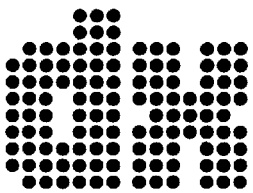


2 - 2002



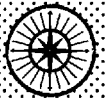
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magazine



WORLD WIDE DX CLUB



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Please do not forget to write all contributions for the different sections on separate sheets of paper, so that we are able to distribute them to the competent section editors.

WORLD RADIO TV HANDBOOK 2002

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DX MAGAZINE No. 2

· Vol. XXXVII ·

February 2002

Hello again,

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

The **10th CEPT Conference** with the theme "On the Move ..." will take place in Vienna from April 17th to 19th, 2002. If you want to meet the experts on telecommunications regulation and get an update on important regulatory telecom developments in Europe this is the place to go. Furthermore, there will be high level presentations from industry on pertinent topics such as digital broadcasting, 3rd generation mobile, emergency services and more. The introduction of 3rd generation mobile is just around the corner and you will be able to witness a live UMTS demonstration with new applications in the exhibition area, plus many other new developments from our exhibitors. As in the past we expect about 200 participants and there will be plenty of possibilities to meet and discuss with people during coffee and lunch breaks. More information can be found at the ERO web page under: <<http://www.ero.dk/EROWEB/CEPTconf/conf.htm>>.

On 31 January 2002 the ERO launched a new Frequency Information System called EFIS, available to the public on the Internet. With this tool ERO is aiming at providing a valuable service to all parties with an interest in spectrum utilisation. EFIS will also contribute to CEPT policy objectives of harmonisation and transparency as well as EU policy objectives. For more information, see <<http://www.efis.dk>> or access EFIS via the ERO web site <<http://www.ero.dk>>.

At its meeting in Lisbon 2002 in January the Frequency Management Working Group of the ERC adopted an update of the ERC Report 25 - **The European Common Allocations Table**. The plan now contains European allocations and frequency utilisation for the frequency bands from 9 kHz to 275 MHz. The document of 179 pages is available from the ERO web site <<http://www.ero.dk/doc98/official/pdf/REP025.PDF>> (size: 2 MB).

Es steht nun fest - auch in diesem Jahr wird es ein SWLCS-DX-CAMP in Merchweiler/Saar geben. Termin: 9. bis einschließlich 11. August 2002 in der Dorfstraße 13, 66589 Merchweiler. Leider wird uns die Wiese für die Übernachtungszelte in diesem Jahr nicht mehr zur Verfügung stehen, so dass es in dieser Hinsicht etwas eng wird. Das Gebäude gegenüber von Dorfstraße 13 wird komplett saniert und zu diesem Zeitpunkt eine Baustelle sein, was auch die angrenzende Wiese betrifft. Also steht in diesem Jahr nur mein Grundstück zur Verfügung. Vielleicht kann ich auch noch aufstocken, hi. Mal sehen, wie wir da alle unterbringen. Es wird schon gehen. Wir haben ja auch noch etwas Zeit. Zumindest steht schon mal der Termin fest. Beste Grüße aus Merchweiler - Peter Hell <p_hell@freenet.de>

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

NEWS ABOUT BROADCASTING (+other) STATIONS
 Dr. Juergen Kubiak · Goltzstr. 19 · D-10781 Berlin · GERMANY

AFGHANISTAN: Start Date of *Radio Free Afghanistan* Announced Spokesperson for Radio Free Europe/Radio Liberty (RFE/RL), Sonia Winter, announced on 18 January 2002 that the target date for the start of Radio Free Afghanistan is 30 January 2002. She did, however, warn that there could be a "small delay". Broadcasts in Pashto and Dari will initially be on the air for one or two hours per day, increasing to a total of 12 hours a day within a few months. (RNMN 18 January 2002 via DXLD #2-011 via JKB)

ARMENIA: *Voice of Armenia* on 4810 noted on Feb.10:

1230-1315 no propagation
 1315-1400 in Armenian
 1400-1415 in Azeri
 1415-1445 in Turkish
 1445-1515 in Kurdish
 1515-1530 in Armenian or Georgian (OBSERVER #162 via WB, 12 Feb 2002)

AUSTRIA: *Everest Radio* discontinued via Moosbrunn since 5 February, due to lack of budget. *Radio Afrika International* via Moosbrunn morning broadcasts 1100-1200 on 17815 ended 31. January, afternoon broadcasts 1500-1600 on 17895 continue, and will be kept during the summer schedule. So will the relays of AWR, TWR, RCI, and Voice of Vietnam. (Wolf Harranth - Radio Austria International via WB, 12 Feb 2002)

BULGARIA: *Radio Bulgaria* B01 schedule effective October 28, 2001 to March 31, 2002.

ADDR: 4, Dragan Tsankov Blvd., 1040 Sofia or P.O.Box 900, 1000 Sofia.

Fax.:+359 2 650 560.

Website: <http://www.nationalradio.bg>

Listeners E-mail: rbul@nationalradio.bg

Programme Director: Angel Nedyalkov E-mail: nedyalkov@nationalradio.bg

Frequency Manager: Ivo Ivanov E-mail: rbul1@nationalradio.bg

MW: Petrich (G.C: 23.18E/41.42N): 747 kHz 500 kW/non-dir

Vidin (G.C: 22.40E/43.49N): 1224 kHz 500 kW/205 deg

SW: P=Plovdiv/Padarsko (G.C: 24.42E/42.10N): 2 x 500 kW, 3 x 250 kW

S=Sofia/Kostinbrod (G.C: 23.13E/42.49N): 2 x 100 kW, 2 x 050 kW

ALBANIAN Days Target Freq/Tx/Pwr/Azi

0530-0600 Mon-Fri Balkans 5900 P250/248, 1224

0700-0800 Sat/Sun Balkans 5900 P250/248, 1224

1645-1730 -daily- Balkans 5900 P250/248, 1224

2000-2045 -daily- Balkans 5900 P250/248, 1224, 747

BULGARIAN

0100-0200 -daily- South America 5900 P250/258, 11600 P250/245

0100-0200 -daily- North America 7400 P500/295, 9400 P500/306

0400-0500 -daily- Balkans 1224

0400-0500 -daily- East Europe 5900 S100/030, 7500 S100/030

1100-1130 -daily- East Europe 11700 S100/030, 15200 S100/030

1100-1130 -daily- West Europe 12000 P500/295, 13600 P250/306

1300-1500 -daily- Balkans 1224

1300-1500 -daily- West Europe 12000 P500/295, 15700*P500/306

1600-1700 -daily- Middle East 9400 P500/126

1600-1700 -daily- South Africa 17500 P500/185

1600-1800 -daily- East Europe 7500 S100/030, 9900 S100/030

1900-2000 -daily- Balkans 5900 P250/248, 1224, 747

1900-2100 -daily- West Europe 6000 P250/306

1900-2100 -daily- Middle East 7400 P250/140
 ENGLISH
 0000-0100 -daily- North America 7400 P500/295, 9400 P500/306
 0300-0400 -daily- North America 7400 P500/295, 9400 P500/306
 1200-1300 -daily- West Europe 15700 P500/306, 17500 P250/292
 2000-2100 -daily- West Europe 5800 P500/295, 7500 P500/306
 2200-2300 -daily- West Europe 5800 P500/295, 7500 P500/306
 FRENCH
 0200-0300 -daily- North America 7400 P500/295, 9400 P500/306
 0700-0800 -daily- West Europe 12000 P500/295, 13600 P500/306
 1800-1900 -daily- West Europe 5800 P500/295, 9400 P500/306
 2100-2200 -daily- West Europe 5800 P500/295, 7500 P500/306
 GERMAN
 0600-0645 -daily- West Europe 5800 P500/295, 9400 P500/306
 1100-1200 -daily- West Europe 15700 P500/306, 17500 P250/292
 1715-1800 -daily- West Europe 5800 P500/295, 9400 P500/306
 1900-1945 -daily- West Europe 5800 P500/295, 9400 P500/306
 GREEK
 0500-0530 Mon-Fri Balkans 5900 P250/248, 1224
 0500-0600 Sat/Sin Balkans 5900 P250/248, 1224
 1730-1815 -daily- Balkans 5900 P250/248, 1224, 747
 2045-2130 -daily- Balkans 5900 P250/248, 1224, 747
 RUSSIAN
 0000-0100 -daily- Central Asia 7500 P250/045
 0300-0400 -daily- East Europe 5900 S100/030, 7500 S100/030
 1500-1600 -daily- East Europe 7500 S100/030, 9900 S100/030, 1224
 1500-1600 -daily- Central Asia 9400 P250/045
 1800-1900 -daily- East Europe 7500 S100/030, 9900 S100/030
 SERBIAN
 0600-0700 Mon-Fri Balkans 5900 P250/248, 1224
 0800-0900 Sat/Sun Balkans 5900 P250/248, 1224
 1600-1645 -daily- Balkans 5900 P250/248, 1224
 2130-2215 -daily- Balkans 5900 P250/248, 1224, 747
 SPANISH
 0000-0100 -daily- South America 5900 P250/258, 11600 P250/245
 0200-0300 -daily- South America 5900 P250/258, 11600 P250/245
 0200-0300 -daily- Central America 7500 P250/295
 1700-1800 -daily- South Europe 9700 P250/260, 11700 P250/270
 2200-2300 -daily- South Europe 6000 P250/258, 7300 P250/245
 TURKISH
 0530-0600 Mon-Fri Middle East 6000 P250/115, 7400 P250/140
 0600-0700 Sat/Sun Balkans, Middle East 6000 P250/115, 7400 P250/140, 1224
 1815-1900 -daily- Balkans, Middle East 7400 P250/140, 1224, 747
 DX-MIX px in Russian will be on the air:
 1545-1600 Saturday on 9900, 9400, 7500, 1224
 1845-1900 Saturday on 9900, 7500
 0045-0100 Sunday on 7500
 0345-0400 Sunday on 7500, 5900 (BCLNews.it, Italy)

ECUADOR: *HCJB World Radio* English release to India will change from the current frequency of 11785 to 12035 as of 2330 Saturday, Jan-26. The change is being made due to interference on the current frequency. We would appreciate hearing from our listening friends in India as to the quality of the new frequency. Reception Reports and comments may be sent to <dxpl@hcjb.org.ec>. (Allen Graham - DX Partyline HCJB via EDXP-NET, 24 Jan 2002)

HCJB, the Protestant evangelical international broadcaster based in Quito, Ecuador, will end its French-language shortwave broadcasts on March 26th. The last French broadcast will be at 20 UTC that day. Curt Cole, director of HCJB's Latin American Region, said that a recent survey confirmed a diminishing French-language shortwave audience. One of the families involved with HCJB's French programming has moved to Cote d'Ivoire, and another will move to France, to work on HCJB programs to be

placed on local radio stations. Allen Graham, host of HCJB's DX Party Line, tells me that his station has changed its frequency for English to South Asia. At 2330 UTC, the new frequency is 12035 kilohertz, replacing 11785, which was suffering from interference. That's new 12035 at 2330 for HCJB English to South Asia. Allen says that reception reports from listeners in the region would be appreciated. If you have e-mail, send them to <dxpl@hcjb.org.ec>. (Communications World Script 26 January 2002 via JKB)

FINLAND: *Radio Finland* B01 schedule on shortwave. Transmitter site: Pori.

FREQ	START	STOP	CIRAF ZONES	POWR
6055	0630	0700	27	250
6095	0300	0500	29	
6120	0500	2300	18,27,28	
6120	1700	2300	27,28	250
6135	1600	1700	29	250
6180	0800	0900	19,29	250
6190	2000	2100	29	250
9510	0700	0900	27,36,54-56,58-60	500
9560	0730	0800	27,28,36	250
9600	1400	1600	29,30	250
9630	1500	1600	27,28,36	250
9630	1700	2000	27,28,36	250
9715	0530	0600	4,7-9	500
9745	0500	0630	29	250
9775	0200	0300	12-14	500
9775	0200	0300	6-9	500
9745	0500	0630	38-40	500
9730	2330	2345	43,44,50,59	500
11800	1400	1500	43,44	500
11755	0500	0600	28S,38,39	500
11755	0600	2100	27,28,36	250
11755	1200	1300	28S	250
11755	1500	1700	28S	250
12010	2330	2345	43,44,49	500
12035	0200	0300	4,7-9	500
13690	1400	1500	39-41	500
13755	1030	1300	27,28,36	500
15400	1300	1400	4,7-9,11	500
15400	1630	1900	4,7-9,11	
15520	1700	1800	38,48,53,57	500
17670	0900	1000	30-33	500
17660	1300	1400	4,7-9,11	500
21670	0700	0930	43,44,50,55	500
21800	1000	1200	43,44,55	500
21800	1200	1300	12-14	500
21810	1700	1800	38,48,53,57	500

(DXA via ADXN #434 - Jan/Feb 2002 via WWDXC-HQ)

GERMANY: Germany's *Deutsche Welle* introduced a weekly program in Romani since beginning of 2002. Romani is the language of the Roma and Sinti ethnic communities of Europe, more traditionally known as the Gypsies, which is no longer the preferred term. The program reports about the Sinti and Roma communities and inter-cultural life in Europe. The schedule for Romani from Deutsche Welle is Sunday at 1830 to 1900 UTC on 3995, 6130, and 11885 kilohertz, and via the DW channels on HotBird 5 and Astra 1A.

