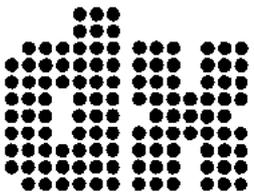


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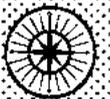
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WORLD WIDE DX CLUB



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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.

- WORLDWIDE DX CLUB homepage in the Internet at: <http://www.wwdxc.de>
- Weekly "TopNews" by Wolfgang Büschel at: <http://www.wwdxc.de/topnews.htm> (available also free of charge by E-Mail to our members on request)
- Latest DRM schedule at: <http://www.wwdxc.de/drm.htm>

## WORLD RADIO TV HANDBOOK 2006

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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. 8/9

Vol. XLI

August 2006

(Cf. DXM 4/2006) Please remember that our News Editor Jürgen Kubiak will resign after 10 years of compiling our News section. His last edition is DX MAGAZINE 8/9, i.e. this summer edition. Therefore we need a new **News Editor** as from October 2006. If YOU are interested to compile this section for us in the future, please do not hesitate to contact me.

Hello again,

Welcome to the annual summer double issue of our DX MAGAZINE. Like in the past years you will find our normal monthly sections, several articles and in addition our annual "List of Members". **We are still looking for a new News Editor, as you can see in the advertisement above. Therefore, please do not hesitate to contact me, if you are interested to start as our new News Editor as from October 2006.** And now let's start with our usual news from outside the club:

(Cf. DXM 5/2006) **WORLD RADIO TV HANDBOOK** is pleased to announce that an update file for the Summer season broadcasting schedules is now available for download from the WRTH website: <<http://www.wrth.com>>. The file 48kb is in PDF format and requires Adobe Acrobat reader (free) 5.0 or above to open it. **(Sean D. Gilbert, G4UCJ/G4001SWL, International Editor - World Radio TV Handbook)**

Während der Mitgliederversammlung des **Radio Slowakei** Hörerklubs auf dem DX-Camp des SWLCS in Merchweiler (Saar) am 22. Juli 2006 wurde informiert, daß der neue slowakische Kultusminister versuchen möchte, die Auslandssendungen von Radio Slowakei International auf Kurzwelle wieder aufleben zu lassen. Sicherlich braucht er dazu auch die aktive Unterstützung von uns DXern und Freunden von Radio Slowakei International. Es wäre daher empfehlenswert, wenn jeder, dem etwas an Radio Slowakei International liegt, ein entsprechendes Schreiben an den Kultusminister senden könnte. Denn mit diesem Feedback aus dem Hörerkreis würde es dem Herrn Minister sicherlich leichter fallen, eine Wiederaufnahme der Kurzwellensendungen zu realisieren. Kontaktdaten fuer die Aufrufaktion sind: Marek Madaric, Minister kultúry, Ministerstvo kultúry Slovenskej republiky, Nám. SNP 33, 813 31 Bratislava, Slowakische Republik. Die E-Mail lautet: <[mksr@culture.gov.sk](mailto:mksr@culture.gov.sk)>. **(Volker Willschrey, Deutschland)**

And with this best wishes and good DX until October from

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

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

**ALBANIA:** Mrs. Drita Cico, Monitor of Radio Tirana operations, just informed about the decision of the Technical director of Radio Tirana Mr. Arben Mehilli to change two

**Radio Tirana FS** frequencies due to complaints from Portugal and in compliance with ITU regulations. Changes from 2006 August 9th:

1800-1815 from 6225 to 5920 kHz in Serbian

1900-1930 from 6225 to 5920 kHz in Italian

2030-2200 from 6205 to 5910 kHz in Albanian

Those who like Albanian music are recommended to check the last part of these transmissions. (Ullmar Qvick, Sweden, 2006 Aug 7, DXLD #6-119)

**BELARUS:** **Radio-Station Belarus** (<<http://www.radiobelarus.tvr.by/eng/>>), the international service of the Republic of Belarus, has launched a new website. The site includes online news in text format, audio of the latest broadcasts in English, German, Russian and Belarusian, and a 24-hour live Internet stream. The Internet stream carries additional programming in English and other languages. According to the website, airtime in English is 2 hours and 30 minutes a week on shortwave plus 30 hours and 20 minutes on the Web. The schedule of Internet broadcasts is on this page, but please note that the times are in local time (UTC+3). But old habits die hard - we were rather amused to hear the announcer on a Web-only portion of the broadcast inviting us to "stay tuned." (RNMN Weblog as of July 10th, 2006)

**ESTONIA:** The Estonian government has endorsed a bill on the creation of an **Estonian National Broadcasting Corporation**, signifying a merger of Eesti Televisioon (ETV) and Eesti Raadio. The aim of the bill is to establish the foundation, aims and duties of the National Broadcasting Corporation. When the bill enters into force, ETV and Eesti Raadio will wind up their operations and the National Broadcasting Corporation will continue as their legal successor. Joint activity will make it possible to more flexibly use the financial resources necessary for the operation of ETV and Eesti Raadio, to better use opportunities of the new media and find the synergy opening in the merger of the two organizations and later joint development, according to the authors of the bill. (RNMN Weblog as of July 20th, 2006; Source: Baltic Times)

**ETHIOPIA:** These stations are active on SW with current schedules:

**Radio Ethiopia** with FS on 7165 and 9560: 1200-1300 Somali, 1300-1400 Afar, 1400-1500 Arabic, 1600-1700 English and 1700-1800 French.

Radio Ethiopia with HS on 5990, 7110 and 9704.2: 0300-1000 (SS -1400) 1500-2000 Amharic/Oromo/Tigre/Somali/Afar-Hararie/Agnuak/Nuer. 5990 is covered most times by R Luxembourg in DRM!

**Radio Fana**, Addis Ababa, on 6210 and 6940: MF 0300-0430 0900-1000 1500-1700 Amharic, 0430-0530 1000-1100 1700-2000 Oromiffa; SS 0530-0730 1500-1900 Amharic, 0300-0530 1200-1500 Oromiffa.

**Voice of the Revolution of Tigray**, Mek'el on 5500 and 6350: MF 0400-0500, SS 0400-0900, MF 0930-1030, SS 1100-1730, MF 1500-1900 Tigrinya

(Anker Petersen, DSWCI DX Window, 2006 July 26, via DXLD #6-111)

External service of **Radio Ethiopia**. Postal address: Audience Relations, R. Ethiopia, P.O.Box 654, Addis Ababa. (JKB)

Current schedules of **Clandestine stations** broadcasting on SW towards Ethiopia:

11840, R Voice of Oromo Liberation Front, via Samara: Mo/Th 1700-1730 Oromo.

11840, Dejen R, via Samara: We 1700-1800 Tigrinya.

11840, R Voice of the Ethiopian National United Front (ENUF), via Samara: Fr/Su 1700-1800 Amharic.

11840, Voice of Ethiopian People, via Samara: Tu/Sa 1700-1800 Amharic.

13820, Voice of Oromo Liberation, via Juelich: Apr-Oct: Tu/We/Fr/Su 1700-1730 Oromo, 1730-1800 Amharic.

15565, Voice of Ethiopian Unity, via Juelich: Apr-Oct: We/Fr/Su 1900-2000 Amharic.

15660, Tensae Ethiopia (Voice of Unity), via Samara: Apr-Oct: 1500-1600 Amharic

(Anker Petersen, Denmark, DSWCI DX Window, 2006 July 26, via DXLD #6-111)

**EUROPE:** **Radio Free Europe - RFE / Radio Liberty - RL** A06 schedule update as of website dated 13 Aug 2006.

Afghan Service (several changes, complete sked):

0230-0430 11820 SW Every day

0230-0330 12140 SW Every day

0230-0630 17670 SW Every day

0330-0930 15615 SW Every day

0430-1030 17815 SW Every day

0630-1230 17685 SW Every day

0930-1430 15090 SW Every day		1230-1430 11550 SW Every day
1030-1230 11805 SW Every day		1230-1330 19010 SW Every day

Romanian Service (new additional frequency):

1800-1900 11985 SW MoTuWeThFr

Tatar-Bashkir Service (new additional frequencies):

1500-1600 15410 SW Every day

1900-2000 9805 SW Every day

Turkmen Service (new additional frequency):

1400-1600 15460 SW Every day

(RFE/RL website via JKB, 13 Aug 2006)

**FRANCE:** The president of *RFI (Radio France Internationale)*, Antoine Schwarz, and the managing director of Voice of Nigeria [VON], Mr Aboubakar Jijiwa, signed an agreement of cooperation this morning [6 July] in Paris which will allow RFI to broadcast new daily programmes in Hausa. The broadcast will come into effect in autumn via the different short-wave and FM transmitters which RFI has in Nigeria, Niger, Ghana, Cameroon, Sudan ... [press release ellipsis]. This region represents an audience pool of some 100m Africans, since Hausa is the prevalent language in sub-Sahara Africa. The new Hausa editorial team will operate from Voice of Nigeria's premises in Lagos. The team will consist of five trilingual journalists (Hausa, French, English) and two technicians, led by a coordinator assigned from RFI's editorial office. RFI's programmes, initially scheduled to last two hours, will focus both on African and international news as well as on news in the Hausa-speaking world, with reports from RFI's correspondents in Niger, Cameroon, Ghana and Chad. Re-broadcast agreements with private or public radio stations, particularly in Niger, are currently being negotiated. The agreement between RFI and VON also allows for a joint project to adapt into Hausa (and later into other languages in Nigeria) a training method to learn French, which will be broadcast on the two stations. Voice of Nigeria and RFI, which have entertained excellent relations for several years, welcome this agreement which will produce programmes close to their listeners' interests, in total synergy with RFI's other editorial offices. With Hausa, RFI will now broadcast in 21 languages. (RNMN Weblog as of July 6th, 2006; Source: Radio France Internationale press release, Paris, in French 6 Jul 06 via BBC Monitoring)

**French Guiana:** DRM test transmissions from Montsinery, French Guiana, started yesterday 17 July. A new 150 kW DRM / 250 kW AM Thomson transmitter is currently under acceptance tests. There will be some DRM test transmissions in the coming days between about 1900 and 2145 UTC:

21645 kHz to Europe on 20, 24, 26 and 28 July; 4/4 antenna

15795 kHz to Brazil on 18, 21, 25 and 27 July; 2/3 antenna.

(RNMN Weblog as of July 19th, 2006; Source: Jacques Gruson, TDF via DRM Software Radio Forums)

**GERMANY:** *Deutsche Welle* has extended its radio transmissions for Belarus. From 1st August 2006 the transmission time has been increased by 30 minutes to 45 minutes in the context of a new morning programme. DW Director General Erik Bettermann: "Against the background of the political situation in Belarus, it is our intention to set an example." After the controversial presidential elections in March and in view of the desolate media situation in the country, it has now become even more important to provide the people in this state bordering on the EU with uncensored information from Europe. "We want people to be able to form their own opinions, and we are putting the emphasis on credibility and sustainability," says Bettermann. The Russian programme of DW RADIO has been broadcasting a 15-minute programme to Belarus on shortwave and mediumwave since October 2005. The transmissions – from Monday to Friday at 1530 UTC – are in Russian and Belarusian. The new 30-minute offering can be heard at 0400 UTC (also from Monday to Friday) via shortwave and satellite. In addition to which, texts and audio are archived on the Internet at <[www.dw-world.de/belarus](http://www.dw-world.de/belarus)>. This expansion means topics from the areas of culture, industry and commerce, education and youth can be included in the programme in future, "and more content can be delivered in Belarusian", says programme chief Cornelia Rabitz. She says that the Belarusian programme, which is also broadcast over the Internet, is encountering more and more interest. "In the last six months we have succeeded in setting up a reliable network of correspondents in Belarus. This enables us to obtain and broadcast exclusive information from Belarus," says Rabitz. The tried and tested infrastructure of DW ensures that the programmes are of a high professional

standard. (RNMN Weblog as of August 4th, 2006; Source: Deutsche Welle)

**GREECE:** The General Director of **ERT** Christos Panagopoulos informs the Minister of Interior: "In answer to the question raised in the Greek Parliament under the case number 4158/2/6/07 by the deputy Stavros Mpenos, I would like to inform you that the programs of ERA-5 continue to be transmitted through the transmitters of ERT just like in the past. However from July 1, 2006 there have been certain curtailments in the total of hours of emission. Today, ERA-5 is transmitted from transmitters in Avlida (Avlis) as follows: a) 7-hour program towards America, Atlantic and Canada on 7475 and 9420, b) 6-hour program to Australia, Asia and Indian Ocean on 15650 & 17520, c) 12-hour program to Africa on 12120 & 9420, d) 24-hour program to Europe on 7475, 9420, 15630 kHz. It is a fact that on April 2006 the US government decided to closed down the Voice of America transmitters at Kavala and Rhodos, which transmitted parts of ERA-5 programming. As a result of this, ERA-5 programming to America and Australia had to be reduced. Also foreign language transmissions on shortwave have been eliminated. The foreign language transmissions will continue to be transmitted on AM transmitters only. The reductions of ERA-5 services have nothing to do with economic issues. I would like to assure you that the reduction is the result of the elimination of the Voice of America transmitters. Currently ERA-5 is trying to find ways to reinstate the transmissions to Americas and Australia through other technical means. Finally, I would like to point out that the ERA-5 programming is also available through the Internet, and through the ERT satellite platform." (Christos Rigas, Chicago Area DX Club, 2006 July 18, dxldyg via DXLD #6-105)

**INTERNATIONAL WATERS:** The former **Radio Veronica** ship will not, after all, be coming home to the Netherlands - at least, not for the moment. The plan was to bring the ship, now converted into a discotheque, from Antwerp in Belgium and set up a new discotheque in Waalwijk. But the local council has refused permission on safety grounds. Ben Scholten, chairman of the group behind the plan, says he's very disappointed at the decision. The plan was formulated after Scholten heard that the current owner of the vessel wanted to sell it. (RNMN Weblog as of July 12th, 2006; Source: Algemeen Dagblad)

**IRAN:** A06 schedule **Voice of the Islamic Republic of Iran - VOIRI** Tehran. Postal address: Islamic Republic of Iran Broadcasting, Vali-e asr Ave, Jame Jam St., P.O. Box 19395-6767, Teheran. For German language service: IRIB Deutsches Programm (German Service), Bundespressehaus, Zimmer 1305, Schiffbauerdamm 40, D-10117 Berlin, Germany. eMail: <IRIBWORLD@IRIB.COM>, Internet: <<http://www.trib.com>>.

ALBANIAN	0630-0727	13810	15235						9925
	1830-1927	9545	9570						
	2030-2127	9535	11830						
ARABIC	0230-0427	9685	9935	13790					
	0330-0427	9610	11875	"Voice					
				of Islamic					
				Palestinian					
				Revolution"					
	0430-0527	9935	13790	13800					
	0530-1427	13790	13800	15150					
	1430-1627	15150							
	1630-0227	9935							
ARMENIAN	0300-0327	12025							
	0930-0957	9695	15260						
	1630-1727	7230	9780						
AZERI	0330-0527	13710							
	1430-1657	6200							
BENGALI	0030-0127	5955	7135						
	0830-0927	11705							
	1430-1527	9520	9810	12090					
BOSNIAN	0530-0627	13750	15235						
	1730-1827	7295	9860						
	2130-2227	7305	9810						
CHINESE	1200-1257	13735	15190	17535	17635				
	2330-0027	11785	11975	13715					
DARI	0300-0627	11910	13740						
	0830-1427	9940	13720						
	1430-1457	9940							
ENGLISH	0130-0227	7235	9495						
				"Voice of Justice"					
	1030-1127	15600	17660						
	1530-1627	7370	9635						
	1930-2027	6205	7205	7540	9800				
GERMAN	0730-0827	15085	15430						
	1730-1827	7540	11855	15085					
FRENCH	0630-0727	13710	15430						
	1830-1927	7540	9905	13755	15085				
HAUSA	0600-0657	17810	17870						
	1830-1927	9925	11930						
HEBREW	0430-0457	9610	11875						
	1200-1227	13685	15260						
	1900-1927	3985	5970						
HINDI	0230-0257	15165	17635						
	1430-1527	11695	13805						
ITALIAN	0630-0727	11555	13770	15085					
	1930-1957	5910	7380						
JAPANESE	1300-1327	13755	15555						
	2100-2127	9670	11990						
KAZAKH	0130-0227	7270	9795						
	1300-1357	11665	13615						
KURDISH	0330-0427	7255	11920	Sorrani					
dialect									
	1330-1427	5990	Sorrani	dialect					
	1430-1627	5990	Kirmanji	dialect					
MALAY	1230-1327	15200	17555						
	2230-2327	5945	7310						
PASHTO	0230-0327	7130	9605						
	0730-0827	11990	15440						
	1230-1327	6175	9790	11730					
	1430-1527	7270							
	1630-1727	6000	7195						
RUSSIAN	0300-0327	9650	11925						
	0500-0527	9855	11870	17595	17655				

	1430-1527	7165	9315	9580	9900		TAJIK	0100-0227	6185	7285
	1700-1757	3985	7175					1600-1727	5945	5955
	1800-1857	6205	7260				TURKISH	0430-0557	11685	13640
	1930-2027	3985	7175					1600-1727	7165	9870
SPANISH	0030-0227	9655	9905				URDU	0130-0227	7205	9480 9845
	0230-0327	9905						1330-1427	6000	9665 11695
	0530-0627	15530	17785					1530-1727	7270	
	2030-2127	7300	7540	9650				1730-1757	6175	7220
SWAHILI	0330-0427	15265	15340				UZBEK	0230-0257	9740	11945
	0830-0927	15240	17660					1500-1557	5945	5955
	1730-1827	7165	9655							

(OBSERVER by Ivanov via BC-DX #428, 07 August 2006)

**JAPAN:** *Japan Broadcasting Corp - NHK* said Tuesday (25 July) it plans to cut radio programmes for Italian, German, Swedish and Malay speakers to shift emphasis on television programmes for its international services, marking the first reduction in the number of languages used to run its programmes. Currently, NHK transmits shortwave radio programmes in 22 languages. The reduction is scheduled to take effect in October next year. Shortwave radio programmes for Europe, excluding Russia, and for North America and Hawaii will also be trimmed, according to NHK. French programmes will be limited to audiences in Africa and those in Spanish restricted to Latin America, it said. The move comes along with a decline in demand for those radio programmes, according to NHK. Television and the Internet are taking on greater roles than radio in Europe and North America, it said. More than 100m yen [856,000 US dollars] will be saved as a result of these reductions and the funds will be used to increase programmes in English, according to NHK. (RNMN Weblog as of July 25th, 2006; Source: Kyodo News Service, Tokyo, in English 1238 UTC 25 Jul 06 via BBC Monitoring / also via MF)

**KOREA (NORTH):** *Open Radio for North Korea* (<<http://www.nkradio.com/>>) will broadcast, free of charge, messages from South Koreans who want to express their thoughts to Kim Jong Il in regards to North Korea's missiles. According to Open Radio "The event is intended to relay voices of South Korean citizens to North Korea's foremost Commissioner Kim Jong Il and make North Korean authorities reflect upon their policies." Open Radio says the messages can contain anything except instigations of violence or breaches to existing law. The messages should be kept to 1 A4 page and undoubtedly include a message of protest to Kim Jong Il or a message to another North Korean person. Messages can be sent via email, fax or posted on the Open Radio homepage website. Open Radio will be airing the messages on 5880KHz on July 16th and 17th, between 6PM and 6:30PM (0900-0930 UTC). (RNMN Weblog as of July 10th, 2006; Source: The Daily NK)

**North Korea / Mongolia:** The 20 July edition of the International Herald Tribune has a feature on *Free North Korea Radio*, which broadcasts a 30-minute daily programme into North Korea, produced in Seoul. The story says that "Within hours, beamed from a transmitter in Mongolia, Kim's radio signals penetrate North Korea's tightly sealed borders with news of the outside world." Later in the article, the newspaper says that "last December, with financial assistance coming indirectly from the US Congress, Kim's Mongolian radio station began its first shortwave broadcasting. Its 30-minute program is broadcast twice a day on two different channels to increase the chances of penetrating North Korea's signal-jamming." (RNMN Weblog as of July 21st, 2006)

**MALAYSIA:** Public broadcaster *Radio Television Malaysia (RTM)* has now made available its overseas service, Voice of Malaysia, live on the Web. This is accessible on two audio streams from the organization's recently redesigned website at <[www.rtm.net.my](http://www.rtm.net.my)>. Most of RTM's national domestic networks have been available on live streams for some time, subject to free registration. Now all five are online and no longer require registration. These are:

Nasional FM - National 24-hour general service in Malay

Muzik FM - National 24-hour music presented in Malay

Traxx FM - National 24-hour general service in English

Ai FM - National 24-hour general service in Mandarin and other Chinese languages

Minnal FM - National 24-hour general service in Tamil

Also available:

KLFM - 24-hour general service for the capital

Asyik FM - Regional general service presented in Orang Asli. 0500-1300 gmt  
 Klasik FM - Music service for the capital, presented in Malay. 0400-1600 gmt  
 RTM's two national television channels are also available on live video streams from the website: TV1 (labelled "Inforia Channel") broadcasts in Malay and is on the air 2145-1800 gmt daily. TV2 (labelled "Family Channel") is on the air round the clock in Malay, English, Mandarin and Tamil. Programme guides for both services are available on the site.

The site also has links to the individual websites of most of the RTM national radio networks and regional broadcasters. (RNMN Weblog as of August 3rd, 2006; Source: BBC Monitoring research, 2 Aug 06)

**MISCELLANEOUS:** Researchers and employees of Korean company *Samsung* are devising a method to use the ionosphere as a medium for "long distance communication" without the need for expensive satellites. The ionosphere already plays a role in communications as a "radio reflector" for shortwave signals. But by launching UHF signals behind a 1GHz carrier signal, scientists hope to alter the behaviour of the ionosphere to create an alternating current, which can then be modulated at a particular frequency in order to create an antenna of global proportions. See <<http://www.engadget.com/2006/07/28/samsung-working-on-atmospheric-broadcasting/>>. (RNMN Weblog as of July 29th, 2006)

**Language based shortwave broadcasts** sorted by time. Credits to Eike Bierwirth, Leipzig (Germany), who compiled a comprehensive shortwave broadcasting-schedule list of stations on the air in various languages, version May 18, 2006. Based on this data I filtered language-based transmissions. Days are 1 = Mon .. 7 = Sun.

