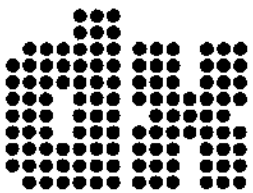


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WORLD WIDE DX CLUB



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Each of the editors mentioned above is self-responsible for the contents of his composed column. Furthermore, we cannot be responsible for the contents of advertisements published in DX MAGAZINE.

We have no fixed deadlines. Contributions may be sent either to WWDXC Headquarters or directly to our editors at any time. If you send your contributions to WWDXC Headquarters, please do not forget to write all contributions for the different sections on separate sheets of paper, so that we are able to distribute them to the competent section editors.

## WORLD RADIO TV HANDBOOK 2003

Prices for orders from WORLDWIDE DX CLUB • Preise bei Bestellung beim WORLDWIDE DX CLUB:

€ 26.00 or US\$26.00. Extra for air mail: € 10.20 or US\$10.20.

These prices include postage and packing. Delivery against advance payment by International Money Order, cheque in € drawn on a German bank (otherwise please add € 5.00 for bank charges), cheque in US\$ drawn on a US bank, cash in any convertible currency, Postal Money Order or transfer to our postal giro accounts Postbank Frankfurt/Germany No. 289010605 (IBAN: DE49 5001 0060 0289 0106 05 - BIC/SWIFT-Code: PBNKDEFF) or Postbank Leeuwarden/Netherlands No. 3822840.

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## INTERNATIONALE ANTWORTSCHEINE (alte, kleine Version)

Bei uns erhältlich für € 1,00 pro Stück (inkl. Porto). Mindestbestellung: 10 Stück. Laut UPU (s. DX MAGAZINE 6/02, S. 31) sind diese weiterhin unbeschränkt gültig.

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**DX MAGAZINE No. 3**

**Vol. XXXVIII**

**March 2003**

Hello again,

Welcome to another issue of our DX MAGAZINE. Since we have no news from inside the club this month, let's just start with our usual news from outside the club:

All our members having access to the Internet are able to download an update for **WORLD RADIO TV HANDBOOK 2003** from the WRTH website at <<http://www.wrth.com/WRTHUPDATES.pdf>>. The file is a PDF document, so you will need Acrobat Reader to open it.

The annual **AIB Global Media Business Conference 2003** will take place in London on Tuesday 29 and Wednesday 30 April 2003 at the Royal College of Surgeons. The Conference is the only event designed specifically for the international broadcasting industry covering both television and radio. The AIB's Conference Partners are BBC World Service and BBC World. The complete agenda for the two-day AIB Global Media Business Conference is available online at <<http://www.aib.org.uk>>, and full booking information - including an online registration system - is also available on the AIB's website.

The **Annual Meeting of the National Association of Shortwave Broadcasters** will be held on Friday, May 2, 2003 at the Crown Plaza, National Airport, 1489 Jefferson Davis Highway, Arlington, VA 22202, USA. A registration fee of \$50.00 for each representative, and \$25.00 for each additional person from the same organization, will be charged to cover luncheon and other expenses. You may send this fee to the NASB address given below at least one week before the Annual Meeting, or you may pay by check or cash at the meeting. National Association of Shortwave Broadcasters, 10400 N.W. 240th Street, Okeechobee, FL 34972, USA, E-Mail: <[nasb@shortwave.org](mailto:nasb@shortwave.org)>.

The **37th Conference of the European DX Council 2003** will take place in Germany, organized by Rhein-Main-Radio-Club from Friday 15. August to Sunday 17. August 2003 at 'KTC - Kommunikations und Trainingszentrum der Dresdner Bank' in Königstein/Taunus. The Conference location Königstein is about 15 km North of Frankfurt. The EDXC Conference is a unique opportunity to meet annually the specialists of long distance radio listening from everywhere. The Conference is the traditional workshop for exchanging experiences and finding new trends and looking at the future of dxing. After focusing on traditional DX'ing, this year's conference concentrates on the future of the hobby as well as of Shortwave, Tropical Bands, FM-DX and Free Radio. The EDXC Conference 2003 in Germany is organized by RMRC e.V. in co-operation with ADDX, AGDX, EAWRC, SWLCS and other DX clubs with the friendly assistance of Bosch Company. Full information can be found at the conference website <<http://www.edxc-konferenz2003.org/>>.

Advice from the WRTH publishers in the UK is that production of Edition Two of the **Shortwave Guide** is planned for completion in May, with a global release of early June. This timetable reflects several weeks improvement as compared with the first (2002) edition. The SWG will include comprehensive details of the international schedules for the A03 season. We shall keep you informed about the price and ordering information for this book.  
(Information via Bob Padula, Australia)

The **Ontario DX Association** proudly presents their annual raffle with the draw on September 20 at their convention RadioFest 2003. Keep watching their web site for more information right up until RadioFest, September 20, 21, 22, 2002 at their web site: <<http://www.odxa.on.ca/radiofest.html>>. Ticket Prices: \$ 2.00 each, 6 for \$10.00, 12 for \$20.00 (Canadian Dollars), \$ 1.50 each, 6 for \$ 7.50, 12 for \$15.00 (U.S. Dollars).

Please send orders to: Raffle 2001 / ODXA, Box 161, Willowdale Station A, Toronto, Ontario, Canada, M2N 5S8. Tickets are also available at ODXA Toronto Chapter Meetings, ODXA attended amateur radio hamfests & fleamarkets as well as at RadioFest 2003. All winners will be posted on their web site mentioned above and in "Listening In", the magazine of the Ontario DX Association.

Der EAWRC veranstaltet vom 11. bis 21. April 2003 seinen **1. EAWRC-Free-Radio-Contest**, für den möglichst viele Free-Radio-Stationen auf MW und KW gehört werden müssen. Jeder Contestteilnehmer wird eine Urkunde mit der erreichten Platzierung erhalten. Auf die drei Bestplatzierten warten Preise. Außerdem werden zahlreiche Sachpreise unter allen Teilnehmern verlost. Die Teilnahmegebühr beträgt € 5,00 oder US\$ 5,00 (zusammen mit den Contestunterlagen einzusenden). Einsendeschluß ist der 12. Mai 2003. Die ausführlichen Teilnahmebedingungen sind gegen Rückport erhältlich von: EAWRC-FR-Contest, c/o Axel Röse, Michaelstr. 7, D-41460 Neuss, E-Mail <freeradio@eawrc.de>.

And with this best wishes and good DX until next month from



## **NEWS ABOUT BROADCASTING (+other) STATIONS**

**Dr. Juergen Kubiak · Goltzstr. 19 · D-10781 Berlin · GERMANY**

**AFGHANISTAN:** Two *shortwave stations* in Afghanistan are active:

1680 R Helmand, Helmand 5 0530-0630, 1230-1515 Dari/Pashtu 20/80 (Internews 10/2002)  
8700 Information R, Kabul 0030-1530 (CRW 11/2002)

(via GH, DXLD #3-024, 12 Feb 2003)

**ANGOLA:** *Radio Ecclesia*, operated by the Catholic church from studios in Luanda and broadcast on short wave via a hired transmitter at Meyerton, South Africa. Direct short wave broadcasts from Luanda are reportedly planned, pending restoration of its license by the Angolan government. Address: Radio Ecclesia, Rua Comandante Bula 118, Sao Paulo, Luanda, Angola. Transmitter Sites: Meyerton, South Africa - 250 kW

Times/UTC	Days	Language	Target	Frequencies/kHz
1900-2000	Daily	Portuguese	Af	7205

(British DX Club - "AFRICA ON SHORTWAVE" via JKB, Feb. 2003)

**AUSTRALIA:** *HCJB Australia*'s new frequency of 11770 generated some headaches within two days of it coming on line. This was a replacement for 11755, for the Australia/South Pacific service 0700-1200, where co-channel interference from Radio Finland was causing lots of difficulties. 11770 was taken into use on Feb-02, but on Feb-03, the Voice of Nigeria, at Lagos, chose to commence use of the same channel for its External Service in the period 0500-1200, which caused havoc with HCA between 0700 and 1000. The Nigerian signal propagates into South Eastern Australia via the classical long-path. It is thought that VON has commissioned a new high-powered transmitter, and 11770 is a registered channel which had been inactive for many years. By Feb-06, VON had vanished from 11770 in this time period, and was noted using its regular frequency of 7255, parallel with either 9690 or 15120. As of Feb-11, it had settled on 7255 and 15120, yielding good signals here in Melbourne from 0500 until as late as 1000 on 7255 via longpath, 15120 via shortpath! HCA's frequency planning has thus become complicated, due to the irregular nature of the Nigerian operation on 11770. HCA's other frequency - 15480 - intended for Asia, 1230-1700, continues to provide excellent reception as well across all of Australia, and target zone signals are reported to be reliable. I note that 11770 is not very useful in Asia, due to co-channel occupancy by the Xinjiang Peoples Broadcasting Station at Urumqi. To assist HCA in assessing the effectiveness of 11770, I would like to thank these following Australian members for their signal

reports, which have been passed on to HCA's Frequency manager: Michael Stevenson (Port Macquarie, NSW), Barry Murray (Cairns, QLD), Tim Gaynor (Oxenford, QLD), Don Rhods (Yarra Glen, VIC) and Ken Anderson (Mitcham, NSW). (Bob Padula - EDXP World Broadcast Monitor, 2003 Feb 12, via DXLD #3-024)

**BURKINA FASO:** After over a year back on the air, the shortwave has once again gone inactive. Nothing was heard on 4815, 5030, 7230 or 9515. (Chris Greenway - Accra, Ghana; 2003 Feb 12, DXLD #3-024)

**CONGO (Democratic Republic of):** *Radio Okapi* operated jointly by the United Nations Observer Mission in the Democratic Republic of the Congo (MONUC) and Foundation Hirondelle, was scheduled to start February 25, 2002. Address: Radio Okapi, QG Monuc, 12, Av des Aviateurs, Kinshasa Gombe, Democratic Rep. of Congo. Transmitter site: Kinshasa - 3 x 10 kW Marconi transmitters. Current operation of domestic service 24 hours daily, multilingual: 6030, 9550 and 11690 kHz. (British DX Club - "AFRICA ON SHORTWAVE", additional information JKB, Feb. 2003)

Current schedule of *Radio-Television Nationale Congolaise*. Address: RTNC, BP 3171, Kinshasa-Gombe, Democratic Republic of Congo. Transmitter Site: relayed via Africa No 1, Moyabi, Gabon - 500 kW transmitter.

Times/UTC	Days	Language	Target	Frequencies/kHz
0400-0600	Daily	French/Vernaculars	Dom	9770
1600-1900	Daily	French/Vernaculars	Dom	9770

(British DX Club - "AFRICA ON SHORTWAVE" via JKB, Feb. 2003)

**CONGO (Republic of):** Current schedule of Radio Congo. Address: Radio Congo, BP 2241, Brazzaville, Republic of Congo. Transmitter Site: Brazzaville - 100 kW transmitter.

Times/UTC	Days	Language	Target	Frequencies/kHz
0430-0700	Daily	French/Vernaculars	Dom	5985
0700-1800	Daily	French/Vernaculars	Dom	9610
1800-2300	Daily	French/Vernaculars	Dom	5985

Note: change-over times between frequencies may vary slightly.  
(British DX Club - "AFRICA ON SHORTWAVE" via JKB, Feb. 2003)

**CUBA:** Here are the Cuban domestic radio websites that I am aware of. They might help with IDing Cuban stations.

Radio Cadena Habana <http://www.cadenahabana.islagrande.cu> (plays station IDs on website)

Radio Guamá <http://www.rguama.co.cu>

CMKX Radio Bayamo <http://www.radiobayamo.islagrande.cu>

Radio Ciudad de la Habana <http://www.radiociudad.islagrande.cu>

Radio Reloj <http://www.radioreloj.cu> (steaming audio with Windows Media Player) This network is very easy to identify with the clock pulses in the background while the news is being read. At the top of each minute they have a morse code "RR" and station ID

Radio Enciclopedia <http://www.radioenciclopedia.cu>

CMKC Radio Coco <http://www.radiococo.cu>

Radio Metropolitana <http://www.metropolitana.islagrande.cu> (plays station IDs on website)

Radio Progreso <http://www.radioprogreso.cu> (steaming audio with Windows Media Player) very easily heard in southern Ontario when conditions are slightly auroral on 890 KHz covering up Chicago's WLS.

Radio Ciudad del Mar <http://www.rcm.cu/>

CMHT Radio Sancti Spiritus <http://www.radiosanctispiritus.islagrande.cu/> (Plays station IDs as page loads) Some English on this site

Radio Rebelde <http://www.cuba.cu/RRebelde/> and <http://www.radiorebelde.com.cu/> The first site seems to have some problems. On the second site they have streaming audio with Windows Media Player. They also sometimes are on shortwave 5.025 MHz.

Radio Victoria <http://www.tiempo21.islagrande.cu>

CMHW <http://www.cmhw.islagrande.cu/> (plays station IDs on website)

Radio Nuevitas <http://www.cadenagramonte.cubaweb.cu/radionuevitas/> (plays station IDs on website... you need Quick Time)  
 Radio Cadena Agramonte <http://www.cadenagramonte.cubaweb.cu/>  
 CMKC Radio Revolución <http://www.cmkc.co.cu/>  
 Radio Surco <http://www.radiosurco.islagrande.cu/>  
 Radio Angúlo <http://www.radioangulo.cu> (plays station ID as part of Flash display as you open the site) Site has some English as well.  
 Radio Taíno Holguín <http://www.891fm.cu/> (plays station ID on website)  
 Radio Taíno <http://radiotaino.cubasi.cu/inicio.asp> (plays Spanish/English ID if you move your mouse over the "en vivo" button at the top of the page)  
 Radio Trinchera Anti-imperialista <http://www.gtmo.cult.cu/emisora/Radio/index.htm>  
 (This website is down)  
 CMGW Radio 26 <http://www.atenas.inf.cu/servicios/radio26.htm>  
 All of the Cuban websites with a ".cu" domain will tend to load very slowly due to old slow web servers and slow connections. Also you will find a lot of errors on pages as website designers are doing the sites with no software manuals. But if you are patient you will find a lot of good information about the various Cuban radio stations. If you speak/read Spanish, even better. 73 (Bob Chandler - VE3SRE, 2003 Feb 12, Latin MWDX, via DXLD #3-026)

**DENMARK:** *Radio Denmark* A03 schedule, valid March 30 - October 25, 2003.

UTC	Target (primary coverage in brackets)	kHz	Tx	Beam
1130-1155	Europe, Mediterranean, Canary Islands	13800	K	180
	North America (east), Carribean	15705	S	280
	South America, Canary Islands	18950	S	235
1230-1255	Far East	15705	K	40
	North America (east + central), Greenland	15735	S	300
	North America (east), Carribean	17520	S	280
	South East Asia, Australia (west), Russia	18950	K	80
1330-1355	Europe	9590	S	180
	South East Asia, Australia (west), Russia	15705	K	80
	North America (east + central), Greenland	15735	S	300
1430-1455	North America (west), Greenland	15705	S	315
	Middle East (north), South Asia, Russia	15735	K	95
1530-1555	North America (west), Greenland	15705	S	315
	Middle East (north), South Asia, Russia	15735	K	95
1630-1655	Europe	9920	S	180
	North America (east), Carribean	15705	S	280
1730-1755	Europe	11615	S	180
	Europe (south east), Middle East (west), Africa (east)	15705	K	145
1830-1855	Europe	7490	S	180
	New Zealand	13800	K	35
1930-1955	Europe, Canary Islands	7490	S	180
	Africa (west, central & south), Europe (south)	13800	K	180
	North America (west), Greenland	17505	S	315
2030-2055	Europe, Canary Islands	7490	S	180
	Australia (east)	9510	K	65
2130-2155	Australia (east)	9510	K	65
2230-2255	South America	9925	S	235
	Far East	11845	K	35
2330-2355	South East Asia, Australia (west)	9415	K	80
	North America (east), Carribean	9945	S	280
	South America	9985	S	235
	Far East	11845	K	35
0030-0055	South East Asia, Australia (west)	9930	K	80
	North America (east), Carribean	9985	S	280
	North America (east + central), Greenland	11635	S	300
0130-0155	South Asia	9975	K	95
	North America (east), Carribean, South America			

	(north west)	9985	S 280
	North America (east + central), Greenland	11635	S 300
0230-0255	South Asia	9975	K 95
0330-0355	Russia, Europe (south east), Middle East (north)	7490	K 95
	North America (west), Greenland	9960	S 315
	Europe (south east), Middle East (west), Africa (east)	13800	K 145
0430-0455	Europe	7465	S 180
	Russia, Europe (south east), Middle East	7490	K 110
	North America (west), Greenland	9475	S 315
	Europe (south east), Middle East (west), Africa (east)	13800	K 145
0530-0555	Europe	7465	S 180
	Europe (south east), Middle East (west)	11615	K 120
	Europe (south), Africa	13800	K 165
0630-0655	Europe, Canary Islands	7180	K 165
	Europe (south west), Canary Islands, Africa (north west), New Zealand	9590	S 195
	Europe (south west), Canary Islands, Africa (west)	11615	S 220
	Europe (south), Africa, New Zealand	13800	K 165
0730-0755	Europe	7180	K 165
	Europe, Canary Islands	9590	K 195
	Europe (south west), Africa (west), Canary Islands, New Zealand	11615	S 220
0830-0855	Middle East (east)	15735	K 110
	Australia, Europe (southwest), Canary Islands, South America	13800	S 250
0930-0955	Australia, Europe (southwest), Canary Islands, South America	13800	S 250
	Far East, New Zealand	17500	K 40
1030-1055	Europe, Mediterranean, Canary Islands	13800	S 180

Address: Radio Danmark, Radioavisen, Rosenorns Allé 22, DK-1999 Frederiksberg C, Denmark.  
Telefax: +45 35 20 57 81.

