



Monitoring System

DK2OM – Wolf Hadel
Co-ordinator of IARUMS Region 1
Editor of the Newsletter

HB9CET – Peter Jost
Vice Co-ordinator of IARUMS Region 1

The monthly newsletter for Region 1

December 2014

The 27 members of the IARUMS Region 1 Monitoring Team:



Acknowledgements

ARI: DH7SA – Salvatore ++ ARSK: 5Z4NU - Ted ++ ASTRA: DL1BDF – Mustapha ++ DARC: DK2OM – Wolf ++ ERASD: SU1SA – Sayed ++ IARC: 4Z1AB – Amos ++ IRTS: EI9GSB - Lisa ++ KARS: 9K2RR – Faisal ++ MARL: 9H1M – Dominic ++ MRASZ: HA7PL - Laci ++ NARS: 5N9AYM – Yusuf ++ NRRL: LA4EU – Hans Arne ++ OEVSV: OE3GSA – Gerd ++ PZK: SP9BRP – Jan ++ RAL: OD5RI – Riri ++ REF: F5MIU – Francis ++ REP: CT4AN – Jose ROARS: A41MA - Younis ++ RSGB: M0VRR - Vaughan ++ SARL: ZS4GJA - Gideon ++ SRAL: OH2BLU - Pekka ++ SSA – Ullmar ++ UBA: ON4PN - Patrick URE: EB1TR - Fabian ++ USKA: HB9CET - Peter ++ VERON: PA2GRU - Dick ++ ZRS: S56ZDB – Darko ++ G3VZV – Graham (satellite) ++ TG9ADV – Jorge (Co-ordinator Region 2) ++ VK3MV – Peter (Co-ordinator Region 3) ++ DF8FE – (Webmaster assis.) ++ DL8AAM (ALE) ++ DJ7KG (BUOYS) ++ DF5SX (BC) ++ DARC (server support) ++ OD5TE (Hani) ++ VE6SH – Tim (IARU President) ++ 9K2RR – Faisal (EC-IARU-R1) ++ PTTs: BAKOM (Swiss), BNetzA Konstanz (Germany) ++ OFCOM (UK) ++ Dutch AT ++ SK6AW – DX-Cluster ++ YO9RIJ – Petrica

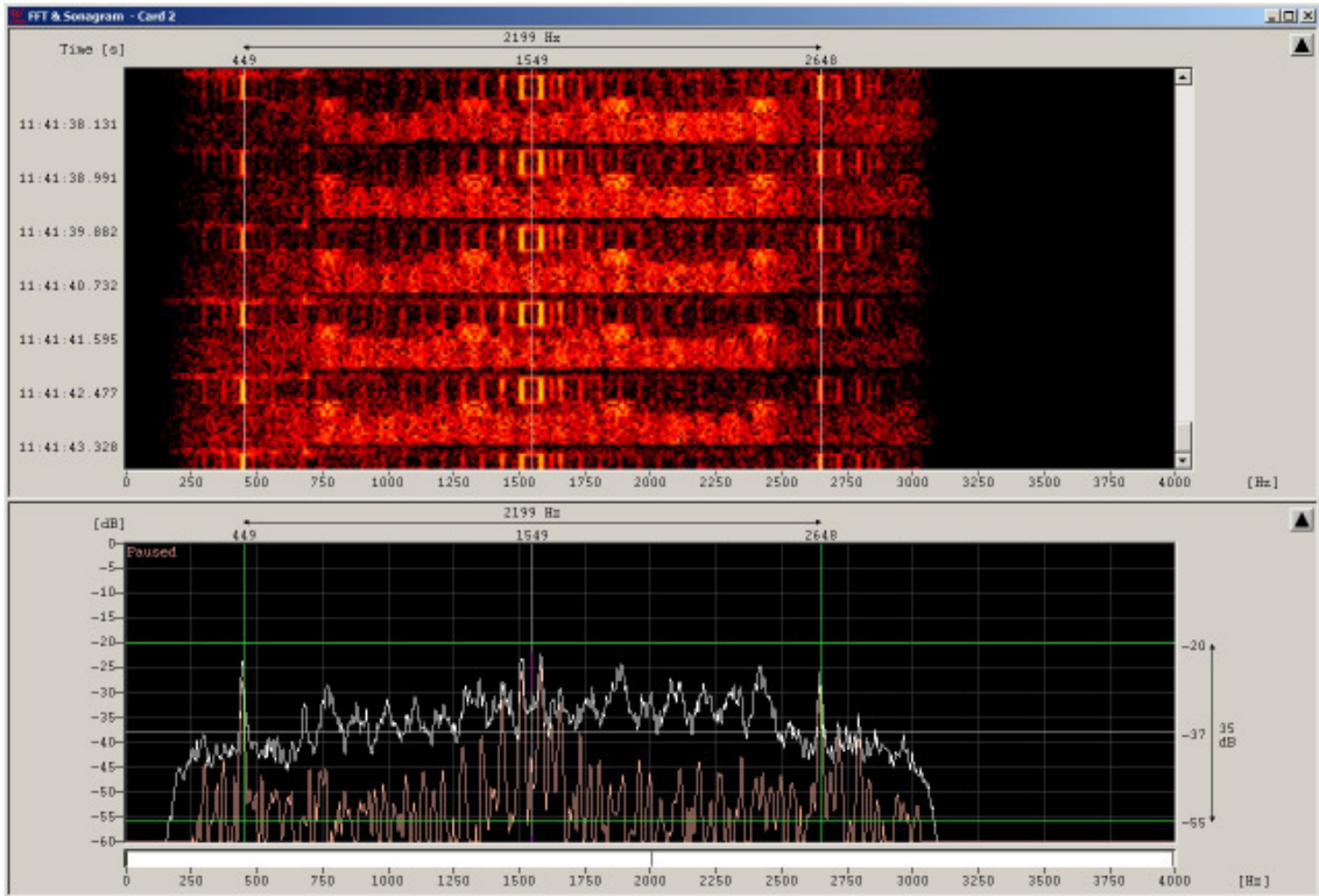
Part 1: News and Infos

1. Chinese OFDM30 on 14 MHz

The Chinese system OFDM30 is very common on shortwave and of course on our bands, too.

Parameters: 30 x 60 Bd, shift 2200 Hz, pilotone at 450 Hz AF – often operating on LSB.

Screenshot: DK2OM with Wavcom W-Code – OFDM30 on 14301.7 kHz on USB – daily active in December 2014



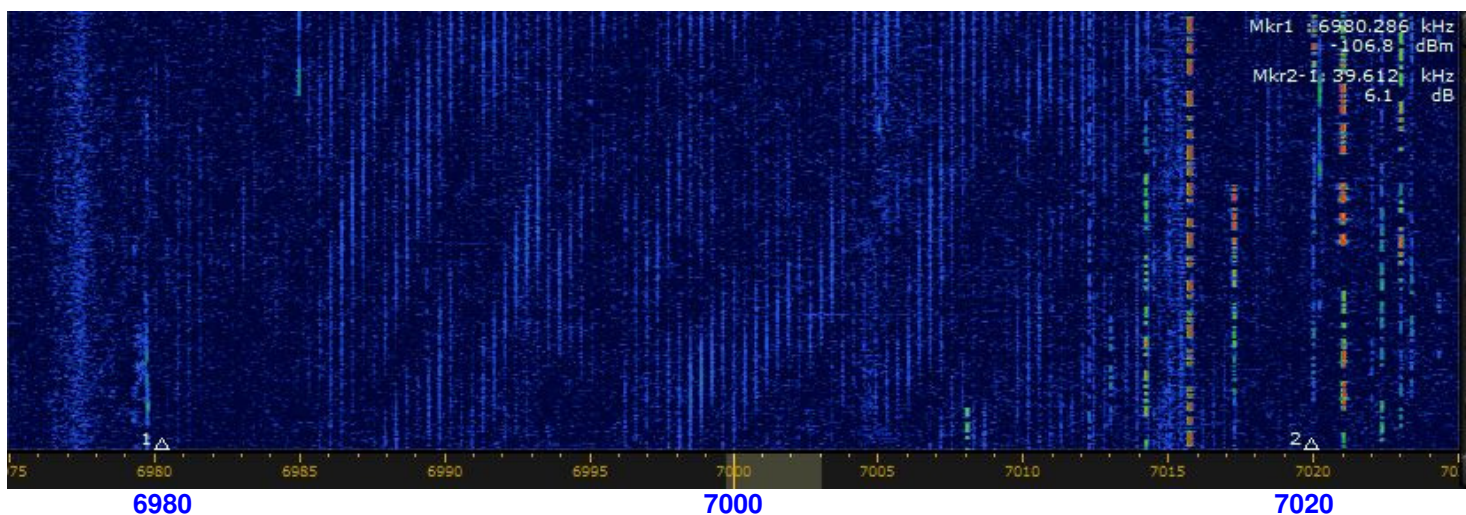
2. Ionosphere in December 2014

The MUF was rather high during the noons, often above 30 MHz. The F_2 layers were rather stable and often on 200 km altitude. In the early mornings and late evenings the MUF went down to 7 – 10 MHz. So we caught many intruders on our lower bands in the evenings. The following screenshot shows an example.