**English Part 2 of 2** (transmission starting 1200-2359), English part 1 was published in last issue of DXM:

START	STOP	DAY	ITU	STATION	LAN	TARG	FREQUENCY
1200	1230		F	Radio France Int.	E	Waf	17815/ASC
					E	Eaf	21620
1200	1230		USA	Adventist World Radio	E	SAs	15365/UAE
1200	1245		USA	WYFR Family Radio	E	WNA	5985
					E	ENA	5950
					E	CAm	17750
					E	SAm	17555
1200	1300		ALS	KNLS Anchor Point	E	FE	9615 9780
1200	1300		AUS	Radio Australia	E	Oc	5995b 6020 9475 9560
					E		9580 9590 11880
1200	1300		AZE	Voice of Azerbaijan	E	ME	1295 6111
1200	1300		CAN	Radio Canada Int.	E	As	9660/J 15170/J
1200	1300		CHN	China Radio Int.	E	ENA	9560/CAN
					E	As	684 1188 1269 1341 5955b
					E		9460ka 9730b 9760j 11650u
					E		11660ka 11690x 11760k 11980k
					E		13610ka 13645ka
					E	Eu	13650/ALB 13790u 17490ka
1200	1300		G	BBC World Service	E	Saf	6190/AFS 11940/AFS 21470/SEY
					E	Eaf	17885/SEY
					E	Waf	17830/ASC
					E	ME	11760/OMA 15575/CYP
					E	SAs	15310/THA 17790/OMA
					E	SEA	6195/SNG 9740/SNG
					E	FE	17760/THA
					E	Eu	15485s 17640s
					E	Car	11865/GUF
1200	1300		KOR	KBS World Radio	E	NAm	9650/CAN
1200	1300		POL	Radio Polonia	E	Eu	9525 11850
1200	1300	Su-Fr	RUS	Voice of Russia	E	G	558/G
1200	1300		TWN	Radio Taiwan Int.	E	FE	7130
1200	1300		USA	Voice of America	E	As	1170#/PHL 6160/PHL
					E		9760/PHL 11750/MRA
					E	Oc	9645/THA
1200	1300		USA	WHRI World Harvest R.1	E	NAm	9495
1200	1300		USA	WYFR Family Radio	E	SEA	11895/RUS-i
1200	1330		HOL	Radio Nederland DIGITAL	E	CEu	7240
1200	1400		HWA	KWHR World Harvest R.3	E	FE	12130
1200	1400	SaSu	I	IRRS Milano	E	As	15750

1200	1400		USA	Brother Stair	E	Eu	6110/D-j
1200	1400		USA	WHRA World Harvest R.5	E	Eu	15665
1200	1400		USA	WWCR 3	E	NAm	9985
1200	1500	Mo-Fr	I	IRRS Milano	E	Eu	13840
1200	1700		USA	WHRI World Harvest R.2	E	NAm	9840
1200	2200		USA	Dr.Gene Scott	E	NAm	9725/CTR 11775/AIA
					E	SAm	11870/CTR
					E	CAm	13750/CTR
1200	2200		USA	WINB Red Lion, PA	E	CAm	13570
1200	2300		USA	WBCQ Monticello, ME	E	NAm	17495 18910
1200	0200		USA	WWCR 2	E	NAm	13845
1200	0500		USA	WBCQ Monticello, ME	E	NAm	9330
1205	1220	Mo	AUT	oe1 international	E	As	17715
					E	Oc	17715
					E	Eu	6155 13730
1205	1230	SaSu	AUT	oe1 international	E	As	17715
					E	Oc	17715
					E	Eu	6155 13730
1215	1230	Tu-Fr	AUT	oe1 international	E	As	17715
					E	Oc	17715
1215	1330		EGY	Radio Cairo	E	SAs	17835z
1230	1235		IND	AIR Delhi	E	IND	6085d 17860d
1230	1245	Th	G	Bible Voice	E	FE	12065/RUS-kh
1230	1300		BGD	Bangladesh Betar	E	SAs	7185
1230	1300		S	Radio Sweden	E	ME	15735
					E	As	13580 15735
					E	NAm	15240
1230	1300		THA	Radio Thailand	E	Oc	9835
1230	1300		VTN	Voice of Vietnam	E	SEA	9840 12020
1230	1330		TUR	Voice of Turkey	E	Eu	15450
					E	AUS	15535
					E	As	15535
1235	1300	SaSu	AUT	oe1 international	E	As	17715
					E	Oc	17715
					E	Eu	6155 13730
1245	1300	Mo	AUT	oe1 international	E	As	17715
					E	Oc	17715
1245	1300	Tu-Fr	AUT	oe1 international	E	Eu	6155 13730
					E	As	17715
					E	Oc	17715
1245	1300		USA	WYFR Family Radio	E	SAm	17555
					E	CAm	17750
1300	1315	We	AUS	HCJB Australia	E	SAs	15405
1300	1327		CZE	Radio Prague	E	Eu	13580
					E	Af	17540
					E	ME	17540
1300	1330		AUS	HCJB Australia	E	FE	15400
1300	1400		AUS	Radio Australia	E	Oc	5995b 6020 9560 9580 9590
1300	1400		CHN	China Radio Int.	E	SAm	17625/CHL
					E	NAm	9570/CUB 9650/CAN 15260/CAN
					E	As	684 1341 5955b 9730b 9765x
					E		9870x 11660ka 11760k
					E		11900k 11980k 13610ka
					E		13755ka 13790u
1300	1400		G	BBC World Service	E	SAf	6190/AFS 11940/AFS 21470/ASC
					E	EAF	15420/SEY 17885/SEY
					E	WAF	17830/ASC
					E	ME	11760/OMA 15575/CYP
					E	SAs	15310/THA 17790/OMA
					E	SEA	6195/SNG 9740/SNG
					E	FE	11750/THA
					E	Eu	12095w(Sa) 15485s 17640s
					E	EEu	15565r 17640w
1300	1400	Mo-Fr	I	IRRS Milano	E	As	15750
1300	1400		IND	AIR Gangtok (Sikkim)	E	IND	1404 3390 4870
1300	1400		KOR	KBS World Radio	E	SEA	9570 9770
1300	1400		KRE	Voice of Korea	E	Eu	4405 13760 15245

1300	1400		ROU	Radio Romania Int.	E	NAm	9335	11710
1300	1400		USA	Voice of America	E	Eu	11830	15105
1300	1400	Sa	USA	Voice of Joy	E	As	9760/PHL	
1300	1400		USA	WYFR Family Radio	E	Oc	9645/THA	
1300	1400		USA	WYFR Family Radio	E	As	15720	
					E	SEA	11895/RUS-i	
					E	CAM	17750	
					E	WNA	11830	11865
					E	ENA	11910	
					E	SAs	11560/TWN	
					E	SEA	11520/TWN	
1300	1430		CLA	VoJammu-Kashmir Freedom	E	SAs	5102	
1300	1600		CAN	Radio Canada Int.	E	ENA	9515	13655 17800
					E	Car	17800	
1300	1600		D	Deutsche Welle	E	Eu	6140j	
1300	1600	SaSu	I	IRRS Milano	E	Eu	13840	
1300	1600		USA	WHRI World Harvest R.1	E	NAm	11785	
1300	1630		JOR	Radio Jordan	E	Eu	11690	
1300	1650		NZL	Radio New Zealand Int.	E	Oc	7145	
1300	2300		USA	WWRB Manchester, TN	E	NAm	9385	
1300	0805		CAN	CKZU Vancouver	E	NAm	6160	
1330	1345		G	BBC World Service	E	WAF	15105/ASC	21640/ASC
1330	1400	Su	AUS	HCJB Australia	E	SAs	15435	
1330	1400		GUM	KTWR Trans World Radio	E	SEA	9585	
1330	1400		LAO	Lao National Radio	E	SEA	7145	
1330	1400		S	Radio Sweden	E	As	15735	
					E	NAm	15240/CAN	
1330	1400	12456	USA	Adventist World Radio	E	SAs	15275/GUM	
1330	1500		IND	All India Radio	E	SEA	9690b	11620k 13710b
1330	1800		G	BBC DIGITAL	E	Eu	7465/NOR-k	
1400	1415		G	FEBA Radio	E	SAs	9500/RUS-n	
1400	1415	Tu,Th	USA	Pan American Broadc.	E	ME	15205/D-n	
1400	1430		CAN	Radio Canada DIGITAL	E	Eu	9815/HOL	
1400	1430		F	Radio France Int.	E	EAF	21620	
1400	1430	Sa	NZL	R. New Zealand DIGITAL	E	Eu	9770/G-r	
1400	1430		S	Radio Sweden	E	NAm	15240	
1400	1430		THA	Radio Thailand	E	Oc	9830	
1400	1500		AFS	Channel Africa	E	SAF	9620	
1400	1500		ALS	KNLS Anchor Point	E	FE	9795	
1400	1500		AUS	Radio Australia	E	Oc	5995	6080 7240 9475\$
					E		9590	11660\$ 11750d
1400	1500		CHN	China Radio Int.	E	As	5955b	9560ka 9765x 9870x
					E		11660ka	11675u 11765u
					E		11775ka	13610ka 13710ka
					E	Af	13685/MLI	17630/MLI
					E	NAm	13740/CUB	
1400	1500		G	BBC World Service	E	SAF	6190/AFS	11940/AFS 21470/ASC
					E	WAF	17830/ASC	
					E	EAF	21660/CYP	
					E	SAs	15310/THA	17790/OMA
					E	FE	11750/THA	
					E	SEA	6195/SNG	9740/SNG
					E	ME	15575/CYP	
					E	Eu	12095w	15485s 17640s
					E	EEu	15565r	17640w
1400	1500	Su	G	Bible Voice	E	SAs	15690/D-w	
1400	1500	Sa	GRC	Voice of Greece	E	Eu	9420a	15630a
1400	1500		GUM	KTWR Trans World Radio	E	FE	9975	
1400	1500		J	NHK Radio Japan	E	SEA	7200	
					E	SAs	11730	
					E	Oc	11840/CLN	
1400	1500	Tu	J	Shiokaze	E	KRE	5890/RUS-i	
1400	1500		OMA	Radio Sultanate Oman	E	Eu	15140t	
1400	1500		RUS	Voice of Russia	E	Eu	7370/MDA	
					E	As	1251	7165v 9745c 11755/TJK
					E		12055c	15605m 17645m
1400	1500		TWN	Radio Taiwan Int.	E	SEA	15265	

1400	1500		USA	KJES Vado, NM	E	ENA	11715
1400	1500		USA	Voice of America	E	SAs	7125/THA 9760/PHL
					E		15185/PHL-x
					E	SEA	15185/PHL-x 15490/D-L
					E	As	9760/PHL
					E	ME	15490/D-L 17730/BOT
					E	Af	4930/BOT 6080/STP 13795/BOT
					E		15580/BOT 17685 17720/STP
1400	1500		USA	WYFR Family Radio	E	CAm	17750
					E	ENA	11910 13695
					E	WNA	11830
					E	SAs	11560/TWN
1400	1545	Sa	G	Bible Voice	E	SAs	15690/D-w
1400	1600	Sa	BEL	TDPradio DIGITAL	E	Eu	6015/G-r
1400	1600		BEN	ORTV du Benin	E	WAF	7210
1400	1600		HOL	Radio Nederland	E	SAs	9345/UZB 9890/MDG 11835/MDG
1400	1600		LBY	LJB Voice of Africa	E	NAf	17850/F
					E	EAF	17725/F
1400	1600		SNG	938 Live	E	SEA	6150
1400	1600		USA	Brother Stair	E	ME	13810/D-j
1400	1600		USA	WEWN Birmingham, AL	E	NAm	9955
1400	1600		USA	WHRA World Harvest R.5	E	Eu	17650
1400	1600		USA	WRMI Radio Miami Int.	E	NAm	7385
1400	1800		HWA	KWHR World Harvest R.3	E	FE	9930
1400	1800		USA	WRN DIGITAL	E	Eu	11540/BUL
1400	1800		USA	WWCR 4	E	NAm	9985
1400	2300		USA	WWCR 3	E	NAm	12160
1400	2400		USA	KAIJ Frisco, TX	E	NAm	13815
1430	1435		IND	AIR Delhi	E	IND	6085d 9575d 9835d
1430	1445	Su	USA	Pan American Broadc.	E	SAs	15205/D-n 15650/D-j
1430	1500	Sa	AUS	Radio Australia DIGITAL	E	Eu	9770/G-r
1430	1500	Sa	IND	AIR Gangtok (Sikkim)	E	IND	1404 3390 4870
1430	1500		KOR	KBS World Radio DIGITAL	E	Eu	9770/G-r
1430	1600		BRM	Myanma Radio	E	SEA	576 4725 5986
1435	1440		IND	AIR Delhi	E	IND	6085d 9575d
1445	1500	Mo-Sa	G	BBC World Service	E	SAs	6140/OMA 7205/THA
					E	SEA	15160/OMA
1500	1510	Mo-Sa	TKM	Turkmen Radio	E	CAs	279 5015
1500	1530	Su	HNG	Radio Budapest	E	Eu	6025 9690
1500	1530		MNG	Voice of Mongolia	E	As	12015
1500	1530	SaSu	USA	Voice of America	E	SEA	1575/THA
1500	1530		VTN	Voice of Vietnam	E	SEA	1242 7285h 9840 12020
1500	1545		G	FEBA Radio	E	SAs	7320/RUS-i
1500	1545		USA	WYFR Family Radio	E	CAm	17750
					E	SAm	15770
					E	ENA	11910
					E	WNA	11830
					E	EAF	15750/D-w
					E	SAs	6280/TWN 15520/UAE
1500	1600		AFS	Channel Africa	E	SAf	9620
					E	EAF	17770
1500	1600		AUS	Radio Australia	E	Oc	5995 6080 7240 9475
					E		9590 11660 11750d
1500	1600		CAN	Radio Canada Int.	E	SAs	11675/CHN-k 15360/D-w
					E		17720/CHN-u
1500	1600		CHN	China Radio Int.	E	SAf	6100/AFS
					E	As	1188 5955x 7160ka 7325b
					E		9740ka 9785j 9870x
					E		11775ka 11965ka
					E	NAm	13740/CUB
					E	Af	13685/MLI 17630/MLI
1500	1600		G	BBC World Service	E	SAf	6190/AFS 11940/AFS 21470/ASC
					E	WAF	15400/ASC 17830/ASC
					E	EAF	9695#/SEY 11690#/AFS
					E		15420#/SEY 21660/CYP
					E	SAs	5975/SNG 15310/THA 17790/OMA
					E	FE	11750/THA

1500	1600	Sa	G	Bible Voice	E	SEA	6195/SNG	9740/SNG
1500	1600		J	NHK Radio Japan	E	Eu	12095w	15485s 17640s
					E	EEu	12095w	15565r 17640w
					E	SAs	15680/D-j	
					E	SEA	7200	
					E	As	6190	
					E	SAs	11730	
					E	NAm	9505	
					E	CAm	9505	
1500	1600		KRE	Voice of Korea	E	Eu	4405	13760 15245
1500	1600		RUS	Voice of Russia	E	NAm	9335	11710
					E	Eu	7370/MDA	12040m 15455a
					E	ME	972\$	4965/TJK 4975/TJK 11985m
					E	As	972\$	9660/CHN-x
1500	1600	Fr	TWN	Radio Taiwan DIGITAL	E	Eu	9770/G-r	
1500	1600		USA	KJES Vado, NM	E	WNA	11715	
1500	1600		USA	Voice of America	E	Af	4930/BOT	6080/STP 13795/CLN
					E		15580/BOT	17895/BOT
1500	1600		USA	Voice of America	E	As	7125/THA	12150/CLN
					E		13735/CLN	15105/THA
1500	1600		USA	Voice of America	E	ME	15195/D-b	15445/D-L
1500	1600		USA	Voice of America	E	SEA	1575\$/THA	6160/PHL 9590/PHL
					E		9760/PHL	12040/PHL 15550/THA
					E	Oc	15550/THA	
1500	1800		AUS	CVC International	E	NIG	15715/D-w	
1500	1800		USA	AFRTS	E	NAO	7590/ISL	9380/ISL
					E	Car	5446.5k	7811k 12133.5k
					E	Oc	5765/GUM	6350/HWI
					E	SAs	4319/BIO	
1500	2300		USA	WWRB Manchester, TN	E	NAm	11915	
1500	2400		USA	KTBN Salt Lake City, UT	E	NAm	15590	
1505	1520	Mo	AUT	oe1 international	E	WNA	13775/CAN	
1505	1530	SaSu	AUT	oe1 international	E	WNA	13775/CAN	
1515	1530	Tu-Fr	AUT	oe1 international	E	WNA	13775/CAN	
1530	1545		G	BBC World Service	E	SAs	9705/THA	11685/SNG
1530	1545		IND	AIR Delhi	E	SAs	7255a	9820p 9910k 11740p
1530	1550		CVA	Radio Vaticana	E	SAs	12065/UZB	13765 15235
1530	1600	Mo,Th	G	Bible Voice	E	SAs	15680/D-j	
1530	1600	We	G	Bible Voice	E	CAf	15775/D-j	
1530	1600		USA	Adventist World Radio	E	SAs	15225/UAE	
1530	1630		IRN	IRIB Teheran	E	SAs	7370k	9635s
1530	1630	alt	IRN	IRIB Teheran	E	SAs	11650k	
1530	1800	Su	G	Bible Voice	E	ME	13590/D-j	
1535	1600	SaSu	AUT	oe1 international	E	WNA	13775/CAN	
1540	1615	1345	G	Bible Voice	E	ME	13590/D-j	
1540	1700	Tu	G	Bible Voice	E	ME	13590/D-j	
1545	1600	Mo-Fr	AUT	oe1 international	E	WNA	13775/CAN	
1545	1600		USA	WYFR Family Radio	E	CAm	17750	
					E	ENAm	11910	
					E	WNA	11830	
					E	EAF	15750/D-w	
					E	SAs	6280/TWN	15520/UAE
1545	1630	Su	USA	Pan American Broadc.	E	ME	15650/D-j	
1545	1730	Sa	G	Bible Voice	E	ME	13590/D-j	
1546	1600		IND	AIR Delhi	E	IND	9575d	
1600	1615	Fr	G	FEBA Radio	E	IRN	9850/RUS-a	
1600	1615		PAK	Radio Pakistan	E	ME	9375	11570
					E	SAf	12105	15725
					E	PAK	4790	5025 5080
1600	1620	Mo-Fr	MDA	Radio DMR	E	Eu	5910	
1600	1627		CZE	Radio Prague	E	Eu	5930	
					E	Af	17485	
1600	1630		HRV	Voice of Croatia	E	Eu	774	783 1125 1134 1143
1600	1630		SWZ	Trans World Radio	E	SAf	1170	
1600	1630		USA	Adventist World Radio	E	SAs	11640/GUM	11680/GUM
1600	1630		VTN	Voice of Vietnam	E	Eu	7280	9730
					E	Af	7220	9550

1600 1645		USA	WYFR Family Radio	E	CAM	17750
				E	Car	6085
				E	ENA	13695
				E	WNA	11830 11865
				E	SAf	21525
				E	Eu	18980 21455
				E	SAs	11850/UAE
1600 1700		AUS	Radio Australia	E	Oc	5995 6080 7240 9475
				E		9710 11660
1600 1700		CHN	China Radio Int.	E	SAf	6100/AFS
				E	As	1080 1323 9570x 11900x
				E		11940ka 11965ka 13760ka
1600 1700		D	Deutsche Welle	E	SAs	1548/CLN 6170/CLN
				E		9485/CLN 15705w
1600 1700		ETH	Radio Ethiopia	E	EAF	7165 9560
1600 1700		F	Radio France Int.	E	SAf	7170/AFS
				E	CAf	11615 15160/AFS
				E	WAF	15160/AFS
				E	EAF	17605
				E	ME	15605
1600 1700		G	BBC World Service	E	Eu	9410/CYP 12095w 15105w
				E		15485s 17790s 17885r
				E	EEu	9410w 12095w
				E	WAF	15400/ASC 17830/ASC
				E	EAF	15420\$/-/SEY 21660/CYP
				E	SAf	3255/AFS 6190/AFS 21470/ASC
				E	SAs	3915/SNG 5975/THA
				E		9510/SNG 11955/THA
				E	SEA	6195/SNG 7160/SNG
1600 1700		J	NHK Rado Japan DIGITAL	E	Eu	9770/G-r
1600 1700		KOR	KBS World Radio	E	FE	5975
1600 1700		KRE	Voice of Korea	E	ME	9990 11545
1600 1700	Mo-Fr	NMB	Namibian BC 1	E	NMB	6175
1600 1700	Mo-Fr	NMB	Namibian BC 2	E	NMB	6060
1600 1700		RUS	Voice of Russia	E	Af	11985m 15540m
				E	Eu	7370/MDA
				E	ME	684 1251 11985m
				E		12055s 15540m
				E	As	1251 6070n 9405i
				E		11755 12055s 12115/TJK
1600 1700		TWN	Radio Taiwan Int.	E	SAs	11550
1600 1700		TWN	Radio Taiwan Int.	E	SAs	11815
1600 1700		USA	KJES Vado, NM	E	CAM	11715
1600 1700		USA	Voice of America	E	Af	909/BOT 1530/STP 4930/BOT
				E		6080/STP 15410/STP 15580/BOT
1600 1700		USA	Voice of America	E	ME	15195 15445
1600 1700		USA	Voice of America	E	SEA	1170-/PHL 13600/THA
				E	Af	12080/BOT 17895/MRC
				E	Oc	13600/THA
1600 1700		USA	WEWN Birmingham, AL	E	NAm	13615
1600 1700		USA	WYFR Family Radio	E	ME	7520/UKR 9925/D-j
1600 1800	Sa	BEL	TDPradio DIGITAL	E	NAm	11900/CAN
1600 1800		EGY	Radio Cairo	E	SAf	11740a
1600 1900		USA	WHRA World Harvest R.5	E	Eu	17640
1600 2100	Mo-Sa	USA	WMLK Bethel, PA	E	NAm	9265
1600 2300		USA	WHRI World Harvest R.1	E	NAm	15285
1615 1630		CVA	Radio Vaticana	E	Eu	585 1530 4005v 5885v
				E		7250 9645
				E	ME	15595
1615 1700	SaSu	G	BBC World Service	E	EAF	9695/SEY 11690/AFS 15420/SEY
1630 1645	Th	G	Bible Voice	E	ME	13590/D-j
1630 1700		CHN	PBS Xizang	E	CHN	4905 4920 5240 6110
				E		6130 6200 7125 7385
1630 1700	Sa	D	Freie Volksmission	E	ME	11865w
1630 1700		SVK	Radio Slovakia Int.	E	Eu	5920 6055
1630 1700	SaSu	SWZ	Trans World Radio	E	SAf	6130
1630 1700		USA	Adventist World Radio	E	SAs	11975/GUM

1630	1720		SUD	Radio Peace	E	SUD	4750
1630	1800	SaSu	G	Bible Voice	E	ME	9430/D-j
1640	1650		TKM	Turkmen Radio	E	CAs	576 4930
1645	1700		TJK	Radio Tajikistan	E	As	1161 7245y
1645	1700		USA	WYFR Family Radio	E	Car	6085
					E	SAf	21525
					E	Eu	18980 21455
					E	ENA	13695
					E	SAs	11850/UAE
1645	1715	Mo-Fr	SWZ	Trans World Radio	E	SAf	6130
1645	2310		LBR	Radio Veritas	E	Waf	5470
1651	1850		NZL	Radio New Zealand Int.	E	E0c	7145
1700	1727		CZE	Radio Prague	E	Eu	5930
					E	Af	17485
1700	1730		AZE	Voice of Azerbaijan	E	ME	1295 6111
1700	1730		S	Radio Sweden DIGITAL	E	Eu	5955/HOL
1700	1730		VTN	Voice of Vietnam	E	Eu	9725/AUT
1700	1746		G	BBC World Service	E	Eaf	6005/SEY 9630/SEY
1700	1800		AFS	Channel Africa	E	Waf	15235
1700	1800		AUS	Radio Australia	E	Oc	5995 6080 9475
					E		9580 9710 11880
1700	1800		CHN	China Radio Int.	E	SAf	6100/AFS
					E	As	1080 1323 9570x 9695x
					E		11900j 11940ka 13760ka
1700	1800		F	Radio France Int.	E	ME	15605
					E	Eaf	17605#
1700	1800		G	BBC World Service	E	Eu	6195r 6195/CYP 9410/CYP
					E		15105w 15485s 17885r
					E	EEu	9410w 12095w
					E	Waf	15400/ASC 17830/ASC
					E	Eaf	11945/AFS
					E	SAf	3255/AFS 6190/AFS 21470/ASC
					E	SAs	3915/SNG 5975/THA
					E		9510/SNG 11955/THA
					E	SEA	7160/SNG
1700	1800		J	NHK Radio Japan	E	Eu	11970
					E	SAf	15355/GAB
1700	1800		POL	Radio Polonia	E	Eu	7220 7265
1700	1800		RUS	Voice of Russia	E	Af	11510/ARM 11985m
					E	As	1251 1269 9405i
1700	1800	SaSu	RUS	Voice of Russia	E	Eu	1494sp 7370/MDA 9820s
					E		9890s 11675a
1700	1800		TWN	Radio Taiwan Int.	E	Af	15690/F
1700	1800		USA	Voice of America	E	Af	4930+/BOT 6080/STP
					E		15410/MRC 15580/BOT
1700	1800		USA	WYFR Family Radio	E	Eu	18980 21455
					E	ENA	13690
					E	CAm	17795
					E	Eaf	21680/ASC
1700	1800		ZWE	Voice of the People	E	ZWE	7120/MDG
1700	1900		NIG	Voice of Nigeria	E	Eu	15120
1700	2030		SWZ	Trans World Radio	E	SAf	1170 3200
1700	2200	Fr,Su	I	IRRS Milano	E	Eu	5775
1700	2200		USA	WEWN Birmingham, AL	E	NAm	13615
					E	Eu	15220
1700	2200		USA	WHRI World Harvest R.2	E	NAm	15665
1700	2215		SRL	Sierra Leone BS	E	Waf	3316
1700	2300		BEN	ORTB Radio Parakou	E	Waf	5025 7190
1700	2300		GNE	Radio Africa	E	Af	15190
1700	2300		USA	WWRB Manchester, TN	E	Af	15250
1700	0400		ZMB	Christian Voice	E	SAf	4965
1730	1735		IND	AIR Delhi	E	IND	6085d 7140d 9575d 9835d
1730	1735		IND	AIR Thiruvananthapuram	E	IND	5010
1730	1745	Mo,We	G	BBC World Service	E	Eu	6050/CYP 11920s 13650s
1730	1745	Mo-Fr	UN	United Nations Radio	E	Eaf	7130/AFS
					E	Waf	17810/ASC
					E	ME	15495/G-s