E-mail: schedule, programme matters: rdk@dr.dk - technical, reports: rdktek@dr.dk

The schedule is also available by auto-reply email from: schedule@dr.dk

WWW: <http://www.dr.dk/rdk> or <http://www.dr.dk/radiodanmark>

The two daily news transmissions in Danish only are aired at 11.30 and 17.30 utc. Transmissions in between are repeats. The technical letterbox programme, "Tune In" is heard every second Saturday from 11.48 UT until 16.48 UT. Transmissions may be cancelled without warning. Radio Denmark shares the Norwegian transmitters with Radio Norway. They broadcast at xx.00-xx.30, followed by Denmark at xx.30-xx.55, 24 hours a day. Stations: Kvitsoy (K) and Sveio (S) each have two 500 kW transmitters, but run at 250 kW. They are located on the Norwegian west coast near Stavanger and Haugesund at 05.27E 59.04N (K) and 05.19E 59.37N (S). Kvitsoy covers the Eastern Globe, while Sveio covers the Western Globe. Radio Denmark replies complete reports by a QSL-card. Although not necessary, return postage is appreciated (1 IRC, 1 Euro or 1 US dollar). Recordings (incl. RealAudio and MP3 email files) are accepted. Tapes, however, are not returned. (Alokesh Gupta via WDXC-HQ; March 03, 2003)

**ECUADOR:** A03 broadcast schedule (30 Mar 2003 - 25 Oct 2003) of *The Voice of the Andes* - **HCJB**. Address: Radio Station HCJB, Casilla 17-17-691, Quito, Ecuador. Fax: +593-2-2267263. Frequency Manager: Douglas Weber, E-Mail: <[dweber@hcjb.org.ec](mailto:dweber@hcjb.org.ec)>.

UTC kHz kW Az. Target

ENGLISH

0000	0300	9745	100	351	N. Amer. (E)
0000	0600	21455	1	35/225	Eur./S. Pacific
0300	0600	9745	100	324	N Amer. (W)
0600	0800	9860	100	42	Europe
0600	0800	21455	1	35/225	Eur./S. Pacific

1100	1430	12005	75	43	Caribbean
1100	1430	15115	100	352/128	N/S America
1100	1430	21455	1	35/225	Eur./S. Pacific
2000	2200	15185	100	41	Europe

## GERMAN

0500	0530	9780	100	42	Europe
0500	0530	21455	1	35/225	Eur./S. Pacific
0930	1000	6010	100	155	S. America
0930	1000	21455	1	35/225	Eur./S. Pacific
2000	2030	15590	100	42	Europe
2000	2030	17795	100	38	Europe
2000	2030	21455	1	35/225	Eur./S. Pacific
2300	2400	11980	100	131	S. America

## GERMAN

0530	0600	9780	100	42	Europe
0530	0600	21455	1	35/225	Eur./S. Pacific
1000	1030	6010	100	155	S. America
1000	1030	21455	1	35/225	Eur./S. Pacific
2230	2300	11980	100	150/330	N/S America
2230	2300	17660	100	340	N. America

## HUARANI

1030	1100	6050	50	18/172	S. America
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## KIKONGO (Monday to Friday only)

0500	0515	12005	100	100	W. Africa
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## PORTUGUESE

0800	0930	9745	100	100	N. Brazil
0800	0930	21455	1	35/225	Eur./S. Pacific
1530	1800	15295	100	139	Brazil
2300	0230	11920	100	126	Brazil

## QUICHUA

0830	1000	6125	100	155	S. America
0830	1030	690	50	000/180	Ecuador
0830	1400	3220	8	90 (V)	S. America
0830	1400	6080	8	90 (V)	S. America
2100	0300	3220	8	90 (V)	S. America
2100	0300	6080	8	90 (V)	S. America
2130	0000	9745	100	155	S. America

## RUSSIAN

0330	0430	11865	100	34	W. Russia
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## SPANISH

0100	0500	9525	100	325	Mexico
0600	0630	9655	100	42	Europe
1030	1100	21455	1	35/225	Eur./S. Pacific
1030	0500	690	50	000/180	Ecuador
1100	0500	6050	50	18/172	S. America
1100	1300	11960	100	355	Cuba
1100	1500	15140	100	150	S. America
1300	1500	11960	100	323	Mexico
1430	1530	21455	1	35/225	Eur./S. Pacific
2030	2130	15590	100	50	Europe
2100	2300	15140	100	150	S. America
2030	2400	21455	1	35/225	Eur./S. Pacific
2300	0100	15140	100	160/330	N/S America

All transmissions daily, except programme in KIKONGO. V = Vertical.

(Swopan Chakroborty via WDXC-HQ; March 04, 2003)

**EGYPT:** A03 schedule **Radio Cairo**, the External Service, V.O.T.ARABS - VOICE OF THE ARABS and GEN PROG - GENERAL PROGRAMME of the Egyptian Radio RTV. Address: Radio Cairo, Egyptian Radio and Television Union, PO Box 11511, Cairo, Egypt. Transmitter Site: Abis - 250/500 kW transmitters; Abu Zaabal - 100/250/500 kW transmitters.

UTC	KHz	PROGRAM	TARGET AREA
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0030-0430	11725	ARABIC	E.N.AMERICA
0045-0200	11780	SPANISH	N.AMERICA
0045-0200	11755	SPANISH	C.AMERICA
0045-0200	11790	SPANISH	S.AMERICA
0200-0330	11780	ENGLISH	N.AMERICA
0200-0000	12050	GEN PROG	N.AMERICA& EUROPE
0300-0600	9855	V.O.T.ARABS	N.AFRICA,S.EUROPE&ARAB GULF
0300-0030	15285	V.O.T.ARABS	ARAB GULF
0350-0700	9770	GEN PROG	N.AFRICA , S.EUROPE
0350-0700	9620	GEN PROG	N.AFRICA , S.EUROPE
0350-1200	9800	GEN PROG	ARAB GULF
0600-1400	11720	V.O.T.ARABS	N.AFRICA,S.EUROPE& ARAB GULF
0700-1100	15115	GEN PROG	W.AFRICA
0700-1500	11785	GEN PROG	N.AFRICA , S.EUROPE
1015-1215	17775	ARABIC	M.EAST & AFGHANISTAN
1100-0000	11540	GEN PROG	N.AFRICA,S.EUROPE & ARAB GULF
1100-1130	17800	ARABIC	C.& S.AFRICA
1115-1215	17665	THAI	S.E.ASIA
1215-1330	17775	ENGLISH	S.ASIA
1215-1315	17665	MALAY	S.E.ASIA
1230-1330	15480	PERSIAN	TADZHIKSTAN
1300-1800	17675	GEN PROG	N.AFRICA , S.EUROPE
1320-1450	17665	INDONESIAN	S.E.ASIA
1330-1430	17775	BENGALI	S.ASIA
1330-1530	15480	PERSIAN	IRAN
1300-1600	15220	ARABIC	W.AFRICA
1430-1530	9780	AZERI	AZERBAIJAN
1500-1600	15170	HINDI	S.ASIA
1500-1600	15670	PASHTO	AFGHANISTAN
1500-1600	7315	RUSSIAN	W.RUSSIA
1530-1630	11635	UZBEKI	UZBEKISTAN
1530-1630	15155	AFAR	E.& C.AFRICA
1530-1730	17810	SWAHILI	C.& E.AFRICA
1600-1800	15170	URDU	S.ASIA
1600-1645	15620	ZULU	C.& S.AFRICA
1600-1800	6230	TURKISH	TURKEY
1600-1800	9950	ALBANIAN	ALBANIA
1630-1730	15155	SOMALI	E.& C.AFRICA
1630-1830	15255	ENGLISH	C.& S.AFRICA
1645-1730	15620	SHONA	C.& S.AFRICA
1730-1815	15620	INDEBELE	C.& S.AFRICA
1730-1900	15155	AMHARIC	E.& C.AFRICA
1800-0030	9700	V.O.T.ARABS	N.AFRICA,S.EUROPE
1800-1900	9988	ITALIAN	EUROPE
1800-2100	9675	HAUSA	W.AFRICA
1830-1915	9755	LINGALA	C.& S.AFRICA
1830-1930	15375	WOLOF	W.AFRICA
1900-2000	9990	GERMAN	EUROPE
1900-0030	11665	V.O.T.ARABS	C.& E.AFRICA
1915-2030	15425	FULANI	W.AFRICA
1930-2030	15375	BAMBARA	W.AFRICA
2000-2200	11750	ARABIC	AUSTRALIA
2000-2115	9990	FRENCH	EUROPE
2030-2200	15375	ENGLISH	W.AFRICA
2030-2230	15335	FRENCH	W.AFRICA
2100-2200	9675	YORUBA	W.AFRICA
2115-2245	9990	ENGLISH	EUROPE
2215-2330	11790	PORTUGUSE	S.AMERICA
2300-0030	11725	ENGLISH	E.N.AMERICA
2330-0045	15590	ARABIC	S.AMERICA
2330-0045	11755	ARABIC	S.AMERICA

(Alokesh Gupta via WDXC-HQ; March 10, 2003)

**EUROPE: Trans World Radio - TWR Europe**, transmission schedule season A03, effective: 30 Mar 2003 - 25 Oct 2003. TWR website: <<http://www.twr.org>>. Address: Frequency Coordination, Trans World Radio, Postfach 141, A-1235 Vienna, Austria. Fax: +43-1-863-12-20 or +43-1-862-12-57. E-mail: <[eurofreq@twr-europe.at](mailto:eurofreq@twr-europe.at)>.

## TRANS WORLD RADIO - MONTE CARLO, MONACO

TIME/UTC	DAYS	LANGUAGE	FREQ	PWR	AZI	ZONES
0645-0750	6	English	9870	100	324	27
0645-0820	7	English	9870	100	324	27
0655-0820	12345	English	9870	100	324	27
0830-0845	123456	German	7160	100	13	28
0830-0845	123456	German	9795	100	26	28
0830-0915	7	German	7160	100	13	28
0830-0915	7	German	9795	100	26	28
1230-1245	4	7 Slovenian	7280	100	85	28
1230-1245	123 56	Serbo-Croatian/Croat	7280	100	85	28
1300-1330	7	German	7160	100	13	28
1300-1330	7	German	9795	100	26	28
1330-1400	1234567	German	7160	100	13	28
1330-1400	1234567	German	9795	100	26	28

## TRANS WORLD RADIO - JUELICH, GERMANY

0645-0750	6	English	6045	100	0	27
0645-0820	7	English	6045	100	0	27
0655-0820	12345	English	6045	100	0	27
1230-1245	4	7 Slovenian	9490	100	130	28
1230-1245	123 56	Serbo-Croatian/Croat	9490	100	130	28
1600-1645	6	Rumanian	9660	100	100	28

## TRANS WORLD RADIO - NAUEN, GERMANY

1600-1645	6	Rumanian	7135	125	125	28
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## TRANS WORLD RADIO - MOOSBRUNN, AUSTRIA

1344-1359	1	Russian	9745	100	55	28/29/30
1344-1429	67	Russian	9745	100	55	28/29/30
1344-1459	2345	Russian	9745	100	55	28/29/30
1359-1429	1	Belorussian	9745	100	55	28/29/30
1429-1459	1	Russian	9745	100	55	28/29/30

## TRANS WORLD RADIO - CERRIK, ALBANIA

0500-0515	12345	Slovak	6235	100	350	28/29
0515-0530	1234567	Polish	9850	100	350	28
0830-0845	23456	Hungarian	9490	100	350	28
1030-1100	6	Slovak	9490	100	350	28/29
1344-1359	1	Russian	11615	100	33	28/29/30
1344-1429	67	Russian	11615	100	33	28/29/30
1344-1459	2345	Russian	11615	100	33	28/29/30
1359-1429	1	Belorussian	11615	100	33	28/29/30
1429-1459	1	Russian	11615	100	33	28/29/30
1500-1530	1234567	Polish	9440	100	350	28
1530-1545	7	Polish	9440	100	350	28
1530-1545	67	Armenian/East	9945	100	90	29S/39N
1530-1545	67	Armenian/East	12080	100	90	29S/39N
1530-1600	12345	Armenian/East	9945	100	90	29S/39N
1530-1600	12345	Armenian/East	12080	100	90	29S/39N
1615-1630	12 45	Czech	6175	100	350	28
1625-1740	1234567	Farsi	9960	100	90	30/40
1625-1740	1234567	Farsi	12100	100	90	30/40
1630-1700	1234567	Hungarian	6175	100	350	28
1740-1755	7	Qashqai	9960	100	90	30/40
1740-1755	7	Qashqai	12100	100	90	30/40
1930-2000*12345		Finnish	9430	100	350	18
2000-2030*12345		Swedish	9430	100	350	18
2030-2100*12345		Norwegian	9430	100	350	18

\*) April 28th to August 8th, 2003

## TRANS WORLD RADIO - SHIJAK, ALBANIA

0500-0515	12345	Slovak	7380	100	350	28/29
0515-0530	1234567	Polish	7380	100	350	28
0830-0845	23456	Hungarian	7385	100	350	28
1030-1100	6	Slovak	7340	100	350	28/29
1500-1530	1234567	Polish	7355	100	350	28
1530-1545	7	Polish	7355	100	350	28
1615-1630	12 45	Czech	7135	100	350	28

## TRANS WORLD RADIO - ROUMOULES, RMC - FRANCE

0228-0258	7	French	216	200	315	27
0241-0256	123456	French	216	200	315	27
0345-0415	1234567	German	1467	100	25	28
1845-1900	123 5	Serbo-Croatian/Croat	1467	100	85	28
1900-1915	7	Sous	1467	100	241	37,38
1900-1915	6	Kabyle	1467	100	241	37,38
1900-1915	45	Albanian	1467	100	85	28
1900-1915	3	Mandarin	1467	100	325	27,28
1900-1915	2	Tarifit	1467	100	325	27,28
1900-1915	1	Tamazight	1467	100	241	37,38
1915-1930	5	Spanish	1467	100	241	27,28
1915-1930	1234 67	Albanian	1467	100	85	28
1930-2000	67	German	1467	100	25	28
1930-2030	12345	German	1467	100	25	28
2000-2200	67	Arabic	1467	100	241	37,38
2030-2100	12345	Kabyle	1467	100	241	37,38
2100-2200	12345	Arabic	1467	100	241	37,38
2200-2245	1234567	English	1467	100	325	27

## TRANS WORLD RADIO - FLLAKE, ALBANIA

1810-1840	12345	Serbo-Croatian/Serbi	1395	500	330	28
1825-1840	12	Serbo-Croatian/Bosni	1395	500	330	28
1840-1915	1234567	Hungarian	1395	500	330	28
1915-1930	7	Russian	1395	500	330	28
1915-1930	5	Arabic	1395	500	330	28
1915-1930	4	Kurdish-Sorani	1395	500	330	28
1915-1930	3	Farsi	1395	500	330	28
1915-1930	2	6 Turkish	1395	500	330	28
1915-1930	1	Polish	1395	500	330	28
1930-1945	1234567	Serbo-Croatian/Croat	1395	500	330	28
1945-2015	67	Serbo-Croatian/Bosni	1395	500	330	28
1945-2015	12345	Serbo-Croatian/Croat	1395	500	330	28
2015-2030	1234567	Slovak	1395	500	330	28
2030-2100	1234567	Czech	1395	500	330	28

## TRANS WORLD RADIO - ST. PETERSBURG, RUSSIA

1800-1830	1234567	Lithuanian	1494	600	258	29NW
1830-1900	67	Lithuanian	1494	600	258	29NW
1830-1900	12345	Finnish	1494	600	258	18
1900-1930	67	Latvian	1494	600	258	29NW
1900-1930	12345	Swedish	1494	600	258	18
1930-2000	67	Estonian	1494	600	258	29NW
1930-2000	12345	Norwegian	1494	600	258	18

From 28 April - 08 August 2003: All transmissions are one hour later!

## TRANS WORLD RADIO - CAPE CRECO, CYPRUS

0155-0200	1234567	Arabic	1233	600	205	38,39,40
0200-0215	67	Arabic	1233	600	205	38,39,40
0200-0230	12345	Arabic	1233	600	205	38,39,40
0215-0230	67	Iraqi	1233	600	205	38,39,40
1925-1944	2	Arabic	1233	600	205	38,39,40
1925-2100	1 345	Arabic	1233	600	205	38,39,40
1925-2115	67	Arabic	1233	600	205	38,39,40
1944-1959	2	Sudanese	1233	600	205	38,39,40
1959-2100	2	Arabic	1233	600	205	38,39,40

## TRANS WORLD RADIO - GRIGORIOPOL, MOLDOVA

1730-1745	67	Ukrainian	999	500	0	29
1730-1800	12345	Ukrainian	999	500	0	29
1745-1800	67	Russian	999	500	0	29
1800-1830	1234567	Bulgarian	1548	100	245	28
1830-1845	1234567	Romani-Balkan	1548	100	245	28
1845-1915	1234567	Rumanian	1548	100	245	28
1900-1915	6	Ukrainian	999	500	0	29
1900-1930	345	Ukrainian	999	500	0	29
1900-1930	12	7 Russian	999	500	0	29
1915-1930	6	Russian	999	500	0	29
1915-1945	123456	Romani-Kalderash	1548	100	245	28
1915-2000	7	Serbo-Croatian/Serbi	1548	100	245	28
1930-2000	234567	Russian	999	500	0	29
1930-2000	1	Belorussian	999	500	0	29
1945-2000	123456	Serbo-Croatian/Serbi	1548	100	245	28

Day 1 = Mon .. 7 = Sun

(Bernhard Schraut - Freq. Manager, via WDXC-HQ; March 10, 2003)

**IRAQ:** Reception reports for three different radio *stations targeting Iraq* can be sent to wifaq\_ina@hotmail.com, the E-mail address of the Iraqi National Accord (INA). That was revealed by the INA in answer to a query from Nick Grace of Clandestine Radio.com concerning the status of Radio Tikrit, Twin Rivers Radio and al Mustaqbal. All three stations broadcast sequentially on slightly different mediumwave frequencies:

Twin Rivers Radio 1600-1900 UTC on 1566 kHz

Radio Tikrit 1900-2100 on 1584 kHz

al-Mustaqbal 2100-2400 on 1575.3 kHz

Technical observations suggest all three stations share the same transmitter. Egyptian radio monitor Tarek Zeidan has reported that the main male announcer on Radio Tikrit is the same voice as that on the US psyop station 'Information Radio', which points to US involvement in Radio Tikrit. The station bears all the hallmarks of a black clandestine operation intended to confuse and misinform the population. It started out by appearing to support the Saddam Hussein regime, but is now carrying material hostile to that regime. The CIA is understood to operate a 50 kW mediumwave transmitter in Kuwait. (© Radio Netherlands Media Network as of 24 February 2003, via JKB)

**IRELAND:** *Radio Telefis Eireann - RTE* will shortly launch a long wave service on 252 kHz, according to a report in today's Irish Independent. The service will cover the whole of Ireland and much of Britain and is expected to comprise of compilation programming from RTÉ Radio 1, 2FM, Lyric FM & Raidio na Gaeltachta. The frequency previously carried Atlantic 252, of which RTE had a stake. TeamTalk 252 took over the frequency but closed shortly afterwards, selling out to ukbetting.com. RTE have recently paid 600,000 [pounds?] for the transmission site which is based in Co Meath. (via Paul David and Mike Terry, DXLD #3-025)

**LIBYA:** At 6 Feb 2003 observed start of *LBJ - Voice of Africa's* broadcast on three frequencies: 17695, 21675, 21695. Audio signal on 17695 kHz appeared a bit later. Nothing at all on the 4th scheduled frequency 21640 kHz. It's curious that Big Ben bells and time announcement are delayed in approximately one minute behind the exact time. (Alexei Kulinchenko - Signal via DXLD #3-026)

**NETHERLANDS:** As of 11 February 2003, the frequency of *Radio Netherlands* Dutch transmission to South Africa via Madagascar at 2030-2125 UTC has changed from 6020 to 6025 kHz. (©RNMN 11 Feb 2003, via JKB).

