

# The **NASA** Journal

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JUNE 2006

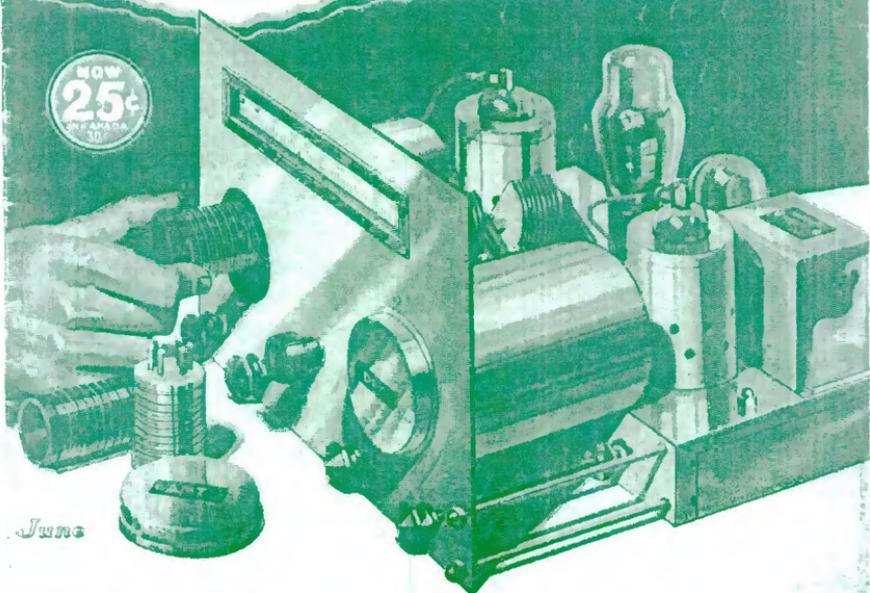
THE RADIO EXPERIMENTER'S MAGAZINE

## SHORT WAVE CRAFT

Edited by  
HUGO GEINSBACK

*Best Short Wave  
Station List  
of the World*  
When to hear  
the  
Foreign Stations  
*ALL IN THIS  
ISSUE*

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**25¢**  
PREVIOUS  
30¢



June

The 4-Tube "MASTER COMPOSITE" Set YOU Voted For - See Page 80

North American Shortwave Association — America's Shortwave Broadcast Club

# Quality Equipment From Universal Radio

## RFspace SDR-14

The RFspace SDR-14 is a 14-bit software defined radio receiver, offering a broad range of spectrum analyzer and demodulation capabilities. The hardware samples the whole 0-30 MHz band using a sampling rate of 66.667 MHz. The digital data from the ADC is processed into I and Q format using a direct digital converter (DDC) and is then sent to the PC for processing using a USB 1.1 interface. All of the demod and spectral functions are done on the PC side. Supported formats include USB, LSB, AM, FM, WFM, CW, CWR and DSB. Filter bandwidths are continuously adjustable. DRM is now supported via special demod mode using third-party software (DREAM) by routing the demod audio through the mixer control. The SDR-14 supports high resolution spectral captures using up to 262144 point FFTs. The maximum spectral display width is 30 MHz simultaneously. One of the most exciting features of the SDR-14 is the ability to record band segments of any band to hard drive in real time. This is done at a rate of 52GB/day for a 150 kHz wide segment. The stored file contains everything that happened in that segment of the band for the duration of the recording. The fidelity of the file is superb with over 96dB of dynamic range. The recording can be played back at any time with full tunability and choice of modes. The recording can also be analyzed for hidden signals and carriers. The SDR-14 comes with AC power supply, USB cable and computer CD. Visit the Universal website to view screen shots, spectrograms and complete specifications.



Order #0014 \$1099.95

## ICOM PCR1500

The Icom PCR1500 wideband computer receiver connects externally to your PC via a USB cable. This provides compatibility with many computer models, even laptops. Incredible coverage is yours with reception from 10 kHz to 3300 MHz (less cellular gaps). Modes of reception include AM, FM-Wide, FM-Narrow, SSB and CW. (CW and SSB up to 1300 MHz only). The PCR1500 comes with an AC adapter, whip antenna, USB cable and Windows 98SE/ME/2000/XP™ CD.



Order #1500 \$579.95

The Icom R1500 is similar to the above, but also includes a controller head for additional operation independent of a PC.

Order #1501 \$699.95

## IC-7000

The ICOM 7000 represents the next generation in all-mode HF/VHF/UHF transceivers. DSP at the IF level is the cornerstone of this impressive new multi-bander. In fact, the 7000 employs two DSP chips to work its magic. Imagine having 41 bandwidths available - standard! You can even select sharp or soft filter shape. And variable twin PBT allows you to either narrow the IF passband, or shift the entire passband to eliminate QRM. The IC-7000 has an incredibly versatile and capable **shortwave receiver**. It would be difficult to find a more impressive receiver in such a small package. Yes, there is tremendous power "under the hood", but the radio is also downright gorgeous. The 2.5 inch (diagonal) color TFT presents numbers and indicators in bright, concentrated colors for easy recognition. You can choose from three background colors and two font styles. Not only does this display provide radio status, but it also supports a two-mode band scope. In the Center Mode the scope is centered on the receiving frequency. In the Fixed Mode the scope sweeps a fixed range. The Digital Voice Recorder (DVR) function has a front panel REC control that allows you to record incoming signals for up to 25 minutes. Other features include: a detachable control head (requires optional separation cable), 503 memories, S/PWR/SWR meter, RIT, Preamp, RTTY Demodulator, Attenuator, Bass & Treble, adjustable SSB bandwidth, DTMF memory, VOX, full break-in and adjustable CW pitch. Requires 12 VDC at 22 amps for transmit but only 2 amps for receiving.



Order #0700 \$1499.99

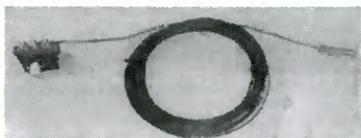
## GRUNDIG YB-550 PE

The incredibly attractive Grundig YB-550PE combines form and function to offer an excellent shortwave experience. Six tuning methods are available to make tuning the bands easy and quick. Enjoy AM, FM, FM Stereo (to earphone jack) and full coverage shortwave from 1710-30000 kHz. Direct keypad frequency entry is possible or Up-Down tuning is available to surf the bands. A bar-graph tuning meter puts you exactly on frequency. 100 memories store your favorite stations. The built in clock can wake you to the radio audio or a buzzer. The large backlit LCD shows time and frequency. Comes with a carry case. 3.5 x 5.75 x 1.375 inches 10 oz. (The PPI0440 AC adapter is optional order #2419 \$14.95)



YB-550 Order #0550 \$79.95

## PAR ELECTRONICS EF-SWL



The Par EF-SWL is an end-fed short wave antenna optimally designed for 1-30 MHz reception. The radiator is 45 feet of genuine #14 gauge black polyethylene coated Flex-Weave wire (168 strands of #36 gauge woven copper). This material is very strong yet can easily be coiled like a rope for portable use. The UV resistant matchbox houses a wideband 9:1 transformer wound on a binocular core. Unlike other transformers, external stainless studs on the matchbox allow the user to configure the primary and secondary grounds for best noise reduction at their particular location. Output is via a silver/teflon SO-239 connector.

Par EF-SWL Order #2205 \$57.95

## PAR ELECTRONICS BCST-HPF & BCST-LPF

The Par BCST-HPF is designed to help shortwave listeners cope with interference from AM stations. This 7 pole elliptic high pass filter passes 1.8 to 200 MHz and notches out 0-1.7 MHz. The housing has SO-239 jacks for input and output and also has a toggle type bypass switch. Made U.S.A.



Order #4426 \$58.95

The Par BCST-LPF is designed to help long wave DXers cope with interference from nearby AM stations above 540 kHz. Stop band is 540 kHz to 300 MHz. The housing has SO-239 jacks for input and output and has a bypass switch.

BCST-LPF Order #1143 \$58.95



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Guaranteed lowest prices on the web? Not always. But we **DO** guarantee that you will find our website the most informative. Please stop by for a look. We offer a wide selection of new and used shortwave equipment, antennas and books.

U.S.A. flat-rate shipping: Under \$50 = \$4.95,  
\$50-\$100 = \$6.95, \$100-\$500 = \$9.95, \$500-\$1000 = \$14.95.  
Except Alaska, Hawaii and Puerto Rico.

I attended the annual DRM/National Association of Shortwave Broadcasters (NASB) two day meeting in Silver Spring, Maryland in May which was hosted by Adventist World Radio. The joint meetings were attended by broadcasters, transmission providers, transmitter and antenna manufacturers, regulatory industry, receiver manufacturers, radio amateurs, and shortwave listeners. Although there will be a full report in the *Shortwave Center*, it is worth noting that **Adil Mina** of Continental Electronics showed a Sangean receiver that came off the production line just four weeks prior to the meeting. Throughout the meeting, **Kim Elliott** was demonstrating available DRM receiving technology. It is marketed under the Roberts name. The first production run was 150 units with another production run about to begin. The price was 299 Euros. The next batch of \$200.00 or less is expected to be available by August. Adil expects that in three years or less DRM receivers will be \$50.00 or less mainly because of the strong interest the Chinese have in manufacturing them. I anticipate either Adil or a member of his team to be available at the Winter SWL Festival in Kulpville next March to bring us up-to-date on DRM progress both on the production end and receiving end. **Don Messer** who is Chairman of the DRM Consortium Technical Committee talked about the introduction of DRM in the Americas and that within 2 years DRM broadcasts will be available either commercially or as public broadcasting or both with people using affordable receivers. The 26 MHz with line of sight coverage seems to be the model that is gaining the most traction and could be ready for deployment within two years provided the FCC makes some rule changes. Things seem to be picking up steam in the DRM shortwave world with successful 26 MHz testing and DRM capable portable receivers.

Congratulations to **Anker Petersen** of Denmark who finished in first place in the 18<sup>th</sup> International DX Contest "The Grand Tour with Cancer and Capricorn 2006." **Rolands Strautmalis** of Latvia and **Patrick Robic** of Austria were the second and third place contestants. Seventeen DXers from fourteen different countries worldwide entered this year's event.

**Sean Gilbert**, International Editor of the *World Radio TV Handbook* (WRTH), announced that the WRTH has released a summer schedules file that is now available for free download at the WRTH web site, <http://www.wrth.com>. The file is a PDF document and you will require the free Adobe Acrobat Reader 5 or above to read it. The file contains Summer 06 broadcasting schedules from all International and selected clandestine/target broadcasters. Also included are 'By Frequency' LW, MW and SW listings of the stations in the file plus a new feature for the summer web file: broadcasts in English, French, German, Portuguese and Spanish. The file contains 113 pages and the page layout is the same as WRTH and is approximately 450k.

The Association of Italian Radio Listeners (A.I.R.) invites all worldwide radio listeners to participate in the "United Europe" award. The award simply requires one QSL confirmation from a European country broadcast radio station in any language and date. There are four categories for this interesting "diploma" award: over 40 countries confirmed (plus honor role); over 30 countries confirmed, over 20 countries confirmed and the fourth category is over 10 countries confirmed. All requests for diplomas should be sent to AIR, Associazione Italiana Radioascolta, C.P. 1338, 10100 Torino AD, Italy along with 4 International Reply Coupons or 2 Euros.

Don't forget to order your copy of *The Domestic Broadcasting Survey 8 (DBS-8)*, edited by DSWCI Chairman **Anker Petersen**, and published by the Danish Shortwave Club International (DSWCI). The DBS-8 covers all active stations in the tropical bands, 2300 to 5700 kHz. Also, it covers domestic stations on the international shortwave bands above 5700 kHz broadcasting to a domestic audience. All active clandestine shortwave stations are listed with schedules and identification information. The latest survey is based upon many official sources, DX bulletins and the club's international band of monitors. All buyers of the DBS-8 will get a username and password to monthly updates on the tropical bands published as the *Tropical Band Monitor* available on the club's website ([www.dswci.org](http://www.dswci.org)). The 40 page A-4 sized DBS-8 is available by e-mail in PDF format. A limited number of printed copies are also available. The e-mail edition costs US\$7.00, □5,00 or 5 International Reply Coupons (IRCs). The limited printed edition costs US\$12.00, □10,00 or 10 IRCs. Order direct from the club treasurer at DSWCI, c/o Brent Nielsen, Egekrogen 14, DK 3500 Vaerloese, Denmark. Historically, this has been one of the best monitoring products available to shortwave listeners/DXers. There is a review available in this issue of *The Journal* on the current edition.

Summer is around the corner in North America but the DX should be there provided you are up to date with news and information. If you have not signed up for the club's electronic *Flashsheet* service, you are missing out on timely news and information that will enhance your shortwave listening plea-

sure. It is now time for you to get on the distribution list for the club's electronic *Flashsheet* to stay up-to-date. The changing conditions will bring different DX and new listening targets. The club's electronic *Flashsheet* helps members stay on top of the action with breaking shortwave news and information. If you are a current member of the club and want to receive the electronic *Flashsheet* just drop **Rich D'Angelo** ([rdangelo3@aol.com](mailto:rdangelo3@aol.com)) a note with your e-mail address, location and membership expiration date from your mailing label. You can participate by sending your latest logs to the electronic *Flashsheet* edited by **Ray Bauernhuber**, [DXRADIO@webtv.net](mailto:DXRADIO@webtv.net). Each week the electronic *Flashsheet* brings a lot of exciting, late breaking DX news and information to our members. The electronic newsletter is an excellent supplement to the monthly *Journal* for the timely dissemination of DX loggings and breaking news. This is a service that is only available to our members. Deadlines are posted in the *NASWA Flashsheet* each week. Let's keep Ray busy!

Please remember to direct all communications about subscriptions, bulletin delivery issues, *Father's Day* present ideas, the use of PayPal as a payment method, etc. to Bill Oliver at the club's Levittown address or to his electronic address, [weoliver@comcast.net](mailto:weoliver@comcast.net). The regular postal address is the familiar 45 Wildflower Road, Levittown, PA 19057. Inquiries sent to Wyomissing only slow down the process. Thanks!

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

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## Contribute!

Send your loggings and QSL information off to our Distributing Editor, **Bob Montgomery** (Address: P O Box 1458, Levittown, PA 19058). He will forward them to the appropriate editor. Remember, Bob also distributes QSL report information and totals for the **Scoreboard** column. He can also be reached through the Internet at: [RMonty23@netzero.net](mailto:RMonty23@netzero.net).

**NASWA**

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

## Calendar Of Events

- Jun 16 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.
- Jun 16 Meeting. Boston Area NASWA Chapter.** The Boston Area DXers have found a new location for meetings. Inquiries about the BADXers may be sent to Paul Graveline at 978-470-1971 or Internet: ctcreditor@aol.com. The URL for the BADX guys is <http://www.naswa.net/badx/>
- Jul 8 Meeting. The Cincinnati/Dayton Monitoring Exchange (MONIX)** meets at the Lebanon Citizens' National Bank (LCNB), 425 West Central Avenue (Ohio 73), Springboro, Ohio at 7:00 PM. For more information contact Mark Meece at 937-743-8089 or e-mail at <antennapig@siscom.net>. For additional information about MONIX, check out their web site at <<http://www.siscom.net/~mmeece/monix.html>>
- Jul 28–30, 2006 Convention.** The DX Clubs of Mexico holding its 12<sup>th</sup> National DX Meeting, "Ascension 2006" 28–30 July 2006 in the city of Ascension in the state of Chihuahua in Mexico. For more information you can go to the WRMI website ([www.wrmi.net](http://www.wrmi.net)) and click on "Mexican National DX Meeting." Jeff White will be there representing the National Association of Shortwave Broadcasters.
- Jul 29 Meeting. Reading (England) International Radio Group** meetings will be held in Meeting Room 3, Reading International Solidarity Centre, 35-39 London Street, Reading from 2.30 p.m. to 5 p.m. Further information is available from Mike Barraclough mikewb@dircon.co.uk or phone 01462 643899.
- Aug 19, 2006 2006 Madison-Milwaukee Radio Get-together. The 13<sup>th</sup> Annual Madison-Milwaukee Get-together for DXers and Radio Enthusiasts** will take place in Milwaukee, WI on Saturday August 19, 2006, with Tim Noonan hosting. Please contact Tim at dxing2@aol.com for additional information Further information will appear in the *Journal* as the event draws near.
- Sep 1–3, 2006 Convention. The National Radio Club and the DX Audio Service** will hold their annual convention at the Best Western in Akron, Ohio on 1-3 September 2006. Room rates are \$68.00 per night. More information to follow.
- Oct 19–22, 2006 Convention. European DX Council (EDXC) Conference** in St. Petersburg, Russia on 19-22 October 2006 hosted by Tibor Szilagyi <Tibor.Szilagyi@ovako.com.> It will be held at the State Educational Centre of Russian Atomic Energy Agency ROSATOM in Saint Petersburg, Aerodromnaya street No. 4, 197 348. There is a hotel at the Conference Centre with rooms costing EUR 46.00 / night or \$54.00 / night, including breakfast. If you have questions please do not hesitate to contact Tibor Szilagyi.
- Mar 9–10, 2007 Convention. The 20<sup>th</sup> Annual Winter SWL Festival**, sponsored by NASWA, will be held at the *Best Western—The Inn at Towamencin*. JThe 20th Annual Winter SWL Festival, sponsored by NASWA, will be held at the Best Western - The Inn at Towamencin on 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> March 2007. Join us for this 20<sup>th</sup> anniversary extravaganza in the DX Mecca. Richard Cuff and John Figliozzi co-chair the organizational committee. Although it is early, you don't want to miss this special FEST event. There are a lot of special arrangements being made for this special occasion. See you there!
- Mar 7–8, 2008 Convention. The 21<sup>st</sup> Annual Winter SWL Festival**, sponsored by NASWA, will be held at the Best Western - The Inn at Towamencin on 7<sup>th</sup> and 8<sup>th</sup> March 2008. Richard Cuff and John Figliozzi co-chair the organizational committee. Although it is early, you don't want to miss this special FEST event. See you there!

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

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# 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.*

**Ron Howard <howard@redshift.com>, Monterey, CA**

Greetings from California.

Just bought an Etón E5 from Universal Radio, in preparation for my trip to Shanghai next month. Hope to get in a little DX'ing there. Have never had a portable before, so it seems very strange to have such a small radio, but I like it. The performance with the Kang Guru Radio English reception was outstanding. It was without an external antenna. I was very impressed! Hope that the electrical interference in a big city like Shanghai will not preclude me from hearing anything.

Ron

**Errol Urbelis, 563 Meadow Road, Kings Park, NY 11754**

Is Diego Garcia (AFRS) really that strong on 4319 kcs (USB) at 2230 UTC? "Market Place" makes almost a daily trip into Long Island. Just picked up a Grundig Satellit 800, great audio, using it daily with some good DX catches coming into New York.

I am looking for WRTH years 1960, 1963, 1964, 1965, 1967 and 1969. I have all the others dating back to 1959. Please help. I have a 1988 Passport and 1992 WRTH for the price of postage (\$4.00). I can be reached at 631-269-5913 or my QTH.

Good DX and hope to be at Kulpsville in 2007 (My 50th year of DX'ing).

73s, Errol

**Toshi Ohtake <ohtaket@yahoo.com>, Tokyo, Japan**

According to DX Partyline program of HCJB, English program from Quito, Ecuador is to be terminated at 1330UTC on May 6, Saturday. So, the last DX Partyline from Ecuador will be heard at 12:30UTC on 12005 kHz and 21455 kHz on May 6. DX Partyline is expected to be heard thereafter from HCJB Australia and two private U.S. radio stations, WWCR and WMRI. JSWC-edited Asian DX News will be heard every 4th weekend of the month. The second transmitter of HCJB Australia which was transferred from Quito is now functional and will be used from 30 April.

On the weekend of May 27, DX Information of Radio Japan's "World Interactive" will feature the DSWCI's Jubilee celebration event reported by me. DSWCI will issue the special QSL card to the correct reception report of this program, too. On the coming week end starting April 29, as announced in the last issue of this bulletin, Mr. Jerry Berg's interview will be aired. The recording was made today with pseudo-live mode. The World Interactive program is recorded at an open studio in the tourist course of NHK Broadcasting Center, so many people are passing by to watch us through a glass window. On the weekend of May 13, the interview

with Mr. Jeff White of Radio Miami International will be aired. The 50-minute "World Interactive" program will be aired 8 times on every weekend as shown below. You can also listen through Radio Japan web site at [www.nhk.or.jp/english/](http://www.nhk.or.jp/english/).

Radio Saint Helena revival is becoming realistic. Within a month after announcement in our club bulletin, JSWC member's donation has reached US \$800.00 which is to be hand-delivered to Mr. Kipp at DSWCI Jubilee celebration to which I am attending. Mr. Robert Kipp of Germany now saying: The latest Plans are now laid out to buy all necessary equipment and in July all the equipment to be shipped to St. Helena AND FIRST WEEKEND IN NOVEMBER: Revive the RSH Day shortwave broadcasts!!!! He also sent me a note: Since we have a beam and a rotator, I want to TRY to broadcast a special program (30 to 60 minutes??) to JAPAN. This would be a one-time "test" transmission. I do NOT know whether it would be better to use "Long-Path" or "SHORT-Path" from St. Helena to Japan on 11.1MHz at the start of November 2006.

This is all for this month. Wish you good DXing!! Toshi

**Charles R. Foxx, Jr. <[fxtnw2hilo@mindspring.com](mailto:fxtnw2hilo@mindspring.com)>, 15 Mapole Ave., Norfolk, VA 23504-3923**

I would like to be in touch with any SWL/DXers using a Palstar R30 or Yaesu shortwave receiver (FT890). Please contact me.

Charles

**Maryanne Kehoe <[atlsvo@webtv.net](mailto:atlsvo@webtv.net)>, Atlanta GA**

I enjoyed reading the article "Radio Broadcasting in Singapore" in the May issue. I had the chance to spend an afternoon at one of the places mentioned, Sentosa Island, and in walking around the city, the British Colonial influence is still there-evident by the architecture of buildings such as the Raffles Hotel (sometimes referred to as "the real Raffles"—a slight dig at the high-rise Raffles Plaza Hotel that is nearby.)

I was there for two weeks and can highly recommend it—a once-in-a-lifetime experience!

**Richard A. D'Angelo <[rdangelo3@aol.com](mailto:rdangelo3@aol.com)>, 2216 Burkey Drive, Wyomissing, PA 19610**

Loggings from me were down this month as other activities squeezed my time for shortwave radio. One of those activities was when I was on the road attending the annual DRM/National Association of Shortwave Broadcasters ("NASB") two day meeting in Silver Spring, Maryland. Adventist World Radio played host this year at their beautiful headquarters facility just outside Washington, DC. The meeting was recorded for distribution through the Internet as a Podcast so it maybe available for you to hear.

The joint meetings were attended by broadcasters, transmission providers, transmitter and antenna manufacturers, regulatory industry, receiver manufacturers, radio amateurs, and shortwave listeners.

The meeting was well worth attending as experts in the evolving DRM field shared their knowledge and experiences as this new technology emerges. Although receiver progress is slow in developing, it appears that the pace is picking up with many of the engineers predicting cheap portables coming in the next two years. In the meanwhile, early adopters will need to a little bit of an experimentation mindset as the technology develops.

Watch the Shortwave Center for a comprehensive report, and maybe some picture, on this two-day meeting.

Leading off the QSL information for the month is my verification of All India Radio - Jammu, which is Kashmir on the NASWA list of radio countries. This would be c/v #224. Belarus offered an e-mail reply expressing puzzlement as to why I had not heard from them before. Interesting! Radio Free Europe / Radio Liberty verified as Kavala not as the reported location of Thailand, a mild disappointment. However, since IBB is done using Kavala, this is will probably be my last "Kavala" verification. WYFR via Madagascar continues to verify the same report over and over again. Finally, Trans World Radio via the Meyerton Transmitting Station verified through the transmission provider, Sentech, with Kathy Otto of Broadcast Planning continuing to be very responsive to shortwave listener requests.

73, Rich

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## FRENDX: Twenty-Five Years Ago (June 1981)

Bill Oliver did his first *Headquarters Report* mentioning that membership under Mac Leonhardt's tenure as Executive Director the past six years rose from 850 to 2100. Terry Colgan became the new Distributing Editor replacing Gregg Bares who resigned because of college commitments. *Log Report* Section B editor Steven Wiseblood moved over to Colgan's Section D. Jerry Berg returned to *Log Report* editing by taking over Section B. John Kapinos was holding "Kap III" on June 28<sup>th</sup>. The 6<sup>th</sup> annual New England Area DXers Outing at Black Rock State Park was scheduled to be held on September 12<sup>th</sup> hosted by Sam Barto. About 100 were expected to attend. The ANARC Convention was scheduled for Thunder Bay, Ontario on July 17, 18 and 19. The first of a three part club history written by Don Jensen appeared in John Moritz's *Shortwave Center*. An interview with Carsten Wiedemann of Radio Denmark appeared. Al Sizer wrote about new Lebanese shortwave station KING. In the *QSL Report* column, Sam Barto reported the second highest total of countries reported, 129. The record was 132 countries reported. Paul Buer reported the first QSL from Malabo in ten years. In his final *Frendx Credits*, Gregg Bares reports the lowest turnout he could remember of 55 members.

## Company Store

Mike Wolfson KB8TYT • 1842 Mifflin Ave. • Ashland, OH 44805 • [mwolfson@bright.net](mailto:mwolfson@bright.net)

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Hello everyone. No big announcements this month; just a couple of reminders. Watch this space in the next couple of months, though, for information about prepublication offers for the 2007 WRTH and Passport to World Band Radio. First, don't forget we are stocking copies of the Fine Tunings' Reprint Catalogs. We're offering them in 2 flavors. A 5 page "mini" catalog for \$2 and a 20 page "premium" edition for \$5. Next, we have ball caps with the club logo for \$12 plus postage. Finally, don't forget the 1947-1958 WRTH CD compilation. These are shipped directly from Germany and are available for only \$60. All orders should be sent to me at the address listed on the masthead. All prices are in US dollars. That's it for now. Have a good one. Mike

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## On the Short Waves by Jerry Berg

<[www.ontheshortwaves.com](http://www.ontheshortwaves.com)> Update, April 1, 2006—Under "Articles, Research, etc.," "Pot Pourri": "Thrills, entertainment, education are at the command of the D-X fan . . ." says Stewart-Warner in a nice 16-page promotional booklet. There are instructions on how to tune (the lesson seems to be to "Tune Slowly"), photos of world events and some well-known stations, and a list of shortwave, longwave, mediumwave and police stations. The back cover contains advertising for their Ferrodyne Round-the-World shortwave radios. This booklet contains no dates, but it appears to be from the mid-1930s.

<[www.ontheshortwaves.com](http://www.ontheshortwaves.com)> Update, April 15, 2006—Under "Articles, Research, etc.," "Research," we have added a series of current feature articles, "Reminiscing With A Radio," written by highly regarded DXer and radio historian Dr. Adrian M. Peterson, Coordinator of International Relations for Adventist World Radio. Adrian will begin writing his "Wavescan" scripts once again at the end of April 2006, and we will again be posting them at [www.ontheshortwaves.com](http://www.ontheshortwaves.com).

<[www.ontheshortwaves.com](http://www.ontheshortwaves.com)> Update, April 23, 2006—And under "CPRV," "QSL Gallery," a trip to Africa, with some shortwave QSLs not to be seen again anytime soon: Five from the Belgian Congo--(1) a 1945 QSL issued by the BBC's New York office for reception of the BBC program relayed over Leopoldville; (2) a QSL from the Belgian Broadcasting Service during World War II when it was transmitting from Leopoldville rather than from Europe; (3) a 1947 QSL folder from OTC, the Belgian National Broadcasting Service; (4) a QSL-card from OTC when it was "the International Goodwill Station In the Heart of Africa"; and (5) a super rare, a 1956 QSL from 250 watt Radio College, Elisabethville, Congo Belge. From the Canary Islands, (6) a great looking 1968 card from Radio Atlantico; and (7) a 1947 card from Radio Club Tenerife. (8) Radio Clube de Sao Tome e Principe, 1952 (note the frequency, 17677 kc.). And (9) August Balbi's 1935 QSL from the African Broadcasting Co. Ltd., Johannesburg, forerunner of Radio RSA—at the same P.O. Box 4559 that the station would use into the early 90s!

<[www.ontheshortwaves.com](http://www.ontheshortwaves.com)> Update, May 6, 2006—Under "Articles, Research, etc.," "Pot Pourri," the Marconi World Radio Atlas. It contains information about the Canadian Marconi Company factory, shortwave—the "thrill band" of radio, propagation, how to tune, and how to obtain QSLs. This is followed by a list of shortwave stations of the world, "Empire" transmissions from Daventry, and a list of North American BCB stations. The atlas appears to have been issued in the late 1930s.

<[www.ontheshortwaves.com](http://www.ontheshortwaves.com)> Update, May 21, 2006—Under "Articles, Research, etc.," "Vintage Advertisements," look at what Allied Radio was offering the discriminating SWL in 1940. And how about those "terms": a Hallicrafters Sky Buddy for less than \$5 down and less than \$5 per month.



# Easy Listening

Richard D. Cuff • 42 North 37th Street • Allentown, PA 18104 • richard@thecuffs.us

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## Apologies for missing the May Journal

I'm sorry for missing the *Journal* deadline in May...business responsibilities and a family vacation distracted me at deadline time.

## World Cup on Shortwave

The World Cup will be a fixture of June and July this year, and many international broadcasters will air matches featuring their countries' team, primarily in their domestic language services. Some examples:

### Radio Netherlands

**Radio Netherlands's** Dutch service will air matches featuring the Dutch team Sunday, June 11<sup>th</sup> from 1200–1457 UTC on 15305 kHz targeting Surinam, and from 1230–1457 UTC on 11725 kHz targeting Florida and the Caribbean. Coverage will also air Friday, June 16<sup>th</sup> 1500–1757 UTC on 15330 kHz and 15305 kHz. June 21<sup>st</sup> coverage will include 1800–2057 UTC on 15315 kHz and 15530 kHz. Check the [RNW Media Network weblog](#) if the Netherlands team survives to the elimination round for updates on coverage plans.

### BBC World Service

Thirty reporters in 33 languages will be assigned to World Cup broadcasts. There will be special editions of *World Cup Have Your Say* at 0800 UT, as well as special coverage in *Sportsworld* on Saturdays from 1400 through 1700 UTC. Also, the Friday editions of *Outlook* will feature interviews with the players' wives, looking at life behind the glamour. Reporters Rebecca Kesby and Katie Dahlstroem are touring the World Cup venues in a camper van to speak to the fans, the critics and the beleaguered locals; their reports will air in *NewsHour*, *Europe Today*, *The World Today* and *World Briefing*.

### Radio Australia

**Radio Australia** doesn't have broadcast rights for the World Cup, but there will be daily 15-minute highlights shows featuring scores and interviews. These will air from June 8<sup>th</sup> through to July 10<sup>th</sup> at 2330 UT Fridays and Saturdays, 0145 UT Saturdays and Sundays, Sundays–Thursdays at 2240, and weekdays 0345 and 0615 UT.

## Developments at Deutsche Welle

Like the BBC World Service and Radio France International before it, **Deutsche Welle** has eliminated shortwave broadcasts targeting North America. Some DW broadcasts targeting Africa, however, can be heard reasonably well here, though at somewhat inconvenient times.

North American options other than shortwave include the following:

- 24/7 English language webcast at <http://www.dw.world.de>
- All DW English language programming is also available on-demand, though only the past 7 days' worth, or one edition, as appropriate, of each program is available.
- Podcast offerings have recently been expanded, as mentioned below.
- Sirius satellite radio subscribers can hear *Newslink Plus* every weeknight at 9 PM ET (0100 UTC Tuesdays–Saturdays) on channel 136, PRI World.