1730	1745		ISR	Kol Israel	E	Eu	9345	11590	13675
					E	NAm	9345	11590	13675
1730	1746		G	BBC World Service	E	Waf	9525/AFS		
					E	Eaf	7230/AFS		
					E	Saf	3390/AFS		
1730	1800		BUL	Radio Bulgaria	E	WEu	9500	11500	
1730	1800		CVA	Radio Vaticana	E	Eaf	11625	13765	
					E	Saf	13765	15570	
1730	1800	Fr	G	Bible Voice	E	ME	13590/D-j		
1730	1800		S	Radio Sweden	E	Eu	1179	6065	
1730	1800		USA	Adventist World Radio	E	ME	9385/GUM		
1730	1800	Mo-Fr	USA	Voice of America	E	ZWE	909/BOT	4930/BOT	
					E		137555/STP	17730/MRC	
1730	1900		SWZ	Trans World Radio	E	Eaf	9500		
1730	2230		LBR	ELWA Radio Liberia	E	Waf	4760		
1745	1815		BGD	Bangladesh Betar Islam	E	Eu	7185		
1745	1945		IND	All India Radio	E	Eu	7410k	9950k	11620b
					E	Eaf	11935m	15075k	17670k
					E	Waf	9445b	13605b	15155a
1800	1803		HRV	Voice of Croatia	E	Eu	774	783	1125
1800	1810		BOT	Radio Botswana	E	Saf	4820		
1800	1810		TZA	Radio Tanzania Zanzibar	E	Eaf	11735		
1800	1815	Tu	G	Bible Voice	E	ME	13590/D-j		
1800	1815	Sa	G	Bible Voice	E	ME	11710/D-j		
1800	1830		G	BBC World Service	E	Waf	15400/ASC	17830/ASC	
					E	Eaf	11945/AFS		
					E	Saf	3255/AFS	6190/AFS	21470/ASC
					E	SAs	5975/THA	9510/SNG	
					E	Eu	6195r	6195/CYP	9410/CYP
					E		17795s		
1800	1830	Sa	G	Bible Voice	E	ME	13590/D-j		
1800	1830	Su	G	Bible Voice	E	EEu	6015/D-j		
1800	1830		LTU	Radio Vilnius	E	Eu	666		
1800	1830		USA	Adventist World Radio	E	Saf	3215/AFS	3345/AFS	
					E	Eaf	9610/AFS		
1800	1830	We,Fr	USA	Adventist World Radio	E-C	SUD	15315/AUT		
1800	1830	SaSu	USA	Voice of America	E	Af	909/BOT	4930/BOT	
1800	1845		USA	WYFR Family Radio	E	Eu	3955/G-s	18980	
					E	Waf	17535		
					E	Eaf	7395/MDG	15750/D-w	
					E	ME	13780/G-r		
					E	ENA	13690		
					E	WNA	13800		
					E	CAM	17795		
1800	1900	Mo-Fr	ARG	R.Argentina al Exterior	E	Eu	9690	15345	
1800	1900		AUS	Radio Australia	E	Oc	6080	7240	9475
					E		9580	9710	11880
1800	1900		CAN	Radio Canada Int.	E	Af	9530/D-w	11765/CHN-ka	
					E		13730/D-n	15255/G-s	
1800	1900		CHN	China Radio Int.	E		9600b	11940ka	13760ka
1800	1900	Su	CLA	R.Free South.Camerrooms	E	CAf	15695/RUS-a		
1800	1900	Sa	G	Bible Voice	E	ME	9430/D-n		
1800	1900		HOL	Radio Nederland	E	Eaf	7120/MDG	11655	
					E	Saf	6020/MDG		
1800	1900		KRE	Voice of Korea	E	Eu	4405	13760	15245
1800	1900		ROU	Radio Romania Int.	E	Eu	9635	11830	
1800	1900		RUS	Voice of Russia	E	Af	9745c	11510/ARM	
					E	Eu	7370/MDA	9820s	9890s
					E		11630m		
1800	1900		TWN	Radio Taiwan Int.	E	Eu	3965/F		
1800	1900		USA	Voice of America	E	Af	909\$/BOT	4930\$/BOT	6080/STP
					E		11975/STP	15410/MRC	
					E		15580/BOT	17895/MRC	
1800	1900		YEM	Rep.of Yemen Radio	E	ME	9780		
1800	1915	Su	G	Bible Voice	E	ME	9430/D-n		
1800	1915	Sa	G	Bible Voice	E	EEu	6015/D-j		
1800	2100		AUS	CVC International	E	NIG	13820/D-w		
1800	2100		USA	WRN DIGITAL	E	Eu	9310/BUL		

1800	2200		USA	WOCR 4	E	NAm	9975
1800	2300		USA	AFRTS	E	NAO	7590/ISL 9380/ISL
					E	Car	5446.5k 7811k 12133.5k
					E	Oc	5765/GUM 10320/HWI
					E	SAs	4319/BIO
1805	1815	Mo-Sa	HRV	Voice of Croatia	E	Eu	6165
1815	1900		BGD	Bangladesh Betar	E	Eu	7185
1815	1900	Fr	G	Bible Voice	E	ME	9430/D-n
1830	1840		RRW	Radio Rwanda	E	CAf	6055
1830	1845		S	IBRA Radio	E	EAF	11880/D-n
1830	1900		G	BBC World Service	E	WAF	15400/ASC 17830/ASC
					E	EAF	6005/SEY 9630/SEY 11945/AFS
					E	SAf	3255/AFS 6190/AFS 21470/ASC
					E	SAs	12045/THA
					E	Eu	6195r 6195/CYP 9410/CYP
					E		17795s
1830	1900		GRC	Voice of Greece	E	Eu	7430
1830	1900		SCG	Int.R.Serbia-Montenegro	E	Eu	6100
1830	1900		SVK	Radio Slovakia Int.	E	Eu	5920 6055
1830	1930		TUR	Voice of Turkey	E	Eu	9785
1845	1900	Mo-Sa	ALB	Radio Tirana	E	Eu	7465 9920
1845	1900		USA	WYFR Family Radio	E	Eu	3955/G-s 18980
					E	EAF	7395/MDG 15750/D-w
					E	ME	13780/G-r
					E	ENA	13690
					E	WNA	13800
					E	CAM	17795
1851	1950		NZL	Radio New Zealand Int.	E	Oc	9630 15720
1900	1920	SaSu	MLI	RTV du Mali	E	WAF	4783 4835 5995
1900	1925		ISR	Kol Israel	E	Eu	9400 11590
					E	NAm	9400 11590
					E	Af	15640
1900	1930	Su	D	Radio Santec	E	ME	11880n
1900	1930	Sa	G	Bible Voice	E	WAF	9775/D-j
1900	1930	Su	G	Bible Voice	E	EEu	6015/D-j
1900	1930		HNG	Radio Budapest	E	Eu	3975 6025
1900	1930	Tu	J	Shiokaze	E	KRE	5890/RUS-i
1900	1930	Mo-Sa	S	Radio Sweden	E	Eu	1179
1900	1930		VTN	Voice of Vietnam	E	Eu	7280 9730
1900	1945		USA	WYFR Family Radio	E	Eu	18930 18980
					E	WAF	17845
					E	EAF	6020/MDG 7395/MDG
					E	SAf	3230/AFS
					E	ENA	13690
					E	WNA	13800
					E	CAM	17795
					E	Car	6085
1900	2000	Mo	AFS	So.African Radio League	E	SAf	3215
1900	2000		AUS	Radio Australia	E	Oc	6080 7240 9500
					E		9580 9710 11880
1900	2000		CHN	China Radio Int.	E		7295u 9435k 11940ka 13760ka
1900	2000		D	Deutsche Welle	E	Af	13780w 15620w
1900	2000		G	BBC World Service	E	WAF	15400/ASC 17830/ASC
					E	EAF	6005/SEY 9630/SEY
					E	SAf	3255/AFS 6190/AFS 12095/ASC
					E	Eu	6195/CYP 9410/CYP 17795s
					E	SAs	12045/THA
1900	2000		HOL	Radio Nederland	E	EAF	7120/MDG 11655
					E	WAF	11655 17810/ATN
					E	SAf	5905/MDG 7120/MDG
1900	2000		KOR	KBS World Radio	E	Eu	7275
					E	FE	5975
1900	2000		KRE	Voice of Korea	E	ME	9975 11535
					E	SAf	7100 11910
1900	2000		RUS	Voice of Russia	E	Eu	7310sp 9890s 12070m
1900	2000		THA	Radio Thailand	E	Eu	7155
1900	2000		USA	KJES Vado, NM	E	AUS	15385

1900	2000		USA	Voice of America	E	Af	909/BOT 4930/BOT 4940/STP
					E		6080/STP 11975/STP 15410/MRC
					E		15445g 15580/BOT 17895/MRC
1900	2000		USA	Voice of America	E	ME	7395/CLN 9670/THA
1900	2000	Sa	USA	Voice of Joy	E	ME	6220
1900	2000		USA	WYFR Family Radio	E	Eu	7370/RUS-s 7440/RUS-m
					E		9490/RUS-m 12060/RUS-a
1900	2000		USA	WYFR Family Radio	E	NAf	7435/RUS-s
1900	2030	Mo-Th	I	IRRS Milano	E	Eu	5775
1900	2100	SaSu	HOL	Radio Nederland	E	ENA	17735/ATN
					E	CNA	15315/ATN
					E	WNA	17660/CAN
1900	2100		NIG	Voice of Nigeria	E	Eu	15120
1900	2100		USA	Brother Stair	E	SAf	13810/D-j
1900	2100		USA	WHRA World Harvest R.5	E	Af	13710
1900	2200	Sa	I	IRRS Milano	E	Eu	5775
1900	1100		SLM	Solomon Islands B.C.	E	SLM	5020 9545
1910	1930	Mo-Sa	ARM	Public Radio of Armenia	E	Eu	4810 9960
1915	1930		G	BBC World Service	E	Waf	15105/ASC 17885/ASC
1920	1940		SOM	Radio Hargeisa	E	SOM	7530
1930	2000	1245	BLR	Radio Belarus	E	Eu	1170 7105 7280 7290
1930	2000	Su	G	Bible Voice	E	Waf	9775/D-j
1930	2000		GRC	Voice of Greece	E	Eu	7430
1930	2000		S	Radio Sweden	E	Eu	6065
1930	2030		IRN	IRIB Teheran	E	Eu	6205k 7205s
					E	Af	9800s 9925k
1930	2030	alt	IRN	IRIB Teheran	E	Eu	11860s
1930	2030	Sa	USA	Pan American Broadc.	E	NAf	9430/D-w
1930	2200		PNG	NBC Port Moresby	E	PNG	4890
1935	1955		I	RAI International	E	Eu	5960 9845
1945	2000		USA	WYFR Family Radio	E	Eu	18930 18980
					E	Waf	17845
					E	Eaf	6020/MDG 7395/MDG
					E	SAf	3230/AFS
					E	ENA	13690
					E	WNA	13800
					E	CAm	17795
1950	2020		CVA	Radio Vaticana	E	Eu	585 1530 4005v 5885
					E		7250 9645
1951	0600		NZL	Radio New Zealand Int.	E	Oc	15720
2000	2015	Th,Su	USA	Pan American Broadc.	E	NAf	9430/D-w
2000	2027		CZE	Radio Prague	E	Eu	5930
					E	Oc	11600
2000	2030	Mo-Sa	ALB	Radio Tirana	E	Eu	7465
2000	2030	Sa	CLA	Voice of the Diaspora	E	Waf	9405/D-j
2000	2030		CVA	Radio Vaticana	E	Waf	9755 11625 13765
2000	2030		MNG	Voice of Mongolia	E	As	12015
2000	2030		USA	Adventist World Radio	E	CAf	7180/AFS
2000	2030	Fr	USA	Pan American Broadc.	E	NAf	9430/D-w
2000	2045		USA	WYFR Family Radio	E	Eu	17750 18980
					E	Waf	17845
					E	Eaf	6020/MDG 15195/ASC
					E	SAf	3230/AFS
					E	NAf	11895/D-j
					E	CAm	17795
					E	SAm	17725
					E	WNA	13800
2000	2100		AUS	Radio Australia	E	Oc	9500 11650 11660b
					E		11880 12080b
2000	2100		CAN	Radio Canada Int.	E	Eu	5850/S 7235/G-s
					E		11765/D-w 15325
2000	2100		CHN	China Radio Int.	E	Eu	5960/ALB 7190ka 7285/ALB
					E		7295u 9440k 9600u
					E		9800u
					E	Af	11640/MLI 13630/MLI
2000	2100		D	Deutsche Welle	E	SAf	7130/RRW 15205w
					E	Eaf	13780w

2000	2100	Mo-Fr	E	Radio Exterior España	E Af 11795n
					E Af 9595
2000	2100		G	BBC World Service	E Eu 15290
					E Waf 15400/ASC 17830/ASC
					E Eaf 6005/SEY 9630/SEY
					E Saf 3255/AFS 6190/AFS 12095/ASC
2000	2100		HOL	Radio Nederland	E Eu 6195/CYP 9410/CYP
					E Eaf 5905/MDG 7120/MDG
					E Waf 17810/ATN
					E Saf 7120/MDG
2000	2100		INS	Voice of Indonesia	E Eu 9525 15150
2000	2100		RUS	Voice of Russia	E Eu 9890s 12070m 15455a
2000	2100		USA	KJES Vado, NM	E Car 15385
2000	2100		USA	Voice of America	E Af 909/BOT 1530/STP 4930/BOT
					E 4940#/STP 6080/STP 11975/STP
					E 15410/MRC 15445g 15580/BOT
2000	2100		USA	WYFR Family Radio	E Eu 7360/MDA
2000	2130		EGY	Radio Cairo	E Waf 15375z
2000	2200		AFS	Channel Africa	E Saf 3345
2000	2200		CAN	Radio Canada Int.	E Car 17765
2000	0500	SaSu	NMB	Namibian BC 2	E NMB 6060 6175
2000	0600	Mo-Fr	NMB	Namibian BC 2	E NMB 6060 6175
2005	2105		SYR	Radio Damascus	E Eu 9330 12085
2025	2045		I	RAI International	E Eaf 5970 11875
2030	2033		SVN	Radio Slovenija	E Eu 918
2030	2045		THA	Radio Thailand	E Eu 9680
2030	2100	SaSu	USA	Voice of America	E Af 4940/STP
2030	2100		VTN	Voice of Vietnam	E Eu 7280 9730
					E Af 7220 9550
2030	2130		CUB	Radio Habana Cuba	E Eu 9505 11760
2030	2130		TUR	Voice of Turkey	E AUS 7170
					E As 7170
2030	0030		USA	Voice of America	E AFG 1296/AFG 7555/KWT
2045	2100		USA	WYFR Family Radio	E Eu 18980
					E Waf 17845
					E Eaf 6020/MDG 15195/ASC
					E Saf 3230/AFS
					E Naf 11895/D-j
					E CAm 17795
					E SAm 17725
					E WNA 13800
2045	2230		IND	All India Radio	E Eu 7410k 9445b 9950k 11620b
					E Oc 9910a 11620b 11715p
2050	0700		NZL	Radio New Zealand Int.	E Oc 15720
2055	2130		CVA	Radio Vaticana DIGITAL	E NAm 9800/CAN
2100	2130	Su	BLR	Radio Belarus	E Eu 1170 7105 7280 7290
2100	2130		CHN	China Radio Int.	E Af 11640/MLI 13630/MLI
2100	2130		HNG	Radio Budapest	E Eu 6025
					E Saf 9525
2100	2130		KOR	KBS World Radio	E Eu 3955/G-s
2100	2130		USA	Adventist World Radio	E Waf 11955/AUT
2100	2145		USA	WYFR Family Radio	E Eu 11565 18980
					E Waf 17845
					E Eaf 15195/ASC
					E Saf 6045/AFS
					E CAm 17795
					E WNA 13800
2100	2200		AUS	Radio Australia	E Oc 7240 9500# 9660b 11650
					E 11660b 11695# 12080b
					E 13630 15515
2100	2200		BUL	Radio Bulgaria	E WEu 5800 7500
2100	2200	Sa	CAN	R. Canada Nord-Quebec	E CAN 9625
2100	2200		CHN	China Radio Int.	E Eu 5960/ALB 7190ka 7285/ALB
					E 9600ka 9800u
2100	2200	Sa	CLA	Voice of Biafra Int.	E Waf 7380/AFS
2100	2200		D	Deutsche Welle	E Waf 9440w 11865/RRW 15205/RRW
2100	2200	SaSu	E	Radio Exterior España	E Af 9595

2100	2200	G	BBC World Service	E	Eu	9840
				E	Waf	15400/ASC
				E	SAf	3255/AFS 6005/SEY 6190/AFS
				E	SAs	3915/SNG
				E	FE	5965/THA 11945/J
				E	SEA	6195/THA
				E	Eu	12095r
2100	2200	J	NHK Radio Japan	E	Car	11675#- /USA-g 15390/GUF
				E	Oc	6035/SNG
				E	NAm	17825
				E	CAm	17825
				E	HWI	21670
				E	Eu	6055/G-s 6180/G-s
				E	CAf	11855/ASC
2100	2200	KRE	Voice of Korea	E	Eu	4405 13760 15245
2100	2200	LBR	Star Radio	E	Waf	11965/ASC
2100	2200	UKR	Radio Ukraine Int.	E	WEu	7490x
2100	2200	USA	WRMI Radio Miami Int.	E	NAm	7385
2100	2200	USA	WYFR Family Radio	E	Eu	7360/MDA
2100	2300	USA	WHRA World Harvest R.5	E	Af	11765
2110	2210	SYR	Radio Damascus	E	Eu	9330 12085
2115	2200	USA	WYFR Family Radio	E	CAf	11875/ASC
2115	2245	EGY	Radio Cairo	E	Eu	9990a
2130	2157	CZE	Radio Prague	E	Waf	9410
				E	NAm	11600
2130	2200	HOL	Radio Nederland DIGITAL	E	ENA	9800/CAN
2130	2200	ROU	Radio Romania Int.	E	Eu	7210 9535
				E	NAm	11940 15465
2130	2200	S	Radio Sweden	E	Eu	1179 6065
				E	AUS	7420/MDG
2130	2200	USA	Adventist World Radio	E	FE	11850/GUM
2130	2400	Mo-Fr	CAN R. Canada Nord-Quebec	E	CAN	9625
2145	2200	USA	WYFR Family Radio	E	Waf	17845
				E	CAf	11875/ASC
				E	Eaf	15195/ASC
				E	SAf	6045/AFS
				E	Eu	11565
2200	2230	USA	Voice of America	E	ME	1593/KWT
2200	2245	USA	WYFR Family Radio	E	SAf	15770
				E	CAf	11875/ASC
				E	WNA	11740
2200	2300	AGL	Radio Nacional Angola	E	AGL	944 7217
2200	2300	AUS	Radio Australia	E	Oc	12010d 13620d 13630
				E		15230 15240/TWN 15515
				E		17785 17795
2200	2300	CAN	Radio Canada Int.	E	ENA	6100
2200	2300	CAN	Radio Canada DIGITAL	E	ENA	9800
2200	2300	CHN	China Radio Int.	E	Eu	7175/RUS-m
				E	FE	9590b
2200	2300	D	Deutsche Welle	E	FE	7115/RUS-n 9720/RUS-ka
2200	2300	G	BBC World Service	E	Waf	15400/ASC
				E	Eu	12095r
				E	SAs	7105/OMA
				E	SEA	5955/SNG 6195/SNG 9740/SNG
				E	FE	5965/THA
				E	Car	5975/GUF
2200	2300	HOL	Radio Nederland DIGITAL	E	CNA	15195/ATN
2200	2300	TUR	Voice of Turkey	E	Eu	9830
				E	NAm	9830
2200	2300	TWN	Radio Taiwan Int.	E	Eu	15600/USA-o
2200	2300	USA	Voice of America	E	As	7215/PHL-x 15185/PHL-x
				E		15290/PHL 17740/PHL
				E	Oc	17740/PHL
2200	2400	PNG	Radio East New Britain	E	PNG	5985
2200	2400	USA	Dr.Gene Scott	E	NAm	6090/AIA 9725/CTR
				E	CAm	13750/CTR
				E	SAm	11870/CTR

2200	2400		USA	WEWN	Birmingham, AL	E	NAm	9975	
						E	Eu	15745	
2200	2400	Mo-Fr	USA	WRMI	Radio Miami Int.	E	NAm	7385	
2200	2400	SaSu	USA	WRMI	Radio Miami Int.	E,S	Car	9955	
2200	0100	SaSu	USA	WHRI	World Harvest R.2	E	NAm	7490	
2200	0100		USA	WWCR	1	E	NAm	7465	
2200	0100		USA	WWCR	4	E	NAm	9985	
2200	0400		USA	WINB	Red Lion, PA	E	NAm	9265	
2200	0407	Su	CAN	R.	Canada Nord-Quebec	E	CAN	9625	
2200	0507	Su	CAN	R.	Canada Nord-Quebec	E	CAN	9625	
2200	0600		PNG	NBC	Port Moresby	E	PNG	9675	
2200	1000		USA	WJIE	Millerstown, KY	E	NAm	13595	
2205	2230		I	RAI	International	E	FE	11895	
2215	2230		HRV	Voice	of Croatia	E	SAm	9925/D-w	
						E	Eu	783 1125 1134 1143	
2215	2230	Sa	USA	Trans	World Radio	E	Eu	1467/F	
2215	2245	Su	USA	Trans	World Radio	E	Eu	1467/F	
2230	2257		CZE	Radio	Prague	E	NAm	7345 9415	
2230	2300		CAN	Radio	Canada Int.	E	NEu	1179/S	
2230	2300		CVA	Radio	Vaticana DIGITAL	E	Eu	1530	
2230	2300		USA	Adventist	World Radio	E	SEA	15320/GUM	
2230	2300		USA	Voice	of America	E	ME	1593/KWT	
						E	FE	9570/PHL 13755/MRA 15145/PHL	
2230	2400	Fr,Sa	USA	Voice	of America	E	SEA	1575/THA	
2230	0730		AUS	Australian	Broadc.Co.	E	AUS	4835 4910 5025	
2245	2300		USA	WYFR	Family Radio	E	WNA	11740	
						E	CAf	11875/ASC	
2245	0045		IND	All	India Radio	E	SEA	9705p 11620k 13605b	
						E	FE	9950a 11645k 13605b	
2300	2315		USA	WYFR	Family Radio	E	CAf	11875/ASC	
2300	2330		USA	Voice	of America	E	ME	1593/KWT	
						E	FE	9570/PHL 13755/THA 15145/PHL	
2300	2345		CVA	Radio	Vaticana DIGITAL	E	NAm	9750	
2300	2345		USA	WYFR	Family Radio	E	WNA	11740	
						E	SAm	15255 17750	
2300	2400		AUS	Radio	Australia	E	Oc	9660b 12010d 12080b 13620d	
						E		13670 15230 15240#/TWN	
						E		15415\$ 17750\$ 17785 17795	
2300	2400		BUL	Radio	Bulgaria	E	NAm	9700 11700	
2300	2400		CHN	China	Radio Int.	E	ENA	5990/CUB 6145/CAN	
						E	WNA	13680/CAN	
						E	As	5915ka 7180ka 11685b	
2300	2400		CUB	Radio	Habana Cuba	E	Car	9550	
2300	2400		D	Deutsche	Welle	E	SEA	5955/CLN 9890/RRW	
						E		15135/RUS-c 17860/RUS-i	
2300	2400		G	BBC	World Service	E	FE	5965/THA 11900/THA	
						E	SEA	3915/SNG 6195/SNG 9580\$/KOR	
						E		9740/SNG 11945/J 11955/THA	
2300	2400		ROU	Radio	Romania Int.	E	Eu	6140 7265	
						E	NAm	9645 11940	
2300	2400		USA	Voice	of America	E	As	7215/PHL-x 15185/PHL-x	
						E		15290/PHL 17740/PHL	
2300	0030		EGY	Radio	Cairo	E	ENA	11950z	
2300	0100		USA	WHRI	World Harvest R.1	E	NAm	7555	
2300	0100		USA	WHRA	World Harvest R.5	E	Eu	7520	
2300	0300		USA	AFRTS		E	NAO	7590/ISL 9380/ISL	
						E	Car	5446.5k 7811k 12133.5k	
						E	Oc	10320/HWI 13362/GUM	
						E	SAs	4319/BIO	
2300	0500		USA	WWRB	Manchester, TN	E	NAm	6890	
2300	1100		SNG	938	Live	E	SEA	6150	
2300	1200		USA	WWCR	3	E	NAm	5070	
2330	2400		AUS	HCJB	Australia	E	SAs	15390	
2330	2400		LTU	Radio	Vilnius	E	NAm	9875	
2330	2400		S	Radio	Sweden DIGITAL	E	NAm	9800/CAN	
2330	2400		USA	Voice	of America	E	ME	1593/KWT	
						E	SEA	7260/PHL 13725/MRA	