According to Radio Netherlands Media Network Homepage, RNW has added new broadcasts due to the Iraq crisis as from March 19: 0330-0425 on 7310 kHz via Flevo directed to Turkey and Israel (also audible in Saudi-Arabia, Kuwait, Iran and Iraq) 1330-1425 on 21735 kHz via Flevo directed towards Afghanistan and Pakistan [all broadcasts are in the Dutch language]. (Manfred Reiff, Wuppertal, Germany, March 13, 2003)

The Dutch *transmission provider Nozema* contracted the maintenance of the Flevoland transmitters to the Deutsche Telekom subsidiary T-Systems. The contract includes also operational support as well as help in obtaining spare parts. The Flevoland site is equipped with Telefunken transmitters like the T-Systems sites in Germany; the maintenance contract is the result of contacts achieved through the airtime business (Radio-Kurier 4/2003 via Kai Ludwig, DXLD #3-026)

**NIGERIA:** Here is an overview about the *Nigerian shortwave radio scene:*

*Voice of Nigeria* - External Service. Address: Voice of Nigeria, PMB 40003, Falomo Post Office, Ikoyi, Lagos, Nigeria. Transmitter Site: Ikorodu - 350 kW transmitters.

Times/UTC	Days	Language	Target	Frequencies/kHz
0500-0800	Daily	English	EuAfAm	7255 15120
0800-0900	Daily	Hausa	EuAfAm	7255 15120
0900-1000	Daily	English	EuAfAm	7255 15120
1000-1200	Daily	English	Af	7255
1200-1300	Daily	Hausa	Af	7255
1300-1600	Daily	French	Af	7255
1600-1700	Daily	Swahili	Af	7255

1700-1800	Daily	Arabic	Af	7255
1800-1900	Daily	Fulfulde	Af	7255
1900-2100	Daily	English	EuAfAm	7255 15120
2100-2200	Daily	Hausa	EuAfAm	7255 15120
2200-2300	Daily	English	EuAfAm	7255 15120

Radio Nigeria-Abuja. Address: Radio Nigeria-Abuja, PMB 71, Garki, Abuja, Nigeria.  
Transmitter Site: Abuja.

Times/UTC	Days	Language	Target	Frequencies/kHz
0430-2305	Daily	English/Vernaculars	Dom	7275

Note: irregular.

Radio Nigeria-Enugu. Address: Radio Nigeria-Enugu, Broadcasting House, PMB 1051, Enugu, Nigeria. Transmitter Site: Enugu - 10 kW transmitter.

Times/UTC	Days	Language	Target	Frequencies/kHz
0400-2305	Daily	English/Vernaculars	Dom	6025

Radio Nigeria-Ibadan. Address: Radio Nigeria-Ibadan, PMB 5003, Ibadan, Oyo State, Nigeria. Transmitter Site: Ibadan - 50 kW transmitter.

Times/UTC	Days	Language	Target	Frequencies/kHz
0430-2305	Daily	English/Vernaculars	Dom	6050

Radio Nigeria-Kaduna. Address: Radio Nigeria-Kaduna, PO Box 250, Kaduna, Kaduna State, Nigeria. Transmitter Site: Kaduna - 50 kW transmitters.

Channel 1

Times/UTC	Days	Language	Target	Frequencies/kHz
0400-2305	Daily	Hausa	Dom	6090

Channel 2

Times/UTC	Days	Language	Target	Frequencies/kHz
0430-2305	Daily	English/Vernaculars	Dom	4770

Radio Nigeria-Lagos. Address: Radio Nigeria, Broadcasting House, PMB 12504, Ikoyi, Nigeria. Transmitter Site: Lagos - 50 kW transmitter.

Times/UTC	Days	Language	Target	Frequencies/kHz
0425-2305	Daily	English	Dom	3326

Radio Biafra International (Nigerian opposition). Address: Biafra Foundation, 733, 15th Street NW, 3700 Washington, DC 20005, USA. Transmitter Site: Armavir, Russia - 200 kW transmitter.

Times/UTC	Days	Language	Target	Frequencies/kHz
1900-2000	.....s.	Igbo/English	WAF	12125

Note: broadcasts in support of the Biafra Foundation.

Radio Jakada International (Nigerian opposition). Transmitter Site: Armavir, Russia - 200 kW transmitter.

Times/UTC	Days	Language	Target	Frequencies/kHz
1900-1930	mtwtf..	Hausa	WAF	12125

Note: Jakada Radio International describes itself as a non-religious, non-political, commercial radio station. It says it does not represent any political or ideological tendencies or manifestations, and is committed to fundamental human rights, democracy, rule of law and pluralism.

High Adventure Ministries. Shortwave station under construction in Jos to provide regional coverage.

(British DX Club - "AFRICA ON SHORTWAVE" via JKB, Feb. 2003)

**PORTUGAL:** Frequencies changes for RDP International *Radio Portugal* effective from 2003 Jan. 13:

to Europe Mon-Fri

1700-2000 NF 11740\* LIS 100 kW / 052 deg, ex 11800

1700-2000 NF 11960# LIS 300 kW / 045 deg, ex 13585

\* co-ch Radio Liberty in Turkmen till 1800 and AWR in Arabic 1800-1900

# co-ch VOA in Arabic 1800-1900 and Radio Farda in Persian 1900-2000

to Europe Sat/Sun

1500-1758 NF 11775\* LIS 100 kW / 052 deg, ex 13790

1500-1758 NF 11960 LIS 300 kW / 045 deg, ex 13660

\* co-ch SLBC in Sinhala from 1610 and VOA in Portuguese from 1700

1800-2000 NF 9655\* LIS 100 kW / 052 deg, ex 13790

1800-2400 NF 9880# LIS 300 kW / 045 deg, ex 13660

\* co-ch VOA in Russian  
 # co-ch Radio Kuwait in Arabic till 2130  
 to Brasil Sat/Sun  
 2000-2100 NF 11905\* LIS 100 kW / 215 deg, ex 21655  
 \*co-ch VOA in Arabic till 2100 and Radio Tashkent in German/English  
 (OBSERVER #236 - Ivanov and Datzinov, via WB, 22 Jan 2003)

**SEYCHELLES:** Excerpt about changes at **FEBA** (*The Far East Broadcasting Association*) from an article by the Director of Programming, Tony Ford, in Treshold 10/2003, FEBA's listeners bulletin:

With three transmitters working flat out together, it was impossible to squeeze more programmes into evening peak listening hours. "Wouldn't it be nice," some planners dreamed, "to have transmitters dotted around the world so we can pick and choose the best one for each language and time of day?" Some dreams come true. The bold decision last December by the Feba UK Board to transfer all programmes from Seychelles to other stations brings new freedom to programme planners in Feba. It's like accessing a fleet of taxis rather than running just one car. We have known for ages that Seychelles provides a good service to Christian mission, but it's expensive - because of the license fee and because the Seychelles itself is expensive. Then the government needed to reclaim land from the coral lagoon around our extensive antenna system. New buildings planned would be too close to the high frequency radiation. "Your station," we were told, "will have to go". For 33 years Seychelles provided a distinctive Christian voice, for some countries the only such voice there was. Now, commercial stations are plentiful, reliable and cheap to hire. As a craftsman lays down an old, loved and well-used tool to pick up a new, more efficient one, Feba is going to use different outlets for its programming. We plan that many listeners will hardly notice the change. Where possible programmes will be heard at the same time and frequency as now. If not, we will advertise from Seychelles just how the replacement programmes can be found. For listeners in Ethiopia, it should be easier to find the broadcasts. Cheaper transmitting costs release money to make and air more programmes each week. The challenge has been to find the right station for each language and to get the best price for a good quality service. We shall adjust programmes to fit the new stations' processes. And we shall check that stations are delivering the promised signal. Noteworthy is the level of trust and partnership with other Christian radio groups. In East Africa we have agreed that IBRA Radio finds the station for Swahili. Feba-made programmes will continue in a programme block IBRA organizes and manages. In Mozambique Feba is moving its Portuguese programmes from international to domestic radio services - more good news for listeners. We will keep on planning for the future. Shortwave radio propagates with seasonal variations; we will adjust things so listeners get a clear, reliable signal on which to hear the Gospel - sometimes by moving programmes from one station to another. Engineering and technology were the bedrock of Feba in Seychelles. Our new toolset contains propagation software, a good negotiating style, confidence that programme partners will trust us to find the best stations, and faith to sign contracts when money to pay the bills will come in later. These are exciting days as opportunities multiply to share Jesus with needy people. (Tony Ford - FEBA Director of Programming - in Treshold #10/2003, via JKB, March 2003)

**SOUTH AFRICA:** From Mar-30, the weekly one-hour Sunday morning broadcasts of the **South African Radio League** via the Meyerton facility are proposed for the 16 metre band, 17815, vacating the long established 13 metre band occupancy of 21560. The program is also available in parallel on 9750, and repeated on Monday evenings in the 90 metre band, on the traditional frequency of 3215. (Bob Padula - EDXP World Broadcast Monitor, 2003 Feb 12, via DXLD #3-024)

**SWEDEN:** **Radio Sweden**'s English Schedule A03 for the period beginning March 30, 2003. Address: S-105 10 Stockholm, Sweden. WWW: <<http://www.radiosweden.org>> E-mail: <[info@P6.sr.se](mailto:info@P6.sr.se)> or <[radiosweden@sr.se](mailto:radiosweden@sr.se)>. Europe / Africa / Middle East

1330	17505 kHz
1730	1179 and 6065 kHz (Sundays on 13580 kHz instead)
1930	1179 and 6065 kHz

2130 1179 and 6065 kHz

Asia & Pacific

1130 17505 kHz

1230 15750 and 17505 kHz

1330 17505 kHz

2130 11650 kHz

0130 9435 kHz

North America

1130 17840 kHz

1230 17840 kHz

1330 17840 kHz

0230 9495 kHz (via Sackville, Canada)

0330 9495 kHz (via Sackville, Canada) (Alokesh Gupta; March 03, 2003)

**UKRAINE: Radio Ukraine International - RUI** advises that from Mar-30, the Lvov transmitting centre is to be used for proposed transmissions for Australia. A massive 1000 kW is planned, for 11 hours daily, in three distinct segments - morning (22 metres), late afternoon (13 mb), and evening (16 and 13 mbs). Proposed frequencies are: 13755 1700-2000, 17555 0800-1200, 17725 0800-1300, 21510 0500-1200 (Bob Padula, EDXP World Broadcast Monitor, 2003 Feb 12, via DXLD #3-024)

Radio Ukraine International - RUI A03 very first plan of schedule (from 30 March 2003) [nice, but languages? Ed.].

Frequency	Time UTC	Tx Site	Azimuth	Target Area
5905	2100-0000	Kharkiv	290	W.Europe
7410	0400-0700	Kharkiv	290	W.Europe
9620	0000-0400	Kharkiv	55	Russia
9620	1300-1700	Kharkiv	55	Russia
11550	1700-2100	Kharkiv	277	W.Europe
12040	2300-0400	Mykolaiv	314	N.America
15415	0700-1300	Kharkiv	277	W.Europe

The changes will be very possible. (Alexander Yegorov; March 13, 2003)

**UNITED ARAB EMIRATES: UAE Radio** from Dubai has moved frequency again for its English Broadcasts at 1030, 1330 and 1600 UT. The off channel frequency of 21597.64 that it has been using for some time now has moved to 21605.27 kHz (Graham Powell - Editor of the Online DX Logbook, 2003 Feb 8, DXLD #3-022)

**UNITED KINGDOM: Merlin** A03 schedule, valid March 30 - October 25, 2003:

FREQ	START	END	DAYS	SITE	PWR	BRG	LANG	TARGET
5975	2100	2130	.mtwtf.	Antigua	250	160	ENGLISH (CARIB)	CARIB
5990	1630	1700	smtwtf.	Singapore	250	340	BENGALI	S AS
5995	0300	0345	smtwtf.	Delano	250	125	SPANISH	C S AM
5995	0345	0400	.twtf.	Delano	250	125	SPANISH	C S AM
6005	0705	0720	smtwtf.	Ascension	250	27	BBC ENG (AFR)	W AF
6005	0300	0400	smtwtf.	Ascension	250	102	ENGLISH (AFE)	S AF
6005	1700	1746	smtwtf.	Seychelles	250	270	ENGLISH (AFE)	E AF
6005	1830	2100	smtwtf.	Seychelles	250	270	ENGLISH (AFE)	E AF
6005	2100	2200	smtwtf.	Seychelles	250	240	ENGLISH (AFE)	S AF
6005	0400	0705	smtwtf.	Ascension	250	27	ENGLISH (AFW)	W AF
6005	1800	1830	smtwtf.	Seychelles	250	300	SOMALI	E AF
6005	1746	1800	smtwtf.	Seychelles	250	270	SWAHILI	E AF
6010	0430	0445	smtwtf.	Skelton	300	110	BBC ENG (LD)	SE EUR
6010	1900	2000	.....s	Skelton	300	160	SLBC	S,W EUR
6010	0400	0430	.mtwtf.	Skelton	300	110	TURKISH	SE EUR
6015	2000	2015	smtwtf.	Cyprus	250	314	SERBIAN	SE EUR
6030	1630	2000	smtwtf.	A'Seela	250	300	ARABIC	ME
6030	2000	2200	smtwtf.	A'Seela	250	305	ARABIC	ME
6030	1300	1345	smtwtf.	A'Seela	250	290	INDONESIAN	ME
6035	1300	1345	smtwtf.	Nakhon Sawan	250	150	INDONESIAN	SE AS
6050	1700	1730	smtwtf.	Cyprus	250	315	ALBANIAN	SE EUR
6050	2000	2015	.mtwtf.	Cyprus	250	295	ALBANIAN	SE EUR
6050	1730	1745	.m.w...	Cyprus	250	315	BBC ENG (ALBANIA)	SE EUR
6050	1800	1830	smtwtf.	Cyprus	250	335	ROMANIAN	SE EUR
6050	0300	0329	smtwtf.	Meyerton	500	20	SWAHILI	E AF
6050	1930	2000	.mtwtf.	Cyprus	250	5	TURKISH	SE EUR
6065	0030	0100	smtwtf.	A'Seela	250	85	BENGALI	S AS
6065	0000	0030	smtwtf.	Nakhon Sawan	250	325	BURMESE	SE AS
6065	0100	0130	smtwtf.	A'Seela	250	60	HINDI	S AS
6065	1700	1730	smtwtf.	Nakhon Sawan	250	275	HINDI	S AS
6065	1300	1530	smtwtf.	Kimjiae	250	290	MANDARIN	CHN
6065	0130	0200	smtwtf.	A'Seela	250	50	URDU	S AS
6065	1730	1800	smtwtf.	Nakhon Sawan	250	275	URDU	S AS
6080	2200	2300	smtwtf.	Singapore	250	140	INDONESIAN	SE AS
6090	1600	2000	smtwtf.	A'Seela	250	335	PERSIAN	ME