(Comm. World #12 Jan 2002, via JKB)

GREECE: *Voice of Greece* English, 1930-2000, now on 11645 (ex 12110).

(Mike Barraclough via Jan World DX Club Contact via DXLD #2-001, 1 Jan 2002)

INDIA: Northeastern service of **All India Radio (AIR)**, Shillong. Shillong is well known as the Scotland of east. Their broadcasting equipment: Presently using a 50 kW Brown Brovery Co. (BBC), Switzerland made transmitter for SW & 100 kW Bharat Elec. Ltd. (BEL) made MW transmitter. Their is also an one kW transmitter for Shillong itself. Transmitter site is located at Mawgrong, another 30 km away from Shillong without any generator facility. Station has both uplinking & downlinking facility with INSAT. As a standby there is one no Sony communication type digital receiver. But model no. is not readable. In near future AIR Shillong will get two FM transmitter, 2x5 kW = 10 kW. Northeastern service started its test transmission from 1988 & regular prog from 3rd Jan 1990 to cater 7 northeastern states in Hindi & English language. Except relay from AIR New Delhi they have program in English on northeastern states culture, local festival, regional news etc. Present broadcasting time & freq of AIR Shillong:

0022-0400 4970
0655-0930 7130
1055-1630 4970

Address for communication: Station Director, Northeastern Service, All India Radio, Pomdngiem, Opposite GPO, Shillong - 793 001, India. (Swopan Chakroborty via EXDP-NET, 20 Jan 2001)

Station review - kHz, kW, location, schedule.

3223	50 Shimla	0045-0200	1300-1730(Sat, Sun 1741)
3315	50 Bhopal	0025-0215	1200-1741
3365	50 Delhi	1220-1841	HS
3390	10 Gangtok	0100-0400	1030-1600
3945+	50 Gorakhpur	0130-0228	Nepali, 0228-0300 HS, 1330-1430 Nepali, 1430-1735 Urdu
4760	10 Leh	s0100/w0215-	0430 1130-1630/1700
4760	10 Port Blair	2325-0300	1030-1630/1700/Sat 1730
4775	50 Imphal	0025-0215	1030-1700/1730
4790	100 Chennai	0000-0045	Tamil (to Sri Lanka)
4800	50 Hyderabad	0025-0215	1130(Sun 1145)-1744
4820	50 Kolkata	0025-0215	1220-1830
4840	50 Mumbai	0015-0400	1230-1730
4850	50 Kohima	0000-0450	1000-1600/1630/1700
4860+	50 Delhi	0025-0440	1220-1330 HS, 1430-1930 Urdu (to Pakistan)
4880	50 Lucknow	0025-0400	1215-1741
4895	50 Kurseong	0055-0400	1130(Sun 1030)-1700/1741
4910	50 Jaipur	0025-0415	1130-1741
4920	50 Chennai	0015-0245	1200-1743
4940	50 Guwahati	0015-0415	1150-1700(Sat 1741)
4950	50 Srinagar	2345-0025	(Ramadan 17 Nov to 17 Dec 2001) s0025/w0120-0200 1130-1740
4960	50 Ranchi	0025-0435	1125(Sun 1030) -1741
4970	50 Shillong	0025-0400	1056-1630
4990	50 Itanagar	0030-0400	1000-1630
5010	50 Thiruvananthapuram	0020-0215	
5040	10 Jeypore	0025-0436	(Sun 0445), 1130(Sun 1030)-1741
5050	50 Aizawl	0025-0400	1130(Sun 1030)-1630/1700
5985	50 Ranchi	0700	(Sun 0630)-0945
6000	10 Leh	0655-0900	
6020	50 Shimla	0215-0400	(Sun 0415-1230), 0700-0936 1130-1230
6030	50 Delhi	0200-0310	1215-1430
6040	50 Jeypore	0700-0935	
6045	250 Delhi	1330-1430	Nepali (to Nepal), 1430-1930 Urdu (to Pakistan)
6065	50 Kohima	0700-0900	
6085	10 Gangtok	0700-0930	
6085	50 Delhi	1220-1310	1330-1340 1345-1420 1430-1440 1445-1615/1630/1700/1730v, 1730-1740

6110	50	Srinagar	0215-0453 (Sun 1115), 0600-1115
6150	50	Itanagar	0700-0900
6155	100	Delhi	0015-0430 Urdu (to Pakistan)
6190	50	Delhi	0730-1030
7105	50	Lucknow	0630(Sun 0415)-0930 0935-0936
7115	10	Port Blair	0315-0346 (Sat 0415,Sun 0505), 0700-0930(Sun 1000)
7115	250	Panaji	1615-1730 Farsi, 1730-1830 Malayalam (to West Asia)
7120	50	Jaipur	(Sun v0420-0600), 0700(Sun 0630)-0941 (Sun 1030-1130)
7125	100	Delhi	0100-0200 Sindhi (to Pakistan)
7130	50	Shillong	0655-0930
7140	50	Hyderabad	0228-0430 0630-0930 (Sun 0530-1130)
7140	100	Delhi	1550-1615/1630/1700/1730v 1730-1740
7150	50	Imphal	0230-0430/0530 0630-1030
7150	250	Delhi	2045-2230 English (to Au/Nz)
7160	50	Chennai	0300-0415/0430(Hol, Sat 0430/0445,Sun 0545), 0710(Hol 0610, Sun 0630)-1030 (Sat, Sun 1130)
7170	50	Delhi	0030-0040
7180	50	Bhopal	0228-0430 (Sun 1135), 0700-0931
7210	50	Kolkata	0230-0401v, 0730-0931
7220	50	Delhi	0215-0225 0228-0320 0330-0355
7230	50	Kurseong	0619-1030
7240	50	Mumbai	0530(Sun 0430)-1035
7250+	50	Gorakhpur	0700-0800 Nepali (to Nepal), 0830-1130 Urdu (to Pakistan), 1130-1140 HS
7255+	100	Delhi	1315-1415 Dari, 1415-1530 Pashtu, (to Afghanistan. Pakistan), 1530-1545 E
7280	50	Guwahati	0600(Sun 0530)-0930 0945-1145
7290	50	Thiruvananthapuram	0230-0400(Sun 0430), (Sun 0500-1030) 0630-0945/1000/1015
7295	10	Aizawl	0700-0930
7410	500	Bangalore	1330-1430 Nepali (to Nepal), 1615-1730 Hindi (to West Asia), 1745-1945 English, 1945-2045 Hindi (to W. Europe), 2045- 2230 English (to NE Asia)
9565+	100	Delhi	0130-0200 & 1215-1330 Tibetan (to Tibet) 1330-1420 1430-1440 1445- 1615/1630/1700/1730v, 1730-1740 HS
9595	250	Delhi	0015-0430 Urdu (to Pakistan)
9595+	100	Delhi	0700-0800 Nepali (to Nepal), 0800-0830 HS, 0830-1130 Urdu (to Pakistan) 1130-1140 HS
9620	-	Delhi	1230-1500 Sindhi, 1500-1600 Baluchi (to Pakistan)
9650	250	Aligarh	2045-2230 English (to W. Europe)
9690	250	Delhi	1330-1500 English (to SE Asia)
9705	250	Panaji	2245-0045 English (to E , SE Asia)
9810	250	Aligarh	0130-0229 Nepali (to Nepal)
9820+	250	Panaji	1300-1500 Sinhala (to Sri Lanka), 1530-1545 English
9835+	100	Delhi	0000-0045 Tamil (Sri Lanka) 1330-1420 1430-1440 1445-1615/1630/1700/1730v, 1730-1740 HS
9845	100	Delhi	0215-0300 Pushtu, 0300-0345 Dari (to Afghanistan, Pakistan)
9910+	250	Aligarh	0000-0045 Tamil (to SE Asia), 0215-0300 Pushtu, 0300-0345, 1315-1415 Dari, 1415-1515 Pushtu (to Afghanistan, Pakistan), 1530-1545 English, 1615-1730 Farsi, 1730-1945 Arabic (to West Asia), 1945-2030 French (to W, NW Africa), 2045-2230 English (to Au/Nz), 2300-2400

		Hindi (to SE Asia)
9950	50 Delhi	0100-0130 Burmese (to Myanmar)
9950	250 Delhi	2245-0045 English (to NE Asia)
10330	100 Chennai	0050-0430 0630-1200 1245-1730 (Vividh Bharati)
10330	50 Guwahati	0025-0430 and ditto
10330	50 Delhi	ditto
10330	100 Mumbai	ditto
11585	250 Aligarh	1000-1100 English (to NE Asia)
11585	500 Bangalore	1230-1500 Sindhi, 1500-1600 Baluchi (to Pakistan)
11620+	250 Delhi	0100-0430, 0830-1130 Urdu (to Pakistan), 1130-1140 HS, 1215-1315 Burmese (Myanmar)
11620	500 Bangalore	1330-1500 English (to E, SE Asia), 1515- 1600 Gujarati (to E. Africa), 1615-1715 Russian (to E. Europe), 1745-1945 English, 1945-2045 Hindi, 2045-2230 English (to W. Europe)
11695	250 Panaji	1215-1330 Tibetan (to Tibet), 1330-1430 Nepali (to Nepal)
11710	100 Delhi	1115-1140 HS
11710	250 Aligarh	1215-1315 Burmese (to Myanmar)
11715	250 Delhi	0130-0229 Nepali (to Nepal)
11715	250 Panaji	2045-2230 English (to Au/Nz)
11735	500 Bangalore	0215-0300 Pushtu, 0300-0345 Dari (to Pakistan, Afghanistan)
11740+	250 Panaji	0000-0045 Tamil, 2300-2400 Hindi (to SE Asia) 1530-1545 English
11790	250 Aligarh	0100-0200 Sindhi (to Pakistan)
11830	100 Delhi	0125-0225 0228-0355 HS
11840	- Delhi	1145-1315 Chinese (to NE Asia)
11850	100 Delhi	0700-0800 Nepali (Nepal)
11900	- Delhi	0130-0200 Tibetan (to Tibet)
11935	100 Mumbai	1745-1945 English (E.Africa)
11985	- Delhi	0000-0045 Tamil, 0045-0115 Sinhala (to Sri Lanka)
12025	250 Panaji	1615-1730 Hindi 1730-1830 Malayalam (to West Asia)
13605	500 Bangalore	1745-1945 English , 1945-2030 French (to W, NW Africa), 2245-0045 English (to Asia)
13620	500 Bangalore	0215-0300 Pushtu (to Pakistan, Afghanistan), 0400-0430 Persian, 0430- 0530 Arabic, 0530-0600 Urdu (Haj S Season), 1730-1945 Arabic (to West Asia)
13630	500 Bangalore	0100-0130 Burmese (to Myanmar)
13645	500 Bangalore	1115-1200 Thai (to SE Asia)
13695	500 Bangalore	0315-0415 Hindi (to West Asia)
13700	500 Bangalore	0130-0200 Tibetan (to Tibet), 1000-1100 English (to Au/Nz) 1115-1215 Tamil, 1215- 1245 Telegu (to SE Asia)
13710	500 Bangalore	1330-1500 English (to E, SE Asia)
13720	500 Bangalore	1515-1615 Swahili, 1615-1730 Hindi (to E. Africa, Mauritius)
13770	500 Bangalore	1615-1730 Hindi (to West Asia)
13795	500 Bangalore	0000-0045 Tamil, 2300-2400 Hindi (to SE Asia)
15020	250 Aligarh	1000-1100 English (to NE Asia, Au/Nz)
15020	250 Delhi	1300-1500 Sinhala (to Sri Lanka)
15075	500 Bangalore	0315-0415 (West Asia), 0430-0530 Hindi (to E. Africa, Mauritius)
15135	100 Delhi	0125-0205 0215-0225 0228-0355 HS
15140	500 Bangalore	1615-1715 Russian (to E. Europe)
15155	500 Bangalore	1745-1945 English (to W, NW Africa)
15175	500 Bangalore	1515-1600 Gujarati (to E. Africa)
15185	250 Delhi	0315-0415 Hindi, 0415-0430 Gujarati, 0430-0530 Hindi (to E. Africa, Mauritius)