3. Iranian OTH radar on 7000 kHz

We found an OTH radar emission on 7000 kHz on Dec. 27th. Parameters: 375 sps (high as usual) and abot 50 kHz wide. Bearings were showing Iran as expected. The signals were audible in whole Europe.

Screenshot: DK2OM with Perseus – Vertical lines: Spectral lines from the radar with 375 Hz increments



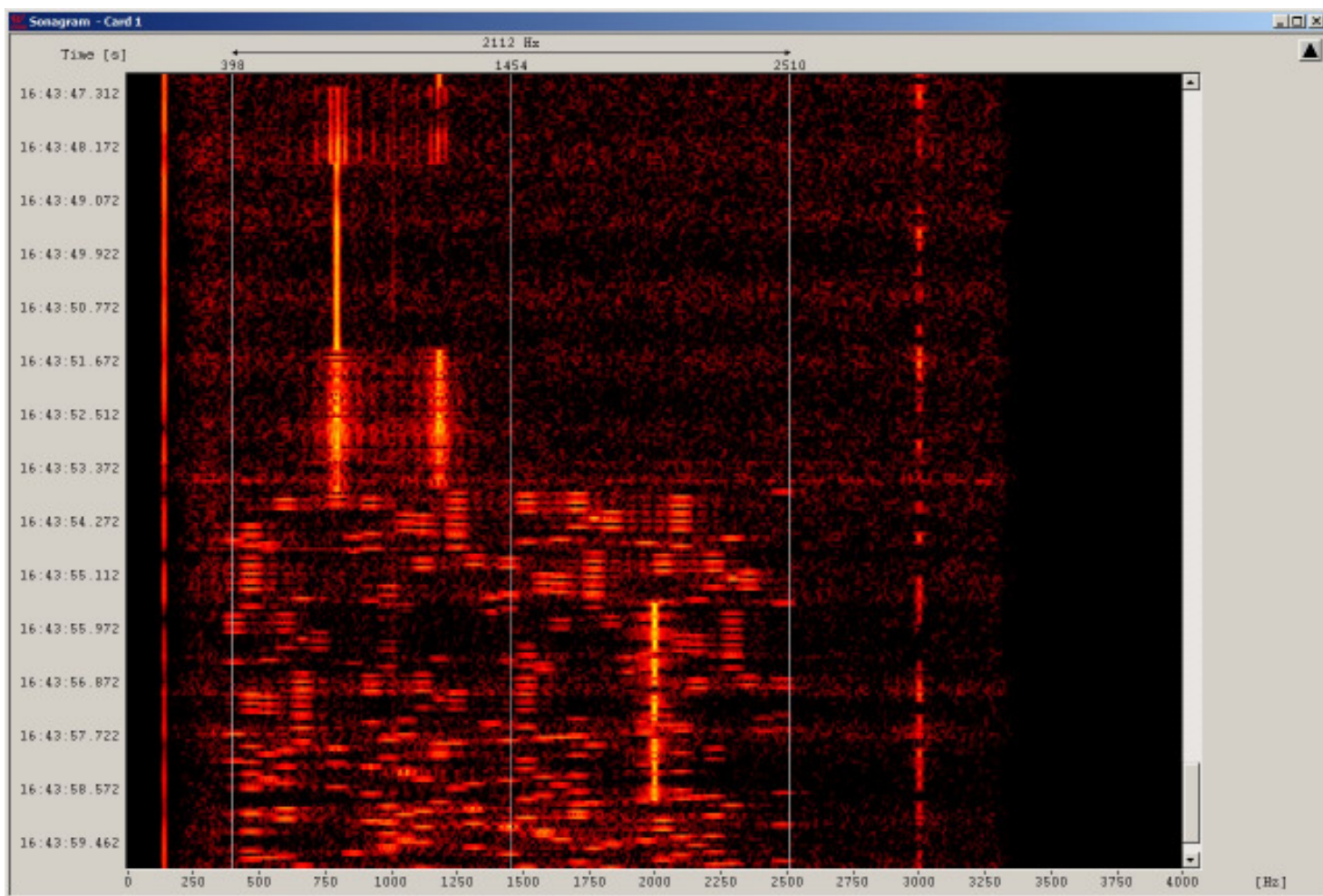
4. Pirates from Far East

Pirates from Philippines abused 14000 on USB daily. Indonesian pirates preferred 7000 on USB, daily too. Friends from Region 3 reported, that more bands and frequencies are crowded of pirates in Region 3.

5. Situation on 10 MHz-Band – legal operations

The 10 MHz-band is assigned on secondary base, as you may know. Checking the band from time to time will give you an interesting overview. The band is used by military services from Russia, Singapore, Tunisia, Algeria, Morocco, Malaysia and South Africa. The next screenshots shows the MFSK system “MHF50” from the South African Navy on 10116.5 kHz (center) with 54.3 Bd, 33 tones and shift 2120 Hz.

You can see an F1B-intro followed by MFSK tones. Screenshot: DK2OM with Wavcom W-Code – system “MHF50”



6. Taxi traffic on FM from Russia, Ukraine and Kazakhstan – not via E_s

Some people believe that the CIS taxii transmissions are audible via Sporadic E! This is an error. If you have some experiences on 50 MHz you may know, that the E_s conditions on 50 MHz are very unstable.

We get the CIS intruders by the stable F₂ layers as described above. Look for the links to 3 European ionosondes on our homepage. Observe the the altitudes of F₂ layers and the MUF conditions!

Ionosondes on our homepage -> folder “Important Links”

Ionosondes:

[Ionosonde Juliusruh - Germany](#)

[Ionosonde Pruhonice - Czech Republic](#)

[Ionosonde Dourbes - Belgium](#)

7. Results of the past year 2014

The past year 2014 has been a hard year for all people, who like shortwave and Amateurradio (as usual). We were not only suffering from pirates. Emissions by PLC, Plasma TV and switching power supplies from LED lamps and other devices were often causing local interferences. Anyway we did not give up, and we will never give up to defend our bands!

Many thanks to all involved members, friends and concerned PTTs, especially the German PTT BNetzA, national societies and IARU!

11. Homepage IARU Region 1 <http://www.iaru-r1.org/>
Homepage IARUMS Region 1 <http://www.iarums-r1.org>
Homepage IARUMS Region 2 <http://www.iaru-r2.org/>
Homepage IARUMS Region 3 <http://iaru-r3.org/iaru-region-3-monitoring-system-newsletter/>
Intruderlogger Region 1 <http://peditio.net/intruder/bluechat.cgi>
ITU-Monitoring Reports:
<http://www.itu.int/ITU-R/index.asp?category=terrestrial&rlink=terrestrial-monitoring&lang=en>

Part 2: Detailed reports of the national Co-ordinators

DD = day *** MM = month *** dly = daily *** vt = various times *** vd = various days *** BD = Baud *** SH = shift *** SP = spacing *** Mode = mode of transmission *** A3E = AM *** A1A = CW *** J3E-U = USB *** J3E-L = LSB *** FSK (F1B) = frequency shift keying *** PSK = phase shift keying *** OFDM = orthogonal frequency division multiplex
ALE (MIL-188-141A) = automatic link establishment *** MUX = multiplex *** **Ui (unid)** = unidentified *** **Illicit** = illegal *
UiILL = unidentified illegal *** **BC** = broadcast *** **MIL** = military *** **PTR** = printer *** **NGO** = non governmental organization *** **ITU** = ITU country abbreviation *** **PRC** = People's Republic of China *** **PLA** = People's Liberation Army *** **MFA** = Ministry of Foreign Affairs *** **MOI** = Ministry of Interior *** **MOPO** = Ministry of Public Order *** **IARUMS** = IARU Monitoring System *** **UTC** = Universal Time Coordinated *** **pps** = pulses per second (earlier radar systems) *** **sps** = sweeps/sec (radar systems) *** **FMCW** = frequency modulated continuous wave (OTH and coastal Radars)
5BL = cyrillic 5 lettergroups

ARSK MONITORING OVERVIEW FOR December 2014

Radio Hargeisha was not heard again on 7,120 or 7,130 kHz, and Uganda Radio on 7,195 kHz was heard only on one day. Unidentified intruders using KiSwahili (who may be military) on 7,000 kHz and others unidentified on 7,075 kHz were active as usual. There were also unidentified intruders using 7074 kHz.

E/H.M. Alleyne, 5Z4NU

ARSK National IARUMS Co-ordinator

ARSK – Kenya – 5Z4NU (Ted)

H'd by	kHz	UTC	dd	mm	ITU	Identity	MODE	Details
ARSK	7.0000	am	dly	12	E. Africa	?	J3Eu	Unidentified, KiSwahili, East Africa.
ARSK	7,074.00	vt	dly	12	E. Africa	?	J3Eu	Unidentified, KiSwahili, East Africa.
ARSK	7,075.00	vt	dly	12	E. Africa	?	J3E	Unknown African language
ARSK	7195.00	0900	25	12	UGA	R. Uganda	A3E	Not heard again.

DARC 1 – Germany – DG0JBJ (Mario) – OTH radar intrusions

DG0JBJ (Mario) observed 44 OTH radars on 20 m, 43 OTH radars on 15 m and 190 OTH radars on 10 m in December 2014. A Chinese OTH radar disturbed 160 kHz of our 7 MHz-band on several evenings.