2330	2400		VTN	Voice of Vietnam	E	FE	9570/PHL 13755/THA 15145/PHL
2345	2400		USA	WYFR Family Radio	E	SEA	9840 12020
					E	SAm	15255 17750
<b>Esperanto:</b>							
START	STOP	DAY	ITU	STATION	LAN	TARG	FREQUENCY
0700	0730	Su	CUB	Radio Habana Cuba	EO	NAm	6000
1100	1200		CHN	China Radio Int.	EO		1017 11635u 15110u
1300	1400		CHN	China Radio Int.	EO	As	9440b 11650x
1500	1525		POL	Radio Polonia	EO	Eu	7270 7285
1500	1530	Su	CUB	Radio Habana Cuba	EO	Am	11760
1700	1800		CHN	China Radio Int.	EO		11650x
1800	1825		POL	Radio Polonia	EO	Eu	7285
1920	1930	Su	CVA	Radio Vaticana	EO	Eu	585 1530 4005v 5885
1920	2000	We,Th	CVA	Radio Vaticana	EO	Eu	1260 1611 5980 7250
1930	2000	Su	CUB	Radio Habana Cuba	EO	Am	11760
1930	2030		CHN	China Radio Int.	EO		7265ka 9745u
2000	2020	Sa	I	RAI International	EO	Eu	6110 9780
2150	2200	Su	CVA	Radio Vaticana	EO	Eu	585 1530 4005v 5885
2150	2200	Su	CVA	Radio Vaticana DIGITAL	EO	Eu	1611
2200	2300		CHN	China Radio Int.	EO		7315ka 9860ka
2330	2400	Su	CUB	Radio Habana Cuba	EO	CAm	6140
<b>Portuguese:</b>							
START	STOP	DAY	ITU	STATION	LAN	TARG	FREQUENCY
0000	0100		CHN	China Radio Int.	P	SAm	9560b 9710ka 11850/GUF
0000	0100		USA	WYFR Family Radio	P	SAm	15130 17725 17750
0000	0200	Tu-Sa	ARG	R.Argentina al Exterior	P	Am	11710
0000	0400		CHL	Voz Cristiana	P	SAm	11745
0000	2400		AGL	R Nacional, Canal A	P	Af	1088 1367 4950
0000	2400		B	R.Boa Vontade, P.Alegre	P	B	1300 6160 9550 11895
0000	2400		B	Radio Cancao Nova	P	SAm	1020 4825 6105 9675
0000	2400		B	Radio Guaiba	P	SAm	6000 11785
0000	2400		B	Radio Aparecida	P	SAm	820 5035 6135 9630 11855
0000	2400		B	Radio Gazeta, Sao Paolo	P	SAm	5955 9685 15325
0000	2400		B	Radio Guaruja Paulista	P	B	1550 3235 3385
					P		5045 5940 9715
0000	2400		B	Radio Brasil Central	P	SAm	1270 4985 11815
0000	2400		B	Radio Nacional Amazonia	P	SAm	6185 11780
0000	2400	alt	B	Radio Nacional Amazonia	P	SAm	6180
0000	2400		B	Radio Guaruja	P	SAm	5980
0000	2400		B	Radio Marumby	P	SAm	9665 11750
0000	2400		B	Radio Tupi, Curitiba	P	SAm	6060 9565 11765
0000	2400		B	Radio Bandeirantes, SP	P	SAm	6090 9645 11925
0030	0100		CVA	Radio Vaticana	P	SAm	7305 9610
					P	CVA	1260
0100	0145		USA	WYFR Family Radio	P	SAm	7520 15130 17725
0115	0130		I	RAI International	P	SAm	9840
0145	0200		USA	WYFR Family Radio	P	SAm	15130
0200	0245		USA	WYFR Family Radio	P	SAm	15130 17750
0230	0300		J	NHK Radio Japan	P	SAm	9660/GUF
0245	0300		USA	WYFR Family Radio	P	SAm	15130
0300	0345		USA	WYFR Family Radio	P	SAm	15130
0400	0500		USA	WYFR Family Radio	P	SAf	11530
0400	1200		CHL	Voz Cristiana	P	SAm	6110
0430	0500		G	BBC	P	SAf	3390/AFS 6135/AFS 7205/AFS
0430	0500		USA	Voice of America	P	Af	1530/STP 6095/STP 7340/CLN
0500	0545		D	Deutsche Welle	P	Af	9565/RRW 15545w
0500	0645	Mo-Fr	POR	RdP Radio Portugal	P	Eu	7240
0530	0600		CVA	Radio Vaticana	P	SAf	11625 13765 15570
0600	0900		AUS	CVC International	P	MOZ	9805/AFS
0645	0800	Mo-Fr	POR	RdP Radio Portugal	P	Eu	7240 11850
0700	0745		USA	WYFR Family Radio	P	Eu	9985
0700	0830	SaSu	POR	RdP Radio Portugal	P	Eu	12020
					P	Af	15160
					P	WAf	12000
					P	SAm	12000
0800	0900		USA	WYFR Family Radio	P	SAm	9605 9625 11770
0800	0930		EQA	HCJB Voice of the Andes	P	SAm	9745 21455

					P	Eu	21455	
0800	1000	Mo-Fr	POR	RdP Radio Portugal	P	Eu	12020	
0800	1000		RUS	Voice of Russia DIGITAL	P	Eu	12060t	
0800	0200		B	Radio Novas da Paz	P	SAm	6080 9515 11725	
0800	0200		B	Radio Nova Visao	P	SAm	5965 9530 11735	
0800	0215		B	Radio Record	P	SAm	6150 9505	
0800	0300		B	Radio Cultura FM	P	SAm	6170	
0800	0300		B	Radio Globo, Sao Paulo	P	SAm	6120 9585	
0800	0300		B	Radio Cultura AM	P	SAm	1200 9615 17815	
0800	0400		B	Radio Gaucha, P.Alegre	P	SAm	6020 11915	
0830	1000	SaSu	POR	RdP Radio Portugal	P	Eu	11995 12020	
					P	Af	15160	
					P	Waf	12000	
					P	SAm	12000	
0830	0430		B	Radio Filadelfia	P	B	6105	
0855	1300		B	Radio Senado	P	B	5990	
0900	1000		USA	WYFR Family Radio	P	SAm	6175 9605 9625 11770	
0900	2000		B	Radio Itatiaia	P	B	5970	
0900	0100		B	Radio Rio Mar	P	SAm	3385 6160 9695	
0900	0330		B	Radio Globo, Rio d.J.	P	SAm	6030 11805	
0900	0400		B	Radio CBN Anhanguera	P	SAm	4915 6080 11830	
0930	0300		B	R.Educadora 6 de Agosto	P	B	3255	
1000	1045		USA	WYFR Family Radio	P	SAm	6175 9605 11770	
1000	1200	Mo-Fr	POR	RdP Radio Portugal	P	Eu	12020	
					P	Af	21830	
					P	Waf	15575	
					P	SAm	15575	
1000	1200	SaSu	POR	RdP Radio Portugal	P	Eu	12020	
					P	Af	21830	
					P	Waf	21655	
					P	SAm	21655	
1000	2400		B	Radio Clube Paranaense	P	B	6040 9725 11935	
1030	1100		J	NHK Radio Japan	P	SAm	9530/GUF	
1100	1130	Mo-Sa	CVA	Radio Vaticana	P	SAm	21850	
					P	CVA	1260	
1100	1200		CHN	China Radio Int.	P	SAm	17625/CHL	
1200	1245		USA	WYFR Family Radio	P	SAm	9625	
1200	1300		AGL	RNA N'Gola Yetu	P	AGL	944 7217	
1200	1400	SaSu	POR	RdP Radio Portugal	P	Eu	12020	
					P	Af	21830	
					P	Waf	21655	
					P	NAm	15560	
					P	SAm	21655	
1200	1700		CHL	Voz Cristiana	P	SAm	15525	
1200	1900	irr	POR	RdP Radio Portugal	P	NAm	15560	
1300	1400		USA	WYFR Family Radio	P	SAm	17555	
1300	1500	Mo-Fr	POR	RdP Radio Portugal	P	As	15770	
1315	1330		CVA	Radio Vaticana	P	Eu	1260 9645 11740	
1355	1525	Su-Fr	SWZ	Trans World Radio	P	MOZ	7315	
1400	1500		USA	WYFR Family Radio	P	SAm	15770	
1400	1700	SaSu	POR	RdP Radio Portugal	P	Eu	11905	
					P	Af	21830	
					P	Waf	21655	
					P	NAm	15560	
					P	SAm	21655	
1500	1545		USA	WYFR Family Radio	P	SAm	18980	
1500	1600	Th	CVA	Radio Vaticana	P	CVA	1260	
1530	1800		EQA	HCJB Voice of the Andes	P	SAm	15295	
1600	1900	Mo-Fr	POR	RdP Radio Portugal	P	Eu	11905	
					P	Af	17680	
					P	Waf	21655	
					P	SAm	21655	
1630	1645	Mo,Th	SWZ	Trans World Radio	P	MOZ	4760	
1700	1730		CVA	Radio Vaticana	P	CVA	1260	
1700	1730		USA	Voice of America	P	Af	1530/STP 9565/STP 12080/BOT	
1700	1800		F	Radio France Int.	P	Waf	12015 15530	
1700	1800		USA	WYFR Family Radio	P	SAf	21525	

1700	2000	SaSu	POR	RdP	Radio Portugal	P	SAm	17725
						P	Eu	11905
						P	Af	17680
						P	WAF	21655
						P	NAm	15560
						P	SAm	21655
1700	2400		CHL		Voz Cristiana	P	SAm	15340
1730	1800		USA		Voice of America	P	Af	1530/STP 9565/STP 9815/MRC
						P		12080/BOT 15730/STP
1800	1830		CVA		Radio Vaticana	P	CAf	11625 13765
						P	WAF	15570
1800	1830	Mo-Fr	USA		Voice of America	P	Af	1530/STP 9565/STP
						P		9815/BOT 17785/MRC
1800	2000		CHL		Voz Cristiana DIGITAL	P	SAm	17660
1800	2000		USA		WYFR Family Radio	P	SAm	17725
1900	1930		CHN		China Radio Int.	P	Af	7180k 7335j 9535x 9620ka
1900	2000		AFS		Channel Africa	P	SAf	3345
1900	2000	irr	POR		RdP Radio Portugal	P	Eu	9820
						P	Af	11945
						P	WAF	21655
						P	SAm	21655
1905	1920	124	SWZ		Trans World Radio	P	AGL	6130
1905	2205		AUS		CVC International	P	SAf	4990/AFS
1920	1950		SWZ		Trans World Radio	P	AGL	6130
1930	2000		CHN		China Radio Int.	P	Af	7180k 7335j 9535x 9620ka
						P		11640/MLI 13630/MLI
2000	2030		CUB		Radio Habana Cuba	P	Eu	11800
2000	2030		RUS		Voice of Russia	P	Eu	7380m 11630m
2000	2100		F		Radio France Int.	P	SAf	11815
2000	2300	irr	POR		RdP Radio Portugal	P	Eu	9820
						P	Af	11945
						P	WAF	15295
						P	NAm	15560
						P	SAm	15295
2000	1100		B		Radio Baré OndaTropical	P	B	4895
2000	1200		B		Radio Inconfidencia	P	B	6010
2005	2020	Su	SWZ		Trans World Radio	P	AGL	6130
2030	2100		G		BBC	P	SAf	3390/AFS 6135/AFS 7205/AFS
						P	WAF	11855/ASC 13745r 15105s
2050	2110		I		RAI International	P	SEu	6110 7130
						P	CAf	15240
						P	EAF	11875
2100	2130	Fr-Su	CAN		Radio Canada Int.	P	SAm	15455 17860
2100	2200		CHN		China Radio Int.	P	SAm	11690/CHL
2100	2200		USA		WYFR Family Radio	P	SAf	15770
2130	2200	Fr-Su	CAN		Radio Canada Int.	P	SAm	17860
2200	2230	Fr-Su	CAN		Radio Canada Int.	P	SAm	17860
2200	2230		CUB		Radio Habana Cuba	P	SAm	17705
2200	2245		USA		WYFR Family Radio	P	SAm	15130 17725
						P	Eu	15695
2200	2300		CHN		China Radio Int.	P		9410ka 9685ka
2200	0303		B		Radio Senado	P	B	5990
2215	2330		EGY		Radio Cairo	P	SAm	11785z
2230	2300	Fr-Su	CAN		Radio Canada Int.	P	SAm	17860
2245	2300		USA		WYFR Family Radio	P	SAm	15130 17725
2300	2330	Fr-Su	CAN		Radio Canada Int.	P	SAm	13710 17860
2300	2330		CUB		Radio Habana Cuba	P	SAm	15230 17705
2300	2400		CHN		China Radio Int.	P	SAm	9560b 13650/CUB
2300	2400		RUS		Voice of Russia	P	SAm	7300m 7330m
						P		11510/TJK 12010m
						P	Eu	603
2300	2400		USA		WYFR Family Radio	P	SAm	17725
2300	0200	Mo-Fr	POR		RdP Radio Portugal	P	NAm	9715
						P	VEN	13700
						P	B	15295
2300	0230		EQA		HCJB Voice of the Andes	P	SAm	11920 12020
2330	2400	Fr-Su	CAN		Radio Canada Int.	P	SAm	17860

START	STOP	DAY	ITU	STATION	LAN	TARG	FREQUENCY
2330	2400		CUB	Radio Habana Cuba	P	SAm	15230
<b>French: (= F and A,F or F,A = mixed with Arabic)</b>							
0000	0030		F	Radio France Int.	F	SEA	15445/J
0000	0100		CUB	Radio Habana Cuba	F	Car	9550
0000	0100		USA	WYFR Family Radio	F	SAm	15255
0000	2400		F	TDF DIGITAL	F	Eu	25765 25775
0000	2400		LUX	RTL DIGITAL	F	Eu	5990
0000	2400		ZAI	Radio Okapi	F	ZAI	6030 9550
0100	0200		BUL	Radio Bulgaria	F	NAm	9700 11700
0100	0200		F	Radio France Int.	F	CAm	9800\$/GUF
0100	0200		KRE	Voice of Korea	F	SEA	13650 15100
0115	0130		I	RAI International	F	NAm	11800
0130	0200		CUB	Radio Habana Cuba	F	Car	9550
0200	0230		SVK	Radio Slovakia Int.	F	NAm	5930
					F	LAm	9440
0200	0300		ROU	Radio Romania Int.	F	NAm	6135 9715
0230	0250		CVA	Radio Vaticana	F	NAm	7305 9610
0230	0300		CVA	Radio Vaticana	F	EAF	9660
0241	0256	Mo-Sa	USA	Trans World Radio	F	Eu	216/F
0300	0400	Tu-Sa	ARG	R.Argentina al Exterior	F	Am	11710
0300	0400		CAN	Radio Canada Int.	F	ENA	6040
0300	0400		F	Radio France Int.	F	NAf	7135 9790
					F	CAf	5925/AFS 7135 9790
0300	0400		KRE	Voice of Korea	F	CAm	11735 13760 15180
0300	1100		F	Radio France DIGITAL	F	Eu	6175
0300	2200		BEL	RTBF	F	Eu	9970
0345	0400		ISR	Kol Israel	F	Eu	11590 13720
					F	NAm	11590 13720
0400	0500		AFS	Channel Africa	F	CAf	7305
0400	0500		F	Radio France Int.	F	NAf	3965 7135 9790
					F	CAf	7135 7150/ASC 9790
					F		15210/UAE
0400	0600		DRC	Radio Okapi	F	CAf	11690/AFS
0430	0445		F	Radio France Int.	F	Eu	6045
0430	0500		CVA	Radio Vaticana	F	CAf	9660 11625
0430	0500		G	BBC	F	Waf	6035/ASC 7105/ASC
					F	EAF	17885/SEY
0430	0730		TCD	Rd.Nationale Tchadienne	F	CAf	840 6165
0440	0500		CVA	Radio Vaticana	F	Eu	1530 4005v 5885v 7250
0500	0530		J	NHK Radio Japan	F	ME	17820/CLN
0500	0600		F	Radio France Int.	F	NAf	7280 9790 11700 15300
					F	Waf	7280 9790
					F	CAf	11700 15210/UAE 15300
					F	EAF	13680\$ 15160\$
0500	0600		USA	WYFR Family Radio	F	CAf	11530
					F	Eu	11580
0500	0700		GAB	Africa No.1	F	Af	9580
0500	0830		ZAI	Radio Kahuzi, Bukavu	F	CAf	6210
0530	0600		LAO	Lao National Radio	F	SEA	7145
0530	0600	Mo-Fr	USA	Voice of America	F	Af	1530/STP 4960/STP 6035/STP
					F		6095/STP 9885/BOT 13710/CLN
0555	0800		GUI	Radio Conakry	F	Waf	7125
0600	0627		CZE	Radio Prague	F	Eu	5930 7345
0600	0630		BUL	Radio Bulgaria	F	WEu	9500 11500
0600	0630		CVA	Radio Vaticana	F	Waf	11625 13765
					F	CAf	13765 15570
0600	0630		G	BBC	F	Waf	6105/ASC 7105/ASC
					F	NAf	13740r 15405/CYP
0600	0630		ROU	Radio Romania Int.	F	Eu	9655 11730
0600	0630	Mo-Fr	USA	Voice of America	F	Af	4960/STP 6035/STP 6095/STP
					F		9885/BOT 13710/CLN
0600	0700		F	Radio France Int.	F	NAf	9790 11700 13675 13695
					F		15300 17850
					F	Waf	9570\$/ASC 9790 11700
					F		13675 13695
					F	CAf	11700 13695 15210/UAE

				F		15300 17770/RRW 17850
				F	Eaf	17800\$
0600 0700		USA	WYFR Family Radio	F	Eu	9355
				F	Waf	9930
0600 0800		CHN	China Radio Int.	F	Eu	17865ka
0600 1700		F	Radio France DIGITAL	F	NAf	15790
0615 0630	Mo-Sa	CVA	Radio Vaticana	F	Eu	585 1530 4005v 5885v 6185
				F		7250 9645 11740
				F	ME	15595
0625 0800	Su-Fr	MTN	Radio Mauritanie	A,F	Waf	4845
0630 0700		J	NHK Radio Japan	F	Eu	11970/GAB
0630 0730		IRN	IRIB Teheran	F	Eu	13710k 15430s
0630 0730	alt	IRN	IRIB Teheran	F	Eu	13750k
0700 0730		G	BBC	F	Waf	15105/ASC
				F	CAf	17695/AFS
0700 0800		F	Radio France Int.	F	NAf	11700 13695 15300
				F		15315 17620 17850
				F	Waf	11700 13695 15300
				F		15315 17620
				F	CAf	11700 15170/AFS 15300 17850
				F	Eaf	17800
0700 0800		NIG	Voice of Nigeria	F	Eu	15120
0700 0800		TWN	Radio Taiwan Int.	F	Eu	7520/USA-o
0700 1600		F	Radio France DIGITAL	F	Eu	7135 7310
0700 1600		GAB	Africa No.1	F	Af	9580 17630
0730 0757		CZE	Radio Prague	F	Eu	9880 11600
0730 1000	SaSu	TCD	Rd.Nationale Tchadienne	F	CAf	840 6165
0800 0845		USA	WYFR Family Radio	F	CAf	11530
0800 0900		F	Radio France Int.	F	NAf	11845 13675 15300
				F		15315 17620 17850
				F	Waf	13675 15300 15315 17620
				F	CAf	15300 17850
0800 0900		KOR	KBS World Radio	F	Eu	15210
0800 0900		SEN	West Africa Democracy R	F	Waf	17875/G-r
0800 0900		USA	Adventist World Radio	F	NAf	15130/D-j
0800 1000		ARS	BSKSA	F	Waf	17785
0800 1200	Su	GUI	Radio Conakry	F	Waf	7125
0800 1800		MTN	Radio Mauritanie	A,F	Waf	7245
0900 1000		CHN	China Radio Int.	F	Eu	17650ka
0900 1000		F	Radio France Int.	F	NAf	11845 13675 15300
				F		15315 17620 17850
				F	Waf	13675 15300 15315 17620
				F	CAf	15300 17850 21580
1000 1015		ISR	Kol Israel	F	Eu	13680 15760
				F	NAm	13680 15760
1000 1100		F	Radio France Int.	F	NAf	11845 13675 15300
				F		15315 17620 17850
				F	Waf	13675 15300 15315 17620
				F	CAf	15300 17850 21580
				F	FE	9830\$/J
				F	SEA	11890\$/J
1000 1100		SEN	West Africa Democracy R	F	Waf	17875/G-r
1000 1100		USA	WYFR Family Radio	F	SAm	9625 11970
1000 1200		ZAI	Radio Kahuzi, Bukavu	F	CAf	6210
1000 2230		TCD	Rd.Nationale Tchadienne	F	CAf	840 6165
1100 1115	Mo-Sa	CVA	Radio Vaticana	F	Eu	585 5885v
1100 1115	Mo-Sa	CVA	Radio Vaticana DIGITAL	F	Eu	1611
1100 1130		BUL	Radio Bulgaria	F	WEu	11700 15700
1100 1200		F	Radio France Int.	F	Eu	6175\$
				F	NAf	11845 13675 15300
				F		15315 17620 17850
				F	Waf	13675 15300 15315 17620
				F	CAf	15300 17815/AFS 17850
				F		21580
				F	FE	9830/J
				F	SEA	11890/J
				F	ENA	15515/GUF 17570