6110	0000	0115	smtwtfs	Antigua	125	235	SPANISH	S	AM	7210	0400	0415	smtwtfs	Rampisham	500	105	SERBIAN	SE	EUR
6110	0000	0115	smtwtfs	Antigua	125	290	SPANISH	C	AM	7210	1400	1415	.mtwtf.	Biblis	100	105	SERBIAN	SE	EUR
6110	0000	0115	smtwtfs	Ascension	250	235	SPANISH	S	AM	7225	1330	1400	smtwtfs	Nakhon Sawan	250	300	BENGLALI	S	AS
6110	0115	0130	.twtf.	Antigua	125	235	SPANISH	S	AM	7230	1730	1745	smtwtfs	Meyerton	500	20	BBC ENG (AFR)	AF	
6110	0115	0130	.twtf.	Antigua	125	290	SPANISH	C	AM	7230	1800	1830	smtwtfs	Meyerton	250	76	FRENCH	S	AF
6110	0115	0130	.twtf.	Ascension	250	235	SPANISH	S	AM	7230	1746	1800	smtwtfs	Meyerton	500	20	SWAHILI	E	AF
6110	0300	0345	smtwtfs	Antigua	125	235	SPANISH	S	AM	7235	1700	1730	smtwtfs	A'Seela	250	60	HINDI	S	AS
6110	0300	0345	smtwtfs	Antigua	125	290	SPANISH	C	AM	7235	2000	2015	smtwtfs	Rampisham	500	95	ROMANIAN	SE	EUR
6110	0345	0400	.twtf.	Antigua	125	235	SPANISH	S	AM	7235	1730	1800	smtwtfs	A'Seela	250	50	URDU	S	AS
6110	0345	0400	.twtf.	Antigua	125	290	SPANISH	C	AM	7295	2000	2015	smtwtfs	Rampisham	500	110	SERBIAN	SE	EUR
6110	1100	1130	.mtwtf.	Greenville	250	200	SPANISH	CARIB		7320	0100	0130	smtwtfs	Cyprus	300	107	HINDI	S	AS
6120	2330	2400	smtwtfs	A'Seela	250	85	THAI	SE	AS	7320	0130	0200	smtwtfs	Cyprus	300	107	URDU	SW	AS
6130	0400	0415	smtwtfs	Woofferton	250	114	SERBIAN	SE	EUR	7325	0400	0600	smtwtfs	Rampisham	500	168	ARABIC	N	AF
6130	1100	1130	.mtwtf.	Delano	250	115	SPANISH	C	S AM	7325	1800	1900	smtwtfs	Cyprus	300	358	RUSSIAN	RUSS	
6130	1300	1330	.mtwtf.	Delano	250	126	SPANISH	C	S AM	7325	1900	2000	.mtwtf.	Cyprus	300	358	RUSSIAN	RUSS	
6135	1400	1600	smtwtfs	Nakhon Sawan	250	20	ENGLISH (ASE)	FE		7325	2000	2030	.mtwtf.	Cyprus	300	358	RUSSIAN	RUSS	
6135	0430	0500	smtwtfs	Meyerton	250	32	PORTUGUESE (AF)	S	AF	7325	0300	0345	sm....	Rampisham	500	285	SPANISH	C	AM
6135	2030	2100	smtwtfs	Meyerton	250	32	PORTUGUESE (AF)	S	AF	7325	0300	0345	smtwtfs	Skelton	300	260	SPANISH	C	AM
6140	1445	1500	.mtwtf.	A'Seela	250	60	BBC ENG (ASIA S)	S	AS	7325	0300	0345	.twtf.	Rampisham	500	285	SPANISH	C	AM
6140	1400	1445	smtwtfs	A'Seela	250	60	HINDI	S	AS	7325	0345	0400	.twtf.	Skelton	300	260	SPANISH	C	AM
6140	1445	1500	s.....	A'Seela	250	60	HINDI	S	AS	7325	0345	0400	.twtf.	Rampisham	500	285	SPANISH	C	AM
6140	1515	1545	smtwtfs	A'Seela	250	110	SINHALA	S	AS	7330	1100	1530	smtwtfs	Vladivostok	500	228	MANDARIN	FE	
6140	1545	1615	smtwtfs	A'Seela	250	110	TAMIL	S	AS	7385	1730	1800	s.....	Moscow	250	117	RUSS CASIA	C	AS
6155	0430	0500	smtwtfs	Ascension	250	27	FRENCH	W	AF	7385	1730	1800	.....s	Moscow	250	117	RUSSIAN	RUSS	
6155	0529	0600	smtwtfs	Ascension	250	55	HAUSA	W	AF	7385	1700	1730	smtwtfs	Moscow	250	117	UZBEK	C	AS
6180	2215	2245	s.....s	Cyprus	250	314	CYPRUS BROAD	EUR		7385	1730	1800	.mtwtf.	Moscow	250	117	UZBEK	C	AS
6190	0300	0500	smtwtfs	Meyerton	100	15	ENGLISH (AFE)	S	AF	7430	1500	1530	smtwtfs	Tashkent	200	131	NEPALI	S	AS
6190	0500	1700	smtwtfs	Meyerton	100	0	ENGLISH (AFE)	S	AF	9410	0000	0100	smtwtf.	Cyprus	250	101	ENGLISH (ASS)	SW	AS
6190	1700	2200	smtwtfs	Meyerton	100	15	ENGLISH (AFE)	S	AF	9410	0100	0200	smtwtfs	Cyprus	250	101	ENGLISH (ASS)	SW	AS
6195	1000	1100	smtwtfs	Antigua	250	160	ENGLISH (AME)	CARIB		9410	0400	0600	smtwtfs	Rampisham	500	62	ENGLISH (EUR)	RUSS	
6195	1100	1130	s.....s	Antigua	250	160	ENGLISH (AME)	CARIB		9410	0400	0600	smtwtfs	Skelton	300	125	ENGLISH (EUR)	EUR	
6195	1130	1200	smtwtfs	Antigua	250	160	ENGLISH (AME)	CARIB		9410	0400	0700	smtwtfs	Skelton	300	180	ENGLISH (EUR)	W	EUR
6195	1200	1230	s.....s	Antigua	250	160	ENGLISH (AME)	CARIB		9410	1600	1700	smtwtfs	Cyprus	250	295	ENGLISH (EUR)	W	EUR
6195	1230	1400	smtwtfs	Antigua	250	160	ENGLISH (AME)	CARIB		9410	1700	2200	smtwtfs	Cyprus	250	327	ENGLISH (EUR)	EUR	
6195	0000	0200	smtwtfs	Singapore	125	1	ENGLISH (ASE)	SE	AS	9410	0000	0100	.....s	Cyprus	250	101	ENGLISH (NEWS)	ME	
6195	0000	0200	smtwtfs	Singapore	125	90	ENGLISH (ASE)	SE	AS	9410	0200	0300	smtwtfs	Cyprus	250	7	ENGLISH (NEWS)	RUSS	
6195	0900	1100	smtwtf.	Nakhon Sawan	250	0	ENGLISH (ASE)	SE	AS	9410	0200	0400	smtwtfs	Skelton	300	125	ENGLISH (NEWS)	EUR	
6195	0900	1100	smtwtf.	Singapore	125	1	ENGLISH (ASE)	SE	AS	9410	0300	0400	smtwtfs	Rampisham	500	62	ENGLISH (NEWS)	RUSS	
6195	0900	1100	smtwtf.	Singapore	125	90	ENGLISH (ASE)	SE	AS	9410	0800	0900	s.....	Cyprus	250	7	TURKISH	SE	EUR
6195	1000	1100	.....s	Singapore	125	1	ENGLISH (ASE)	SE	AS	9510	1600	1800	smtwtfs	Singapore	250	315	ENGLISH (ASS)	S	AS
6195	1000	1100	.....s	Singapore	125	90	ENGLISH (ASE)	SE	AS	9510	1800	1830	smtwtfs	Nakhon Sawan	250	255	ENGLISH (ASS)	S	AS
6195	1000	1100	.....s	Nakhon Sawan	250	0	ENGLISH (ASE)	SE	AS	9510	1100	1130	smtwtfs	Singapore	250	60	INDONESIAN	SE	AS
6195	1100	1700	smtwtfs	Singapore	125	1	ENGLISH (ASE)	SE	AS	9510	0200	0230	smtwtfs	Rampisham	500	76	RUSS CASIA	C	AS
6195	1100	1700	smtwtfs	Singapore	125	90	ENGLISH (ASE)	SE	AS	9510	0230	0330	.mtwtf.	Rampisham	500	62	RUSSIAN	RUSS	
6195	2100	2200	smtwtfs	Nakhon Sawan	250	150	ENGLISH (ASE)	SE	AS	9510	1500	1600	smtwtfs	Singapore	100	315	URDU	S	AS
6195	2200	2400	smtwtfs	Singapore	125	1	ENGLISH (ASE)	SE	AS	9515	0300	0345	smtwtfs	Delano	250	125	SPANISH	C	S AM
6195	2200	2400	smtwtfs	Singapore	125	90	ENGLISH (ASE)	FE	AS	9515	0345	0400	.twtf.	Delano	250	125	SPANISH	C	S AM
6195	1100	1130	.mtwtf.	Antigua	250	160	ENGLISH (CARIB)	CARIB		9525	1730	1745	smtwtfs	Meyerton	335	BBC ENG (AFR)	AF		
6195	1200	1230	.mtwtf.	Antigua	250	160	ENGLISH (CARIB)	CARIB		9525	0000	0115	smtwtfs	Ascension	250	235	SPANISH	S	AM
6195	0400	0600	smtwtfs	Rampisham	500	168	ENGLISH (EUR)	W	EUR	9525	0115	0130	.twtf.	Ascension	250	235	SPANISH	S	AM
6195	0400	0600	smtwtfs	Skelton	300	110	ENGLISH (EUR)	EUR		9530	1630	1700	smtwtfs	Cyprus	250	7	BBC ENG (UKR)	UKR	
6195	1700	1900	smtwtfs	Skelton	300	110	ENGLISH (EUR)	EUR		9530	1600	1630	smtwtfs	Cyprus	250	7	UKRAINIAN	UKR	
6195	1700	2200	smtwtfs	Rampisham	500	168	ENGLISH (EUR)	W	EUR	9540	1345	1430	smtwtfs	Singapore	250	340	BURMESE	SE	AS
6195	1900	2200	smtwtfs	Cyprus	250	343	ENGLISH (EUR)	N	EUR	9540	1300	1345	smtwtfs	Singapore	250	160	INDONESIAN	SE	AS
6195	2200	2300	smtwtfs	Cyprus	250	295	ENGLISH (EUR)	W	EUR	9540	1235	1300	smtwtfs	Singapore	250	330	THAI	SE	AS
6195	0200	0300	smtwtfs	Rampisham	500	62	ENGLISH (NEWS)	RUSS		9580	0030	0100	smtwtfs	Singapore	250	330	BBC ENG (LD)	S	AS
6195	0300	0400	smtwtfs	Rampisham	500	110	ENGLISH (NEWS)	EUR		9580	0000	0030	smtwtfs	A'Seela	250	85	BURMESE	SE	AS
6195	0900	1000	.....s	Singapore	125	1	ENGLISH (NEWS)	SE	AS	9580	2330	2400	smtwtfs	Kimjoe	250	285	ENGLISH (ASE)	FE	
6195	0900	1000	.....s	Singapore	125	90	ENGLISH (NEWS)	SE	AS	9580	2200	2330	smtwtfs	Kimjoe	250	285	MANDARIN	CHN	
6195	0900	1000	.....s	Nakhon Sawan	250	0	ENGLISH (NEWS)	SE	AS	9580	1730	1800	s.....	Nakhon Sawan	250	305	RUSS CASIA	C	AS
6195	1500	1600	smtwtfs	Skelton	300	10	PASHTO	W	EUR	9580	1700	1730	smtwtfs	Nakhon Sawan	250	305	UZBEK	C	AS
6195	1400	1500	smtwtfs	Skelton	300	110	PERSIAN	W	EUR	9580	1730	1800	.mtwtf.	Nakhon Sawan	250	305	UZBEK	C	AS
6195	1600	1700	smtwtfs	Skelton	300	110	PERSIAN	W	EUR	9585	0230	0330	.mtwtf.	Woofferton	300	75	RUSSIAN	RUSS	
7105	2200	2300	smtwtfs	A'Seela	250	95	ENGLISH (ASE)	SE	AS	9585	0330	0500	.mtwtf.	Rampisham	500	76	RUSSIAN	RUSS	
7105	0430	0500	smtwtfs	Ascension	250	85	FRENCH	W	C AF	9605	1030	1100	smtwtfs	Yamata	300	290	BBC ENG (ASIA)	E	FE
7105	0600	0629	smtwtfs	Ascension	250	27	FRENCH	W	AF	9605	1630	1700	smtwtfs	Nakhon Sawan	250	325	BENGLALI	S	AS
7105	0530	0600	smtwtfs	Ascension	250	55	HAUSA	W	AF	9605	0900	1030	smtwtf.	Yamata	300	290	ENGLISH (ASE)	FE	
7105	1300	1530	smtwtfs	Nakhon Sawan	250	25	MANDARIN	CHN		9605	0900	1030	.....s	Yamata	300	290	ENGLISH (NEWS)	FE	
7105	0400	0430	smtwtfs	Ascension	250	85	SWAHILI	E	AF	9605	1700	1730	smtwtfs	Singapore	100	315	HINDI	S	AS
7110	1400	1415	.mtwtf.	Biblis	100	126	CROATIAN	SE	EUR	9605	1100	1530	smtwtfs	Yamata	300	290	MANDARIN	CHN	
7115	1500	1600	smtwtfs	Cyprus	250	343	TURKISH	SE	EUR	9605	1730	1800	smtwtfs	Singapore	100	315	URDU	S	AS
7120	0300	0000	smtwtfs	Meyerton	500	335	ENGLISH (AFW)	W	AF	9610	0245	0300	smtwtfs	Seychelles	250	270	BBC ENG (SWAHILI)	E	AF
7120	0400	0500	smtwtfs	Meyerton	250	328	ENGLISH (AFW)	W	AF	9610	0500	0510	.mtwtf.	Rampisham	500	105	CROATIAN	SE	EUR
7130	0230	0330	.mtwtf.	Rampisham	500	62	RUSSIAN	RUSS		9610	0600	0629	smtwtfs	Ascension	250	27	FRENCH	W	AF
7135	1130	1145	smtwtfs	Singapore	100	13	BBC ENG (LD)	CHN		9610	0529	0600	smtwtfs	Ascension	250	65	HAUSA	W	AF
7135	1345	1430	smtwtfs	Singapore	100	340	BURMESE	SE	AS	9610	2200	2300	smtwtfs	Nakhon Sawan	250	20	MANDARIN	CHN	
7135	1100	1130	smtwtfs	Singapore	100	140	INDONESIAN	SE	AS	9610	0445	0500	smtwtfs	Cyprus	250	315	SERBIAN	SE	EUR
7135	1300	1345	smtwtfs																