15185	100	Delhi	0700-0930	1115-1140	HS
15200	500	Bangalore	1745-1945		English (to W, NW Africa)
15235	250	Panaji	1115-1200		Thai (to SE Asia)
15260+	100	Delhi	0700-0930	HS,	1000-1100 English (to Sri Lanka)
15770	250	Aligarh	0400-0430	Farsi,	0430-0530 Arabic, 0530-0600 Urdu (Haj Season) (to West Asia), 0845-0945 Indonesian, 1115-1215 Tamil, 1215-1245 Telegu (SE Asia)
15795	250	Delhi	1145-1315		Chinese (to NE Asia)
17510	250	Delhi	0845-0945		Indonesian (to SE Asia), 1000- 1100 English (to Au/Nz)
17670	-	Delhi	0430-0530	Hindi,	1515-1615 Swahili, 1615-1730 Hindi, 1745-1945 English (to E. Africa, Mauritius)
17705	500	Bangalore	1145-1315		Chinese (to NE Asia)
17715	250	Delhi	0315-0415	Hindi,	0415-0430 Gujarati, 0430-0530 Hindi (E. Africa, Mauritius)
17740	-	Delhi	1115-1200		Thai (to SE Asia)
17810	-	Delhi	1115-1215		Tamil, 1215-1245 Telegu (to SE Asia)
17800	500	Bangalore	1000-1100		English (to NE Asia)
17860+	100	Delhi	1115-1215		Tamil (to Sri Lanka), 1220-1245 HS
17895	500	Bangalore	1000-1100		English (to Au/Nz)

Hol = Holiday, HS= Home Service, + = Fq used by both HS & External Service.

Power and Transmitter locations of External Services are presumed only!

(Jose Jacob via van Arnhem, DSWCI DXW Jan 2 via hcdx via DXLD # 2-002, 2 Jan 2002)

IRAN: While many international broadcasters are depending more on rebroadcasting to reach their audiences, Iran is increasing its use of brute force radio transmitters to send signals across national boundaries. The Voice of the Islamic Republic of Iran reports that Iran's Voice and Vision broadcasting organization, in cooperation with an Iranian university, has built a one-megawatt radio broadcast transmitter. The report does not say what frequency this transmitter will use, or even if it's medium wave or shortwave. It does say that this is only the world's sixth one million watt radio broadcast transmitter. On shortwave, transmitters rated at 500 kilowatts are much more plentiful, and some international broadcasters operate two 500-kilowatt transmitters in parallel, that is, on the same frequency, to achieve one megawatt of power. (Comm. World #12 Jan 2002, via JKB)

IRELAND: RTE renew broadcast contract with MERLIN. R Telefis Eireann (RTE), Ireland's national public sce bcng organisation, has renewed its contract with Merlin Communications to bc RTE progrming on Merlin's SW network for a further year. Merlin will transmit daily progrming from its UK sites, as well as SNG, ASC and Sackville-CAN, offering comprehensive coverage of RTE's key target areas. Merlin, now part of Vosper Thornycroft Holdings PLC, receives RTE progrming via satellite in its central London control room. Progrs are then bc to RTE's target regions, which include Ce and NoAM, AUS, AF and the ME. In addition to the standard contract, Merlin will also bc the "All Ireland" Hurling & Football Finals' in Sept on behalf of RTE. RTE's Dir of Radio, Helen Shaw said: "Our audiences across the world are frequently part of the Irish community overseas and they greatly appreciate the ability to hear nx and information from Ireland and to enjoy special events like the All Ireland GAA matches. We are delighted that we can continue with this sce working with Merlin and improve the quality of the content, which will be developed to our overseas audiences this year". Recent B01 **Radio Telefis Eireann - RTE** schedule. Address: Radio Telefis Eireann, Broadcasting Developments, Dublin 4, Ireland.

0130-0200 6155 CeAmerica

1000-1030 9895 ME

1830-1900 13640 Ce&Ea USA

1800-1830 15540 SoEaAS & Australasia

1830-1900 21630 AF (Press release via WB in BC-DX #562, 12 Feb 2002)

ISLE OF MAN: The Isle of Man Communications Commission has announced on February 13th, 2002, the grant of a substantive licence to Isle of Man International Broadcasting plc (IMIB). The licence, under the Broadcasting Act 1993 (of Tynwald), is to enable IMIB to provide a long wave radio service broadcasting on 279 kHz, and will be for a ten-year period.

The service, provisionally called *MusicMann 279*, will be music led and will target an audience across Britain and Ireland. It is expected to launch towards the end of 2003.

IMIB plans to install the transmission antenna on an offshore platform in Manx waters some 9km northeast of Ramsey, Isle of Man, near the spot Radio Caroline was anchored in the 1960's. Some 50 new jobs, both full and part time, will be created in the town where the studios will be located.

As well as its Isle of Man broadcasting licence, IMIB will hold a Wireless Telegraphy licence from the United Kingdom Radiocommunications Agency.

Announcing the grant of the licence, the Chairman of the Communications Commission, the Hon Phil Braidwood, MHK, said "The Isle of Man first sought a high power broadcasting frequency four decades ago. IMIB now has the opportunity to demonstrate that the Island is again a vibrant source entertaining radio for the whole of the British Isles".

The Director of the Commission, Anthony Hewitt, added "It is now nearly 3 years since the selection of IMIB to exploit this opportunity was approved. With planning issues behind them, the way is now clear for IMIB and its backers to get the station on air and to realise its full commercial potential".

(Don Rhodes <donrhodes@pac.com.au> 14 Feb 2002)

ISRAEL: KOL ISRAEL overseas service schedule (Network in brackets), valid October 28, 2001 to March 31, 2002. Postal address: KOL, Israel Radio International, PO Box 1082, Jerusalem 91010, Israel. Fax: +972-2-302327. KOL website: <http://www.israelradio.org> and for correspondence regarding reception problems send to: Raphael Kochanowski, Director of Engineering Liaison and Coordination (email to <raphaelk@iba.org.il>).

Hebrew (Reshet Bet - Second Network)	15650	Europe + N. America
Includes TV news from Channel 1 at 1900-1950.	6280*	Europe + N. America
	9435	Europe + N. America
0500-1900	15760	Europe + N. America
0600-1900	17535	Europe + N. America
1900-0500	9345	Europe + N. America
1900-2300	9390	Europe + N. America
2300-0600	7545	Europe + N. America
1900-1950	15640	S.Europe + S America
2100-2215	15640	S.Europe + S America
1700-0430	11585	Europe + N. America
0430-0600	15640	Europe + N. America
Arabic (Reshet Dalet - Fourth Network)	15640	Europe + N. America
0400-2215	5915	Middle East
0400-2215	9815	Middle East
0400-2215	12145	Middle East
English(Alef) 0500-0515	15640	Latin America
9435	Europe + N. America	9435
11605	Europe + N. America	6280*
6280*	Europe + N. America	15650
17545	Australasia and S.America	Spanish (REQA) 1735-1745
English (REQA) 1130-1135	15640	Spain + Latin America
15640	Europe + N. America	Spanish (Hei) 2045-2100
17545	Europe + N. America	11605
English (Alef) 1700-1730	15640	Spain + Central America
11605	Europe + N. America	15640
17545	Europe + N. America	15650
English(Hei) 2000-2025	6280*	Europe + N. America
11605	Europe + N. America	9435
		Spanish & Ladino (Hei)

Saturday only 1600-1625	9435	Europe
17525 Spain+ Central America	15640	Europe
15640 Spain + Latin America	15650	Europe
17545 Europe + N. America	Yiddish (Hei) 1800-1825	
Ladino (REQA)	9435	Europe
1745-1800 15640 Mediterranean	15650	Europe
Moghrabi (REQA)	Hungarian (Hei)1745-1800	
1725-1735 15640 North Africa	9435	Central Europe
Russian (REQA) 1830-2000	15650	Central Europe
11605 Russia	Bukharian (REQA) 1300-1315	
9435 Russia	15640	Central Asia
Persian (Hei) 1500-1625 Sun-Thurs	17545	Central Asia
9985 Iran	Georgian (REQA) 1315-1330	
11605 Iran	15640	Georgia
Persian (Hei)	17545	Georgia
1500-1600 Fri-Sat and holidays	Romanian (Hei) 1725-1745	
17545 Europe + N. America	9435	Romania
Yiddish (REQA + Hei) 1700-1725	15650	Romania

* frequency in use from December 15, 2001 to February 28, 2002.

(KOL website last modified at 03 Dec 2001; via JKB)

The Israel Broadcasting Authority has announced its intention imminently to end all radio broadcasts in all languages directed overseas excepting those in Hebrew and Arabic. Some local broadcasts heard only within Israel may remain in English, French, Russian and Amharic. This will mean the end of English, French and all other programming produced for overseas on shortwave and all other media. No financial provision for production of these language services or their transmission has been included in the 2002 budget. (Marie A. Lamb in EDXP-NET via WWDXC-HQ, 1 Feb 2002)

KOREA (SOUTH): *Radio Korea International - RKI* broadcasts in 10 different languages on a total of 24 frequencies targeting 9 directions : Europe, North America, South America, Southeast Asia, Middle East & Africa, Australia, China, Japan and Non Direction. Latest B01 schedule valid to 03/31/02:

0000-0100	Japanese	7275, 11810
0000-0100	Korean	15575
0100-0200	Korean	7275, 11725*
0100-0200	Spanish	11810*, 15575
0200-0300	English	7275, C-9650, 11725*, 11810*, 15575
0300-0400	Korean	7275, 11725*
0700-0800	Korean	7550, S-9535, 9570
0800-0900	Japanese	5975, 7275
0800-0900	English	9570, 13670
0900-1000	Korean	7550*
0900-1100	Korean	5975, 7275, 9570, 13670
1000-1100	Korean	1170
1000-1100	Spanish	7550*, 9580*, C-11715*
1100-1130	Korean	9580*, C-9650
1100-1200	Russian	1170, 5975, 6135, 7275
1130-1230	Mandarin	6065
1130-1230	English	C-9650
1200-1300	Korean	7285
1200-1300	Indonesian	9570, K-9705, 13670
1200-1300	Japanese	1170, 5975, 6135
1300-1400	Mandarin	1170, 5975, 6135, 7285
1300-1400	English	9570, 13670
1400-1500	Japanese	5975, 7275
1400-1500	Indonesian	9570, 13670
1600-1700	Arabic	7275, 7550
1600-1700	English	5975, 9515, 9870
1600-1700	Russian	15575

1700-1800	French	7275, 9515, 9870
1700-1900	Korean	5975, 7550, 15575
1800-1900	Spanish	9515, 9870
1800-1900	Russian	S-15360
1800-1900	German	6480, 7275
1900-2000	English	5975, 7275
1900-2000	Arabic	6480, 7550, 9515, 15575
1900-2000	French	9870
2000-2100	Mandarin	5975
2000-2100	Spanish	7275, 9870
2000-2100	German	S-3955, 7550, 15575
2100-2130	English	S-3970
2100-2200	French	S-3955
2100-2200	English	15575
2100-2300	Korean	5975
2200-2300	Indonesian	7275, 9750
2300-2400	Mandarin	5975, 7275, 9750
2300-2400	Korean	15575

(*) directed to South-America.