DARC 2 – Germany - DK2OM (Wolf)

FSK transmissions -> center frequency between mark and space

PSK transmissions -> center frequency - ALE (MIL188-141A) -> USB frequency

exclusive bands -> black – shared bands -> blue - voice traffic -> green - BC -> red

SH = shift --- SP = spread (radar) – SPS = sweeps/sec (radar)

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	1810,5	2040	25	12	CIS		A3E			CIS pirates, unstable carrier
DK2OM	1812,0	1727	03	12	RUS		USB LSB			14 tones – hyperbolic radio navigation system – BRAS-3/RS-10 – Kaliningrad – daily, all day
DK2OM	1852,0	2040	10	12	I	IPP	USB			Palermo Radio, weather reports
DK2OM	1855,0	2040	10	12	I	IQP	USB			San Benedetto Radio, weather reports
DK2OM	1876,0	2042	10	12	I	IQN	USB			Lampedusa Radio, weather reports
DK2OM	1880,0	2040	10	12	BEL		PSK8	2400	2400	Stanag4285 – 600 bps long – area of Brugge – Belgium
DK2OM	1888,0	2043	10	12	I	IPD	USB			Civitavecchia Radio, weather reports
DK2OM	1896,5	---	---	--	D		PSK8	2400	2400	Stanag4285 – 600 bps long – German Navy
DK2OM	1925,0	2043	10	12	I	IPL	USB			Livorno Radio, weather reports – daily, vt

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	3500,0	vt	dly	12	TUR		FSK8	120	1750	ALE, "201" - Turkish Red Crescent – legal!
DK2OM	3501,5	1705	16	12	CIS		A3E			CIS pirates – unstable carrier
DK2OM	3503,5	2034	01	12	G	no ITU	FSK8	125	1750	ALE – "XSS" "XPU" "XJR" – British MIL Tascomm – vt, daily - legal!
DK2OM	3505,8	2240	29	12	CIS		A3E			CIS pirates, unstable carrier
DK2OM	3509,0	2010	10	12	RUS		F1B	75	200	Sevastopol
DK2OM	3513,7	2030	01	12	ISR		PSK4 PSK8	75 2400	2400	hybrid modem – ISR Navy – PSK4 parallel and PSK8 serial
DK2OM	3517,4	1644	28	12	E		LSB			Spanish fishery
DK2OM	3520,0	1726	11	12	E		USB			Spanish fishery
DK2OM	3520,0	1720	14	12	F		USB			French pirates
DK2OM	3524,0	1658	24	12	RUS		F1B	50	250	Kaliningrad
DK2OM	3530,0	vt	dly	12			FSK8	125	1750	ALE, "11141"
DK2OM	3535,0	2115	13	12	E		USB			Spanish fishery
DK2OM	3540,0	2118	13	12	E		USB			Spanish fishery – daily, various times
DK2OM	3548,8	1820	19	12	G		PSK8	2400	2400	Stanag4285 – 600 bps long - Liverpool
DK2OM	3550,0	vt	vd	12	ALG	no ITU	FSK8	125	1750	ALE, "IU50" "IU52" "FN50"
DK2OM	3550,0	0700	12	12	F		A3E			French amateurs not respecting bandplans - daily
DK2OM	3550,7	2011	02	12	ISR		PSK4 PSK8	75 2400	2400	hybrid modem – ISR Navy – PSK4 parallel and PSK8 serial
DK2OM	3553,8	2208	07	12	TUR		PSK8	2400	2400	Stanag4285 – 600 bps long - TUR MIL - Ankara – daily, all day - legal operation
DK2OM	3557,0	1940	25	12	RUS		F1B	75	250	St. Peterburg
DK2OM	3560,0	2008	25	12	E		USB			Spanish fishery
DK2OM	3560,0	2000	28	12	MRC		USB			Moroccan fishery
DK2OM	3561,0	1725	17	12	RUS		F1B	75	250	east of Moscow
DK2OM	3567,0	vt	dly	12	CHN ?	no ITU	FSK8	125	1750	ALE, "103" "106"
DK2OM	3569,8	0715	21	12			PSK8	2400	2400	Stanag4285 – 600 bps long -
DK2OM	3574,5	2243	29	12	RUS		PSK2A	120	2600	AT3004D - Sevastopol
DK2OM	3576,4	ady	dly	12	I	IZ3DVW	A1A			uncoordinated beacon
DK2OM	3585,0	ady	dly	12	TWN	HLL	F1C			120 rpm, IOC 576, WX-fax - daily - legal!
DK2OM	3586,5	1737	02	12	F		OFDM	44.44	1800	OFDM27 – area of Bordeaux – also 16.12.2014 at 1740 utc
DK2OM	3587,0	vt	vd	12	E	no ITU	FSK8	125	1750	ALE, "TVV" "TXX" - Spanish Guardia Civil
DK2OM	3590,0	vt	dly	12	PAK	no ITU	FSK8	125	1750	ALE, "KW" "KHAIBAR" – Pakistan navy
DK2OM	3591,0	2212	07	12	F		PSK4	75	5800	Link11-CLEW on both sidebands (5800 Hz wide) - Djibouti
DK2OM	3592,0	2244	15	12	RUS		PSK2A	120	2600	AT3004D - Crimea
DK2OM	3594,0	2231	15	12	RUS	C	A1A			Cluster beacon - Moscow RUS Navy - "RIW"
DK2OM	3594,3	2230	15	12	RUS	D	A1A			Cluster beacon – Sevastopol RUS Navy – "RCV"
DK2OM	3595,0	vt	dly	12	D		FSK8	125	1750	ALE – German customs
DK2OM	3595,0	2024	03	12	RUS		USB			woman in Russian voice – often spelling figures - St. Peterburg - daily
DK2OM	3596,0	vt	dly	12	D, S, HRV		FSK8	125	1750	ALE, "DK3CW" "SA6CBK" "9A0PZ" – just for info!
DK2OM	3596,0	2243	15	12			PSK2A	120	2600	AT3004D -
DK2OM	3617,0	vt	dly	12	HRV	9A5EX	FSK8	125	1750	ALE, "9A5EX" – HAM-ALE - just for info
DK2OM	3622,5	ady	dly	12	J	JMH	F1C			Tokyo Meteo – 120 rpm – IOC576 – daily, legal!!!
DK2OM	3642,0	1734	24	12	CHN		A1A			endless slip – DKG6 de 3A7D Chinese military – daily, all day
DK2OM	3720,0	vt	dly	12	S		FSK8	125	1750	ALE, "YU" "YT" "YV" "DZ" – Swedish MIL

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	3740,0	1740	24	12	CHN		FMCW		94k	Chinese OTH radar – 43.5 sps – 3740 - 3834 kHz
DK2OM	3751,5	vt	dly	12	POL	no ITU	FSK8	125	1750	ALE, “IZ3” “MI3”
DK2OM	3756,0	2020	01	12	UKR		A3E			UKR – pip – 14 tones – hyperbolic navigation system – BRAS-2/RS-10 – 3756.022 kHz – daily – all day
DK2OM	3756,0	2035	29	12	UKR		A3E			UKR – pip – 14 tones – hyperbolic navigation system – BRAS-2/RS-10 – daily, all day
DK2OM	3761,5	vt	vd	12	POL	no ITU	FSK8	125	1750	ALE, “NI9” “PL7” “AB2” – Polish MIL
DK2OM	3782,0	ady	dly	12	POR	CTP	F1B	75	850	POR Navy headquarter Lisbon
DK2OM	3791,0	vt	vd	12	D	DK0ESD	FSK8	125	1750	ALE, “DK0ESD” – just for info!
DK2OM	3792,0	2022	01	12	RUS		F1B	50	200	Kaliningrad
DK2OM	6998,0	1841	01	12	GRC		FSK8	125	1750	ALE, “GEF” “EK9” – highest tone on 7000.5 kHz – Greek military
DK2OM	6999,0	1833	06	12			FSK8	125	1750	ALE, “537” “725” – signal center = 7000.625 kHz
DK2OM	7000,0	vt	dly	12	?	no ITU	FSK8	125	1750	ALE, “210” “20989” “2205” “203”
DK2OM	7000,0	1818	01	12	RUS	D	A1A			spurious from Cluster beacon D – Sevastopol RUS Navy – “RCV”
DK2OM	7000,0	0800	23	12	G		USB			UK fishery
DK2OM	7000,0	1707	08	12	INS		USB LSB			Indonesian pirates
DK2OM	7000,0	1630	16	12	G		USB			UK fishery
DK2OM	7000,0	2038	21	12	ALG		USB			male persons in Arabic voice
DK2OM	7000,0	1650	27	12	IRN		FMCW		50k	OTH radar Iran – 375 sps
DK2OM	7001,0	1622	09	12	F		N0N			unstable carrier – long lasting – St. Raphael – South France
DK2OM	7001,5	2055	03	12	ALG		PSK4A	62.5	1750	Clover 2000 – 8 x 62.5 Bd – South Algeria
DK2OM	7001,8	1705	08	12	IND		PSK8	2400	2400	MIL-188-110A
DK2OM	7001,8	1555	10	12	TUR		PSK8	2400	2400	Link11-SLEW - Istanbul
DK2OM	7001,9	1620	16	12	RUS		OFDM	22.2	2870	OFDM112 - Moscow
DK2OM	7003,0	1629	19	12	RUS		PSK2	120	2600	AT3004D – submode idle – Rosstov na Donu
DK2OM	7010,0	1424	27	12	RUS		PSK2A	120	2600	AT3004D - Kaliningrad
DK2OM	7018,0	2010	01	12	RUS	REA4	F1B	100	1000	mostly idling – Russian airforce Moscow – ident at full hour + 40 min.
DK2OM	7022,0	0808	01	12	RUS		PSK4B	120	2600	AT3104D - Moscow
DK2OM	7038,7	2010	01	12	RUS	D	A1A			Cluster beacon – Sevastopol RUS Navy – “RCV” - daily – all day
DK2OM	7038,8	ady	dly	12	RUS	P	A1A			Cluster beacon – 7038.780 kHz - Kaliningrad RUS Navy – “RMP”
DK2OM	7038,9	2010	01	12	RUS	S	A1A			Cluster beacon – Severomorsk RUS Navy – „RIT“
DK2OM	7039,0	1738	31	12	RUS	C	A1A			Cluster beacon - Moscow RUS Navy - “RIW”
DK2OM	7039,2	2000	06	12	RUS	F	A1A			Cluster beacon - Vladivostok RUS Navy - “RJS”
DK2OM	7039,3	1736	31	12	RUS	K	A1A			Cluster beacon - Petropavlovsk Kamchatskiy - RUS Navy - Pacific fleet - “RCC”
DK2OM	7039,4	2000	06	12	RUS	M	A1A			Cluster beacon – Magadan RUS Navy – „RTS“
DK2OM	7040,0	vt	dly	12	F	F6BAZ	FSK8	125	1750	ALE, “F6BAZ” – just for info
DK2OM	7040,0	ady	dly	12	I		A1A			IZ3DVW – uncoordinated and unwanted beacon
DK2OM	7040,5	vt	dly	12	HRV		FSK8	125	1750	ALE, “9A5EX” “9A0ALE” –