9740	1000	1600	.....s	Singapore	125	135	ENGLISH (ASE)	SE AS	11860	1630	1700	.mtwtf.	Seychelles	250	270	GREAT LAKES	E AF
9740	2200	2400	smtwtf.	Singapore	50	25	ENGLISH (ASE)	SE AS	11860	1400	1415	....tf.	Seychelles	250	300	SOMALI	E AF
9740	2200	2400	smtwtf.	Singapore	50	135	ENGLISH (ASE)	SE AS	11860	1415	1500	smtwtf.	Seychelles	250	300	SOMALI	E AF
9740	0900	1000	.....s	Singapore	125	25	ENGLISH (NEWS)	SE AS	11860	1530	1615	smtwtf.	Seychelles	250	270	SWAHILI	E AF
9740	0900	1000	.....s	Singapore	125	135	ENGLISH (NEWS)	SE AS	11860	1615	1630	.mtwtf.	Seychelles	250	270	SWAHILI	E AF
9750	0300	0400	smtwtf.	Seychelles	250	280	ENGLISH (AFE)	E AF	11865	0100	0200	smtwtf.	Cyprus	250	77	PASHTO	W AS
9750	0200	0300	smtwtf.	Seychelles	250	280	ENGLISH (NEWS)	E AF	11865	0200	0300	smtwtf.	Cyprus	250	77	PERSIAN	ME
9760	2215	2245	s.....s	Cyprus	250	315	CYPRUS BROAD	EUR	11865	0300	0329	smtwtf.	Rampisham	500	140	SWAHILI	E AF
9780	0400	0415	smtwtf.	Woofferton	300	105	SERBIAN	SE EUR	11895	1100	1110	.mtwtf.	Cyprus	250	314	CROATIAN	SE EUR
9780	1600	1630	smtwtf.	Skelton	300	110	SERBIAN	SE EUR	11895	0700	0900	....f.	Dhabbaya	250	45	PASHTO	ME
9790	0030	0100	smtwtf.	Nakhon Sawan	250	325	BENGALI	S AS	11895	0700	0800	....t..	Dhabbaya	250	45	PERSIAN	ME
9815	0430	0445	smtwtf.	Rampisham	500	105	BBC ENG (LD)	SE EUR	11895	0845	0900	....t..	Dhabbaya	250	45	PERSIAN	ME
9815	0400	0430	.mtwtf.	Rampisham	500	105	TURKISH	SE EUR	11895	0800	0845	smtwt.s	Dhabbaya	250	45	PERSIAN/PASHTO	ME
9825	0000	0300	smtwtf.	Ascension	250	245	ENGLISH (AME)	S AM	11920	1130	1145	smtwtf.	Nakhon Sawan	250	20	BBC ENG (LD)	FE
9865	1329	1400	smtwtf.	Tashkent	200	131	BENGALI	S AS	11920	1400	1445	smtwtf.	Singapore	100	315	HINDI	S AS
9865	1400	1445	smtwtf.	Tashkent	200	131	HINDI	S AS	11920	1100	1130	smtwtf.	Nakhon Sawan	250	150	INDONESIAN	SE AS
9870	2230	2300	smtwtf.	Ascension	250	265	BRAZILIAN	S AM	11920	1500	1600	smtwtf.	Cyprus	250	92	URDU	SW AS
9875	0530	0545	s.....s	Cyprus	250	335	BBC ENG(ROMANIA)	SE EUR	11940	0500	1700	smtwtf.	Meyerton	100	15	ENGLISH (AFE)	S AF
9875	0100	0200	smtwtf.	Cyprus	250	77	PASHTO	W AS	11945	1030	1100	smtwtf.	Nakhon Sawan	250	20	BBC ENG (ASIA)	E FE
9875	0200	0300	smtwtf.	Cyprus	250	77	PERSIAN	ME	11945	1345	1430	smtwtf.	Singapore	250	340	BURMESE	SE AS
9875	0300	0400	smtwtf.	Rampisham	500	95	PERSIAN	ME	11945	0000	0030	smtwtf.	Yamata	300	290	ENGLISH (ASE)	FE
9875	0400	0415	.mtwtf.	Rampisham	500	95	ROMANIAN	SE EUR	11945	2100	2200	smtwtf.	Yamata	300	290	ENGLISH (ASE)	FE
9875	0500	0515	smtwtf.	Cyprus	250	335	ROMANIAN	SE EUR	11945	2300	2400	smtwtf.	Yamata	300	290	ENGLISH (ASE)	FE
9875	0515	0530	s.....s	Cyprus	250	335	ROMANIAN	SE EUR	11945	1300	1345	smtwtf.	Singapore	250	90	INDONESIAN	SE AS
9885	0530	0600	smtwtf.	Cyprus	250	314	ALBANIAN	SE EUR	11945	1100	1300	smtwtf.	Nakhon Sawan	250	20	MANDARIN	CHN
9895	0400	0500	.mtwtf.	Rampisham	500	76	UKRAINIAN	UKR	11945	2200	2300	smtwtf.	Yamata	300	290	MANDARIN	CHN
9915	0000	0300	smtwtf.	Cyprus	300	101	ARABIC	ME	11955	1700	1730	smtwtf.	Woofferton	250	114	ALBANIAN	SE EUR
9915	0300	0445	smtwtf.	Skelton	300	150	ARABIC	N AF	11955	1730	1745	.m.w...	Woofferton	250	114	BBC ENG(ALBANIA)	SE EUR
9915	0300	0445	smtwtf.	Skelton	300	110	ARABIC	ME	11955	0500	0900	smtwtf.	Nakhon Sawan	250	150	ENGLISH (ASE)	SE AS
9915	0445	0600	smtwtf.	Skelton	300	180	ARABIC	N AF	11955	2200	2300	smtwtf.	Singapore	250	13	ENGLISH (ASE)	SE AS
9915	0445	0600	smtwtf.	Rampisham	500	140	ARABIC	N AF	11955	2300	2400	smtwtf.	Nakhon Sawan	250	150	ENGLISH (ASE)	SE AS
9915	0600	0730	smtwtf.	Skelton	300	180	ARABIC	N AF	11955	0000	0100	smtwtf.	Nakhon Sawan	250	275	ENGLISH (ASS)	S AS
9915	1800	2400	smtwtf.	Cyprus	300	147	ARABIC	ME	11955	0100	0300	smtwtf.	A'Seela	250	63	ENGLISH (ASS)	S AS
9915	1800	1900	smtwtf.	Cyprus	300	281	ARABIC	N AF	11955	0000	0100	.....s	Nakhon Sawan	250	275	ENGLISH (NEWS)	S AS
9915	1900	2400	smtwtf.	Cyprus	300	280	ARABIC	N AF	11965	2230	2300	smtwtf.	Antigua	250	160	BRAZILIAN	S AM
9915	1730	1800	s.....s	Cyprus	300	77	RUSS CASIA	C AS	11980	1400	1415	.mtwtf.	Cyprus	250	315	CROATIAN	SE EUR
9915	1700	1730	smtwtf.	Cyprus	300	77	UZBEK	C AS	11980	2200	2330	smtwtf.	A'Seela	250	50	MANDARIN	CHN
9915	1730	1800	.mtwtf.	Cyprus	300	77	UZBEK	C AS	12005	1300	1500	.mtwtf.	Lampertheim	100	55	RUSSIAN	RUSS
11655	0800	0815	smtwtf.	Rampisham	500	62	RUSSIAN	RUSS	12030	1100	1300	....f.	Dhabbaya	250	345	PERSIAN	ME
11670	0600	0615	smtwtf.	Rampisham	500	62	RUSSIAN	RUSS	12035	0300	0400	smtwtf.	Cyprus	250	173	ENGLISH (AFE)	E AF
11675	2115	2130	.mtwtf.	Antigua	125	300	ENGLISH (CARIB)	CARIB	12095	1900	2100	smtwtf.	Ascension	250	114	ENGLISH (AFE)	S AF
11675	2115	2130	.mtwtf.	Antigua	125	300	ENGLISH (CARIB)	CARIB	12095	0000	0300	smtwtf.	Skelton	300	230	ENGLISH (AME)	S AM
11680	0600	0900	smtwtf.	Cyprus	300	102	ARABIC	ME	12095	2100	2400	smtwtf.	Ascension	250	245	ENGLISH (AME)	S AM
11680	1630	1800	smtwtf.	Rampisham	500	168	ARABIC	N AF	12095	0600	1700	smtwtf.	Woofferton	250	140	ENGLISH (EUR)	EUR
11680	1800	2400	smtwtf.	Skelton	300	180	ARABIC	N AF	12095	0300	0400	smtwtf.	Cyprus	250	7	ENGLISH (MEF)	RUSS
11680	1015	1030	smtwtf.	Cyprus	250	7	BBC ENG(RUSS)	RUSS	12095	0400	0600	smtwtf.	Cyprus	250	327	ENGLISH (MEF)	EUR
11680	1100	1130	smtwtf.	Cyprus	250	335	ROMANIAN	SE EUR	12095	1700	1900	smtwtf.	Woofferton	250	78	ENGLISH (MEF)	RUSS
11680	0930	1000	s.....s	Cyprus	250	7	RUSSIAN	RUSS	13610	1500	1600	smtwtf.	Nakhon Sawan	250	305	PASHTO	SW AS
11680	1000	1015	smtwtf.	Cyprus	250	7	RUSSIAN	RUSS	13610	1600	2000	smtwtf.	Nakhon Sawan	250	305	PERSIAN	ME
11680	1200	1205	smtwtf.	Cyprus	250	7	RUSSIAN	RUSS	13610	1300	1400	.mtwtf.	Rampisham	500	62	RUSSIAN	RUSS
11680	1205	1215	s.....s	Cyprus	250	7	RUSSIAN	RUSS	13630	0200	0300	smtwtf.	Rampisham	500	76	PASHTO	W AS
11680	1030	1045	smtwtf.	Biblis	100	126	SERBIAN	SE EUR	13635	1700	1730	smtwtf.	Cyprus	250	50	AZERI	C AS
11680	1600	1630	smtwtf.	Skelton	300	110	SERBIAN	SE EUR	13645	1630	1700	smtwtf.	Rampisham	500	76	BBC ENG(UKR)	UKR
11685	1530	1545	smtwtf.	Singapore	250	320	BBC ENG (LD)	S AS	13645	0300	0400	smtwtf.	Cyprus	300	77	PERSIAN	ME
11685	0800	0810	smtwtf.	Nakhon Sawan	250	305	BENGALI	S AS	13645	0400	0445	smtwtf.	Cyprus	300	77	PERSIAN/PASHTO	ME
11685	0230	0300	smtwtf.	A'Seela	250	100	HINDI	S AS	13645	1500	1600	smtwtf.	Rampisham	500	105	TURKISH	SE EUR
11685	2200	2300	smtwtf.	Nakhon Sawan	250	150	INDONESIAN	SE AS	13645	1400	1430	smtwtf.	Rampisham	500	76	UKRAINIAN	UKR
11685	1500	1530	smtwtf.	Singapore	250	320	NEPALI	S AS	13645	1600	1630	smtwtf.	Rampisham	500	76	UKRAINIAN	UKR
11720	2130	2145	.t..f.	Rampisham	500	209	ENGLISH (FALKL)	S AT	13650	0530	0600	smtwtf.	Rampisham	500	115	ALBANIAN	SE EUR
11720	1930	2000	.mtwtf.	Rampisham	500	105	TURKISH	SE EUR	13650	1200	1205	smtwtf.	Rampisham	500	62	RUSSIAN	RUSS
11730	0445	0500	smtwtf.	Cyprus	300	314	SERBIAN	SE EUR	13650	1205	1215	s.....s	Rampisham	500	62	RUSSIAN	RUSS
11735	1630	1700	smtwtf.	Lampertheim	100	75	BBC ENG(UKR)	UKR	13650	0445	0500	smtwtf.	Rampisham	500	105	SERBIAN	SE EUR
11735	1600	1630	smtwtf.	Lampertheim	100	75	UKRAINIAN	UKR	13650	1030	1045	smtwtf.	Rampisham	500	105	SERBIAN	SE EUR
11740	0300	0600	smtwtf.	Cyprus	300	150	ARABIC	ME	13660	0000	1200	smtwtf.	Cyprus	300	117	ARABIC	ME
11750	0100	0130	smtwtf.	A'Seela	250	85	HINDI	S AS	13660	1200	2400	smtwtf.	Skelton	300	180	ARABIC	N AF
11750	0200	0300	smtwtf.	A'Seela	250	335	PERSIAN	ME	13680	0400	0500	.mtwtf.	Cyprus	250	7	UKRAINIAN	UKR
11750	0300	0400	smtwtf.	Cyprus	250	77	PERSIAN	ME	13740	0600	0629	smtwtf.	Rampisham	500	169	FRENCH	N AF
11750	0130	0200	smtwtf.	A'Seela	250	85	URDU	S AS	13745	0100	0130	smtwtf.	Tashkent	200	131	HINDI	S AS
11760	0300	0500	smtwtf.	Cyprus	250	77	ENGLISH (MEF)	W AS	13745	2030	2100	smtwtf.	Rampisham	500	189	PORTUGUESE (AF)	W AF
11760	0500	0600	smtwtf.	A'Seela	250	320	ENGLISH (MEF)	ME	13745	0200	0230	smtwtf.	Cyprus	250	37	RUSS CASIA	C AS
11760	0700	1400	smtwtf.	A'Seela	250	320	ENGLISH (MEF)	ME	13745	0230	0330	.mtwtf.	Cyprus	250	7	RUSSIAN	RUSS
11760	0200	0300	smtwtf.	Cyprus	250	101	ENGLISH (NEWS)	ME	13745	0330	0500	.mtwtf.	Rampisham	500	62	RUSSIAN	RUSS
11765	0500	0700	smtwtf.	Meyerton	250	328	ENGLISH (AFW)	W AF	13745	1400	1500	.mtwtf.	Rampisham	500	62	RUSSIAN	RUSS
11765	0700	0800	smtwtf.	Ascension	250	27	ENGLISH (AFW)	W AF	13745	1500	1900	smtwtf.	Rampisham	500	62	RUSSIAN	RUSS
11765	0000	0115	smtwtf.	Ascension	250	265	SPANISH	S AM	13745	1900	2000	.mtwtf.	Rampisham	500	62	RUSSIAN	RUSS
11765	0115	0130	.twtf.	Ascension	250	265	SPANISH	S AM	13745	2000	2030	.mtwtf.	Rampisham	500	62	RUSSIAN	RUSS
11770	0400	0500	.mtwtf.	Woofferton	250	78	UKRAINIAN	UKR	13750	1015	1030	smtwtf.	Rampisham	500	62	BBC ENG(RUSS)	RUSS
11780	0800	0900	s.....s	Cyprus	250	7	TURKISH	SE EUR	13750	0800	0815	smtwtf.	Rampisham	500	76	RUSSIAN	RUSS
11790	0400	0445	smtwtf.	Cyprus	250	77	PERSIAN/PASHTO	ME	13750	0930	1000	s.....s	Rampisham	500	62	RUSSIAN	RUSS
11820	0900	1630	smtwtf.	Cyprus	300	102	ARABIC	ME	13750	1000	1015	smtwtf.	Rampisham	500	62	RUSSIAN	RUSS
11820	1630	1800	smtwtf.	Cyprus	300	150	ARABIC	ME	13755	1230	1315	s.....s	Cyprus	300	295	ALBANIAN	



15180	0600	1630	smtwtfs	Rampisham	500	168	ARABIC	N	AF	15575	0500	0730	smtwtfs	Cyprus	250	92	ENGLISH (MEF)	W	AS
15180	1630	1800	smtwtfs	Cyprus	250	280	ARABIC	N	AF	15575	0730	0900	s.....s	Cyprus	250	92	ENGLISH (MEF)	W	AS
15180	1800	1830	smtwtfs	Cyprus	250	280	FRENCH	N	AF	15575	0900	1200	smtwtfs	Cyprus	250	92	ENGLISH (MEF)	W	AS
15185	0600	0900	smtwtfs	Cyprus	250	150	ARABIC	ME		15575	1200	1500	smtwtfs	Cyprus	250	117	ENGLISH (MEF)	ME	
15190	0900	1000	smtwtfs	Ascension	250	235	ENGLISH (AME)	S	AM	15585	1700	1730	smtwtfs	Skelton	300	125	ALBANIAN	SE	EUR
15190	1000	1100	s.....s	Ascension	250	235	ENGLISH (AME)	S	AM	15585	1730	1745	.m.w...	Skelton	300	125	BBC ENG (ALBANIA)	SE	EUR
15190	1100	1130	s.....s	Antigua	125	205	ENGLISH (AME)	S	AM	15595	1500	1530	.mtwtf.	Rampisham	500	62	RUSSIAN	RUSS	
15190	1100	1130	s.....s	Antigua	125	300	ENGLISH (AME)	CARIB		17555	0900	1130	smtwtfs	Moosbrunn	100	115	ARABIC	ME	
15190	1100	1130	s.....s	Ascension	250	235	ENGLISH (AME)	S	AM	17585	1200	1630	smtwtfs	Skelton	300	150	ARABIC	N	AF
15190	1130	1200	.mtwtf.	Antigua	125	205	ENGLISH (AME)	S	AM	17610	0730	1200	smtwtfs	Skelton	300	150	ARABIC	N	AF
15190	1130	1200	.mtwtf.	Antigua	125	300	ENGLISH (AME)	CARIB		17615	0030	0100	smtwtfs	Nakhon Sawan	250	25	BBC ENG (LD)	FE	
15190	1130	1700	s.....s	Antigua	125	205	ENGLISH (AME)	S	AM	17615	0000	0030	smtwtfs	Nakhon Sawan	250	25	ENGLISH (ASE)	FE	
15190	1200	1230	.mtwtf.	Antigua	125	300	ENGLISH (AME)	CARIB		17615	0230	0300	smtwtfs	Nakhon Sawan	250	300	HINDI	S	AS
15190	1230	1700	.mtwtf.	Antigua	125	205	ENGLISH (AME)	S	AM	17615	0100	0230	smtwtfs	Nakhon Sawan	250	300	PASHTO	SW	AS
15190	1230	1700	.mtwtf.	Antigua	125	300	ENGLISH (AME)	CARIB		17640	0400	0700	smtwtfs	Cyprus	250	173	ENGLISH (AFE)	E	AF
15190	1100	1130	.mtwtf.	Antigua	125	205	ENGLISH (CARIB)	CARIB		17640	0700	1500	smtwtfs	Woofferton	300	70	ENGLISH (MEF)	RUSS	
15190	1100	1130	.mtwtf.	Antigua	125	300	ENGLISH (CARIB)	CARIB		17640	0700	1500	smtwtfs	Skelton	300	140	ENGLISH (MEF)	EUR	
15190	1200	1230	.mtwtf.	Antigua	125	205	ENGLISH (CARIB)	CARIB		17695	1015	1030	smtwtfs	Lampertheim	100	77	BBC ENG (RUSS)	RUSS	
15190	1200	1230	.mtwtf.	Antigua	125	300	ENGLISH (CARIB)	CARIB		17695	0700	0729	smtwtfs	Meyerton	500	350	FRENCH	C	AF
15220	1100	1130	.mtwtf.	Ascension	250	235	SPANISH	S	AM	17695	0800	0815	smtwtfs	Lampertheim	100	77	RUSSIAN	RUSS	
15225	1300	1500	.mtwtf.	Woofferton	250	70	RUSSIAN	RUSS		17695	0930	1000	s.....	Lampertheim	100	77	RUSSIAN	RUSS	
15225	1500	1900	smtwtfs	Woofferton	250	70	RUSSIAN	RUSS		17695	1000	1015	smtwtfs	Lampertheim	100	77	RUSSIAN	RUSS	
15225	1900	2000	.mtwtf.	Woofferton	250	70	RUSSIAN	RUSS		17705	1600	1800	smtwtfs	Rampisham	500	47	RUSSIAN	RUSS	
15225	2000	2030	.mtwtf.	Woofferton	250	70	RUSSIAN	RUSS		17710	0230	0300	smtwtfs	Irkutsk	250	224	HINDI	S	AS
15245	1400	1445	smtwtfs	A'Seela	250	100	HINDI	S	AS	17710	0810	0820	smtwtfs	Irkutsk	250	224	HINDI	S	AS
15245	1445	1500	s.....	A'Seela	250	100	HINDI	S	AS	17710	1500	1530	.mtwtf.	Rampisham	500	61	RUSSIAN	RUSS	
15280	0000	0530	smtwtfs	Nakhon Sawan	250	40	ENGLISH (ASE)	FE		17740	0600	0615	smtwtfs	Cyprus	250	7	RUSSIAN	RUSS	
15280	2300	2400	smtwtfs	Nakhon Sawan	250	40	ENGLISH (ASE)	FE		17760	0300	0500	smtwtfs	Nakhon Sawan	250	25	ENGLISH (ASE)	FE	
15285	1030	1100	smtwtfs	Singapore	100	13	BBC ENG (ASIA)	E	SE AS	17760	0500	1000	smtwtfs	Singapore	100	13	ENGLISH (ASE)	SE	AS
15285	1100	1530	smtwtfs	Singapore	100	13	MANDARIN	FE		17760	1000	1400	smtwtfs	Nakhon Sawan	250	25	ENGLISH (ASE)	FE	
15310	0000	0100	smtwtfs	Nakhon Sawan	250	290	ENGLISH (ASS)	S	AS	17780	1230	1245	smtwtfs	Ascension	250	27	BBC ENG (FRENCH)	W	AF
15310	0100	0300	smtwtfs	Nakhon Sawan	250	290	ENGLISH (ASS)	S	AS	17780	1200	1230	smtwtfs	Ascension	250	27	FRENCH	W	AF
15310	0300	0600	smtwtfs	A'Seela	250	63	ENGLISH (ASS)	S	AS	17790	1100	1130	smtwtfs	Ascension	250	245	ENGLISH (AME)	S	AM
15310	0600	1800	smtwtfs	Nakhon Sawan	250	290	ENGLISH (ASS)	S	AS	17790	0000	0100	smtwtf.	Singapore	100	315	ENGLISH (ASS)	S	AS
15310	1800	2000	smtwtfs	Nakhon Sawan	250	300	ENGLISH (MEF)	ME		17790	0100	0300	smtwtfs	Singapore	100	315	ENGLISH (ASS)	S	AS
15310	0000	0100	s.....s	Nakhon Sawan	250	290	ENGLISH (NEWS)	S	AS	17790	0300	0700	smtwtfs	Nakhon Sawan	250	280	ENGLISH (ASS)	S	AS
15325	1015	1030	smtwtfs	Cyprus	250	50	BBC ENG (RUSS)	RUSS		17790	0700	0806	smtwtfs	A'Seela	250	63	ENGLISH (ASS)	S	AS
15325	1100	1110	.mtwtf.	Rampisham	500	105	CROATIAN	SE	EUR	17790	0900	0930	.mtwtf.	A'Seela	250	63	ENGLISH (ASS)	S	AS
15325	0600	0615	smtwtfs	Rampisham	500	47	RUSSIAN	RUSS		17790	0930	1700	smtwtfs	A'Seela	250	63	ENGLISH (ASS)	S	AS
15325	0800	0815	smtwtfs	Rampisham	500	47	RUSSIAN	RUSS		17790	0000	0100	s.....s	Singapore	100	315	ENGLISH (NEWS)	S	AS
15325	0930	1000	s.....	Cyprus	250	50	RUSSIAN	RUSS		17790	0900	0930	s.....	A'Seela	250	63	ENGLISH (NEWS)	S	AS
15325	1000	1015	smtwtfs	Cyprus	250	50	RUSSIAN	RUSS		17790	0810	0820	smtwtfs	A'Seela	250	63	HINDI	S	AS
15325	1200	1205	smtwtfs	Cyprus	250	50	RUSSIAN	RUSS		17790	0820	0830	smtwtfs	A'Seela	250	63	URDU	S	AS
15325	1205	1215	s.....s	Cyprus	250	50	RUSSIAN	RUSS		17800	1400	1500	smtwtfs	Cyprus	300	77	PERSIAN	ME	
15325	1030	1045	smtwtfs	Rampisham	500	105	SERBIAN	SE	EUR	17810	1345	1415	smtwtfs	Ascension	250	55	HAUSA	W	AF
15325	1300	1330	.mtwtf.	Greenville	250	164	SPANISH	C	S AM	17830	0800	1000	smtwtfs	Ascension	250	65	ENGLISH (AFW)	W	C AF
15325	1235	1300	smtwtfs	Cyprus	250	102	THAI	ME		17830	1000	1100	s.....s	Ascension	250	65	ENGLISH (AFW)	W	C AF
15340	1500	1600	smtwtfs	Cyprus	300	77	PASHTO	W	AS	17830	1100	2100	smtwtfs	Ascension	250	65	ENGLISH (AFW)	W	C AF
15360	0000	0300	smtwtfs	Singapore	100	13	ENGLISH (ASE)	SE	AS	17830	2100	2300	smtwtfs	Seychelles	250	270	ENGLISH (AFW)	W	AF
15360	0300	0500	smtwtfs	Nakhon Sawan	250	150	ENGLISH (ASE)	SE	AS	17845	1200	1205	smtwtfs	Lampertheim	100	77	RUSSIAN	RUSS	
15360	0500	1000	smtwtfs	Singapore	125	25	ENGLISH (ASE)	SE	AS	17845	1205	1215	s.....s	Lampertheim	100	77	RUSSIAN	RUSS	
15360	0500	1000	smtwtfs	Singapore	125	135	ENGLISH (ASE)	SE	AS	17870	0700	0730	.....f.	Cyprus	300	77	PASHTO	W	AS
15360	1000	1030	smtwtfs	Singapore	100	13	ENGLISH (ASE)	SE	AS	17870	0730	0800	smtw.f.s	Cyprus	300	77	PASHTO	W	AS
15365	1400	1415	.mtwtf.	Skelton	300	110	SERBIAN	SE	EUR	17870	0800	0900	.....f.	Cyprus	300	77	PASHTO	W	AS
15380	1600	2000	smtwtfs	Singapore	100	315	PERSIAN	ME		17870	1100	1200	smtwtfs	Cyprus	300	77	PASHTO	W	AS
15390	2230	2300	smtwtfs	Ascension	250	245	BRAZILIANS	AM		17870	0700	0800	....t.	Cyprus	300	77	PERSIAN	ME	
15390	2115	2130	.mtwtf.	Greenville	250	174	ENGLISH (CARIB)	CARIB		17870	0845	0900	....t.	Cyprus	300	77	PERSIAN	ME	
15400	0629	0700	smtwtfs	Ascension	250	65	ENGLISH (AFW)	W	C AF	17870	0900	1000	....t.f.	Cyprus	300	77	PERSIAN	ME	
15400	0700	1000	smtwtfs	Ascension	250	27	ENGLISH (AFW)	W	AF	17870	1000	1100	smtwtfs	Cyprus	300	77	PERSIAN	ME	
15400	1000	1100	s.....s	Ascension	250	27	ENGLISH (AFW)	W	AF	17870	0800	0845	smtwt.s	Cyprus	300	77	PERSIAN/PASHTO	ME	
15400	1100	1130	smtwtfs	Ascension	250	27	ENGLISH (AFW)	W	AF	17870	1200	1300	smtwtfs	Cyprus	300	77	PERSIAN/PASHTO	ME	
15400	1500	2300	smtwtfs	Ascension	250	27	ENGLISH (AFW)	W	AF	17885	1915	1930	smtwtfs	Ascension	250	27	BBC ENG (AFR)	W	AF
15400	0529	0559	s.....s	Meyerton	250	7	GREAT LAKES	E	AF	17885	0500	0529	smtwtfs	Seychelles	250	270	ENGLISH (AFE)	E	AF
15405	0800	0810	smtwtfs	Nakhon Sawan	250	300	BENGALI	S	AS	17885	0529	0559	.mtwtf.	Seychelles	250	270	ENGLISH (AFE)	E	AF
15405	0600	0629	smtwtfs	Cyprus	300	280	FRENCH	N	AF	17885	0559	0600	smtwtfs	Seychelles	250	270	ENGLISH (AFE)	E	AF
15405	0230	0300	smtwtfs	Nakhon Sawan	250	305	HINDI	S	AS	17885	0600	0800	s.....s	Seychelles	250	270	ENGLISH (AFE)	E	AF
15405	0810	0820	smtwtfs	Nakhon Sawan	250	300	HINDI	S	AS	17885	0800	1400	smtwtfs	Seychelles	250	270	ENGLISH (AFE)	E	AF
15405	0820	0830	smtwtfs	Nakhon Sawan	250	300	URDU	S	AS	17885	0430	0500	smtwtfs	Seychelles	250	240	FRENCH	E	AF
15420	1400	1415	.mtw...	Seychelles	250	295	BBC ENG (SOMALI)	E	AF	17885	1800	1830	smtwtfs	Ascension	250	27	FRENCH	W	AF
15420	0329	0600	smtwtfs	Seychelles	250	280	ENGLISH (AFE)	E	AF	17885	0529	0559	s.....s	Seychelles	250	270	GREAT LAKES	E	AF
15420	1300	1400	smtwtfs	Seychelles	250	280	ENGLISH (AFE)	E	AF	17885	1930	2000	smtwtfs	Ascension	250	55	HAUSA	W	AF
15420	1500	1530	smtwtfs	Seychelles	250	280	ENGLISH (AFE)	E	AF	17885	0400	0430	smtwtfs	Seychelles	250	270	SWAHILI	E	AF
15420	1615	1630	s.....s	Seychelles	250	280	ENGLISH (AFE)	E	AF	17895	1300	1500	.mtwtf.	Cyprus	250	50	RUSSIAN	RUSS	
15420	1630	1700	smtwtfs	Seychelles	250	280	ENGLISH (AFE)	E	AF	17895	1500	1600	smtwtfs	Rampisham	500	47	RUSSIAN	RUSS	
15420	1700	1900	smtwtfs	Meyerton	250	19	ENGLISH (AFE)	S	AF	21470	0800	1300	smtwtfs	Seychelles	250	240	ENGLISH (AFE)	S	AF
15420	0700	0730	....f.	A'Seela	250	10	PASHTO	SW	AS	21470	1300	1900	smtwtfs	Ascension	250	114			