Transmitter:

(C) Sackville, Canada

(K) Kranji, Singapore

(S) Skelton, UK (M. Cornachioni in CONEXION #143 via WWDXC-HQ, 27 Jan 2002)

MONGOLIA: The overseas service of the *Voice of Mongolia* was founded in 1964. Since then it has been introducing Mongolia to the rest of the world. The first broadcast in September 1964 was a half hour transmission in the Mongolian and Chinese languages, beamed to China. In the next few years, Mongolian international broadcasting expanded in terms of languages used, broadcast hours and target areas. The English service of Radio Ulaanbaatar, which was renamed The Voice Of Mongolia on January 1st, 1997, was launched on January 29th, 1965. Today the service transmits its broadcasts under the name "The Voice Of Mongolia" in the Mongolian, English, Chinese, Russian and Japanese languages. The Voice of Mongolia transmits a half-hour program on a daily basis in each of the mentioned languages. All of The Voice Of Mongolia's broadcasts come directly from its Khonkhor Transmitting Station, about 25 km east of Ulaanbaatar, Mongolia's capital. It broadcasts through Soviet-made 100, 250, and 500 kW transmitters and curtain antennas built in the mid sixties. You may be able to hear some of our broadcasts which are not directed to your part of the world providing fair reception in South America and in Southern Africa and in Europe as well. The Voice Of Mongolia is the country's only overseas broadcasting service and is operated by Mongolian National Radio & Television, a public service broadcaster of the Mongolian Government. It broadcasts a total of 8 hours a day in 5 languages - Mongolian, English, Chinese, Russian and Japanese. All reception reports and personal letters should be sent to the station's address marked for a particular language section (e.g. English Section): Voice of Mongolia, C.P.O.Box-365, Ulaanbaatar 13, MONGOLIA or via Email: radiomongolia@magicnet.mn

The Voice of Mongolia, Winter Broadcast Schedule. Eff Oct 28 2001 - March 31, 2002.

English	SoAS/AUS	1030-1100	12085
	EUR	1500-1530	12015
	EUR	2000-2030	12015
Russian	EUR	1330-1400	7380
Chinese	AS	1000-1030	990 12085
	AS/SoAS	1130-1200	990 7380
Japanese	AS	0900-0930	12085
	AS	1200-1230	7380
Mongolian	AS	0930-1000	990 12085
	SoAS	1100-1130	990 7380

Internet: <<http://www.mongol.net/vom>> (Rumen Pankov via BC-DX #562, 1 Feb 2002)

NEPAL: *Radio Nepal* observed back on 5005 by several listeners in Europe and Asia 2315-1815. Fax: 977-1-221952 and postal address Radio Broadcasting Service, P.O. Box 634, Singha Durbar, Kathmandu, Nepal. (JKB, Feb 2002)

POLAND: In *Radio Polonia*'s Media Magazine as well as discussing leasing of time from Juelich and Slovakia there was a suggestion that they might, in the future, use a long wave transmitter with the Digital Radio Mondiale system for their external service.

(Mike Barraclough, England, Jan World DX Club Contact via DXLD #2-001, 1 Jan 2002)

SAUDI ARABIA: *Broadcasting Service of the Kingdom of Saudi Arabia - BSKSA* complete schedule for B01 season. Address of Technical/Frequency management: PO Box 61718, Riyadh. Fax: +966-1-404-1692.

MAIN PX in Ar	0600-0900	17560	17760	21505	21705
	0900-1200	21505	21705		
	1200-1500	17585	21505	21705	
	1700-1800	11785	15315	15435	
	1800-2300	9555	9870		
SECOND PX in Ar	0300-0600	9578.9			
	0600-1700	11855.1			
	1700-2200	9578.9			
CALL OF ISLAM in Ar	1500-1700	11785	15315	15435	
HOLY KORAN in Ar	0300-0600	11820	15170	15435	21495
	0600-0800	15380	17895		
	0800-0900	15380			
	0900-1200	11935	17615	21495	
	1200-1400	15380	17895	21600	
	1400-1500	17745	17895		
	1500-1600	13690	17745		
	1600-1700	13690	15205	17560	17745
	1700-1800	13690	15205	17560	
	1800-2100	11820	11935	11950	15230
	2100-2300	11820	11935	15230	

FOREIGN SERVICES

Bambara	1700-1800	17775			
Bengali	1600-1700	15345	<< retimed (x1400-1500)		
French	0800-1000	21600			
	1400-1600	21600			
Indonesian	1000-1200	21670			
Pashto	1700-1800	9695	<< new lang		
Persian	1400-1600	11745			
Somali	0400-0500	17760			
Swahili	0500-0600	17760			
Turkish	0400-0600	15275			
Turkmen	1400-1600	9730	<< retimed (x1500-1700)		
Urdu	1200-1400	15345	(OBSERVER via BC-DX #559, 2002 Jan 24)		

SWEDEN: Finally, this news about another maritime radiotelegraph station closing down. *Stockholm Radio* will end its radiotelegraph operations on 500 kilohertz on February first, after a century of operation. In the past few years, many coastal stations operating of the emergency calling frequency of 500 kilohertz have ended operations. Satellites are now used to locate and communicate with vessels on the high seas. For more information, visit <http://www.coastal-radio.org.uk>. Iceland may soon be ending all of its shortwave broadcasts. The Radio Netherlands Media Network Web site Radio Netherlands Media Network Web site said the shortwave transmissions, all in Icelandic and aimed mainly at the Icelandic fishing fleet, resumed on

December 22nd after several months' absence. But they may be taken off the air again for budget reasons. In the meantime, if you would like to try to hear Iceland on shortwave, here's the schedule. To Europe at 1215 to 13 UTC on 13865 kilohertz and 1755 to 1825 on 12120. And to the United States at 1410 to 1440 and 1835 to 1905 on 13865, and 23 to 2335 on 12120. (Communications World Script 26 January 2002 via JKB)

USA: *World Wide Christian Radio - WWCR* has four 100 kW state-of-the-art transmitters which serve the world on 10 different broadcasting channels. Together our transmitters provide over 400 religious and talk programs direct from Nashville, Tennessee to a global audience. WWCR (Nashville) B01 Winter Schedule:

Transmitter #1 - 100 KW - 46 Degrees

	21 Jan-28 Feb	1 Mar-31 Mar
9475	1000-1100	1000-1100
15685	1100-2100	1100-2200
9475	2100-2300	2200-0000
3210	2300-1000	0000-1000

Transmitter #2 - 100 KW - 85 Degrees

	1Dec01-28 Feb	1 Mar-31 Mar
13845	1400-0000	1300-0100
5935	0000-1400	0100-1300

Transmitter #3 - 100 KW - 40 Degrees

	15 Jan-28 Feb	1 Mar-31 Mar
12160	1300-2200	1300-2300
5070	2200-1300	2300-1300

Transmitter #4 - 100 KW - 90 Degrees

	21 Jan-28 Feb	1 Mar-31 Mar	
9475	1400-2100	1400-2200	
7435	2100-0500	2200-0500	
7560	0500-1400	0500-1400	(ADXN #434 - Jan/Feb 2002 via WWDXC-HQ)

Latest X-band list thanks to Patrick Martin:

1610	KDNZ IA CEDAR FALLS NX/TLK/SPT
KALT TX ATLANTA (REP. SILENT)	WHKT VA PORTSMOUTH NOS/SPT
1620	1660
WPHG AL ATMORE (SILENT)	**KAXW CA MERCED SS
KSMH CA AUBURN REL (ETWN)	WODX FL MARCO ISLAND NX
KBLI ID BLACKFOOT SPT (ESPN)	KXTR KS KANSAS CITY CLAS
WDND IN S.BEND SPT (ESPN)	WQSN MI KALAMAZOO SPT(ESPN)
KOZN NE BELLEVUE SPT (ESPN)	WWRU NJ JERSEY CITY SS (UNICA)
WTAW TX COLLEGE STN TLK	KQWB ND WEST FARGO NOS
KYIZ WA RENTON UC-AC	KRZX TX WACO NX/TLK/SPT
1630	KXOL UT BRIGHAM CITY OLD
*WTEL GA AUGUSTA TLK/SPT	WGIT PR CANOVANAS SS
KCJJ IA IOWA CITY AC/OLD	1670
KKWY WY CHEYENNE C&W	KNRO CA REDDING SPT (ESPN)
XEUT BCN TIJUANA JAZZ	WRNC GA WARNER ROBINS C&W
1640	WTDY WI MADISON TLK/SPT
KDIA CA VALLEJO TLK	1680
KPBC OR LAKE OSWEGO REL/GOS	KAVT CA FRESNO KID (DISNEY)
KBJA UT SANDY SS (UNICA)	WTIR FL WINTER GARDEN TOURIST
WKSH WI SUSSEX REL	***KYE LA MONROE UC-GOS
1650	WJNZ MI ADA UC-CHR
KWHN AR FT SMITH NX/TLK	WTTM NJ PRINCETON SPT (ESPN)
KFOX CA TORRANCE KK	1690
KBJD CO DENVER REL-AC	KSXX CA ROSEVILLE SS/ETH

KDDZ	CO	ARVADA	KID (DISNEY)	WJCC	FL	MIAMI	SPRS	SS/REL
WPTX	MD	LEXINGTON	PK SPT9SSN)	KBGG	IA	DES MOINES	NX	
1700				KQXX	TX	BROWNSVILLE	OLD	
WEUV	AL	HUNTSVILLE	UC-GOS	KTBK	TX	SHERMAN	SPT (SSN)	

* WTEL also reported using WRDW calls.

**KAXW soon will change to KTIQ and go Sports.

***KYEAA also reported using KRJO calls. (ADXN #434 - Jan/Feb 2002 via WWDXC-HQ)

UZBEKISTAN: Radio Tashkent Postal address: Radio Tashkent, 49 Khorezm Street, Tashkent, Uzbekistan. E-mail: <uzradio@uzpak.uz>. Radio Tashkent transmission schedule valid 10/28/01 al 03/31/02. Postal address: R. Tashkent, 49 Khoresm Street, Tashkent, Uzbekistan.

0000-0030	Uyгур	5040	
0100-0130	English	5955, 5975, 7215	
0130-0200	Dari	5955, 5975, 7215	
0200-0230	Pashto	5955, 5975, 7215	
0230-0330	Uzb.	5955, 5975, 7215	
0600-0630	Turkey	15165, 15330	
1200-1230	English	5955, 5975, 6025, 9715	
1230-1300	Urdu	5955, 5975, 6025, 9715	
1300-1330	Hindi	5955, 5975, 6025, 9715	
1330-1400	English	5955, 5975, 6025, 9715	
1330-1430	Uyгур	5040	
1400-1430	Urdu	5060, 5975, 6025, 9715	
1430-1500	Mandarin	5040	
1430-1500	Hindi	5060, 5975, 6025, 9715	
1500-1530	Uzb.	5040	
1520-1550	Dari	5975, 6025, 7285, 9540	
1550-1630	Uzb.	5975, 6025, 7105, 7285, 9540	
1630-1700	Farsi	5975, 6025, 7285	
1700-1730	Turkey	7105, 9540	
1700-1730	Arabic	5975, 6025, 7285	
1730-1830	Uzb.	5975, 6025, 7105, 7285, 9540	
1830-1900	Farsi	5975, 6025, 7105, 7285, 9540	
1900-1930	Arabic	5975, 6025, 7105, 7285, 9540	
1935-2030	German	5025, 5035, 5060, 7105, 9540, 11905	
2030-2100	English	5025, 11905	
2130-2200	English	5025, 11905	
2330-2400	Mandarin	5040	

(Marcelo Cornachioni in CONEXION #145 via WWDXC-HQ; February 10, 2002)

VENEZUELA: Anker Petersen just returned to Denmark from a DXpedition to Aruba. The only active Venezuelan SW stations he heard from Aruba were:

4830 R Tachira, San Cristobal

4939.5 R Amazonas, Puerto Ayacucho

4980 Ecos del Torbes, San Cristobal

9640 Ecos del Torbes, San Cristobal (Anker Petersen in EDXP #238, 2002-Feb-08).

YUGOSLAVIA: A dispute that has silenced *Radio Yugoslavia's* shortwave transmissions shows no signs of being settled. A note on the station's Web site informs listeners that the silence is due to "technical problems". Indeed, there is a technical problem at the transmitter site at Bijeljina, which is actually located in the Serbian part of Bosnia. The Bosnian Serb Electric Power Company has cut off its power supply because Radio Yugoslavia has not paid an outstanding electricity bill of 9 million dinars (around 150,000 EUR). Radio Yugoslavia is, in fact, in

dispute with its own federal government as well as with the Bosnian Serbs. Yugoslav Assistant Minister of Information Slobodan Orlich says that Radio Yugoslavia has refused to accept a financial rehabilitation programme proposed by the government. The station's budget is currently lumped together with several other media operations, and the current funding is not even sufficient to pay the salaries of the remaining employees. The loss of power at Bijeljina has caused material damage to the transmitting facility due to the cold weather now affecting a large part of Europe. Radio Yugoslavia Director Milena Jokich says that the well-pump and the network of pipes have been cracked by the melting ice. Zoran Kalicanin, Assistant Federal Minister of Information, claims that the damage is not too serious. He also stresses that the shortwave broadcasts are a "priority" but that the budget for 2001 was exceeded. Federal Information Secretary Slobodan Orlich says that he has written to Radio Yugoslavia promising that the debt will be paid from the budget for 2002. Meanwhile, as politicians and officials bicker in Belgrade, the shortwave transmitters in Bosnia remain silent, and the only way to hear Radio Yugoslavia is via its Web site <<http://www.radioyu.org>>.