Listeners who have been tuning into DW since the 1980s probably remember the weekend *Larry's Random Selection*, a weekly look at offbeat items from the news, along with a weekly salutation from "Jessie, the cat what

am...". I always found Larry Wayne's offbeat sense of humor enjoyable. Fast forward to 2006: DW now offers a weekly newsletter, called "Germany Light", that includes "...weird and wonderful..." stories from around Germany. To be sure, it isn't radio, but if you're a fan of offbeat news, you'll want to subscribe to this weekly newsletter. See <http://www.dw-world.de/dw/article/0,2144,1410678,00.html> or simply type "Germany Light" into the search box at the main DW website.

### Dialogue

*Dialogue* is a new program in Deutsche Welle's English language service. It's a weekly half hour that combines several stories regarding religion. The stories selected focus on the interactions between religious matters and greater society, quite often focusing on conflicts between religious groups of different faiths, and conflicts between religious groups and government or cultural institutions. A typical program might cover five stories, which seems to be a good balance between breadth of coverage and individual story depth.

*Dialogue* airs at times scattered from Friday through Sundays: Fridays, 1630 and 1730; Saturdays, 0830 and 1830; Sundays, 1430; Mondays, 0230, 0430, 0530 and 0630. While DW no longer targets North America via shortwave, past listening suggests the 0630 airing on 17860 kHz (from Kigali, Rwanda) is probably the best bet, as the other hours that typically work well to North America, particularly the 2100 UTC airings on 11865 and 12205 kHz, don't include any airings of *Dialogue*.

Your other listening alternatives include the live DW webcast, for any of these airings, plus the on-demand program archive at the DW website for the current week's edition. Older archives don't appear to be kept.

### Podcasting

DW has been gradually increasing its podcasting offerings. Programs offered as

podcasts include *Inspired Minds*, *Living Planet*, *Newslink Plus*, *Sports Report*, *Inside Europe* and—get this—*Slowly Spoken News Reports*, DW's German language version of the Voice of America's *Special English* newscasts. Best place to find DW podcasts is their own website, <http://www.dw-world.de/english/podcasts>.

## International Broadcaster use of podcasting continues to expand

Why mention podcasts in a shortwave club journal? Primarily because the trend in international broadcasting is to diversify the ways people can listen to programming. Shortwave, local FM rebroadcast, satellite radio, live webcast, on-demand webcast, and podcast are all part of the "tool kit" broadcasters have at their disposal. Since the *Easy Listening* column is all about the content of programming, I feel it's worth the effort to highlight the diverse ways available to a listener to listen to well-crafted, interesting programming from perspectives that traditionally were limited to shortwave technology to reach a global audience. Hopefully you'll agree with this line of reasoning!

### CBC Canada

**Radio Canada International's** domestically focused parent, **CBC Radio**, has recently launched a series of podcasts for programs that air only on the domestic CBC Radio services, as well as some which air on RCI's North American service in the mornings. A few programs are podcast in their entirety—*Dispatches* and *Quirks and Quarks*. Others have weekly "best of" editions—*As It Happens* (20 minutes in a recent edition), *The Current* (48 minutes), *Ideas* (53 minutes), and *Definitely Not the Opera* (25 minutes). There are also weekly podcasts taken from the various regional morning and afternoon programs on local CBC stations, such as *Toronto This Week* and *Manitoba This Week*. There are also irregularly scheduled podcasts from *Sounds Like Canada* and *Words At Large*, taken

from CBC programs that feature books and interviews with authors. In my opinion, the gem among all these is a daily podcast called *Editor's Choice*. It's a sampling from various CBC Radio programming; recent editions were all spoken-word programming; *Freestyle* was the source for one recent edition. The features recently podcast in *Editor's Choice* ranged from 7 to 17 minutes in length.

You can find the CBC's podcast offerings at <http://www.cbc.ca/podcasting/>.

### Radio New Zealand

Fans of **Radio New Zealand International** (RNZI) know that much of the programming aired when RNZI is audible in the USA is rebroadcast from the domestic *National Radio* network. Radio New Zealand upgraded their Internet capabilities last year, including on-demand and live webcasts, and this Internet-delivered audio capability has recently been expanded to a podcasting trial. The *National Radio* programming included in the trial, with RNZI shortwave air times in parentheses, includes *Saturday Morning with Kim Hill*, *Mediawatch* (Saturdays 2109, 2212), *Country Life*, *Insight* (Saturdays 2104, Tuesdays 1230), *One In Five*, *Parliamentary Audio*, *Our Changing World* (Sundays 1315, Thursdays 0906), *This Way Up* (Saturdays 0010) and *Upbeat*.

Visit Radio New Zealand's podcast offerings at <http://www.radionz.co.nz/rss>.

### Radio Australia programming update

**Radio Australia** has recently launched a weekly program on Rugby, called—originally enough—*Total Rugby*. It airs Saturdays at 0110 and 0810 UT and again Sundays at 1730 UT. As Roger Broadbent puts it, "All the news from players, coaches and managers—it's everything you need to 'play' the game and be part of the scrum, with previews, highlights and perspectives on developments and changes in the sport in Asia, the Pacific, Europe and the Americas."

See the mention of the World Cup coverage up above.

### BBC World Service

#### Review—"Business Daily"

This was one of the most important new programs launched with the seasonal frequency changes and significant schedule alteration at the World Service

The program seems targeted for "Generation X'ers"—20-somethings to 30-somethings. The production sounds reasonably similar to the USA public radio program Marketplace, though slightly "hipper", typically tackling 1 or 2 issues over its 18-minute duration and then adding a 3-minute commentary from regular contributors including the Asian Wall Street Journal's Jeremy Wagstaff. Stock market updates are generally not included; you'll want to listen to *World Business Report* for them.

There is some overlap between *Business Daily* and *World Business Report*, which often will air the same 3-minute commentaries featured in *Business Daily*. The 2132 weekday edition of *Business Daily* on 15390 kHz (also webcast and on XM satellite radio) should be audible in North America. Other airtimes include 0141 (Sirius/XM), 0741 (Europe webcast), 1041 (Sirius/XM), and 1541 (Africa SW). *Business Daily* will also be available on-demand, and is updated daily as of 0741 UT.

Other programming highlights include the following:

*Making Cities Work* is a new four-part documentary series featuring the *Observer* newspaper's architecture critic, Dejan Sudjic, looking at cutting-edge solutions for transport, housing and the environment in Mexico, Russia, China and the USA. Sudjic brings together some of the world's best, most creative urban thinkers to present their vision of cities of the future. Shortwave airtimes include Mondays 1105 and 1905 UT (Europe, also live webcast), and

Mondays 1405, 1905 and Tuesdays 0505 (Americas—XM), beginning June 19<sup>th</sup>. On-demand webcast and podcast should also be available; also check the *Documentary 1* airtimes.

In *Slumming It*, Emma Josephs visits slums in India and the US to explore the day to day reality of living in a slum in this new two-part series. The United Nations says 32 per cent of the global urban population—one billion people—now live in slums and the number will double in the next 30 years unless urgent action is taken. Shortwave airtimes include Wednesdays 1105 and 1905 (Europe and live webcast) and Wednesdays 1405, 1905 and Thursdays 0505 (Americas—XM), beginning June 21<sup>st</sup>. Also available via on-demand webcast and podcast; also check the *Documentary 2* airtimes.

*World Stories* is a five-part series of documentaries produced by World Service non-English language services for airing in the BBC's English language service. The features include the following:

*Brazilian Beauty*, produced by the Portuguese service targeting Brazil, in which image-conscious Brazilian reporter Ilana Rehavia investigates what Brazilians think about their looks and body image, beginning Friday, June 2<sup>nd</sup>.

*Farming in the Ukraine*, produced by the Ukrainian Service, in which Ukrainian Service producer Marina Denysenko tells the story of Alain—a wealthy retired French businessman from Cannes—who follows his dream and puts \$2 million into a farm in the dilapidated Ukrainian village of Kravivka, beginning Friday, June 9<sup>th</sup>.

*Aliens in California*, produced by the Greek Service, visits the Search for Extra-Terrestrial Intelligence (SETI) Institute in California to explore how far we have gone to

seek out Extra Terrestrial civilizations. Irini Romboglou assesses the chance of humans finding fellow-thinkers in the cosmos, other beings that might contemplate and wonder as we do, beginning Friday, June 16<sup>th</sup>.

*Feminism and the Veil*, produced by the BBC Arabic Service, investigates whether women in Egyptian Islamic militant groups are activists, or are playing a subordinate role. Safaa Faisal explores the social background and ideology that leads a woman to become part of the Jihad struggle. She looks in depth at today's Egyptian scene where Islamic ideology has become increasingly dominant and most of women's views of feminism, individuality and achievement can only be viewed under the lens of religion. And she examines the Egyptian government's way of dealing with female fundamentalism in the context of global terrorism, beginning June 23<sup>rd</sup>.

*The Porter and the Mountain*, produced by the Hindi service, looks at ill-equipped porters in the Himalayas, who have long risked life and limb, suffering in miserable conditions, for the equivalent of the price of a pint of beer. Guides and Porters working the Himalayan trek routes often pay a shocking proportion of their pay to middlemen. Navin Singh Khadka tells the story of the dangerous and stressful working conditions and poor employment rights of the Himalayan porters, beginning June 30<sup>th</sup>.

Airtimes include Fridays, 0806, 1106 and 1906 (Europe / live webcast); Fridays 1306, 2106 (Africa); Fridays 1406, 1906, and Saturdays 0006, 0506, and Sundays 2306 (Americas / XM); also check the *Documentary 3* airtimes.

Hope June brings relaxing listening!

73 DE Richard



# Shortwave Center

John Figliozzi • 45 Algonquin Rd • Clifton Park, NY 12065 • jfiglio1@nycap.rr.com

Welcome to the first month of summer!

For June's SWC, we have two from ye olde Executive Director, a prolific and dedicated contributor if ever there was one. Rich D'Angelo reviews the 8<sup>th</sup> edition of Anker Petersen's well-regarded Domestic Broadcasting Survey (which I might add parenthetically, belongs in every DXers "bookshelf"). Then, our scribe reports on

two very important shortwave-related meetings which took place on back-to-back days in May.

Next month, we'll showcase a feature from a name which will be familiar to all NASWANS—Marlin Field.

Until July, keep that radio out of the swimming pool!

## 2006 American Shortwave Conference: DRM and NASB Meetings

### Day One

By Richard A. D'Angelo

Adventist World Radio (AWR) played host to this year's annual meeting of the US DRM Group and the National Association of Shortwave Broadcasters at their headquarters location in Silver Springs, Maryland on May 11<sup>th</sup> and May 12<sup>th</sup>. This was the third annual meeting of the DRM group with about 50 people attending. The meeting was recorded for distribution through the Internet as a Podcast. Did anyone manage to hear it?

Adrian Peterson of AWR welcomed the group and introduced Greg Scott who provided a comprehensive history of the organizations shortwave broadcasting history including a discussion about Adrian's Radio Monitors International that was broadcast from Sri Lanka many years ago.

Mike Adams of the Far East Broadcasting Association and Jeff White of Radio Miami International jointly hosted the proceedings. Mike handled speaker introductions while Jeff handled the behind the scenes activities. Mike informally polled the room noting that this meeting was being attended by broadcasters,

transmission providers, transmitter and antenna manufacturers, regulatory industry, receiver manufacturers, radio amateurs, and shortwave listeners.

### The Status of HF and DRM

Adil Mina, a Vice President at Continental Electronics with 40 years of industry experience,



Adil Mina with Roberts/Sangean DRM Portable



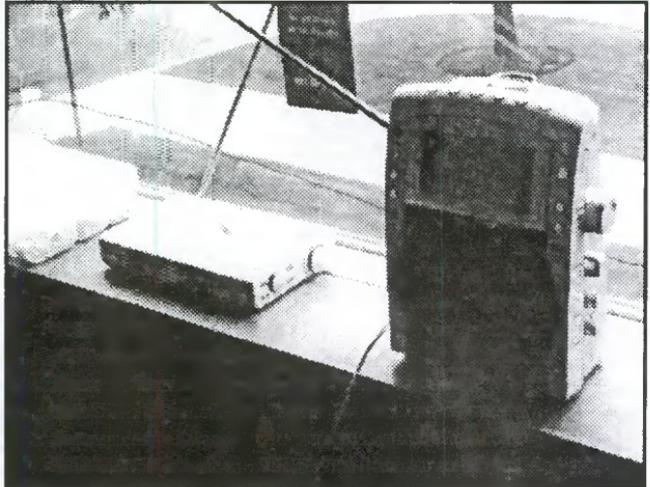
**George Jacobs listening to DRM developments**

rience, began the program. He mentioned that in the last four to five years over 90% of new shortwave transmitting equipment has been purchased by the Chinese (later he mentioned that China will be installing seven 500 kw transmitter in Cuba this year). However, recently other organizations have been doing the purchasing. A lot of recent interest has been generated by DRM and the opening of new markets. Everyone wants to know where are the cheap receivers? Adil showed a Sangean receiver that came off the production line just four weeks ago, which is marketed under the Roberts name. The first production run was 150 but Sangean is now beginning another run. The price was 299 Euros. The next batch of \$200.00 or less is expected to be available by August. He expects them to be

available before the IBC conference in the summer.

Adil expects that in three years or less DRM receivers will be \$50.00 or less mainly because of the strong interest the Chinese have in manufacturing them. He noted a 100 kw Continental transmitter and a 500 kw Harris transmitter being copied in a Chinese factory using the Company pictures from the catalog. Plus he saw a Thompson exciter for DRM being copied for future production runs. He expects China's continuing interest in high frequency for communication around the country to help drive cheaper DRM receiver manufacturing.

Adil noted that there seems to be interest in three main areas. The first is an international interest in DRM as shortwave broadcasting moves into the digital world. The second seems to be the special tests in the 26 MHz range with line of sight coverage. Finally, there is a growing interest in commercial competition in high frequency broadcasting. Adil and Dr. Don Messer both believe that the Federal Communications Commission will enable broadcasting to the USA from within the



**The first two DRM portables**

USA. They indicated that five transmitters could cover the entire country. This was later clarified as not through 26 MHz transmitters but through long haul shortwave DRM transmissions.

Adil was very firm that "Shortwave is the only media that you can broadcast from one place to another under your control. Satellite systems can be shut off." There is a strong belief that digital shortwave has a bright future because of listening quality and the potential of the big savings from the reduction of energy usage. At a recent National Association of Broadcasters (NAB) meeting in Las Vegas experiments were able to cover the entire city with a 30 watt transmitter on 26 MHz with excellent sound quality reported by listeners.

## **Introduction of DRM in Region II (the Americas)**

Don Messer, Chairman of the DRM Consortium Technical Committee, spoke about the introduction of DRM in the Americas. He firmly believes that within 2 years DRM broadcasts will be available either commercially or as public broadcasting or both with people using affordable receivers.

Don focused on some of the technical aspects of DRM broadcasting from a presentation he made in Las Vegas earlier this year. The ability to multicast 4 programs within a 10 kHz channel has been successfully tested in Mexico. DRM is very versatile with what broadcasters can do for frequency selection and target audiences.

Utilizing the underutilized shortwave broadcasting band at around

26 MHz was selected because a study of frequency usage showed this band to be under utilized. Various tests in this range have been successful leading the DRM folks to focus more of their time and energy on making 26 MHz a prime target for DRM shortwave broadcasting. The potential for 43 non-overlapping 10 kHz channels exist providing plenty of spectrum for high quality radio.

The Mexico City 26 MHz test utilized a 200 watt transmitter (the size of a vending machine) on the edge of town. Engineering analysis determined that 2-6 kw transmitters can cover all of Mexico City. Tests in Europe have provided similar results.

Shortwave listener Ullis Fleming asked about the potential to jam DRM signals. Don responded that the key was the signal to noise ratio. Signals can be jammed but the potential to overcome is there with using higher power. Nevertheless, Don wouldn't go to DRM to overcome jamming but for its programming potential. Four speech programs can be broadcast into one area on a 10 kHz channel simultaneously providing tremendous opportunities for broadcasters to reach target audiences.



**Kim Elliott at the DRM demonstration with Jeff White in background**

## Demonstrations

Ongoing demonstrations using the two Roberts DRM portable radios, without an external antenna, were conducted with mixed results. DRM is either "in" or "out"



Alan Heil discussing developments at the VOA

but not in between. These receivers are also capable of analog shortwave reception. The programs were transmitted by Radio Canada International in Sackville. There was a range of programming available for sampling throughout the day with our own Kim Elliott running the display. When DRM signals are "in" the quality is quite impressive.

## The Latest Prototype Receivers

John Sykes, Project Director Digital Radio for BBC World Service, spoke about receivers. He began with where things were 2½ years ago before getting up to the present. He addressed many technical aspects of receiver technology to determine how to maximize the signal to decode the broadcast information.

Sykes is a strong believer in radio although he acknowledged that BBC management is enamored with the Internet for program delivery. Although the ability to "time shift" listening exits with digital delivery, Sykes is convinced that radio has a long future in the marketplace. Ultimately, consumers will want radios that delivery program content without the need to understand the technology behind the scenes. He is convinced that there will be plenty of DRM radios on the market in 2006.

Currently, the BBC is carried by both Sirius and XM satellite radio companies so the urgent need for the BBC to go digital in the USA appears to be minimal at the moment. The two private companies spent billions to get their networks up

and running. The BBC is able to use that platform and their combined marketing activities. Things could change but for the moment the BBC seems satisfied to use these two companies as a platform in the USA.

## The Starwaves Radio

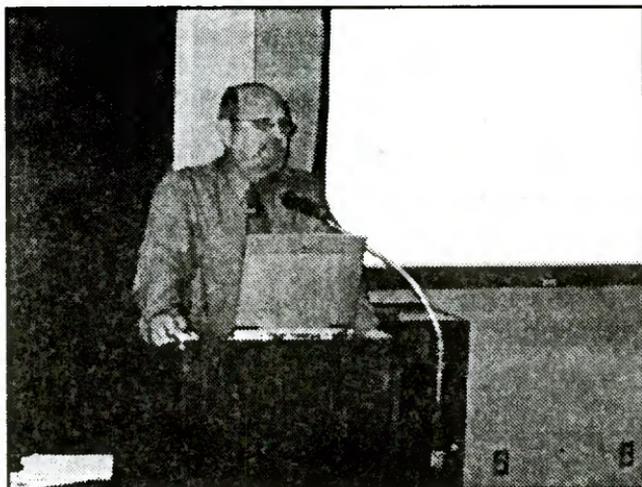
Johannes von Weyssenhoff, Technical Director of Starwaves GmbH in Germany, spoke briefly about and demonstrated the Starwaves DRM-DAB receiver. They had a receiver on display that retails for about 1,500 Euros in Germany. Johannes offered me a very good price if I purchased three or four thousand at one time. I told him I would get back to him after I talked to Mike Wolfson at the Company Store.

## DRM Receivers

Charlie Jacobson of HCJB Engineering presented a report by Andy Giefer of Radio Deutsche Welle providing comparisons of DRM receivers with different front ends in conjunction with the Dream software on a PC. Also, he discussed some activities at Radio Deutsche Welle. DW currently transmits 66 hours a day to Europe using DRM so they are gathering substantial experience in broadcasting and monitoring DRM.

## DRM Demonstrations at Winter SWL Festival

Kim Elliott of the Voice of America and NASWA talked about the DRM demonstra-



Ed Sprague explaining the engineering aspects of DRM

tions conducted at the Winter SWL Festival each year in Kulpsville. He mentioned about our first, although brief, trans-Atlantic DRM reception last March and the uneven results from Bonaire and Sackville.

Mike Adams asked me to address the group about a listeners perspective where I focused on the need for adequate, reasonably priced equipment to be available if DRM listeners are to be developed. Mike mentioned hold-

ing special events QSLs and contests to help develop listener interest.

## The Future of US International Broadcasting

Alan Heil, former VOA broadcaster, spoke about the Voice of America and the current state of affairs. Among Alan's topics was the reduction in English language broadcasts and the recent closing of the Kavala, Greece relay site. He talked about the proposals to reduce English even further and the complete elimination of many other languages. VOA will rank 6<sup>th</sup> out of the G8 nations in English language broadcasting under these proposals.

Jamming is still taking place for most broadcasts to China but the VOA's English service reaches an estimated two million listeners without jamming. Alan referred to discontinuing the English service to China is the equivalent to jamming ourselves.

He made a strong case for continuing America's voice strong in the post 9-11 era. Today saving the VOA is one of Alan's major retirement activities. He distributed a fact sheet providing a "what to do" list

for those opposing these changes at the VOA.

## DRM Antennas

Gordon Sinclair of TCI International talked about long range, short range and local DRM shortwave broadcasting. His presentation featured pictures of antenna arrays to cover desired regions and target audiences. He discussed some of TCI's antenna experimen-

tation in various locations around the world including the 26 MHz demonstration at the NAB gathering in Las Vegas with good results using just 30 watts. Another case was made for the FCC to allow domestic transmitters to transmit to a domestic audience in the 26 MHz shortwave band.

## Transmitters

Ed Sprague of Continental Electronics spoke about implementing DRM on existing transmitters. Compatibility with existing equipment and flexibility concerning future uses of transmitters were important issues. The technical discussion about the DRM transmitter options was of interest to many of the broadcasters present although I glazed over a little. He talked about an experiment his company did at transmitters at Biblis.

## Brainstorming

Mike Adams closed the day's program with a group discussion about implementing DRM in the US. Don Messer focused his comments on instituting DRM broadcasting in the US to a US based audience. Don concentrated his remarks on the use of 26 MHz, which was a regular theme of this meeting, to the NASB broadcasters. He indicated that National Public Radio (NPR) expressed strong interest at the NAB meeting in Las Vegas in DRM. NPR has informally committed to doing 26 MHz tests in major metropolitan areas. Adil Mina talked extensively about the positive coverage DRM received at the NAB convention in Las Vegas. Like Messer, he sees a great future for 26 MHz and the possibility of testing for NPR provides an excellent opportunity to test DRM. He also talked about being approached by a commercial medium wave company about DRM testing. Apparently, the opportunities to test DRM in North America are growing rapidly. Brazil, Canada, Mexico and US medium wave tests are scheduled for the rest of 2006. Adil's a great salesman for his company and he was certainly doing his best to get the NASB thinking about doing some planning. Johannes von Weyssenhoff, who is part of the German DRM Forum, discussed how that

group functions and compared it to the US DRM Group.

## Conclusions

I found myself "drafted" to be Chairman of a DXers/Listeners Liaison Committee. I'm not sure what's involved but as a regular attendee of these gatherings I sense I have now become involved. Don Messer was similarly drafted as the Chairman of the Regulatory Committee. There are other established committees and Chairs that are listed on the consortium's website. Adil Mina and Don Sprague volunteered to jointly become Chairman of DRM USA assuming Jeff White needs to step down based on NASB responsibilities. The next day Jeff was selected as the new president of the NASB.

A very special thank you goes out to Adrian Peterson and the fine folks at AWR that hosted the event and provided a satisfying luncheon buffet. I had the pleasure of lunching with George Jacobs (formerly of the Voice of America, a WRTH contributor, a legend in the broadcast field, and now a semi-retired radio consultant), a former Brooklyn boy like myself and Alan Heil (also, formerly of the Voice of America). The conference facilities were first class making the day quite enjoyable.

The day's activities were well worth attending as experts in the evolving DRM field shared their knowledge and experiences as this new technology emerges. However, not everything was all technical. Although receiver progress is slow in developing, it appears that the pace is picking up with many of the engineers predicting cheap portables coming in the next two years. In the meanwhile, early adopters will need to have a little bit of an experimentation mindset as the technology develops. However, not every moment was a techie adventure. At one point I heard George Jacobs ask Adrian Peterson, "how is the QSL card collection?" They continued talking about QSL collecting and which stations have been difficult and which one's have been responsive over the years. There is a little bit of radio hobbyist in all shortwave radio aficionados.

# 2006 American Shortwave Conference: DRM and NASB Meetings

## Day Two

By Richard A. D'Angelo

Day two started off with opening remarks by Doug Garlinger, NASB President, who was the moderator for the NASB meeting. Many of the same people that attended Day One activities were present again with a many new faces so some of the material was duplicative.

The first speaker was Don Messer, NASB Consultant and Chairman of the DRM Technical Committee with a brief overall status of the US position on the 2007 World Administrative Radio Conference (WRC07) and a brief update on DRM for those that were not present for the previous day's session. The themes of 26 MHz and "like an FM station" were prominent. He elaborated further on 30 days of 26 MHz testing in Mexico City last summer with successful results. DRM for local use has overtaken long haul shortwave transmissions that use sky wave propagation. More discussion was focused on getting FCC approval of domestic shortwave to enable the roll out of digital shortwave in North America.

Walt Ireland of the American Radio Relay League and Chairman of the US Working Party-6E (WP-6E), Vice Chair of Informal Working Group-4 (IWG-4) and a retired Voice of America employee, reported on the results of recent IWG-4, ITU-R, WP-6E and SG-6 meetings. He talked about the WRC efforts of broadcasters to obtain greater use of the 4 to 10 MHz spectrum. He talked about the International Broadcasting Board (IBB) seemingly lack of interest in high frequency broadcasting as priorities change. Therefore, IBB did not request additional spectrum in the HF bands. The overall US position isn't firm as all the spectrum users (NASB, ARRL, Department of Justice, emergency services, etc.) can not agree on allocation needs. Post 9/11 demands for high frequency spectrum have created some of the problems. Further remarks talked about broadband over power line efforts that have manufacturers attempting to notch out interference

in the amateur bands. Work is continuing international on this matter. If WRC decides to give broadcasters additional spectrum, Walt has no idea what the US position would be. During the question and answer session he mentioned he was very impressed with the development of DRM in the last twelve months. He also spoke of the users of DRM in the amateur world today.

Gary McAvin from WMLK gave a report about one of my favorite subjects, the Winter SWL Festival. WMLK represented the NASB at last year's Fest. He called it a very productive event and with individuals seeking knowledge and information. The Scanner Scum, Uncle Skip Arey and Tom Swisher and their activities were discussed. He talked about the importance of keeping listeners involved in the process because politics does come into play (WMLK and WRMI have lost frequencies). He requested other NASB members to attend because of the value of the meeting. Keep the shortwave listeners involved because they provide valuable technical feedback. Solomon Meyer talked about listener equipment set ups at the Winter SWL Festival and mentioned that receiver manufacturers should coordinate something, especially in DRM, to reach this group.

Stephen Hegarty, Deputy Research Director of Intermedia, spoke about comparative trends in shortwave ownership and listening in eastern Europe, east and southeast Asia, the Middle East and Africa. Shortwave radio ownership is on the decline worldwide because of more local choices except in Africa. Shortwave does provide a niche with heaviest years tending to be well educated men. Specifics were offered about Bosnia, China, Kuwait, and Nigeria. Throughout sub-Saharan Africa radio remains the most widely accessible and heavily used medium. It is very much a mass medium and is used most often for news, music and religious programs. Bosnia reflects people turning to the Internet to sample radio programming.

Adil Mina questioned the China statistics because his travels in China relate different facts reflecting the wide use of shortwave in the provinces. Hegarty defended his research as representative of urban and rural populations. Don Messer questioned the rural representation based on his prior VOA experience with similar research studies where shortwave tends to be more heavily used. Kim Elliott felt the research was based on a good sampling based on his prior research experiences. Other transmitter manufacturers suggested there has to be a bigger rural market based on their transmitter sales to China for domestic usage. It was a lively exchange of opinions and facts. Hegarty was asked a question by Mike Adams about North American shortwave listenership. He indicated Radio France was interested in data recently but none existed. He talked about the time might be right to conduct such a survey. Mike asked for the NASB to be considered in the process.

Steve Claterbaugh of Comet North America, talked about what his company can do for broadcasters with repairs or equipment maintenance.

John White of the US division of Thompson and Multimedia (formerly Thales) talked about Thompson's latest DRM activities and recent organizational changes at his company. He noted that many of his company's transmitters installed around the world were capable of being modified for DRM use.

John Sykes, Project Director Digital Radio for the BBC World Service, returned to discuss what the BBC is doing with DRM. He gave a

brief overview of Thursday's presentation for those that were not present for that session. He talked about DRM use in low population areas where dense networks don't make much sense or city-wide with FM like service on 26 MHz. John included mobile audio samples recorded by Peter Senger of Deutsche Welle while driving from Germany to Belgium.

Tom Lucey of the FCC International Bureau offered some comments about the June frequency coordination meeting in Hilversum, Holland. The next HFCC will be in Greece in August so he requested proposed schedules from NASB members by June 29<sup>th</sup>.

The brief public session in the afternoon featured an informal question and answer session with some IBB representatives. This was followed by Adrian Peterson, AWR International Relations and NASWA Editor, who presented "Wandering the World with a Radio." Over the years, Adrian has been a monitor for many broadcasters while stationed overseas (VOA, BBC, DW, FEBA Seychelles, and Radio Australia). Adrian has in his possession a 1902 radio card of Marconi believed to be the oldest known radio card.

That was the last "open" presentation of the meeting. The NASB Business Meeting began at 1:30 PM and it is a closed door session open only to members. During that session, Jeff White was selected to be the new NASB president. The two-day combined meeting of the US DRM Consortium and the NASB was a wonderful opportunity to hear what was going on in the shortwave world from North American broadcasters and, equipment manufacturers.

## Domestic Broadcasting Survey

### 8<sup>th</sup> Edition 2006

Edited by Anker Petersen  
ISSN 1399-8218

Reviewed by Richard A. D'Angelo

The latest Domestic Broadcasting Survey 8 (DBS-8), once again edited by world-

renowned DXer Anker Petersen, has been released. Published in April by the Danish Shortwave Club International (DSWCI), the DBS continues to be the top annual publication devoted to tropical and domestic band shortwave broadcasting stations. The DSWCI offers the DBS in electronic form (PDF

format), which provides for a substantial reduction in price over a paper version thereby increasing its value and speed of delivery. Either way you will be receiving and using an important DX resource produced by an international array of top shelf DXers that will prove its worth to you time after time.

As in past years, a copy of the Press Release can be found on the DSWCI website at [www.dswci.org](http://www.dswci.org). By clicking on the Domestic Band Survey, you will see the color front page of a traditional dance by the Bana minority in Central Vietnam highlands taken by Anker during his world travels and sample listings from this year's DBS along with reviews from last year's edition. Anker sacrifices life and limb to travel the world taking these cover photos for the DBS.

The soon to be 50 years old DSWCI has a worldwide membership of experienced shortwave listeners scattered in about 36 different countries all over the world. Anker draws upon the knowledge and skills of the DSWCI's international array of top-flight DXers to produce a unique and extremely valuable hobby resource. In addition to the club's extensive monitoring activity, the new survey is also based upon many official sources and DX bulletins with A06 schedules included when available. Over the years, the DSWCI has published some of the best non-commercial hobby references available to the shortwave listener. The electronic DBS-8 continues this grand tradition. It is an essential reference for serious shortwave listeners and DXers.

This is the eighth year that the DSWCI has incorporated its invaluable tropical band survey into a broader survey that includes all domestic shortwave broadcasting. The old Tropical Band Survey (TBS) portion of this publication, which has been tops in the field of shortwave broadcast lists for many years, is in its 34<sup>th</sup> year. Because most of its members devote most of their DXing time to domestic broadcasting stations on the tropical and international shortwave bands, a few years ago the DSWCI decided to

expand the traditional tropical band survey to include stations broadcasting to a domestic audience. Consequently, the DSWCI now publishes a superb, comprehensive reference of domestic shortwave broadcasting. The DBS-8 covers all active stations broadcasting to a domestic audience between the frequencies of 2,300 kHz to 30,000 kHz. Part 1 is the 34<sup>th</sup> edition of Tropical Band Survey covering all active broadcasting stations in the 2,300 to 5,700 kHz range. Part 2 covers the domestic stations on the international bands above 5,700 kHz broadcasting to a domestic audience. Part 3 continues to include active clandestine broadcasting stations with schedules and identifications that enhance the value of the DBS-8 to the serious shortwave monitor. Part 4 contains deleted frequencies between 2 and 8 MHz, which have not been reported heard during the last five years.