21830 0300 0500 smtwfts Cyprus 250 92 ENGLISH (ASS) SW AS  
 21830 0800 0900 smtwfts Rampisham 500 92 ENGLISH (ASS) SW AS

**MERLIN RELAY OF OTHER BROADCASTERS A'03** (Sorted by language)

ABC  
 Freq Start End Days callsign Site Pwr Brg Lang Target  
 15435 1300 1430 smtwfts ABC Singapore 100 13 CHINESE CHN  
 21615 0000 0030 smtwfts ABC Tinian 250 255 INDONESIAN SE AS  
 21780 0400 0430 smtwfts ABC Tinian 250 255 INDONESIAN SE AS  
 11550 0900 0930 smtwfts ABC Taipei 250 205 INDONESIAN SE AS  
 11550 2130 2330 smtwfts ABC Taipei 250 205 INDONESIAN SE AS  
 17865 0500 0530 smtwfts ABC Singapore 250 13 KHMER SE AS  
 9720 2300 2330 smtwfts ABC Singapore 100 13 KHMER SE AS  
 17865 0530 0600 smtwfts ABC Singapore 250 13 VIETNAMESE SE AS  
 15110 2330 2400 smtwfts ABC Taipei 250 225 VIETNAMESE SE AS  
 HCJB  
 12025 2100 2230 smtwfts HCJ Skelton 250 165 ARABIC N AF  
 11760 1600 1700 smtwfts HCJ Rampisham 500 62 RUSSIAN RUSS  
 KBS  
 3955 2100 2130 smtwfts KBS Skelton 250 106 ENGLISH EUR  
 6145 1900 2000 smtwfts KBS Skelton 250 150 FRENCH EUR  
 3955 2000 2100 smtwfts KBS Skelton 250 106 GERMAN EUR  
 9535 0700 0800 smtwfts KBS Skelton 300 110 KOREAN EUR  
 15360 1800 1900 smtwfts KBS Rampisham 500 61 RUSSIAN RUSS  
 BIBLE VOICE  
 7180 0030 0100 smtwfts MNO Dhabbaya 250 85 NA S AS  
 9610 0200 0230 smtwfts MNO Dhabbaya 250 90 NA S AS  
 CBS  
 3955 1800 1900 smtwfts MNO Skelton 250 175 ENGLISH W EUR  
 3955 1900 2000 smtwfts MNO Skelton 250 175 FRENCH W EUR  
 6185 1900 2000 smtwfts MNO Skelton 250 105 GERMAN W EUR  
 CHRISTIAN RADIO ??  
 15590 1900 2000 smtwfts MNO Woofferton 250 170 CHRISTIAN RADIO AFRI W AF  
 R.ECCLESIA  
 7205 1900 2000 smtwfts MNO Meyerton 250 328 ECCLESIA AF  
 GOSPEL FOR ASIA  
 6145 0000 0130 smtwfts MNO Dhabbaya 250 85 NA S AS  
 15590 1230 1330 smtwfts MNO Dhabbaya 250 85 NA S AS  
 11695 1600 1630 smtwfts MNO Dhabbaya 250 85 NA S AS  
 6145 2300 2400 smtwfts MNO Dhabbaya 250 85 NA S AS  
 WALES RADIO INTL  
 9795 0200 0230 .....s MNO Rampisham 500 300 NA N AM  
 17845 1230 1300 .....s MNO Rampisham 500 62 NA OC  
 7325 2030 2100 .....f. MNO Skelton 300 110 NA EUR  
 PROJECT AIRWAVES (NEW)  
 15250 0100 0230 smtwfts NEW Singapore 100 13 NA FE  
 21510 0330 0600 smtwfts NEW Dhabbaya 250 90 NA S AS  
 15265 0600 1100 smtwfts NEW Singapore 100 13 NA FE  
 13735 1100 1300 smtwfts NEW Singapore 100 13 NA FE  
 RAI  
 6110 0130 0230 smtwfts RAI Ascension 250 235 ITALIAN S AM  
 11765 0130 0230 smtwfts RAI Ascension 250 295 ITALIAN C AM

11920 1000 1100 smtwfts RAI Singapore 250 140 ITALIAN OC  
 15320 1700 1800 smtwfts RAI Ascension 250 100 ITALIAN AF  
 RADIO AFGHANISTAN  
 13680 0230 0330 smtwfts RTA Dhabbaya 250 45 NA ME  
 18940 1330 1630 smtwfts RTA Kvitsoy 500 95 NA ME  
 RTE  
 6155 0130 0200 smtwfts RTE Rampisham 500 270 RTE C AM  
 15280 1000 1030 smtwfts RTE Singapore 250 135 RTE AUS  
 15585 1800 1830 smtwfts RTE Rampisham 500 105 RTE ME  
 13640 1830 1900 smtwfts RTE Sackville 250 277 RTE N AM  
 21630 1830 1900 smtwfts RTE Ascension 250 85 RTE AF  
 TWR  
 12035 1800 1815 smtwfts TWR Dhabbaya 250 225 VARIOUS E AF  
 12035 1815 1830 s.....s TWR Dhabbaya 250 225 VARIOUS E AF  
 UN RADIO  
 7150 1700 1715 .mtwtf. UNR Meyerton 100 76 NA S AF  
 17720 1700 1715 .mtwtf. UNR Skelton 300 180 NA N AF  
 21535 1700 1715 .mtwtf. UNR Meyerton 500 342 NA S C AF  
 7150 1730 1745 .mtwtf. UNR Meyerton 100 5 NA E AF  
 15495 1730 1745 .mtwtf. UNR Skelton 300 110 NA ME  
 17810 1730 1745 .mtwtf. UNR Ascension 250 65 NA W C AF  
 15585 1830 1845 .mtwtf. UNR Rampisham 500 115 NA ME  
 17565 1830 1845 .mtwtf. UNR Skelton 300 180 NA N AF  
 V.O. VIETNAM  
 6175 0100 0130 smtwfts VOV Sackville 250 212 ENGLISH N AM  
 6175 0230 0300 smtwfts VOV Sackville 250 212 ENGLISH N AM  
 6175 0330 0400 smtwfts VOV Sackville 250 212 ENGLISH N AM  
 9725 1700 1730 smtwfts VOV Moosbrunn 100 300 ENGLISH W EUR  
 9725 1830 1900 smtwfts VOV Moosbrunn 100 300 FRENCH W EUR  
 9725 1900 1930 smtwfts VOV Skelton 250 150 RUSSIAN S EUR  
 6175 0300 0330 smtwfts VOV Sackville 250 212 SPANISH C AM  
 6175 0130 0230 smtwfts VOV Sackville 250 212 VIETNAMESE C AM  
 6175 0400 0500 smtwfts VOV Sackville 250 268 VIETNAMESE N AM  
 9725 1730 1830 smtwfts VOV Moosbrunn 100 300 VIETNAMESE W EUR  
 9725 1930 2030 smtwfts VOV Skelton 250 150 VIETNAMESE S EUR  
 VRT  
 13690 1729 1856 smtwfts VRT Skelton 300 180 VRT FGDE EUR AF  
 15325 1757 1856 smtwfts VRT Dhabbaya 250 230 VRT FGDE AF  
 13690 1929 2056 smtwfts VRT Skelton 300 180 VRT FGDE EUR AF  
 9925 0500 0529 smtwfts VRT Meyerton 500 355 VRT FLEMISH AF  
 13685 0700 0756 smtwfts VRT Skelton 300 180 VRT FLEMISH EUR AF  
 21630 0957 1056 s..... VRT Meyerton 250 355 VRT FLEMISH AF  
 15195 1057 1126 smtwfts VRT Rampisham 500 168 VRT FLEMISH S EUR  
 21630 1057 1126 smtwfts VRT Meyerton 250 355 VRT FLEMISH AF  
 15195 1257 1556 s..... VRT Skelton 250 175 VRT FLEMISH EUR AF  
 WYFR  
 15165 1900 2000 smtwfts YFR Woofferton 100 114 ARABIC ME  
 15520 1500 1700 smtwfts YFR Dhabbaya 250 85 ENGLISH S AS  
 21680 1700 1800 smtwfts YFR Ascension 250 85 ENGLISH E AF  
 3230 1900 2100 smtwfts YFR Meyerton 100 0 ENGLISH S AF  
 15195 2000 2100 smtwfts YFR Ascension 250 65 ENGLISH C AF  
 15520 1400 1500 smtwfts YFR Dhabbaya 250 85 HINDI S AS  
 15290 1700 1900 smtwfts YFR Rampisham 500 62 RUSSIAN RUSS

(Via Alokesh Gupta, New Delhi, India, March 19, 2003)

UK military contingency preparations in relation to Iraq are being conducted under the name of Operation Telic. **British Forces Broadcasting Service - BFBS** has introduced for Operation Telic short wave transmissions to Gulf region from 0200-0500 UTC at 13720 KHz and 1500-1800 UTC at 5945 KHz. The British Forces Broadcasting Service is part of the Services Sound & Vision Corporation (SSVC). The SSVC is a registered charity set up to entertain and inform Britain's Armed Forces around the world. To support UK troops on Operation Telic, SSVC has supplied hundreds of portable radios to help keep them in touch with home. BFBS Radio are already broadcasting to the region and will be rolling out several new FM transmitters as more troops arrive. BFBS went on air at the end of 1943 when an experimental Forces Radio station was opened in a harem in Algiers. Since then, its two networks have broadcast from 20 countries and 67 radio stations to a total of 200 million listeners around the world. (Websites of <http://www.ssvc.com> & <http://www.ssvc.com/bfbs> via JKB, 16. Feb. 2003)

In the wake of last Saturday's security breach at Bush House, **BBC World Service** director Mark Byford has told staff that security arrangements are being reviewed "as a matter of priority". "While the protest was peaceful, the demonstrators were able to disperse around the floors of the central block. They were all escorted away by police within half an hour," said Byford in an E-mail. "However, clearly, we are reviewing our security arrangements here at main entrance points as a matter of priority. This may well include enhanced physical security arrangements like at Television Centre". In 1999, an intruder gained access to the television newsroom simply jumping over the turnstiles. They have been replaced by glass security doors manned by uniformed guards. Mr Byford urged staff to wear their ID cards at all times. (© Radio Netherlands Media Network as of 19 February 2003, via JKB)

**Trans World Radio** - TWR launches French-Canadian Broadcast to Quebec Trans World Radio began airing its first ever French broadcast in the Canadian province of Quebec on March 3. The program, a 30-minute French-Canadian version of the popular series Thru the Bible (called A travers la Bible), now airs at 10:30 p.m. (EST) five days a week in Montreal over radio station CJMS, 1040 on the AM dial. This station can be heard by nearly 4 million people in Montreal and the surrounding area. In addition, the new broadcast can be heard live on the Internet at <http://www.cjms.ca>

On March 30, a new broadcast called Shepherd the Lambs will begin equipping Sunday school teachers in China to reach children more effectively. After two years of extensive research and groundwork, plans for a program that systematically trains Chinese Sunday school teachers will finally become reality. This one-hour program will air at 9 p.m. every Saturday and Sunday. Research has shown that the majority of Christians in China who minister to children are neither qualified nor knowledgeable enough to carry out the important task of Sunday school teaching. This is especially true in the remote areas. To discover more about TWR's ministry in Northeast Asia, surf to <http://www.ktwr.net/>

Normal Broadcast Schedule Resumes on All Five Guam Transmitters Nearly three months after Typhoon Pongsona struck the island of Guam and wreaked havoc on TWR's broadcasting site there, regular programming resumed this week on all five transmitters. Just recently, TWR had restored broadcasts on four of the five transmitters, but now the fifth one is totally functioning. The staff has planned a special thanksgiving celebration Friday, March 7, which will include a dinner and brief "re dedication" service.

Trans World Today Radio Spots Available Online Want to hear some brief yet exciting audio clips about various TWR ministry initiatives? Whether it's our outreach to Cambodian children or our church planting efforts around the world, we've put the best of our 60-second Trans World Today spots on our Web site. Take a quick listen by clicking <http://www.gospelcom.net/twr/broadcasts/twtoday.php> (via Alokesh Gupta; March 12, 2003)

#### **UTILITY:** Various services of **Shannon Radio**.

Air/Ground Operations: 3016, 5598, 13306, 2899, 5616, 8864, 13291, 2872, 5649, 8879, 11336, 2971, 4657, 8891, 3467, 6622, 8831.

VHF 127.9 MHz, 124.175 MHz

Search and Rescue: 2182, 3023, 5680

Volmet: 3413, 5505, 8957, 13264

All transmitters are 5 kW, in USB mode with suppressed carrier.

Address: The Irish Aviation Authority, Shannon Aeradio, Ballygirreen, Newmarket-on-Fergus, Co. Claire, Ireland. Website: <<http://www.iaa.ie>>, E-mail: [qsl@i...](mailto:qsl@i...) [truncated but we can guess?]. (Sergei Alekseichik, Hrodna, Belarus, info received directly from the station, Signal, 2003 Feb 15, via DXLD #3-026)

Middle East **Military Communications**: frequencies especially active now, all in USB.