(© Radio Netherlands Media Network via DXLD #2-006 via JKB, 8 Jan 2002)

ZIMBABWE / UK: A new station called *Shortwave Radio Africa* is broadcasting to Zimbabwe from studios in London. It is staffed by journalists who formerly worked at Capital FM, an independent station in Harare, capital of Zimbabwe, which operated for a few days in 2000 before being closed down by authorities. Shortwave Radio Africa's schedule is daily at 16 to 19 Universal Time on 6145 kilohertz. Roger Tidy in the U.K., reporting to DX Listening Digest, saw a report on Channel 4 news which said that the transmitter is in South Africa. The SW Radio Africa Web site is <<http://www.swradioafrica.com>>. The Zimbabwean government has been placing restrictions on journalistic activities in the run up to March presidential elections in that country. (Communications World Script: 19 January 2002 via JKB)

Sources & Contributors:

ADNX News Bulletin by Australian Radio DX Club - Australia.
 BC-DX News Bulletin by Wolfgang W. Bueschel - Germany.
 BP Bob Padula - Australia.
 Comm. World Communications World, hosted by Dr. Kim Andrew Elliott, VOA - USA.
 CONEXION CONEXION Digital - Buenos Aires, Argentina.
 DXA DX Antwerpen - Holland.
 DXLD Glenn Hauser's DX LISTENING DIGEST - USA.
 DXW DX-Window by Danish Shortwave Club International - Denmark.
 EDXP Electronic DX Press, Bob Padula - Australia.
 EDXP-NET ELECTRONIC DX PRESS Messaging Network - Australia.
 JKB Dr. Juergen Kubiak, Berlin - Germany.
 OBSERVER Fortnightly edition of Radio Bulgaria's Frequency Management.
 RNMN R. Netherlands Media Network.
 WB Wolfgang W. Bueschel, Stuttgart - Germany.
 WWDXC-HQ WWDXC Headquarter, Michael Bethge - Germany.

Abbreviations:

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

ME Middle East
FSU Former Soviet Union

<i>Languages:</i>		<i>Other common abbreviations:</i>	
Ar	Arabic	bc	broadcast
Ch	Chinese	lsb	Lower Side Band Mode
Du	Dutch	nd	non-directional
E	English	px	program
F	French	sce(d),	
G	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	ddmmyy	(daymonthyear)
R	Russian	dd.mm.yy	(day.month.year)
Sp	Spanish		
Turk	Turkish		

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DIGITAL AUDIO BROADCASTING - AN AUSTRALIAN OVERVIEW by Bob Padula

1. OUTLINE

The new year of 2002 has opened with a flurry of activity across the industry, associated with the introduction of Digital Audio Broadcasting (DAB).

Here in Australia, the Government has authorised experimental transmissions in the L-band (UHF), for assessing consumer reaction to this new delivery platform, and many other countries are also moving towards broad roll-out of DAB.

This paper is a general overview of the subject, from an Australian perspective, and if you are interested in this emerging technology, there are a range of Links given which you are invited to visit for detailed information.

2. WHAT IS DAB?

Simply put, "DAB" is the replacement for existing VHF-FM audio broadcasting, and there has been acceptance of the "Eureka 147" technical standard in many countries as the preferred platform.

Th proposed replacement for LW, MW and SW is the Digital Radio Mondiale standard, ("DRM"), currently undergoing technical development and compatibility trials in various regions.

Digital television is a third category, with consumer acceptance worldwide not being quite what its developers had anticipated at this stage! The Australian Government would like to introduce digital TV widely, as soon as possible, but is aware of negative perceptions from the UK, where 92% of respondents to a recent survey said they didn't believe they should have to pay for the conversion from analogue!

There are two main Web sites of particular interest, devoted to digital radio broadcasting:

<http://www.drm.org> (covering the DRM technology)

<http://www.worlddab.org/> (covering DAB technology)

The WorldDAB Forum issues a regular free on-line newsletter, available from its Web site, and archived editions may be viewed or downloaded.

As the technology is continuously evolving, there are very few printed references available on the subject, are very expensive, and useful mainly in academic/educational and design/development/research areas.

My view would be that we should not hide our heads in the sand with these incoming technologies. WorldDAB reports that in Canada, General Motors has announced that it will be delivering factory-installed DAB receivers in its Chevrolet Impalas and Monte Carlos from 2003 in their Canadian models. There are 55 DAB stations serving a potential 10 million people in Vancouver, Toronto, Windsor and Montreal, with others due on line this year.

Once this new technology is available, the term "DX" will cease to have any meaning, whether DRM or DAB. Put simply, digital signals are either "on" or "off" and there is no concept of "fading". Once the received signal level drops below a threshold level, there is no signal at all - rather like cell-phone technology.

The proposed shortwave version of DRM would mean a major intellectual adjustment to what we have grown up with: receivers will not have tuning "dials" as such, and will respond to digitally modulated signals from an array of transmitters globally, with a combined output, with the receiver continually "searching" for the desired program over a very wide frequency spectrum. You will not "tune" to "frequencies" but to "stations"! The same sort of thing may happen with long-wave and medium-wave. But that's a long way off still...

One thing that worries some of us in the industry is the progressive dismantling and closure of the HF transmitter infrastructure for international and domestic broadcasting, which is quite inconsistent with DRM's objectives of maintaining HF radio to deliver digital signals globally.

Information coming forward from the industry focuses heavily on the rapid commercial introduction of DAB for domestic purposes using VHF, but relatively little details are available for the DRM initiatives.

Indeed, one could wonder if there is any future at all in HF broadcasting, whether AM or DRM, if the existing rate of termination of existing transmitters is maintained, with widespread migration to satellite, and VHF, supported by streaming Audio on the Internet. As many private HF international broadcast operators have realised, revenue streams from commercial advertising are negligible, and many governments are no longer prepared to invest vast sums into HF broadcasting where the main audience is "technical monitors or hobbyists"!!!

3. INDUSTRY INFORMATION

3.1 WHAT DIGITAL RADIO SYSTEMS ARE AVAILABLE?

A number of different digital radio systems are currently under consideration to become the preferred standard in Australia.

Of the systems under consideration, only the European Eureka 147 system is sufficiently developed to allow for the commencement of initial planning for digital radio services in Australia. However this does not preclude other planning options and transmission standards being adopted to ensure the best possible

outcomes for digital radio in Australia.

Other digital radio standards include in-band systems, digital systems that use satellites for delivery of services and a digital radio system intended to replicate the large coverage areas of current AM broadcasters and shortwave broadcasters.

The two main in-band systems under development in the USA are In-Band On Channel (IBOC) and In-Band Adjacent Channel (IBAC). The IBOC system transmits a digital signal simultaneously within an existing analog AM or FM signal. The IBAC system transmits a digital signal within unused spectrum adjacent to the spectrum used by existing FM signals. In-Band Reserve Channel (IBRC), which is based on using "spare" spectrum not able to be used for other services, may also be used.

3.2 EUREKA 147

Eureka 147 was developed in Europe by a consortium of broadcasters, Government research bodies and a segment of the electronic manufacturing industry. Eureka 147 is being adopted in Europe and Canada.

Depending upon the particular technical and spectrum arrangements adopted, the Eureka 147 system may offer:

- use of one receiver for both terrestrial and satellite reception;
- the commencement in early 1998 of markets for domestic receivers, and transmission and studio equipment;
- higher quality sound than AM or FM radio, providing an appropriate bit rate is used;
- the capability to re-configure services for different programming requirements;
- greater flexibility in coverage than analog services;
- reception to fixed, portable and mobile receivers with fewer impairments (eg. noise or multi-path distortion) than current AM or FM radio;
- program-associated information and ancillary multimedia services;
- more effective use of spectrum than analog services;
- lower radiated power requirements for coverage of a given area than analog services;
- the ability to operate over a range of frequency bands; and
- generally lower or comparable capital and operating costs than AM or FM radio.

3.3 WHAT RECEIVERS ARE NEEDED?

Reception of digital radio requires new receivers to separate and decode the transmitted signals. These receivers may incorporate a screen as well as the traditional speakers to allow for reception of the new multimedia applications.

Eureka 147 receivers are currently under manufacture for the European and Canadian markets. The first consumer receiver models were displayed at the World of Consumer Electronics fair (Internationale Funkausstellung, IFA) in Berlin in August 1997.

Eureka 147 receivers have only been on the European market since summer 1998. Nevertheless, there now exists Eureka 147 car radios, hi-fi units, PC cards and software as well as portable receivers, and other exciting new developments and prototypes such as the Eureka 147 palm top receiver.(ABA)

4. INFORMATION FOR THE LISTENER

Digital radio broadcasting (DRB) is a new method of assembling, broadcasting and receiving communications

services using the same digital technology now common in many products and services such as computers, compact discs (CDs) and telecommunications.

4.1 DIGITAL RADIO CAN:

- provide for better reception of radio services than current amplitude modulation (AM) and frequency modulation (FM) radio broadcasts;
- deliver higher quality sound than current AM and FM radio broadcasts to fixed, portable and mobile receivers; and
- carry ancillary services-in the form of audio, images, data and text-providing
- program information associated with the station and its audio programs (such as station name, song title, artist's name and record label),
- other information (e.g. Internet downloads, traffic information, news and weather), and
- other services (e.g. paging and global satellite positioning).

A fundamental difference between analog and digital broadcasting is that digital technology involves the delivery of digital bit streams that can be used not only for sound broadcasting but all manner of multimedia services.

4.2 HOW DOES IT WORK?

Digital radio systems use advanced digital techniques to convert the audio signal from an analog waveform to a digital signal, sampling the amplitude of the wave and creating a stream of ones and zeros which accurately represent the original sound. The sampled information is digitally compressed before being transmitted. In some digital radio broadcasting systems, several audio channels are brought together and encoded into a single data stream by means of a multiplex. Data and other services are added. The whole digital stream is referred to as an ensemble. Receivers separate and decode the signals in the digital stream. (ABA)

5. DIGITAL BROADCASTING IN AUSTRALIA

5.1 AUSTRALIAN BROADCASTING CORPORATION

A very useful and comprehensive paper by Margaret Cassidy, discussing the Australian Broadcasting Corporation's digital radio broadcasting plans, is available at:

http://www.aba.gov.au/abanews/conf/1999/broad_sem99/Margaret_Cassidy.htm

5.2 COMMERCIAL RADIO AUSTRALIA (CRA)

In August 2001, Australia's commercial radio apex body CRA (Commercial Radio Australia) approved a plan to extend existing Eureka 147 technical trials in the L-band into a comprehensive consumer trial. These expanded trials are now in progress and include industry participation, along with the existing participants, and a continuing commitment from the Australian Broadcasting Corporation.

These trials will concentrate on measuring consumer response to a range of audio and PAD/PID content and receiver functions. The trials consortium is in discussion with technology providers to gain access to both receiver and transmission technology for the remainder of the project. Negotiations are also under way to access VHF spectrum in the Sydney metro area, to allow the industry to conduct parallel trials in the L-band and VHF to assess transmission and receiver capabilities.

CRA is also looking to other countries for strategic partnerships, including France and the World DAB Forum. (Pacific-Asia Broadcasting Union, and WorldDAB Forum)

6. SOUTH AFRICA RECOMMENDS EUREKA 147

After nearly a year of deliberation, the Southern African Digital Broadcasting Association (SADIBA) has recommended that Eureka 147 technology be adopted as the standard for Digital Radio in South Africa.

SADIBA determined that "Digital Radio according to the Eureka 147 technology provides a low-cost information distribution system that delivers the multimedia radio of the future and will contribute to establishing a knowledge economy in South Africa."

The Association further recommended that Band III and L-Band frequency allocations be made for Digital Radio, that both existing and new services are accommodated, and that a commercial multiplex licence be issued first.

