2145		Radio Iraq Int'l	7157.0lr	9887.0lr	11787.0lr				
2100-2145		WYFR Okeechobee FL	7580.0eu	13820.0af	15565.0af	17575.0sa	21525.0af		
2100-2156		Radio Romania Int'l	5955.0eu	7105.0eu	7215.0eu	9690.0eu			
2100-2156		Voice of Korea	7505.0eu	11335.0eu					
2100-2159		Radio Canada Int'l	5995.0va	7235.0va	7425.0va	9805.0va	11600.0va	13650.0va	
2100-2200		AWR Europe, Austria	9660.0af						
2100-2200		R. Nacional de Angola	3374.9va	4950.0va	7245.0va				
2100-2200		Radio Damascus	12085.0na	13610.0na					
2100-2200		Radio Japan	6035.0pa	6115.0eu	6180.0eu	11830.0eu	11855.0af	17825.0na	
			17860.0pa	21670.0pa					
2100-2200		Radio Korea	15575.0eu						
2100-2200		VOA	6035.0af	6040.0me	6095.0as	6160.0as	7140.0me	7415.0af	
			9530.0me	9595.0as	9670.0as	9760.0me	11870.0pa	11975.0af	
			13710.0af	15185.0pa	15240.0af	15580.0af	17735.0as	17820.0as	
			17895.0af						
2100-2200		Voice of Russia	5940.0eu	5950.0eu	6175.0eu	7300.0eu	7340.0eu		
2100-2200		WBCQ Monticello ME	7415.0na	17495.0na					
2100-2200		World Beacon	3230.0af	17850.0af					
2100-2230		SIBC Solomon Islands	5019.9do	9545.0do					
2100-2400		WRMI Miami FL	15725.0na						
2115-2130	mtwhf	BBC Caribbean Report	5975.0am	11675.0am	15190.0am				
2115-2130		BBC World Service	3255.0af	3915.0as	5965.0as	6005.0af	6110.0as	6190.0af	
			6195.0va	9410.0eu	11835.0af	12095.0sa	15400.0af		
2115-2130	s	BBC World Service	5975.0am						
2115-2200		Radio Cairo	9990.0eu	15375.0af					
2118-2218	s	Voice of Greece	9420.0pa	15650.0pa					
2130-2145	t f	BBC Calling Falklands	11680.0sa						
2130-2156		China Radio Int'l	5965.0eu	9840.0eu					
2130-2200		BBC World Service	3255.0af	3915.0as	5965.0as	5975.0am	6005.0af	6110.0as	6190.0af
			6190.0af	6195.0va	9410.0eu	11835.0af	12095.0sa	15400.0af	
2130-2200		Christian Voice, Austr.	7170.0as						
2130-2200		KSDA Guam	11960.0as	11980.0as					
2130-2200		Radio Australia	7240.0pa	9660.0pa	11880.0va	12080.0pa	17715.0va	21740.0va	
2130-2200	t h	Radio Minsk, Belarus	7105.0eu	7210.0eu					
2130-2200		Radio Tashkent	5025.0eu	11905.0eu					
2130-2200		Voice of Turkey	9525.0as						
2130-2200	f	Wales Radio Int'l	6010.0eu						
2130-2230		VOIRI Teheran	9780.0au	11740.0au					
2130-2400		ABC Alice Springs	2310.0lr	4835.0do					
2130-2400		ABC Katherine	5025.0do						
2130-2400		ABC Tennant Creek	4910.0do						
2145-2200		WYFR Okeechobee FL	7580.0eu	15565.0af					
2200-2230		Radio Budapest	6025.0eu						
2200-2230		Radio Canada Int'l	6045.0va	9770.0va	9805.0va	11600.0va			
2200-2230		Radio Korea	3955.0eu						
2200-2230		Radio Mexico Int'l	9705.0am	11770.0am					
2200-2230		Radio Yugoslavia	6100.0eu						
2200-2230		VOA	6160.0as	7215.0as	7290.0me	9530.0me	9770.0as	9880.0as	
			9890.0as	11760.0as	15185.0as	15290.0as	15305.0as	17735.0as	
			17820.0as						
2200-2230	mtwhf	VOA	6035.0af	7415.0af	11655.0af	11975.0af	13710.0af		
2200-2230		Voice of Turkey	9525.0as						
2200-2245		Radio Cairo	9990.0eu						
2200-2245		WYFR Okeechobee FL	7580.0eu	11740.0na	15565.0af				
2200-2256		China Radio Int'l	7170.0eu						
2200-2300		BBC World Service	5965.0as	5975.0am	6195.0va	7105.0as	9660.0as	11685.0as	
			11835.0af	12080.0pa	12095.0sa	15400.0af			
2200-2300		Radio Australia	13620.0va	15240.0as	17715.0va	17795.0va	21740.0va		
2200-2300	s	Radio Bulgaria	5800.0eu	7500.0eu					
2200-2300		Radio Exterior de Espana	9595.0af	9680.0eu					
2200-2300		Radio Taipei Int'l	5810.0eu	9355.0eu					
2200-2300		Radio Ukraine Int'l	5905.0eu	7240.0eu	9560.0eu				
2200-2330		Christian Voice, Austr.	13620.0as	17850.0as					
2200-2400		Caribbean Beacon	6090.0am						
2200-2400		Voice of Guyana	3291.4do	5949.4do					
2200-2400		WBCQ Monticello ME	7415.0na	9335.0na					
2200-2400		WEWN Birmingham AL	9975.0na	17595.0af					
2200-2400		WSHB Cypress Creek SC	7510.0eu	15285.0sa					
2200-2400		WWCR Nashville TN	3215.0na	5070.0na	7520.0na	13845.0na			
2205-2230		RAI, Rome	9675.0as	11900.0as					
2215-2400		Radio New Zealand Int'l	17675.0pa						
2230-2257		Radio Prague Int'l	7345.0na	9435.0af					