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										just for info
DK2OM	7047,37	vt	vd	12	D		FSK8	125	1750	ALE, "DL0NOT" – just for info!
DK2OM	7049,5	vt	dly	12	HRV G F	9A0ALE M1DFO F6BAZ	FSK8	1250	1750	Amateur ALE, just for info!
DK2OM	7050,0	1650	12	12	UKR RUS		LSB			music and chats mentioning Ukraine - daily
DK2OM	7055,5	vt	vd	12	MEa	no ITU	FSK8	125	1750	ALE, "111" "132" "133" - Caucasus
DK2OM	7060,0	1958	06	12	FEa		FMCW		32k	Codan like ocean surface radar 2.5 sps – 7060 – 7092 kHz
DK2OM	7060,0	2013	11	12	RUS		FMCW		13k	OTH radar "Contayner" – 50 sps – Nizhny Novgorod
DK2OM	7060,0	1813	27	12	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod
DK2OM	7063,5	0156	21	12	RUS		F1B	75	200	ship – White Sea
DK2OM	7070,0	vt	dly	12	GEO	no ITU	FSK8	125	1750	ALE, "MV" "244" "686" "334" "204" "571" – daily active
DK2OM	7077,4	1818	01	12	RUS	D	A1A			spurious from Cluster beacon D – Sevastopol RUS Navy – "RCV"
DK2OM	7081,5	1555	12	12	ISR		PSK4 PSK8	75 2400	2400 2400	hybrid modem – ISR Navy – PSK4 parallel and PSK8 serial
DK2OM	7088,8	---	---	12	S	SL0FRO	A1A			7088.830 - cw-trainee, Sweden – kHz – SL0FRO - just for info!
DK2OM	7089,0	0833	02	12	RUS		PSK2A	120	2600	AT3004D – Saratov
DK2OM	7089,8	1800	14	12	TUR		PSK8	2400	2400	Link11 - SLEW – aircraft – area of Izmir
DK2OM	7091,5	ady	dly	12	KAZ	V	A1A			beacon "V" continuous – Almaty – Kazakhstan
DK2OM	7092,0	vt	vd	12			FSK8	125	1750	ALE, "3014"
DK2OM	7097,0	1952	06	12	FEa		FMCW		32k	Codan like ocean surface radar 2.5 sps – 7097 – 7129 kHz
DK2OM	7099,5	vt	dly	12	HRV	9A0ZG	FSK8	125	1750	ALE, "9A0ZG" "9A5EX1P" "9A0OS" – daily - just for info!
DK2OM	7102,0	1645	05	12	HRV SUI D	9A0ALE	FSK8	125	1750	ALE, "9A0ALE" "9A2KS" "HB9MHB" "9A0ZG" "DK0ESD" – just for info!
DK2OM	7110,0	vt	dly	12	HRV	9A0ALE	FSK8	125	1750	ALE, "9A0ALE" – just for info
DK2OM	7110,0	vt	dly	12			FSK8	125	1750	ALE, "1101" "1112"
DK2OM	7137,0	vt	dly	12	TWN	no ITU	FSK8	125	1750	LSB – ALE , "ACCENT" "ABLAZE" "ABOUND" "AGHAST" "ARTIST" "ANYWAY" "ABJECT" "ADROIT" – Taiwanese navy – daily – various times – tnx for info: DL8AAM
DK2OM	7172,0	1520	09	12	RUS		PSK2A	120	2600	AT3004D – Ukraine border
DK2OM	7183,0	vt	dly	12	SUI		FSK8	125	1750	ALE, "HB9MHB" – just for info!
DK2OM	7185,0	1950	24	12	RUS		PSK2	120	2600	AT3004D – submode idle – area of Krasnodar
DK2OM	7185,5	vt	dly	12	D HRV		FSK8	125	1750	ALE, "9A5EX" "DK0ESD" just for info - daily
DK2OM	7192,0	1710	09	12	RUS		PSK2A	120	2600	AT3004D – Ukraine border
DK2OM	7195,0	2230	22	12	RUS		PSK2	120	2600	AT3004D - submode idle – Rostov na Donu
DK2OM	7196,0	1550	dly	12	IRN		A3E		9k	Voice of Iran from 7200.0 kHz
DK2OM	7197,0	vt	dly	12	TUR	no ITU	FSK8	125	1750	ALE, "8241" "206102" "8151" "3021" "3761" "8021" "8141" "3061" "3241" "8411" – Turkish Sivil Avunma = Turkish Civil Defense - source: DL8AAM – daily, various times
DK2OM	7200,0	1520	25	12	IRN		A3E			Voice of Iran – 1520 – 1620 utc

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	10100,8	ady	dly	12	D		F1B	50	450	Baudot - German Weatherservice – legal!
DK2OM	10110,0	vt	dly	12	SNG		FSK8	125	1750	ALE, “CN6” “68” – Singapore Navy - Changi Naval Base
DK2OM	10113,0	vt	dly	12	TUN	no ITU	FSK8	125	1750	ALE, “TUD”
DK2OM	10114,4	1750	19	12	TUR		PSK4	75	2300	Link11-CLEW - Izmir
DK2OM	10114,8	0754	16	12	RUS		F1B	100	1000	CIS14 – Moscow - daily
DK2OM	10115,0	vt	vd	12		no ITU	FSK8	125	1750	ALE, “2001” “2002”
DK2OM	10116,5	1635	17	12	AFS		F7D	54.3	2120	MHF50 – 33 tones - South African navy
DK2OM	10118,6	1820	4	12			USB			Korean fishery
DK2OM	10120,0	vt	dly	12			FSK8	125	1750	ALE, “9066” “9067” “8001”
DK2OM	10120,0	1920	01	12	THA		USB			unid net – male persons – Gulf of Thailand
DK2OM	10121,5	1645	08	12	RUS		PSK4B	120	2600	AT3104D – ship – area of Severomorsk
DK2OM	10123,0	vt	dly	12	ALG	no ITU	FSK8	125	1750	ALE, “CM3” “COF” “BSF” ”CM2” “ESA”
DK2OM	10123,0	1820	17	12	ALG		PSK8	2400	2400	Stanag4538 – South-Algeria
DK2OM	10123,0	1825	17	12	ALG		USB			Arabic voice traffic – South- Algeria
DK2OM	10125,0	01827	03	12	E		USB			Spanish fishery – also 15.12. at 1934 utc
DK2OM	10126,0	1646	22	12	E		USB			Spanish fishery
DK2OM	10129,0	vt	dly	12	ALG	no ITU	FSK8	125	1750	ALE, “CM1” “CTF” “772”
DK2OM	10130,0	1731	02	12	MRC		FSK8	125	1750	Thales 3000 – West Sahara – daily - vt
DK2OM	10130,0	vt	dly	12	MLE	no ITU	FSK8	125	1750	ALE, “001” “068” – Kuala Lumpur
DK2OM	10130,0	1747	05	12	Af		USB			male persons – NW Africa
DK2OM	10130,0	1625	25	12	CYP		FMCW		20k	OTH radar Cyprus - 50 sps
DK2OM	10131,3	2059	02	12			LSB			Korean fishery – Atlantic – St. Helena
DK2OM	10132,0	1036	18	12	F		USB			French amateurs not respecting bandplans
DK2OM	10133,9	1640	14	12	F		USB			persons in French voice
DK2OM	10135,5	0650	02	12			USB			
DK2OM	10136,0	vt	dly	12	ALG	no ITU	FSK8	125	1750	ALE, “CM3” “BLD” “CNC” “TF2”
DK2OM	10144,0	ady	dly	12	D	DK0WCY	A1A			10143.986 kHz - DK0WCY – German aurora beacon – just for info!
DK2OM	10145,0	1430	27	12	E		USB			Spanish fishery
DK2OM	10145,5	1520	13	12	HRV S / D F / G	9A5EX	FSK8	125	1750	ALE, “9A5EX” “SM5VRH” “DK0ESD” “F6BAZ” “MIDFO”- just for info - daily
DK2OM	10150,0	1759	16	12	RUS		FMCW		10k	OTH burst radar 10 sps – Nizhny Novgorod
DK2OM	10150,0	1500	dly	12	POR		USB			Azores
DK2OM	14000,0	1300	17	12	PHL		USB LSB			Philippine pirates – daily 1300 utc and later
DK2OM	14000,0	1512	29	12	E		USB			Spanish fishery
DK2OM	14000,0	0910	14	12	B		USB			Brazil – north-east coast
DK2OM	14001,0	2055	22	12	MRC		USB			Moroccan fishery
DK2OM	14001,5	1555	17	12	ALG		PSK4	62.5	1750	Clover 2000 – 8 x 62.5 Bd - Algeria
DK2OM	14001,8	1030	20	12			PSK8	2400	2400	Stanag4285 – 600 bps long -
DK2OM	14060,0	vt	vd	12	ISR	no ITU	FSK8	125	1750	ALE, “AAA” - Israel
DK2OM	14109,0	vt	dly	12	ISR	4X1	FSK8	125	1750	ALE, “4X1” “CT2IXQ” – just for info!
DK2OM	14109,0	vt	dly	12	CAN		FSK8	125	1750	ALE, “VE3GDZ” – just for info!
DK2OM	14118,0	0840	01	12	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	14135,0	0749	11	12	RUS		FMCW		10k	OTH burst radar 10 sps – Nizhny Novgorod – long lasting
DK2OM	14192,0	0850	02	12	RUS		F1B	50	200	RUS navy Kaliningrad – vd, vt
DK2OM	14203,9	0715	08	12	RUS		OFDM	35.6	2770	OFDM60 - Vladivostok