The Digital Broadcasting Advisory Body (DBAB) is expected to present final recommendations on digital broadcasting to the Minister of Communication in May 2002.

Last July, a team from WorldDAB attended a two-day workshop in Johannesburg to debate the various issues facing South Africa's broadcasters and regulators. The team was able to share its accumulated knowledge on such issues as policy, regulation, technology, and commercial and marketing strategies, which other countries around the world have identified as core to the successful implementation of digital broadcasting.

For more information on the recommendations and DAB in South Africa, visit <http://www.sadiba.co.za/> (WorldDAB Forum)

7. DENMARK TO INCREASE COVERAGE

On Jan-29, Denmark's Tele Danmark received government approval for the final phase of transmitter rollout that will bring 100% DAB Digital Radio coverage to the country.

Currently, coverage stands at 30% of the population. A national network of transmitters is due to roll out this year increasing coverage to 75% by August 1, 2002, building to 100% by March 2003.

National public broadcaster, DR, plans to introduce a wide range of new programming, which will be unique to DAB Digital Radio. Listeners will be able to tune in to several youth music channels, a jazz channel, a children's channel, and services offering news and traffic information.

First to benefit from DR's upgrading of transmitters will be Copenhagen, the location of this year's WorldDAB Forum, October 10/11.

For further information contact Ms Karen Marie Zeuthen at <mailto:MZ@dr.dk> or visit <http://www.dr.dk/dab/> (Danish). An English version of this web site will be available very soon. (WorldDAB Forum)

8. KOREA BEGINS TESTING

A pilot DAB service using the Eureka 147 standard begins testing in Korea in February. The Korean Broadcasting System (KBS) received approval last year from the Ministry of Information and Communication for a five-month trial, after which the MIC will decide whether Korea will adopt the Eureka 147 standard. The MIC hopes to begin official Digital Radio services in 2003, and has set up a committee to look at the legal aspects of introducing Digital Radio services and examining ways of activating DAB related industries. (WorldDAB Forum)

9. SINGAPORE LAUNCHES MULTIMEDIA ON SMARTRADIO

MediaCorp Radio Singapore has launched new and innovative multimedia programming for its DAB service, SmartRadio. With SmartRadio, listeners can view up-to-the-minute information including news, traffic reports, airport flight information, entertainment news and an events guide, all in the easy-to-read, familiar style of a website browser.

For more information about DAB in Asia please contact Ms Pearlynn Pek at the Asia DAB Committee of the World DAB Forum mailto:pearlynn_PEK@asiadab.org or visit <http://www.asiadab.org/> (WorldDAB Forum)

10. A "CHORUS" OF APPROVAL FOR DAB

On Jan-17, at a London forum for manufacturers organised by Digital One, a new fabless semiconductor company, Frontier Silicon, announced the availability of the Frontier Chorus FS1010, a single-chip DAB/Audio processor based on the licensed META DBX-1 design from Digital One and Imagination Technologies. Production quantities of the new processor are planned for March, and Frontier expect the sub-£100 digital radio to be available the second half of 2002.

The forum was designed to highlight the trends and opportunities presented by DAB Digital Radio following indications at the end of last year that the medium was ripe for mass market adoption. Digital One's aim was to share this information and give encouragement to current and future manufacturers.

Among those attending the forum were more than 40 senior executives from Alpine, Arcam, Atlantic Technology, Audio Partnership, Dixons Stores Group, Hitachi, Imerge, JVC, Kenwood Electronics, LG Electronics, Linn Products, Mercedes-Benz, MG Rover Group, Mitsubishi Electric, Modular Technology, Pace Micro Technology, Psion Digital, Quad, Wharfedale, Bosch, Roberts Radio, Samsung, Sanyon, Sharp UK, Toyota, and TTP.

The event was oversubscribed, and Digital One is planning to host a second forum elsewhere in Europe later this Spring.

- The full press release on the new Frontier Silicon chip can be downloaded at: http://www.worlddab.org/pressreleases/Frontier_Silicon02.pdf

- For more information on the London Forum, please contact the Mr Kevin Franklin at mailto:kevinfranklin@digitalone.co.uk (WorldDAB Forum)

11. SLOVAKIA DRAWS UP PLANS

Slovakia received government approval for DAB Digital Radio using Eureka 147 in June 2000. This year, the Research Institute of Posts and Telecommunications is expected to submit to the government, a document outlining the strategy and technical criteria necessary for the implementation of T-DAB.

Regular DAB transmission in the L-band is planned for 2006 in the western part of the country. (WorldDAB Forum)

12. SWEDEN LOBBIES BRUSSELS

Representatives of Swedish Radio's Board of Governors travel to Brussels in March to discuss DAB Digital Radio with the EU Commission, and then go on to Geneva for talks with the EBU. Digital Radio in Sweden is undergoing a change in dynamics following a cut in DAB services to 40%. (WorldDAB Forum)

13. ISLE OF MAN 3G/DAB TRIALS

Trials are currently underway on the Isle of Man, off the UK coast, to test the possibilities of convergence of both 3G and DAB. Partners mm02, Virgin Radio and Crowncastle International have developed the network, while Unique Interactive and XY Networks are supplying data facilities on 3G/DAB and DAB only platforms.

A carefully selected closed user group on the Isle of Man has been given 3G handsets and Psion WaveFinders so that public reaction to audio and data services over both DAB and 3G can be assessed. Six services are currently available, five from Virgin Radio and the local Manx Radio service. An additional Manx audio service is to be added to the trial this Spring.

Please contact Mr Peter Dews mailto:Peter.Dews@crowncastle.com) for more information on the trials taking place in the Isle of Man. (WorldDAB Forum)

14. CET'S VISUAL RADIO DAB RECEIVER CARD

CET Technologies Pte Ltd from Singapore launches an enhanced Visual Radio (VR) DAB receiver capable of receiving both DAB Eureka 147 and proprietary Conditional Access (CA) DAB broadcasts in VHF Band III and L-Band, in the first quarter of this year.

Please contact Ms Pearlynn Pek for more information mailto:perlynn_PEK@asiadab.org (WorldDAB Forum)

15. "WHAT'S NEW FOR RADIO?" WORLDDAB TECHNICAL COMMITTEE WORKSHOP

The Technical Committee is holding a two-day workshop entitled "What's new for radio?" on May 23 and 24 in Zurich. The aim of the workshop is to provide a complete briefing on the possibilities of DAB. Among topics under discussion will be DAB and mobile technology, DAB and car systems, EPG possibilities and a round up of the market situation around the world. The presentations will consider the whole value chain for the benefit of content providers, transmission providers and manufacturers.

For more information on this Workshop visit the WorldDAB Web Site at <http://www.worlddab.org/> (WorldDAB Forum)

16. NEW ZEALAND

The Eureka 147 standard is the preferred platform in NZ. Planning will initially concentrate on terrestrial delivery, but possible long-term satellite delivered is being considered.

The timing for large scale introduction of DAB services is at least five years away, and possibly up to 10-15 years. The Radio Spectrum Management Group of the Ministry of Economic Development has recommended that a policy framework be progressed for the allocation and eventual use of DAB L-band spectrum. (WorldDAB forum)

17. RUSSIA

Network Service Co. now offers high-quality digital radio broadcasting in digital TV format (DVB-S). Programming from various radio broadcasting stations is retransmitted via ground-based facilities, radio networks, cable TV networks, and direct-to-home systems. High-quality stereo digital programs are available using a parabolic 90-120 cm antenna across all of Russia, the CIS and former Soviet Republics. (Intersputnik Today via ABU)

18. ACKNOWLEDGMENTS

WorldDAB Forum

Asia Pacific Broadcasting Union

Australian Broadcasting Authority

Australian Communications Authority

AMT (Australia)

Intersputnik Today

(Bob Padula, Australia <bobpadula@bigpond.com> EDXP MAGAZINE #238, 12 Feb 2002)





DX LOGBOOK

Logs around the clock

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TROPICAL BANDS

Frequ.	UTC	SINPO	ITU	Radio Station	Language	Programme Details	Date	Rep.
2310.0	2325	23332	AUS	ABC,Alice Springs	English	C & W Program	2801	GVG
3214.8	1028	22222	INS	RRI,Manado	Indonesian	Local Pop Music & News	2601	JY
3215.0	1820	33333	AFS	South African Amateur Radio	English	Program	2101	GVG
3215.0	1530	33333	MDG	Adventist World Radio	French	Program	2801	GVG
3220.0	0233	24432	EQA	HCJB,Pifo	Quechua	Talk and short music	1002	ALS
3220.0	1245	22332	KRE	Radio Pyongyang	Korean	Music	3101	GVG
3265.0	1300	33333	INS	RRI,Gorontalo	Indonesian	Relay from Jakarta	3101	GVG
3291.3	0856	43343	GUY	Radio Guyana,Georgetown	English	Talk,ID and News	3101	RAD
3310.0	0901	33332	BOL	Radio Mosoj Chaski	Quechua	Flute Music, ID & Talks	3101	RAD
3315.0	1230	44444	IND	All India Radio, Bhopal	Hindi	Program	2901	GVG
3325.0	1415	44444	INS	RRI,Palangkaraya	Indonesian	Musical Program	2801	GVG
3344.8	2045	43333	INS	RRI,Ternate	Indonesia	Talk & News from Jakarta	1801	JY
3380.0	1600	44444	MWI	Malawi Broadcasting Corp.	English	News	0302	GVG
3390.0	1430	44444	IND	All India Radio,Gangtok	English	Musical Program	2701	GVG
3960.0	1325	33333	INS	RRI,Palu	Indonesian	Pop Music	3101	GVG
3976.1	1405	33333	INS	RRI,Pontianak	Indonesian	Local News	2401	JY
4485.0	1700	24332	RUS	Radio Rossii,Ufa	Russian	News	1201	HO
4635.0	1650	35333	TJK	Tajik Radio	Tajik	Local News	1301	HO
4725.0	1442	22432	BRM	Myanmar Radio & TV	Bamar	Talks by woman	2101	ZL
4795.8	1206	23322	VTN	Son La BC,Tuyen Quang	Vietnamese	Talks	1102	GI
4815.0	0016	33332	B	Radio Difusora Londrina	Portugese	Talk,ID & Pop Vocals	1901	RAD
4820.0	0254	22222	BOT	Radio Bostwana	English	IS,Anthem,ID and Ann	2201	RAD
4825.0	2000	34333	RUS	Radio Rossii, Yakutsk	Russian	News	2901	HO
4830.0	0249	24332	VEN	Radio Tachira, San Cristobal	Spanish	Salsa Music	1002	ALS
4834.9	1055	32222	PRU	Radio Maranon	Spanish	Vocals and Talk	2201	RAD
4850.0	0920	35333	MOL	Khokh Tenger(Blue Sky Radio)	Mongolian	Western pops & Rock	0301	HO
4860.0	1232	33333	IND	All India Radio,Delhi	English	News & Hindi vocals	0502	RAD
4874.6	2102	33222	INS	RRI,Sorong	Indonesian	News relay,English Music	1801	JY
4920.0	1227	33222	IND	All India Radio, Chennai	Hindi	Vocals and Talks	0502	RAD
4925.0	1427	33333	INS	RRI, Jambi	Indonesian	Local Pops, News,ID	3001	JY
4930.0	1650	24332	TKM	Turkmen Radio	Turkmen	Local Program	1301	HO
4940.0	0815	35333	RUS	Radio Mix Master, Yakutsk	Russian	Pop Music	0112	HO
4980.0	0255	24332	VEN	Radio Ecos del Torbes	Spanish	Romantic Music & Ann	1002	ALS
4990.0	0028	55555	IND	All India Radio,Itnagar	English	Program	2901	GVG
5005.0	1535	44444	NPL	Radio Nepal	Nepali	Program	2901	GVG
5010.0	0020	55555	IND	All India Radio,Thiruvanthapuram	Tamil	ID and Program	2901	GVG
5019.9	0925	34443	SLM	Solomon Is.Broadcasting Co.	English	News,Ad and ID	2101	GI
5025.0	1020	25432	PRU	Radio Quillabamba,Quillabamba	Spanish	Latin Music Time check	1002	ALS
5040.0	0030	55555	IND	All India Radio, Jeypore	Hindi	News relay	2901	GVG
5050.0	2003	44333	TAN	Radio Tanzania	Swahili	News and ID	2701	ZL