				F	CAM	13640/GUF	15365\$	
				F		15515/GUF	17570 17800\$	
1100 1200		KRE	Voice of Korea	F	LAm	11710	15180	
				F	SEA	3560	11735 13650	
1100 1200		ROU	Radio Romania Int.	F	Eu	11830	11895 15250 15380	
1100 1300		CAN	Radio Canada Int.	F	Car	9515		
1200 1230		G	BBC	F	Waf	17780/ASC	21640/ASC	
				F	Naf	15425r		
1200 1230		VTN	Voice of Vietnam	F	SEA	1242	7285h	
1200 1300		CHN	China Radio Int.	F	Eu	17650ka		
1200 1300		D	Deutsche Welle	F	Waf	15275w		
				F	Af	11795/RRW	15410/RRW	
				F		17770w	21780/RRW	
1200 1300		F	Radio France Int.	F	Naf	11845	13675 15300 15315	
				F		17620	17850 21685	
				F	Waf	13675	15300 15315 17620	
				F		17815\$/AFS	21685	
				F	CAf	15160/AFS	15300	
				F		17850	21580	
				F	Eaf	21620\$		
				F	CAM	15515\$/GUF		
1200 1300	Fr	I	IRRS Milano	F	Waf	15750		
1200 1300		USA	WYFR Family Radio	F	ENA	13695		
1200 1700		F	Radio France DIGITAL	F	Eu	6175		
1200 2300		F	Radio France DIGITAL	F	CAM	21645/GUF		
				F	SAm	17875/GUF		
1200 2400		GUI	Radio Conakry	F	Waf	7125		
1230 1300		J	NHK Radio Japan	F	Waf	15400/ASC		
				F	CAf	17870/ASC		
1230 1630		ZAI	Radio Kahuzi, Bukavu	F	CAf	6210		
1300 1330		LAO	Lao National Radio	F	SEA	7145		
1300 1330		VTN	Voice of Vietnam	F	SEA	1242	7285h	
1300 1400		CHN	China Radio Int.	F	Eu	13710ka		
				F	Af	17880/MLI		
1300 1400		F	Radio France Int.	F	Naf	11845	13675 15300 15315	
				F		17620	17850 21685	
				F	Waf	13675	15300 15315	
				F		17620	21685	
				F	CAf	15160/AFS	15300	
				F		17850	21580	
				F	CAM	15515\$/GUF		
1300 1400		USA	WYFR Family Radio	F	SAm	11970		
1400 1410		MTN	Radio Mauritanie	F	Waf	7245		
1400 1500		F	Radio France Int.	F	Naf	11845	13675 15300	
				F		15315	17620 17850 21685	
				F	Waf	13675	15300 15315	
				F		17620	21685	
				F	CAf	15300	17850 21580	
				F	Eaf	21620\$		
				F	SAs	7220/RUS-c		
1400 1500		KRE	Voice of Korea	F	Eu	4405	13760 15245	
				F	NAm	9335	11710	
1400 1600		ARS	BSKSA	F	Waf	21600		
1400 1600		CHN	China Radio Int.	F	Eu	11920/ALB	13670/ALB	
1455 1525	SaSu	SWZ	Trans World Radio	F	MDG	9585		
1500 1530	Mo-Fr	CAN	R. Canada Nord-Quebec	F	CAN	9625		
1500 1600		F	Radio France Int.	F	Naf	11845	13675 15300	
				F		15315	15605 17620 17850	
				F	Waf	13675	15300 15315	
				F		15605	17620	
				F	CAf	15300	17850 21580	
1530 1545		ISR	Kol Israel	F	Eu	11605	15640 15760	
				F	NAm	11605	15640 15760	
1530 1555		I	RAI International	F	Eu	9670	11855	
1600 1615		CVA	Radio Vaticana	F	Eu	585	1530 4005v 5885v	
				F		7250	9645	
				F	ME	15595		

1600	1630		HNG	Radio Budapest	F	Eu	6025 9860
1600	1645		USA	WYFR Family Radio	F	ENA	11910
1600	1700		AFS	Channel Africa	F	WAF	15235
1600	1700		D	Deutsche Welle	F	EAF	11670/RRW 17800/POR
					F	WAF	17860w 21820w 21840/RRW
1600	1700		DRC	Radio Okapi	F	CAf	11890/AFS
1600	1700		F	Radio France Int.	F	NAf	13675 15300 15315
					F		17620 17850
					F	WAF	13675 15300 15315 17620
					F	CAf	15300 17850
1600	1700		KOR	KBS World Radio	F	ME	7150
1600	1700		KRE	Voice of Korea	F	Eu	4405 13760 15245
					F	NAm	9335 11710
1600	1700		RUS	Voice of Russia	F	Eu	11980m 12000m 12040m
					F		12070m 15455a
					F	Af	9745c 11510/ARM 12000m
1600	1700		RUS	Voice of Russia DIGITAL	F	Eu	9450t
1600	1800		CHN	China Radio Int.	F	Eu	11690ka
1600	1800		LBY	LJB Voice of Africa	F	WAF	15660/F
					F	CAf	17870/F
1600	1900	Su	CAN	R. Canada Nord-Quebec	F	CAN	9625
1600	1900		GAB	Africa No.1	F	Af	9580 15475
1600	2000		CAN	Radio Canada Int.	F	Car	17765
1620	1640	Tu,Th	MDA	Radio DMR	F	Eu	5910
1630	1655		I	RAI International	F	NAf	7275 9845 11855
1630	1650		J	NHK Radio Japan	F	ME	11785
1630	1657		CZE	Radio Prague	F	Eu	5930
					F	Af	17485
1630	1700		VTN	Voice of Vietnam	F	Af	7220 9550
1700	1715		ISR	Kol Israel	F	Eu	9345 11590 13675
					F	NAm	9345 11590 13675
1700	1715	Mo-Fr	UN	United Nations Radio	F	CAf	6055/AFS 11735/AFS
					F	NAf	11665/G-r
1700	1730		BUL	Radio Bulgaria	F	WEu	9500 11500
1700	1730		CVA	Radio Vaticana	F	EAF	13765 15570
1700	1730		SVK	Radio Slovakia Int.	F	Eu	5920 7345
1700	1800		D	Deutsche Welle	F	CAf	9735/RRW
					F	WAF	15425w 17820w 17860/POR
					F		21840/RRW
1700	1800		ETH	Radio Ethiopia	F	EAF	7165 9560
1700	1800		F	Radio France Int.	F	NAf	11995 13675 13695
					F		15300 17620 17850
					F	WAF	11995 13675 13695
					F		15300 17620
					F	CAf	15300 17850
1700	1800		ROU	Radio Romania Int.	F	Eu	9535 11765
1700	1800		RUS	Voice of Russia	F	Eu	12040m 12070m 15455a
					F	Af	9745c
1700	1800		USA	WYFR Family Radio	F	WAF	17535
1700	2000	irr	CME	Radio Garoua	F	CAf	5010
1700	2215		NGR	La Voix du Sahel	F	WAF	7155 9705
1708	1740	Mo	NZL	Radio New Zealand Int.	F	E0c	7145
1730	1800		GRC	Voice of Greece	F	Eu	7430
1755	1825	SaSu	SWZ	Trans World Radio	F	WAF	9745/AFS
1800	1810		RRW	Radio Rwanda	F	CAf	6055
1800	1820		J	NHK Radio Japan	F	Eu	11970
					F	Af	9685 11785
1800	1830	Th	CAN	Eglise du Christ	F	NAf	11950/G-w
1800	1830		G	BBC	F	SAf	5985/AFS
					F	WAF	15105/ASC 17885/ASC
					F		21630/ASC
					F	NAf	15180r
1800	1900	Mo-Fr	E	Radio Exterior España	F	Eu	9665
1800	1900		F	Radio France Int.	F	NAf	9790 11705 11995 13675
					F		15300 15605
					F	WAF	9790 11995 13675 15300 15605
					F	CAf	11705 15300

1800	1900		KOR	KBS World Radio	F	ME	15575
1800	1900		KRE	Voice of Korea	F	SAf	7100 11910
					F	ME	9975 11535
1800	1900		RUS	Voice of Russia	F	Eu	12000m 12040m 12070m
					F		15455a 15465m
					F	Af	7180sp 12000m
1800	1900		USA	WYFR Family Radio	F	Eu	18930
					F	CAf	21525
1800	2000		CHN	China Radio Int.	F	Eu	5970/ALB 6055/ALB
					F		7175/ALB 11695/ALB
1800	2400		MLI	RTV du Mali	F,A	Waf	4783 4835 5995
1800	0100		MTN	Radio Mauritanie	A,F	Waf	4845
1830	1850	Mo-Sa	ARM	Public Radio of Armenia	F	Eu	4810 9960
1830	1857		CZE	Radio Prague	F	Eu	5930 13580
					F	NAf	13580
1830	1900		G	FEBA Radio	F	CAf	15130/ASC
1830	1900	Th	SUI	R.Reveil Paroles de Vie	F	CAf	15675/D-j
1830	1900		VTN	Voice of Vietnam	F	Eu	7280 9725/AUT 9730
1830	1930		IRN	IRIB Teheran	F	Eu	9905s 15085k
					F	Waf	13755k
1830	2000		USA	Voice of America	F	Af	1530/STP 9815/BOT 9830/STP
					F		12080/BOT 15730/STP
					F		17785/MRC
1830	2030		CHN	China Radio Int.	F	Af	7350k 9645k
1840	1910	Sa	SWZ	Trans World Radio	F	Waf	9720/AFS
1840	1925	Su-Th	SWZ	Trans World Radio	F	Waf	9720/AFS
1900	1930	Mo-Sa	ALB	Radio Tirana	F	Eu	9920
1900	1945		USA	WYFR Family Radio	F	CAf	21525
					F	Eu	21455
1900	2000		CAN	Radio Canada Int.	F	Eu	5850/S 15325
					F	Af	7235/G-s 11765/CHN-ka
					F		13730/G-s 15235 15255/G-s
1900	2000	Mo-Fr	E	Radio Exterior España	F	Af	9595
					F	ME	9600
1900	2000	Sa	E	Radio Exterior España	F	Af	9595
					F	ME	12015
1900	2000	Su	E	Radio Exterior España	F	ME	12015
1900	2000		F	Radio France Int.	F	NAf	9790 11705 11995 13675
					F		15300 15605
					F	Waf	9790 11995 13675 15300 15605
					F	CAf	7160/AFS 11705 15300
1900	2000		INS	Voice of Indonesia	F	Eu	9525 15150
1900	2000		KOR	KBS World Radio	F	Eu	6145/G-s
1900	2000		RUS	Voice of Russia	F	Eu	1323/D 12000m 12030m
					F		12040m 15455a 15465m
					F	Af	7180sp 12000m 12030m
1900	2000		TWN	Radio Taiwan Int.	F	Eu	6045/G-s
1900	2100		F	Radio France DIGITAL	F	Eu	3965
1900	2300		GAB	Africa No.1	F	Af	9580
1905	2005		SYR	Radio Damascus	F	Eu	9330 12085
1930	1945		ISR	Kol Israel	F	Eu	9400 11590
					F	NAm	9400 11590
					F	NAf	9345
					F	CAM	9345
1930	1950		CVA	Radio Vaticana	F	Eu	585 1530 4005v
					F		5885 7250 9645
1930	2000		SVK	Radio Slovakia Int.	F	Eu	5920 6055
1930	2000		VTN	Voice of Vietnam	F	Eu	7280 9730
1930	2030		TUR	Voice of Turkey	F	Eu	11850
					F	Af	9535
1935	1950	Tu-Fr	SWZ	Trans World Radio	F	CAf	9525
1935	2020	Sa-Mo	SWZ	Trans World Radio	F	CAf	9525
1945	2000		USA	WYFR Family Radio	F	CAf	21525
1945	2030		IND	All India Radio	F	Waf	9905a 13605b 13620b
2000	2030		CUB	Radio Habana Cuba	F	Am	11760
2000	2030		HNG	Radio Budapest	F	Eu	3975 6025
2000	2030		USA	Adventist World Radio	F	CAf	9655/AFS 9715/AFS

					F	NAf	15265/D-j
2000	2030		USA	Voice of America	F	Af	9815/BOT 9830/STP 11720/MRC
					F		12080/BOT 15730/STP
2000	2100	Mo-Fr	ARG	R.Argentina al Exterior	F	Eu	9690 15345
2000	2100		BUL	Radio Bulgaria	F	WEu	5800 7500
2000	2100	Sa	CAN	R. Canada Nord-Quebec	F	CAN	9625
2000	2100	Su	E	Radio Exterior España	F	Af	9595
2000	2100		F	Radio France Int.	F	NAf	6175 7315 9790 11705 11995
					F	Waf	7315 9790 11995
					F	CAf	7160/AFS 9790 11705
2000	2100		KRE	Voice of Korea	F	Eu	4405 13760 15245
2000	2100		RUS	Voice of Russia	F	Eu	1323/D
2000	2100		TWN	Radio Taiwan Int.	F	Eu	9955 13690/USA-o
					F	ENA	18930/USA-o
2000	2115		EGY	Radio Cairo	F	Eu	9990a
2000	2200	Su	E	Radio Exterior España	F	Eu	15290
2015	2030		THA	Radio Thailand	F	Eu	9680
2030	2045	347	S	IBRA Radio	F	Waf	9675/D-j
2030	2100		CVA	Radio Vaticana	F	Waf	9755 11625 13765
2030	2100		SCG	Int.R.Serbia-Montenegro	F	Eu	6100
2030	2100		USA	Adventist World Radio	F	Waf	11955/AUT
					F	NAf	15265/D-j
2030	2100	SaSu	USA	Voice of America	F	Af	9815/BOT 9830/STP 11720/MRC
					F		12080/BOT 15730/STP
2030	2130		CHN	China Radio Int.	F	Eu	7200u 7215/RUS-s 11660ka
2030	2130		USA	WYFR Family Radio	F	Waf	11985/ASC
2030	2230		EGY	Radio Cairo	F	Waf	9735a
2040	2050	Su	NZL	Radio New Zealand Int.	F	Oc	11725 15720
2100	2130		ROU	Radio Romania Int.	F	Eu	7250 9715
2100	2130	Mo-Fr	USA	Voice of America	F	Af	9815/BOT 9830/STP
					F		12035/STP 12080/BOT
2100	2130		VTN	Voice of Vietnam	F	Eu	7280 9730
					F	Af	7220 9550
2100	2200		AGL	Radio Nacional Angola	F	AGL	944 7217
2100	2200		CAN	Radio Canada Int.	F	NAf	9690/S 11810/G-s 15325
2100	2200	Su	CAN	R. Canada Nord-Quebec	F	CAN	9625
2100	2200		F	Radio France Int.	F	NAf	6175 7315 9485 9790 11705
					F	Waf	7315 9485 9790
					F	CAf	7160/AFS 9790 11705
2100	2200		NIG	Voice of Nigeria	F	Waf	7255
2100	2200		TWN	Radio Taiwan Int.	F	Af	9365/F
2100	2200		USA	WYFR Family Radio	F	SAm	17725
2130	2200		CUB	Radio Habana Cuba	F	Am	11760
2130	2230		CHN	China Radio Int.	F	Eu	7200u 11660ka
					F	Af	11975/MLI 13630/MLI
2200	2227		CZE	Radio Prague	F	NAm	7345 9415
2200	2230		CUB	Radio Habana Cuba	F	Car	9505
2200	2300		CAN	Radio Canada Int.	F	Car	15180
2200	2300	Sa	CAN	R. Canada Nord-Quebec	F	CAN	9625
2200	0100		F	Radio France DIGITAL	F	Eu	6175
2230	2300	SaSu	TCD	Rd.Nationale Tchadienne	F	CAf	840 6165
2300	2330		CAN	Radio Canada Int.	F	As	9525/KOR 12035/J 13660/J
2300	2400		CAN	Radio Canada Int.	F	ENA	6100
2300	2400		E	Radio Exterior España	F	NAm	15385
2300	2400		F	Radio France Int.	F	SEA	15445/J 15595/RUS-v
					F	FE	15595/RUS-v
2300	2400		USA	WYFR Family Radio	F	ENA	17750
2300	0400		F	Radio France DIGITAL	F	Eu	3965

(Eike Bierwirth's shortwave broadcasting-schedule list - Last update: May 18, 2006; filtered for the language-based transmissions by JKB)

**NETHERLANDS:** New additional frequency in updated schedule A06 of **Radio Netherlands:** 2100-2200 Flevo 5930 ND 500kW Dutch To Europe (RN schedule at the web via JKB, 13 Aug 2006)

**NEW ZEALAND:** **Radio New Zealand International** has announced the introduction of a

new thirty minute weekday programme exchange with the BBC Pacific service. The programme, to be launched on Monday 17 July, will see the BBC's Pacific service relaying a bulletin of Pacific regional news and Radio New Zealand International's Pacific current affairs programme Dateline Pacific at 0830-0900 UTC. Dateline Pacific draws on the work of Radio New Zealand International staff and on stories filed by Pacific journalists from around the region. In exchange, at 0100 UTC on weekdays Radio New Zealand International will be broadcasting a BBC World news bulletin, followed by detailed BBC correspondent's reports from the four corners of the globe and a round-up of the latest in international sport. Radio New Zealand International manager, Linden Clark, says she is delighted with the launch: "This will allow us to get more listeners for our flagship current affairs programme across the Pacific. It's also recognition of the relevance of the Dateline Pacific programme which is already relayed by Radio Australia around the region." The Radio New Zealand International programme will be carried on the BBC's Pacific network of FM relays and satellite services. Radio New Zealand's own shortwave broadcasts cover the area from Papua New Guinea in the west across to French Polynesia in the east and all the countries in between. A new digital (DRM) shortwave service is just now being launched across the Pacific region with partner relaying radio stations in Vanuatu, Solomon Islands, Fiji, Samoa, American Samoa, Tonga and Niue all now equipped with digital software receivers. More countries will be equipped so they can receive the new digital signal over the next few months. (RNZN Weblog as of July 14th, 2006; Source: Radio New Zealand International)

**Radio New Zealand International - RNZI** schedule valid 04 Jun 2006 - 02 Sep 2006. Address: P.O.Box 123, Wellington, New Zealand. Fax: 00 64 4 474 1433 and e-mail address is <info@rnzi.com>. Reception reports by e-mail or post are welcome and at the web <<http://www.rnzi.com/pages/contact.htm>> RNZI has provided forms of reception reports for e-mail (Netscape users only) and postal mail. Please do not send cassettes. All DX reception reports must contain detailed programme information for verification purposes and be accompanied by two International Reply Coupons (IRC) or \$US 2 if a QSL is sought. E-mail reports will be verified by e-mail only.

UTC	kHz	Primary Target	Az.	Days
0459-0658	9615 AM & 9440 DRM	All Pacific	0°	Daily
0659-1059	7145 AM & 6095 DRM	All Pacific	0°	Daily
1059-1259	6095 DRM	All Pacific	0°	Daily
1059-1259	9870 AM	NW Pacific, Bougainville, PNG, Timor	325°	Daily
1300-1650	7145 AM & 6095 DRM	All Pacific	0°	Daily
1651-1850	6095 AM & 7145 DRM	Cook Islands, Fiji, Niue, Samoa, Tonga	35°	Daily
1851-1950	9630 AM & 9440 DRM	All Pacific	0°	Daily
1951-2235	15720 AM & 13730 DRM	All Pacific	0°	Daily
2236-0458	13730 AM & 15720 DRM	All Pacific	0°	Daily

Bougainville/Papua New Guinea and Timor Transmission 1100 -1300 UTC programme is directed to the North Western Pacific and Asia.

Broadcast of breakfast sessions via the Internet and also have several news bulletins and programmes available as audio files.

Sunday to Friday RNZI joins Radio Australia's Breakfast programme beamed to Asia and the Pacific on short-wave and satellite. Central and South Pacific frequencies - 15515, 13630, 12080, 11660, 11650. West Pacific 11650, 9660 kHz. For more on Radio Australia go to <<http://www.abc.net.au/ra/>>.

Listen out for RNZI's Pacific Regional News and Dateline Pacific at 0630 and 2130 UTC.

VT Merlin Digital Stream:RNZI Joins the VT Merlin DRM Service. This is a DRM Transmission for listeners in Europe for people lucky enough to have a DRM capable receiver!

Dateline Pacific can be heard every Saturday at 1400 UTC on 9770 kHz.

(RNZI schedule at the web 13 Aug 2006, via JKB)

**NIGER:** Niger's public broadcasting organization, Office de *Radiodiffusion du Niger (ORTN)*, has a new website. ORTN operates two television services, Tele Sahel and Tal-TV, and a nationwide radio service, La Voix du Sahel. The website offers on-demand video and audio files of the main news bulletins broadcast on all three television and radio services in the previous seven days. Tele Sahel is broadcast terrestrially nationwide and is available to a wider audience on the Atlantic Bird 3 satellite at 5 degrees west, frequency 3646 MHz, right-hand polarization, symbol rate 2170, FEC 3/4. La Voix du Sahel is broadcast throughout the country on various mediumwave and FM frequencies, and on 9705 kHz shortwave. It is also available on satellite, on the same Atlantic Bird 3 transponder as Tele Sahel. Tal-TV coverage is limited to the capital, Niamey,

and surrounding areas. (RNMN Weblog as of August 8th, 2006; Source: BBC Monitoring research 7 Aug 06)

**SLOVAKIA:** *Radio Slovakia International* - RSI reports that Culture Minister Marek Madaric, speaking at a news conference in Bratislava on Thursday after meeting President Ivan Gasparovic, has given notice of a return to state contributions for the public media. "This could be done via a contract between the public media and parliament," he said. According to Madaric, the contract would define the state media's role, programme orientation and funding. He also spoke about restoring RSI to shortwave although no timescale was mentioned. (RNMN Weblog as of July 23rd, 2006)

**SPAIN:** *Radio Exterior de Espana* - REE esquema en idioma espanol, valido 29 de octubre de 2005 - 25 de marzo de 2006. Address: Radio Exterior de Espana, Apartado 156.202, 28080 Madrid, Spain. E-mail: audiencia\_ree.rne@rtve.es and Web: <<http://www.rtve.es/rne/ree/>>. [Sked is not available in English, Ed.]