2230-2259		R. Vlaanderen Int'l	13700.0na						
2230-2300	smtwhf	ORF Vienna	5945.0eu	6155.0eu					
2230-2300		Radio Budapest	3975.0eu						
2230-2300		Radio Sweden	6065.0eu	9435.0eu					
2230-2300		Radio Tirana, Albania	7130.0eu	9540.0eu					
2230-2330		Radio Havana Cuba	9550.0am						
2230-2400		KWHR Naalehu HI	17510.0as						
2230-2400		Nat'l BC, Papua NG	9675.0do	11880.0ir					
2230-2400	a	SIBC Solomon Islands	9545.0do						
2230-2400	s	a SIBC Solomon Islands	5019.9do						
2230-2400		VOA	6160.0as	7215.0as	7290.0me	9530.0me	9770.0as	9880.0as	
			9890.0as	11760.0as	15185.0as	15290.0as	15305.0as	17735.0as	
			17820.0as						
			11740.0na						
2245-2300		WYFR Okeechobee FL	9705.0as	9950.0as	13605.0as				
2245-2400		All India Radio, Delhi	3915.0as	5875.0eu	5965.0as	5975.0am	6195.0va	7105.0as	
2300-2330		BBC World Service	11685.0as	11945.0as	12095.0sa	15280.0as			
2300-2330		China Radio Int'l	5990.0na	13680.0na					
2300-2330		Radio Canada Int'l	5960.0am	6040.0am	6175.0am	9590.0am	9755.0am	11865.0am	
			13730.0am						
2300-2330	mtwhf	Radio Mexico Int'l	9705.0am	11770.0am					
2300-2330		VOA Special English	6045.0as	7140.0as	9545.0as	11925.0as	15395.0as		
2300-2345		Deutsche Welle	9470.0as	9815.0as	13690.0as	21790.0as			
2300-2345		WYFR Okeechobee FL	11740.0na	15170.0sa	15400.0sa				
2300-2356		Radio Romania Int'l	7195.0eu	9510.0na	9570.0eu	11940.0na			
2300-2400	s	fa Italian Radio Relay Svc	7120.0uf	7125.0al					
2300-2400		Radio Australia	9660.0pa	12080.0pa	13620.0va	15240.0as	17715.0va	17795.0va	
			21740.0va						
2300-2400		Radio Cairo	9900.0am						
2300-2400		SBC Radio 1, Singapore	6150.0do						
2300-2400		Sri Lanka B'casting Corp.	4940.0do						
2300-2400		Voice of Turkey	9655.0va	9830.0va					
2300-2400		WHRA Greenbush ME	7580.0eu						
2300-2400		WINB Red Lion PA	12160.0am						
2300-2400		WRNO New Orleans LA	7354.4va						
2300-2400		WWFV McCaysville GA	5085.0uf	6890.0uf					
2330-2345		Voice of Africa, Libya	15435.0ir	17725.0ir					
2330-2356		China Radio Int'l	5990.0na	13680.0na					
2330-2357		Radio Prague Int'l	7345.0na	9435.0na					
2330-2357		Voice of Vietnam	9840.0as	12019.9as					
2330-2400		BBC World Service	3915.0as	5875.0eu	5965.0as	5975.0am	6035.0as	6195.0va	
			7105.0as	11685.0as	11945.0as	12095.0sa	15280.0as		
			11935.0pa	13620.0as	17850.0as				
2330-2400		Christian Voice, Austr.	11785.0as						
2330-2400		HCJB Quito Ecuador	5960.0na	6175.0na	9590.0na	9755.0na			
2330-2400		Radio Canada Int'l	6165.0na	9845.0na					
2330-2400		Radio Netherlands	9875.0na						
2330-2400		Radio Vilnius, Lithuania	9885.0sa	11660.0sa					
2330-2400		Swiss Radio Int'l	6045.0as	7130.0as	7140.0as	9545.0as	9620.0as	11805.0as	
2330-2400		VOA Special English	11925.0as	13745.0as	15205.0as	15395.0as			
24hr-		AFRTS	4278.5uf	4319.0uf	4995.0uf	5350.0uf	5765.0uf	6350.0uf	
			6458.5uf	6847.5uf	10320.0uf	10942.5uf	12579.0uf	12689.5uf	
			13254.0uf	13362.0uf	16847.5uf				
24hr-		CFRX Toronto ON	6070.0do						
24hr-		CFVP Calgary AB	6030.0do						
24hr-		CHNX Halifax NS	6130.0do						
24hr-		CKZN Saint John's NL	6160.0do						
24hr-		CKZU Vancouver BC	6160.0do						
24hr-		University Network	5029.1am	6150.0am	7375.0am	9724.9sa	11870.0am	13749.7na	
24hr-		WJCR Upton KY	7490.0am	13595.0as					
24hr-		WTJC Newport NC	9370.0na						
24hr-		ZLXA New Zealand	3935.0do						