5050.0 0037 33333 IND All India Radio,Aizwal English News 2901 GVG

SHORTWAVE BANDS

Frequ.	UTC	SINPO	ITU	Radio Station	Language	Programme Details	Date	Rep.
5290.0	1700	35333	RUS	Radio Rossii,Krasnoyarsk	Russian	News	1201	HO
5500.0	0354	43333	ETH	Voice of Tigray Revolution	Tigrina	IS and Opening Ann.	2201	RAD
5925.0	0933	33443	VTN	Voice of Vietnam	Vietnamese	Regional Pop Music	2101	GI
5990.0	2228	32222	B	Radio Senado,Brasilia	Portugese	Brazilian Pop Music	0702	DC
5994.9	0855	45544	AUS	Radio Australia	English	IS.Opening Ann & Music	2101	GI
6010.5	1300	24432	URG	Emisora Ciudadde Montevideo	Spanish	Ads & ID,Music	2601	ALS
6010.2	0708	23322	CHL	Radio Parinacota, Putre	Spanish	Romantic Andean style music	0202	ALS
6020.0	0417	54443	TUR	Voice of Turkey	English	Letterbox	1701	RL
6045.6	1025	33422	PRU	Radio Santa Rosa, Lima	Spanish	Romantic Music	1002	ALS
6055.0	0550	45443	E	Radio Exterior de Espana	English	Radio Waves	2001	RL
6060.0	0910	33332	RUS	Amurskoe R. Blagoveshchensk	Russian	Program	0301	HO
6071.2	2010	23222	INS	RRI,Jayapura	Indonesian	Talk and Music	1801	JY
6090.0	0655	34433	CHL	Radio Esperanza, Temuco	Spanish	Gospel Music and ID	0202	ALS
6125.0	1216	24422	URG	SODRE, Montevideo	Spanish	Tangos Musical program	2601	ALS
6140.0	1221	44444	URG	Radio Monte Carlo, Montevideo	Spanish	Songs, ID and Weather Report	2601	ALS
6180.0	0744	34333	B	Radio Nacional de Amazonia	Portugese	Talk, Music and ID	2401	KH
6249.4	2202	22222	EQG	Radio Nacional,Malabo	Spanish	Talk & Highlife vocals	1301	RAS
6265.0	1558	24322	ZMB	Zambia Nac.Broadcasting Corp.	Vernaculars	IS, Drums and Talks	0901	KH
6265.0	0900	44333	TWN	CBS, Taipei	Mandarin	Music Program	2101	ZL
6280.0	0506	55533	ISR	KOL Israel, Jerusalem	English	Daily Newscast	2501	RL
6355.6	0710	25332	PRU	Radio Union ,Lima	Spanish	ID, Romantic music	1002	ALS
6458.5	2330	23532	PUR	AFRTS, Isabella	English	ID Public Radio Intl.	0901	DC
6496.6	1200	32332	VTN	Cao Bang BC, Cao Bang	Vietnamese	Ann, Music and songs	1102	GI
6940.0	0358	32222	ETH	Radio Fana,Addis Ababa	Orofima	Horn of Africa Music	2101	RAD
6956.6	0245	35343	PRU	La Voz del Campesino, Huarmaca	Spanish	Music and Ann.	1002	ALS
7171.4	0910	23322	INS	RRI,Serui	Indonesian	Holy Koran. Local News	0202	JY
7230.0	0106	45543	SVK	Radio Slovakia Intl.	English	Slovakia Today	3001	RL
7230.0	0644	54333	G	Radio Japan via Rampisham relay	English	Let us learn Japanese	2901	RL
7235.0	1533	43433	SNG	Radio Singapore	Malay	Ads & Program	2101	ZL
7260.0	0815	35333	VUT	Radio Vanuatu	English	Talk, ID	2401	KH
7325.0	0033	44443	LTU	Radio Vilinius,Sitkunai	English	Outgoing 2001 and New 2002	0201	RL
7375.0	0402	53333	UKR	Radio Ukraine Intl., Via Mykolaiv	English	Dairy Events Past Week	1401	RL
7384.0	0425	53333	USA	Radio Prague via WRMI	English	Mailbox	1401	RL
7385.0	0429	45443	USA	WRMI	English	Viva Miami Mailbag	1002	RL
7445.0	0658	55553	CTR	Radio for Peace Intl.,	English	Radio Nation	1601	RL
9390.0	2046	35433	ISR	KOL Isreal, Jerusalem	Hebrew	Music Program and ID	1801	IN
9370.0	0753	34333	USA	WTJC	English	Music,Yalk and ID	2301	KH
9435.0	0420	53433	CZE	Radio Prague	English	Magazine Orange day	0902	RL
9515.0	0900	34333	B	Radio Record	Portugese	Religious Program	2701	IN
9530.0	0440	43333	RUS	Magadan Radio	Russian	Vocal Music and Interview	0701	SM
9530.0	0608	53434	ROM	Radio Romania Intl.,	English	Newsreel	0502	RL
9535.0	1950	44553	THA	Radio Thailand,Udon Thani	English	Thai Culture Rice & Cuisine	3001	RL
9560.0	0248	55333	CAN	Radio Korea International	English	Multi Wave Feedback	2801	RL
9586.0	1940	24432	B	Radio Globo, Rio de Janeiro	Portugese	Football Commentary,ID	0902	ALS
9590.0	0519	55554	NLA	Radio Nederland via Bonaire relay	English	Good Life, Elephant poaching	1201	RL
9605.0	0309	55333	CVA	Vatican Radio	English	Sunday Gospel	2101	RL
9620.6	1209	33422	URG	SODRE, Montevideo	Spanish	ID and Music	2601	ALS
9630.0	0850	44444	B	Radio Aparecida	Portugese	Talk,Informa	1102	GI

9630.0	0436	44444	CTR	Radio Exterior de Espana	Spanish	Comments on Argentina	0701	SM
9645.0	2218	33333	MRC	VOA via Tangier relay	Arabic	Talks on Palestine	2801	SM
9660.0	1429	45444	PHL	Radio Blagovest via Radio Veritas	Russian	ID and Religious Talks	0901	IN
9704.2	1459	35333	ETH	Radio Ethiopia	Amharic	IS,ID and Talk	0901	KH
9705.0	2150	33432	NGR	RDTV Niger	French	Talk & Local Music	1401	KH
9725.0	0815	34443	B	Radio Clube Paranaense	Portugese	Talk and Music	1102	GI
9737.7	0718	44433	PRG	Radio Nacional de Paraguay	Spanish	Music ID and Announcement	2301	KH
9745.0	0121	53433	EQA	HCJB, Quito	English	DX Party Line	1002	RL
9845.0	1544	53433	JAP	Radio Japan,NHK	English	Musical Masterpiece	1102	RL
9875.0	2345	53333	LTU	Radio Vilinius,Situkunai	English	Euro,Ice fishing,	1901	RL
9885.0	2354	54433	SUI	Swiss Radio Intl.	English	Newsnet and Mardi Gras	1002	RL
9990.0	2230	33333	EGY	Radio Cairo	Arabic	Arabian Music	2801	SM
9925.0	2040	45333	RUS	R.Vlaanderen Intl. via Armavir	English	Belgium Today Cannabis	2401	RL
9960.0	2035	43333	ARM	Voice of Armenia	English	News and Mailbox	1301	RAD
11590.0	1000	43443	CHN	Voice of the Strait	Chinese	Music, Talk and ID	1201	HY
11675.0	0038	44444	KWT	Radio Kuwait	Arabic	Music,IS and Comments	2201	SM
11690.0	1609	45533	JOR	Radio Jordan	English	Music, Creed & A.Morissette	0302	RL
11725.0	0804	32442	B	Radio Novas de Paz	Portugese	Talk	2301	KH
11765.0	0030	44444	ASC	BBC World Service	Spanish	Interview	2201	SM
11765.0	1905	24432	B	Radio Tupi, Sao Paulo	Portugese	ID and Religious Program	2901	ALS
11785.0	0654	34332	B	Radio Guaiba	Portugese	Talk, Music & ID	2301	KH
11815.0	0805	34232	B	Radio Brasil Central	Portugese	Music, ID	1501	KH
11915.0	0757	34333	B	Radio Guacha	Portugese	Talk & ID	1501	KH
11925.0	0734	33332	B	Radio Bandeirantes	Portugese	Talks,ID	2301	KH
11990.0	0226	55533	CAN	Radio Canada International	English	Maple Leaf Mailbag	1401	RL
12015.0	2114	33333	SWE	Radio Canada International	English	Maple Leaf Mailbag	2001	IN
12060.0	0427	33333	MDG	Radio Voice of Hope	English	ID and Program	1901	RAD
12085.0	0925	33332	MNG	Voice of Mongolia	Russian	Music and ID	3101	RAD
12095.0	0003	44444	ASC	BBC World service	English	News and Outlook	2201	SM
12160.0	0000	33333	USA	WINB	English	Bible Sermon	2201	SM
12172.0	2235	35552	USA	WWFV, McCaysville	English	Religious Music	1801	RL
13640.0	1837	55333	CAN	RTE Radio Dublin via Sackville	English	Saturday Sport	2601	RL
13650.0	2325	33333	CUB	China radio International	Chinese	Comments and Music	0901	SM
13680.0	2322	44444	CAN	China Radio International	English	News on Co-operative farmers	0901	SM
13700.0	2251	54433	NLA	R. Vlaanderen Intl. Via Bonaire	English	Brussels 1043	1301	RL
13715.0	2320	33333	SVK	Radio Slovakia International	Spanish	Talks and interviews	0901	SM
13780.0	2314	33333	RWA	Duetsche Welle	German	Comments	0901	SM
13820.0	2310	33222	USA	Radio Marti	Spanish	Comments	0901	SM
15110.0	0500	35333	KWT	Radio Kuwait	English	ID,History of Kuwait	1301	IN
15120.0	0245	44343	PHL	Radyo Pilipinas	English	Pop Songs	1301	HY
15120.0	0644	43443	NIG	Voice of Nigeria	English	Drums, ID and News	0801	KH
15225.0	0527	33333	AFS	Adventist World Radio	Igbo	Soft music and ID	1901	RAD
15345.0	2045	34333	ARG	RAE,Buenos Aires	French	Music Program	0802	IN
15450.0	1551	35322	TUN	Radio Diffusion TV Tunisienne	Arabic	Music and Announcements	1201	KH
15475.9	1915	34443	ARG	LRA36 Radio Nacional Arcangel	Spanish	Romantic music and ID	2901	ALS
15785.0	1404	35322	ISR	Galei Zahal	Hebrew	Music Program & ID	2101	KH
15820.0	0727	44444	ARG	Radio Diez	Spanish	ID, Talk	1701	KH
17595.0	1329	34433	EGY	Radio Cairo	Bengali	ID,IS and Koran	2701	KH
17675.0	0730	44444		Radio Liberty	Farsi	News	0602	ZL
17705.0	1728	45543	USA	Voice of Greece via Delano	English	Talk on Embassy in mexico	0202	RL
17735.0	1233	35433	TUN	Radio DTV Tunisienne	Arabic	Music Talk and ID	2101	KH

17735.0	2138	33333	PHL	VOA	English	Interview. War on Terrorism	1501	SM	
17740.0	2034	44444	GRC	VOA via Kavala relay	Arabic	Comments	0602	SM	
17775.0	2353	35322	USA	KVOH	Spanish	Music, Talks and IN	2701	KH	
17815.0	1059	35322	AUT	Radio Africa International	English	ID, Music and Talk	0801	KH	
17825.0	2124	44444	CLN	Radio Japan	English	Mines in Cambodia/Afghan.	1501	SM	
17830.0	2030	33333	ASC	BBC Worl Service	English	News	0602	SM	
17835.0	2122	44444	RWA	Duetsche Welle	English	Comments on 2002 Olympics	1501	SM	
17865.0	1657	55353	CAN	Radio Austria via Sackville relay	English	Postbox	1201	RL	
17870.0	1808	54433	AFS	Channel Africa	English	South Africa Today	2801	RL	
21485.0	2116	44444	USA	VOA	French	Comments on Microsoft plus	1501	SM	
21550.0	1323	35433	CHL	Voz Cristiana	Spanish	Music, Talk and ID	2101	KH	
21670.0	0905	45444	FIN	Radio Finland	Finnish	News	1102	GI	
21670.0	2132	44444	CLN	Radio Japan	English	Comments . Food items	1501	SM	
21675.0	2113	44444	USA	Radio Marti	Spanish	Comments	1501	SM	
21700.0	2014	44444	E	REE	Spanish	Football commentary	0602	SM	
21815.0	2105	33333	CTR	Radio for Peace Intl.	English	Religious Programs	1501	SM	