A valuable, unique feature of the DBS-8 is the right hand column called Last Log. This column shows the last month and year prior to the April 18<sup>th</sup> deadline when a particular station was reported logged by a DXer somewhere in the world. This gives the listener a reasonable indication of the audibility of the shortwave broadcasting station. As part of the updating process, most frequencies that have not been heard in the last year have been deleted from the list and moved to a new section at the end of the survey, Part 4 as discussed above, for stations deleted since July 2001. This updating procedure makes the DBS current and very user friendly. My own personal monitoring and checking confirms that the 2006 edition of the Domestic Broadcasting Survey continues the tradition of providing very accurate and extremely useful information for the DXer. Consequently, it makes an extremely valuable addition to the references and published resources hobbyists maintain in pursuit of elusive DX station catches.

To assure reliability, each of the 1,165 station frequencies has been confirmed on the air by the club's extensive collection of worldwide monitoring experts since the last publication through the April 14<sup>th</sup>

closing date. Stations confirmed as being active is marked with an "A" (regular), or "B" (irregular), or "C" (sporadic) in the list. A "D" means the station is likely inactive. This simple coding system provides valuable information when tuning the bands while trying to get a handle on rare, exotic DX catches. As a result of monitoring, most of the frequencies already have been confirmed as being active in 2006.

Last year's new feature, the "Tropical Bands Monitor", was a big success. This website based feature, which is updated each month, helps to keep buyers of the DBS-8 up-to-date. DSWCI members also receive periodic updates issued in the *Shortwave News* bulletin published by the club and through its electronic *DX Window*. These extra services keep the domestic band survey accurate and up-to-date. Details about becoming a DSWCI member are available at the club website. The electronic, PDF format, membership option substantially reduces the cost of being a member by reducing the printing and postage costs.

The Domestic Broadcasting Survey and Tropical Band Monitor are a high quality shortwave broadcast DX resources made available at a very reasonable price. The combination of high quality and low prices make the DBS unbeatable in today's global resource reference marketplace. If you listen to domestic broadcasters, the DBS-8 is a "must have" while tuning the bands. This is the first resource I pack when attending French Creek DXpeditions. I can't imagine DXing the shortwave bands without a copy of the Domestic Band Survey at my side.

The DBS-8 is very easy to use. The first column provides the reception code, A, B, or C as previously described. The second column lists the frequency. The third column provides the station transmitter output. The fourth column designates the broadcasting country utilizing the International Telecommunications Union (ITU) country code abbreviations. For those not familiar with these abbreviations, a complete list of ITU country codes is given on page 3 of the DBS. The fifth column provides

the station name and/or call letters and location. The next column provides transmission times and other useful information about the station such as operating schedules during Ramadan for Middle East and Indonesian stations. Other useful features for easy station identification are the parallel frequencies and station ID sentences. The final column is the Last Log feature previously described. Also, the survey includes a listing of Indonesian provinces and special districts, which is extremely useful for DXers with an interest in that part of shortwave broadcasting world.

The 40-page A-4 size Domestic Broadcasting Survey is available in electronic form in PDF format of about 330 KB. The electronic DBS-7 is available via e-mail for only US\$7.00, €5, or 5 International Reply Coupons (IRCS). The limited print edition is available for only US\$12.00, €10, or 10 IRCS. The DBS-8 can be ordered direct from the club treasurer at the following address:

DSWCI  
c/o Bent Nielsen  
Egekrogen 14  
DK-3500 Vaerloese  
Denmark

The 2006 edition of the Domestic Broadcasting Survey continues the tradition of being a very useful and reliable DXing resource that should be in the shack of every active shortwave monitor. I use the DBS on a daily basis while tuning the bands. I can't imagine DXing without this at my side. While some enjoy operating a computer while tuning the bands, I print out a hardcopy to use thereby eliminating another electronic device from the listening equation. During French Creek DXpeditions, my copy of the Domestic Broadcasting Survey is in constant use! The PDF format DBS is incredibly inexpensive and extremely useful. At only US\$7.00, the electronic Domestic Broadcasting Survey continues to be the "best buy" of any hobby resource on the market today. You will need this new DBS! It is an outstanding piece of DX hobby research and a "must have" for any DX shack. I can highly recommend ordering a copy. 

# Kim's Column

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This column, with links, is available at this URL publicized only to NASWA members: [www.kimandrewelliott.com/iran.html](http://www.kimandrewelliott.com/iran.html)

## Iranians may be rediscovering shortwave

The new media of international broadcasting—internet, satellite, local relays—are wondrous. But they also keep getting shut down by governments that do not want their people to receive international broadcasts. This is why it's a good idea to maintain a shortwave capability, as shortwave is the least interdictable of the media available to international broadcasters.

A recent illustration of this is a [BBC report](#) on 18 May about developments in Iran. "The Islamic Revolution Guards Corps (IRGC), a hardline body guarding the gains of the 1979 Islamic revolution, intends to increase the number of jamming stations in Tehran and other cities from 50 to 300 within two years."

These jamming stations would attempt to block satellite broadcasts aimed at Iran. At the Ku-band frequencies used by these satellites, the range of the terrestrial direct-wave jammers would be limited. And previous reports have suggested health dangers of high-powered jamming up around 12 GHz.

Iran is also seeking to block internet content from outside the country. Via [BBC Monitoring](#), the Iranian newspaper *Sharq* (via [BBC Monitoring](#)) reported on May 1 that "Iran's Central Filtering Site, with the capability to identify internet users and record the sites they visit, will soon enter its test phase. The centre is intended to block unauthorized sites uniformly across the country."

So for Iranians seeking to get news from abroad, they may soon have to rely again on long-distance radio. *Radio Farda* is available via medium wave from across the Persian Gulf. But on medium wave, the closer

transmitter, i.e. the jamming transmitter, usually prevails. It's on shortwave, and only on shortwave, that physics often grants the more distant transmitter the advantage in a battle with a co-channel jammer.

So shortwave may again become the best way to get uncensored news into Iran. The best strategy to overcome jamming is to transmit on as many frequencies as possible, from as many sites as possible. One of the best U.S. shortwave sites to reach Iran is—well, was—Kavala, Greece. That relay has just been shut down by the Broadcasting Board of Governors. Too bad. (By the way, *Radio World* printed my commentary about the loss of Kavala in their 10 May issue.)

## India restricts int'l television

Satellite television has lately been the medium of choice for people in India to receive international broadcast content. But on 16 May, India's Information and Broadcasting Ministry [ordered 30 foreign channels](#)—including Aljazeera and Bloomberg—purged from set-top boxes used by multi-system and direct-to-home operators. These stations had not secured the necessary permission to downlink their signals into India.

This development may not be sufficient to bring back shortwave as India's medium of choice to receive international broadcasts. But for Indians who want news from a non-Indian source, shortwave radios do not need set-top boxes that authorize some stations and block others.

## Take the VOA tour. Or leave it.

Officially, VOA is still planning to drop VOA News Now and five language services in October. The preponderance of rumors in the VOA corridors is that News Now will get at least a temporary reprieve, although it is already reduced in terms of hours and frequencies. And VOA Turkish, slated for demise,

recently received support from a senior official of the American Jewish Congress.

But even as VOA plans to drop languages, the tours of VOA headquarters have resumed. They're not like the tours you might have taken in past years, though. The new tour is limited to the first floor. A reason for this might be that the escalators in the VOA building haven't worked for more than a year. But that eliminates looking in on all the studios from which VOA radio broadcasts emanate.

You can see two radio studios on the first floor, but the real showcase is the television set in front of VOA's slick new newsroom. Television is the thing.

In past years, a tour guide would talk about VOA and explain the sights. Now visitors are issued headphones, on which they listen to an audio presentation about VOA, as they look at various displays in the first floor corridor.

But the magnificent old master control, an amazing thing to see even in its retirement, is gone. So are the models of shortwave antennas arrays at the IBB relays stations, along with just about any mention of shortwave. The excellent timeline of the history of VOA has been removed. So has the display about the career of Willis Conover.

## Alwyn James, 1927-2006

Speaking of Willis Conover, another VOA broadcaster, who probably had as many fans as Willis, recently passed away. Many of you who heard VOA's English-to-Africa signing for the morning at 0300 UTC probably remember Al James, host of VOA's *Daybreak Africa*. Al died on 2 May. He had retired a few years ago.

I remember listening to Al on my shortwave radio, and I always admired the energy and friendliness of his delivery. I think Al's talents were never sufficiently appreciated at VOA. But I'm sure they were in Africa, location of VOA's largest English audience, in the morning, when most Africans listen to the radio. I highlighted Al and his colleagues on *Daybreak Africa* in the first issue of *VOA Guide*, a schedule publication I created for VOA listeners.

## Why you are not hearing "VOA News, Baghdad."

It's because the VOA bureau in Baghdad has been closed for the past six months, according to the Washington Post. The VOA reporter there, Alisha Ryu, had been fired upon, and her bodyguard killed.

Interestingly, Alhurra and Radio Sawa have fifty Iraqi employees. But their reports are not used by VOA because, according to the structure of U.S. international broadcasting, VOA and Alhurra/Sawa are separate and competing entities.

And then there are the U.S. private broadcasting networks still reporting from Iraq. But VOA doesn't use their reports, either. By contrast, BBC World Service makes full use of the journalistic resources of the domestic BBC. The lesson here is that U.S. international broadcasting should be consolidated, and it should enter into a partnership with U.S. domestic broadcasting.

## DRM again

Elsewhere in the issue, Rich D'Angelo writes about the meeting of the U.S. DRM group and the of the National Association of Shortwave Broadcasters. I organized the DRM display at those meetings. For the most part, we had successful reception of DRM signals from RCI Sackville and HCJB Pifo. This usually required our big outside wire antenna.

We were impressed by the prototype stand-alone Sangean DRM receiver, which you can see at Ullis Fleming's radiointel.com. It often received DRM even with the built-in whip antenna inside the steel-frame building.

But the remaining advantage of shortwave in our multimedia age is its ability to get a signal into areas where reception is blocked, jammed, distant, or otherwise difficult. We know that analog shortwave can do this. It remains to be seen if DRM will be equally robust.

*Views expressed are my own. More at [kimandrewelliott.com](http://kimandrewelliott.com).*



# Listener's Notebook

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**ANTARCTICA** Reactivated **LRA36 Radio Nacional Arcangel San Gabriel** in AM&USB on 15476 at 1915 UT with ID and frequency announcement. (Stuart Austin-England, May 2/DX Listening Digest/Hauser-OK)

**AUSTRALIA** 2325, **VL8T** Tennant Creek, NT, 0840-1130 fade out, Apr 22, 24 and 30, it is back on as 4910 in English, end of news regarding Indonesian violence, weather, "ABC News" ID at 0940 and "ABC TV" promo. Music intro from "The Good, The Bad and The Ugly" and 2 M re "nationwide controversy" of some sort, pop music. Fair, but fading rapidly after 1000, // 2310-VL8A. The ABC website indicated these 2 frequencies of Tennant Creek would return late March. (Barbour in Dxplore, Rhodes, via EDXP-FORUM and Wilkner/DSWCI DX-Window)

## HCJB-Australia A06

0000-0030	English	15525	15405
0030-0045	Tamil	15405	Fr
0030-0045	Nepali	15405	Sa-Th
0045-0100	Bangla	15405	Mo-Sa
0045-0100	Malayalam	15405	Su
0100-0115	Chhattisgarhi	15405	Fr-Su
0100-0115	Gujarati	15405	Mo
0100-0115	Marwari	15405	Th
0100-0115	Teleg	15405	We
0100-0115	Bhojpuri	15405	Tu
0115-0145	Hindi	15405	
0145-0200	Hmar	15405	Su
0145-0200	Kuruk	15405	Mo/Th
0145-0200	Marathi	15405	Fr
0145-0200	Santhali	15405	Tu/Sa
0145-0200	English	15405	We
0200-0230	Urdu	15405	
0700-0900	English	11750	
0900-1000	Mandarin	15400	
1000-1100	English	15400	
1000-1130	English	15540	
1100-1200	Mandarin	15400	
1130-1200	English	15425	Mo-Sa
1130-1200	Malay	15425	Su
1200-1230	Indonesian	15425	
1200-1300	Cantonese	15395	
1230-1245	Tamil	15425	Fr
1230-1245	Nepali	15425	Sa-Th
1245-1300	Telegu	15405	We
1245-1300	Kuruk	15425	Mo/Th
1245-1300	Malayalam	15425	Su
1245-1300	Marathi	15425	Fr
1245-1300	Santhali	15425	Tu/Sa
1300-1315	Marwari	15435	Th

1300-1315	English	15405	We
1300-1315	Bhojpuri	15435	Tu
1300-1315	Chhattisgarhi	15435	Fr-Su
1300-1315	Gujarati	15435	Mo
1300-1330	English	15400	
1315-1330	Hindi	15435	
1330-1400	Urdu	15435	Mo-Sa
1330-1400	English	15435	Su
2230-2300	Japanese	15525	Sa/Su
2230-2300	Mandarin	15525	Mo-Fr
2300-2400	Cantonese	15525	
2300-2330	Indonesian	15390	
2330-2400	English	15390	

(via Alokesh Gupta, New Delhi, India/DX Listening Digest/Hauser-OK)

**BANGLADESH** 4750 **Radio Bangladesh**, tune in before 1600, May 03, though no ID heard yet, its in Bengali and in parallel to their 693 MW, very good reception. Must watch this frequency in our local mornings also, say 0100 UTC. This must be the night/morning frequency of their reactivated SW transmitter. I had heard them about 2 weeks back (testing?) on 7250 and 7315 at around 0730-0810 while I was in Port Blair, Andamans. (Jacob-INDIA/DSWCI DX-Window) Also testing 4880.

7250 **Radio Bangladesh**, 0730-0815, Apr 17, Home Service with Cricket Commentry in Bengali, and on Apr 20 on 7315 also in Bengali with lot of advs. At 0800 there was news and they had disappeared by 0815 when I checked. WRTH 2006 says that their HS transmitter is to be back on air by now and may be it was some tests that I heard. (Heard in Port Blair by Jacob-IND/DSWCI DX-Window)

**BELGIUM (non)** Some changes of TDP via ARM:

## Voice of Delina in Tigrina

1700-1730 NF 11830 Mo-Fr, ex 1800-1900 Sun on 12130

## Radio Horyaal in Somali

1730-1800 NF 11830 Sa-Th, ex 12130

(DX Mix News-BUL)

**BHUTAN** **Bhutan Broadcasting Service (BBS)** recently awarded Thomson for the supply and installation of new shortwave transmitting equipment to modernize its Sangaygang Station and improve the nationwide service.

Scope of delivery includes the DRM ready Thomson 100 kW shortwave transmitter TSW 2100D [sic, evidently from optical scan], Thomson Skywave 2000 DRM frontend equipment Stratus (DRM Modulator/RF Exciter) and Cirrus (DRM Encoder/Multi-plexer), a new quadrant antenna HQ 1/0.3, 5/6 MHz, 300 Ohm as well as station auxiliaries.

BBS will be broadcasting on the frequencies 5035 kHz, 6035 kHz, and 7500 kHz. The existing 50 kW shortwave transmitter, installed and taken into operation at Sangaygang by Thomson in 1988, is still being used. The Sangaygang Station is located 2660 m above sea level, close to the capital city Thimphu.

With an area of 47'000 square miles and a population estimated at around 750'000 inhabitants, more than 90% of Bhutan's population is living in rural areas. The terrain is mostly mountainous, making a widespread FM coverage very cost-intensive. A total of nine FM stations are located around the urban areas. Thus shortwave is clearly the most important media [sic] for nationwide coverage. BBS broadcasts in Zhongka and Nepali, the two main local languages.

Thomson won this project against international competition, whereby a main decision factor was the excellent after sales service offered by Thomson since 1988 and the trust put in the company's proven digital DRM expertise.

The new equipment is scheduled to go on air beginning of 2007 (Radio News, Spring 2006—Published by Thomson Broadcast & Multimedia, Issue 22; May 18, 2006 via BCDX/DX Listening Digest/Hauser-OK)

**BOLIVIA** 4545.3v *Radio Virgen de Remedios*, Tupiza, 2305-2356, May 05 and 13, Spanish religious talks, hymn "Renueva me" by male choir, instrumental music, referring to Sacrament of Jesus. (Grimm and Slaen). Also noted on this frequency 1030-1100, May 05, 07, 09 and 14, Spanish interview, long catholic talk, ann "...y de la Cadena Radio Catolica Mundial..." (program made EWTN Network). QRM CODAR utility in Florida. (Slaen and Wilkner). Drift from 4733, etc. (Ed/DSWCI DX-Window)

**CANADA Radio Canada International** Final Schedule for Shortwave (A06)

0000-0100	Mandarin	9690-KIM 11895-KIM
0000-0100	Spanish	11990-SAC 13725-SAC
0000-0100	English	11700-KUN
0000-0200	English	9755-SAC
0100-0200	English	13710-SAC
0200-0300	Arabic	5840-HB 5955-WER
0200-0300	Spanish	9755-SAC 13710-SAC

0300-0400	French	6040-SAC
0300-0400	Arabic	6040-SAC 7230-WER 9520-MOS
1100-1300	French	9515-SAC
1200-1300	English	15170-YAM 9660-YAM
1300-1330	Mandarin	15170-YAM 9660-YAM
1300-1600	English	9515-SAC 13655-SAC 17800-SAC
1430-1500	Mandarin	11935-YAM 15295-YAM
1500-1530	Russian	11935-WOF 15325-WOF
1500-1600	English	11675-KUN 15360-WER 17720-URU
1600-1630	Russian	11935-WOF 15325-RMP
1600-2000	French	17765-SAC
1800-1900	English	9530-WER 11765-KAS 13730-NAU 15255-SKN 7235-SKN 11765-KAS 13730-SKN 15235-SAC 15255-SKN
1900-2000	French	5850-HB 15325-SAC
1915-1945	Arabic	13650-SAC 15180-RMP
2000-2100	English	5850-HB 7235-SKN 11765-WER 15325-SAC 17765-SAC
2000-2200	English	17765-SAC
2100-2130	Portuguese	15455-SAC 17860-SAC Fr-Su
2100-2200	French	9690-HB 11810-SKN 15325-SAC
2100-2200	English	DRM 9800-SAC Fr-Su
2130-2200	Portuguese	FR-SA-SU 17860-SAC
2200-2230	Portuguese	FR-SA-SU 17860-SAC
2200-2300	Spanish	11990-SAC 15455-SAC
2200-2300	Mandarin	9525-KIM 9870-KIM 12035-YAM
2200-2300	French	15180-SAC
2200-2300	English	6100-SAC
2230-2300	Portuguese	17860-SAC Fr-Su
2300-2330	French	9525-KIM 12035-YAM 13660-YAM
2300-2330	Portuguese	13710-SAC
2300-2400	Spanish	11990-SAC 15455-SAC
2300-2400	French	6100-SAC
2330-2400	Portuguese	17860-SAC Fr-Su

Transmitter Sites:

- HBY: Hoerby, Sweden
- KAS: Kashi, China
- KIM: Kimjae, Republic Of Korea
- KUN: Kunming, China
- MOS: Mosbrunn, Austria
- RMP: Rampisham, United Kingdom
- SAC: Sackville, Canada
- SKN: Skelton, United Kingdom
- URU: Urumqui, China
- WER: Wertachtal, Germany
- WOF: Woofferton, United Kingdom
- YAM: Yamata, Japan

DRM SCHEDULE:

**RCI** 1400-1430 E 9815 FLEVO  
Netherlands  
**Radio Vaticana** 2055-2130 E 9800 CBC Sackville  
**Radio Nederland** 2130-2200 E 9800 CBC Sackville  
**RCI** 2200-2300 E 9800 CBC Sackville  
**Deutsche Welle** 2300-2330 E 9800 CBC Sackville  
**Radio Sweden** 2330-0000 E 9800 CBC Sackville  
**Int.**  
**BBC World Service** 0000-0100 E 6010 CBC Sackville  
**China Radio Int.** 0100-0200 E 6140 CBC Sackville  
**BBC World Service** 0400-0500 E 6010 CBC Sackville

(May 5th/RCI websites via JKB, WWDXC/DX Listening Digest/Hauser-OK)

**CLANDESTINE—AFRICA** 3230 *SW Radio Africa*, via Sentech, Meyerton, 1700-1900, ends its short return to SW on May 02, without being jammed by the Government of Zimbabwe since Mar 05. (Pringle-Wood in DXLD/DSWCI DX-Window)

9905 *Radio Nile*, via Madagascar (250 kW, 325 degrees), \*0400-0458\*, Sa-Tu, Summer A-06 schedule in English/Arabic to East Africa, ex 15320 for A-05 // 12060 Madagascar (250 kW / 335 degrees) (Ivanov, in Radio Bulgaria DX MIX News, via BC-DX Apr 18). Heard 0416-0428, Apr 30, English talk about naming children with names that are blessed followed by a prayer. ID: "You are listening to Radio Nile." Into Sudanese program at 0425 after another ID. Fair with // 12060 good. (D'Angelo-PA/DSWCI DX-Window)

**CLANDESTINE—ASIA** 9660 "*Voice of China Reborn*" via Taiwan, 0300-0310, 10-min. broadcasts, jammed by China, cf. 9780. (Nagoya DX Club via DX-LD). Language and date? (Ed/DSWCI DX-Window)

9780 "*Voice of China Reborn*," via Taiwan, 1400-1410, 10-min. broadcasts, jammed by China and QRM from Radio Free Asia, cf. 9660. (Nagoya DX Club via DXLD/DSWCI DX-Window)

**EL SALVADOR** 17837.07 *Radio Imperial* (p), 2044, Apr 24, heard again with usual Arabic music program which I think they have from 2000-2100. I have heard it several times now. Why Arabic music, I do not know. Heard several times in 2006. (Valko-PA/DSWCI DX-Window)

**GERMANY** *Deutsche Welle* changes from 25th May 2006.

Urdu 1430-1515 UT (cancelled: 17595)  
new: 15705

Hindi 1515-1600 UT (cancelled: 17595)  
new: 15705

English 1600-1700 UT (cancelled: 17595)  
new: 15705

(DW via Swopan Chakroborty, Kolkata, India, May 18/DX Listening Digest/Hauser-OK)

Freq change of *Brother Stair* via DTK T-Systems from May 4:

1900-2100 NF 13810 JUL ex-9405, re-ex 9860

(DX Mix News-BUL)

**GREECE** [see USA]

**GREENLAND** 3815 USB, *KNR*, Tasiilaq, 2100, May 02, news in Danish. (Liehr). In 12 days I received a full data letter for my Mar 02 log via Ifracombe, UK. 2 IRC enclosed. V/S: Ms. Ivalu Sovndahl Pedersen, Communications Asst. (as promised via e-mail). Gave URL of [www.knr.gl/english](http://www.knr.gl/english) for KNR info and [www.knr.gl/pictures](http://www.knr.gl/pictures) for Greenland photos. Also gave SW schedule as 1200-1315 and 1800-1915 West Greenlandic Time (GMT -3). (Churchill in Dx-plorer, May 14/DSWCI DX-Window)

**INDIA AIR Chennai** has changed from 7275 to 7270 for the morning broadcast at 0025-0430. It must be due to interference from Singapore which has come up lately on 7275 (ex 7170). The full sked of Chennai 100 kW on 7270 now is: 0025-0430, 0700-1330, 1430-1740 73 (Jose Jacob, VU2JOS, May 4, dx\_india/DX Listening Digest/Hauser-OK)

I am back from Andaman Islands today. I visited **AIR Port Blair** studios/ offices / transmitters once again. Here are the details of changes observed since my last visit there in 2004. The SW transmitter was running at 7 kW only when I visited but was told that they normally operate with 8.5 kW. I have monitored extensively and there was no spurious (near 4743) of the 4760 frequency reported by some dxers. (It must be some other AIR station) (Jacob-IND, May 01/DSWCI DX-Window)

Aiming to lessen the strain faced by Central Reserve Police Forces (CRPF) personnel entrusted with maintaining internal security in Jammu and Kashmir, the local All India Radio station has decided to start a new program which will feature songs exclusively requested by them. The program "Hello CRPF" will be aired by *Radio Kashmir* from today, station director G H Zia said adding there will be repeat broadcast of the program on Monday from the commercial broadcasting service of the station. IGP CRPF, Kashmir, A P Maheshwari welcomed the gesture of Radio Kashmir and said the program will go a long way in entertaining the jawans who are serving in difficult situations in the state. CRPF recently re-

placed Border Security Force from the internal security duty in Jammu and Kashmir. (<http://www.hindu.com/thehindu/holnus/002200604231554.htm>> Srinagar, Apr 23 (PTI), via Gupta). I called up Radio Kashmir today, schedule for this program "Hello CRPF" is as follows: 0935-1030 on 6110 and 1116 MW ( Sunday). (Gupta-INDIA/DSWCI DX-Window)

**INDONESIA** 3266.41 **RRI Gorontalo**, 1202-1229\*, Apr 27, Jakarta program to 1218, then local programming with talk; fairly good signal but hard to understand soft-voiced announcer. (Wilkins via Dxplore/DSWCI DX-Window)

3325.05, 1339-, **RRI Palangkaraya**, May 19. Fair to good reception with easy listening Indo music by a female vocalist. I suspect both PNG and Indonesia was very strong this morning as there are several presumably PNG open carriers still present on 90 meters. (Walt Salmaniw-BC/DX Listening Digest/Hauser-OK)

3344.97, 1342-, **RRI Ternate**, May 19. Good reception with a western pop song, which seems a bit odd for an Indo station, but sure enough afterwards the usual sing-song Indo voice of a young lady came on. Akin to Filipino to me. Open carrier at 1344:45. Then at 1345:00 returned with more traditional Indonesian vocal. (Walt Salmaniw-BC/DX Listening Digest/Hauser-OK)

3976.06, 1438-, **RRI Pontianak**, May 19. Very good reception despite only a S3 to S5 signal. Very clear, with only a minimal of the typical bassy sound of most Indos. Several mentions of Pontianak. Best heard on my West facing BOG (Beverage on Ground). (Walt Salmaniw-BC/DX Listening Digest/Hauser-OK)

3987 kHz, **RRI Manokwari** first noted on May 3 at 1100 UT. Local ID at 1140. [http://n1hp.or.tv/sound/mp3/03987\\_060503\\_1140.mp3](http://n1hp.or.tv/sound/mp3/03987_060503_1140.mp3) May 4 at +0945 to 1200 broken out with N. Korea Jam on 3985 kHz. Local news at 1000 and 1100. (Atsunori Ishida-NDXC/NDXC HQ, controller: S. Hasegawa/DX Listening Digest/Hauser-OK)

**RRI-Wamena** has reactivated again on 4869.9 kHz. In Japan, first noted on 14th May with very good signal, but QRMed by RRI-Sorong on 4870.9 kHz. (Kenji Takasaki-JAPAN/DX Listening Digest/Hauser-OK)

4870.9 **RRI Sorong** 1133-1145\* May 16. W talk to 1145, then off without fanfare. Band noise high today so could not make out much of talk. Sorong and Wamena hetting against each other, solved by using USB and LSB, respectively. Although both have been somewhat irregular, especially Wamena, they have both been very stable on their respective

frequencies for several years (John Wilkins-CO./DXplorer May 16 via BCDX/DX Listening Digest/Hauser-OK)

7289.88 **RRI Serui**, (Irian Jaya). In Indonesian, ID as RRI, then had relay from Jakarta for news. Volcano update, 0800 sport update 0815 with soccer scores. 16/5 went past 0820 WRTVH sign-off to go to 0830 (John Wright, Australian DX News/DX Listening Digest/Hauser-OK)

7290 **RRI Nabire**. Fair at times, but very noisy, with Indo talk at 0802-0805, 16/5 (Dennis Allen, ibid.) Serui or Nabire? Needs a studio ID here. (Craig Seager, ADXN/DX Listening Digest/Hauser-OK)

9680 **RRI Jakarta**, May 21, 1000-1020, KGRE program#5107, requests text messages be phoned in with the answer to: What is the capital of Australia?, song "Bound for South Australia," interview with two students from Indonesia who received scholarships to study in Australia, fair. Glad to hear them back, as they were off on May 14 and 17.