4725 US Military Global (night)

6739 US Military Global (night)

8992 US Military Global (primary)

11175 US Military Global (primary)

13200 US Military Global (backup)

15016 US Military Global (backup)

5696 US Coastguard, Virginia, California, others

11300 Aeradio, commercial, covering Tripoli, Cairo, Khartoum, Djibouti, etc.

11232 CANFORCE Canadian military traffic, phone patches enroute, weather.

(Robert Ellis, Worldwide Utility Column, Feb CIDX Messenger, via DXLD #3-025)

**VIETNAM:** From Mar 30, the **Voice of Vietnam** plans the continuing use of leased overseas relays. Daily relay output will be Sackville (Canada) four hours, Moosbrunn (Austria) two hours, and Skelton (UK) 90 minutes. Planned frequencies are:

6175 Sackville 0100-0500, 9725 Moosbrunn 1700-1900, 9725 Skelton 1900-2030

(EDXP World Broadcast Monitor, 2003 Feb 12, via DXLD #3-024)

**YEMEN:** *Radio Sana'a* is now **Radio Yemen**. (HFD, 13.3.03)

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BDXC-UK	British DX Club - United Kingdom.
BP	Bob Padula - Australia.
DXLD	Glenn Hauser's DX LISTENING DIGEST - USA.
EDXP	Electronic DX Press, Bob Padula - Australia.
GH	Glenn Hauser - USA.
HFD	Hans-Friedrich Dumrese, Trier - Germany.
JKB	Dr. Juergen Kubiak, Berlin - Germany.
OBSERVER	Fortnightly edition of Radio Bulgaria's Frequency Management.
RNMN	R. Netherlands Media Network ©.
WB	Wolfgang W. Bueschel, Stuttgart - Germany.
WWDXC-HQ	WWDXC Headquarter, Michael Bethge - Germany.

### Abbreviations:

<i>Target:</i>	<i>Target Prefix:</i>
ITU country code or	N North
Af Africa	E East
Am America	S South
As Asia	W West
Eu Europe	C Central
ME Middle East	
FSU Former Soviet Union	

<i>Languages:</i>	<i>Other common abbreviations:</i>
Ar Arabic	bc broadcast
Ch Chinese	lsb Lower Side Band Mode
Du Dutch	nd non-directional
E, En English	px program
F French	sce(d),
G, Ge German	sked schedule
Gr Greek	ssb Single Sideband Mode
I Italian	tx(er) transmitter
J Japanese	usb Upper Side Band Mode
K Korean	mm/dd/yy Date (month/day/year)
P Portuguese	dd.mm.yy (day.month.year)
R Russian	
Sp Spanish	
Turk Turkish	

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# DX LOGBOOK

## Logs around the clock

by Ashok Kumar Bose, Apt. #421, 3420 Morning Star Drive, Mississauga, ON, L4T 1X9, Canada  
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### MEDIUMWAVE BAND

Frequ.	UTC	SIO	ITU	Radio Station	Language	Programme Details	Date	Rep.
945.0	0058	342	D	Mega Radio,Nurnberg	German	ID,Jingles,Disco music	0403	HJK
1016.0	0105	444	D	Info Radio	German	UN Inspectors in Iraq	0403	HJK
1584.0	0050	444	I	Radio Studio X	English	Classic old pops and ID	0403	HJK
1593.0	0105	343	KWT	Radio Farda	Farsi	Inetnet,ID,Pop music	2202	HJK
1602.0	0542	544	I	RAI Bozen	German	Morning gymnastic	0403	HJK

### TROPICAL BANDS

Frequ.	UTC	SIO	ITU	Radio Station	Language	Programme Details	Date	Rep.
2850.0	1027	222	KRE	KBS,Pyongyang	Korean	Talks	0402	RAD
3200.0	1800	232	SWZ	TWR,Mpangela Range	English	Christian Radio Play	0802	HJK
3234.9	1010	322	PRU	Radio Luz y Sonido	Spanish	Religious talks	0302	RAD
3255.0	1007	222	B	Radiodifusora Seis de Agosto	Portugese	Talks and iD	0302	RAD
3255.0	0358	233	AFS	BBC,Meyerton	English	Report on Kenya	1102	HJK
3976.1	1045	211	INS	RRI,Pontianak	Indonesian	Talks,Song Coconut Islands	0402	RAD
4220.0	2348	222	CHN	Quinghai PBS	Chinese	Vocals and music	0302	RAD
4409.8	2321	221	BOL	Radio Eco	Spanish	Vocals with ID	0302	RAD
4485.0	0407	444	RUS	Radio Rossii,Krasboyarsk	Russian	Pop Music	1102	HJK
4725.0	1132	222	BRM	Radio Myanmar	Burmese	News,Instrumental music	0302	RAD
4746.8	1050	322	PRU	Radio Huanta 2000	Spanish	Talks and iD	0302	RAD
4753.4	2203	222	INS	RRI,Makassar	Indonesian	News and vocals	0202	RAD
4775.0	1146	221	IND	All India Radio, Imphal	Hindi	ID,News	0302	RAD
4790.0	1026	222	PRU	Radio Atlantida	Spanish	ID,Flute music & vocals	0302	RAD
4790.0	0021	222	IND	All India Radio,Chennai	Tamil	Talks & Flute music	0302	RAD
4820.0	2229	222	CHN	China National Radio	Chinese	Talks	0202	RAD
4832.0	0350	243	HND	Radio Litoral,La Caiba	Spanish	Christian program	1102	HJK
4840.0	0031	222	IND	All India Radio,Mumbai	Hindi	News	0302	RAD
4850.0	2229	222	CHN	China National Radio	English	Language lessons	0202	RAD
4860.0	0026	0026	IND	All India Radio,Delhi	Hindi	News	0302	RAD
4895.0	1143	211	IND	All India Radio,Kurseong	Hindi	Vocals,Pop music	0402	RAD
4915.0	0342	232	B	Radio Capixaba,Victoria	Portugese	Religious Program	1102	HJK
4950.0	0335	233	AGL	Radio Nacional Angola	Portugese	ID,Pop music	1102	HJK
4976.0	1216	222	VTN	Son La Broadcasting	Vietnamese	Flute music and talks	0302	RAD
4976.0	0325	344	UGA	Radio Uganda,Kampala	English	Pop,ID,Talks	1102	HJK
5019.9	1042	322	SLM	Solomon Is. Broadcasting	English	Religious talks,ID,Music	0402	RAD
5025.0	0040	343	BEN	ORTB,Parakou	French	Afro Folklore and Talks	1102	HJK
5050.0	0317	343	USA	WWRB,McCaysville	English	Report on Terrorists	1102	HJK

### SHORTWAVE BANDS

Frequ.	UTC	SIO	ITU	Radio Station	Language	Programme Details	Date	Rep.
5300.1	1058	211	PRU	Radio Superior	Spanish	ID and Talks	0302	RAD
5890.0	1103	444	CVA	Radio Vatican	Italian	News,Iraq crisis	2202	HJK
5927.1	2250	221	BOL	Radiodifusoras Minería	Spanish	Talks and ID	0302	RAD

5930.0	0101	433	SVK	Radio Slovakia Intl.,	English	News	1902	RL
5950.0	0300	333	USA	Radio Taipei Intl.,	English	ID,News	1102	HJK
5950.0	0304	433	YEM	Yemen Radio,Saana	Arabic	Sign on Arabic Music	1102	HJK
5965.0	0739	444	EQA	HCJB,Pifo	English	DX Partyline	2202	HJK
5990.0	0255	232	IND	All India Radio	Sindhi	Talk on Pakistan	1102	HJK
5990.0	1745	533	SVK	Radio Prague	German	Czech President	2802	WB
5995.0	2356	333	MLI	Rdiff TV Malienne,Bamako	French	Afro Pops and talks	2502	HJK
6000.0	0332	344	CUB	Radio Habana	English	Letterbox	2402	HJK
6005.0	0009	343	D	DLR,Berlin	German	Sea weather Report	1102	HJK
6025.0	0149	232	DOM	Radio Amanecer, Santo Domingo	Spanish	Religious Program	1102	HJK
6030.0	2200	433	CAN	CFVP,CKMX,Calagry	English	Music,Blue Rodeo	2401	RL
6034.9	0205	132	CLM	La Voz del Guaviere	Spanish	ID,Political Talks	1102	HJK
6035.0	0014	333	UAE	AWR	Hindi	Religious Program	1102	HJK
6045.0	0826	444	MRC	Radio Sawa,Breich	Arabic	Report on Israel	0802	HJK
6055.0	0048	433	E	REE,Madrid	English	Radio Waves	2601	RL
6085.0	0220	343	OMA	Radio Oman,Seeb	Arabic	Koran songs	2402	HJK
6114.9	1715	544	ALB	TWR	Czech	IS,ID,Religious Program	0702	HJK
6125.0	0056	443	IRN	IRIB,Teheran	English	Interview	1102	HJK
6135.1	0128	233	B	Radio Aparecida	Portugese	Religious program	2402	HJK
6150.0	0225	333	CYP	Radio Bayrak	English	Non stop English pop oldies	1102	HJK
6160.0	2305	332	KOR	Radio Canada Intl., via Kimje	Chinese	Magazine,ID	1002	HJK
6165.0	0120	444	NLA	Radio Nederlands,Bonaire	English	ID,Magazine	2402	HJK
6175.0	0234	433	IRN	IRIB,Teheran	Spanish	Koran,ID and News	1102	HJK
6190.0	0004	232	CHN	Xinjiang PBS,Urumqui	Mongolian	Talks,Folklore	1102	HJK
6210.0	1704	243	ETH	Radio Fana	Amharic	Political Talk	2502	HJK
6220.0	1428	343	IRN	IRIB,Teheran	Azeri	Koran,News	0802	HJK
6280.0	1513	232	TWN	WYFR	English	Bible reading	2402	HJK
7110.0	0355	333	ETH	Radio Ethopia	Amharic	Afro Pop	0403	HJK
7145.0	1625	342	VTN	Voice of Vietnam	English	Music,ID	0802	HJK
7185.0	1226	222	BGD	Bangladesh Betar	Bengali	ID,Music and News	0402	RAD
7200.0	0514	232	SDN	Radio Omdurman	Arabic	Folklore,News	0602	HJK
7210.0	0535	132	BEN	ORTB,Cotonou	French	ID,political talks	0602	HJK
7210.0	1630	343	RUS	RFA,Irkutsk	Korean	Program	1103	WB
7255.0	1455	432	IND	All India Radio, Delhi	Pashto	Indian Folklore	2802	HJK
7325.0	0055	543	LTU	Radio Vilinius	English	Gambling & Movie Industry	0802	RL
7325.0	0234	443	AUT	RAI,Wein	English	Letter from Austria	1702	RL
7345.0	0121	453	CZE	Radio Prague	English	Talking point	1902	RL
7375.0	0456	533	UKR	Radio Ukraine Intl.,	English	Hello from Kyiv	0902	RL
7385.0	0417	353	USA	Radio Prague via WRMI	English	Economic Report	3101	RL
7445.0	0336	343	CTR	RFPI	Spanish	Report on Colombia	0403	HJK
7490.0	1730	555	NOR	Radio International	Persian	ID and Program	2802	WB
7505.0	0331	132	USA	KTBN,Salt Lake	English	Prayers	0403	HJK
7560.0	1735	333	RUS	Denge Mezopotamya	Kurdish	Song	2802	WB
7571.1	2020	221	PAK	Radio Pakistan	Urdu	Domestic program	1103	WB
9155.0	1620	222	AZE	Ashur Radio	Arabic	ID & Program	2702	WB
9325.0	1813	443	KRE	Voice of Korea	German	Birthday of Kim Song II	1802	HJK
9369.8	0956	343	USA	WTJC,Newport	English	ID,Christian songs	1802	HJK
9385.0	1720	443	GUM	AWR,Agat	Tagalog	Religious Program	1802	HJK
9400.0	0337	553	BUL	Radio Bulgaria	English	Folk Studio & Plaza Bulgaria	1702	RL
9455.0	1900	332	D	Voice of Russia via Juelich	German	NATO Program	1103	WB
9495.0	0345	553	SWE	Radio Sweden	English	Art Gallery	0602	RL
9509.9	1950	544	ALB	Radio Albania,Cerrik	English	News	1503	WB
9515.0	1910	221	D	Voice of Russia via Juelich	English	Return of Paintings	1103	WB
9530.0	0835	443	GUF	NHK, via Montsinery	Japanese	Magazine, Pop songs	1902	HJK
9555.0	0846	333	USA	WYFR	Spanish	Religious Program ,ID	1902	HJK
9585.0	0812	444	D	Radio Farda,Lampertheim	Farsi	Pop music,ID,Jingles	0802	HJK
9633.4	0935	333	MLI	RDTV Malienne, Bamako	French	Afro Pop,Talks	1902	HJK
9645.8	0150	333	B	Radio Bandeirantes	Portugese	Political talks from Sao Paulo	0403	HJK
9655.0	2336	543	TUR	Voice of Turkey,Ankara	English	Culture Parade	3001	RL
9660.0	1121	444	G	NHK	German	Weekend Prisma	2202	HJK
9710.0	0942	444	LTU	Radio Vilinius	English	ID,Comments on Vilinius Bank	1902	HJK
9724.9	0949	333	CTR	Dr. Gene Scott	English	Religious Program	1902	HJK

9770.0	0116	343	CLN	SLBC,Colombo	English	Back to the Bible	1102	HJK
9779.6	1640	344	YEM	Radio Saana	Arabic	Music and Talks	2802	WB
9835.0	0630	553	J	Radio Japan,NHK	English	Music Beat	1402	RL
9835.0	0227	453	HUN	Radio Budapest	English	Hungary Today	3001	RL
9870.0	0002	433	AUT	RAI, Wein	English	Daily Report from Austria	0202	RL
9885.0	0755	553	D	SRI,Berne	English	Newsnet	1402	RL
9925.0	1630	555	LTU	Radio Dat via Situkunai		1000 Hz tone only	2802	WB
9975.0	2255	553	USA	WEWN,EWTN	English	Holy Rosary	1102	RL
9990.0	2229	453	EGY	Radio Cairo	English	Short story,Tourism	2801	RL
10330.0	0138	132	IND	All India Radio,Delhi	Hindi	Indian Folklore	1102	HJK
11580.0	1502	344	MRA	KFBS,Saipan	Mandarin	Christian programs	2402	HJK
11620.0	0215	132	IND	All India Radio,Delhi	Urdu	Indian Folklore	0403	HJK
11675.0	1020	333	NZL	Radio New Zealand Intl.,	English	Songs, ID	1802	HJK
11685.0	1533	333	SNG	BBC World Service	English	Iraq Politics	0702	HJK
11709.9	1059	132	ARG	RAE,Buenos Aires	Japanese	ID,Magazine	2702	HJK
11735.2	1648	333	KRE	Voice of Korea	English	Folklore,Choir,ID	0802	HJK
11745.0	0210	233	CHL	Voz Cristiana	Portugese	ID,Christian songs	0403	HJK
11780.0	1106	232	B	Radio Nacional Amazonia,Brasilia	Portugese	ID,Report from Sao Paulo	2702	HJK
11800.0	0055	453	I	RAI,Roma	English	Newscast	0702	RL
11805.3	0610	233	GEO	Radio Georgia	Russian	Folklore,Talks	1702	HJK
11880.0	1116	232	AUS	Radio Australia	English	Political talks and ID	2702	HJK
11900.0	1125	333	GUM	KSDA,Agat	Vernacular	Religious Program	2702	HJK
11960.0	1035	444	BLR	Belaruskaje Radio	Belarussian	ID,Info,Pop music	1802	HJK
11970.0	1731	343	J	Radio Japan,NHK	English	45 minutes magazine	2502	HJK
12010.0	1041	444	RUS	Voice of Russia	German	Letterbox	1802	HJK
12040.0	0202	132	EQA	HCJB,Pifo	English	News,Program to India	0403	HJK
13570.0	1401	332	USA	WINB,Red Lion	English	Religious Program	0503	HJK
13635.0	1240	433	AUS	Voice International, Darwin	Hindi	IS,Music	0802	HJK
13650.0	2154	553	CAN	Radio Canada Intl.,	English	Maple leaf Mailbag	2801	RL
13680.0	1030	332	GRC	Radio Farda	Farsi	Program jammed	1103	WB
13690.0	1411	443	AUS	Voice International,Darwin	English	ID,Listeners Feedback program	0503	HJK
13700.0	2246	453	NLA	RVI,Brussels	English	Tourism Low Counties	1602	RL
13710.0	1429	433	IND	All India Radio,Delhi	Hindi	ID,Folkore	0503	HJK
13730.0	1020	443	AUT	ROI,Moosbrun	German	Methane gas in Japan	1902	HJK
13820.0	1711	444	D	Radio Africa Intl.,	English	News,Gospel singer	0802	HJK
14539.9	1600	333	ALB	Radio Tirana,Cerrick	Albanian	Woman's program	2802	WB
14600.0	1605	333	RUS	Voice of Russia, Samara	German	News	2802	WB
14710.0	1610	333	ALB	TWR,Shijak	Polish	Program	2802	WB
15050.0	1443	243	IND	All India Radio,Delhi	Sinhala	Report on Pakistan	0503	HJK
15070.0	1450	344	PAK	Radio Pakistan	Urdu	Political talks	0503	HJK
15095.0	1250	343	PHL	FEBC,Manila	Vernacular	ID,Religious Program	0603	HJK
15120.0	1102	343	NIG	Voice of Nigeria	English	ID,Afro Folklore	1802	HJK
15175.0	1300	333	NZL	Radio New Zealand	English	ID,News,Morning Show	0603	HJK
15290.0	0820	343	GRC	Radio Farda,Kavalla	Farsi	Talks,ID,Oldies	0802	HJK
15294.9	1026	222	MLA	RT Malaysia,Kajang	English	Lovely songs from Malaysia	1103	WB
15330.0	1515	233	GUM	KTWR,Agat	English	ID,Religious program	0503	HJK
15335.0	1700	444	SLK	Duetshe Welle visa Trincomalee	Urdu	ID,IS	2802	WB
15375.0	1604	344	OMA	Radio Oman	Arabic	Arab Folklore,Literature	0503	HJK
15355.0	1720	343	GAB	Radio Japan,NHK via Moyabi	English	News,Iraq crisis	2502	HJK
15365.0	1109	232	AUS	Voice International	Indonesian	Folklore songs,ID	1802	HJK
15395.0	1611	444	UAE	UAE Radio,Dubai	English	Arabic Literature	0503	HJK
15480.0	1605	343	AUS	HCJB,Kunamarra	English	ID,Walking in the Sunshine	2802	HJK
15495.0	1618	343	GUM	AWR,Agat	English	Love with God	0503	HJK
15660.0	1317	333	GUM	KSDA,Agat	Vernacular	Religious program,Prayers	0603	HJK
15725.0	1335	343	GUM	KSDA,Agat	English	Help children in Hongkong	0603	HJK
15745.0	1335	343	USA	WEWN,Birmingham	English	Prayers	0603	HJK
15785.4	1125	243	ISR	Galei Zahal	Hebrew	Telefon Interview	1802	HJK
17600.0	1131	444	RUS	Radio Rossii	Russian	ID,Culture Magazine	1802	HJK
17635.0	1015	222	AUS	Voice International,Darwin	Chinese	Talks	1103	WB
17675.0	0808	444	MRC	Radio Farda	Farsi	English pop oldies	0802	HJK

17675.0	0315	553	NZL	Radio New Zealand	English	Mailbox	3001	RL
17700.0	1050	233	CHN	CNR2,Beijing	Chinese	Jingles,Magazine	1902	HJK
17818.0	1148	233	ROU	Radio Romania Intl.	Romanian	ID Pop music	1802	HJK
17835.0	1100	342	UAE	AWR,via Abu Dhabi relay	Mandarin	ID,Religious Program	1902	HJK
17860.0	1155	233	IND	All India Radio,Delhi	Tamil	Report on Pakistan	1802	HJK
21465.0	1104	444	PAK	Radio Pakistan	English	News,Sports,ID	1902	HJK
21470.0	1110	443	IRN	IRIB,Teheran	English	Report on Iraq	1902	HJK
21515.0	0945	333	D	Voice of Russia via Juelich	English	ID and Program	1103	WB
21525.0	2150	431	UZB	Voice of Tibet	Tibetan	Program jammed by Chinese	1103	WB
21575.0	1212	333	CLN	Radio Farna	Farsi	Music and talks	1802	HJK
21597.6	1150	444	UAE	UAE Radio,Dubai	Arabic	Folklore,Koran	0702	HJK
21630.0	1216	344	AFS	Radio Vlaanderen Intl., Meyerton	Dutch	ID,Pop music	1802	HJK
21660.0	1125	444	CHN	China National Radio 1, Xiang	Mandarin	IS,Talks,Ochestra	1902	HJK
21675.0	1221	333	F	LJB,Issoudun	Arabic	Political talks	1802	HJK
21725.0	1227	233	POR	RDP,Lisbon	Portuguese	Sports News	1802	HJK
21755.0	1010	222	J	Radio Japan,NHK	English	World News	1103	WB
23510.0	1545	232	FIN	Radio Finland,Pori	Finnish	News	2802	WB

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### **Thanks a lot to our Club members for your contributions:**

JK : Hans Joachim Koch, Dornstetten,Germany. AOR 7030 with 120/200/400 metres long wire  
 RAD : Richard A. D'Angelo, Wyomissing, USA. Drake R-8B with very long wires & Datong FL3  
 RL : Richard Lemke, St Albert, Alberta, Canada. JRC NRD-535 HF with random long wires.  
 WB : Wolfgang Bueschel, Stuttgart, Germany. AOR AR7030, Sony ICF 2010, Kenwood R-1000, Drake SPR-4 with 12 metres long wire.