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	14205,0	vt	dly	12	CHN	no ITU	FSK8	125	1750	ALE, "505" "822" – 60 deg. from DL - CHN ?
DK2OM	14205,0	1538	23	12	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod
DK2OM	14206,8	0737	21	12	CHN		OFDM	44.5	2200	OFDM39 – China
DK2OM	14222,0	0706	03	12	RUS		PSK2A	120	2600	AT3004D – area of Chita
DK2OM	14240,0	1050	09	12	RUS		PSK2A	120	6600	AT3004D x 2 on DSB - Irkutsk
DK2OM	14251,8	0731	21	12	CHN		OFDM	44.5	2200	OFDM39 – China
DK2OM	14260,0	vt	dly	12	SRB	YU1BI	FSK8	125	1750	ALE, "YU1BI" – just for info!
DK2OM	14265,0	vt	vd	12	TUR		FSK8	125	1750	ALE, "526"
DK2OM	14280,0	1005	Wed	11	UKR		A3E			female voice with encrypted msgs – figures – "SZRU" = Foreign Intelligence Service of Ukraine at Rivne – every Wednesday
DK2OM	14295,0	vt	dly	12	SRB	YU1BI	FSK8	125	1750	ALE, "YU1BI" – just for info!
DK2OM	14295,1	ady	dly	12	TJK		A3E			3rd from Radio Tajik on 4765 kHz – daily, all day
DK2OM	14301,7	0724	21	12	CHN		OFDM	60	2200	OFDM30 – USB mode – pilotone 450 Hz - China - daily
DK2OM	14308,0	0757	16	12	RUS		F1B	75	500	Moscow
DK2OM	14318,5	0700	08	12			F1B	600	600	DPRK-FSK600 – 14318.480 kHz – North Korean emba Damaskus
DK2OM	14322,0	vt	dly	12	CHN	no ITU	FSK8	125	1750	ALE, "402"
DK2OM	14328,0	vt	dly	12	CHN	no ITU	FSK8	125	1750	ALE, "139" "534" "772" – West China
DK2OM	14330,0	vt	dly	12			FSK8	125	1750	ALE, "BV4"
DK2OM	14344,0	0722	27	12	RUS		F1B	75	250	Pechora
DK2OM	14344,7	vt	dly	12	CHN		PSK8	2400	2400	modified MIL-188-110A - 600 bps short – 14344.650 kHz – daily, all day
DK2OM	14346,0	vt	dly	12	HRV RUS D		FSK8	125	1750	ALE, "9A0ZG" "RX3ARZ" "DK0ESD" – just for info – various times, daily
DK2OM	14346,0	vt	dly	12	THA	HS0ZEA	A1A			HS0ZEA beacon – 14345.950 kHz - every 5 minutes – just for info!
DK2OM	14346,0	0755	11	12	RUS		F1B	75	250	Chita
DK2OM	14348,0	0917	10	12	RUS		PSK2A	120	2600	AT3004D – Ulan Ude
DK2OM	18100,0	0921	26	12	MRC	no ITU	FSK8	125	1750	ALE, "CD" "C3" "R3" "G3" "E4" "E5" "Z2" "FORD" – daily, various times
DK2OM	18107,0	vt	vd	12	RUS	RDL	F1B	50	200	Moscow – idle and traffic – Russian navy – various days and times – legal operation
DK2OM	18117,5	vt	vd	12	POR	CT2IXQ	FSK8	125	1750	ALE, "CT2IXQ" – just for info
DK2OM	18140,0	vt	dly	12	SRB	YU1BI	FSK8	125	2600	ALE, "YU1BI" – just for info!
DK2OM	21000,0	vt	vd	12	SDN		USB			MFA Sudan – Khartoum with emba Yemen – voice traffic – daily, vt
DK2OM	21000,0	0937	02	12	B		USB			Brazilian pirates – Rio de Janeiro with North Brazil
DK2OM	21000,0	vt	vd	12	F		FMCW			OTH radar – 6 sps bursts – South France – full hour 02 min. and then every 15 min.
DK2OM	21001,0	1200	25	12	FEa		USB			Far East pirates
DK2OM	21002,1	vt	vd	12	SDN	!0000	F1B	100	170	21002.15 kHz - Pactor 1 encrypted – MFA Sudan – Khartoum with emba Yemen – daily, vt
DK2OM	21090,0	0715	04	12	TUR		FMCW		20k	OTH radar Turkey
DK2OM	21096,0	vt	dly	12	INS	YD00XH	FSK8	125	1750	ALE, "YD00XH3" – daily, various times - just for info!
DK2OM	21131,0	vt	vd	12	CHN	no ITU	FSK8	125	1750	ALE, "A92" "L02" – Chinese Navy?
DK2OM	21145,0	0810	11	12	MRC	no ITU	FSK8	125	1750	ALE, "B301", "C3", "IR4" "T4" "E4" "A2" "CD" "K3"