Key:

Days:	Target Areas:	Other Notes:
s - Sunday	na - North America	va - Various
m - Monday	ca - Central America	do - Domestic
t - Tuesday	sa - South America	om - Omnidirectional
w - Wednesday	am - Americas	
h - Thursday	eu - Europe	ir - Irregular
f - Friday	af - Africa	oc - Occasional
a - Saturday	me - Middle East	al - Alternate
	as - Asia	lf - Lower Sideband
	pa - Pacific	uf - Upper Sideband

15th Annual Winter SWL Fest

Sponsored by **NASWA**

March 8-9, 2002

Best Western—The Inn at Towamencin
(formerly Holiday Inn),
Sumneytown Pike, Kulpsville, Penna.

Plan to attend your favorite forums Friday and Saturday. Enjoy meeting with your friends in the Hospitality Room. Bring radio related items for the swap meet or to donate for the Silent Auction. Check out your friends' receivers, bring one of your own for others to try!

No frills; just shortwave, longwave, mediumwave, pirates, and scanning. Once again you will enjoy the camaraderie of your hobby friends.

Please note, there is an incentive for you to pre-register, as prices are more expensive for those who wait. Registration options are also more flexible than in the past, with new one-day and student registrations. **If you wish to participate in the meals, you must register and inform us that you will be attending by Thursday morning, March 7th.** If you choose not to participate in the meals, the hotel has a restaurant, and there are other restaurants nearby.