15150 **VOI**, May 17, 0951-1000, weak, could have been in English but not positive, 0956 usual canned English ID for VOI and their website. 9525 not heard (Ron Howard, Monterey, CA/DX Listening Digest/Hauser-OK)

**ISRAEL IBA** frequency changes as of May 1: I went back and checked the official A-06 schedule and see that there were also changes for the nighttime Hebrew service, 9400 and 9345 moving up to 11 MHz, marked by the @ symbol, changed to UT here:

0400-0500	N. America/W. Europe	11590
2000-2300	N. America/W. Europe	11585
2300-0330	N. America/W. Europe	11590

Also some changes in Spanish shown, no others in English (Hauser-OK/DX Listening Digest)

**JAPAN** 3925, 1421-, **Nikkei Radio Broadcasting Corp.**, May 19. Superb reception with even a short English clip (an interview with an English speaker about fuel cell technology), without Japanese translation. Many mentions of Nikkei weekly. 'Home page' and 'www' mentioned. Parallel 6055 equally strong. 9595 just slightly weaker. Possibly an English lesson, since the same male returns explaining what the term 'rev' means! Society for testing English proficiency incorporated mentioned at 1428 as the presenters of this program. (Walt Salmaniw-BC/DX Listening Digest/Hauser-OK)

**KOREA (NORTH) Voice of Korea**, Pyongyang, DPR Korea

0000	Chinese	13650	15100
0000	Korean (PBS)	7140	9345 9730
0000	Spanish	11735	13760 15180

0100	English	7140 9345 9730
0100	English	11735 13760 15180
0100	French	13650 15100
0200	Chinese	7140 9345 9730
0200	English	13650 15100
0200	Spanish	11735 13760 15180
0300	Chinese	13650 15100
0300	English	7140 9345 9730
0300	French	11735 13760 15180
0700	Japanese	3250 9650 11865
0700	Korean (PBS)	7140 9345
0700	Russian	9975 11735
0700	Russian	13760 15245
0800	Chinese	7140 9345
0800	Japanese	3250 9650 11865
0800	Russian	9975 11735
0800	Russian	13760 15245
0900	Japanese	3250 6070 9650 11865
0900	Korean (KCBS)	7140 9345
0900	Korean (PBS)	9975 11735
0900	Korean (PBS)	13760 15245
1000	English	11710 15180
1000	English	11735 13650
1000	Japanese	3250 6070 9650 11865
1000	Korean (PBS)	7140 9345
1100	Chinese	7140 9345
1100	French	11710 15180
1100	French	11735 13650
1100	Japanese	3250 6070 9650 11865
1200	Japanese	3250 6070 9650 11865
1200	Korean (KCBS)	11710 15180
1200	Korean (KCBS)	11735 13650
1200	Korean (PBS)	7140 9345
1300	Chinese	11735 13650
1300	English	9335 11710
1300	English	13760 15245
1300	Korean (PBS)	9325 12015
1400	French	9335 11710
1400	French	13760 15245
1400	Korean (KCBS)	11735 13650
1400	Russian	9325 12015
1500	Arabic	9990 11545
1500	English	9335 11710
1500	English	13760 15245
1500	Russian	9325 12015
1600	English	9990 11545
1600	French	9335 11710
1600	French	13760 15245
1600	German	9325 12015
1700	Arabic	9990 11545
1700	Korean (KCBS)	9335 11710
1700	Korean (KCBS)	13760 15245
1700	Russian	9325 12015
1800	English	13760 15245
1800	French	7100 11910
1800	French	9975 11535
1800	German	9325 12015
1900	English	7100 11910
1900	English	9975 11535
1900	German	9325 12015
1900	Spanish	13760 15245

2000	French	13760 15245
2000	Korean (KCBS)	7100 11910
2000	Korean (KCBS)	9325 12015
2000	Korean (KCBS)	9975 11535
2100	Chinese	7180 9345
2100	Chinese	9975 11535
2100	English	13760 15245
2100	Japanese	3250 9650 11865
2200	Chinese	7180 9345
2200	Chinese	9975 11535
2200	Japanese	3250 9650 11865
2200	Spanish	13760 15245
2300	Japanese	3250 9650 11865
2300	Korean (KCBS)	7180 9345
2300	Korean (KCBS)	9975 11535
2300	Korean (KCBS)	13760 15245

KCBS = Korean Central Broadcasting Station (Choson Jungang Pangsong)

PBS= Pyongyang Broadcasting Station (Pyongyang Pangsong)

(Arnulf Piontek, via WWDXC-HQ; April 29/Worldwide DX Club/Kubiak-DE)

**KYRGYZSTAN "Kyrgyzskaye Radio"** in Russian: 0000-0015 UT News, 0015-0030 Orthodox religious program, both in Russian, on 4010 and 4795. May 14, earlier were news in English, or there are only on weekdays? (Rumen Pankov-BUL, wwdxc BC-DX May 19/DX Listening Digest/Hauser-OK)

**LIBYA(non) Summer A-06 schedule of LJBC: Radio of The Great Jamahiriya**

1200-1400 Arabic on 17660

**Radio The Voice of Africa**

1200-1357	Swahili	17725 >>> from May 7 till Sep.2
1200-1357	Swahili	21695 >>> till May 6/from Sep.3
1200-1357	Swahili	17610
1200-1400	Various*	17670 >>> (alt.17675/85/90)
1200-1400	Various*	17680 >>> (alt.17675/85/90)
1400-1557	English	21695 >>> till May 6/from Sep.3
1400-1557	English	17725 >>> from May 7 till Sep.2
1400-1557	English	17850
1600-1757	French	17870
1600-1757	French	15660
1700-1857	Arabic	11615
1800-1957	Hausa	11835 >>> from Sep.3
1800-1957	Hausa	15660 >>> till Sep.2
1900-2157	Arabic	9590
2200-2357	Arabic	7320

\* nx in Swahili/French/English/Arabic (DX Mix News-BUL)

**MADAGASCAR 9688.64, Radio Malagasy (tent.)**

Definitely a carrier here at 1133-1215, Apr 23, sure sounded like alternating woman and man with mx bridge briefly at 1145. QRM from 9685. Thanks Korinek tip in dswei DX- Window. (Dave Valko-USA, dswei DXW 23 April/ARDXC Australian DX News)

**MALI 4834.89 Radio Mali**, Kati, Bamako, 1900-2240, Apr 29, 30, May 01 and 02, French talks and ann, West African pop music. Often mentioned Malienne and Bamako in the last minutes on 4835, its 100% Mali back on the air // 5995! Poor but clear signal. QRM Alice Springs \*2130. (Goncalves, Monferini, Ratzler, Ritola and Petersen). Has been off on 4835 since Nov 2004. (Ed/DSWCI DX-Window)

7286.4 **Radio Mali**, Kati, 0940, May 01, French, music and songs; audible at 1220 but useless; 35332. Reactivated; surely the same transmitter for 4835v. (Goncalves/DSWCI DX-Window)

**NEW ZEALAND Radio New Zealand International A06 Rev Schd**

0600-0700 15720 7145  
0706-1059 7145  
1100-1259 9870  
1300-1650 7145  
1651-1850 7145  
1851-1950 9630  
1951-0600 15720

(RNZI Website/Gupta-IND/DSWCI DX-Window)

**PAKISTAN 4790v Radio Pakistan**, Islamabad relaying Rawalpindi III is no longer using the Azad Kashmir ID here, but instead it sounds like them on 4940. (Goonetilleke-SRI LANKA, May 16/DSWCI DX-Window)

**PERU 4790.292 Peru Radio Vision**, Distrito Jose, Chiclayo 0900 "Radio Vision...kilociclos banda de..." by M, into lively "flauta andina" then to Palabras de Dios at this moment—1033, now back to music at 1041. At 1043 continuous ments de Palabras de Dios [May 24, Wilkner-FL/Cumbre DX/Johnson-FL)

**RUSSIA Voice of Russia A06 in English**

To Australia & New Zealand  
0500-0700 21790 17635  
0700-0900 21790 17495 17635

To Southeast Asia  
1400-1500 17645 15605 11755 12055 9745 7165  
1500-1600 9660 1600-1700 12115 12055 11755  
9405 6070  
1700-1800 9405

To Africa  
1600-1700 15540 11985  
1700-1800 11985 11510  
1800-1900 11510 9745

To Europe  
0800-0900 15780\* 12060\*  
1200-1300 9450\* 7370  
1500-1600 15455 12040 7370  
1600-1700 7370  
1700-1800 9890 9820(Sa/Su) 7370  
1800-1900 11630 9890 9820 7370  
1900-2000 12070 9890 7310  
2000-2100 15455 12070 9890

To the Middle East  
1500-1600 11985 4975 4965  
1600-1700 15540 11985 12055

To Latin America  
2000-2200 15735

To North America  
0100-0200 15595 15555 9665 7250  
0200-0300 15595 15555 9860 9665  
0300-0400 15595 15555 15455 15425 9860 9880  
9665  
0400-0500 15555 9860 9880 9665

\*DRM (ARDXC Australian DX News)

Foreign relays via Russian and CIS transmitters:

Moscow / RUS  
7175 2200-2300 CRI  
7225 1930-2000 CRI  
7350\* 1630-1745 FEB  
7440 1900-2000 YFR  
7515 1900-2100 DWL DRM  
9490 1900-2000 YFR  
9690 0400-0600 DWL DRM  
12035 1830-1930 CRI (7200) [what does this mean? See below]  
12085 1600-1630 BBC [days of week? garbled]  
12085 1600-1700 BBC [days of week? garbled]  
13685 1700-1800 VRT

\*23/09/2006—28/10/2006

Sankt-Petersburg / RUS  
7130 1800-1830 CRI  
7390 1600-1630 TWR  
12065 1600-1700 CRI (7130)  
13685 0600-0700 VRT

Samara / RUS  
5810 1800-1900 YFR  
7320 2030-2130 CRI  
7370 1900-2000 YFR  
7435 1800-2000 YFR

9475 1600-1645 TWR Mo-We  
 9475 1600-1630 TWR Th/Fr  
 9825 1800-1900 IBR (5935)  
 12120 1700-1730 VOL Mo/Th  
 12120 1700-1800 VOP Tu/Sa  
 12120 1700-1800 DER We  
 12120 1700-1800 VOE Mo/Su  
 15260 1600-1700 LBT We/Fr/Su  
 15260 1600-1700 ERI Th  
 15530 0400-0500 FEB Mo-Th  
 15530 0400-0530 FEB Fr-Su

Krasnodar / RUS

6015 0400-0445 BBC  
 6245 1445-1630 TWR  
 7180 0100-0200 BBC  
 7320 0230-0330 BBC  
 7375 1730-1930 DWL  
 9495 1530-1700 FEB  
 9850\* 1530-1645 FEB  
 11510 1400-1600 YFR  
 15655 1600-1630 FEB  
 11680 0600-0800 BBC  
 11825 1630-1700 RPR  
 11855 0330-0430 BBC  
 12030 0930-1130 BBC  
 12060 1900-2000 YFR  
 12130 1730-1800 RHR Sa-Th (7590)  
 -12130 1800-1900 VOD Su (7590)  
 13575 1330-1430 DWL  
 15460 0500-0530 BVB Mo/We  
 15460 0500-0545 BVB Fr  
 15525 0800-0900 DWL  
 15535 0630-0700 SIR Mo-Fr  
 15660 1500-1600 VOI  
 15695\*\* 1800-1900 FSC \*\* alternative 15675 kHz

\* 26/03/2006—22/09/2006

Novosibirsk / RUS

6210 1230-1300 VAT  
 7115 2200-2300 DWL  
 7390 1800-1830 RPR  
 7580 1300-1700 YFR  
 9445 0015-0145 TWR  
 9445 1300-1545 TWR  
 9500 1400-1515 FEB  
 11660 2300-2350 DWL  
 11990 1300-1500 VOA  
 12035 0200-0300 FEB  
 12055\* 1315-1400 VAT  
 12075 1200-1300 RFI  
 12075\* 2315-2400 VAT  
 15560 0200-0330 VAT

\* 26/03/2006—02/09/2006

Irkutsk / RUS

5880 1500-1600 FNK  
 5890 1400-1500 SHI

5890 1900-1930 SHI  
 7150 2200-2300 VOA  
 7210 1500-1700 FRA  
 7320 1500-1545 FEB  
 9395 1230-1545 TWR  
 9450 0900-1200 YFR  
 9900 1000-1200 DWL  
 11705 0300-0700 RFA  
 11830\* 2200-2245 VAT  
 11895 1200-1400 YFR  
 11965 2200-2400 DWL  
 12025 0930-1030 FRI  
 12025 1100-1200 RFI  
 13710 1000-1100 RNW  
 17710 0230-0300 BBC  
 17860 2300-2400 DWL

\* 08/05/2006—03/09/2006

Chita / RUS

6205\* 1315-1400 VAT  
 7220 1400-1500 RFI  
 7250\*\* 1300-1330 DEG Tu/Th/Sa \*\* alternative 7350 and 7420  
 15135 2300-2400 DWL

\* 03/09/2006—28/10/2006

Khabarovsk / RUS

9900 1300-1400 RNW  
 11830\* 2200-2245 VAT  
 12065 1130-1250 BVB  
 13820 1000-1100 RNW

\* 26/03/2006—07/05/2006 and 04/09/2006—28/10/2006

Komsomolsk-na-Amure / RUS

6225 1300-1350 DWL  
 7380 1000-1100 YFR  
 9720 2200-2300 DWL  
 11830 2300-2350 DWL  
 13785 0000-0045 VAT

Vladivostok / RUS

7205 1230-1300 IBR  
 7330 1100-1530 BBC  
 7370 1030-1055 DWL  
 9460 1030-1055 DWL  
 11660 0000-0100 DWL  
 12005 2200-2300 RFI  
 12045 2200-2300 RFI  
 12075\* 2315-2400 VAT  
 15535 2330-0030 RFA  
 15595 2300-2400 RFI

\* 03/09/2006—28/10/2006

Petropavlovsk-Kamchatskiy / RUS

5880 1300-1400 RNW  
 5910 1030-1145 BVB Su

7350 1000-1200 DWL  
 9450 1200-1300 IBR  
 12065 1000-1100 RNW  
 15135 0000-0100 DWL  
 15470 2030-2100 VOA  
 15640 2200-2400 DWL

**Almaty / KAZ**

7420 2200-2400 DWL  
 7430 2200-2300 DWL  
 9355 1530-1600 VOO Tu/Fr  
 9380 2330-0015 TWR (7410)  
 12150 1100-1500 TFR  
 17845 1000-1200 DWL

**Gavar / ARM**

7365 0030-0130 FEB  
 15480 1430-1530 DVB

**Grigoriopol / MDA**

6015 2000-2200 RNW  
 7360 2000-2200 YFR  
 7460 0230-0315 RPD  
 7480 1800-1845 RPD  
 11530 0400-1600 MEZ  
 13800 1630-1715 RIN  
 17660 1200-1400 SAM

**Nikolaev / UKR**

7520 1600-1700 YFR  
 11820 0800-1400 BBC  
 13660 0445-1200 BBC

**Orzu / TJK**

7540 1500-2200 RFA  
 7540 2300-2400 RFA  
 17525 0300-0700 RFA

**Yangiyul / TJK**

6020 1600-1630 RFI  
 7465 1600-1700 RFA  
 9350 0100-0200 RFA  
 9370 1600-1700 RFA  
 9395 2300-2400 RFA  
 9975 2330-0030 RFA  
 11520 0100-0200 RFA  
 11540 0030-0130 RFA  
 11540 1100-1500 YFR  
 13825 1500-1600 RFA  
 13830 1100-1400 RFA  
 15680 1200-1300 QHR Mo-Sa  
 15695 0100-0300 RFA  
 17510 0600-0700 RFA  
 16mb\* 1055-1520 VOT

\* various frequencies in the specified range

**Tashkent / UZB**

6240 1800-1900 SPR Th  
 7355 0100-0300 CVC

7375 0030-0100 FEB  
 7430 1500-1545 BBC  
 7485 1400-1500 BVB Th/Fr  
 7510 1400-1500 YFR  
 9345 1400-1600 RNW  
 9495 1700-1900 YFR  
 9530 1400-1500 FEB  
 9530 1700-1800 RFI  
 9855 1400-1700 CVC  
 9865 1330-1500 BBC  
 11520 1300-1400 YFR  
 12065 1300-1400 RNW  
 12065 1430-1600 VAT  
 12070 0100-0400 CVC  
 13630 0400-1100 CVC  
 13685 0300-0600 CVC  
 13745 0100-0130 BBC  
 13745 0330-0500 BBC  
 13820 1100-1400 CVC  
 15565 0500-0700 BBC

(...) 03/09/2006—28/10/2006 [frequencies in () start in Sept]

BBC—*British Broadcasting Corp.*  
 BVB—*Bible Voice Broadcasting Network*  
 CRI—*China Radio International*  
 CVC—*CVC International*

DEG—*Degar Voice*  
 DER—*Dejen Radio*  
 DVB—*Democratic Voice of Burma*  
 DWL—*Deutsche Welle*  
 ERI—*V. of Eritrea*  
 FEB—*FEB Radio*

FNK—*Open Radio For North Korea*  
 FSC—*Radio Free Southern Cameroons*  
 IBR—*IBRA Radio*  
 LBT—*Voice of Liberty*  
 MEZ—*Voice of Mesopotamia*  
 QHR—*Que Huong Radio*

RFA—*Radio Free Asia*  
 RFI—*Radio France Internationale*  
 RHR—*Radio Horyaal*  
 RIN—*R. Anternacional*  
 RNW—*Radio Nederland Wereldomroep*  
 RPD—*Radio Payam-e Doost*  
 RPR—*Radio Prague*  
 SAM—*Sawt al-Amal / V of Hope*  
 SHI—*Shiokaze (Radio Sea Breeze)*  
 SIR—*Sudan Interactive Radio*  
 SPR—\_\_\_\_\_ [sic—a free online translation turned this into uregjbmshope tbdjp which still doesn't seem quite right—gh]

TWR—*Trans World Radio*  
 VAT—*Radio Vaticana*  
 VOA—*Voice of America*  
 VOD—*Voice of Delina*  
 VOE—*Voice of Ethiopian National United Front*  
 VOL—*Voice of Oromo Liberation*  
 VOO—*Voice of Orthodoxy*

**VOP—Voice of Ethiopian People**

VOT—Voice of Tibet

VOU—Voice of Unity

VRT—Radio Vlaanderen Internationaal

YFR—WYFR Family Radio

(Nikolay Rudnev-RUS, May 21/DX Listening Digest/  
Hauser-OK)Freq change for **Radio Rossii** in Russian from  
May 1:1325-2100 NF 7120\*MSK 250 kW / 265 deg to WeEu,  
ex 7420

(DX Mix News-BUL)

**SOUTH AFRICA (non)** Freqs changes for **Ad-  
ventist World Radio:**

1800-1830 English NF 9610 MEY ex 9600

2000-2030 French NF 9655 MEY ex 9735

2000-2030 French NF 9715 MEY ex 9390

(DX Mix News-BUL)

4990.0 **Christian Voice**, via Meyerton (p),  
\*1905-2205v\*, May 02, 09, 12 and 13, Portuguese  
ann, songs, religious program, 1947 time pip, "Noti-  
cias" at 2000 and 2200 for two minutes, 2202 slogan  
"Em Mozambique," but also mentioned Brazil and  
Sao Paulo, jingles. Abrupt sign off in mid sentence,  
strongest after 2130. (Petersen and Schulze). Chris-  
tian Voice is now scheduled via Sentech \*1905-  
2205\*, ex 9620 in Portuguese towards Angola (0 de-  
grees 100 kW). The programs may be produced by  
the CVC Brazilian service in Miami. (Green, Hauser  
and Pennington in DXLD, via Monferini/DSWCI DX-  
Window)

**UNITED KINGDOM** Updated summer A-06 relays  
of VT Communications

**Radio Prague**

0000-0027 11665 Spanish

**China Radio International**

0000-0057 Spanish 9745

1100-1157 Portuguese 17625

1200-1257 Chinese 17625

1300-1357 English 17625

1500-1757 English 6100

1800-1857 Chinese 6100

2100-2157 Portuguese 11690

**Gospel for Asia**

0000-0130 6145 SoEaAs langs

1230-1500 15215 SoEaAs langs

1600-1630 11695 SoEaAs langs

2300-2400 6040 SoEaAs langs

**Bible Voice Broadcasting Network**

0015-0030 Hindi 9605

0030-0045 Bengali 7210

0030-0045 Telugu 9605 Sa

0030-0100 Hindi 6010 Mo-Fr

0030-0100 English 6010 Sa/Su

**Voice of Vietnam**

0100-0128 English 6175

0130-0228 Vietnamese 6175

0230-0258 English 6175

0300-0328 Spanish 6175

0330-0358 English 6175

0400-0428 Spanish 6175

0430-0528 Vietnamese 6175

1700-1728 English 9725

1730-1828 Vietnamese 9725

1830-1858 French 9725

1900-1928 Russian 9725

1930-2028 Vietnamese 9725

**Adventist World Radio**

0100-0200 Vietnamese 15445 Sa

0300-0330 Oromo 11710

0300-0330 Amharic 11975

0330-0400 Tigrigna 11975

1200-1230 English 15365

1230-1300 Bangla 15365

1300-1330 Chinese 15320 Mo-Fr

1300-1330 Uighur 15320 Sa/Su

1330-1400 Chinese 15320

1400-1500 Vietnamese 11695

1500-1530 Nepali 15225

1530-1600 English 15225

1500-1530 Punjabi 15265

1530-1600 Hindi 15265

1630-1700 Somali 15460

1730-1800 Oromo 11710

**Hmong Lao Radio**

0100-0200 Laotian 15260 We/Fr

**Radio Solh/Radio Peace**

0200-0900 Dari/Pashto 11665

0900-1200 Dari/Pashto 11675

1200-1800 Dari/Pashto 17700

**Sudan Radio Service**

0300-0500 En/Ar/Others 11805 Mo-Fr

0500-0600 En/Ar/Others 15325 Mo-Fr

1500-1800 En/Ar/Others 17660 Mo-Fr

from May 8, 2006

0300-0315 test txions 9735 \\ 11805

0400-0415 test txions 9695 \\ 11805

0500-0515 test txions 11940 \\ 15325

**Radio Okapi**

0400-0600 French/Lingala 11690  
 1600-1700 French/Lingala 11890

**Radio Mustaqbal**

0600-0630 Somali 15515 Mo-Th/Sa  
 0635-0705 Somali 15515 Mo-Th/Sa  
 0710-0740 Somali 15515 Mo-Th/Sa  
 0745-0815 Somali 15515 Mo-Th/Sa

**Southern Sudan Interactive Radio Instruction**

0630-0700 English 15535 Mo-Fr

(DX Mix News-BUL)

**UNITED STATES OF AMERICA Radio Free Europe - RFE / Radio Liberty**

0000-0100 Kazakh 5945 7200  
 0000-0100 Russian 7120 7175 7220 9520  
 0030-0200 Persian\* 7295 9805 9865  
 0100-0200 Tajik 9760 13760  
 0200-0300 Russian 7175 7220 9520 15250  
 15470  
 0200-0300 Turkmen 9555 15120  
 0200-0400 Tajik 9760 15525  
 0200-0400 Kazakh 9615 15205  
 0200-0400 Persian\* 9775 9805 9865  
 0230-0330 Afghan 12140 17670  
 0300-0400 Turkmen 9555 17770  
 0300-0400 Uzbek 12110 15145 15460  
 0300-0400 Russian 6105 7175 7220 15250  
 15470  
 0300-0400 Tatar-Bashkir 9855  
 0300-0500 Belarusian 7155 9635  
 0330-0630 Afghan 15615 17670  
 0400-0500 Russian 6105 7220 9520 9760  
 0400-0500 N Caucasus 9845 9855  
 0400-0600 Persian\* 9510 9835 15255  
 0500-0600 Tatar-Bashkir 11990  
 0500-0700 Russian 9520 9760 11815  
 0600-0800 Persian\* 9510 15290 17845  
 0630-0930 Afghan 15615 17685  
 0700-0800 Russian 11815 11855 15280  
 17730  
 0800-0900 Russian 11855 15280 17730  
 0800-1000 Persian\* 15290 15690 17755  
 0900-1000 Russian 11860 15280 17730  
 0930-1230 Afghan 15090 17685  
 1000-1100 Russian 11860 15130 17730  
 21530  
 1000-1400 Persian\* 7125 15690 17755  
 1100-1200 Russian 11705 15130 17730  
 21530  
 1200-1300 Kazakh 11520 15120  
 1200-1300 Russian 11705 15130 15205  
 17730  
 1230-1330 Afghan 15090 19010  
 1330-1430 Afghan 15090  
 1400-1500 Persian\* 9435 13870 17745

1400-1500 Tajik 9790 11895  
 1400-1500 Russian 11725 11875 15130  
 15195  
 1400-1500 Uzbek 13755 15145 15170  
 1400-1600 Kazakh 7170 9815  
 1400-1600 Turkmen 15120 15255  
 1500-1530 Romanian 15380  
 1500-1600 Persian\* 13870 15170 17745  
 1500-1600 Russian 9520 11725 11875 15130  
 1500-1600 Tajik 9790 11975  
 1500-1600 Tatar-Bashkir 11990  
 1500-1700 Belarusian 9725 15215  
 1600-1700 Tajik 7190 9790  
 1600-1700 Russian 7220 9520 9565 15130  
 1600-1700 Persian\* 13870 15170 17670  
 1600-1700 Turkmen 11895 13815  
 1600-1700 Uzbek 7555 9595 11875  
 1700-1800 N Caucasus 11705 15255  
 1700-1800 Turkmen 9395 11895  
 1700-1900 Persian\* 7105 7180 9760  
 1700-1900 Belarusian 7195 15215  
 1800-1900 Romanian 11815 Mo-Fr  
 1900-2000 Tatar-Bashkir 9650  
 1900-2000 Persian\* 7105 9505 9760  
 1900-2000 Russian 7220 9520 9585  
 1900-2100 Belarusian 7115 9750  
 2000-2100 Persian\* 7190 9505 9760  
 2000-2200 Russian 7220 9520  
 2100-2130 Persian\* 7190 9505 9960  
 2200-2300 Russian 7220 9520 9590  
 2300-2400 Russian 7120 7220 9590

\*Radio Farda (RFE/RL website via JKB, 14 May, WWDXC/DX Listening Digest/Hauser-OK)

**Voice of America changes:**

1300-1400 Kurdish NF 12025 KWT, ex 9825 KAV  
 1500-1530 Uzbek NF 7555 IRA, ex 11520  
 1630-1800 Persian 6040 WER, ex KAV  
 1700-1730 Shona NF 13755 SAO, ex 11975 Mo-Fr  
 1700-1730 Shona NF 17730 MOR, ex 17895 Mo-Fr  
 1730-1800 Oromo 11905 WER, ex KAV Mo-Fr  
 1730-1800 English NF 17730 MOR, ex 17895 Mo-Fr  
 1730-1800 English NF 13755 SAO, ex 11975 Mo-Fr  
 1800-1830 Ndebele NF 13755 IRA, ex 12110 Mo-Fr  
 1800-1830 Ndebele NF 17730 SAO, ex 15730 Mo-Fr  
 1800-1845 Amharic 11905 WER, ex KAV  
 1800-1930 Persian 6040 DHA, ex KAV  
 1845-1900 Amharic 11905 DHA, ex KAV  
 1900-1930 Tigrina 11905 DHA, ex KAV Mo-Fr

(DX Mix News-BUL)

**VOICE OF AMERICA TO CLOSE GREEK RELAY SITES**

Voice of America has decided to close down their two relay sites in Greece. The sites in question are Kavala and Rhodos. VOA operates a 500 kW AM transmitter at Kavala as well as 12 shortwave transmitters of 250 kW. The Rhodos site uses one 500 kW AM transmitter on 1260 kHz. The two 50 kW shortwave transmitters at Rhodos closed down several years ago.

Voice of America started using transmitters in Greece in 1949, when they operated one AM transmitter and four shortwave transmitters in the city of Thessaloniki. At the same time VOA operated a radio station located on the ship Courier, which was docked near the island of Rhodos. Eventually the Rhodos station became land based. In 1972, VOA put into operation the Kavala site. As a result the Thessaloniki transmitters were turned over to the Greek authorities, which started using them for their own broadcasts.

The terms between Greece and VOA concerning the relay sites were renegotiated twice. First time in 1997, and then again in 2002. In 2002, the agreement called for VOA granting Voice of Greece the use of relay time on the US based Delano and Greenville shortwave transmitters. This is still in effect. It is unknown what will happen to this arrangement once the relay sites in Greece close down (April DX Chicago [http://home.earthlink.net/~dxchicago/dx\\_chicago.htm](http://home.earthlink.net/~dxchicago/dx_chicago.htm) via John Babbis, MD, DXLD) Not any more

Kavala has been replaced for IBB shortwave transmission by Wertachtal (0200-0300 9775, 0400-0500 15255, 1630-1800 6040, 1700-1900 7105, 1730-1845 11905, 1900-2000 9650), Lampertheim (1300-1400 12025, was 9825 from Kavala), Iranawila (0600-0800 17845) and Al-Dhabbaya (0300-0400 9775, 0400-0500 9510, 0800-0930 15290, 1845-1930 11905).

IBB usage of Al-Dhabbaya shortwave transmitters started with A06 season, first for RFA in Tibetan and Uighur. Rhodes is probably still on air with ERA programming (0900-1400). (Aaron Zawitzky/DX Listening Digest/Hauser-OK)

ALL TRANSMISSIONS FROM THE KAVALA AND RHODES RELAY STATIONS WILL CEASE AS OF 0900 UTC, 11 MAY 2006. THIS EFFECTIVELY ENDS BROADCASTING AT THESE STATIONS. THE US GOVERNMENT WISHES TO RECOGNIZE AND TO THANK THE IBB EMPLOYEES AND THE PEOPLE OF GREECE FOR THEIR SUPPORT AND DEDICATION DURING MORE THAN 50 YEARS OF US AND GREEK BROADCASTING.

**TRANSMITTER CHANGES:**

KAV-A 0000-2400 CANCEL ALL  
 KAV-11 0000-2400 CANCEL ALL  
 KAV-12 0000-2400 CANCEL ALL  
 RHO-A 0000-2400 CANCEL ALL

MAY 10, 2006 I M M E D I A T E OPERATIONAL MEMO A06-061

101753 EFC NNNN

(via Aaron Zawitzky/DX Listening Digest/Hauser-OK)

**Updated A-06 schedule of WYFR relays**

0000-0100	Hindi	15195 TAI
0100-0200	English	15195 TAI
0400-0500	German	3955 SKN
0500-0600	Portuguese	9525 MDC
0900-1100	English	9450 IRK
1000-1100	Japanese	7380 K/A
1000-1100	Korean	7130 TAI
1100-1200	Korean	9450 IRK
1100-1400	Chinese	7250 TAI
1100-1400	Chinese	9280 TAI
1100-1400	Chinese	12150 A-A
1200-1300	Indonesian	11520 TAI
1200-1300	Burmese	11560 TAI
1200-1300	Vietnamese	11895 IRK
1300-1400	Burmese	11520 TAC
1300-1400	English	11895 IRK
1300-1500	English	7580 NVS
1300-1500	English	11560 TAI
1400-1500	English	7250 TAI
1400-1500	Urdu	7510 TAC
1400-1500	English	9280 TAI
1400-1500	Bengali	NF 11850 ARM
1400-1500	English	12150 A-A
1400-1500	Hindi	15520 DHA
1500-1600	English	6280 TAI
1500-1600	Chinese	9280 TAI
1500-1600	Punjabi	NF 11850 ARM
1500-1600	Hindi	11560 TAI
1500-1600	English	15520 DHA
1500-1600	English	15750 WER
1500-1700	Hindi	7580 NVS
1500-1700	Russian	9955 TAI
1600-1700	English	6280 TAI
1600-1700	Persian	7520 SMF
1600-1700	Swahili	9590 MDC
1600-1700	English	11850 DHA
1600-1700	Amharic	15750 WER
1600-1800	Turkish	9925 JUL
1700-1800	German	3955 JUL
1700-1800	Arabic	13700 RMP
1700-1800	Arabic	13840 JUL
1700-1800	Swahili	15750 WER
1700-1800	English	21680 ASC
1700-1900	Russian	9495 TAC

1800-1900	English	3955 SKN
1800-1900	Polish	5810 SAM
1800-1900	Swahili	5905 MDC
1800-1900	English	7395 MDC
1800-1900	English	7435 SAM
1800-1900	Arabic	13720 SKN
1800-1900	Arabic	13780 RMP
1800-1900	English	15750 WER
1900-2000	Swahili	5925 MEY
1900-2000	German	7370 SAM
1900-2000	English	7395 MDC
1900-2000	Arabic	7435 SAM
1900-2000	Spanish	7440 MSK
1900-2000	Italian	9490 MSK
1900-2000	French	12060 ARM
1900-2000	Arabic	15165 RMP
1900-2100	English	3230 MDC
1900-2100	English	6020 MDC
2000-2100	Arabic	9705 JUL
2000-2100	French	11895 WER
2000-2200	English	7360 KCH
2000-2200	English	15195 ASC
2030-2130	French	11985 ASC
2100-2200	English	6045 MEY
2100-2400	Chinese	7235 TAI
2100-2400	Chinese	9280 TAI
2115-2315	English	11875 ASC

(DX Mix News-BUL)

**KNLS Broadcast Schedule, starting March 26:**

0800-0900	English	11870
0800-0900	Mandarin	11765
0900-1000	Russian	11870
0900-1000	Mandarin	11765
1000-1100	English	9795
1000-1100	Mandarin	11765
1100-1200	Mandarin	9615
1100-1200	Russian	9655
1200-1300	English	9615
1200-1300	English	9780
1300-1400	Mandarin	9615
1300-1400	Mandarin	9795
1400-1500	Mandarin	9615
1400-1500	English	9795
1500-1600	Mandarin	9615
1500-1600	Russian	9795
1600-1700	Mandarin	9615

1600-1700	Russian	9795
1700-1800	Russian	7355
1700-1800	Mandarin	9615

(KNLS 8 May 2006, via JKB/Worldwide DX Club/Ku-biak-DE)

**VATICAN CITY** Frequency changes for *Vatican Radio*:

0030-0100	Portug.	NF 9610 SMG, ex 9605
0100-0145	Spanish	NF 9610 SMG, ex 9605
0145-0230	Spanish	NF 9610 SMG, ex 9605
0230-0250	French	NF 9610 SMG, ex 9605
0250-0320	English	NF 9610 SMG, ex 9605
0320-0400	Spanish	NF 9610 SMG, ex 9605

(DX Mix News-BUL)

**VIETNAM Radio the Voice of Vietnam (VOV)**

launched its broadcast in the Dao ethnic language at a ceremony held in northwestern Son La province on May 07, the 52nd anniversary of the Dien Bien Phu Victory. The Dao-language broadcast, the tenth program of the VOV for ethnic minority groups, will be aired three times a day at 0000, 0400 and 1330 UTC on 6165, MW and FM. VOV has set up broadcasting stations in the mountains of Quan Ba (Ha Giang province), Sin Ho (Lai Chau province), Mau Son (Lang Son province) and Pha Din (Son La province). The broadcast, covering an acreage of 80,000 sq.km, will disseminate the policies of the Party and State to the Dao community and other ethnic minority groups. The Dao group, with a population of 500,000, lives along the Vietnam-China and Vietnam-Laos border line, and in midland and coastal provinces of northern Vietnam. (Vietnam News Agency on ABU Website, May 11, via Alam al-Amin, Gupta and Liangas/DSWCI DX-Window)

**UNIDENTIFIED** 4824.7, New UNID Central Asian station, 1935-1950, May 08, Vernacular ann, songs with string instruments. Off upon recheck at 2025. Tajikistan and Turkmenistan were heard on usual 4635, 4930 and 5015. (Petersen/DXV/DSWCI DX-Window)

**SI/**

For faster service with membership dues payments, address changes, or missing bulletins, send all information to NASWA, 45 Wildflower Road, Levittown, PA 19057-3209. The email address for these things is weoliver@comcast.net. Please send articles and comments for the Musings section of "NASWA Notes" to Rich D'Angelo whose address appears on his masthead

# Pirate Radio Report

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

Hello and welcome to the June 2006 edition of the *Pirate Radio Report*.