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										“KB2” “J5” “GS4” “R3” – various times, daily
DK2OM	21145,8	vt	dly	12	I	IZ3DVW	A1A			21145.764 kHz – IZ3DVW uncoordinated and unwanted beacon
DK2OM	21190,0	0655	01	12	RUS		F1B	100	1000	harmonic from 10595 kHz - Moscow - daily
DK2OM	21247,0	0949	27	12	RUS		FMCW		10k	OTH burst radar 10 sps – Nizhny Novgorod
DK2OM	21295,0	0900	02	12	AUS		FMCW		10k	Australian OTH radar - 49, 50 and 51 sps – long lasting
DK2OM	21346,0	ady	dly	12	THA	HS0ZEA	A1A			beacon “HS0ZEA” – just for info!
DK2OM	21400,0	0930	22	12	RUS		F1B	50	2000	harmonic from 5350 kHz – area of Moscow - daily
DK2OM	21409,5	0758	11	12	RUS		F1B	100	2000	F1B 100 / 2000 - CIS14 – harmonic from 10704.75 - Jekaterinburg, RUS - daily
DK2OM	21436,0	0650	04	12	RUS		PSK2A	120	5200	AT3004D – harmonic from 10718.0 kHz - Sevastopol
DK2OM	21438,0	0851	02	12	RUS	RCV	A1A			RIP90 de RCV - RUS Navy Sevastopol - daily
DK2OM	21440,0	0900	10	12	IRN	IRIB	A3E			spurious from 21510.0 “Voice of Iran” – also on 21370 kHz
DK2OM	21446,0	ady	dly	12	THA	HS0ZEA	A1A			HS0ZEA beacon – every 5 minutes - just for info!
DK2OM	25000,0	0733	08	12	FIN		A3E			time signal Helsinki – just for info – carrier on 25000 – dots on 25001 and 24999 – daily, all day
DK2OM	28000,0	vt	dly	12	CIS		F3E			28000 – 29700 numerous CIS taxi nets – mostly Russia
DK2OM	28000,0	ady	dly	12	B		A3E			Brazilian CBers – 28000 – 28315 – no change
DK2OM	28000,0	1500	04	12	E		USB			Spanish pirates
DK2OM	28000,0	1120	07	12	B		USB			Brazilian pirates
DK2OM	28025,0	0934	03	12	POR		F1B	51	300	F1B bursts - 28100.160 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28030,0	vt	dly	12	POR		F1B	51	340	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28045,0	1015	03	12	POR		F1B	51	280	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28050,0	vt	dly	12	POR		F1B	51		F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28051,5	vt	dly	12	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28065,0	0932	03	12	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28066,8	---	--	12	GAB		A3E		980	carrier and dots in USB and LSB, bursts every 60 sec – carrier – Gabon – daily and all day
DK2OM	28085,0	vt	vd	12	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28101,0	0938	03	12	POR		F1B	51	320	F1B bursts - 28100.780 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28102,1	vt	vd	12	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										buoys - daily
DK2OM	28125,0	1345	04	12	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28146,0	vt	vd	12	ARG B		FSK8	125	1750	ALE, “LU8EX” “PY2TI” “DL1” – just for info!
DK2OM	28175,0	1125	25	12	RUS		F3E			taxi Moscow
DK2OM	28200,0	vt	vd	12	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28275,1	vt	vd	12	AF		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28315,0	vt	dly	12	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28420,0	vt	vd	12	F		FMCW		20k	OTH radar – 2.5 sps - South France – sounding similar to CODAR
DK2OM	28425,0	0740	03	12	RUS		USB			voice scrambler Yakhta – voice and F1B synchro signal (100 Bd / 150 Hz) – Abakan
DK2OM	28435,0	----	--	12	E		F1B	81.9	140	Datawell-buoy “Waverider” – 28435.040 kHz – Costa del Sol – Malaga
DK2OM	28600,0	1000	13	12	IRN		FMCW		50k	OTH radar Iran – 307 and 870 sps – splattering +/- 400kHz – also audible in USA east-coast, Chile and Australia
DK2OM	29250,0	----	--	12	E		F1B	81.9	140	Datawell-buoy “Waverider” – 29249.905 kHz – Fuerteventura - daily, all day
DK2OM	29375,0	----	--	12	I		F1B	81.9	140	Datawell-buoy “Waverider” – 29374.898 kHz – Gallipoli, South Italy - daily, all day
DK2OM	29387,5	---	--	12	IND		F1B	81.9	140	Datawell-buoy “Waverider” – 29387.460 kHz – Indian NW coast, close to Pakistan - daily, all day
DK2OM	29400,0	1455	16	12	USA		F1B	81.9	140	Datawell-buoy “Waverider” – 29400.070 kHz - USA north-east coast – NY daily, all day
DK2OM	29450,0	---	--	12	MRC		F1B	81.9	140	Datawell-buoy “Waverider” – 29449.870 kHz - area of El Aaiun – Morocco - daily, all day
DK2OM	29500,0	---	--	12	G		F1B	81.9	140	Datawell-buoy “Waverider” – area of Gibraltar – daily, all day
DK2OM	29525,0	---	---	12	MRC		F1B	81.9	140	Datawell-buoy “Waverider” – 29524.990 kHz - Agadir - Morocco – daily, all day
DK2OM	29625,0	1645	29	11	USA		F1B	81.9	140	Datawell-buoy “Waverider” – 29625.024 kHz - USA north-east coast – daily, all day
DK2OM	29685,5	---	--	12	I				2000	serial modem, Italian MIL Brescia – report: SWL
DK2OM	29699,8	---	--	12	I				2000	serial modem, Italian MIL Brescia - report: SWL

IRTS – Ireland – EI9GSB (Lisa)

KARS – Kuwait – 9K2RR (Faisal)

MRASZ – Hungary - HA7PL (Laci)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SH	DETAILS
MRASZ	3508,0	1947	26	12			USB		numbers from 1 to 0, russian language
MRASZ	3510,0	1959	19	12			USB		unidentified language
MRASZ	3554,0	2000	12	12			A1A		dashes
MRASZ	3575,0	1915	10	12			LSB		russian language
MRASZ	3575,0	1953	26	12			LSB		russian female
MRASZ	3601,0	1930	26	12			N0N		carrier with hum
MRASZ	3602,0	1958	26	12			LSB		russian non ham
MRASZ	3623,0	1957	12	12			LSB		russians + dotter
MRASZ	7000,0	1832	1	12	UKR	D	A1A		"D" beacon,
MRASZ	7000,0	1659	18	12			LSB		italian language
MRASZ	7000,0	1401	21	12			N0N		
MRASZ	7000,1	1747	12	12			N0N		
MRASZ	7001,0	1817	9	12			N0N		
MRASZ	7005,0	1620	14	12			LSB		music, unidentified language
MRASZ	7005,0	1751	14	12			LSB		unidentified language
MRASZ	7007,0	1606	14	12			A1A		dashes
MRASZ	7018,0	1833	1	12	RUS	REA4	F1B	1000	hrd: 3, 9, 14, 24, 26
MRASZ	7018,5	1641	18	12	RUS	REA4	A1A		"8746T 818T7 11T36" after this go to F1B
MRASZ	7025,0	1833	1	12			A1A		quick dotter
MRASZ	7038,7	vt	ady	12	UKR	D	A1A		"D" beacon, hrd: till 21 Dec.
MRASZ	7046,0	1747	10	12			F1B	200	
MRASZ	7050,0	1045	4	12			LSB		russian language, hrd:11,13,14,16,18,21,24
MRASZ	7051,0	0813	11	12			LSB		french language
MRASZ	7055,0	0816	11	12			LSB		russian/ukrainian lang. hrd: 12, 14, 18, 21, 24
MRASZ	7077,4	1831	1	12	UKR	D	A1A		"D" beacon, hrd: 12, 14, 16, 19, 21
MRASZ	7091,5	1922	26	12	KAZ	V	A1A		"V" beacon
MRASZ	7100,0	1831	1	12			OTHR		7085-7130 kHz
MRASZ	7112,0	1644	14	12			A3E		ui. BC
MRASZ	7115,0	1734	14	12			A3E		ui. BC
MRASZ	7205,0	1839	16	12			A3E		german l; splattering 5 kHz down
MRASZ	10115,0	1434	21	12			OTHR		
MRASZ	10125,0	0821	11	12			USB		"438 00" messages for agent's
MRASZ	10130,0	1759	19	12			USB		unidentified language
MRASZ	13270,0	1248	24	12			OTHR		14260-14280
MRASZ	14012,0	1228	24	12			USB		"allo allo allo"
MRASZ	14018,0	1014	11	12			OTHR		
MRASZ	14020,0	1044	11	12			OTHR		
MRASZ	14192,0	1056	4	12	RUS		F1B	400	hrd: 11, 13, 14, 21, 24
MRASZ	21011,0	0812	14	12			N0N		with 50 Hz hum
MRASZ	21200,0	0958	21	12			OTHR		
MRASZ	21430,0	1002	31	12			OTHR		21405-21445
MRASZ	21450,0	815	14	12			OTHR		short burst's
MRASZ	28005,0	0834	11	12			F3E		russian taxi
MRASZ	28020,0	1044	21	12			OTHR		
MRASZ	28050,0	0842	11	12			F3E		russian taxi
MRASZ	28070,0	0901	11	12			N0N		
MRASZ	28125,0	0857	11	12			F3E		russian taxi
MRASZ	28135,0	0841	11	12			F3E		russian taxi
MRASZ	28160,0	0924	11	12			OTHR		
MRASZ	28170,0	0840	11	12			F3E		russian taxi
MRASZ	28175,0	0845	11	12			F3E		russian taxi
MRASZ	28185,0	1004	31	12			F3E		russian taxi
MRASZ	28225,0	0931	11	12			F3E		russian taxi
MRASZ	28235,0	0840	11	12			F3E		russian taxi
MRASZ	28275,0	0837	11	12			F3E		russian taxi
MRASZ	28580,0	1006	31	12			OTHR		28540-28640

OEVSV – Austria – OE3GSA (Gerd)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
oevsv	7013.0	0610	10	12	unid	unid	A3A			arabic,using aeronautical phrases
oevsv	7017.5	1325	02	12	unid	unid	A1A			strong QSB
oevsv	7034.0	0533	16	12	unid	unid	OTHR			band U/S
oevsv	7050.0	0554	10	12	unid	unid	A3A			music
oevsv	7055.0	0600	10	12	unid	unid	J3E			B777 issue, chaos UA/UT
oevsv	14191.0	1507	06	12	unid	unid	F1B	100	250	