\*\*\*\*\*

Dear Friends,

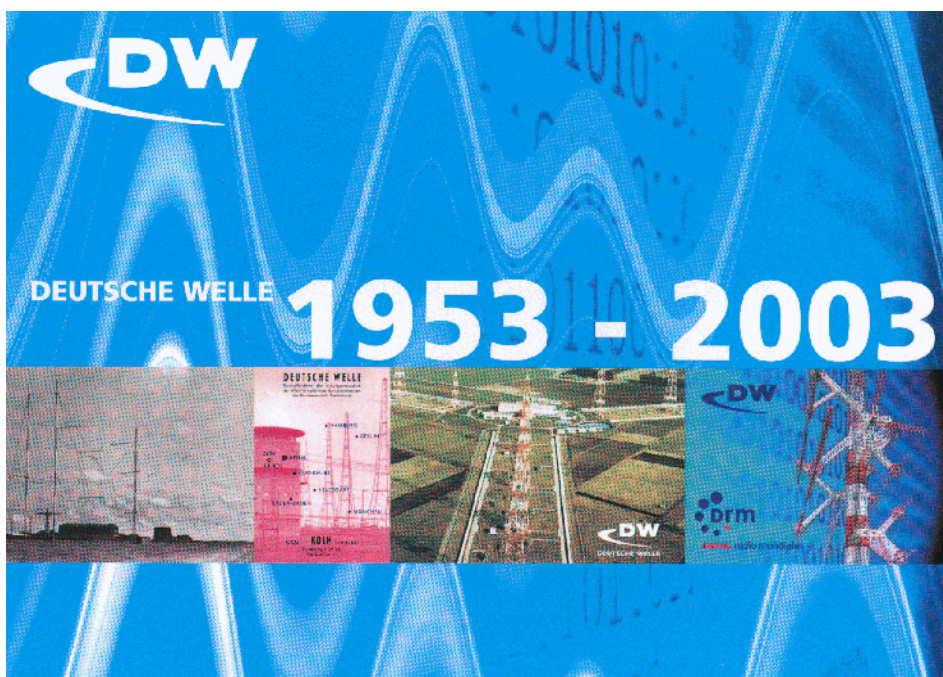
Welcome to the third issue of Logbook for 2003.

I suppose the weather all over the northern hemisphere is now warming after an extended cold winter. The summer frequencies are due this month end.

Once again it is Club members whose loggings enabled me to compile this logbook. Our member Herr Hans Joachim Koch keeps his loggings posted to me directly. Keep up the good work.

Till next issue it's 73's from your Editor,

*Ashok Kumar Bose*



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*Special QSL issued for Deutsche Welle's 50th anniversary*





## LOW BUDGET DRM RECEPTION WITH A PERSONAL COMPUTER

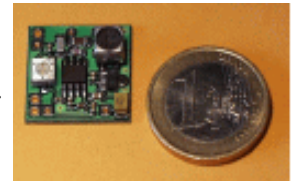
by Michael Bethge

Digital Radio Mondiale (DRM) is a new digital radio standard for the long-, medium- and short-wave ranges. The standard was formed by a consortium in co-operation with the International Telecommunication Union (ITU). The new system offers the radio stations and new service providers access to the multimedia age with small bit rates for large target areas and long distances.

Germany's international broadcaster, Deutsche Welle, has announced that from June 2003 it will transmit digitally on shortwave to Europe and the Middle East. Deutsche Welle thus becomes the first international broadcaster to commit to a start date for regular DRM transmissions. Other broadcasters will certainly follow soon with regular DRM transmissions.

At this moment there are no consumer receivers with built-in DRM decoder available on the market. The only possibility to receive/decode DRM transmissions is currently with a modified receiver in combination with a personal computer running with the Windows operating system. A few specialized radio dealers offer to make the necessary modifications on your receiver, like Charly Hardt in Germany <<http://www.charly-hardt.de>>. However, this modification is not really cheap - between € 120.00 and € 150.00. In addition, you need a DRM decoder for your personal computer, which is normally offered by the DRM Consortium for € 60.00 at <<http://www.drmrx.org/>>.

I have therefore looked for a possibility to receive/decode DRM transmissions without investing that much money. In this case you will have to make the necessary modification to your receiver yourself, which is not too difficult - at least it was not really difficult for my NRD-525. Just have a look at the receiver modifications described at <[http://www.drmrx.org/receiver\\_mods.html](http://www.drmrx.org/receiver_mods.html)> for a number of receivers. You will have to buy a so-called "universal downmixer from 455 kHz or 10.7 MHz to 12 kHz", which is available from Sat-Service-Schneider in Germany <<http://home.t-online.de/home/sat-service/sat/DRM/DRM.htm>>, E-Mail: <[sat-service@t-online.de](mailto:sat-service@t-online.de)>. I received it within 3 days and paid € 31.90 including VAT and postage. On the right please find a picture of this small unit.



After you have built in the downmixer and connected it to your personal computer's sound card (line in jack), you will need a software decoder. After some research in the Internet, I have found a freeware decoder called "Dream", developed by the Darmstadt University of Technology, Germany <<http://www.tu-darmstadt.de/fb/et/uet/fguet/mitarbeiter/vf/DRM/DRM.html>>.



Since they are offering only the uncompiled source code for this programme, and also two "DLL" files were missing, I have made a full compiled version available for our members at <<http://www.wwdxc.de/archive/dream.zip>>

(size: 2.1 MB). After downloading the ZIP file, please uncompress the files to a new empty directory. After that, the programme file "dream.exe" can just be started with a double mouse click. If everything is working well, the decoder will soon show the station you have tuned in on the screen, and you will hear the transmitted programme from the loudspeakers connected to your personal computer.

A list of current DRM test transmissions can be found at <[http://www.rnw.nl/realradio/html/drm\\_latest.html](http://www.rnw.nl/realradio/html/drm_latest.html)>.

If you have any more questions on this subject, please do not hesitate to contact me by E-Mail at <[mail@wwdxc.de](mailto:mail@wwdxc.de)>.



(Michael Bethge)

## DRM Receivers

(Merlin Press Release)

The Digital Radio Mondiale Consortium has unveiled a production-ready world-band consumer receiver, made by Coding Technologies together with the BBC and German device manufacturer AFG, and a preview version of its first publicly-available receiver, the DRM Software Radio made by Fraunhofer IIS-A, in a special preview with live transmissions at IBC 2002, Amsterdam, in September 2002. In December 2002, DRM has opened the doors to radio enthusiasts who want to be the first non-members to access its transmissions with the DRM Software Radio Project, managed by VT Merlin Communications. Qualified radio amateurs and DXers may purchase the software (price: 60 EUR) in the Inetrnet at <<http://www.drmrx.org>>.

DRM is made up of 75 broadcasters, network operators, manufacturers and researchers who have created a digital system (also called DRM) for the broadcasting bands below 30 MHz. DRM is the world's only non-proprietary, digital AM system for short-wave, medium-wave and long-wave with the ability to use existing frequencies and bandwidth across the globe. With near-FM quality sound offering a dramatic improvement over analogue AM, DRM will revitalize the AM broadcasting bands in markets worldwide.

"This is an exceptionally fast-moving time in DRM's development," says Senger. "As we close in on our 2003 launch with test transmissions across the globe, we invite radio enthusiasts to listen to DRM for themselves and report their findings in our Software Radio Project. Furthermore, we are delighted to present the first DRM consumer receiver, which offers equipment manufacturers a low-cost track toward mass production of DRM receivers."

### DRM Software Radio Project

The DRM Software Radio, designed for private use, is a downscaled version of an existing, professional Fraunhofer receiver. Its features include: audio MPEG-4 AAC +SBR decoding, multimedia reception, selection of service and the possibility to log the reception quality (which can later be sent back to DRM). Its audio decoding library has been provided by Coding Technologies.

Radio enthusiasts may register their interest in the Software Radio Project at the DRM Booth during IBC 2002, or at the DRM Web site at [www.drm.org](http://www.drm.org) <<http://www.drm.org>>. When the project launches in December, the web site will be set up to support and distribute the software for a 2-year period, and to analyse received DRM transmissions. It will also contain a discussion forum, worked examples of receiver modifications, an analysis section, and general information about the project.

Participants must meet the following technical criteria: Operating system: Windows 2000, Windows XP, or Windows 98. An AT-compatible PC with 500 MHz Intel Pentium processor (or equivalent), 64 MB RAM, 50 MB free disk space, 16-bit SoundBlaster (or compatible) soundcard that supports full duplex at 48 kHz sampling rate for input and output; the input must be without AGC (Automatic Gain Control); for example: Creative SoundBlaster Live! or "USB One" USB audio interface. Notebook soundcards are not always compatible, and a compatibility list will be published. A front-end receiver is also required, an AOR7030 or another receiver which can be modified. The modification is the addition of an extra circuit board to produce an extra Intermediate Frequency (IF) of 12kHz. Several companies already sell these conversion boards. Participants will need a receiver with a 12kHz IF, because this frequency is within the range of PC soundcards. Many radio receivers have an IF of 455kHz, so the extra circuit board mixes this down to the soundcard range. The PC soundcard is used to analyse the DRM signal.

### DRM Consumer Receiver

The world-band consumer receiver, developed by Coding Technologies together with the BBC and German device manufacturer AFG, is based on a modular system design made up around standard

components. It is a production-ready OEM receiver sample integrated in an enclosure of a commercially available multi-band radio receiver.

The DRM system also uses aacPlus(tm) by Coding Technologies as the standard audio coding format. aacPlus is a combination of MPEG AAC (Advanced Audio Coding) with Coding Technologies' groundbreaking SBR(tm) (Spectral Band Replication) bandwidth extension algorithm.

### **About DRM**

The Digital Radio Mondiale Consortium was founded in 1998. DRM's membership is rich in its diversity, with members from 29 countries as varied as Ecuador, Tunisia, Germany, China, the U.S.A., Nigeria, Finland, India, the U.K., Japan, Spain and Australia.

Moving fast toward universal standardization, the DRM system has been endorsed by the International Electrotechnical Committee (IEC), which published its DRM Publicly Available Specification (PAS 62272-1). The IEC approval, together with DRM's existing certifications by the International Telecommunications Union (ITU) and the European Telecommunications Standards Institute (ETSI), puts DRM a step closer to its 2003 launch.

DRM audio samples are available online at [www.drm.org](http://www.drm.org) <<http://www.drm.org>>.

### **About Coding Technologies**

Coding Technologies, the Swedish-German technology leader in audio coding, develops and implements unique audio compression technologies for the broadcasting, Internet and telecommunication markets. Coding Technologies' SBR(tm) (Spectral Band Replication) technology is used in the MP3 successor mp3PRO as well as in the highly efficient coding method aacPlus(tm). It is part of open standards like Digital Radio Mondiale (DRM) and is reference model in MPEG-4. The company's customers include system designers, chip/device manufacturers and content providers.

Coding Technologies, a privately held company with offices in Stockholm, Sweden, and Nuremberg, Germany, combines the exceptional skills of a Swedish company specialized in audio compression technologies and a spin-off from the renowned Fraunhofer Institute for Integrated Circuits, the inventor of MP3.

For more information, visit <<http://www.codingtechnologies.com>>.

### **About Fraunhofer IIS-A**

The Fraunhofer-Gesellschaft founded in 1949 is the leading organization of applied research in Europe. It operates 56 research establishments. The headquarters are located in Munich, Germany. Most of the 11,000 staff members are qualified scientists and engineers. Founded in 1985, the Fraunhofer Institute for Integrated Circuits IIS in Erlangen ranks first in terms of staff count and industrial revenues among other Fraunhofer-Institutes. The spectrum of services ranges from consulting, concept development, hardware and software design to system development and prototype implementation. Research topics are: Audio coding including significant contributions to international standards (MP3, MPEG-4 Audio), video coding at very low bit rates, Digital Radio Mondiale (DRM), RF-circuitries, complex digital systems on silicon, vision systems for automated quality assurance, ultra fine focus X-ray computer tomography, high speed camera systems and analog and digital ICs. 13,500 square meters of office and laboratory space are available for 450 staff members to carry out contract research. The budget of 49 million Euros is mainly financed by projects from private industries and public sectors. Less than 20 % of the budget is subsidized by federal and state funds.

## INTERNATIONAL BROADCASTING PLANNING

by Bob Padula

The first meeting for 2003 of the High Frequency Coordination Conference (HFCC) is set down for Sandton, South Africa, from 3-7 February. This is a joint meeting with the Arab States Broadcasting Union. The output of the meeting will be in the form of a Master Schedule, setting down actual operational requirements for the A-03 Transmission season, which runs from 30 March until 26 October.

The most recent meeting was in Bangkok, Thailand, in August 2002, which was augmented by the attendance of delegates from the Asia Pacific Broadcasting Union (ABU-HFC), which produced the schedule for the B-02 season, which concludes on 29 March 2003. Some 130 frequency managers, from 57 bcers, physically participated in that meeting.

The South African meeting is being hosted jointly by the HFCC Secretariat and the Sentech organisation, and will be held at the Hilton Hotel, with attendance now open to anyone. The registration fee is US\$75 per delegate, and participants had been invited to complete their registrations in November 2002.

This meeting is somewhat of a "hard-sell" for both South African tourism and the Sentech company. The keynote address will be delivered by Zandile Mbele, Sentech's General Manager, Corporate Affairs, and delegates have been invited to take full advantage of pre- and post-meeting tourist activities.

The output of the meeting will be compiled into a Master Schedule, and a truncated version of that file will be made available at the HFCC's website <http://www.hfcc.org> in due course, for anyone who is interested.

The HFCC is an approved body within the ITU. Regrettably, there has been increasing concerns across the industry at professional level that much of its output is subject to frequent and ongoing alteration during the txion season. This has been caused by hopelessly flawed initial freq assignments, with many allocations being made with little regard to actual channel occupancy in the primary target areas.

Whilst it is acknowledged that there is a need to modify schedules part way through a season extending for several months, the amount of amendments made during the B02 season (barely 8 weeks old!) has been massive, with major changes being made by some bcers almost on a weekly basis. From the viewpoint of the customer (meaning listener), trying desperately to discover the actual operating frequency for some bcers is virtually impossible, not helped by the tendency by many stns to conceal their schedules from the global listening community!

Tentative requirements are submitted to the HFCC several months in advance of the start of the season, and the freq management process is supported by a computerised management information system, which calculates Optimum Working Frequencies for particular propagation routes, using predicted solar data, which are then used at the meeting to analyse "frequency collisions". Changes are then made on an iterative, manual basis at the meeting.

Unfortunately, there is no major physical representation either from the ABU-HFC or several large bcers at the A03 meeting, and from an engineering planning perspective, it seems inconceivable that major decisions on operational requirements can be driven without such direct input.

The effectiveness of the process is further constrained due to the very high dependence on theoretical considerations, with little regard being given to txs on the same freqs, located around the world.

With high power of 500 kW now commonplace, propagation worldwide is now normal, irrespective of the theoretical "intended" area of reception! The current absurdity of HCJB Australia using 11755 at 0700-1100 simultaneously with R Finland is an example of rickety frequency selection, where the Finnish stn is well heard across Australia, even though it is "intended" for Europe. Pori actually has an azimuth of 220 degrees, 500 kW, which puts out lots of energy into Australia via the long-path across the South Pacific. This has not been recognised by HCJB Australia. Propagation reciprocity also applies: HCJB Australia would also disturb the Finnish tx!

Another example is the use of 7285 by the Voice of Vietnam and the Voice of America (Thailand) at 1100, for the same target area!

Shortwave radio is on shaky ground, and these unsound frequency planning processes don't help. Bringing together 130 "frequency managers" as a Committee in some swanky hotel, twice a year, for a week, at huge expense to their employers, to develop highly questionable engineering solutions, does not seem to me to be the way to go.

It seems to me that the entire thing has gone off the rails: a committee of 130 people seems overkill, acknowledging that many of these people have little or no technical qualifications or engineering planning expertise. The money could be better spent in upgrading transmitter infrastructure and distribution, and in developing and strengthening improved communication to the customers - the listeners.

No, I will not be going to South Africa!

(Bob Padula, EDXP, Jan 9, 2003)