Conditions on the pirate bands have started to deteriorate in the past couple of weeks. Summer static can be fierce with thunderstorms in the area. Europirates can still be heard on nights with good propagation. Be sure to check out Laser Hot Hits on 6275 kHz. If they are coming through well, then others from Europe might be heard as well.

Many thanks to the following fine folks who contributed: Scott Barbour-NH, Joe Miller-MI, Joe Wood-TN, Stephen Wood-MA, George Zeller-OH.

**CBZO**, The Canadian Version of WBZ0?, was logged on 6925 USB from 0001-0023\*, on April 29<sup>th</sup>. Canadian themed pirate with audio from the Bob and Doug McKenzie movie "Strange Brew" and their album "The Great White North". Several IDs between "off-color" Canadian themed humor by Terrence & Philip and punk-type music. "America-@#\$\$% Yeah" from Team America and "Join the Army and kill some Canadian scum as we continue the march to war" via South Park at s/off. Fair/poor. [Barbour-NH]

**Ground Zero Radio**, noted on 6925.6 AM mode from 0115 to 0128 sign off. Program mainly of rock mx but also "Happy Trails" by Roy Rogers and Dale Evans. Elkhorn address. Rather sudden QRT. [Zeller-OH]

**Laser Hot Hits**, a Europirate on 6275 kHz on May 3<sup>rd</sup> from Ireland with lots of Motown music, including the Temptations, but also some obscure artists. ID announcements requesting program sponsors and donations to Merlin, Ontario address. I am hearing this just about every night for the last week with weak but 50% readable signals, lots of QRM [Wood-MA]

**Mac Shortwave**, noted on 6950 kHz at 0055 to 0130 UTC on May 6<sup>th</sup>. Programming featured music from the 1950s including: "Tequila,"

"Sweet Little 16," "Tears on my Pillow," "Hand Jive," and many others. Music was about 75% readable with OM in Voice about 20% readable. Heavy static. Poor. [Wood-TN].

**Northwoods Radio** noted on 6950 USB on May 13<sup>th</sup> from 0030-0040. Hank Williams Jr. 'Country boy can survive' followed by a comic song, station ID and sign off. It appears this may have been a continuation of UNID logging of a half-hour earlier, but without an ID, I'm just not sure. [Miller-MI]

**Radio Strike**, an Italian FM pirate, was noted with a live broadcast at 2300 UTC on May 6<sup>th</sup> over **Mystery Radio** on 6220 kHz in conjunction with the Danish Shortwave Club International's [DSWCI] Jubilee Celebration. They were broadcasting live, greeting listeners on the air in English and Italian. QSLs were to come by sending reception reports to DSWCI headquarters. [Lobdell-MA]

**WBMRR**, noted on 6925 kHz, logged on May 14<sup>th</sup> at 0338 to 0412 sign off. First log of this station. Very well done program consisting of mostly country and western based alternative music. Parody ad for Trucker Willie's Biker Babes R Us store and mention of the Sturgeous rally. ID at 0404. Email address as [WBMRRradio@hotmail.com](mailto:WBMRRradio@hotmail.com). Off with Blue Oyster Cult. Good. [Wood-TN].

**WMPR**, The *Techno Pirate* was noted on 6955 kHz with lots of techno dance music and some ID announcements at 0012 UTC on May 3<sup>rd</sup>. [Wood-MA].

**WNKR [West & North Kent Radio]** noted on 6950, [via **Channel z** relay?], from 0045-0102 on April 26<sup>th</sup>. Classic rock by Foreigner, BTO, Brownsville Station and Steely Dan. Various IDs and UK-accented OM b/w selections with phone number-"287-???-5294". Rough copy with static crashes, co-channel SP fisherman and ute battling for dominance! [Barbour-NH]

Happy Pirate DX!



# QSL Report

Sam Barto • 78 Blakeman Road • Thomaston, CT 06787



**ABU DHABI:** Radio Free Asia 6010 via Al Dhabbaya f/d cd. in 7 wks. (Barto-CT).

**ALBANIA:** Radio Tirana International 6115 and 7455 e-mail reply rcvd. in 12 hours from Drita Cico (dcico@icc.al.eu.org) This is the head of the Monitoring Center who promised to forward my rpt. for a postal QSL. Also rcvd. a transmission history in Albanian! (D'Angelo)

**ASCENSION ISLAND:** Star Radio 11690 p/d "Logo" cd. from Foundation Hirondelle in 36 ds. w/ postcard for 1 IRC. v/s Darcy Christen.

**Station Notes:** Radio Mundial 3325 Radio Nossa Voz v/s Mrs. Luci Rothschild de Abreu. Radio Nova Visao Trans Mundial 9530 Addr: Caixa Postal 18.300.

CEP\*04626-970 Sao Paulo, Brasil.

**Radio Novo Tempo** 4895 v/s

Mrs. Ellen Ramos. Addr: Rua Armando de Oliveira 135, Bairro Amambai, CEP\*79005-380 Campo Grande, Brasil. **Radio 8 de Setembro** 2480 v/s Pedro Gaspar, Director.

Addr: Rua Jose Bonifacio 795, Descalvado (SP), CEP\*13690-000, Brasil... via PLAY DX....Sam.

Dear Sir,  
Thank you for your reception report dated 24 DEC 2015 09:12:34 KHZ

which is in accordance with our frequency and programme schedule.

Tx. Power.....

Antenna Type.....

We hope you will continue to enjoy our programmes.

Yours faithfully,  
*N. Njama*  
for Director of Broadcasting

RADIO TANZANIA  
P.O. Box 9191,  
DAR ES SALAAM,  
Phone: 39911-4, Cable "SALTI"  
Telex: 41201.



Bill Smith  
SLOCAST ST. DAUGLAS  
MA 01516-2446  
U.S.A.

Very pleased w/ this QSL. (Wood-MA).  
**United Nations Radio** 17810 n/d "Thankyou Logo" cd. in 15 mos. for \$1.00. (Wood-MA). 17735 and 15495 same cd. in 1 yr. (Barto-CT).

**AUSTRIA:** Radio Austria International 7325 f/d ltr. w/ photo of Saint Stephens on the back in 16 ds. for an e-mail rpt. (Wood-MA).

**BONAIRE:** Radio Nederland 9890 f/d cd. w/ site, brochures and various decals in 20 ds. (Jordan-TN).

**CANADA:** CFVP 6030 f/d ltr. via FAX in 1 day. v/s Ken Pasolli (Brown-MO).

**CLANDESTINE:** Radio Republica 7110 via WRMI n/d ltr. in SP/EG w/ schedule and newspaper article in 55 ds. for \$1.00. (Barbour-NH).

**COSTA RICA:** TIPC Light-house of the Caribbean 5054.6 n/d ltr. w/ f/d EG/SP mini transmitter cd. in

Bayside Market Place and the new American Center are the places for entertainment, concerts and sporting events.  
Photo by Martin Gurnett

## WRMI QSL

Date/Fecha (UTC): 18 Aug 2015

Time/Hora (UTC): 1653

Freq./Frec. (KHz): 13155

Via Jülich, Germany relay

Program: Minivan Radio

73. Jeff White

RADIO MIAMI INTERNATIONAL  
175 Fontainebleau Bld #1N4  
Miami, Florida 33172 USA  
www.wrmi.net



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

129 ds. from v/s Lic. Ronald Ortiz R., Administrative Manager. The station invited me to try their signal on the internet at [www.farodelcaribe.org](http://www.farodelcaribe.org). (D'Angelo-PA).

**CUBA:** China Radio International 13740 via Habana f/d "China's Endangered Rare Animals - Saiga" cd. in 48 ds. Schedule rcvd. (Humenyk-ONT).

**CZECH REPUBLIC:** Radio Prague 21475 via Litomysl f/d cd. w/ site, schedule, decal and station magnet in 3 wks. for a rpt. via a form on the web site. (Jordan-TN).

**DIEGO GARCIA:** Armed Forces Radio and Television

Service 4319 p/d ltr. w/ postcard in 24 ds. v/s Marshall Bennett. Tnx. Barbour. (Paszkie-

**ENGLAND:** WYFR Your Family Radio wicz-WI).

7240 via Woolferton f/d cd. in 5 wks. w/ brochures and stickers. (Barto-CT).

**GERMANY:** Radio Free Syria 9495 via Wertachtal p/d ltr. in 5 wks. from DTK. (Barto-CT).

13650 via DTK Julich p/d ltr. in 5 wks. (Barto-CT).

Bible Voice Broadcasting 12035 via Julich f/d "Globe / Antenna" cd. w/ sticker & schedule in 103 ds. (Humenyk-ONT).

**IBRA Radio** 9520 via Julich f/d "Man Listening to the Radio"

**STATION NOTES:** Voice of Jinling 5860 v/s Mrs. Ruoyi

Liu, Speaker for the Ruoyi Time Program. Radio

Taiwan International 5960 Addr: 55 Pei An Road,

104 Taiwan. Fu Hsing Broadcasting Station 15250

Addr: 5 Lane 280, Section 5, Chungshan North Road,

Taipei 111, Taiwan. Voice of America Botswana Relay

Station v/s Thomas Powell, VOA Transmitting Plant Man-

ager. Radio Bare 4895 Addr: Avenida Carvalho Leal 250,

CEP\*69065 Cachoerinha, Manaus, Amazonas, Brasil. Radio

Brasil 4785 v/s Adilson Gasparini, Diretor Comercial &

Artístico. Addr: Avenida Benjamin Constant 1214, 5 andar,

CEP\*13010-141 Campinas, SP, Brasil....via PLAY DX.....Sam.

cd. w/ site in 52 ds. for 1 IRC and a report to the Stockholm address. (Barbour-NH). Radio Free Asia 9875 via Lampertheim cd. in 7 wks. (Barto-CT). Voice of America 9575 via Biblis f/d cd. in 6 wks. (Barto-CT). Adventist World Radio 15245 via DTK Julich p/d ltr. in 5 wks. (Barto-CT). Voice of the Democratic Path of Ethiopian Unity 9620 via DTK Julich p/d ltr. in 5 wks. (Barto-CT). Save the Gambia Project / Voices from the Diaspora 9405 via DTK Julich p/d ltr. in 5 wks. (Barto-CT). Voice of Oromo Liberation 9820 via Wert-

achtal p/d ltr in 5 wks. (Barto)





1973 • THREE DECADES OF FAITHFUL SERVICE • 2003

**Family Radio**  
The Sound of the New Life

That all the people of the earth may know that the LORD is God, and that there is none else. (1K 8:20)

*Giving the winds a mighty voice...*

al. **Radio Senado** 5990 v/s Jose Carlos Sigmarina, Coordenador da Secao de Ondas Curtas. Addr: Radio Senado, Senado Federal, Praca dos Tres Poderes, Anexo II, Bloco B, Terreo, CEP\*70165-900 Brasilia, DF, Brasil  
**Rede Boa Vontade** 6160 v/s Jose Joaquin Martin Rodrigues, Gerente da Radio. Addr: Avenida Sao Paulo 722, Bairro Sao Geral, CEP\* 90230-160, Porto Alegre, Brasil....via PLAY DX....Sam.

Amilcar Madrid. (Jordan-TN)

**HUNGARY: Radio Budapest** 9850 via **Jaszbereny** f/d "Vintage YL announcer on Magyar Radio" cd. in 29 ds. w/ schedule. (Humenyk-ONT) Was the YL vintage or the radio?...Sam.

**INDIA: All India Radio** 7270 via **Chennai** f/d "Man w/ Dog, Bhimbetka" cd. in 6 wks. (Barto-CT). 11935 via **Mumbai** f/d "Group of Animals, Bhimbetka" cd. in 6 wks. (Barto-CT). 4990 via **Itanagar** f/d "Lions on Elephants Flanking the entrance to Bhoga-Mandaja, Konarel" cd. in 57 ds. Same v/s as above. (D'Angelo-PA).

**IRAN: Islamic Republic of Iran Broadcasting** 3945 via **Zahedan** n/d Kahju" \* Bridge" cd. w/ the usual assortment of religious material. They asked for my phone # for an interview. I may consider giving it to them in exchange for a f/d Zahedan QSL. (D'Angelo-PA).

**KASHMIR: All India Radio** 4830 via **Jammu** f/d "Rock Shelter, Bhimbetka" cd. in 6 wks. (Barto)

**GOA: All India Radio** 9705 via **Panaji** f/d cd. in 57 ds. via their web form. v/s Y.K. Sharma, Spectrum Management Director. (Jordan-TN)

**GUATEMALA: Radio Verdad** 4052.5 f/d paper cd., personal ltr., brochure, calendar, decal and a yellow cloth station pennant in 26 ds. for an EG rpt. and \$1.00. 200 watts. v/s Dr. Edgar

**STATION NOTES: Radio Record** 6150 v/s Ivone Almeida, Diretor Ger-

CHINA TIBET PEOPLE'S BROADCASTING STATION

**西藏人民廣播電臺簡介**

西藏人民廣播電臺創辦于1969年7月3日。當時呼號為“西藏人民廣播電臺”。同年3月，改呼號為“西藏人民廣播電臺”。1981年6月，西藏人民廣播電臺成立編委會，第一次明確提出了“以藏語為主，藏西語并舉，各有側重”的節目宣傳方針。1985年8月25日，西藏電台立台特設廣播正式開播。1989年11月1日，西藏電台的藏語廣播節目上線播出；1989年3月1日，西藏電台的西語廣播節目上線播出。

2002年，創辦藏語新聞綜合頻率，藏巴語綜合頻率，藏語新聞綜合頻率和藏西語生財頻率。西藏人民廣播電臺現有4套廣播節目。每天總播音18小時35分鐘，節目製作、播出全部實現數字化。此外，西藏人民廣播電臺是全國廣播中央人民廣播電臺第一、二套節目和廣播節目。目前，全國廣播人口覆蓋率達94.9%。目前，西藏人民廣播電臺的節目還向阿拉伯、美國、英國、大馬尼拉等多國空、牙

美、加、加拿大、澳大利亞、日本、印度等國。經過多年的發展，西藏人民廣播電臺創辦了一大批具有地方特色、深受聽眾喜愛的節目，如《牧場雜誌》、《今夜有約》、《中國西藏之聲》、《藏語新語匯》、《999藏語匯編》、《藏語天地》、《動盪的聖地》、《作偽的書》、《秘密的書》、《列島與西藏》、《色在幸福》、《走過西藏》等長短廣播節目。

中國·西藏人民廣播電臺  
CHINA TIBET PEOPLE'S BROADCASTING STATION  
www.tibetradio.cn

尊敬的 Samudh Bator, 先生，  
請聽聽從 USA 寄來的電報簡報。我們很高興說明你收聽的電報是我台錄下。

收報日期: November 24, 2008  
來電時間: 12:00 - 12:12  
電報號碼: 4905 3412  
簽名: [Handwritten signature]

**KUWAIT: Radio Free Asia** 7550 cd. in 7 wks. (Barto-CT).

**MONGOLIA: Radio Free Asia** 7470 via **Ulan Bator** cd. in 7 wks. (Barto-CT).

**MALAGASY REPUBLIC: WYFR** 11805 f/d "Three Decades" cd. in 1 mo. w/ stickers, sked., program guides and bible study (D'Angelo)



**LIBERIA: Radio Station ELWA** f/d cd. w/ ltr. in 22 ds. for \$1.00. via the Ivory Coast maildrop. v/s Moses T. Nyante - Sarga Borkay. (Brown-MO).

**MOROCCO: Voice of America** 13740 and 17725 f/d "Morocco" cd. in 6 wks. (Bar-to-CT). f/d cd. w/ magnet in 50 ds. (Brown-MO).

**NEW ZEALAND: Radio Print Disabled** f/d \* cd. w/ ltr. in 29 ds. for \$1.00. v/s Brian Stokoe. (Brown-MO).

**PAKISTAN: Radio Pakistan** 11570 f/d "Alam-giri Gate" cd. w/ ltr. in 68 ds. for 1 IRC. v/s Muhammad Ayub, Engineering Department. (Barbour-NH).

**PAPUA NEW GUINEA: Wantok Radio Light** f/d cd. w/ ltr. in 36 ds. for 2 IRCs. They said that IRCs are no good in PNG. (Brown-MO). **Voice of Oro** f/d ltr. in 34 ds. This station is also known as Radio Northern v/s Margarette

**STATION NOTES: Radio Brasil Central** 4985 v/s Silvio Jose da Silva, Gerente Executivo da Radio Brasil Central. Addr: Rua SC-1 No. 299, Parque Santa Cruz, CEP\*74860-270, Goiania, GO,

Brasil. **Radio Caiari** 4785 v/s Mrs. Alizangela Lima, Station Director. **Radio Cancao Nova** 9675 Addr: Fundacao Joao Paulo II, S/n Caixa Postal 57, CEP\*12630-000 Cachoeira Paulista, SP, Brasil. **Radio CBN Anhanguera** 11830 / 4915 v/s Fabio de Campo Roriz, Diretor. Addr: Rua Thomas Edison, Quadra 07, Setor Serrinha, CEP\*74835-130 Goiania, GO, Brasil...via PLAY DX...Sam.



Embahe. (Brown-MO).

**ROMANIA: Radio Romania** 6135, 9645, 11745, 11940 and 11965 several different cds. in 1150 ds. w/ stickers. (Humenyk-ONT).

**SAO TOME: Voice of America** f/d cd. w/ calendar and schedule in 45 ds. (Brown-MO).

**SOUTH AFRICA: Channel Africa** f/d ltr. in 21 ds. for \$1.00. v/s Kathy Otto. (Brown-MO). **Adventist World Radio** 6100 and 9820 via Meyerton p/d ltr. in 5 wks. (Barto-CT).

**SWAZILAND: Trans World Radio** 4775 f/d blue cd., schedule and religious tract in 57 ds. for \$1.00. (Jordan-TN).

**SWEDEN: Radio Sweden International** 15240 f/d cd. w/ schedule in 20 ds.

**TAIWAN: Radio Taiwan International** 11635 via Paochung p/d "Bamboo Lanterns" cd. in 6 wks. (Barto-CT). 11665 f/d "Night Market in Keelung" cd w/ schedule in 2½ mos. (Barto-CT). 11665 f/d cd. in 2 mos. (Barto-CT). 6085 and 11715 via Tainan p/d cd. in 2 mos. (Barto-CT). 11710 and 11885 via Huwei p/d "Bamboo Lanterns" cd. w/ schedule in 6 wks. (Barto-CT). 9680 and 11780 same cd. in 2 mos. (Barto-CT).

**QSL**  
Certificado de Sintonia

Emisora Radio Santa Ana, Santa Ana, Cusco, Peru

Para Richard A. D'Angelo

Muchas gracias por su informe de recepcion. Tenemos el gusto de confirmar su control de nuestra emision en 4,965.8 KHz. de fecha 20 Diciembre 2005 a las 10.07 a 10.28 horas de UTC con          vatios de potencia.

*Guillermo Cardenas Orasso*  
(C. de P. Cusco)

X \_\_\_\_\_  
firma

sello oficial



*Emisora*  
*Armonias del Caquetá*

H.J.V.K.  
30 KW - 970 KHz  
Canal preferencial  
3 KW - 4915 KHz  
Onda corta

11780 and 9780 p/d "Night Market in Keelung" cd. in 2½ mos. (Barto-CT). 6105 and 6150 via **Kouhu** p/d "Bamboo Laterns" cd. in 6 wks. (Barto-CT). 7185 and 6105 cd. in 2 mos. (Barto-CT). **Voice of China** 7270 via **RTI** f/d "Taiwanese Puppets" cd. w/ schedule and rpt. forms in 6 wks. (Barto-CT).

**TAJIKISTAN: Radio Free Asia**

7415 via **Dushanbe** cd. in 7 wks. (Barto-CT).

**THAILAND: Voice of America** f/d cd. in 10 mos. w/ calendar, schedule and program guide. (Brown-MO).

**TIBET: China Tibet Peoples Broadcasting Station**  
4905 and 4920 via **Lhasa** f/d cd. in 2 mos. w/ schedule. (Barto-CT).

**USA: Radio Free Asia** 15505 p/d cd. w/o site in 7 mos. (Farnell-MO). Marlin Field says that he received a letter from the Voice of America noting that they do not verify Radio Thailand transmissions from VOA relays.

**STATION NOTES: Radio Gazeta** 5995 / 15325 v/s Benedito Leite da Costa, Supervisor de Operacoes. Addr: Avenida Paulista 900 - 4 Andar, CEP\*01310-940 Sao Paulo, SP, Brasil. **Radio**

La Radio que Usted Necesita



La Gran Cadena Radial  
de la Paz

**Guaiba** 6000 v/s Ademar J. Dallanora, Gerente Administrador. Addr: Rua Caldas Junior 219, CEP\*90019-260 Porto Alegre, RS, Brasil. **Radio Guaruja Paulista** 5045 v/s Orivaldo Rampazo, Diretor Presidente. Addr: Rua Montenegro 196, Conj. 01, Vila Maia, CEP\*11410-040 Guaruja, SP, Brasil. **Radio Globo Sao Paulo** 6120 v/s Roberto Cidade, Chief Engineer... via **PLAY DX**....Sam.



**USA (Pirates): Undercover Radio** 3365 usb f/d "Mobile Unit's Maiden Voyage" cd. in 45 ds. including a CD of the "2006 New Years Show" that I reported. (D'Angelo-PA). **Commander Bunny** I received an unsolicited "Homeland Security" wanted posted. I'd be much happier if the stations I actually heard responded. (Barbour-NH).

**ZANZIBAR: Radio TV**

\* **Zanzibar** 11734  
ltr. in 62 ds.  
for \$2.00.  
(Bill Smith,  
W1OW-MA).

Till next time.

*Sam*

**QSL**

**Certificado de Sintonía**

**Radio Trans-Continental de América, S.A. de C.V.**  
PLAZA SAN JUAN No. 5-2 COL. CENITO MEXICO, D.F. TEL. 5518-4938

LIC. RUBEN CASTAÑEDA ESPINOOLA DIRECTOR GENERAL

MUCHAS GRACIAS POR SU INFORME DE RECEPCIÓN  
TENEMOS MUCHO GUSTO EN CONFIRMAR SU CONTROL DE  
MUESTRA EMISIÓN EN 4810 KHZ XERTA VIA IONOSFERA  
(¡ MAS CERQUITA DE DIOS !)

**RADIO EMISORA DE COBERTURA MUNDIAL**  
4810 KHz. Banda Tropical  
DE 60 METROS

XERTA ONDA CORTA 60 METROS

# Scoreboard

Gary R. Neal • 4866 N. Wyndham Rd. • Wichita, KS 67219-5501 • gmeal@earthlink.net

This month we are highlighting our members' totals from North & Central America. This is your chance to show everyone how well you are doing. The next deadline is May 15<sup>th</sup> for the June 2006 issue of the *Journal*. The spotlight will be on Africa.

Name, State	Total		N. & C. America		Best N. & C. America QSL
	c/h	c/v	c/h	c/v	
Jerry Berg, MA	244	244	26	26	ZNX32 Barbados Rediffusion Ltd.
Marlin Field, MI	244	244	25	25	CFRX (10 w.)
Tom Williamson, ON	243	230	28	26	PJC Curacao
John Sgrulletta, NY	240	240			
Steven R. Lare, MI	236	220	22	21	CKFX (10 w.)
Harold Cones, VA	234	232			
Dan Robinson, MD	230	196	28	17	Martinique
Rich D'Angelo, PA	225	223	22	22	Gronlands Radio, Greenland
Chris Lobdell, MA	224	221	24	23	VSWI - Turks & Caicos
Sheryl Paszkiewicz, WI	224	219	21	21	R N El Salvador
Jerry Klinck, NY	220	202	22	21	R. Miskut
Paul Buer, FL	218	207	24	23	CKFX (10 w.)
Christos Rigas, IL	217	198	21	20	R. Free Grenada
Ron Howard, CA	212	200	22	21	Turks & Caicos
Jerry Johnston, KY	209	139	20	16	CHU off frequency 3333 kHz
George Maroti, NY	206	199	18	16	R. Miskut
Stephen Price, VA	193	174	17	16	Turks & Caicos
Ross Comeau, MA	193	172	18	16	R. Miskut
Allan R. Loudell, DE	192	167	20	19	YSS. El Salvador & R. Belize
James R. Renfrew, NY	189	161	20	20	R. Venceremos
Gary W. Froemming, AZ	184	44	17	6	WWVL
Bob Raymond, NH	175	150			
Mark Humenyk, ON	169	148	14	14	KUSW
Scott R. Barbour, NH	164	110	15	13	WRNO
George L. Glotzbach, MN	154	136	15	14	CKZN
Paul Brouillette, IL	148	121	19	19	CKFX (10 w.)
Scott C. Newman, IN	148	113	17	17	R. Grenada
Richard Bradley, MA	145	130			
Dan Srebnick, NJ	145	111			
Jilly Dybka, TN	145	108	15	14	La Voz del CID
David Turnick, PA	144	129	15	12	R. Impacto, Costa Rica
Edward G. Stroh, IL	135	104	18	15	R. Grenada
Gary R. Neal, KS	134	124	16	14	CHNX (50 w.)
John Mosman, WI	120	120	18	18	Swan Island
Bill Smith, MA	119	119	16	16	Swan Island
Richard Lawrenson, RI	116	110			
Jerry Ervine, TX	110	60			

# Contributors' Page

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

## DEADLINE FOR CONTRIBUTIONS IS THE 10th OF THE MONTH

The following members sent in contributions:

<b>Brian ALEXANDER</b> , Mechanicsburg, PA	NRD-545 AOR AR-7030 100' LW
<b>Scott BARBOUR</b> , Intervale, NH	R-75, MLB-1, 200' Beverage
<b>Jerry BERG</b> , Lexington, MA	R8 19, 41, 90 meter dipoles
<b>Forrest S. BISHOP</b> , Cincinnati, OH	Sangean ATS-909 with a built-in antenna
<b>Ralph BRANDI</b> , Middletown, NJ	AOR7030, R8, 300' longwire, T2FD
<b>Eric BUENEMAN</b> , Hazelwood, MO	ATS803S, MFJ-1778, G5RV, MFJ956 tuners
<b>Lawrence BULK</b> , Mullica Hill, NJ	AOR AR-7030 Plus, SW7600GR, Wellbrook ALA 330S
<b>John CALLARMAN</b> , Krum, TX	NRD-525, 80' inverted L
<b>George CARAS</b> , Saco, ME	RX340, R8B, Orion, R30, SE3, 550lw, verticals
<b>Rich D'ANGELO</b> , Wyomissing, PA	TenTec R340, Lowe HF-150, DX Sloper
<b>Jim EVANS</b> , Germantown, TN	RX340, 30 m wire, R8B AN-LP1
<b>Bob FRASER</b> , Belfast, ME	Sony ICF-2003 ICF-sw100S 2m LW
<b>George HERR</b> , Playa del Rey, CA	G303e. R8B. 45' lw, Am Rad active antenna
<b>Ron HOWARD</b> , Monterey, CA	NRD545, LW 160'
<b>Jan LUCAS</b> , Lindenhurst, NY	Drake 2B, Carolina Windom
<b>William McGUIRE</b> , Cheverly, MD	DX-380
<b>Bill MONTNEY</b> , Lachine, MI	AOR 7030+, 80' random wire
<b>Dale PARK</b> , Honolulu, HI	Sangean ATS-818CS
<b>Sheryl PASZKIEWICZ</b> , Manitowoc, WI	ICOM R-8500, NRD345, AOR LA-350 loop
<b>Jim RENFREW</b> , Byron, NY	Drake R8B, 1000 bev w/ 100' wire, Quantum Phaser
<b>Jim RONDA</b> , Tulsa, OK	FRG-100B, FRG-7, Eavesdropper
<b>Clem SHEMANSKI</b> , Cape Fear, NC	Sat 700, Sony SW07, AN-LP2
<b>Paul SHINN</b> , Valley Springs, CA	R5000, R390A, 160' LW
<b>Louis Crisler SMITH</b> , Thurmont, MD	R-75, 160' long wire
<b>Dan SREBNICK</b> , Aberdeen, NJ	Sat 800, 130' long wire
<b>Mark TAYLOR</b> , Madison, WI	R-75, Sat 800, EWE, Eavesdropper
<b>Joe WOOD</b> , Gray, TN	R-75, Sat 800, EWE, Eavesdropper DX-390, Grundig Mini 100 PE, whip antenna 

## 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. Webmaster Ralph Brandi has updated almost four thousand entries in the database for the new broadcasting season. Visit the Guide on the new NASWA web site at <http://www.naswa.net/swlguide/>. 