PZK – Poland – SP9BRP (Jan)**REF 1 – France – F5MIU (Francis)**

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	Baud	Sh Hz	DETAILS
REF	3541	0904	23	12			lsb			Spanish?
REF	7070	1720	31	12			LSB		3	Music + broadcast S9+10
REF	7160	0857	18	12			?		40kHz	Multiple carrier 1200Hz spaced
REF	10125	0855	9	12			USB			Unidentified language Arabic fishermen ?
REF	10130	1623	9	12			fmcw		25kHz	OTHR Mil S9+10 18Hz
REF	10140	1725	2	12			fmcw		20kHz	OTHR Mil S9+10 18Hz
REF	14116	0845	1	12		?	Data		3000	Continuous data above USB QSO, 12 subcarrier
REF	14120	0845	19	12			fmcw		10kHz	OTHR Mil S2 long pulses
REF	14140	0852	18	12			fmcw		50kHz	OTHR Mil S1
REF	14175	1543	27	12			fmcw		40kHz	OTHR Mil S5 Bad splatters
REF	14200	0901	16	12			fmcw		10kHz	OTHR Mil S2 pulses of 5s
REF	14200	1538	23	12			fmcw		40kHz	OTHR Mil S7 Bad splatters
REF	18180	0855	8	12			Pulses		150k	Pulsed 10Hz WoodyWoodpecker
REF	21030	0842	15	12			fmcw		20kHz	OTHR Mil S8 20Hz
REF	21090	0910	23	12			fmcw		20kHz	OTHR Mil S520Hz end 0914Z
REF	28175	0845	16	12			fmcw		20kHz	OTHR Mil S420Hz
REF	28290	0845	18	12			fmcw		20kHz	OTHR Mil S520Hz
REF	28600	0850	8	12		Iran	pulses		100k	Pulsed OTHR 2 freq S3
REF	28600	0852	15	12		Iran	pulses		100k	Pulsed OTHR 2 freq S3
REF	28600	0852	16	12		Iran	pulses		100k	Pulsed OTHR 2 freq S3
REF	28600	0847	18	12		Iran	pulses		100k	Pulsed OTHR 2 freq S3
REF	28600	0839	19	12		Iran	pulses		100k	Pulsed OTHR 2 freq S5
REF	28600	0847	22	12		Iran	pulses		100k	Pulsed OTHR 2 freq S3
REF	28710	0846	8	12			fmcw		20kHz	OTHR Mil S5 20Hz
REF	28830	0930	23	12			fmcw		20kHz	OTHR Mil S720Hz
REF	28950	0908	11	12			fmcw		20kHz	OTHR Mil S5 20Hz
REF	29090	0845	20	12			fmcw		25kHz	OTHR Mil S8 40Hz
REF	29190	0856	15	12			fmcw		20kHz	OTHR Mil S8 20Hz
REF	29295	0842	2	12			fmcw		10kHz	OTHR Mil S6 18Hz
REF	29610	0840	18	12			fmcw		20kHz	OTHR Mil S520Hz
REF	29650	0854	16	12			fmcw		20kHz	OTHR Mil S420Hz

REF 2 – France – F5JBR (Andre)**REP – Portugal – CT4AN (Jose Francisco)**

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	3500	19.04	4	12	E		J3E-U			Spanish fishery, Galicia province
REP	3505	20.20	14	12			J3E-L			Fishermen, unid language
REP	3535	07.16	12	12	F		J3E-L			Fishermen

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	3550	07.34	02	12	F		A3E			INFRINGE to IARU Band plan – use of AM mode
REP	3550	20.19	17	12			PSK			Unid STANAG-4285 300bps/long
REP	3560	20.27	17	12			F1B	75	200	Unid encrypted baudot
REP	3600	19.05	4	12	G		J3E-U			UK fishermen, foul language
REP	3699	20.33	17	12			F1B	50	200	Unid BEE/T-600 modem idling
REP	3710	20.05	11	12	RUS		J3E-U			Navy ship operations
REP	7000	14.17	15	12	I		J3E-L			Italian pirates splattering into 40m band
REP	7000	14.21	15	12	E		J3E-L			Spanish pirates splattering into 40m band
REP	7000	16.53	18	12	I		J3E-L			IT9xxx calling outside ham band
REP	7005	18.20	11	12			J3E-L			Unid ops with engine sounds
REP	7025	22.15	15	12	B		F1B	75	240	FSK
REP	7035	19.19	07	12			J3E-L			unid. Language
REP	7039,0	22.00	04	12	RUS	C	A1A			MOSCOW, ADY, DLY
REP	7039,3	22.32	04	12	RUS	K	A1A			VOLGOGRAD, ADY, DLY
REP	7038,6	23.05	04	12	RUS	S	A1A			KALININGRAD, ADY, DLY
REP	7038,7	21.35	08	12	UKR	D	A1A			SEVASTOPOL, ADY, DLY
REP	7038,8	22.09	17	12	RUS	P	A1A			MURMANSK, ADY, DLY
REP	7060	18.53	11	12			FMCW			OTH radar
REP	7070	14.45	20	12	I		J3E-L			Music jamming QSOs
REP	7070	17.10	31	12	I		J3E-L			Music jamming QSOs
REP	7085	19.00	22	12			FMCW			OTHR 30kHz wider with splatter S9+35 in CS8
REP	7105	20.22	02	12	E		J3E-U			Fishermen with phone patch
REP	7115	17.02	14	12			8k00 A3EGN			Broadcasting station ! affecting Emergency communications !
REP	7140	18.06	06	12						1.8kHz Unk signal like Amtor but continuous
REP	7180	21.43	06	12			AM			20kHz Spurious from 7205 broadcast going down to 7180 - French language
REP	10101	20.09	16	12			J3E-U			Unid male chatting
REP	10116	20.10	22	12			J3E-U			Unid language
REP	10125	10.02	21	12	E		J3E-U			Unid spanish ops
REP	10130	20.28	22	12	MRC		J3E-U			Moroccan fishermen
REP	10130	20.05	17	12	B		J3E-U			Brazilian fishery
REP	10132	10.36	17	12	F		J3E-U			INFRINGE - hams not observing IARU band Plans
REP	10147	10.34	17	12			J3E/PSK			Speech inversion and ALE bursts
REP	10150	10.35	17	12	F		J3E-L			INFRINGE - hams not observing IARU band Plans
REP	14014	23.11	04	12	MRC		J3E-U			Several Intruders
REP	14100	14.23	15	12	F		J3E-L			French language ops moved here fm 7000
REP	14133	13.50	21	12	RUS UKR		J3E-U			Russian language Religious Transmission
REP	14162	15.15	07	12			F1B			Idle RTTY and sometimes Messaging cypher code
REP	14190	15.55	13	12	I		J3E-U			Music jamming QSOs
REP	14192	DLY	08	12			F1B			RTTY Idle some times messaging
REP	14192	17.19	3	12	RUS		F1B	50	200	CIS50-50 Russian military encrypted
REP	14205	14.15	24	12			FMCW			OTHR 30kHz S9+40 in CS8 splattering widely
REP	14215	12.00	08	12	E		J3E-U			Fishery - Bad language 2 op spanish (Cataluña) fisherman had stoped at 12:09z
REP	14227	13.50	25	12			FMCW			OTHR 25kHz 50sps S9+40 in CS8
REP	18090	13.23	21	12			FMCW			OTH radar 20kHz
REP	21150	14.00	21	12			FMCW			OTH radar 20kHz
REP	21205	08.53	25	12	E		J3E-U			Fishermen
REP	21250	14.14	06	12			FMCW			20kHz 50sps S9+30 in CS8
REP	21310	14.25	25	12			FMCW			OTHR 20kHz 50sps
REP	21330	13.56	8	12			FMCW			OTH radar 50sps/20kHz wide
REP	21340	22.22	25	12			FMCW			OTH radar
REP	21430	11.27	15	12			FMCW			OTH radar 25sps / 20kHz wide
REP	28015	18.05	18	12	B		J3E-U			USB brazilian ops, daily
REP	28065	11.55	22	12	RUS		F3E			Taxis
REP	28145	15.04	22	12	RUS		F3E			Taxis
REP	28150	11.38	11	12	RUS		F3E			Taxis
REP	28170	16.09	24	12	F		A3E			CB's inside Ham Band

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	28175	16.59	24	12	F		A3E			CB
REP	28235	17.27	19	12	RUS		F3E			Taxis
REP	28380	11.20	27	12			FMCW			OTHR 20kHz 50sps
REP	28580	14.48	04	12			FMCW			OTH radar
REP	28700	12.15	05	12			F3E			INFRINGE to IARU 10m Band plan
REP	29070	18.33	05	12			FMCW			OTH radar
REP	29081	12.37	18	12	E		J3E-L			Spanish fishery chating
REP	29170	11.50	20	12	RUS		F3E			Russian taxi female dispatcher
REP	29250	14.18	18	12			F1B	82	160	Datawell buoy, idling
REP	29250	11.26	17	12			F1B	82	140	Datawell GPS buoy
REP	29360	13.41	18	12			J3E-U			Unid language male ops
REP	29610	11.22	17	12			FMCW			OTH radar 50sps / 20kHz wide
REP	29620	12.35	29	12			FMCW			OTH radar
REP	29630	12.58	04	12			FMCW			20KHz 50sps S8 in CS8 Transmission till 13:00z
REP	28x-29xx	dly	dly	11			F3E			Russian taxi dispatchers
REP	28x-29xx	dly	dly	11			A3E			Brazilian CB'rs
REP	28x-29xx	dly	dly	11			FMCW			OTH sea surface radars

RSGB - Great Britain – M0VRR (Vaughan)

SRAL – Finland – OH2BLU (Pekka)