Thanks a lot for your contributions:

ALS : Arnaldo L.Slaen, Argentina. Sony ICF 2010, Realistic DX-160 & GE Superradio with 15 metres long wire
DC : Daniele Canonica, Switzerland. JRC 535D, 30 metres long wire and MLB
GI : Gaku Iwata, Chiba, Japan. FRG 7700 / NRD 535D, AD30, 20 metres long wire
GVG : G.Victor A. Goonetilleke, Sri Lanka. Lowe HF 225 Inverted Vee resonant on 3.3Mhz.
HO : Hironao Oguma, Tokyo, Japan. AR 7030 with AN-1
HY : Hiromitsu Yanagisawa, Saitama, Japan. Drake R8 with 10 metres long wire
IN : Iwao Nagatani, Kobe, Japan. NRD 525, AD-370 with 20 metres long wire
JY : Juichi Yamada, Japan. NRD-525, AR 7030 with SONY AN-1
KH : Kouji Hashimoto, Yamanashi, Japan. NRD 525, FRG 7 & RD 9830 with 35 metres long wire
RAD : Richard A. D'Angelo, Wyomissing, USA. Drake R-8B Lowe HF-150 Alpha Delta DX Sloper, RF Systems
Mini-Windom Datong FL3 JPS ANC-4
RL : Richard Lemke, St. Albert, Alberta, Canada. JRC NRD 535 HF with random long wires.
SM : Stewart Mackenzie, California, USA. Kenwood R 5000 / Grundig Satellit 650 with 100 metres long wire.
WB : Wolfgang Bueschel, Stuttgart, Germany. AR 7030, SONY ICF 2010, Kenwood R-1000, Drake SPR-4 with
12 metres long wire, YAESU FRT 7700 Antenna Tuner.
ZL : Zacharias Liangas, Thessalonki, Greece with Lowe HF-150, Sony ICF 7600D, Yupiteru MVT 7100

Dear Friends,

Welcome to the second issue of Logbook for this year.

This time we welcome Victor with his loggings from Sri Lanka besides our regular contributors.

I find it difficult to convert loggings with SIO code into SINPO code. So from next issue onwards I have decided to use SIO code. Loggings with SINPO will be converted into SIO after removing the N & P codes. Please inform if it is acceptable to the Club members.

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

Ashok Kumar Bose

Throughout the radio hobby, establishing and maintaining a record keeping system is an important facet of active participation. Regardless of which segment of the electromagnetic spectrum the listening enthusiast chooses to pursue, keeping track of what, where and who was heard is important. This allows the hobbyist to set and meet goals, as well as document exactly what was heard. Many listening enthusiasts use strictly written records, while some use a combination of written records and some form of audio archive. With the increasing difficulties in obtaining written QSLs, many DXers are taking the position that a clear recording of a broadcast with a station ID confirms that a given target was heard. The purpose of this article is to help those who make audio recordings of what they hear utilize the latest technology to capture their audio.

In the past 20 years, cassette recording of radio programming was the format of choice. The medium is small, easy to handle and portable. Recording equipment which was capable of making very faithful recordings could be purchased at reasonable pricing. Technological improvements produced reliable, portable equipment which was equally useful at home, or it could be taken into the field on DXpeditions, allowing the DXer to return with exciting clips of audio from rare stations.

For all its convenience, tape recording has its shortcomings. Audio recorded on cassette tapes tends to be "hissy," even when Dolby noise reduction is used. The low, 1-7/8 ips speed allows for quick tape saturation when a signal fades up suddenly, resulting in distortion or sometimes inaudible passages in the recording. Finally, indexing, or keeping track of what is actually on a tape, is cumbersome at best. Written notes must be kept against tape index counter readings. If the notes become lost, or accuracy during an active listening session is compromised, the usefulness of the recorded audio is academic at best.

Time and technology have presented several new formats of audio recording. Digital Audio Tape (DAT), writeable CD and Minidisc (MD) are but a few. Because of the unique capabilities offered to the radio hobbyist, this article will focus on integrating the Minidisc format into your listening hobby. Also, we'll look at a few Minidisc models to illustrate the various useful features the medium offers.

The recordable Minidisc is a reusable medium whose appearance is approximately that of a standard 3-1/2 computer floppy disk. However, the MD is about 2/3 the size of the floppy. The discs are offered by the major magnetic media manufacturers such as Maxell, TDK, Sony, etc. As of this writing, a pack of four Maxell Gold MiniDiscs sells for \$7.99 <<http://www.planetminidisc.com/maxellgmd744.html>> with a free case offer on the Internet at Planet MiniDisc <<http://store.yahoo.com/planetminidisc/index.html>>.

That's about 600 minutes of mono recording time, representing the equivalent of 6.6 90 minute cassettes.

Through its digital ATRAC coding system, a single Minidisc is capable of faithfully recording an exact digital copy of up to 74 minutes of stereo audio on as many as 254 separate tracks or individual cuts. On hardware so equipped, the recording time is approximately doubled when program material is recorded in mono.

An important feature for the hobbyist, a Minidisc can hold up to 1,700 characters of user programmable text, numbers and characters that are used to label each track or selection recorded.

The MD disk itself is written and read with a low power laser. Thus, typical specifications are about the same as a CD. Frequency response is 20-20,000 cps +/- .3 db, undetectable wow and flutter, signal-to-noise ratio in excess of 100db, etc. Audio can be input to and output from most Minidisc equipment by a variety of methods. This includes conventional line level audio connected via RCA plugs. For the musical purest with compatible equipment, some machines offer direct digital input via a single coaxial input. In the case of the more upscale equipment, the digital signal is opto-coupled from the audio source via a single fiber-optic cable. The radio hobbyist will most likely use the RCA inputs to couple line level audio from their receiver to the recorder.

Minidisc recorders are available from most of the major Japanese electronics manufacturers. There are home units about the size of a CD player which run off the commercial power mains. Some manufacturers also offer portable models whose footprint is no bigger than two credit cards, yet are full featured and can operate for many hours on various types of batteries. Sony seems to offer the broadest line of home recorder/players, and there are several excellent brands of portable and even car units (players) on the market as well.

As the hobbyist begins to read the product literature from the various models in order to choose one which best suits his or her needs, they can be quickly overwhelmed by the many product features that recording in the digital realm offers.

A good way to start the selection process of an MD unit is by visiting the Minidisc Community page on the Internet <http://www.minidisc.org/whole_page.html>. It's available by clicking the logo at the left. Here you can learn about the various features, such as editing modes, track indexing and synchro-recording offered by the MD format. What is easy about selecting a Minidisc recorder for hobby use is identifying a few features that are important to the DXer, and then use that criteria to help make a hardware choice.

Perhaps one of the more unique characteristics of the format is the ability to add user chosen titling information to each recorded track. As the selection is played back, the titling information appears on the player's main display in one or more lines, usually by scrolling. The titling information is entered as the initial recording is being made, or during a later edit.

Were I recording a 25 m. reception of All India Radio, a basic entry might consist of the following, which the recorder would encode as data onto the disc and display as the audio is played back: AIR Bangalore 11.620 MHz 2142 UTC 08/19/00 With this 45-character note scrolling across the screen of the player, there is little doubt as to what the program material is. I noted the station name, frequency, and start time of 2142 UTC (more on time labeling later). The date was August 19, 2000.

A more detailed description for the same logging might read: AIR Bangalore 11.620 MHz 2142 UTC 08/19/00. Note ID by OM @ 0:18.0

In the case of the detailed description (68 characters), some additional detail was added to indicate that at 18 minutes into the recording there was an ID by a male announcer. You may title each selection if you wish; what is written and its format is completely your choice.

Because the Minidisc recording system works in real time, most hardware offers several modes of accounting for both playing and recording time. Time into track, length of track and time remaining on disc are but a few of the time display modes. On a personal note, I always label my recordings with the exact time they start. At a later date I can then refer to the time into track and correlate the occurrence of a recorded event with the actual time.

The titling feature is key and can be a very powerful aid to the radio hobbyist.

Because of the potential power of titling, pay special attention to whether a particular piece of hardware, be it a home or portable unit, offers the ability to title tracks. Nearly as important is how the user must go about adding the text. Most home and all portable units allow the text to be entered via multi-function keys or controls on the front panel. Some home units allow the text to also be entered via a remote control.

I particularly like a feature offered on both the Sony MDS JB-930 <<http://www.supremevideo.net/product.asp?stkcode=sonmdsjb930>> (street price, \$319) and the soon-to-appear MDS JB-940 which allows a standard computer keyboard to be plugged right into the front of the machine. All text entry, including upper and lower case alphabet, numbers and punctuation can be conveniently typed in from that keyboard. Additionally, some functions of the machine can also be controlled by entries via the keyboard as well as by the usual front panel and included remote controls. Additional information about Sony MD Products may be obtained at their www site <<http://www.sel.sony.com/SEL/consumer/ss5/>>.

Hardware equipped with the mono recording feature (sometimes called "extended play") is becoming increasingly difficult to locate but is an important feature for the hobbyist. There was some controversy concerning high frequency loss caused by the algorithm used to digitally encode and thus enable monaural recording. The frequencies where the loss occurred were well beyond the range needed by the hobbyist. Yet some manufacturers may be bypassing the issue by simply deleting the feature on newer machines. Indeed, the Sony MDS JB-940, which will replace the MDS JB-930, does not list monaural recording as a product feature. That issue can be reviewed at the Minidisc Community web site.



America's Oldest Private International Shortwave Station

WINB is broadcasting to the world from the state of Pennsylvania on the east coast of the United States of America. Located in the town of Red Lion, WINB came on the air in **October 1962**, which makes us the United States' oldest private shortwave radiostation. Since that time we have informed, entertained and inspired listeners in over 120 countries worldwide. You can tune in WINB as follows:

Transmitting Days		Eastern Standard Time (EST)	UTC	Frequency in kHz
Monday to Friday	s/on	07:00 AM	12:00	9320
Saturday and Sunday	s/on	06:00 AM	11:00	9320
all days		08:00 AM	13:00	13570
all days		06:00 PM	23:00	12160

The Mission

WINB is a commercial, International Shortwave radio station. Its purpose is to promote the Gospel of Jesus Christ. We began transmitting on the shortwave bands in October 1962, and have been used mainly by religious broadcasters to transmit programs as a missionary outreach. Every 30 minutes of bc WINB identifies as following: „This is WINB, Red Lion, Pennsylvania, the United States of America, broadcasting to the world on kHz. For more information on broadcast on WINB call 17172445360, that's 17172445360. You can also write to us at P.O. Box 88, Red Lion, PA, the postal code is 17356, the United States of America, that's P.O. Box 88, Red Lion, PA, the postal code is 17356, the United States of America“.

40th Anniversary in 2002

Dr. Kim Andrew Elliot's message on WINB in VOA-Communication World at February 9, 2002: The last private US shortwave station licensed before the moratorium was WINB in Red Lion, Pennsylvania, marking its 40th anniversary this year 2002. **As part of the celebration** WINB will send an **pennant** to anyone who sent an audio recording and reception report of WINB from February 9 to 23, 2002, between 11:00 and 12:00 UTC on the frequency 9320 kHz. They never had pennants before that !

17.720 1700-2000 GMT 12:00-3:00 p.m. EST
11.795 2000-2200 GMT 3:00-5:00 p.m. EST

WORLD INTER-NATIONAL BROADCASTERS
— INC. —

Transmitter Power: 50,000 Watts - ERP In Target Area In Excess Of 1,000,000 Watts
Transmitter Site: RED LION, Pa., U. S. A.

This is to confirm your report of reception on 23/9/64 Date
time 2000-2115 on a frequency of 11.795

WINB Broadcasts With A Transmitter Output Power of 50,000 Watts, Using A Rhombic Antenna System Which Gives An Effective Beam Power In Excess Of 1,000,000 Watts.

OUR EXACT LOCATION IS 39° 54' NORTH LATITUDE 76° 34' WEST LONGITUDE

Remarks: Glad for your report. We will welcome any in the future.

Signed Rev. John M. Morris

WINB-QSL-card from September 23, 1964:

„Glad for your report. We will welcome any in the future“.

Signed by Rev. John M. Morris

Happy birthday, dear WINB, and all the best in future - god may bless you all !