### **NASWA**

Visit our newly redesigned and refreshed club home page on the World Wide Web at <http://www.naswa.net/>

# Tropical Band Loggings

Dan Ferguson • 4205 Friendfield Trace • Little River, SC 29566 • troplogs@zerobeat.org

- 2310 **AUSTRALIA VL8A** 1136-1141 EE interview with author; good 4/29. Also heard on VL8K 2485 and VL8T 2325, both fair. (Brown, MO)
- 2325 **AUSTRALIA VL8T** Tennant Creek 0939-0949 end EE nx re Indo violence, wx, "ABC News" ID 0940 and "ABC TV" promo. Music intro from "The Good, The Bad and The Ugly" and 2 M re "nationwide controversy" of some sort, pop music. Fair at t/in, fading rapidly after that. //2310-VL8A. 4/30. (Barbour-NH) 0920-0946 EE interview w/mx director; 0934 ABC News. 5/14. (Taylor-WI)
- 3185 **USA WWRB** 1037 M w/ "Last Trumpet Ministries". Fair 5/5. (Herr-CA)
- 3205 **PNG R. W. Sepik** 1132 M in lang; poor 4/26. (Herr-CA) 1145 M in dialect; good 4/22 - best PNG this month. (Brown, MO)
- 3220 **ECUADOR HCJB** 0913-0925 SS rel talk, mx; strong 4/9. (Brown, MO)
- 3234.8 **PERU LV Sonido** (P) 0915-0920 YL singing in SS w/Andean flutes; M talk in Quechua; fair 4/9. (Brown, MO)
- 3235 **PNG R. W. N. Britain** 1210-1218 W in Tok Pisin intors to mx selections; good 4/29. (Brown, MO)
- 3240 **SWAZILAND TWR** 0323-0335 in vern, S.Af. mx, ID 0330, M w/rel monologue; 4/5. (Caras, ME) 0340 rel pgm; F/P 5/13. (Ronda-OK)
- 3255 **S. AFRICA BBC** Meyerton 0331-0401 EE Af nx, ID 0345 in passing, poor 4/6. (Caras, ME)
- 3279.6 **ECUADOR Voz del Napo/R. Maria** 0919-0945 M SS anc, choir singing, tentative ID 0930; ran- chero mx 0943. Fair 4/29. (Montgomery, PA) 3279.7 0839-0848 contemporary instl mx, into SS vocals by W; good 4/9. (Brown, MO)
- 3280 **CHINA V. Pujiang** 1204-1209 M&W w/CC nx items; good 4/29. (Brown, MO)
- 3291.15 **GUYANA V. of Guyana** in EE 0340-0402 anmts, several ments Georgetown, Elvis, mx, ID 0346 pgm previews, five min dead air then ballads, pips, BBC pgm, ID ToH, strong 4/5. (Caras, ME)
- 3291.2 **GUYANA V. Guyana** 0845-0900 Hindi rel svc; chants by W, into EZL EE vocals; M ID & time pips; good but fuzzy audio 4/9. (Brown, MO)
- 3291.4 **GUYANA R. Guyana 2**; 0910-0920, EE, W ID 0913 as "The Voice of Guyana"; mx pgm; ad 0914 of an up coming program; then M anc w/death anmt and song dedication, tune of Indian origin; excellent 4/29. (Montgomery, PA)
- 3320 **N. KOREA Pyongyang** 1147 martial mx; poor 4/22. (Brown, MO)
- 3320 **S. AFRICA R. Songergrense** 0335 with Afrikaans and English pop mx; anmts in Afrikaans; F/G 5/13. (Ronda-OK) 0400 morning pgm w/peppy pop music, female DJ in Afrikaans, news 0400, ID 0405, weather report included mention of the Northwest and Port Elizabeth. 4/22. (Renfrew-NY)
- 3325 **PNG R. Bougainville** 1216-1219 child's choir; fair 4/14. (Brown, MO)
- 3335 **PNG R. E. Sepik** 0943 discussion between man and women in lang. poor 5/13. (Herr-CA) 1148 chorus; F/P 4/22. (Brown, MO)
- 3345 **PNG R. Northern** (P) 0757 Sing-sing music, YL anc, low modulation, EZL version of "Strangers in the Night" 0855, news 0900 // Port Moresby on 4890 but fading out by this time; 5/13. (Brandi-NJ)
- 3385 **PNG R. E. N. Britain** 1003 M in Tok Pisin; poor 5/13. (Herr-CA) 1221 M EE intros, pop hits; F/G 4/14. (Brown, MO)
- 3905 **PNG R. N. Ireland** 1010 Male speaking in lang occ. short chant; fair 5/13. (Herr-CA) 1003 IS, W anc, then M in lang; poor 5/5. (Herr-CA)
- 3925 **JAPAN Nikkei Radio** 0934-0945 W JJ talk; poor 4/29 with // 6055 threshold. (D'Angelo-PA)
- 3944.77 **VANUATU R. Vanuatu** (p) 1011-1030 Vernacular, local mx; M&W banter; poor; 5/6. Also 0957-1012 ballads b/w M w/ "animated" religious sounding talk. Poor 5/7. (Barbour-NH)
- 3955 **GERMANY WYFR** Skelton 0443 GG; WYFR trumpets 0443 & 0459; 5/11. (Renfrew-NY)
- 3976 **INDONESIA RRI Pontianak** 1117-1120 pop & C&W mx. Signal at noise level, popping up just a few times in heavy ARO interference. Weakest signal of the group 5/13. (Jim Evans, TN) 3976.06, 1328 lively music show in lang M/F DJ's; good 5/6. (Herr-CA)
- 3987.04 **INDONESIA RRI Manokwari** 1329 Song in EE "Say That You Love Me", time pip TOH. Good. (Herr-CA)
- 4052 **GUATEMALA R. Verdad** 0356 gospel songs; SS ID 0359; F/P 5/12. (Ronda-OK)
- 4319 **DIEGO GARCIA AFRTS** 0004-0010 EE Sports nx: NBA, WNBA playoffs, golf, NASCAR, and baseball recaps. ABC nx. Soaring oil prices. Pols accuse Big Oil of price gouging. exc 5/1 (CrislerSmith MD)
- 4330 **CHINA Xijiang PBS** (p) 1225-1231 exotic Kazakh style mx; fair 4/22. (Brown, MO)

- 4386.57 **PERU R. Imperio/R. Vision** (P) 0922-0936 SS, local mx, talk over music 0930, into rel svc w/YL simultaneously praying. Poor/rough copy 4/30. (Barbour-NH)
- 4386.6 **PERU R. Imperio** (T) 0944-1002 SS rel svc, M 0947 (tent) ID in passing; back to rel svc 0951; YL talk over at 0957 thru t/out; poor 5/2. (Barbour-NH)
- 4450 **N. KOREA Pyongyang** 1221 KK political talk; poor 4/22. (Brown, MO)
- 4604.95 **INDONESIA RRI Serui** 1116-1132 pop & C&W Indo mx; 1130 M ID, talk; good 5/13. (Evans, TN) 4604.96, 1029 II pop mx; fair 5/5. (Herr-CA) 4605, 1201-1205 South Seas mx by YL; very good 4/22. (Brown, MO)
- 4716.82 **BOLIVIA R. Yura** (P) 0111-0140 SS(?), mx at t/in, brief YL in SS then continuous music thru t/out; poor 4/18. (Barbour-NH)
- 4750 **INDONESIA RRI Makassar** 1106-1132 talk by M (probably news) in Bahasa, mention of Indo, then pop & C&W Indo mx; poor 5/13. (Evans, TN)
- 4754.9 **BRAZIL R. Educaçao Rural** Campo Grande 0922-0925 pop mx, M PP anc; poor 5/13. (Evans, TN)
- 4759.98 **LIBERIA ELWA** 2225 EE talk, "Thanks for listening", ID, mention of Liberia, Liberian NA; QRM from swooper, but not too badly at this hour; 5/6. (Brandi-NJ) 4760, 2240-2300\* EE, mix of choral/hi-life music; whisper-quiet M at 2259 w/ s/off anmts, then; poor 4/17. (Barbour-NH)
- 4770 **NIGERIA RN-Kaduna** 2243-2301\* EE/Vernacular-?; pop/rap mx, rx headlines 2255, music bit 2259 w/ s/off anmt & NA; poor 5/5. (Barbour-NH) 0533-0540 M in EE w/ Hi Life mx; good 4/14. (Brown, MO)
- 4774.95 **SWAZILAND TWR** 0406 GG by W, freq hymns. good //3199.96; poor 5/11. (Herr-CA)
- 4775 **PERU R. Tarma** 0220-0259\* two M SS talk & futbol coverage; ID & s/off anmts 0257, soft instl mx till carrier cut; P/F 4/20. (D'Angelo-PA)
- 4777 **GABON RTV Gabonaise** 0538-0545 FF M anc, 1960s DooWop mx in EE; good but het 4/14. (Brown, MO)
- 4779.97 **GUATEMALA R. Cultural** 1024 SS mx; fair 5/5. (Herr-CA)
- 4789.97 **INDONESIA RRI Fak Fak** 1112-1132 pop & C&W mx with a unique Indonesian flavor; poor 5/13. (Evans, TN) 4790.06, 1127 mx w/ME sound announcer in lang; fair 4/26. (Herr-CA)
- 4795 **BRAZIL Rdiç Aquidauana** 0013-0020 non-stop ballads: voice over acoustic guitars; swisher too. P/F 5/1. (Crisler-Smith MD)
- 4796.53 **BOLIVIA R. Mallku** 0051-0108\* M SS brief talks b/w ballads; canned ID anmt at s/off. Poor w/sweeper QRM 4/30. (Barbour-NH)
- 4819.6 **HONDURAS HRNC, La Voz Evangelica** 1022 SS call in talk show; poor 5/5. (Herr-CA)
- 4835 **AUSTRALIA VL8A** Alice Springs 0818-0829\* soccer w/2 M EE anc; good 4/9. (Brown, MO)
- 4845.2 **BRAZIL R. Cultura Ondas Tropicais** 0151-0203\* BRZ pop vocals; PP ID & fqy anmt by M; group singing; poor 4/20. (D'Angelo-PA)
- 4870.9 **INDONESIA RRI Sorong** (T) 1018 music show; listed as 4870.6 in Tropical Band List; fair 5/13. (Herr-CA)
- 4885 **BRAZIL R. Clube de Para** Belem 0128 lots of music, ID, anmts onda media & onda tropical frequencies, and "Belem, Para, Brasil", steady signal for the hour that I listened; 4/20. (Renfrew-NY) 0613-0619 PP echo ID by M; into BRZ pops; good 4/14. (Brown, MO)
- 4890 **PNG NBC** Port Moresby 1335 5/6 Music at noise level; poor 5/6. (Herr-CA) 1118 mx, M DJ; poor 4/26. (Herr-CA)
- 4909.3 **ECUADOR R. Chaskis** (P) 0403-0422 man talking- maybe Spanish, maybe Quechua but poor audio with echo effect alternating with instrumental music; poor 4/17. (D'Angelo-PA) 0315-0335 local pop mx; short anmts by M 0325 & 0330; poor audio on anmts; poor 5/4. (Jim Evans, TN)
- 4910 **ZAMBIA R. Zambia-ZNBC** 0305-0325 Afr pop mx, M anc in vern; good 4/19. (Jim Evans, TN)
- 4915 **BRAZIL CBN Anhanguera** Goiania 0100-0200\* PP talk; ments of Anhanguera; brief mx breaks; strong, but mixing with a slightly weaker R.Difusora Macapa; fair on// 11829.94v & weak on H 6080; 4/8. (Alexander-PA)
- 4915 **GHANA R. Ghana** 0551 M in dialect; fair 4/14 co-channel BRZ. (Brown, MO)
- 4915.04 **BRAZIL R. Difusora Macapa** 0200-0215+ good signal after Anhanguera signs off 0200. PP talk, Brazilian ballads, ID; good 4/8. (Alexander-PA) 0425-0440 lively pop mx, M w/short PP anmts; M clear ID 0434; good 5/7. (Evans, TN) 0036-0127 PP soccer cmtry by two M, no ID; abrupt s/off 0127 at end of game w/no ID heard. Not usual for Difusora, but most likely of stations on the frequency at this time. Very good. (Taylor-WI)
- 4920 **INDIA AIR** Chennai 1228-1231 YL w/EE nx, M in Hindi; fair 4/14. (Brown, MO)
- 4924.86 **BRAZIL Rdiç Taubate** 0157-0200 PP; no ID heard due to noise; off at 0200; 5/11. (Renfrew-NY)
- 4925 **INDONESIA RRI Jambi** 1332 Indonesian music with m anc; fair 5/6. (Herr-CA)
- 4930 **BOTSWANA VOA** 0417-0430. "Daybreak Africa" pgm w/M anc; Afr nx & cmtry; parallels noted on 4960 (SAO) & 9575 (GVL); poor 4/19. (Jim Evans, TN) 0430 VOA EE pgm 4/25. (Renfrew-NY)

- 4940 **CHINA V. of the Straight** 1225-1231 M in CC w/mx bridges between items; good 4/8. (Brown, MO)
- 4950 **PERU R. Madre de Dios** (P) 0032-0102 M w/lengthy SS talks, brief music bits; canned anmts/ad string at 0046, music 0051, M and various ancrs thru 0100; poor, no discernible ID noted, 4/29. (Barbour-NH)
- 4960 **SÃO TOME VOA** 0417-0430 Daybreak Africa pgm w/M ancr; Afr nx & cmtry; good 4/19. (Jim Evans, TN)
- 4965 **ZAMBIA R. Christian Voice** 0310-0330 talk by man in apparent EE, occasionally rising above the noise level. Very poor signal with heavy fading 4/19. (Jim Evans, TN)
- 4976 **UGANDA R. Uganda** 0330-0340 talk by man in apparent EE, then pop ballad music; poor 4/19. (Jim Evans, TN)
- 4985 **BRAZIL R. Brasil Central** Gioas 2352 mx pgm; mention Ministry of Education & the state of Gioas; frequent canned IDs // 11815, with both about the same strength; 4/23. (Renfrew-NY) 0020-0040+ PP anmts, ads, jingles, PP/US pop mx including a Neil Diamond tune. H 11815 - both freqs fair, 5/1. (Alexander-PA) 0040-0055 PP, ballads & upbeat vocals, brief talk by W; ID jingle 0045; good 5/12. (Taylor-WI) 0004-0018 PP talk, pop mx, nice ID 0010 then banter b/w ancrs, music. F/P 4/18. (Barbour-NH)
- 5005 **EQ. GUINEA R. Nacional** Bata \*0458-0515+ S/on with NA; hi-life mx 0502. SS talk; fair 5/1. (Alexander-PA) 2259\* - presumed, with a preacher (and I nodded off), only to revive upon hearing an anthem at the end of the transmission; 4/23. (Renfrew-NY) 0612 SS, hilife mx; good 4/14. (Brown, MO)
- 5005.1 **NEPAL R. Nepal** (T) 1242 Asian sounding chorus, flutes; poor w/het & UTE 4/8. (Brown, MO)
- 5010 **INDIA AIR Thiruvananthapuram** 1235-1242 W w/EE nx, into Hindi correspondent; het & UTE QRM 4/8. (Brown, MO)
- 5014.38 **PERU R. Atura** 1017 M in SS; fair 5/5. (Herr-CA)
- 5019.9 **SOLOMON ISLANDS SIBC** 1015 M EE ancr; poor. (Herr-CA) 5020, 1304 EE BBC correspondent; fair 4/22. (Brown, MO)
- 5025 **CUBA R. Rebelde** 2307 with 1970's disco music in EE, SS ancr; VG 5/13. (Wood, TN)
- 5030 **BURKINA FASO R. Burkina** \*0558-0615+ s/on w/NA; opening FF anmts 0600; Afro-pops 0602; FF talk; mixing w/ University Network. Both in at equal level; 4/8. (Alexander-PA) 0018-0042 FF, apparently running past listed 0000\* w/ continuous banter b/w 2 OM & occasional YL w/ a few mentions of "Ougadougou". Fair w/ occasional 5025-Rebelde slop 4/21. (Barbour-NH) 2325 - strong, steady signal, a flurry of "RTB" IDs. The "Burkina" pronunciation seemed to accent the last syllable. 4/23. (Renfrew-NY)
- 5035 **USA WEWN** surprised to find them here 0355, ID 0400 and continuing, strong; both DBS and EiBi show them here at 0000-0500. 5/14. (Berg-MA)
- 5045 **BRAZIL R. Guaruja Paulista** 0740 caught tail end of PP ID by M; fair 4/14. (Brown, MO)
- 5050 **USA WWRB** Manchester, TN 2310 pgm w/very conservative rhetoric dealing with the catastrophic breakdown of civilization and how to survive in dire times by purchasing books and videos available for nominal fees. VG 5/13. (Wood, TN)
- 5470 **LIBERIA R. Veritas** 2228-2242 EE, reggae mx & ballads w/M remarking on song lyrics. Mentioned 97.8 FM at 2240; poor 5/5. (Barbour-NH)
- 5890 **USA R. Thailand** Greenville \*0030 EE; s/on in the middle of a sentence mentioning FM frequencies, then into business news; 5/13. (Renfrew-NY) 0045-0102 EE nx, sports, Special Report (interview with Cultural Dept. at French Embassy), Upcoming Events (Coronation Day..Royal Thai Army celebrates His Majesty's Coronation), Wx (Bangkok temp - 26.36C; t'storms forecasted in N, NE and E). M&W ancrs. Fair-mod. strong signal. Music, chimes 0100, M ancr in Thai (?). 5/5 (Shemanski-NC)

## NASWA

Visit our newly redesigned and refreshed club home page on the World Wide Web at <http://www.naswa.net/>, including the NASWA Loggings Database, containing logs published in the *NASWA Journal* going back to November, 1998. The NASWA Loggings Database can help you identify a station based on what other club members have heard. Try the database at <http://www.naswa.net/logs/>.

# International Band Loggings

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- 59393 **PERU R Melodia** Arequipa in SP 0705, variety of OA folk mx, SP pops/ballads, short canned Melodia b/w songs, weak w/some adjacent channel splatter (Alexander PA 4/23)
- 59525 **BOLIVIA R Pio Doce** in SP 0130-0229\*, tlk, ads, fair w/QRN from WYFR (Alexander PA 4/14) in SP 0943, SP mx w/OM b/w selections, fair at t/in but unusable by t/out (Barbour NH 4/9) Only 1 kw.!
- 5970 **BELARUS R Belarus** Minsk in EG 0200, IS, multi-lang IDs, ancmt, nx, poor w/much adjacent channel splatter, barely audible on //7210 (Alexander PA 4/8)
- 60102 **COLOMBIA La Voz de tu Conciencia** Puerto Lleras in SP 0408-0502, relig tlk, church bells, lively LA mx w/relig theme, ID, SP male vocal "100 Pounds of Clay", QRM Radio Mil (Callarman TX 5/7)
- 6035 **SOUTH AFRICA BBC** relay in EG \*0255-0403, IS, ID, nx, "The World Today" (D'Angelo PA 4/10)
- 6055 **JAPAN NSB Tokyo 1** in JP 1157, studio tlk, lite classicals, Nikkei ID, news (Ronda OK 5/10)
- 6085 **TAIWAN R Taiwan Int** Tanshui in CH 1130-1200, tlk, traditional mx, drama?, pips toh, //6085, 11665, 11715, 7185, 11780 with the best reception on 11715 (Renfrew NY 5/2)
- 6115 **ALBANIA R Tirana** in EG \*0142-0158\*. ID, ancmts, nx, pgm re developments in Albania, s/off with another ID and close down ancmts, f-g (D'Angelo PA 4/14) ED: entire xmsn only 16 min long.
- 61348 **BOLIVIA R Santa Cruz** in SP 1012, OM/YL alternating spelling a word then repeating the word, some mx bridges, longer tlk, ID, flutes (Taylor WI 5/8, Paszkiewicz WI 5/2)
- 61398 **COLOMBIA R Lider** Bogota in SP, ballads, clear ID at toh, p, off the air lately (Howard CA 5/14)
- 6150 **COSTA RICA World University Network** in EG 0239, Christian teaching by YL preacher, soul music and announcement, fair reception (Bueman MO 4/9)
- 6165 **CHAD Radiodiffusion Tchadienne** N'Djamena in FR 2157-2300\*, mx, nx toh, hi/life pgm, call-ins, bantering DJ over mx, orch NA at s/off (Barbour NH, Renfrew NY, CrislerSmith NJ, Srebnick NJ)
- 6190 **NETHERLANDS ANTILLES R Nederland** relay Bonaire in DT \*0300, ID, pips, "Newline" pgm of international news, good (McGuire MD 5/6)
- 7120 **SOUTH AFRICA BBC** relay Meyerton in EG 0459, ending tlk on UK politics, promo for pgm on alcohol, address given to obtain sked (Callarman TX 4/16) in EG 0402, nx, //6035, f (D'Angelo 4/10)
- 7125 **MOLDDOVA Russian Int'l Radio** relay via Kishinev in RS 0238, lively mx, tlks, nice blend of music that blends RS harmonies w/US rock, exc (Callarman TX 4/13)
- 7130 **TAIWAN RTI** Minhsiung in JP 1155, lively mx, sort of Oriental Andrews Sisters, broke into song for tlk by OM, gave website, flute/string theme 1158, ID, into nx in EG, g (Callarman TX 4/11)
- 7145 **MOROCCO R Aap ki Duniya** (Pakistan FM network) relay via VOA xmtr in Urdu 0130, IS, ID, nx with EG sound-bite, Indian engineer kidnapped in Iraq, ments "Taliban", exc (CrislerSmith MD 5/1)
- 7155 **NIGER L V du Sahel** Niamey in FR 2117, nx, ments "Morocco" and "Iran", field rpts, promos, IS, ID, rpt on Sudan's civil war, f-g (CrislerSmith MD 4/23)
- 7180 **CHINA CRI** Jinhua in Tagalog/CH 1150, ID, CH mx, lang lesson?, echo effect (Callarman TX 4/11)
- 72099v **BELARUS R Belarus** Minsk in EG 0206, feature "Welcome to Belarus", ID (Brandi NJ 5/8)
- 7215 **SOUTH AFRICA TWR** relay in Sidamo 0332, relig tlk, mx theme, short transmission closes out with full TWR ID at 0345 (Callarman TX 4/13) ED: Sidamo is spoken in parts of southern Ethiopia.
- 7220 **VIETNAM V of Vietnam** Hanoi in RS 1144, Oriental mx, nx, ID "Govorit Hanoia", f-g, // 9840 too weak to check (Callarman TX 4/12, Herr CA 4/15)
- 7235 **IRAN VOIRI Voice of Justice** in EG/AR 0133, AR recitation of Holy Koran w/EG translation, IS, nx re Iran's nuclear pgm and the war in Iraq, ID (Taylor WI, CrislerSmith MD)
- 7240 **SOUTH AFRICA Channel Africa** Meyerton in EG 0504, interviews w/OM activist on HIV virus, closes w/several-point pledge for HIV victims, mx theme, addresses, fair (Callarman TX 4/16)
- 72445v **ANGOLA R Nacional Angola 1** in PT 0048, tlks, pop vocals, ID, pips, nx (Paszkiewicz WI 4/14)
- 7260 **THAILAND R Thailand** Udonthani in VT/Khmer 1104-1130\*, calm-voiced OM speaking slowly in VT, brief reedy mx, bong-type chimes, sked, ID in EG "this is HSK9.... public relations department of Radio Thailand" at 1115 and into pgm in Khmer (Callarman TX, Renfrew NY, Barbour NH)
- 7270 **EGYPT R Cairo** in EG 0213, "Holy Koran and its meaning" pgm, ID 0216 followed by Middle East and African nx, cmntry re Palestinian economics at 0225, fair (Barbour NH 5/1)

- 7295 **MALAYSIA Traxx FM** relay via RTM in EG 1039, promos, ID, echo effects, ezl pop mx, lots of ham QRM, p (Barbour NH 4/30) in EG 1041, 80's pop mx by Hall & Oates and other artists w/DJ, ID, TC, countdown on 20 hit-songs, poor w/ham QRM (Howard CA 5/6, Herr CA 5/6)
- 7315 **GERMANY IBC Tamil** relay via Wertachtel in Tamil 0023, nx, fields rpts, "Live" sound bites, on the Internet this station claims not to be a clandestine outlet, exc (CrislerSmith MD 5/1)
- 7380 **RUSSIA WYFR Family Radio** relay via Komsomolsk in JP 1021, instrum<sup>l</sup> mx at t/in, OM over mx with WYFR Oakland, CA address, p-f listening in USB (Barbour NH 4/23)
- 7430 **SRI LANKA VOA** relay in HD 0037, world nx, ments "Iran", ID, website, g (CrislerSmith MD 4/26)
- 7430 **RUSSIA Deut Welle** relay via Petropavlovsk in GM 1035, pgm info, IS, piano interlude, thoughtful cmntry by OM, polar flutter, fair (CrislerSmith MD 4/29)
- 7440 **UKRAINE RUI** Simferopol in EG 0035, ID, relig vocals including Mozart's "Ave Maria", IS, into UK program 0100, f (Taylor WI 5/1) in UK 2300, IS, ID, fqy, sked, nx, g (McGuire MD 5/8)
- 7445 **TAIWAN RTI** Paoching in EG 1106, nx, extensive wx forecasts, readings, ID1110, cmntry on relations with Japan, f-g (Callarman TX 4/11)
- 7590usb **ICELAND AFN** relay via Keflavik in EG 2218, NPR programming, "All Things Considered" about the Mars exploration, ID, "Marketplace" on Bush's plan for oil/gas problem, g (Barbour NH 4/25)
- 9300 **BULGARIA R Varna** in BG 2200, ezl listening pops and ballads w/tlks b/w selections, 5+1 time pips, frequent IDs (Renfrew NY 4/30, D'Angelo PA 5/1, Barbour NH 4/23)
- 9435 **PHILIPPINES FEBC** in IN 2323, relig vocals, ancmts, IS and s/off 2330 (Paszkievicz WI 5/6)
- 9500 **BULGARIA R Bulgaria** in SP \*2300, fqy, sked, IS, ID, website, nx, fair (McGuire MD 4/17)
- 9530v **BRAZIL Transmundial** Santa Maria in PT 0235, contemp Christian mx, stingers w/Transmundial ID and full ID at 0301, website, many more IDs as part of s/off ancmt 0304 (Brandi NJ 5/8)
- 9560 **CANADA Korean BSWR** relay via Sackville in EG \*0200, IS and ID at s/on, f-p (Bishop OH 5/7)
- 9590 **AUSTRALIA ABC** in EG 1420-1500, Saturday Nite Country Show, interview, cmntry by Paul McCartney on not drinking and driving, top C&W of the week, news, p-f, QRM (Montney MI 4/15)
- 9615v **BRAZIL R Cultura** São Paulo in PT 0210-0305\*, ezl PT ballads, lite jazz, s/off w/NA, weak but in the clear, barely audible on //6170 (Alexander PA 4/15)
- 9655 **IRAN VOIRI** Kamalabad in SP 0222, YL w/lengthy tlk, pgm info, piano and dreamy orchestra, three gongs, ID 0330, choral NA, s/off ancmt, carrier cut 0231, good w/some echo (Callarman TX 5/6)
- 9665 **BRAZIL R Marumby** Florianopolis in PT 0100-0215+, church service, relig mx, ID, fair level but mixing w/unid stn but in the clear after 0200, //11750 very weak (Alexander PA 4/15) in PT 2330, preacher w/sermon, IDs, mentioned //9665, 11750, wiped out by VOR s/on 2359 (Renfrew NY 4/21)
- 9700 **BULGARIA R Bulgaria** in EG 2330, "Magazine Economy" - a small town becomes it own tourist center, g, //11700 covered by HCJB (Fraser ME 4/18) in EG 0209, wx fcst, ID (Bueneman MO 5/2)
- 97042 **ETHIOPIA R Ethiopia** Addis Ababa in Amheric \*0300, ID, ancmts, brief mx, YL w/tlk, nx, fair but choppy reception (D'Angelo PA 4/20, Renfrew NY 4/21, Callarman TX 4/18, Paszkievicz WI 4/25)
- 9730 **PHILIPPINES R Veritas Asia** in CH 1128-1155\*, tlks over mx, EG ID at s/off, g (Barbour NH 4/10)
- 9740 **SINGAPORE BBC** relay in EG 1306, tlk re San Francisco earthquake anniversary, ID, feature "Global Business" on health care, exc (Callarman TX 4/18) in EG 2346, interview of YL on recent violence in Sierra Leone, ments "Freetown", poor to fair (CrislerSmith MD 4/26)
- 9770 **SRI LANKA SLBC** Colombo in EG 0058, popped in after Budapest s/off, time pips, ID, All Asia Service of SLBC, inspirational talk, light mx, f-g (Lucas NY 4/24)
- 9795 **HUNGARY R Budapest** in EG +0229-0258\*, ID, nx, "Insight Central Europe", g (D'Angelo PA 4/13)
- 9820 **RUSSIA VOR** relay Samara in EG 1822, Russia & The World - space tests, //9890 (Fraser ME 4/14)
- 9830 **TURKEY VOT** in EG \*2200, IS, pips, ID, TC, fqy, sked, website, good (McGuire MD 4/21)
- 9845 **NETHERLAND ANTILLES R Nederlands** relay via Bonaire in EG 0015, tlk abt Korea and fishing rights, interview, "Newslne", another interview re new govt controls on tattoos, exc (Shinn CA 4/7)
- 9855 **KUWAIT R Kuwait** in AR 2333, YL and OM speaking slowly, short musical theme, "La Vie en Rose" instrumental salon orch background for poetic tlk, abruptly off at 2359, exc (Callarman TX 4/28)
- 9865 **GUAM KTWB** Agana in CH 1059\*, OM w/long tlk, mx, website, ID, fair w/USB (Barbour NH 4/4)
- 9870 **AUSTRIA ORF** Moosbrunn in EG 0159\*, ID, "Report from Austria" re museum exhibit celebrating 250th birthday of Mozart, fair in USB (Barbour NH 4/18)
- 9875 **LITHUANIA R Vilnius** Sitkunai in EG 2326, IS, nx leading w/story on law enforcement union protests criticized by Lithuanian president, vg (Callarman TX 4/28) in EG 2358\*, "Easter Monday" pgm with rpts on disabled persons in Lithuania, childrens' rights, opera sked, s/off contact info, f (Barbour 4/17)

- 9885 **NEW ZEALAND RNZI** in EG 0845, "Mailbag" w/Radio Heritage Foundation feature on Aussie local radio in the 1960s and 70s, good (Park HI 4/17)
- 9885nf **MOROCCO VOA** relay in EG 0137, Press Conference USA hrd in and out with dominant co-channel VOA Greenville in SP, interview on humanitarian conditions in Rwanda (Callarman TX 5/6)
- 9895 **AUSTRIA AWR** relay in Urdu 0215, hymn, tlk, ID, Pakistan & E-mail address, taped transition from Urdu to Pushtu 0230 (language announced in EG), vg (Callarman TX, Paszkiewicz WI)
- 9965 **PALAU TBBZ** (aka KHBN) in CH 1046, YL w/tlk, mx, fanfare 1100, choral group, looking for ID in EG but no luck, huge drop in audio 1107 (Callarman TX, Barbour NH 4/28)
- 9970 **BELGIUM RTBF International** in FR 0358, piano mx, ID, nx, pop rx w/DJ (Paszkiewicz WI 4/30)
- 10320 **HAWAII AFN Pearl Harbor** in EG 0203, "Sporting News Flash", jingle, quick-fire sports coverage including interviews w/athletes and highlights, talk on steroids in baseball, exc (Shinn CA 4/7)
- 11520 **TAIWAN WYFR Family Radio** relay in IN 1410-1500, OM and YL reading drama material w/music interludes, jingles, pips 1430 (Caras ME 5/2)
- 11580 **NORTHERN MARIANAS KFBS Saipan** in CH 1325, nx, ID, fqy data, very weak (Caras ME 4/30)
- 11585 **ISRAEL V of Israel** Tel Aviv in HB 2020, impassioned rhetoric in HB, 6 pips 2100 (5 short, 1 long) followed by nx, mx, telephone interviews, fair (Callarman TX 5/5)
- 11625 **SPAIN REE** Noblejas in SP \*2100, IS, pips, ID, national & regional nx, f (McGuire MD 5/8)
- 11630 **CHINA CNR Beijing 1** via Lingshi in CH 1330, frenetic talk, nx, jingles, //11925 (Caras ME 4/2)
- 11700 **BULGARIA R Bulgaria** in FR 0100, IS, ID, fqy, sked, national nx, g (McGuire MD 5/9) in EG 0250, IS, nx and daily events features, f-g at t/in but quickly deteriorating (D'Angelo PA 4/14)
- 11705 **SRI LANKA VOA** relay in EG 0112, nx re situation in Nepal, administrative court in Thailand looks at allegations of election violations, prom, feature on jazz legend Toots Thielemans (Callarman TX 4/29)
- 11745 **CHILE Voz Cristiana** Santiago in PT 0226, contemporary Christian mx, promo, f (Bueneman MO 4/9)
- 11760 **CYPRUS BBC** relay in EG 0347, interview w/official in Tonga re earthquake that hit, sparking fears among the population of a possible tsunami, dominant over RHC Havana, vg (Callarman TX 5/3)
- 11780 **BRAZIL R Nacional de Amazonia** Brasilia in PT 0220, mx at t/in, ad/promo string, IDs, f-g with QRM from R Marti 11775 (Barbour NH 4/15) in PT 0223, LA mx, enthusiastic announcer, frequent "Radio Nacional" IDs, futbol scores, g-f (Shemanski NC 4/29) in PT 0326, mx, tlk, slogans, cut off in middle of song at 0339, vg (Renfrew NY 4/17) in PT 0332, mx, promos, ID at 0338 s/off (Caras ME 4/22)
- 11800 **ITALY RAI** Rome in EG 0055, bird chirp IS, NA, news - Italian parliament opens for moment of silence for Italian troops killed in Iraq, vg (Callarman TX 4/29)
- 11860 **INDONESIA RRI** Jakarta in IN 1520-1613, on-air phone calls, sports coverage w/crowd changing "we will rock you" in background, ID 1600, nx, pop songs, f-g (Howard CA 5/6) in IN 1410, John Lennon song, OM announcer with ID, g (Herr CA 5/6)
- 11865 **PORTUGAL Deut Welle** relay in GM 2300, ID, news w/mention of NSA, g (McGuire MD 5/11) in EG 2123, talk on Freud, African nx, promo, sports report, f (Bueneman MO 5/6)
- 11895 **BRAZIL R Boa Vontade** Porto Alegre in PT 0210-0308, OM preaching, full ID and fqy announcem'ts at 0215 and 0245, more preaching, p-f with deep fades (D'Angelo PA 5/6) ED: only 1 kw!
- 11920 **ALBANIA China R Int** relay via Cerrik in FR 1435-1505, nx, Afro pop mx, ID (Caras ME 4/27)
- 11950 **EGYPT R Cairo** in AR 0020, N African pop format, OM singer, huge chorus, lots of strings over percussion, ID, into smouldering Koranic recitation, exc (CrislerSmith MD 4/26) in EG 2302, ID as "Welcome to the North American Service of Radio Cairo", pgm sked, g-vg (Wood TN 5/13)
- 11955 **AUSTRIA AWR** relay in EG 2117, story of the Resurrection, various "AWR-VO Hope" IDs, mission statement, "African Reflections", South Africa PO Box at 2128 s/off (Barbour NH 4/17)
- 11990 **KUWAIT R Kuwait** in AR 1700, pips, IS, ID, regional nx, mention of Israel, g (McGuire MD 5/8)
- 11995 **FINLAND YLE R Finland** Pori in FN 0405, nx including a soundbite from Jimmy Carter on climate change, talks, mx bridges, addresses, weak signal (Callarman TX 5/10)
- 12025 **IRAN VOIRI** Sirjan in Armenian 0302, YL and OM alternating nx items w/lively mx in background, three gongs, ID, brief s/off ancmts and carrier cut 0326+ (Callarman TX 5/10)
- 12055 **VATICAN CITY Vatican Radio** in Tamil/Malayalam 0106, drama w/occasional EG words, mention 9-11, IS, drum, flutes, "Laudetur Jesu Christu", into Malayalam 0120, g, //9650 (Callarman TX 5/10)
- 12070 **RUSSIA Radio Rossii** Moscow in RS 0358, production ancmts, ID, light dance mx, 6 pips, chimes at 0400 to start "Informazona Programa" w/YL reading the news, good (Callarman TX 5/10)
- 12075 **ALBANIA TWR-Europe** relay in Farsi 1715, lengthy talk, IS at 1730 s/off, f-g (Barbour NH 4/2)