Early Registration (rec'd by March 2, 2002)

- Full registration: **\$43**
 - Two-day Partial (no meals): **\$17**
 - One-day Partial (no meals): **\$9**
 - Full spouse/son/daughter: **\$28**
 - Banquet only spouse/son/daughter: **\$16**
 - Student (w/ valid ID, no meals): **\$5**
- Many things, like the raffle, remain the same:

Late or On-Site Registration

- Full registration: **\$50**
- Two-day Partial (no meals): **\$20**
- One-day Partial (no meals): **\$10**
- Full spouse/son/daughter: **\$35**
- Banquet only spouse/son/daughter: **\$20**
- Student (w/ valid ID, no meals): **\$5**

GRAND PRIZE To be announced

SPECIAL Register early to win a sw portable! One free entry for an early-bird registration received by February 12, 2002.

Please bring items for the Silent Auction. Proceeds are donated to charity.

Checks should be made payable to **WINTER SWL FEST**. Register directly with the hotel for your rooms by calling the Holiday Inn at (215) 368-3800. For 2001, one special rate **\$75** single or double! Tell the hotel staff you're with the **WINTER SWL FEST** to receive this special room rate. *You must make your reservation directly with the hotel to receive this rate; reservations via the Best Western 800 number or web site are not eligible for this rate.* Up to the minute info. can be found on the Winter SWL Fest Web Page at <http://www.swlfest.com/> or from <http://www.anarc.org/naswa/>.

The Best Western—The Inn at Towamencin is located at Exit 31 of the PA Turnpike Northeast Extension-Lansdale Interchange. Improved access from the south with the Blue Route (I-476)—ask for details. Limo service is available from Phila. Intl Airport directly to the hotel.

Please submit the following form with your registration amount or send for more information to:

SWL WINTERFEST
P.O. Box 4153
Clifton Park, NY 12065

NAME: _____ (SPOUSE'S NAME) _____

ADDRESS: _____

CITY: _____ E-MAIL: _____ (REQ. FOR REG. CONFIRMATION)

REGISTRATION: <input type="checkbox"/> Full (\$43) <input type="checkbox"/> Two-Day Partial (\$17) <input type="checkbox"/> One-Day Partial (\$9) <input type="checkbox"/> Spouse (\$28) <input type="checkbox"/> Banquet only (Spouse) (\$16) <input type="checkbox"/> Student (\$5)	BANQUET: <input type="checkbox"/> Roast Beef <input type="checkbox"/> Chicken RAFFLE TICKETS: <input type="checkbox"/> raffle tickets, please (\$1 ea./ 6 for \$5/ 13 for \$10)	Registration Fee Enclosed \$ ____ Raffle Tickets Fee Enclosed \$ ____ Total Check/Money Order \$ ____ <i>Registration cancellations after 2/28/2002 cannot be refunded, however we will refund raffle ticket money if you have to cancel.</i>
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All s/h charges for the following items are included unless otherwise noted. Please note the new proprietor and address.

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Shortwave Listening Guidebook by Harry Helms. Covers equipment, antennas, propagation, station profiles, utilities, clandestines, QSL'ing, etc. 315 pages.	\$19.95 +2.00 s/h US/CA +3.00 s/h world
Limited Space Antenna Solutions by Frank P. Hughes. Covers the random wire, dipole, vertical, outdoor, loft and indoor antennas, antenna tuners, and grounds.	\$13.00 +1.00 s/h US/CA +2.00 s/h world
Inside Your Shortwave Radio by Ted Benson. Companion to your receiver's instruction manual, filling in what your manual leaves unclear.	\$13.95 +2.00 s/h US/CA +2.50 s/h world
Underground Frequency Guide (New to Company Store!) by Donald W. Schimmel. An in-depth look at illegal radio communications; pirate, spies and so much more! Lists hundreds of frequencies & diplomatic radio systems worldwide. A book no pirate or clanny enthusiast should be without!	\$11.00 +2.00 s/h all
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