Transmisiones para Europa:			1000-1300	17595	12345
0500-0700	9710	1234567	1100-1200	C-9765	1234567
0500-0700	11920	67	1200-1400	C-9765	123457
0500-0900	12035	1234567	1300-1800	17595	67
0700-1300	13720	1234567	1500-1800	C-9765	7
0900-1700	15585	1234567	1800-2000	C-9765	1234567
1300-1400	13720	67	1900-2000	17595	6
1700-2100	9665	67	1900-2100	17595	7
1700-2300	7275	1234567	2000-2300	C-9765	67
Transmisiones para Africa:			2300-0500	9535	1234567
0900-1400	21540	1234567	2300-0500	15160	1234567
1400-1700	15385	6	Transmisiones para América del Sur:		
1400-1700	17755	6	0600-0800	5965	1234567
1500-1600	15385	12345	0900-1000	21570	12345
1500-1600	17755	12345	1000-1800	21570	1234567
1700-2000	17755	1234567	1000-1200	C-11815	12345
2000-2100	11625	1234567	1200-1300	C-11815	123457
Transmisiones para Oriente Medio:			1200-1300	21700	67
0500-0900	11890	1234567	1300-1500	17695	67
0900-1700	21610	1234567	1300-1800	C-11815	7
Transmisiones para América del Norte:			1300-1500	17695	67
0100-0600	6055	1234567	1500-1900	17595	1234567
0200-0600	C-6125	1234567	1800-1900	17715	1234567
1000-1200	21700	12345	1800-2000	C-11815	1234567
1100-1300	C-15170	12345	1900-2000	17595	7
1200-1300	21700	123457	1900-2100	17595	6
1300-1400	C-15170	123457	2000-2200	C-11815	67
1300-1400	17595	7	2300-0200	11680	1234567
1300-1500	17595	12345	2300-0400	C-6020	1234567
1500-1600	C-17850	7	2300-0500	9620	1234567
1600-1800	C-17850	67	2300-0500	15160	1234567
1800-2000	C-17850	1234567	Transmisiones para Filipinas:		
1900-2300	C-15110	1234567	1200-1400	X-11910	1234567
2000-2300	C-17850	67	Transmisiones para Australia:		
2300-0400	9535	1234567	0700-0900	17770	1234567
Transmisiones para América Central:			0700-0900	21610	67
0200-0600	C-3350	1234567			

Días: (1) Lun, (2) Mar, (3) Mie, (4) Jue, (5) Vie, (6) Sap, (7) Dom.  
Centros retransmisores: (C) Cariari de Pococí, Costa Rica, (X) Xian, China.  
(Marcelo A. Cornachioni in CONEXION #379; August 06, 2006)

**SWEDEN:** Because of the crisis in the Middle East involving Israel and Lebanon, *Radio Sweden* is adding two extra transmissions for Swedish listeners in the region. The domestic service half hour news programme Lunchekot is being relayed daily at 1030 UTC on 9490 and 21810 kHz. The Radio Sweden broadcast at 1200 UTC is also being broadcast to the region on 21810 kHz. Unfortunately this means the 1200 UTC transmission to Asia on 15735 kHz is canceled. (RNMN Weblog as of July 14th, 2006; Source: Radio Sweden)

**SYRIA:** Doreen Carvajal writes in the International Herald Tribune that “The efforts of Islamic countries to get their governments’ views out in a language accessible to audiences elsewhere appear halting compared with a headlong rush in the United States, Germany, France, Russia and Britain to start or expand Arabic programming in a variety of media.” She points out that “Syria’s Damascus Radio programming in English is not accessible on its Web site, although it transmits about two hours of information daily on a shortwave transmitter.” (RNMN Weblog as of August 2nd, 2006)

**UNITED KINGDOM:** Starting today, London-based *SW Radio Africa* will be broadcasting its two-hour daily programme to Zimbabwe live via Internet at the later time of 1800 to 2000 British Summer Time, or 1900 to 2100 Zimbabwe Time (1700 to 1900 UTC). This is the same programme that’s broadcast the following morning at 0300-0500 UTC on mediumwave 1197 kHz. (RNMN Weblog as of July 20th, 2006)

**USA:** The *Voice of America’s (VOA)* Central Africa Service, created following the Rwanda genocide to provide news and information to the Great Lakes region of Africa, celebrates its 10th anniversary tomorrow. Created on 15 July, 1996, the service broadcasts radio programmes in the Kirundi and Kinyarwanda languages to Burundi, Rwanda, Tanzania, and the eastern Democratic Republic of Congo. In recent years, programming has included interviews with major public figures from the Great Lakes region, such as Burundian President Pierre Nkurunziza, Rwandan President Paul Kagame, and Paul Rusesabagina who inspired the movie “Hotel Rwanda,” a story about the 1994 Rwanda genocide in which some 800,000 people were killed. “We’re very proud of the role of VOA’s Central Africa Service in assisting the people of this region during such an important time in their history,” said VOA Director David S. Jackson. The Service also gives a voice to ordinary listeners by airing in-depth features on HIV/AIDS patients, orphans, single mothers, medical professionals, NGO leaders and separated families. “The Service’s health, conflict resolution and human rights segments have proven very valuable in a region trying to recover from years of civil conflict,” said Service Chief Robert Daguillard. “But I’m convinced the crown jewel of our special anniversary broadcast on July 15th will be an interview with families that have been brought together thanks to our family reunification segments.” VOA has also earned praise for Ejo Bite?, its popular programme aimed at young refugees. The 30-minute weekly programme, which translates as “How About the Future?,” is financed by the State Department Bureau of Population, Refugees, and Migration. Started in February 2003, the programme is reported and produced by young refugees in camps along the Burundi and Rwanda borders. The refugees, trained by professional journalists, produce reports on health, conflict resolution, life choices, HIV/AIDS awareness, education and social issues. VOA’s Central Africa Service broadcasts seven hours each week at 0330-0430 UTC to the Great Lakes region on shortwave (6095, 7340 and 13725 kHz), as well as on VOA’s own FM frequency in Kigali, Rwanda. VOA also broadcasts on FM through Radio Publique Africaine in Bujumbura, Burundi and Radio Kwizera in Ngara, Tanzania. (RNMN Weblog as of July 14th, 2006; Source: Voice of America)

The Miami Herald reports that the Bush administration has accelerated its planning for a Cuban transition and is exploring new ways to broadcast information to the island. The Herald says that officials are looking at ways to get *Radio and TV Martí* broadcasts into Cuba quickly but were cautious on committing to using a Department of Defense aircraft for logistical reasons. Radio and TV Martí are expected to get their own aircraft, but those broadcasts won’t start until the end of August at the earliest, says the newspaper, quoting people familiar with the stations’ operations. The Commission for Assistance to a Free Cuba has recommended using third-country broadcasts to Cuba, which is surrounded by nations whose signals can be picked up on the island. (RNMN Weblog as of August 3rd, 2006)

TV Martí broadcasts to Cuba from an airborne transmitter have increased to a six-times-a-week schedule by using a civilian aircraft contracted by the US government and flying out of Key West. The new flights, which will take place Monday through Saturday evenings, are part of a \$10 million allotment by Congress on top of \$28 million to cover operating expenses for Radio/TV Martí. The private aircraft likely will replace the Pennsylvania National Guard Commando Solo C-130 that has been transmitting to Cuba. The new broadcast aircraft currently is being used only to transmit TV Martí, but a future generation of the plane possibly will be outfitted with an FM band transmitter for Radio Martí, according to Alberto Mascaro, TV Martí’s chief of staff. “The transmission from this plane is the fulfillment of the president’s commitment to break the Cuban dictatorship’s information blockade on the Cuban people, and will increase their access to timely and

accurate information that they need at this critical time,' ' Pedro Roig, director of the agency that runs TV and Radio Martí, said in a statement. The Commando Solo C-130 aircraft had been broadcasting the TV signals for only four hours a week since hurricanes destroyed the broadcasting blimp in Cudjoe Key. The new airplane was described only as a twin-engine G1. 'No special equipment is necessary' to receive the station's signals, Alberto Mascaro. "It's an over-the-air signal so all that is needed is a television.' ' (RNMN Weblog as of August 7th, 2006; Source: Miami Herald)

Robert Mawire, CEO of private shortwave station **WRNO**, via a 50-kilowatt transmitter near New Orleans, is focusing his efforts on the Middle East, "to give the people an understanding of America, what we stand for, that we are not against Muslims or the Muslim world." KTVT (Fort Worth), 16 July 2006. Remark by Kim Elliott: New Orleans to the Middle East is a long path for shortwave, and shortwave is not now a popular medium in most of that target region. Furthermore, all WRNO programs are in English. (Kim Elliott, 17 Jul 2006)

**WRNO** website <<http://www.wrnworldwide.org>> listing no transmissions at the moment: Due to the Hurricane Katrina damage to the radio antenna and tower (which is located in Louisiana) the programming schedule has been suspended until the antenna can be repaired and erected. The antenna and tower must be repaired and erected for broadcasting to be restored. Needless to say this is a crucial need at this time, since no broadcasting can take place until this need is met. (JKB, 21 Aug 2006)

**VATICAN:** **Vatican Radio** has no intention of broadcasting adverts even though the media operation weighs heavily on Vatican accounts, officials said today. The station, which employs 200 journalists and transmits to five continents, does not have the right sort of audience to broadcast advertising, network chief Father Federico Lombardi said. He was speaking during the presentation of Vatican accounts, which showed that Vatican Radio soaked up 23.5 million Euro's in 2005 and generated virtually no revenue. "We won't bring in adverts," said Father Lombardi, who has just taken on the job of chief Vatican spokesman as well as that of head of Vatican Radio and TV. "The Radio has an audience which is unlikely to appeal to advertisers," he continued, noting that the network's audience - divided into 40 language groups in scores of countries - was too geographically and ethnically diverse. "What sort of product could be advertised to an audience like that?" he asked rhetorically. Vatican Radio has long been a drain on the Holy See's finances but its existence is never questioned because it is seen as playing a crucial role for the Catholic Church by spreading the words of the pope around the world. (RNMN Weblog as of July 12th, 2006; Source: ANSA)

**VIETNAM:** A disaster preparedness conference in Hanoi on Wednesday heard that **Radio Voice of Vietnam** plans to widen its coverage in the Eastern Sea, currently covered by a shortwave frequency only. Vietnam has 32 broadcast stations along the national coastline in addition to a communications system via border guards and citizens. However, Le Nam Thang, Deputy Minister of Post and Telecommunications, warned that too many communications systems could jam the process. He also said that broadcasters still utilized backward technology like dial-up Internet connections for news and information. (RNMN Weblog as of August 3rd, 2006; Source: Vietnamnet via Thanh Nien Daily)

**ZAMBIA:** The **Zambia National Broadcasting Corporation (ZNBC)** has set aside over 10 billion kwacha (about 2.94 million U.S. dollars) to implement phase two rural TV project, Times of Zambia reports today. ZNBC public relations manager Mirriam Tonga was quoted as saying that money is available and all the tender procedure has been completed. "The installation of new transmission equipment is set but we are being delayed because suppliers are not delivering on time," she said. She said that phase one of the rural TV project covering 26 districts was completed a few months ago at the cost of 4.2 billion kwacha (about 1.24 million dollars). Phase two will cover 17 districts less than phase one. It will cost more than double the amount of money spent on phase one as it involves the installation of new transmitters, down link decoders and transmitter shelters among others, she said. After the completion of the rural TV project, the ZNBC will replace radio transmitters in most parts of the country which receive the signals using the shortwave band. The state-run ZNBC is replacing shortwave with FM band transmitters, she said. (RNMN Weblog as of July 3rd, 2006; Source: Xinhua)

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**Sources & Contributors:**

BC-DX News Bulletin by Wolfgang W. Bueschel - Germany.  
 CONEXION CONEXION Digital - Buenos Aires, Argentina.  
 DXLD Glenn Hauser's DX LISTENING DIGEST - USA.  
 JKB Dr. Juergen Kubiak, Berlin - Germany.  
 Kim Elliott Dr. Kim Andrew Elliott <<http://kimandrewelliott.com>> - USA.  
 MF Michael Frese, Osnabrueck - Germany.  
 OBSERVER Fortnightly edition of Radio Bulgaria's Frequency Management.  
 RNMN R. Netherlands Media Network ©.

**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	

Languages:	Other common abbreviations:
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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After 10 years of compiling the news of DXM, about 111 issues, I want to retire. The main reason for withdraw is to have more time to do other things, including listen to the waves. So this is the last edition of the news section compiled by me. Many thanks to all contributors in the past 10 years, especially to Wolfgang Bueschel.

\*\*\*\*\*  
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# DX LOGBOOK

## Logs around the clock

by Ashok Kumar Bose, Unit # 28, 7035, Rexwood Road, Mississauga, ON, L4T 4M6, Canada  
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### MEDIUMWAVE BAND

Frequ.	UTC	SIO	ITU	Radio Station	Language	Programme Details	Date	Rep.
774.0	0430	231	G	Sherwood Classic	English	Lotto Numbers	2507	MF
1000.0	2130	111	G	Radio Wickford	English	ID, Evening music	1607	MF
1161.0	2035	111	G	BBC,Salisbury	English	ID, News	2307	MF
1197.0	2110	322	G	Weckham Radio	English	ID,Evening Program	1607	MF
1219.0	2305	211	G	Virgin Radio Test from Cardiff	English	ID,Test	1507	MF
1224.0	2050	111	G	Capital Gold, Aberdeen & Dundee	English	Oilworkers	1607	MF
1260.0	2030	121	G	Classic Gold,Buckinghamshire	English	The Royal Family	1607	MF
1325.0	2240	111	G	Classic Gold,Plymouth	English	ID,Program	1507	MF
1332.0	2010	121	G	Classic Gold,Yorkshire	English	Emigrants to New York	1607	MF
1341.0	0015	211	G	Classic Gold,Blackpool	English	Oxfam	2407	MF
1368.0	2000	111	G	Spectrum Brighton	English	Our Boys are Gunfood	2207	MF
1368.0	2010	222	G	Radio Swansea	English	UK and the World	2307	MF
1388.0	2215	121	G	South County Wales,Cardiff	English	ID,Hits around Cardiff	1507	MF
1413.0	0430	222	G	Edinburgh Premier Christian Radio	English	God is our Lord in Edinburgh	1407	MF
1458.0	1950	222	G	Capital Gold, Brighton	English	Jingles Advts.	2307	MF
1530.0	2145	111	G	BBC,Plymouth Gold	English	ID,Phone-in	1507	MF
1550.0	2055	343	ALG	RASD, Tindouf Rabuni	Arabic	Phone-in Politics	0707	WB
1566.0	2115	221	G	Classic Gold, Chelsea	English	Chelsea News	1507	MF
1566.0	2140	322	G	County Sound Radio,Bournemouth	English	ID,Hits	1407	MF
1602.0	0425	111	G	Christian Premier Radio, Leeds	English	Jesus is our life	1007	MF
1602.0	0400	221	G	Edinborough Spectrum	English	Edinburgh Highland Guards	1407	MF

### TROPICAL BANDS

Frequ.	UTC	SIO	ITU	Radio Station	Language	Programme Details	Date	Rep.
4770.0	1935	232	NIG	Radio Nigeria,Kaduna	Vernacular	Talks	0707	WB
4775.0	0428	222	SWZ	TWR, Manzini	English	ID, Religious program	1207	RAD
4777.0	0500	433	GAB	Radio Gabon	French	Talk,Highlife vocals	2406	RAD
4780.0	0202	222	GTM	Radio Cultural Coatan	Spanish	Vocals,music and brief talks	0907	RAD
4790.2	0254	222	PRU	Radio Vision	Spanish	Religious vocals	2706	RAD
4800.0	2010	343	CHN	CNR,Gejiu	Manadrin	Classical music	0707	WB
4810.1	0856	211	Mex	Radio Transcontinental da America	Spanish	Talk,Music segement,ID	0407	RAD
4820.0	2013	344	CHN	CNR,Lhasa	Mandarin	Classical music	0707	WB
4835.5	1940	232	MLI	RTM,Bamako	French	Program in low modulation	0707	WB
4845.0	1945	333	MTN	Radio Mauritania	Arabic	News,Sahel guitar/flute	0707	WB
4910.0	0824	111	AUS	VL8T,Tennant Creek	English	Man talking	1107	RAD

4915.0	1950	232	GHA	Ghana Broadcasting Corp.	Vernacular	Program	0707	WB
4930.0	2025	333	BOT	VOA,Botswana	French	Program	0707	WB
4940.0	2028	444	BOT	VOA,Botswana	English	African Pop music	0707	WB
4976.0	1955	333	UGA	Radio Uganda,Kampala	English	Commentary	0707	WB
5005.0	1957	333	GNE	Radio Nacional	Spanish	ID,African songs	0707	WB
5010.0	0256	222	MDG	Radio Madagasikara	French	National Anthem,ID and music	2206	RAD
5025.0	2005	332	BEN	Radio Benin,Parakou	French	West African music	0707	WB
5026.0	2002	222	UGA	Radio Uganda,Kampala	Vernaculars	Program	0707	WB
5030.0	2007	232	BFA	Radio Burkina,Ouagadougou	French	ID,Talks	0707	WB

## SHORTWAVE BANDS

Frequ.	UTC	SIO	ITU	Radio Station	Language	Programme Details	Date	Rep.
5500.0	0355	211	ETH	Voice of Tigraey Revolution	Tigrinya	IS,Talks	2506	RAD
6030.0	0900	444	USA	Radio Marti via Delano	Spanish	Anns., Program	2607	RAD
6050.0	0435	111	NIG	Voice of Nigeria	English	Fire in Africa	2107	MF
6065.0	0410	111	ZMB	Christian Voice	English	God bless not Africa	2107	MF
6070.0	1600	555	RUS	Voice of Russia	English	Program	3105	MDS
6145.0	0010	322	CAN	CRI	English	Satellite Technology	1707	MF
6145.0	0030	322	CAN	Radio Japan,NHK	English	N. Korea's long distance rockets threats	1707	MF
6175.0	2044	433	AFS	RFI,Meyerton	Portugese	ID	0707	WB
6175.0	0510	321	MLA	Voice of Islam	English	Children of Israel & Lebanon	2107	MF
6205.0	2048	444	ALB	Radio Tirana	Albanian	Night Service	0707	WB
6940.0	0332	211	ETH	Radio Fana	Amharic	News,Music,ID	2706	RAD
7200.0	0341	211	SDN	Radio Omdurman	Arabic	Music,Time pips,ID,News	2306	RAD
7220.0	1420	555	RUS	Radio France Intl.,	English	Program	1405	MDS
7260.0	0400	333	G	Radio Algerienne via Rampisham	Arabic	Music,ID,Talks, Quran	2406	RAD
7283.5	1510	232	MLI	RTM.Bamako	French	Program . QRM with Ukraine	0807	WB
7355.0	0145	232	UZB	CVC	English	Book of Daniel	1707	MF
9345.0	1417	555	UZB	Radio Nederland	English	Program	3105	MDS
9560.0	0210	111	CAN	KBS,World Radio	English	Koreas Medias Worldwide	1707	MF
9580.0	1410	111	CHN	RFI	English	China's A-Bomb Export	2207	MF
9625.0	1500	555	AUS	Radio Australia	English	Program	2405	MDS
9750.0	0330	221	SEY	BBC World Service	English	News Headlines	0207	RAD
9760.0	0021	222	OMA	Radio Oman	Arabic	Quran,Talks,Music	2606	RAD
9855.0	0140	322	MRC	VOA Via Morocco relay	English	Newstalk,World News,ID	0907	RAD
11805.0	0315	333	G	Sudan Radio service	English	Interview ,ID,UN Report on HIV	1907	RAD
11860.0	1445	444	INS	RRJ,Jakarta	Italian	Program	0807	WB
11860.0	0130	121	SNG	Radio Japan,NHK	English	National Bank rates	1707	MF
11905.0	1440	333	CLN	SLBC, Ekala	Hindi	Music	0807	WB
11920.0	0225	222	MRC	RTM	Arabic	Talks,ID,Quran	0107	RAD
11930.0	0357	333	BLR	Belarus Radio 1 (Home Service)	Belarussian	ID,Pop music program	1507	RAD
11975.1	0314	111	UAE	AWR	Tigrinya	Religious talks	0107	RAD
12065.0	0821	111	RUS	Radio Tikhey Okean	Russian	ID,News,Folk songs	1107	RAD
13570.0	2110	111	USA	WINB	English	No QSL for RR's from Europe	2207	MF
13820.0	1820	555	D	CVC via Wertachtal realy	English	Religious Pop Music	0907	WB

13830.0	1420	555	D	CVC via Juleich relay	English	Program	0807	WB
13840.0	1857	333	D	IBRA Radio via Wertachtal	Arabic	Program	0907	WB
13850.0	1417	432	ISR	KOL,Israel	Persian	Program jammed by Iran	0807	WB
15075.0	0236	222	IND	All India radio,Bangalore	Hin di	Vocals,Drama in Kannada	0207	RAD
15100.0	0220	555	KRE	Voice of Korea	English	Program	3105	MDS
15149.8	1855	433	INS	Voice of Indonesia	German	Indonesia ASEAN relation	0907	WB
15170.0	1220	555	J	Radio Canada Intl., via Yamata relay	English	Program	1405	MDS
15190.0	0900	131	GNE	Radio East Africa	English	AIDS in Africa	2307	MF
15190.0	1853	222	PHL	PBS,Tinang	Tagalog	ID,Address	0907	WB
15245.0	2120	333	KRE	Voice of Korea	Englis	North Korean Army	2207	MF
15250.0	2100	131	USA	KJES	English	God in Vado	2207	MF
15270.0	0300	555	PHL	Radio Philipinas	English	Program	3005	MDS
15295.0	1850	555	MLA	RTM,Kajang	Malaysian	Nice malaysian singer	0907	WB
15355.0	1845	555	GAB	NHK,Moyabi	Japanese	Folk music singer	0907	WB
15365.0	1420	454	EGY	Radio Cairo	Arabic	Program with distorted audio	0807	WB
15435.0	1132	555	GUM	AWR, Guam	English	Program	3105	MDS
15560.0	0315	555	RUS	Vatican Radio	English	Program	3005	MDS
15660.0	1840	555	F	LBJ via Issoudun relay	Vernaculars	Program	0907	WB
15735.0	1245	555	SWE	Radio Sweden	English	Program	2905	MDS
15795.0	1415	555	D	CVC,Juleich	English	Religious pop	0807	WB
17560.0	1835	454	G	UN Radio via Rampisham relay	Arabic	Israel Iraq problem	0907	WB
17595.0	1610	555	D	Deutsche Welle	English	Program	1405	MDS
17635.0	1410	555	GAB	Libyan Clandestine		West African great music	0807	WB
17660.0	1150	555	IRN	VOIRI	English	Program	3105	MDS
17725.0	1405	343	F	LBJ via Issoudun relay	English	African politica	0807	WB
17850.0	1400	555	F	LBJ, via Issoudun relay	English	ID	0807	WB
17870.0	0418	555	ROU	Radio Romania Intl.,	English	Program	3005	MDS
21680.0	1350	232	ARS	BSKSA Riyadh	Indonesian	Program	0807	WB
25870.0	1425	121	USA	WFLA	English	God has QSL's not for us	2207	MF

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

MDS : Malinda de Silva, Sri Lanka. Receiver and antenna details unknown.

MF : Michael Frese, Osnabrueck, Germany. SONY ICF SW 7600G with Telescopic antenna.

RAD : Rich D'Angelo, Wyomissing, Pennsylvania, USA. Ten-Tec RX-340 & Drake R-8B with 500/200 feet long wire, Datong FL3.

WB : Wolfgang Bueschel of Germany on tour to Palma de Mallorca, Spain with SONY ICF 2001 & 12 metres longwire antenna.

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Dear Friends,

Welcome to the August edition of the Logbook. By mistake I referred to my last Logbook as a double edition whereas it should have been this edition of the Logbook.

After a heat wave in the Northern hemisphere we seem to have some moderate climate. The propagation seems to be normal so some DX ing is possible.

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

*Ashok Kumar Bose*



## FEBC History

*This chronological historical outline presents significant milestones in FEBC/FEBA history. It is not all inclusive, but touches upon some of the events which have helped shape our organization.*

### 1945

● December 20 - FEBC Incorporated in Los Angeles, California. John Broger, President; Robert H. Bowman, Vice President; William J. Roberts, Executive Secretary are the original officers of FEBC. The office is established in Hyde Park District, Los Angeles.

### 1946

- April - John Broger arrives in Shanghai aboard the S. S. Lane Victory, to talk with missionaries about establishing a Christian radio network.
- May- FEBC issues its first regular, informational newsletter, The FAR EAST Broadcaster. Mrs. Dorothy Broger was editor for the first four years; Mrs. Eleanor Bowman, wife of Robert Bowman, did the original artwork, and assumed editing responsibilities in 1950.
- June - The China Christian Broadcasting System (CCBS) is established in Shanghai. The hope is to open radio stations in China through this local organization.
- August - John Broger goes to the Philippines to seek a base for FEBC there.
- September - Franchise granted for stations in the Philippines.
- October - Construction of Manila transmitters begun in Los Angeles
- November - Final payment made on 12.5 acres of land in Karuhatan, Bulacan, Philippines
- December - Passports and visas obtained for FEBC's first missionary family (the Arvid Viedmarks).
- - A report is made public showing that the total expenses of operation of FEBC in the U.S. and in Asia for this first full year of operation is a little over US\$50,000!

### 1947

- March 20 - First "Call of the Orient" promotional radio program airs on stations in the U.S.
- April- The Veidmarks arrive in the Philippines to begin preparation of Karuhatan property.
- April - First FEBC broadcasts are released in Shanghai on local stations...these are produced in Shanghai in cooperation with local Christians, and aired under the new China Christian Broadcasting System.