- 12130 **GUAM KTWR Trans World Radio** relay via Agana in CH 2208, mx bridges w/short ancmts by YL, longer talks by OM, website in EG, bell-type mx for KTWR ID, carrier cut 2259 (Callarman TX 5/13)
- 13650 **RWANDA Deut Welle** relay in AR 2100, ID, regional nx, ment Egypt's Mubarak, g (McGuire 5/11)
- 13760 **NORTH KOREA V of Korea Kuyang** in EG 0120, Cold War clichés: "The People's Army". Letters of support for North Korea actions from the masses, p-f (CrislerSmith MD 4/14)
- 15140 **OMAN R Sultanate of Oman** in EG 1400-1500, Big Ben type chimes/gongs, ID, nx, variety of US pop, R&B, country mx, tlk, jingle (Alexander PA 4/29, D,Angelo PA 4/30) in AR 2158, AR mx, talk, ID, chimes, flute, story to 2205 s/off (Paszkievicz WI 4/21)
- 15150v **INDONESIA RRI Jakarta** in EG 0155, well done, professional sounding and highly produced radio drama with scene set in a courtroom, ID 0200 and carrier dropped, exc (Shinn CA 4/7)
- 15180 **NORTH KOREA V of Korea Kuyang** in EG 0121, news, band mx, YL w/news about Korean people, discussion about the "crumble of propriety", exc (Shinn CA 4/7)
- 15190 **EQUATORIAL GUINEA R East Africa** in EG 1137, OM preaching the gospel, website and USA addresses, IDs, open carrier at 1152 then pulled the plug at 1154, p-f (Barbour NH, Alexander PA)
- 15240 **SWEDEN R Sweden Horby** in EG 1230, special on the children of Finland who sought safety in Sweden during the Russo-Finnish "Winter War", good (Fraser ME 4/17) in EG 1242, YL/OM with show featuring lifestyles of the 60's with mentions of cooking and pop mx, vg (Wood TN 5/20)
- 15240 **CANADA R Sweden** relay Sackville in SW 1310, show about container shipping, pgm about Lady in waiting to the Queen, Baroque mx, IS, ID and s/off 1359, good (Herr CA 4/30)
- 15340 **CHILE Vox Cristiana** Santiago in EG/SP 2242, IDs at toh, praise and worship mx aimed at young adults, YL in SP with ments of the British Royal Family, Brazil, Harry Potter, vg (Wood TN 5/13)
- 15355 **OMAN R Sultanate of Oman** in AR 2250, drama, ID, chimes, news (Paszkievicz WI 4/29)
- 15360 **GERMANY R Canada Int** relay Wertachtel in EG 1520, "Canada Today to India" and "Maple Leaf Mailbag", //11675 Kunming, China relay (Renfrew NY 5/9)
- 15455 **RUSSIA V of Russia** relay via Armavik in EG 1530, Treasure Store featuring the radio drama called "The Storm", good this fqy but noise on all //s checked (Fraser ME 4/18)
- 15505 **KUWAIT R Kuwait** in AR 1955, AR mx, ID toh, nx, tlk b/w YL/OM w/short mx bridges, booming signal, //15495 fair, 9855 fair, and 9880 poor (Evans TN 5/2)
- 15605 **RUSSIA V of Russia** Moscow in EG 1435, DJ's banter, feature "Our Homeland", p (Bishop OH 4/21)
- 15720 **NEW ZEALAND RNZI** in EG 1817, "Dateline Pacific" on logging activity in Niue, financial health of Marshall Islands social security system, vg (Park HI 5/9)
- 17720 **CHINA R Canada Int** relay via Urumqui in EG 1520, "Canada Today" beamed to India, "Maple Leaf Mailbag", //17720, rare DX catch in North America lately at this time of day (Renfrew NY 5/9)
- 17850 **FRANCE V of Africa** (Libya) relay via Issoudon in EG 1400-1557\*, IDs, sked, hi-life mx, feature on the geography of Libya, tlk re MLK, nx 1430, tlk re African Union, g, //21695 p (Alexander PA 4/8)

## Clandestine/Opposition Stations

- 7205 **UNITED KINGDOM Radio Republica** in SP 0130, tlk by OM, ID sequence, pop mx, fanfare, more tlk over mx bed, ancmts, s/off 0200, some jamming by Cuba, fair (Taylor WI 4/7)
- 7460 **MOLDOVA R Bayem-E-Doost** relay Kishinev in Farsi 0249, OMs talking middle eastern politics, OM w/ID over lute, web address, p-f (CrislerSmith MD 4/25)
- 9905 **MADAGASCAR Radio Nile** relay in EG 0416, OM w/talk about naming children w/names that are blessed followed by a prayer, ID, into Sudanese program at 0425, fair, //12060 (D'Angelo PA 4/30) in EG 0421-0457, two African-accented OM talking about soccer, male vocal on African mx, long presentation on health precautions that should be taken in Darfur refugee camps in order to avoid cholera etc., mx before s/off (Callarman TX 4/18) //12060 also rptd by Renfrew and Crisler Smith.
- 15695 **RUSSIA R Free Southern Cameroon** relay via Armavir in EG \*1800-1859\*, ID, choral anthem, prayer, news re Cameroon, local mx, NA, drums, ID, Sunday only, p-f (Alexander PA 4/30)

## Digital Reception

- 7320D **UNITED KINGDOM BBC** Rampisham in EG 0658, brief snatches of audio, S/N ratio abt 11 dB, not enough to provide steady audio on 20 kbps stream, f/o 0800 (Brandi NJ 5/9)
- 15720D **NEW ZEALAND RNZI** in EG 0143, first reception on G303e, Audio FM quality w/frequent drop outs, Danny Boy comedian, test xmsn, SNR 14-16 dB (Herr CA 5/12)

# Times & Frequencies In English

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Compiled by Mike Barraclough from station schedules, monitoring observations and reported updates.  
Updates and corrections are always welcome.

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Relay sites: a= Antigua, b= Bonaire, c= Sackville Canada, d= Abu Dhabi, D= Delano, e= Espana(Spain), f= WYFR Florida, g= Montsineri Guiana, h= Havana, H= Horby Sweden, i= Ascension Island, j= Julich Germany, k= Kigali Rwanda, l= Sri Lanka, m= Moyabi Gabon, n=Meyerton, RSA, N=Nauen, Germany o= Bamako Mali, p= Singapore, q= Cerrick/Flaake, Albania, r= Russia(various), s= Sines Portugal, S= Sottens Switzerland, t= Talata Madagascar, T= Tashkent u= Skelton/Rampisham UK, v= Taiwan, w= Werchatal Germany, x= Xian/Kashi/Kunming/Urumchi China, y= Yamata Japan, z= Agat, Guam

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Abbreviations: /= target area divider, 1st< or >2nd half hour, Af= Africa, As= Asia, CAm= Central America, Eu= Europe, FE= Far East, LA= Latin America, ME= Middle East, NA= North America, Pa= Pacific, e= east, n= north, s= south, w= west, Int= International, R= Radio, VO= Voice of

<b>AWR AFRICA</b>	1800-1830 Af	3215n 3345n 9610n
<b>AWR AFRICA</b>	2000-2100 Af	7180n
<b>KNLS ALASKA</b>	0800-0900 FE	11765
<b>KNLS ALASKA</b>	1000-1100 FE	9795
<b>KNLS ALASKA</b>	1200-1300 FE	9615 9780
<b>KNLS ALASKA</b>	1400-1500 FE	9795
<b>ALBANIA R TIRANA</b>	0145-0200 NA	6115 7455 Tuesday to Sunday
<b>ALBANIA R TIRANA</b>	0230-0300 NA	6115 7455 Tuesday to Sunday
<b>ALBANIA R TIRANA</b>	1845-1900 Eu	7465 9920 Monday to Saturday
<b>ALBANIA R TIRANA</b>	2000-2030 Eu	7465 Monday to Saturday
<b>R NACIONAL ANGOLA</b>	2100-2200 Af	7217
<b>RAE ARGENTINA</b>	0200-0300 NA	11710 Tuesday to Saturday
<b>RAE ARGENTINA</b>	1800-1900 Eu	9690 15345 Monday to Friday
<b>TWR ARMENIA</b>	1610-1625 ME	5855
<b>VOICE OF ARMENIA</b>	1910-1930 Eu ME	4810 9960
<b>AWR ABU DHABI</b>	1200-1230 SAs	15365
<b>AWR ABU DHABI</b>	1530-1600 SAs	15225
<b>HCJB AUSTRALIA</b>	0000-0030 As	15405 15525
<b>HCJB AUSTRALIA</b>	0145-0200 As	15405 Thursday
<b>HCJB AUSTRALIA</b>	0700-0900 PA	11750
<b>HCJB AUSTRALIA</b>	1000-1100 As	15400 15540
<b>HCJB AUSTRALIA</b>	1130-1200 As	15425
<b>HCJB AUSTRALIA</b>	1300-1315 As	15405 Thursday
<b>HCJB AUSTRALIA</b>	1300-1330 As	15400
<b>HCJB AUSTRALIA</b>	1330-1400 As	15435 Sunday
<b>HCJB AUSTRALIA</b>	2330-0000 As	15390
<b>RADIO AUSTRALIA</b>	0000-0100 As Pa	9660 12080 13670 15240 15415> 17715 17750 17775 17795
<b>RADIO AUSTRALIA</b>	0100-0200 As Pa	9660 12080 13670 15240 15415 17715 17750 <17775 17795
<b>RADIO AUSTRALIA</b>	0200-0400 As Pa	9660 12080 13670 15240 15415 15515 17750 21725
<b>RADIO AUSTRALIA</b>	0400-0500 As Pa	9660 12080 13670 15240 15415> 15515 17750 21725
<b>RADIO AUSTRALIA</b>	0500-0600 As Pa	9660 12080 13670 15160 15240 15415> 15515 17750
<b>RADIO AUSTRALIA</b>	0600-0700 As Pa	9660 12080 13670 15160 15240 15415 15515 17750
<b>RADIO AUSTRALIA</b>	0700-0800 As Pa	9660 9710 12080 13630 15160 15240 15415 17750

<b>RADIO AUSTRALIA</b>	0800-0900 As Pa	5995 9580 9590 9710 12080 13630 15240v 15415> 17750
<b>RADIO AUSTRALIA</b>	0900-1000 As Pa	9580 9590 11880 15240v 15415>
<b>RADIO AUSTRALIA</b>	1000-1100 As Pa	9580 9590 11880 15240v 15415
<b>RADIO AUSTRALIA</b>	1100-1200 As Pa	5995 6020 9475 9560 9580 9590 11880 <15240v
<b>RADIO AUSTRALIA</b>	1200-1300 As Pa	5995 6020 9475 9560 9580 9590 11880
<b>RADIO AUSTRALIA</b>	1300-1400 As Pa	5995 6020 9560 9580 9590
<b>RADIO AUSTRALIA</b>	1400-1500 As Pa	5995 6080 7240 9475> 9590 11660> 11750
<b>RADIO AUSTRALIA</b>	1500-1600 As Pa	5995 6080 7240 9475 9590 11660 11750
<b>RADIO AUSTRALIA</b>	1600-1700 As Pa	5995 6080 7240 9475 9710 11660
<b>RADIO AUSTRALIA</b>	1700-1800 As Pa	5995 6080 9475 9580 9710 11880
<b>RADIO AUSTRALIA</b>	1800-1900 As Pa	6080 7240 9475 9580 9710 11880
<b>RADIO AUSTRALIA</b>	1900-2000 As Pa	6080 7240 9500 9580 9710 11880
<b>RADIO AUSTRALIA</b>	2000-2100 As Pa	9500 11650 11660 11880 12080
<b>RADIO AUSTRALIA</b>	2100-2200 As Pa	7240 <9500 9660 11650 11660 <11695 12080 13630 15515
<b>RADIO AUSTRALIA</b>	2200-2300 As Pa	12010 13620 13630 15230 15240v 15515 17785 17795
<b>RADIO AUSTRALIA</b>	2300-0000 As Pa	9660 12010 12080 13620 13670 15230 <15240v 15415> 17750> 17785 /17795

**VOICE INT AUSTRALIA** 0100-0300 As 7355 Tashkent  
**VOICE INT AUSTRALIA** 0300-0600 As 13685 Tashkent  
**VOICE INT AUSTRALIA** 0600-0900 As 15335  
**VOICE INT AUSTRALIA** 0900-1100 As 11955  
**VOICE INT AUSTRALIA** 1100-1800 As 13635

**AWR AUSTRIA** 2100-2200 WAF 11955

Weekday schedule:

<b>RADIO AUSTRIA INT</b>	0043-0058 LA	9870 Tuesday to Saturday
<b>RADIO AUSTRIA INT</b>	0113-0130 LA	9870 Tuesday to Friday
<b>RADIO AUSTRIA INT</b>	0143-0158 NA	9870 Tuesday to Saturday
<b>RADIO AUSTRIA INT</b>	1205-1220 As Au	17715 Monday
<b>RADIO AUSTRIA INT</b>	1205-1220 Eu	6155 13730 Monday
<b>RADIO AUSTRIA INT</b>	1215-1230 As Au	17715 Tuesday to Friday
<b>RADIO AUSTRIA INT</b>	1245-1300 As Au	17715 Monday to Friday
<b>RADIO AUSTRIA INT</b>	1245-1300 Eu	6155 13730 Tuesday to Friday
<b>RADIO AUSTRIA INT</b>	1505-1520 NA	13775c Monday
<b>RADIO AUSTRIA INT</b>	1515-1530 NA	13775c Tuesday to Friday
<b>RADIO AUSTRIA INT</b>	1545-1600 NA	13775c Monday to Friday

Weekend schedule:

<b>RADIO AUSTRIA INT</b>	0035-0100 LA	9870 Sunday and Monday
<b>RADIO AUSTRIA INT</b>	0105-0130 LA	9870 Sunday and Monday
<b>RADIO AUSTRIA INT</b>	0033-0100 NA	9870 Sunday and Monday
<b>RADIO AUSTRIA INT</b>	0505-0530 ME	17870 repeated at 0535-0600 Sunday
<b>RADIO AUSTRIA INT</b>	1205-1230 Eu	6155 13730 repeated at 1235-1300 Saturday and Sunday
<b>RADIO AUSTRIA INT</b>	1205-1230 As Au	17715 repeated at 1235-1300 Saturday and Sunday
<b>RADIO AUSTRIA INT</b>	1505-1530 NA	13775c repeated at 1535-1600 Saturday and Sunday

The station also has a short English news bulletin to Europe at 0609 on 6155.

**VOICE OF AZERBAIJAN** 1700-1730 ME 6110

**RADIO BANGLADESH** 1230-1300 As 7185  
**RADIO BANGLADESH** 1745-1900 Eu 7185

**BELARUS RADIO MINSK** 0200-0230 NA 5970 6170 7210 Mon, Tue, Wed, Fri, Sat  
**BELARUS RADIO MINSK** 0230-0300 NA 5970 6170 7210 Sunday  
**BELARUS RADIO MINSK** 1930-2000 Eu 1170 7105 7280 7290 Mon, Tue, Thur, Fri  
**BELARUS RADIO MINSK** 2100-2130 Eu 1170 7105 7280 7290 Sunday

**RADIO BULGARIA** 0200-0300 NA 9700 11700  
**RADIO BULGARIA** 0630-0700 Eu 9500 11500  
**RADIO BULGARIA** 1130-1200 Eu 11700 15700  
**RADIO BULGARIA** 1730-1800 Eu 9500 11500  
**RADIO BULGARIA** 2100-2200 Eu 5800 7500  
**RADIO BULGARIA** 2300-0000 NA 9700 11700

**RADIO CANADA INT** 0000-0057 SEAs 11700x  
**RADIO CANADA INT** 0000-0059 N&CAm 9755  
**RADIO CANADA INT** 0100-0159 NA 9755 13710  
**RADIO CANADA INT** 1200-1259 SEAs 9660y 15170y  
**RADIO CANADA INT** 1300-1559 N&CAm 9515 13655 17800  
**RADIO CANADA INT** 1500-1557 As 11675x 15360w 17720x  
**RADIO CANADA INT** 1800-1859 Af 9630w 11765x 13730w 15255u  
**RADIO CANADA INT** 2000-2059 Eu 5850H 7235u 11765w 15325  
**RADIO CANADA INT** 2000-2159 N&CAm 17765  
**RADIO CANADA INT** 2200-2259 NA 6100

<b>CHINA RADIO INT</b>	0000-0100 NA/As/Eu	6020q 9570q/6075 7180 11885 13750 15115 / 7130 9725
<b>CHINA RADIO INT</b>	0100-0200 NA/As/Eu	6020q 9570q 9580h 9790c/ 6075 9535 11870 15115 15785 /9410 9725
<b>CHINA RADIO INT</b>	0200-0300 As	11770 13640
<b>CHINA RADIO INT</b>	0300-0400 NA/As	9690e 9790h/11770 13750 15110 15120 15785
<b>CHINA RADIO INT</b>	0400-0500 NA/As	6020 6080c/13750 15120 15785 17725 17855
<b>CHINA RADIO INT</b>	0500-0600 NA/As/Af	6020 6190c/11710q 17505/ 11880 15350 15465 17505 17540 17725 17855
<b>CHINA RADIO INT</b>	0600-0700 Af/As	11710q 17505 /11870 11880 13660 15140 15350 15465 17540 17505 17710
<b>CHINA RADIO INT</b>	0700-0800 Eu/As	13710q 17490 /11880 13660 15350 15465 17540 17710
<b>CHINA RADIO INT</b>	0800-0900 Eu/As	13710q 17490 /11620 11880 15350 15465 17540
<b>CHINA RADIO INT</b>	0900-1000 Eu/As	17490/ 11620 15350 17750
<b>CHINA RADIO INT</b>	0900-1100 Pa	15210 17690
<b>CHINA RADIO INT</b>	1000-1100 Eu/NA/As	17490/ 6040c /11610 11635 13590 13620 13720 15190 15350
<b>CHINA RADIO INT</b>	1100-1200 Eu/NA/As	13650q 17490 / 6040c 11750d/ 5955 11650 11795 13645
<b>CHINA RADIO INT</b>	1200-1300 As/Pa	5955 9460 11650 11660 13645 9730 11690 11980/ 9760 11760
<b>CHINA RADIO INT</b>	1200-1300 Eu	13650q 13790 17490
<b>CHINA RADIO INT</b>	1300-1400 NA/As	9570h 9650c 15260c/ 5955 9765 9730 9870 11660 11980 13755
<b>CHINA RADIO INT</b>	1300-1500 Eu/Pa	13610 13710(1400-) 13790 / 9760 11760
<b>CHINA RADIO INT</b>	1400-1500 NA/As/Af	13740h/13685o 17630o/ 5955 9560 9765 9870 11675 11765 11775
<b>CHINA RADIO INT</b>	1500-1600 Eu/Af	11965 13640 /13685o 17630o
<b>CHINA RADIO INT</b>	1500-1600 NA/As	13740h 5955 7160 7325 9785 9870 11775
<b>CHINA RADIO INT</b>	1600-1700 Eu/Af	11940 11965 13760 / 6100n 9570 11900
<b>CHINA RADIO INT</b>	1700-1800 Eu/Af	9695 11940 13760 / 6100n 9570 11900
<b>CHINA RADIO INT</b>	1800-1900 Eu	9600 11940 13760
<b>CHINA RADIO INT</b>	1900-2000 Eu	11940
<b>CHINA RADIO INT</b>	1900-2000 Eu/Af	11940/ 7295 9435
<b>CHINA RADIO INT</b>	2000-2130 Af	11640o 13630o
<b>CHINA RADIO INT</b>	2000-2100 Eu/Af	5960q 7190 7285q 9600 9800/ 7295 9440
<b>CHINA RADIO INT</b>	2100-2200 Eu	5960q 7190 7285q 9490 9600 9800
<b>CHINA RADIO INT</b>	2200-2300 Eu/As	7175r/ 9590
<b>CHINA RADIO INT</b>	2300-0000 NA/As	5990h 6145c 13680c/ 5915 7180 11685
<b>VOICE OF CROATIA</b>	0200-0215 NA	9925
<b>VOICE OF CROATIA</b>	0600-0605 Pa	9470 13820
<b>VOICE OF CROATIA</b>	1805-1815 Eu	6165
<b>VOICE OF CROATIA</b>	2215-2230 Eu NA	9925
<b>CUBA RADIO HAVANA</b>	0100-0500 NA	6000 6060 9820
<b>CUBA RADIO HAVANA</b>	0500-0700 NA	6000 6060 9550 9820 11760
<b>CUBA RADIO HAVANA</b>	2300-0000 CAm	9550
<b>CZECH RADIO PRAGUE</b>	0000-0027 NA	7345 9440
<b>CZECH RADIO PRAGUE</b>	0100-0127 NA	6200 7345
<b>CZECH RADIO PRAGUE</b>	0300-0327 NA	7345 9870
<b>CZECH RADIO PRAGUE</b>	0330-0357 As ME	9445 11600
<b>CZECH RADIO PRAGUE</b>	0400-0430 NA	6100c
<b>CZECH RADIO PRAGUE</b>	0700-0727 Eu	9880 11600
<b>CZECH RADIO PRAGUE</b>	0900-0929 Eu/As	9880/ 21745
<b>CZECH RADIO PRAGUE</b>	1030-1057 Eu	9880 11665
<b>CZECH RADIO PRAGUE</b>	1300-1329 Eu/As	13580/ 17540
<b>CZECH RADIO PRAGUE</b>	1600-1627 Eu/Af	5930/ 17485
<b>CZECH RADIO PRAGUE</b>	1700-1727 Eu/Af	5930/ 17485
<b>CZECH RADIO PRAGUE</b>	2000-2027 Eu/As Pa	5930/ 11600
<b>CZECH RADIO PRAGUE</b>	2130-2157 Af/NA	9410/ 11600
<b>CZECH RADIO PRAGUE</b>	2230-2257 NA	7345 9415
<b>EGYPT RADIO CAIRO</b>	0200-0330 NA	7270
<b>EGYPT RADIO CAIRO</b>	1215-1330 sAs	17835
<b>EGYPT RADIO CAIRO</b>	1600-1800 Af	11740
<b>EGYPT RADIO CAIRO</b>	2030-2200 wAf	15375
<b>EGYPT RADIO CAIRO</b>	2115-2245 Eu	9990
<b>EGYPT RADIO CAIRO</b>	2300-0030 NA	11950
<b>EQ GUINEA R AFRICA</b>	0700-1200 Af	15190
<b>RADIO ETHIOPIA</b>	1600-1700 Af	7165 9560
<b>RADIO FRANCE INT</b>	0400-0430 eAf	9805 11700 Monday to Friday
<b>RADIO FRANCE INT</b>	0500-0530 eAf	11995(from Sept 3rd) 13680 15160(to Sept 2nd) Monday to Friday
<b>RADIO FRANCE INT</b>	0600-0630 eAf	9570l 15160 17800 Monday to Friday
<b>RADIO FRANCE INT</b>	1200-1230 Af	17815l 21620
<b>RADIO FRANCE INT</b>	1400-1500 ME swAs	7220r 21620
<b>RADIO FRANCE INT</b>	1600-1700 Af	7170n 11615 15160n 15605 17605
<b>RADIO FRANCE INT</b>	1700-1730 Af	15605 17605
<b>GERMANY D WELLE</b>	0000-0100 sAs	9695k 9825w 9885l
<b>GERMANY D WELLE</b>	0400-0500 Af	7225k 9630k 12045w 15445l
<b>GERMANY D WELLE</b>	0500-0600 Af	9630s 9700k 15410t 17800d
<b>GERMANY D WELLE</b>	0600-0700 Af	7170s 15275w 17860k

<b>GERMANY D WELLE</b>	0600-1000 Eu	6140j
<b>GERMANY D WELLE</b>	1300-1600 Eu	6140j
<b>GERMANY D WELLE</b>	1600-1700 As	1548f 6170f 9485f 17595w
<b>GERMANY D WELLE</b>	1900-2000 Af	13780w 15620w
<b>GERMANY D WELLE</b>	2000-2100 Af	7130k 11795N 13780w 15205w
<b>GERMANY D WELLE</b>	2100-2200 Af	9440w 11865k 15205k
<b>GERMANY D WELLE</b>	2200-2300 As	7115r 9720r
<b>GERMANY D WELLE</b>	2300-0000 As	5955f 9890k 15135r 17860r
<b>GERMANY FREE PEOPLES MISSION</b>	1630-1700 ME	11865w Saturday
<b>VOICE OF GREECE</b>	0905-1000 Eu	9420 12120 15630 Sunday Its All Greek to Me
<b>VOICE OF GREECE</b>	1400-1500 Eu	9420 12105 15630 Saturday Hellenes Around the World
<b>VOICE OF GREECE</b>	1830-1900 Eu	7430
<b>AWR GUAM</b>	1130-1200 EAs	15435
<b>AWR GUAM</b>	1330-1400 SEAs	15275 not Sunday/Wednesday
<b>AWR GUAM</b>	1600-1630 SAs	11640 11680
<b>AWR GUAM</b>	1630-1700 SAs	11975
<b>AWR GUAM</b>	1730-1800 ME	9385
<b>AWR GUAM</b>	2130-2200 As	11850
<b>AWR GUAM</b>	2230-2300 As	15320
<b>KTWR GUAM</b>	0740-0900 sAs	17570 (0730-0900 Saturday and Sunday)
<b>KTWR GUAM</b>	0800-0930 Pa	11840 (0815-0930 Saturday and Sunday)
<b>KTWR GUAM</b>	1330-1400 SAs	9585
<b>KTWR GUAM</b>	1400-1500 SAs	9975
<b>R BUDAPEST HUNGARY</b>	0100-0130 NA	9590
<b>R BUDAPEST HUNGARY</b>	0230-0300 NA	9795
<b>R BUDAPEST HUNGARY</b>	1500-1530 Eu	6025 9690 Sunday
<b>R BUDAPEST HUNGARY</b>	1900-1930 Eu	3975 6025
<b>R BUDAPEST HUNGARY</b>	2100-2130 Eu/sAf	6025 9525
<b>All INDIA RADIO</b>	1000-1100 Pa As	13695 15020 15260 15410 17510 17800 17895
<b>ALL INDIA RADIO</b>	1330-1500 sAs	9690 11620 13710
<b>ALL INDIA RADIO</b>	1745-1945 Eu Af	7410 9445 9950 11620 11935 13605 15075 15155 17670
<b>All INDIA RADIO</b>	2045-2230 Eu Pa	7410 9445 9910 9950 11620 11715
<b>ALL INDIA RADIO</b>	2245-0045 As	9705 9950 11620 11645 13605
<b>VOICE OF INDONESIA</b>	0200-0300 As Am	15150
<b>VOICE OF INDONESIA</b>	0800-0900 As Am	15150
<b>VOICE OF INDONESIA</b>	2000-2100 Eu	9525 15150
<b>VoIR IRAN</b>	0130-0230 NA	7235 9495
<b>VoIR IRAN</b>	1030-1130 seAs	15600 17660
<b>VoIR IRAN</b>	1530-1630 seAs	7370 9635
<b>VoIR IRAN</b>	1930-2030 Eu Af	6205 7205 9925
<b>IRELAND</b>	0000-2400 Eu	4025 6220 7465 9385 Laser Hot Hits
<b>IRELAND</b>	1600-2330 Eu	3910 6295 12255 Reflections Europe Sunday
<b>KOL ISRAEL</b>	0330-0345 Eu Am Pa	7530 9345 17600 (11590 13720 replace 7530 9345 May 1st to Aug 31st)
<b>KOL ISRAEL</b>	0930-0945 Eu Am	13680 15760
<b>KOL ISRAEL</b>	1730-1745 Eu NA	9345 11590 13675
<b>KOL ISRAEL</b>	1900-1925 Eu Am Af	9400 11590 15640
<b>IRRS ITALY</b>	0700-1200 Eu Af ME	13840 Saturday and Sunday
<b>IRRS ITALY</b>	1400-1800 Eu Af ME	9310 Brother Stair
<b>IRRS ITALY</b>	1800-2300 Eu Af ME	5785 Brother Stair
<b>IRRS ITALY</b>	1900-2030 Eu Af ME	5775 Monday to Thursday. (Friday 1700-2200, Saturday 1900-2200)
<b>RAI ITALY</b>	0055-0115 NA	11800
<b>RAI ITALY</b>	0445-0500 Eu Af	6110 6145 7235
<b>RAI ITALY</b>	1935-1955 Eu	5960 9845
<b>RAI ITALY</b>	2025-2045 Af	5970 11875
<b>RAI ITALY</b>	2205-2230 As FE	11895
<b>RADIO JAPAN</b>	0000-0015 As	13650 17810
<b>RADIO JAPAN</b>	0000-0100 NA	6145c
<b>RADIO JAPAN</b>	0100-0200 ME/As/Am	5960u 17720/ 11860p 15325 17810 17845/ 11935b 17825
<b>RADIO JAPAN</b>	0300-0400 Pa	21610
<b>RADIO JAPAN</b>	0500-0600 Eu/NA/As	5975u 7230u/ 6110c/15195 17810/ 21755 Pa
<b>RADIO JAPAN</b>	0600-0700 Eu/NA/As	7230u/13630 /11715 11760 11740p 15195/ 21755 Pa
<b>RADIO JAPAN</b>	1000-1100 Eu/Pa	17585d/21755
<b>RADIO JAPAN</b>	1000-1200 As/NA	9695 11730 / 6120c

<b>RADIO JAPAN</b>	1400-1500 As/Pa	7200 11730 /11840l
<b>RADIO JAPAN</b>	1500-1600 As/NA	6190 7200 11730 / 9505
<b>RADIO JAPAN</b>	1700-1800 NA/Eu/Af	9535/ 11970 /15355m
<b>RADIO JAPAN</b>	2100-2200 Eu/Af/NA	6055u 6180u/11855l/17825 / 6035p Pa
<b>RADIO JAPAN regional services</b>	0100-0200 Pa 0600-0700 Hawaii 2100-2200 Hawaii	17685 17870 21670
<b>RADIO JORDAN</b>	1300-1630 Eu NA	11690
<b>KOREA KBS WORLD R</b>	0200-0300 NA SAm	9560c 15575/ 11810
<b>KOREA KBS WORLD R</b>	0800-0900 As/Eu	9570/ 9640
<b>KOREA KBS WORLD R</b>	1200-1300 NA	9650c
<b>KOREA KBS WORLD R</b>	1300-1400 As	9570 9770
<b>KOREA KBS WORLD R</b>	1600-1700 As Af ME	5975
<b>KOREA KBS WORLD R</b>	1900-2000 As Eu	5975 7275
<b>KOREA KBS WORLD R</b>	2100-2130 Eu	3955u
<b>VO KOREA PYONGYANG</b>	0100-0200 FE/LA	7140 9345 9730/ 11735 13760 15180
<b>VO KOREA PYONGYANG</b>	0200-0300 seAs	13650 15100
<b>VO KOREA PYONGYANG</b>	0300-0400 As	7140 9345 9730
<b>VO KOREA PYONGYANG</b>	1000-1100 seAs/LA	11735 13650/ 11710 15180
<b>VO KOREA PYONGYANG</b>	1300-1400 Eu/NA	13670 15245/ 9335 11710
<b>VO KOREA PYONGYANG</b>	1500-1600 Eu/NA	13670 15245/ 9335 11710
<b>VO KOREA PYONGYANG</b>	1600-1700 ME Af	9990 11545
<b>VO KOREA PYONGYANG</b>	1800-1900 Eu	13670 15245
<b>VO KOREA PYONGYANG</b>	1900-2000 ME Af	7100 9975 11535 11910
<b>VO KOREA PYONGYANG</b>	2100-2200 Eu	13670 15245
<b>LAOS LNR Vientiane</b>	0600-0630 As	7145
<b>LAOS LNR Vientiane</b>	1330-1405 As	7145
<b>LIBYA VO AFRICA</b>	1140-1145 Af	17725 21695
<b>LIBYA VO AFRICA</b>	1400-1600 Af	17725 17850
<b>LIBYA VO AFRICA</b>	1735-1740 Af	11615
<b>LIBYA VO AFRICA</b>	1820-1825 Af	11615
<b>LIBYA VO AFRICA</b>	1920-1925 Af	9590
<b>LIBYA VO AFRICA</b>	2030-2035 Af	9590
<b>LIBYA VO AFRICA</b>	2120-2125 Af	9590
all frequencies are relayed via Issoudon, France		
<b>LITHUANIA R VILNIUS</b>	0030-0100 NA	11690
<b>LITHUANIA R VILNIUS</b>	0830-0900 Eu	9710
<b>LITHUANIA R VILNIUS</b>	2330-0000 NA	9875
<b>VOICE OF MALAYSIA</b>	0600-0830 As/Pa	6175 9750 15295.
<b>MOLDOVA</b>	1600-1710 Eu	5910 Radio Pridnestrovye Monday to Thursday
<b>MOLDOVA</b>	1600-1720 Eu	5910 Radio Pridnestrovye Friday
<b>VOICE OF MONGOLIA</b>	1000-1030 As	12085
<b>VOICE OF MONGOLIA</b>	1500-1530 Eu	12015
<b>VOICE OF MONGOLIA</b>	2000-2030 Eu	12015
<b>TWR MONTE CARLO</b>	0700-0820 Eu	9800 11865q (Saturday 0715-0750, Sunday 0645-0820)
<b>RADIO NEPAL</b>	0215-0230 As	5005
<b>RADIO NEPAL</b>	1415-1425 As	5005
<b>RADIO NETHERLANDS</b>	0000-0200 NA	9845b
<b>RADIO NETHERLANDS</b>	0400-0500 NA	6165b
<b>RADIO NETHERLANDS</b>	0600-0800 Pa	9700b
<b>RADIO NETHERLANDS</b>	1000-1100 As Pa	12065r 13710r 13820r
<b>RADIO NETHERLANDS</b>	1100-1200 NA	11675b
<b>RADIO NETHERLANDS</b>	1400-1600 As Pa	9345T 9890t 11835t
<b>RADIO NETHERLANDS</b>	1800-1900 Af	6020t 7120t 11655t
<b>RADIO NETHERLANDS</b>	1900-2000 Af	5905t 7120t 11655 17810b
<b>RADIO NETHERLANDS</b>	1900-2100 NA	15315b 17660c 17735b Saturday and Sunday
<b>RADIO NETHERLANDS</b>	2000-2100 Af	5905t 7120t 17810b
<b>RADIO NEW ZEALAND</b>	0600-0700 Pa	7145 15720
<b>RADIO NEW ZEALAND</b>	0700-1059 Pa	7145
<b>RADIO NEW ZEALAND</b>	1100-1259 Pa	9870
<b>RADIO NEW ZEALAND</b>	1300-1850 Pa	7145
<b>RADIO NEW ZEALAND</b>	1851-1950 Pa	9630 15720
<b>RADIO NEW ZEALAND</b>	1951-0600 Pa	15720

<b>VOICE OF NIGERIA</b>	0500-0700 Eu	15120
<b>VOICE OF NIGERIA</b>	1000-1500 Eu	15120
<b>VOICE OF NIGERIA</b>	1700-1900 Eu	15120
<b>VOICE OF NIGERIA</b>	1900-2100 Af	7255
<b>RADIO OMAN</b>	1400-1500 Eu	15140
<b>RADIO PAKISTAN</b>	0045-0115 sAs	7445 9340
<b>RADIO PAKISTAN</b>	0730-0830 Eu	15100 17835 also 1100-1104
<b>RADIO PAKISTAN</b>	1600-1615 Af ME	9375 11570 12105 15725
<b>RADIO PILIPINAS</b>	0200-0330 As	12025 15120 15270
<b>RADIO PILIPINAS</b>	1730-1930 As	11730 11890 15190
<b>POLAND R POLONIA</b>	1200-1300 Eu NA	9525 11850
<b>POLAND R POLONIA</b>	1700-1800 Eu	7220 7265
<b>RADIO ROMANIA INT</b>	0100-0200 NA	9690 11825
<b>RADIO ROMANIA INT</b>	0400-0500 NA SAs	9780 11820 15110 17870
<b>RADIO ROMANIA INT</b>	0630-0700 Eu Pa	9655 11830 15440 17770
<b>RADIO ROMANIA INT</b>	1300-1400 Eu	11830 15105
<b>RADIO ROMANIA INT</b>	1800-1900 Eu	9635 11830
<b>RADIO ROMANIA INT</b>	2130-2200 Eu NA	7210 9535 11940 15465
<b>RADIO ROMANIA INT</b>	2300-2400 Eu NA	6140 7265 9645 11940
<b>VOICE OF RUSSIA</b>	0100-0200 NA	7250 9665 15555 15595
<b>VOICE OF RUSSIA</b>	0200-0300 NA	9665 9860 15555 15595
<b>VOICE OF RUSSIA</b>	0300-0400 NA	9665 9860 9880 15425 15455 15555 15595
<b>VOICE OF RUSSIA</b>	0400-0500 NA	9665 9860 9880 15555
<b>VOICE OF RUSSIA</b>	0500-0700 Pa	17635 21790
<b>VOICE OF RUSSIA</b>	0700-0900 Pa	17495 17635 21790
<b>VOICE OF RUSSIA</b>	1400-1500 Eu/As	7370/ 7165 9745 11755 12055 15605 17645
<b>VOICE OF RUSSIA</b>	1500-1600 Eu/As	7370 12040 15455 /4965 4975 9660
<b>VOICE OF RUSSIA</b>	1600-1700 Eu/Af	7370/ 11985 15540
<b>VOICE OF RUSSIA</b>	1600-1700 As	6070 9405 11755 11985 12055 12115 15540
<b>VOICE OF RUSSIA</b>	1700-1800 Eu/Af	7370 9820* 9890/ 11510 11985 *Sat,Sun only
<b>VOICE OF RUSSIA</b>	1700-1800 As	9405
<b>VOICE OF RUSSIA</b>	1800-1900 Eu/Af	7370 9820 9890 11630
<b>VOICE OF RUSSIA</b>	1900-2000 Eu	7310 9890 12070
<b>VOICE OF RUSSIA</b>	2000-2100 Eu/LA	9890 12070 15455/ 15735
<b>VOICE OF RUSSIA</b>	2100-2200 LA	15735
From September 3rd	5900 replaces 9880 0300-0500 to North America, 6205 replaces 12055 1400-1500 to Asia.	
European evening broadcasts from that date are:		
<b>VOICE OF RUSSIA</b>	1500-1600 Eu	7300 9810 11980
<b>VOICE OF RUSSIA</b>	1600-1700 Eu	7300
<b>VOICE OF RUSSIA</b>	1700-1800 Eu	7300 7390* 9820* 9890 11675* *Sat,Sun only
<b>VOICE OF RUSSIA</b>	1800-1900 Eu	7300 9480 9820 9890
<b>VOICE OF RUSSIA</b>	1900-2000 Eu	7310 7380 9890
<b>VOICE OF RUSSIA</b>	2000-2100 Eu	7310 9890 11980
<b>R SERBIA/MONTENEGRO</b>	1830-1900 Eu	6100
<b>RADIO SINGAPORE INT</b>	1100-1400 As	6080 6150
<b>RADIO SLOVAKIA INT</b>	0100-0130 N&SA	5930 9440
<b>RADIO SLOVAKIA INT</b>	0700-0730 Pa	9440 15460
<b>RADIO SLOVAKIA INT</b>	1630-1700 Eu	5920 6055
<b>RADIO SLOVAKIA INT</b>	1830-2000 EU	5920 7345
<b>S AFRICA CHANNEL AF</b>	0300-0400 Af	3345 5960 6120
<b>S AFRICA CHANNEL AF</b>	0400-0500 Af	3345 7305
<b>S AFRICA CHANNEL AF</b>	0500-0600 Af	7240 9685
<b>S AFRICA CHANNEL AF</b>	0600-0700 Af	7240 15255
<b>S AFRICA CHANNEL AF</b>	0700-0800 Af	7240 9620
<b>S AFRICA CHANNEL AF</b>	1000-1200 Af	9620
<b>S AFRICA CHANNEL AF</b>	1400-1500 Af	9620
<b>S AFRICA CHANNEL AF</b>	1500-1600 Af	9620 17770
<b>S AFRICA CHANNEL AF</b>	1700-1800 Af	15235
<b>S AFRICA CHANNEL AF</b>	2000-2200 Af	3345
<b>S AFRICA R LEAGUE</b>	0800-0900 sAf/cAf	7205 17695 Sunday
<b>S AFRICA R LEAGUE</b>	1900-2000 sAf	3215 Monday
<b>REE SPAIN</b>	0000-0059 NA	15385
<b>REE SPAIN</b>	2000-2059 Eu Af	9595 15290 Monday to Friday
<b>REE SPAIN</b>	2100-2159 Eu Af	6125 9840 Saturday and Sunday

<b>SLBC SRI LANKA</b>	0100-0500 As	6005 9770 15745
<b>SLBC SRI LANKA</b>	1400-1600 As	7275 11905 Hindi and English service
<b>SWAZILAND TWR</b>	0430-0700 Af	3200 4775 9500(0500-)
<b>SWAZILAND TWR</b>	0600-0630 Af	11640n (-0615 Saturday and Sunday)
<b>SWAZILAND TWR</b>	0700-0900 Af	6120 9500
<b>SWAZILAND TWR</b>	1645-1715 Af	6130 (Saturday and Sunday 1630-1700)
<b>SWAZILAND TWR</b>	1700-2030 Af	3200
<b>SWAZILAND TWR</b>	1730-1900 Af	9500
<b>RADIO SWEDEN</b>	0130-0200 NA AsPa	6010c 9435t
<b>RADIO SWEDEN</b>	0230-0300 NA	6010c
<b>RADIO SWEDEN</b>	1230-1300 EuAfNA	13580 15240 15735
<b>RADIO SWEDEN</b>	1330-1400 EuAfAsPa	15735
<b>RADIO SWEDEN</b>	1330-1400 NA	15240c
<b>RADIO SWEDEN</b>	1730-1800 Eu Af	6065
<b>RADIO SWEDEN</b>	1930-2000 Eu Pa	6065
<b>RADIO SWEDEN</b>	2130-2200 Eu Af Pa	6065 7420t
<b>SWEDEN IBRA RADIO</b>	1830-1845 Eaf	11880j
<b>SYRIA R DAMASCUS</b>	2005-2205 Eu NA	9330 12085
<b>TAIWAN R TAIPEI INT</b>	0100-0200 As	11875 15465
<b>TAIWAN R TAIPEI INT</b>	0200-0300 NA	5950f 9680f
<b>TAIWAN R TAIPEI INT</b>	0300-0400 NA/LA/As	5950f/15215f/15320
<b>TAIWAN R TAIPEI INT</b>	0700-0800 NA	5950f
<b>TAIWAN R TAIPEI INT</b>	0800-0900 SEAs	9610
<b>TAIWAN R TAIPEI INT</b>	1100-1200 SEAs	7445
<b>TAIWAN R TAIPEI INT</b>	1200-1300 FE	7130
<b>TAIWAN R TAIPEI INT</b>	1400-1500 SEAs	15265
<b>TAIWAN R TAIPEI INT</b>	1600-1700 As	11550
<b>TAIWAN R TAIPEI INT</b>	1700-1800 Af	15690 Issoudun, France
<b>TAIWAN R TAIPEI INT</b>	1800-1900 Eu	3965 Issoudun, France
<b>TAIWAN R TAIPEI INT</b>	2200-2300 Eu	15600f
<b>RADIO TAJIKISTAN</b>	0345-0400 ME	7245
<b>RADIO TAJIKISTAN</b>	1645-1700 ME	7245
<b>RADIO THAILAND</b>	0000-0030 Af	9570
<b>RADIO THAILAND</b>	0030-0100 eCNA	5890 Greenville
<b>RADIO THAILAND</b>	0300-0330 wCNA	5890 Delano
<b>RADIO THAILAND</b>	0530-0600 Eu	17655
<b>RADIO THAILAND</b>	1230-1300 As Pa	9835
<b>RADIO THAILAND</b>	1400-1430 As Pa	9830
<b>RADIO THAILAND</b>	1900-2000 Eu	7155
<b>RADIO THAILAND</b>	2030-2045 Eu	9680
<b>VOICE OF TURKEY</b>	0300-0350 Eu NA/As	5975/ 7270
<b>VOICE OF TURKEY</b>	1230-1320 Eu/AsPa	15450 15535
<b>VOICE OF TURKEY</b>	1830-1920 Eu	9785
<b>VOICE OF TURKEY</b>	2030-2120 As Pa	7170
<b>VOICE OF TURKEY</b>	2200-2250 Eu NA	9830
<b>UK BIBLE VOICE</b>	0000-0200 Iraq	6140w Friday to Monday
<b>UK BROADCASTING</b>	0030-0100 SEAs	6010d Friday, Saturday, Sunday
<b>UK NETWORK</b>	0700-0845 WEu	5945j Saturday and Sunday (0715-0800 Friday)
<b>UK</b>	1030-1100 Korea	5910r Sunday
<b>UK</b>	1130-1200 China	12065r Sunday( 1230-1245 Thursday, 1130-1200 Saturday)
<b>UK</b>	1400-1545 SEAs	15690w Saturday (1400-1500 Sunday)
<b>UK</b>	1500-1600 SEAs	15680j Saturday (1530-1600 Monday, Thursday)
<b>UK</b>	1530-1600 Af	15775j Wednesday
<b>UK</b>	1530-1800 ME	13590j Sunday (1540-1615 Monday to Friday, 1645-1700 Tuesday, 1630-1645 Thursday, 1730-1800 Friday, 1545-1730, 1800-1830 Sat)
<b>UK</b>	1630-1800 ME	9430j Saturday and Sunday
<b>UK</b>	1800-1815 Iran	11710j Saturday
<b>UK</b>	1800-1915 EEu	6015j Saturday (1800-1830, 1900-1930 Sunday)
<b>UK</b>	1800-1915 ME	9430 Sunday via Nauen (1815-1900 Friday, 1800-1900 Saturday)
<b>UK</b>	1900-1930 Af	9775j Saturday (1930-2000 Sunday)
<b>UK CHRISTIAN VOICE</b>	0500-0600 Waf	9430j
<b>UK</b>	0515-1545 Af	9555n
<b>UK</b>	0600-0900 Waf	15640j
<b>UK</b>	1500-1800 Waf	15715j
<b>UK</b>	1800-2000 Waf	13820j
<b>UK</b>	2000-2100 Waf	9765j

<b>UK FAR EAST BC ASSOCIATION</b>	0115-0130 India 1400-1415 SAs ME 1500-1545 India 1600-1615 SAs ME	7365 Yerevan Tuesday to Friday 9500r 7320r 9850 Yerevan Friday
<b>RADIO UKRAINE INT</b>	0000-0100 NA	7440
<b>RADIO UKRAINE INT</b>	0300-0400 NA	7440
<b>RADIO UKRAINE INT</b>	1100-1200 Eu	15675
<b>RADIO UKRAINE INT</b>	2100-2200 Eu	7490
<b>UNITED NATIONS</b>	1730-1745 Af	7150n 15495u 17810l Monday to Friday
<b>UNIVERSAL LIFE</b>	0100-0130 As	9480w Sunday
<b>UNIVERSAL LIFE</b>	1900-1930 ME	11880 Nauen Sunday
<b>USA KAIJ</b>	0000-1400 NA FE	5755
<b>USA KAIJ</b>	1400-0000 NA FE	13815
<b>USA KJES</b>	0200-0330 NA	7555
<b>USA KJES</b>	1400-1600 NA	11715
<b>USA KJES</b>	1900-2000 Pa CAm	15385
<b>USA KTBN</b>	0000-1500 NA	7505
<b>USA KTBN</b>	1500-0000 NA	15590
<b>USA KWHR</b>	0100-0500 As	17655
<b>USA KWHR</b>	0500-0800 As	11565 13650
<b>USA KWHR</b>	0800-1200 As	9930 11565
<b>USA KWHR</b>	1200-1300 As	11565 12130
<b>USA KWHR</b>	1300-1400 As	12130
<b>USA KWHR</b>	1400-1800 As	9930
<b>USA OVERCOMER</b>	0900-1100 Eu ME	6110j
<b>USA MINISTRY</b>	1200-1400 Eu ME	6110j
<b>USA</b>	1400-1600 ME	13810j
<b>USA</b>	1900-2000 Af	9860j
<b>USA</b>	1900-2100 ME	13810j
<b>USA PAN AMERICAN</b>	0030-0045 SEAs	9640w Sunday
<b>USA BROADCASTING</b>	1400-1415 ME	15205 Nauen Tuesday, Thursday
<b>USA</b>	1430-1445 ME	15205 Nauen 15650j Sunday
<b>USA</b>	1545-1630 ME	15650j Sunday (Thursday 1600-1630)
<b>USA</b>	1930-2030 ME	9430w Sunday (Friday 2000-2015, Saturday 2000-2030)
<b>USA UNIVERSITY NETWORK</b>	0000-1200 NA 1200-2400 NA	5030 6150 7375 9725 Costa Rica 9725 11870 13750 Costa Rica
<b>GENE SCOTT</b>	1000-2200 NA 2200-1000 NA	11775 Anguilla 6090 Anguilla
<b>USA VOA</b>	1400-1500 Eu ME	15490 17730
<b>USA VOA</b>	1500-1600 Eu ME	15195 15445
<b>USA VOA</b>	0300-0400 Af	4930 6080 <7340 9885 12080 15580
<b>USA VOA</b>	0400-0500 Af	4930 4960 6080 9575 <9885 11835 12080 15580
<b>USA VOA</b>	0500-0600 Af	4930 6080 6180 12080 15580
<b>USA VOA</b>	0600-0700 Af	6080 6180 12080 15580
<b>USA VOA</b>	1400-1500 Af	4930 6080 13795 15580 17685 17720
<b>USA VOA</b>	1500-1600 Af	4930 6080 13795 15580 17685 17720
<b>USA VOA</b>	1600-1700 Af	4930 6080 15410 15580
<b>USA VOA</b>	1700-1800 Af	4930* 6080 15410 15580 *Sat, Sun
<b>USA VOA</b>	1800-1900 Af	4930* 6080 11975 15410 15580 17895 *Sat, Sun 1800-1830 only
<b>USA VOA</b>	1900-2030 Af	4930 4940 6080 11975 15410 15445 15580 17895
<b>USA VOA</b>	2030-2100 Af	4930 4940* 6080 11975 15410 15445 15580 *Sat, Sun
<b>USA VOA</b>	2030-0030 Afghanistan	7555
<b>USA VOA</b>	0100-0200 FE SAs Pa	9885 11705 11725
<b>USA VOA</b>	1200-1300 FE SAs Pa	6160 9645 9760 11750
<b>USA VOA</b>	1300-1400 FE SAs Pa	9645 9760
<b>USA VOA</b>	1400-1500 FE SAs Pa	7125 9760 15185
<b>USA VOA</b>	1500-1600 FE SAs Pa	7125 12150 13735 15105
<b>USA VOA</b>	2200-0000 FE SAs Pa	7215 15185 15290 17740
<b>USA VOA</b>	1730-1800 Zimbabwe	4930 13755 17730 Monday to Friday
<b>USA WBCQ</b>	1700-2200 NA	18910 -2300 Monday, Thursday, Friday, -2330 Wednesday
<b>USA WBCQ</b>	1400-0400 NA	9330 1300-0400 Wednesday and Friday
<b>USA WBCQ</b>	1800-0900 NA	7415 1900-0900 Saturday
<b>USA WBCQ</b>	2200-1000 NA	5110 2300-1000 Friday, Saturday, Sunday
<b>USA W80H</b>	0000-2400 NA	5920 Spanish and English

<b>USA WEWN</b>	0000-0500 NA Eu	5035 5835
<b>USA WEWN</b>	0500-0600 NA Eu	5050 5835
<b>USA WEWN</b>	0600-0900 NA Eu	5050 7570
<b>USA WEWN</b>	0900-1400 NA	5050
<b>USA WEWN</b>	1400-1600 NA	9955
<b>USA WEWN</b>	1600-1700 NA	13615
<b>USA WEWN</b>	1700-2200 NA Eu	13615 15220
<b>USA WEWN</b>	2200-0000 NA Eu	9975 15745
<b>USA WHRI</b>	0000-0100 EuAf NA	7490 (Mon) 7520 7555 9820(Tue-Sun) 13760
<b>USA WHRI</b>	0100-0300 EuAf NA	5850 5875 7315(Sun,Mon) 7490 9515(Tue-Sat)
<b>USA WHRI</b>	0300-0500 EuAf NA	5850 5860 5875 7315(Sun,Mon) 7520
<b>USA WHRI</b>	0500-0600 EuAf NA	5860 6145 7315(Sun Mon) 7465
<b>USA WHRI</b>	0600-0900 EuAf NA	7315 7465 7490
<b>USA WHRI</b>	0900-1000 EuAf NA	7315 7520
<b>USA WHRI</b>	1000-1200 EuAf NA	7520 7555
<b>USA WHRI</b>	1200-1300 EuAf NA	9495 9840 12020 15665
<b>USA WHRI</b>	1300-1400 EuAf NA	9840 11785 12020 15665
<b>USA WHRI</b>	1400-1500 EuAf NA	9840 11785 12020 17650
<b>USA WHRI</b>	1500-1600 EuAf NA	9840 11785 13760 17650
<b>USA WHRI</b>	1600-1700 EuAf NA	9840 13760 15285 17640
<b>USA WHRI</b>	1700-1900 EuAf NA	13760 15285 15665 15785 17640
<b>USA WHRI</b>	1900-2000 EuAf NA	13710 13760 15285 15665 15785
<b>USA WHRI</b>	2000-2100 EuAf NA	9840 13710 13760 15285 15665 15785
<b>USA WHRI</b>	2100-2200 EuAf NA	9840 11610 11765 13760 15285 15665 15785
<b>USA WHRI</b>	2200-2300 EuAf NA	7490(Mon) 9840(Tue-Sat) 11610 11765 13760 15285
<b>USA WHRI</b>	2300-0000 EuAf NA	7490(Mon) 7520 7555 9840(Tue-Sat) 13760
<b>USA WINB</b>	1000-1200 NA	9265
<b>USA WINB</b>	1200-2200 NA	13570
<b>USA WINB</b>	2200-0400 NA	9265
<b>USA WMLK</b>	1600-2100 Eu ME	9265 Monday to Saturday
<b>USA WRMI</b>	0400-1400 SAm	9955 Some Spanish programming
<b>USA WRMI</b>	1400-1600 NA	7385
<b>USA WRMI</b>	2100-0400 NA	7385 Monday to Friday (Saturday and Sunday 2100-2200)
<b>USA WRMI</b>	2200-0400 SAm	9955 Saturday and Sunday, some Spanish programming
<b>USA WTJC</b>	0000-2400 NA	9370
<b>USA WWCR</b>	0000-0100 NA	3215 5070 7465 13845
<b>USA WWCR</b>	0100-0300 NA	3215 5070 5935 7465
<b>USA WWCR</b>	0300-0900 NA	3215 5070 5765 5935
<b>USA WWCR</b>	0900-1000 NA	5070 5765 5935 9985
<b>USA WWCR</b>	1000-1200 NA	5070 5765 5935 15825
<b>USA WWCR</b>	1200-1400 NA	7465 9985 13845 15825
<b>USA WWCR</b>	1400-1800 NA	9985 12160 13845 15825
<b>USA WWCR</b>	1800-2200 NA	9975 12160 13845 15825
<b>USA WWCR</b>	2200-0000 NA	5070 7465 9985 13845
This schedule is valid to 31st May and from 1st September (except 12160 runs to 2300)		
<b>USA WWCR</b>	0000-0100 NA	3215 5070 9985 13845
<b>USA WWCR</b>	0100-0200 NA	3215 5070 5765 13845
<b>USA WWCR</b>	0200-0900 NA	3215 5070 5765 5935
<b>USA WWCR</b>	0900-1000 NA	5070 5765 5935 9985
<b>USA WWCR</b>	1000-1100 NA	5070 5765 5935 15825
<b>USA WWCR</b>	1100-1200 NA	5070 5935 7465 15825
<b>USA WWCR</b>	1200-1400 NA	7465 9985 13845 15825
<b>USA WWCR</b>	1400-1800 NA	9985 12160 13845 15825
<b>USA WWCR</b>	1800-2200 NA	9975 12160 13845 15825
<b>USA WWCR</b>	2200-2300 NA	7465 9985 12160 13845
<b>USA WWCR</b>	2300-0000 NA	5070 7465 9985 13845
This schedule is valid from 1st June to 31st August		
<b>USA WWRB</b>	0000-0500 NA	3185 5050 5745 6890
<b>USA WWRB</b>	0500-1300 NA	3185
<b>USA WWRB</b>	1300-1500 NA	9385
<b>USA WWRB</b>	1500-1700 NA Af	9385 11915
<b>USA WWRB</b>	1700-2300 NA Eu Af	9385 11915 15250
<b>USA WWRB</b>	2300-0000 NA	6890
Schedule subject to daily variations.		
<b>USA WYFR</b>	0000-0100 NA/LA	6065 9505 /11835 17805
<b>USA WYFR</b>	0100-0200 NA	6065 9505
<b>USA WYFR</b>	0100-0200 As	15195v
<b>USA WYFR</b>	0200-0300 NA/LA	6065 9505 / 5985 11835 11855

USA WYFR	0300-0400 NA/LA	6065 9505/ 11740 15255
USA WYFR	0400-0500 Eu/NA/LA	7780/ 6065 6855 9505 / 9715
USA WYFR	0500-0600 Eu/NA/Af	9355/ 6855/ 9525t
USA WYFR	0600-0700 NA/LA	9680/ 6000
USA WYFR	0600-0700 Eu/Af	7780 11580/ 11530
USA WYFR	0700-0800 Eu/NA/Af	7780/ 5985 6855 9505 9715/ 9930
USA WYFR	0800-0900 NA/Af	5950 5985 6855/ 9930
USA WYFR	0900-1100 As	9450r
USA WYFR	0900-0100 NA	5950 6855 9755
USA WYFR	1000-1100 NA	5950 5985 6855 9755
USA WYFR	1100-1200 NA/LA	5950 5985 9755/ 7780 9550 9625
USA WYFR	1200-1300 NA/LA	5950 5985 9755 17750/ 17555
USA WYFR	1300-1400 NA	11830 11865 11910 17750
USA WYFR	1300-1500 As	7580r 11540(1400-) 11895r(-1400) 11520v 11560v
USA WYFR	1400-1500 NA	11830 11910 13695 17750
USA WYFR	1500-1600 NA/LA	11830 11910 17750/ 15770
USA WYFR	1500-1600 As/Af	6280v 15520d/15750w
USA WYFR	1600-1700 NA	6085 11830 11865 13695 17750
USA WYFR	1600-1700 As	15520d
USA WYFR	1600-1700 Eu/Af	18980 21455/ 21525
USA WYFR	1700-1800 NA	11830 13690 17750
USA WYFR	1700-1800 Eu	3955u 18980 21455
USA WYFR	1800-1900 Eu/Af/ME	18980/ 5905t 7395t 15750w 17535/ 7435r 13780u
USA WYFR	1800-1900 NA	13690 13800 17795
USA WYFR	1900-2000 Eu/Af	18930 18980/ 3230n 6020t 17845
USA WYFR	1900-2000 NA	6085 13690 13800 17795
USA WYFR	2000-2100 Eu/Af	17750 18980 7360r/ 3230n 6020t 17845
USA WYFR	2000-2200 NA/LA	13800 17795/ 17725
USA WYFR	2100-2200 Eu/Af	11565 18980 7360r/11875i(from 2115) 15195i 17845
USA WYFR	2200-2300 Af	11875i(to 2315) 15770
USA WYFR	2200-2300 NA	11740
USA WYFR	2300-0000 NA/LA	11740/ 15255 17750
VATICAN RADIO	0140-0200 As Pa	7335 9650
VATICAN RADIO	0250-0320 NA	7305 9605
VATICAN RADIO	0300-0330 Af	9660
VATICAN RADIO	0500-0520 Eu	1530 4005 5885 7250
VATICAN RADIO	0500-0530 Af	9660 11625 13675
VATICAN RADIO	0630-0700 Af	11625 13765 15570
VATICAN RADIO	0630-0645 EuAsPaAf	4005 5885 6185 7250 9645 11740 15595
VATICAN RADIO	1130-1200 AfAsPa	15595 17515
VATICAN RADIO	1530-1600 As Pa	12065 13765 15235
VATICAN RADIO	1615-1630 EuAsPaAf	4005 5885 7250 9645 15595
VATICAN RADIO	1730-1800 Af	11625 13765 15570
VATICAN RADIO	1950-2020 Eu	4005 5885 7250 9645
VATICAN RADIO	2000-2030 Af	9755 11625 13765
VOICE OF VIETNAM	0100-0130 NA	6175c
VOICE OF VIETNAM	0230-0300 NA	6175c
VOICE OF VIETNAM	0330-0400 NA	6175c
VOICE OF VIETNAM	1100-1130 As	7285
VOICE OF VIETNAM	1130-1200 As	9840 12020
VOICE OF VIETNAM	1230-1300 As	9840 12020
VOICE OF VIETNAM	1500-1530 SEAs	7285 9840
VOICE OF VIETNAM	1600-1630 Eu SEAs	7220 7280 9550 9730
VOICE OF VIETNAM	1700-1730 Eu	9725 Moosbrun
VOICE OF VIETNAM	1800-1830 Eu	7280 9730
VOICE OF VIETNAM	1900-1930 Eu	7280 9730
VOICE OF VIETNAM	2030-2100 Eu As	7220 7280 9550 9730
VOICE OF VIETNAM	2330-2400 As	9840 12020
YEMEN RADIO SANA'A	0600-0700 ME Af	9780
YEMEN RADIO SANA'A	1800-1900 ME Af	9780
ZAMBIA CHRISTIAN V	0600-1500 Af	6065
ZAMBIA CHRISTIAN V	1500-0600 Af	4965

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<b>Joe Carr's Loop Antenna Handbook</b> Comprehensive but readable guide to understanding and building loop antennas.	\$16.50 +2.00 s/h US +4.00 s/h Can.
<b>Radio Monitoring: the How-to Guide</b> by Skip Arey. Guide for new listeners to MW, HF, VHF and above.	17.95 +4.00 s/h US +8.00 s/h Can.
<b>Passport to Worldband Radio 2005</b> Great source of information about shortwave stations, frequencies in use and schedules.	\$20.95 +4.00 s/h US +8.00 s/h Can.
<b>World Radio and TV Handbook 2005</b> Long considered to be the bible for shortwave listeners.	\$27.95 +4.00 s/h US +8.00 s/h Can.
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