### 1948

- May 31 - KZAS License is granted.
- June 4 - KZAS (later redesignated as DZAS) goes on the air.
- July 4 - KZAS officially dedicated as FEBC's first broadcast station.
- - Chinese broadcasts on KZAS, 680 KHz, clear channel, are heard in China fairly well at night, and are unofficially the first FEBC broadcasts to China!

### 1949

- July 29 - DZH-6, a 10,000 watt transmitter, goes on the air as FEBC's first short wave station. Chinese, Russian, and many other Asian languages are begun. By the end of this year, 27 languages are already on the air.
- October 1 - The People's Republic of China is declared, beginning a decades-long isolation from the rest of the world. FEBC, which has begun broadcasting to that country only three months before, will not receive any significant mail from fearful listeners for the next 30 years.

### 1950

- Another short wave transmitter, DZH7 is added, making three transmitters on the air now, DZAS-AM, DZH6 and DZH7.
- January - Portable Missionaries ("PMs") , FEBC-built pretuned radio sets are distributed throughout the

Philippines for the first time. Many are pretuned to DZAS, the local AM station; the remainder to tropical band transmitters for the provinces. Eventually, about 3000 will be given out in areas where radios are a novelty. Many Filipinos will come to know Christ through this effort. The cabinets are hand-made made of mahogany plywood; the chassis are formed from the aluminum of 15-inch acetate recording discs.

### 1951

- January- By now five transmitters are in operation at the Karuhatan, Bulacan site.
- April-First broadcasts to Thailand are initiated.
- September - First broadcasts to Japan.

### 1952

- January- FEBC explores the possibilities of opening up a station in Greece, but this project eventually is closed when the government reneges on an earlier commitment.
- April- Paul and Priscilla Johnson, producers of the FEBC Thai broadcast, are murdered while conducting a worship service in the north of that country.
- May- China initiates forcible collectivization of property, and executions of millions of "class enemies" take place. Churches are closed. It becomes increasingly apparent that Christian radio will be one of the very few ways Chinese Christians can be fed spiritually, and the only means of mass communication of the gospel.
- June- FEBC Thailand ministry is reorganized, with the help of the Christian and Missionary Alliance.
- - FEBC's first Vietnamese broadcasts are produced in Vietnam with the help of missionaries and local Christians. A more detailed history of the FEBC Vietnamese programming effort is found under the FEBC-Vietnam Home Page.

### 1953

- January - By now seven transmitters are in operation at the Karuhatan site: DZAS, DZB2, DZH6 for Philippines coverage, and DZH7, DZH8, DZH9 and DZI6 for overseas service.

### 1954

- July - DZFE, FEBC Philippines' classical music station, is inaugurated as an AM station on 1030 kHz. Eventually, the station will switch to FM. Since its inception, this station has won numerous awards. Details on this station's history and awards are found on the the FEBC-Philippines' website.
- September - New Collins transmitter boosts power of DZH-7.
- November - Broadcasts begun in Formosa.

### 1956

- February - VOA facility in San Francisco, scheduled for decommissioning, is dismantled by FEBC personnel and an army of volunteers for shipment to Manila where equipment will be used by FEBC for broadcasting the Gospel.
- June - FEBC interviews Billy Graham and helps publicize the Manila crusade. Bob Pierce, founder of World Vision accompanies Graham, and visits FEBC studios.

### 1957

- - AM Broadcasts in Russian from South Korea are initiated on HLAZ.
- April - Purchase and develop property at Bocaue, Philippines for expansion of short wave services.
- May - Initial inquiries made regarding setting up radio stations in Okinawa.
- December - KSAB and KSDX, FEBC local AM stations, for American and Japanese communities, respectively, go on the air in Okinawa.

### 1958

- April 3 - KSAB is officially dedicated. Standing in front of the KSAB studio are (l. to r.): Arthur Austin, Lois Veit, William Roberts, Dale Smith, Frank Ineson, Robert Kellum.
- September - First 50,000 (RCA) SW transmitter goes on the air at Bocaue, Philippines and is dedicated at a special inauguration ceremony.
- September - FEBC Hong Kong studio opened.

### 1959

- - FEBC Japan (Tokyo) begins operations.

### 1960

- June 8 - A fire ravages KSAB. An electrical short is blamed. The damage is estimated at \$15,000. (Naha, Okinawa)
- July - Chinese language production begins from FEBC Hong Kong.
- March - FEBC purchases and begins operation of short wave station KGEI from San Francisco, California.
- - The New Delhi Office and studio (later to become FEBA-India) is opened and dedicated.

**1961**

- January - 100kw KSBU AM begins operation from Okuma, Okinawa to China on 850 kHz.
- May 1- KSBU is officially dedicated .
- November - FEBA Singapore committee is formed and its inauguration is celebrated with a "tea" for more than 50 invited guests, with Dr. Robert Bowman as the special guest speaker.

**1962**

- - FEBA Singapore begins operations.
- October - KGEI receives a special commendation for its part in assisting in communications to Cuba during the Cuban missile crisis. Dr. Robert H. Bowman accepts the award from President John F. Kennedy, famed news reporter Edward R. Murrow and FCC head Newton Minow at a ceremony at the White House. Mr. Minow is famous for his remark that "Television is a vast wasteland."

**1964**

- DXKI-FM is inaugurated in Koronadal, South Cotabao, Mindanao, Philippines. Details on this station's history and awards are found on the the FEBC-Philippines' website.
- October - FEBA Bangalore, India office dedication.
- November - Far East Broadcasting Associates of India (FEBA-India) is officially launched under the laws of the State of Karnataka.

**1965**

- August 13 - Howard Alan Golding, 11½ , son of FEBC missionaries Dale and Belvah Golding dies of Encephalitis in Singapore. Howard's is the first death in an FEBC missionary family.
- - Later this year, Millie Bell dies from rabies in New Delhi, India. She was bitten while protecting their son from an attack by a dog. The Bells served with Far East Broadcasting in India and Hong Kong.

**1967**

- January - At the annual FEBC Directors' Conference held in Manila, it is unanimously voted to investigate alternative transmitting sites in the Indian Ocean, to more adequately reach India and the South Asia sub-continent.
- April - John and Alica Wheatley visit Seychelles to conduct a feasibility study and talk to the Governor and officials, after clearing the way in London at the Foreign and Commonwealth Office.
- July - Approval is received from the Seychelles Government to establish a short wave station to broadcast to South Asia, the Middle East and East Africa.
- August-November - Full scale activity begins to purchase land in Seychelles, recruit staff, and to raise funds for this major venture through the newly established FEBA-UK.

**1969**

- DXJO (eventually DXAS, Zamboanga) is inaugurated in Jolo, Sulu, Philippines, beginning FEBC's service in Muslim-dominated areas of this country. Eventually the station will have to move because of the dangerous situation in Jolo. But bad things will happen in Zamboanga in 1992.
- November 12 - YASKI (FEBC-Indonesia) begins ministry under the leadership of Rev. Basil Costerisan, Dr. Ais M.O. Pormes, Rev. Dr. Yunus Atmarumeksa, and Prof. Dr. Julius E. Ismael.

**1971**

- February - Land purchased on Cheju Island, S. Korea for stations for China.
- May - Antennas dismantled in Sacramento, California for shipment to Cheju.

**1972**

- DXFE is inaugurated in Davao City, Mindanao, Philippines. Details on this station's history and awards are found on the the FEBC-Philippines' website.
- May 15 - KSBU, Okinawa decommissioned, as Japan resumes control of Island. Local station KSAB becomes JOFF, and KSDX becomes JOTF. JOTF is ceded to a local non-profit Japanese organization.
- September - President Ferdinand Marcos declares Martial Law in the Philippines, closing all mass media outlets. Because of FEBC's credible neutrality, FEBC is allowed to return to broadcasting within a week, the only non-government station so permitted for many weeks to follow.

**1973**

- DWAS is inaugurated in Legaspi City, in the Bicol/Albay region, Luzon, Philippines. Details on this station's history and awards are found on the the FEBC-Philippines' website.
- June - 250kw HLDA-AM (later to redesignated HLAZ) is dedicated for service to China, Japan and S. Korea.

**1974**

- January FEBC re-opens studio/office in Saigon, S. Vietnam
- - FEBA Pakistan opens offices.

**1975**

- DYFR-FM is inaugurated in Cebu City, Cebu, Philippines. Details on this station's history and awards are found on the the FEBC-Philippines' website.
- April - In one of the most dramatic stories of FEBC, the Saigon staff is rescued from sure capture by communists days before the fall of that city.
- July - DWRF-AM (250kw) begins transmissions for China from Iba, Zambales, Philippines. Details on this station's history and awards are found on the the FEBC-Philippines' website.

**1976**

- - FEBA Kenya opens offices.
- - JOFF Okinawa, service to American military and dependents, discontinues operation. FEBC-Okinawa closes all operations.

**1978**

- - FEBA opens offices in Beirut, Lebanon.
- April - KSAI-AM goes on the air in Saipan.

**1979**

- January - FEBC-USA moves offices from Whittier to La Mirada, California.
- - FEBC New Zealand opens offices.
- After thirty years, since broadcasts had first begun to China, and in conjunction with the "opening" of China, Chinese listeners begin to write for the first time to the FEBC Hong Kong office. It is only now, after three decades of broadcasting "by faith," that we learn of the great impact missionary radio has had on the growth and sustenance of the Chinese Christian church.

**1980**

- - Broadcasts in Russian are begun from HLAZ-AM, South Korea.

**1982**

- - Biblical Education for All through Media (BEAM) begins airing on DZAS, Manila, Philippines and on the Overseas English service. In the next ten years, about 3,500 people are trained, many of whom would lead important ministries in the years following.

**1983**

- July 27 - Byrd Brunemeier, veteran FEBC engineer, is electrocuted while making repairs on the high voltage stage of 10kW KSAI transmitter in Saipan.

**1984**

- - FEBA Radio opens offices in Zimbabwe.
- - KFBS-SW, Saipan, four 100kw SW transmitters, goes on the air.

**1985**

- DZB2 is inaugurated for reaching Mangyans in on Mindoro Is., Philippines. Details on this station's history are found on the the FEBC-Philippines' website.
- September - World by 2000 (eventually World by Radio) partnership formed with TWR, HCJB and SIM. The goal is to identify and produce broadcasts for the world's people groups who have little or no Christian broadcasts.

**1986**

- - FEBA Radio opens offices in Cyprus.
- July 14 - Don Bower, missionary engineer, drowns when he is swept off a rock by a large wave while hiking along the eastern coast of Saipan, known for its steep cliffs and violent surf. Fellow hikers were unable to rescue him. He apparently struck his head when he was toppled into the sea.
- December 3 - Super typhoon "Kim" with peak winds of 212 mph hits FEBC Saipan, causing extensive damage to antennas.

**1989**

- July 3 - HLAD-FM, Taejeon, South Korea goes on the air.

**1990**

- July - A massive earthquake rumbles through Luzon, Philippines, causing significant loss of life and property. FEBC Philippines suffers physical damage at several locations.
- October - FEBC introduces the "MSWP" (Manila Short Wave Project) a major refurbishing of SW facility at Bocaue, to serve SW-dependent people groups in Southeast Asia. Later renamed "S.A.V.E. (SouthEast Asia

Voice of Evangelism)"

### 1991

- June 9 - Mt. Pinatubo erupts in Luzon, Philippines. This disaster impacts FEBC Philippines in several areas, including its eventual protracted involvement in radio-related relief efforts which continue until this day. Also major work has to be done at the Iba, Zambales to protect valuable equipment against the volcanic dust.
- Another powerful typhoon hits Saipan, causing considerable damage to equipment.

### 1992

- - Weekly Russian broadcast on Mayak network is begun (discontinued later).
- January - Dr. Robert Bowman, co-founder and President, retires.
- February - FEBC Russia is incorporated in Khabarovsk.
- April 1 - FEBC Russian Ministries studio/office is opened in Sacramento, California.
- June - FEBC Russia office/studio opened in Novosibirsk
- September 21 - Muslim political extremists Abu Sayyaf terrorist group attack FEBC station DXAS, Zamboanga (Philippines), killing three persons including Tausug language broadcaster Greg Hapalla and control operator Greg Bacabis. The killings are carried out after phoned threats against DXAS for broadcasting to the Muslim Tausug. The Tausug themselves were not complaining about the broadcasts, in fact were enthusiastic listeners. Some time passed before Abu Sayyaf took credit for the murders.

### 1993

- - FEBC re-opens offices in Phnom Penh, Cambodia
- April - Program production and local broadcasts begun in Novosibirsk, Russia
- November - Program production and local broadcasts begun in Chernovtsy, West Ukraine

### 1994

- July 31 - KGEI decommissioned. (KGEI's 50kw transmitter is donated to SIM International for use in Monrovia, Liberia. Shortly after installation there, the transmitter is destroyed by a rebel attack).
- August - FEBC-Russia office in Moscow is opened.
- September - FEBC studio and local broadcasts are started in Gorlovka, Ukraine.
- October 3 - Back-to-back typhoons again pound Saipan. Again the damage is significant.
- October - First FEBC Russia building in Khabarovsk is completed and dedicated.

### 1995

- January - Production and local broadcasts begin in Vladivostok, Eastern Russia.
- March- Jim R. Bowman, son of co-founder Robert H. Bowman, is named President of FEBC-USA.
- September - FEBC Studio in Slavyansk, Ukraine is opened.
- December- An explosion and fire cause 3 deaths to construction workers, and \$1 million damage to FEBC Korea FM station in Taejon, S. Korea.

### 1996

- March 16 - HLDD-FM, Changwon, South Korea goes on the air, serving the Pusan area.
- October - Program production and local broadcasts begin in Chita, Eastern Siberia, Russia

### 1997

- January - FEBC-Russia initiates Christian news center in Russian on the internet.
- February - Program production and local broadcasts begin in Ussuriysk, Eastern Russia.
- December - Program production and local broadcasts begin in Izhevsk, Russia.

### 1998

- January 19 - HLAZ-FM, Sogwipo, Jeju, South Korea goes on the air in Koean simulcast with HLAZ-AM.
- March - Digitale Radio Mondiale (DRM) is inaugurated, signaling a major advance in AM technology. The International Telecommunications Commission will eventually approve standards for this system which is expected to revolutionize Short Wave and regular AM signals with "CD" quality sound.
- July 23 - Cambodia grants two AM radio station licenses to Far East Broadcasting. The first station is expected to be on the air by early 1999.
- July - Program production and local broadcasts begin in Kemerovo, Siberia, Russia.
- August - FEBC purchases an FM station in the city of Jakarta. By year's end the station is operating 19 hours a day to this city of 8.5 million.

### 1999

- - License granted to FEBC-Korea for construction of FM station in Sok'cho.
- February - Program production and local broadcasts begin in Blagoveschensk, E. Russia.
- July - Program production and local broadcasts begin in Krasnoyarsk, E. Russia.

● July - Despite holding two valid AM licenses for stations in Phnom Penh, the customs department of Cambodia refuses to allow the imported transmitters off the docks (Cambodia's is a coalition government, still containing elements of the Khmer Rouge). New negotiations produce an FM license. The radio project now aims at mid-2000.

● - S.A.V.E. antenna construction phase is completed.

## 2000

● March - Licenses granted to FEBC-Korea for operation of FM stations in the capital city of Seoul, and the cities of Mok'po and Po Han.

● May - License granted to YASKI (FEBC-Indonesia) for construction of a radio station in Samarinda, Kalimantan.

● June 1- FEBA-Singapore aid in the production of FM broadcasts six hours (three two-hour blocks) daily from Batam Island, Indonesia for service to the country/city of Singapore.

● June - Abraham Intal, eldest son of FEBC-Cambodia director Samoeun Intal dies in a water-related accident while swimming in the ocean. He apparently suffered a seizure or aneurism while struggling against strong surf.

● August- FM license granted to FEBC for operation of station in Ulaan Baatar, Mongolia.

● September - Program production and local broadcasts begin in Barnaul, Siberia, E. Russia.

● July - Radio Heartline, Samarinda, E.Kalimantan, Indonesia goes on the air.

● December 22- HLKX-FM, Seoul, South Korea goes on the air with a license to simulcast HLKX-AM.

● December- FEB International raises total broadcast hours to over 500 hours daily.

## 2001

● March - New S.A.V.E. antenna system inaugurated in Bocaue, Philippines.

● March - Inauguration of full time operation of RadioTserkov (later re-named "Teos") AM 963 in Moscow.

● March - FEBC Thailand now heard on 25 stations nation wide, an increase of 15 new stations since 1997.

● April - WIND-FM, 104.5, Ulaan Baatar, Mongolia, goes on the air officially. It had been in test transmission mode since October, 2000.

● April 2 - HLKW-FM, Mokp'o, South Korea goes on the air.

● April 26 - Fire breaks out in FEBC studio under construction in Phnom Penh, Cambodia, killing construction worker Pu Ly.

● July 23 - Antenna permit issued to FEBC-Cambodia after many months of waiting. .

● August 27 - HLDY-FM, Yeondong (Sokcho), South Korea, goes on the air

● November 12 - HLDZ-FM, Pohang, South Korea goes on the air.

## 2002

● January 21 - Test broadcasts, followed by a regular schedule, begin for station KRUSA, FEBC Cambodia, in Phnom Penh .

● February 25 - HLQR-FM, Ulsan, South Korea goes on the air.

● May - Local station KSAI in Saipan is closed.

● February 28 - License issued for station in Bali, Indonesia.

● February 28 - Radio Heartline, Lampung, Indonesia goes on the air.

● March - FEBC/FEBA total daily hours now at 624.

## 2003

● January - FEBC holds first Staff Congress in Tagaytay, Philippines. The congress' emphasis is upon enabling fellowship among FEBC's multicultural staff, especially those who do not ordinarily travel.

● January - WIND-FM, Ulaan Baatar, Mongolia is destroyed by an electrical fire.

● March - Responding to changing patterns in world broadcasting as well as to government reclamation of land around its reef aerial site, Feba ceases its Seychelles operation and begins transmitting to its audiences from a range of alternative outlets.

● September - The last component of the multimillion dollar SAVE/Redemption project is installed. On March 31 the new 100kw transmitters were commissioned at Bocaue, Philippines. Fund raising for the project ceased May 28. The fourth transmitter of the project was moved down from Saipan and commissioned in September. The project was begun as the Manila Short Wave Project (MSWP) in October of 1990. SAVE Antenna Detail.

● September - Gregg Harris succeeds Jim Bowman as President of FEBC, USA.

● December - The FEBC International Office is registered and established in Singapore.

## राष्ट्रीय भौतिक प्रयोगशाला, नई दिल्ली

# National Physical Laboratory



### The Story of the Indian Chronohertz Station ATA by Dr. Adrian M. Peterson, N9GWY

It was back in the year 1956 that the National Physical Laboratory on the edge of New Delhi in India began to formulate plans for establishing a radio broadcast service for the dissemination of very accurate time signals on a very accurate frequency in the international shortwave bands. Three years later, on February 4, 1959, this new broadcast service was launched without prior publicity using a 2 kW transmitter on exactly 10 MHz.

This new station was located at Kalkaji, in Greater Kailash on the edge of New Delhi. The antenna was a horizontal dipole one wavelength high directed physically northeast - southwest giving it an almost circular coverage pattern.

The frequency 10 MHz is used by many other chronohertz stations in Europe, the United States, the Pacific & Asia, but the lower power of all of these units means that little interference is encountered in the main coverage area of each station. In 1974, the National Physical Laboratory installed an atomic caesium clock, thus increasing the accuracy of the time signals to an infinite degree.

It was in the following year 1974 that the international radio community in Southern Asia began to focus attention on this station, and as a result of reception reports from many distant listeners, QSL letters were issued by the station director. One year later again, an 8 kW transmitter was installed at ATA, replacing the original 2 kW unit.

In November 1976, the National Physical Laboratory conducted a three day convention under the title, "Seminar on Time & Frequency". Our own DX editor, Dr Peterson, was invited to present a paper at this convention on "The Usage of Chronohertz Signals by DXers, Shortwave Listeners & International Radio Monitors". He also designed a new QSL card for them. At this seminar, they also announced that an additional 8 kW transmitter had just been inaugurated for use on the additional channel 15 MHz.

During the following year, an additional transmitter of the same power was installed at station ATA and this radiated on 5 MHz. By this time, the old AWR DX program "Radio Monitors International" was well established, and so, beginning in 1978, an annual "ATA Day" was conducted on air, drawing attention to the station and to the availability of their QSL card.

In 1988, the chronohertz signals from ATA were placed onto the INSAT satellite over India, and by this time, the transmitters were ailing and at times malfunctioning. After a long period of consideration, and increasing technical problems, the decision was finally made not to replace the old electronic equipment, but rather to take the station off the air. Jose states that ATA staff told him in telephone conversations that the radio station was closed somewhere around the year 2000.

Over the more than 40 years of broadcast activity, station ATA in New Delhi had been on the air with a total of four different transmitters on three different channels, 5 MHz, 10 MHz & 15 MHz. Their signal was heard throughout Southern Asia and at times in countries far beyond, and there are just a few distant listeners who are now holding a historic QSL card from station ATA, printed with black text on a yellow card.

Note by Jose Jacob: Standard Frequency and Time Signals Service in the world is a topic for the Amateur Radio exam in India.

(Dr. Adrian M. Peterson, N9GWY, DX Editor, AWR Wavescan - Adventist World Radio via Jose Jacob, VU2JOS, National Institute of Amateur Radio, India)

# THE RADIO NORTHSEA STORY

by Chris Edwards

## RADIO NORTHSEA INTERNATIONAL

In 1969, after being involved with the refitting of the MV Galaxy - former home of Radio London, Edwin Bollier and Erwin Meister started to set up their own station.



The 124 foot 347 ton Bjarkoy was purchased and renamed Mebo. The Ship had been built by Tronsjems M/V at Trondheim in Norway. After work to convert her into a radio ship had started it was decided that a larger ship was required. The Mebo was then fitted out to become a supply tender for the new ship, Mebo II.

The Silvretta was built in 1948 by De Groot and Vliet at Slikkerveer Holland, she was 630 tons and 186 feet long. The ship was renamed Mebo II and then converted into a radio ship in the same shipyard that built her.

The Silvretta was purchased for £25,000 and a further £65,000 was spent on converting her to a Radio ship.

### 1970

**22nd January.** The Mebo II left Slikkerveer for an anchorage off the Dutch coast.

**23rd January.** At 22:30 test broadcasts started on 6210 Khz and 102 Mhz, with non stop music, announcements about the Radio Northsea International\* were made in German by Horst Reiner and in English by Roger Day.

\* Note the spelling of the station name. Dutch and German promotions used the name Radio Noordzee International, English promotions used Radio NorthSea International. Painted on the ship was an alternative - Radio Nordsee International.

**11th February.** Test broadcasts commenced on medium wave 1610 Khz / 186 Metres.

**18th February.** With the arrival of DJ's on board, live test broadcasts start.

**28th February.** 06:00 Official opening of the the station with German programmes. The German schedule was 06:00 - 08:00, 18:00 - 20:00, with English programmes 08:00 - 18:00 and 20:00 - 24:00.

**4th March.** The German evening service was extended to 21:00, with the English service following until 02:00.

**23rd March.** In the late afternoon the Mebo II set sail for the English coast, anchoring off Clacton at 09:00 the next morning.

The medium wave transmitter caused extreme interference to Walton on the Naze Coast guards, who had to increase their transmitter power by ten fold just to stay in touch with the lightships and Trinity House vessels.

**27th March.** Having been made aware of the interference the medium wave transmitter was switched off at 13:25.

**1st April.** The shortwave transmitter went off air, and the station was off air on all frequencies.

**10th April.** The station returned on 102 Mhz and 1578 Khz / 190 Metres.

**15th April.** The Ministry of Posts and Telecommunications (MPT) commenced jamming the medium wave frequency from the Naval radio station at Rochester, Kent, UK with a 800 Hz tone. It was stated this was being done at the request of Italy and Norway. At 20:30 RNI left the air.

**30th April.** 21:00 RNI was back on the air on 1385 Khz / 217 Metres, and a new FM frequency of 100 Mhz, but the jamming continued.

**13th May.** A frequency change to 1230 Khz / 244 Metres was made.

**18th May.** The jamming recommenced at the request of Czechoslovakia, or so the MPT claimed, but RNI stated they had permission from Czechoslovakia to use this frequency.

The Navy transmitter had a power of 10,000 Watts, so not only achieved it's aim but also interfered with BBC Radio 1 in much of the Kent area.

**28th May.** RNI started to try and dodge the interference by jumping between 1227 Khz and 1232 Khz every fifteen minutes, but the jamming followed, and the frequency jumping was given up.

**30th May.** A demonstration is held outside the Post Office station at Beacon Hill, in Kent.

The British Labour Party called a general election for the 18th June. It was the first time eighteen year olds had been given the right to vote. RNI had made it clear that if the Labour party was returned to power they would close down.

**13th June.** RNI changed its ID to Radio Caroline International.



**14th June.** In London, a rally was held in support of Radio Northsea. A protest march took place from Hyde Park to Downing Street and then to Trafalgar Square.

**16th June.** The Clacton on Sea lifeboat took off four crew members.

**17th June.** A plot of land owned by the Marconi Company at Canewdon, Essex was taken over by the authorities. Army personnel erected two marquee tents, one for the 500,000 Watt RCA transmitter, which was run at an estimated 200,000 Watts and the other housed the power generators. The site was heavily guarded at all times by armed army personnel.

**20th June.** The station reverted back to RNI.

**27th June.** A frequency change to 1382 Khz / 217 Metres was made to avoid the jamming.

**30th June.** The Canewdon transmitter was switched off, but was replaced by the less powerful transmitter at Rochester, Kent.

**1st July.** The 6210 Khz service returned (it had been used in the last week of June for tests on 9940 Khz).

**2nd July.** Rogaland Radio (a Norwegian coastal station) started broadcasting on 6210 Khz. The transmitter was used in upper sideband mode and put out the message "Our aim is to clear the channel of unauthorised and out of band transmissions". The ITU list of coast stations shows that Rogaland was only authorised to use 516 Khz and 1729 Khz.

**14th July** the Ministry of Posts and Telecommunications stated the jamming would continue while RNI stayed on air.

**23rd July.** RNI closed down at 10:55. With the aid of a crane ship the Mebo II lifted it's anchor and sailed back to Holland.

**24th July.** 07:00 RNI recommenced broadcasting, FM was once again on 102 Mhz, but jamming did not restart. Interference was however being caused to Hilversum 3.

**30th July.** 13:45 all broadcasts stop.

**3rd August.** 06:00 short wave returned on 6205 Khz. 09:00 medium wave returned on 1385 Khz / 216 Metres.

**4th August.** 04:00 FM resumed on 96 Mhz.

**5th August.** 06:00 a new short wave transmitter was on air on 9940 Khz. Programmes were now all in English and ran from 06:00 to 03:00.

**12th August.** Kees Manders announced that he was the commercial director of RNI. RNI's managing director, Larry Tremaine, denied this and said nothing had been agreed in writing. Kees Manders had been involved with Radio Veronica, Edwin Bollier and Erwin Meister invited him to start a Dutch service from the Mebo II, and offered him a directorship in RNI. Edwin Bollier and Erwin Meister became angry when Kees Manders leaked the story out, and immediately ceased all agreements with Kees Manders.

**17th August.** A storm put the medium wave transmitter out of action.

**22nd August.** Medium wave broadcasts resumed. FM was once again moved to 100 Mhz, but this caused interference to the medium wave service and work began on another medium wave frequency change.

**24th August.** 08:00 medium wave broadcasts restart on 1367 Khz 220 Metres.

**27th August.** Dutch PTT seized ship to shore radio equipment found in the Park Hotel (Scheveningen) bedroom of the owners of RNI.

**29th August.** 13:30 Kees Manders made his way in the tug Huskey to the Mebo II. Kees Manders climbed aboard the Mebo II and demanded that the ship be taken in to Scheveningen, his demands were rejected and was told to leave, when he left, he threatened to cut the anchor chain and tow the ship in.

The crew broadcast the events, and those on board the Huskey prepared to use a water cannon on the aerial mast, the tug Eurotrip was spotted, and the raiders made off. Later the Dutch frigate Van Nes arrived and stood by in case of further trouble.

**22nd September.** The 100 Mhz and 9940 Khz transmitters split from the 1367 Khz and 6205 Khz transmitters to form a "World Service".

**23rd September.** This service was short lived, at 21:00 a message was received from the tender De Redder saying that the station was to close down at 11:00 the next morning.

Programmes continued all night, DJ's broadcasting their final programmes. At regular intervals the message "RNI is voluntarily closing down because of pressure in the Dutch government to close down

the offshore stations, our directors feel it would be better for the people of Holland if we close down, and let Radio Veronica stay on air".

**24th September.** At 11:00 RNI closed down.

A crew from Veronica took over the Mebo II, which stayed at its anchorage. Reports in the press stated the ship was to be sold to an African concern, but nothing came of it, then the true reason for closing leaked out, Radio Veronica had paid RNI 1,000,000 Guilders to stay off air for two months.

## **RNI RETURNS**

**5th January 1971.** The Captain on board the Mebo II was tricked into going ashore, and Edwin Bollier took control of the ship.

**January.** Test broadcasts were made off the coast of Belgium with the station ID of Radio Marina, the station owners were a right-wing organisation and were only heard for two hours.

Many legal arguments followed, it was revealed that RNI had taken 1,000,000 Guilders in bank notes to the Veronica offices, but they had refused to accept them.

The Mebo II was moved to Cadzand, on the Dutch boarder but the anchorage proved very rough, and the ship went back to Scheveningen. Test broadcasts began, but with no station ID.

**14th February.** Station ID of RNI resumed. DJ Stevie Merike announced "This is a test transmission from Radio Northsea International broadcasting on 220 metres medium wave band, 1367 kilocycles, and on channel 44 that 100 megacycles in the FM band, and on 6205 kilocycles in the 48 metre band. We're very pleased to have you around. May I cordially suggest that you call up your friends on the telephone and let them know that RNI is back".



**20th February.** 15:00 programmes officially commence in English. After the Man of Action theme finished DJ Alan West introduced production director Victor Peli, who announced "A new and different chapter of RNI begins at this time. on behalf of the owners, Mr Meister and Mr Bollier, I would like to bid you welcome to the new Radio Northsea International. In the years to come RNI will bring you the best possible entertainment". The opening record was "Nothing rhymed - Gilbert O'Sullivan.

**7th March.** Dutch programmes introduced between 09:00 - 16:00, presented by Joost de Draaier and Jan van Veen (former programme directors from Radio Veronica).

**10th March.** Radio Veronica took Radio Northsea International to court. Veronica claimed that a payment of 1,000,000 Guilders was paid to RNI to cease broadcasting, but they were back on the air. RNI counter claimed that they had tried to repay the money as they wished to resume broadcasting.

The Court ruled that no decision could be taken, as all the problems occurred in international waters. Because the radio ship, Mebo II, was controlled by Meister and Bollier they could continue to broadcast.

**March.** During March a new postal address was given out for record requests, PO Box 117, Hilversum, Holland.

**15th May.** 07:40 Tom van de Linden and Two men, left Scheveningen in a rubber dingy, three hours later they arrived along side the Mebo II. Two of the men climbed aboard and lit a fire in the engine room, and made off. Immediately there was an explosion and the stern of the ship quickly

caught fire. SOS calls were sent out on the broadcast transmitters and the ship to shore link.

**23:50** The tug Eurotrip took ten crew off the ship, leaving only the captain, transmitter engineer and ships engineer on board. The Dutch Royal Navy frigate Gelderland stood by, while the fire fighting tug Volans doused the stern of the Mebo II with water. (the Volans was involved in offshore radio history, 18 years later, when Dutch authorities used her in the raid on Radio Caroline in August 1989). By 02:20 the fire had been extinguished.

**16th May.** Broadcasts resume, as the studios and transmitters had escaped damage. Damage estimated at £28,000 was caused in the fire.

The three men made it back to shore and sunk the dingy and hid the frogman suits, but within a few hours they had been captured by the police.

**17th May.** Norbert Jurgens, the advertising manager for Radio Veronica was arrested and questioned about the fire.

**18th May.** Bull Verwey, a director of Veronica, was arrested and detained.

**20th May.** The two directors and the three frogman appeared in court in The Hague. The Veronica organisation admitted they had paid the frogmen 3,000 each to put the station off the air or tow the ship into port, but not to set the fire. The court case was held over until September.

**June.** Short wave tests start on 9935 Khz. A "World Service" was introduced on Sundays on both short wave frequencies.

**21st September.** The two Veronica directors and the three frogmen received one year jail sentences.

**22nd November.** The Mebo II lost its anchor and started to drift. Broadcasts stopped as the ship entered Dutch territorial waters. The lifeboat Bernard Van Leer, a Royal Dutch Navy Neptune aircraft, a helicopter and the tug Smithbank all raced to the Mebo II's assistance. By 11:00 the Smithbank had the Mebo II in tow, and at 16:30 RNI was back on the air.

## **1972**

**27th March.** The transmitter which had been used for short wave broadcasts on 9935 Khz had been converted to 773 Khz and was tested.

**24th May.** Test broadcasts are made on 773 Khz.

**30th September.** Just after 12:30 a second medium wave service commenced on 1562 Khz / 192 Metres. DJ Tony Allen opened the station with the ID of RNI 2. This frequency had been used by Radio Veronica until 12:30 when they moved to 558 Khz.

**2nd October.** RNI 2 left the air, never to be heard again. It was disclosed that it was to show advertisers that in an emergency the station was capable of transmitting on another frequency. But, it was also said it was done to lure away Radio Veronica's audience to RNI.

**24th October.** The English service failed to commence, the Dutch director, John de Mol, had decided that as the English service did not pay its way, it was not worth keeping on the air, and sacked all the English staff. This had been done without the authority of the Swiss owners, who were furious.

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**3rd November.** English service recommenced.

**12th November.** The World service returned to 6205 Khz, and went out every Sunday.

## 1973

**26th January.** Tests commence on 9780 Khz, irregular test broadcasts are made for the next few weeks.

**23rd February.** The ship lost its anchor and drifted towards the coast, and broadcasts ceased.

**24th February.** A new anchor was fitted. And the ship sailed back to it's old anchorage.

**25th February.** 12:00 broadcasts resume after thirty-six hours off air.

**2nd April.** A severe storm caused damage to the aerial systems on the Mebo II.

**3rd April.** Low power broadcasts resume on medium wave and short wave.

**24th April.** FM service restarted.

**27th May.** The world service closed because of technical problems. At the same time the Zurich office handed all work over to the Dutch office.

**July.** The medium wave transmitter was giving trouble, it was one of five prototypes made by RCA, and the only one which was still in service.

**21st July.** The campaign to keep RNI on the air as a legal station began.

Free stickers were given away in many town centres. The sticker contained a tear off portion for the owner to send back to RNI pledging five Guilders a year. Thirty-thousand people replied, unfortunately a minimum of fifty-thousand replies were needed to become a licensed station.

Radio Veronica carried out a similar scheme and exceeded the required number, and was granted a licence in 1975.

**21st October.** A storm causes more damage to the FM service and it had to leave the air.

**31st October.** The FM service returned, but at a reduced power of 250 Watts.



**November.** More transmitter problems occur, no fully qualified engineers were aboard the ship, Mr Meister went out to the ship and carried out the repairs himself.

**11th November.** The English service was extended and the station started a twenty-four hour format.

**December.** By mid December all three transmitters were back on full power.

## 1974

With the world wide oil shortage the station cut back on broadcasting hours.

The transmitters started to brake down more frequently, they were in need of an overhaul after three years continuous use, again the Swiss owners had to carry out repairs themselves after approaching the radio engineers on the other offshore stations failed.

Holland was preparing it's own Marine Offences Act, and was expected to take effect on 31st August. The station stated that it would close down on the 31st August, as it had no intentions of breaking any laws.

**30th August.** The final English broadcast went out between 20:00 - 24:00

**31st August.** At 18:00 a special farewell service was broadcast hosted by Ferry Maat, it had been intended to close the station at midnight but at the last minute was changed to 20:00. A final broadcast went out at featuring all the staff and management, at 20:00 the station closed after playing the RNI theme and ending with the sound of a sinking ship.

**1st September.** The Dutch Marine Offences Act came into force.

It was planned the ship would enter harbour for an overhaul then sail to Italy and broadcast as Radio Nova International from the gulf of Genoa. The new station was to be in honour of the Royal Park Hotel in Zurich, Switzerland which was owned by Edwin Bollier.

Bad weather prevented the Mebo II from being towed to the De Groot van Vliet shipyard for one week.

9th September. The Mebo II arrived at the shipyard. Customs officials sealed the cabins, in which the records and other studio equipment had been placed.

The Mebo II was dry docked, and twelve inches of crustation was removed from the ships hull.

The Mebo had similar treatment and after repainting had been renamed 'Angela'.

The transmitters were given a full overhaul, both studios were dismantled and three smaller ones and a new record library built in their place. The mast was extended by sixteen feet to one hundred and eighty-five feet, two new short wave aerial systems installed and a second medium wave aerial system was added, so that on arrival off the coast of Genoa, Italy, an English service could be broadcast at night. Some 20,500,000 Guilders had been spent on the overhaul.

**10th October.** Both ships were seized, the new Dutch laws did not permit ships to carry transmitters except for maritime communications.

**10th December.** The courts decided that both ships could leave port, once the transmitters had been removed from the Mebo II. It was pointed out the Mebo II was registered in Panama, and transmitters counted as cargo.

## **1975**

**25th March.** The appeal was heard and it was agreed that the ship was under the jurisdiction of Panamanian law.

## **1976**

**2nd January.** The court case was finally settled, under the condition that the Mebo II sailed within two months and would not transmit from European waters for two years, a bond of 250,000 Guilders was ordered and a fine of 5,000 Guilders for having a radio ship in Holland after the 31st August

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1974 was made.

Two 10,000 Watt RCA transmitters from the Veronica ship Norderney are put on the Angela, which causes the Dutch PTT to investigate, and the intended departure date of 12th September is postponed.

**November.** Both ships were dry docked again, the hulls cleaned and repainted.

## 1977

**10th January.** Both ships tested their engines by sailing around the harbour.

**13th January.** Custom officials carry out pre sailing checks.

**14th January.** It was confirmed that both the Mebo and Mebo II were going to be used by the Libyan Government. At 11:45 both ships left the harbour and sailed down the canal towards Rotterdam. Problems with the authorities arose because a full crew was not on board. A new crew was taken on while in Rotterdam, and supplies were taken on board at Slikkerveer harbour.

**15th January.** The Mebo II damaged two ships when she collided into one of them. A detention order was placed on the Mebo II. Arrangements were made to pay the owners of both ships and the detention order was removed.

**16th January.** 10:30 the Angela headed seaward followed by the Mebo II. Captain van der Kamp was put in charge of both ships.

**20th January.** Both ships took shelter off Brest, France due to bad weather until the 28th.

**1st February.** Both ships entered the Mediterranean Sea.

**2nd February.** Both ships entered Ceuta, Morocco, and took on supplies.

**9th February.** Both ships arrived off Tripoli, but were not allowed into port because of problems with the ships papers, papers referred to the ships as Mebo and Mebo II.

**14th February.** Both ships entered the harbour, the crew of Cape Verde Islanders were paid off and another Dutch Captain took over.

Both ships were hired by Colonel Ghadaffi while land based transmitters are installed by Mebo Ltd for the Peoples Revolutionary Army.

## 1978

**5th April.** The Mebo II was renamed El Fatah, and was now owned by the Libyan Government, the ship would officially broadcast programmes for the SPLAJBC. At the same time the Angela was renamed Almasira.

## 1984

Both the Almasira (ex Angela) and the El Fatah (ex Mebo II) were used for target practice by the Libyan Navy, and sink in the Gulf of Sidra, Mediterranean Sea.

(Adapted from Jim Parkes "Encyclopedia of Offshore Radio" by Chris Edwards, Offshore Echo's Magazine <<http://www.guernseyweb.co.uk/offshore.html>>, December 1996)

# International Co-ordination of DRM and AM Transmissions

*The amount of DRM frequency requirements in the international broadcast bands is growing. It is not surprising therefore that the HFCC has received several complaints in regard to the DRM interference to AM transmissions. The HFCC/ASBU association has taken up the subject in its past Plenary and Steering Board Meetings.*

The General Assembly of the DRM Consortium, held at the end of March 2006, reported that nearly 40 radio stations have already started with regular DRM broadcasting directed to many parts of the world, bringing the total daily amount of DRM transmissions to almost 700 hours. This is still a small part of the total of over 16000 hours that are co-ordinated each season on shortwaves.

DRM frequency requirements are regularly entered into the HFBC global databases. The HFCC/ASBU association is encouraged by the increase in the public awareness of shortwave co-ordination. At the same time the results of our activity are also increasingly under the public scrutiny. It is not surprising therefore that the HFCC has received several complaints in regard to the DRM interference to AM transmissions - some of them quite recently - prior to the co-ordination conference in China in February 2006. DXers and radio hobbyists in particular have appealed to us and suggested that the available spectrum should be separated between the two modes.

Quite a number of frequency managers and co-ordinators active in the HFCC come from among the radio hobby and DXing community, We are therefore fully aware of the differences between the two systems as well as of the dangers of mutual interference. On the other hand we cannot ignore the present dissatisfaction with the quality of AM, its excessive power consumption, and the fact that at least some broadcasters have been losing interest in AM transmissions. It is unthinkable that the whole spectrum internationally allocated to and used by AM broadcasting is left out from the present trend towards highquality sound reproduction and digitalisation.

Unfortunately - especially in regard to shortwaves - the amount of available spectrum is severely limited. Shortwave bands below around 10 MHz have not been substantially enlarged for decades. The HFCC is now a sector member of the ITU in the category of international and regional organisations. It has prepared a document in the run-up to the World Radiocommunication Conference next year with the aim of rallying support for the spectrum enlargement. It is based on the statistics showing that due to the congestion, only around 50 percent of all broadcasting requirements in this range can be received without serious interference.

The Conference results are uncertain, and anyhow, the possible spectrum enlargement would be very slow in coming. The suggested separate allocation of a portion of the present existing frequency space exclusively to DRM has been considered within the HFCC/ASBU association. If implemented, it would severely narrow the already congested low-frequency spectrum available for AM broadcasting on shortwaves. However we are aware of the DRM/AM mutual interference problem: DRM frequency requirements are already graphically highlighted in the co-ordination schedules for example, and frequency co-ordinators pay special attention to them in their discussions of incompatibilities. In addition, the Steering Board of the HFCC/ASBU association has recommended to members not to submit the DRM frequency requirements at random but rather to cluster them together with the aim of reducing interference to adjacent AM transmissions.

A recommendation on a more stricter spectrum separation between AM and DRM transmissions is not ruled out later after a further increase in the amount of DRM frequency requirements - especially in the higher frequency bands that are less overloaded.

Last but not least we should mention an important principle that is imbedded in the Articles of Association of the HFCC in regard to all co-ordination procedures. The Association does provide the tools, representation and services to facilitate the resolution or minimisation of mutual interference but its management does not enter the bilateral or multilateral co-ordination negotiations and it is not an arbiter of their solutions. In other words, the participants of frequency "collisions" themselves are responsible for the measures taken against the incompatibilities detected by the co-ordination software.

At the same time we pay every attention to what listeners and shortwave hobbyists have to say about the quality of shortwave co-ordination, and we always pass relevant information to the members concerned.

(High Frequency Co-ordination Conference - HFCC)

# WORLDWIDE DX CLUB

WORLDWIDE DX CLUB, founded in 1966, does not claim to be the biggest or best DX club in the world. Nevertheless, it offers its members and subscribers a rather good monthly bulletin (mainly in English) entitled "DX MAGAZINE" with up-to-date information on most aspects of DX'ing at the reasonable price of € 15.60, £12.00, US\$18.70 or 16 International Reply Coupons (IRC's) per year (air mail: Europe: € 17.40, £13.00, US\$20.90 or 18 IRC's; Overseas: € 20.40, £15.50, US\$24.50 or 21 IRC's).

Since WORLDWIDE DX CLUB is the "International Department" of ARBEITSGEMEINSCHAFT DX (AGDX), the head organization of the German language DX clubs, it is able to offer its members and subscribers another DX publication in German entitled "Radio-Kurier - weltweit hören". This is jointly issued by the German DX organizations ADDX and AGDX and is available for € 40.00, £28.50, US\$48.00 or 40 IRC's per year (including air mail to countries outside Europe) or, if ordered together with "DX MAGAZINE", for € 51.00, £36.00, US\$61.20 or 51 IRC's per year (air mail: Europe: € 52.80, £37.00, US\$63.40 or 53 IRC's; Overseas: € 55.80, £39.00, US\$66.60 or 56 IRC's per year).

Both publications, "DX MAGAZINE" as well as "Radio Kurier - weltweit hören", are also available as PDF files. If you decide to receive this version, a worldwide subscription rate of € 9.00, £7.00, US\$10.80 or 9 IRC's is applicable for "DX MAGAZINE". "Radio Kurier - weltweit hören" is available for € 20.00, £15.50, US\$24.00 or 20 IRC's, both publications together for € 26.00, £20.00, US\$31.20 or 26 IRC's.

WORLDWIDE DX CLUB has currently the following special publications available:

1. "REPORTING GUIDE", published by the EUROPEAN DX COUNCIL (€ 1.00 or 1 IRC; please enclose 1 additional IRC for air mail).
2. "EDXC RADIO COUNTRIES LIST 1998", published by the EUROPEAN DX COUNCIL (€ 3.00 or 3 IRC's; please enclose 1 additional IRC for air mail).
3. "WORLD RADIO TV HANDBOOK 2006", published by WRTH Publications Limited in December 2005 (€ 30.00 or US\$36.00; extra for air mail: € 10.20 or US\$12.20).
4. "DAS OHR ZUR WELT" (Eine Einführung in den Rundfunk-Fernempfang, herausgegeben von der ARBEITSGEMEINSCHAFT DX e. V.) (€ 1.00 or 1 IRC; please enclose 1 additional IRC for air mail).
5. "EMPFÄNGER-FIBEL 1995/96" (Ratgeber für den Empfänger-Kauf, herausgegeben von der ARBEITSGEMEINSCHAFT DX e. V.) (€ 2.00 or 2 IRC's; please enclose 1 additional IRC for air mail).

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 bank accounts: Raiffeisenbank Graevenwiesbach No. 100019984 (IBAN: DE75 5006 9345 0100 0199 84 - BIC/SWIFT-Code: GENODE51GWB) or Postbank Leeuwarden/Netherlands No. 3822840 (IBAN: NL57 PSTB 0003 8228 40 - BIC/SWIFT-Code: PSTBNL21). *IRC's can only be accepted from countries, in which payments can not be made by any other means (1 IRC = € 1.00) - not for orders of WRTH.*

Die obigen Preise enthalten Porto und Verpackung. Lieferung gegen Vorauszahlung durch Überweisung, Scheck in € (gezogen auf eine deutsche Bank, sonst € 5,00 zusätzlich für Bankgebühren), Postanweisung oder Bargeld. Konten: Raiffeisenbank Grävenwiesbach Nr. 100019984 [Bankleitzahl 500 693 45] und Postbank Leeuwarden/Niederlande Nr. 3822840. *IRC's werden nur aus solchen Ländern akzeptiert, in denen eine Zahlung auf einem anderen Weg nicht möglich ist - nicht für WRTH-Bestellungen.*

For further information on WORLDWIDE DX CLUB please write to: WORLDWIDE DX CLUB, Postfach 12 14, D-61282 Bad Homburg, GERMANY (e-mail: <info@wwdxc.de>), or visit us in the Internet at <<http://www.wwdxc.de>>.