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BAUD	SHIFT	REMARKS
SRAL	7000,0	1230-1400	*	12		UiCarr	N0N			Days: 4. 19. 22. 31.
SRAL	7001,0	0645-2030	9. 10.	12		UiCarr	N0N			ALG(?)
SRAL	7008,0	1300-1425/	*	12		UiPTR	F1B		250	Days: 18. 25. 28.
SRAL	7010,0	0700-1255	27. 29.	12	RUS	UiMUX	PSK2	120	2600	
SRAL	7014,0	1055	18.	12		UiPTR	F1B			
SRAL	7018,0	1020-0800	dly	12	RUS	REA	F1B/N0N		1000	
SRAL	7018,7	0635-0718/	31.	12		UiCarr	N0N			
SRAL	7019,0	1035-1430	30.	12		UiMUX	PSK2	120	2600	
SRAL	7022,0	0900-1230	1.	12		UiMUX	PSK2	120	2600	
SRAL	7030,0	1330-1430	18. 28.	12		UiPTR	F1B			
SRAL	7038,7	h24	dly	12	RUS	D	A1A			Sevastopol
SRAL	7038,8			12	RUS	P	A1A			Kaliningrad, not heard
SRAL	7038,9	0330-2030	dly	12	RUS	S	A1A			Severomorsk
SRAL	7039,0	0620-1330	*	12	RUS	C	A1A			Moscow, days: 1. 2. 5. 9. 11.-18. 21. 23. 24. 29.
SRAL	7046,0	0645	2.	12		UiPTR	F1B		200	
SRAL	7069,0	0800-0830	3.	12		UiPTR	F1B		500	
SRAL	7076,0	1400-1605/	29.	12		UiPTR	F1B		250	
SRAL	7089,0	0700-1615	2. 6.	12		UiMUX	PSK2	120	2600	
SRAL	7098,0	0700-1100	1.14. 16.	12		UiPTR	F1B		250	
SRAL	7102,0	1015-1400	5. 6.	12		UiMUX	PSK2	120	2600	

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BAUD	SHIFT	REMARKS
SRAL	7111,0	1420	29.	12		UiMUX	PSK2	120	2600	
SRAL	7111,0	1300-1400	25.	12		UiPTR	F1B		250	
SRAL	7115,0	1615-1815/	14.	12	IND	AIR	A3E			Fq setting error?
SRAL	7138,0	0710-0820/	7.	12		UiCarr	N0N			
SRAL	7140,0	0645-1620	6. 7.	12	RUS	UiMUX	PSK2	120	2600	
SRAL	7150,0	0655-0710	*	12		186	R3E-u			Fridays: 5. 12. 19. 26. Serbian numbers?
SRAL	7160,0	0905	16.	12	RUS	RMW32	A1A			MR 5BL , calls RKP65
SRAL	7160,0	1425	25.	12		UiMUX	PSK2	120	2600	
SRAL	7167,0	1420-1535	29.	12		UiPTR	F1B		250	
SRAL	7170,0	0640-0700/	25.	12	BLR	R Komitet (?)	A3E			
SRAL	7184,0	1415	24.	12		UiMUX	PSK2	120	2600	
SRAL	7185,0	1300	25.	12	RUS	UiMUX	PSK2	120	2600	
SRAL	7193,0	0800-1430	*	12		UiPTR	F1B/ N0N		250	Days: 3. 4. 5. 8. 9. 14. 15. 17. 18.
SRAL	7198,0	0920-1000	*	12		UiMUX	PSK2	120	2600	Days: 13. 15. 30.
SRAL	7199,8	/1200-1500/	1. – 20.	12	RUS/ UKR	R Komitem	A3E			Russian music
SRAL	7200,0	/1520-1620/	dly	12	IRN	IRIB	A3E			
SRAL	7200,0	0250-0400	dly	12	SDN	R Sudan	A3E			
SRAL	7200,0	1415-1520/	dly	12	SDN	R Sudan	A3E			
SRAL	7200,0	/1930-2100	dly	12	SDN	R Sudan	A3E			
SRAL	7200,1	1300-1500/	dly	12	MY A	R Myanmar	A3E			
SRAL	7 MHz	2000-2030	27.	12	RUS	29B6	FMCW			50Hz / 15 kHz
SRAL	14024,0	0900-1000/	16.	12		UiPTR	F1B		500	
SRAL	14036,0	1230-1300	7.	12	RUS	REA	F1B		2000	2f
SRAL	14058,0	0855	7.	12		UiMUX	PSK2	120	2600	
SRAL	14084,0	0650-0935/	5.	12		UiCW	A1A			5BL
SRAL	14086,0	0920	17.	12		UiMUX	PSK2	120	2600	
SRAL	14118,0	0825-1040	1. 9.	12		UiMUX	PSK2	120	2600	
SRAL	14123,2	0920-1000	4.	12		UiPTR	F1B		250	
SRAL	14141,0	0930-1315/	*	12		UiPTR	F1B		200/ 500	Days: 16. 29. 30.
SRAL	14160,0	0915	4.	12		UiPTR	F1B		250	
SRAL	14162,0	0855	7.	12		UiMUX	PSK2 /A1A	120	2600	“QRJ?”
SRAL	14171,0	1205	30.	12		UiMUX	PSK2	120	2600	
SRAL	14192,0	0630-1700	dly	12	RUS	UiPTR	F1B		200	
SRAL	14240,0	1000-1040	9.	12		UiMUX	PSK2	120	2600	Double BW
SRAL	14240,0	0915	4.	12		UiPTR	F1B		200	
SRAL	14240,0	0630	14.	12		UiPTR	F1B		250	
SRAL	14295,2	0515-1515	dly	12	TJK	R Tojikisto n	A3E			3f 4765,07 kHz, Yangiyul TX
SRAL	14308,0	0750-0910	*	12		UiPTR	F1B		250/ 500	Days: 2. 3. 16. 29.
SRAL	14344,0	0710-	18.	12		UiPTR	F1B			

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BAUD	SHIFT	REMARKS
		0900								
SRAL	14346,0	0930-1055	10.11.	12		UiPTR	F1B		250	
SRAL	14348,0	0920	10.	12		UiMUX	PSK2	120	2600	
SRAL	14 MHz	0645-1540	*	12	RUS	29B6	FMCW			50Hz / 15 kHz, days: 5. 6. 7. 11. 12. 13. 22. 24. 25. 27.
SRAL	14 MHz	0630-1630	dly	12	RUS	UiOTHR	FMCW			10Hz / 15 kHz, mostly 30 sec bursts (16 min. / cycle)
SRAL	18 MHz	0650-1145	*	12	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz, days: 12. 21. 23. 31.
SRAL	21 MHz	0730-1425/	*	12	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz, days: 6. 12. 15. 21. 22. 23. 31.
SRAL	21438,0	0800-1300	dly	12	RUS	RCV	A1A			
SRAL	24 MHz	0745-1400	10.18.	12	CYP / TUR	UiOTHR	FMCW			50Hz / 20 kHz
SRAL	28 MHz	0745-1430	dly	12	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz
SRAL	28 MHz	0745-1300	dly	12	IRN	UiOTHR	FMCW			307 & 870 Hz / 60 kHz
SRAL	28 MHz	0710-1300	*	12	RUS	Taxi disp.	F3E			59 reports, days: 1. 3. 4. 5. 12. 13. 15. 16. 17. 19. 20. 26. 27. 31.

USKA – Switzerland – HB9CET (Peter)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
USKA	7000.0	1151	10	12			N0N			long lasting carrier often
USKA	7000.0	1937	01	12		T	A1A			spurious of 7038.7; maybe malfunction of Beacon D ?
USKA	7000.0	2356	30	12		111	MFSK8	125	1750	MIL 188-141A
USKA	7000.0	0003	31	12		120	MFSK8	125	1750	MIL 188-141A
USKA	7000.0	1922	31	12		21093	MFSK8	125	1750	MIL 188-141A
USKA	7000.0	1935	31	12		509	MFSK8	125	1750	MIL 188-141A
USKA	7000.0	1938	31	12		21079	MFSK8	125	1750	MIL 188-141A
USKA	7000.0	1939	31	12		406	MFSK8	125	1750	MIL 188-141A
USKA	7003.0	2355	19	12			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	7005.0	1754	14	12			J3E-L			unident voice (fare-east)
USKA	7018.0	1936	01	12		REA4	F1B	100	1000	started 8.11.14 daily
USKA	7019.0	1451	30	12			J7D		2k7	CIS12 idling
USKA	7038.7	1941	01	12		T	A1A			maybe malfunction of Beacon D ?
USKA	7038.7	2359	30	12	UKR	D	A1A			Beacon D
USKA	7038.9	1944	01	12	RUS	S	A1A			Beacon S Murmansk daily
USKA	7039.2	0224	13	12	RUS	F	A1A			Beacon F Vladivostok daily
USKA	7039.4	0932	03	12	RUS	M	A1A			Beacon M Magadan daily
USKA	7050.0	1549	12	12			J3E-L			Music, voice, insults QRM often
USKA	7060.0	1901	11	12			FMCW	50 sps	~13k	OTHR, affected BW approx 30k
USKA	7060.0	2209	27	12			FMCW	50 sps	~13k	OTHR, affected BW approx 30k
USKA	7070.0	1648	28	12		288	MFSK8	125	1750	MIL 188-141A
USKA	7070.0	1649	28	12		244	MFSK8	125	1750	MIL 188-141A: To 288
USKA	7077.4	1939	01	12		T	A1A			spurious of 7038.7 maybe malfunction of Beacon D ?
USKA	7077.875	0837	19	12			F1B	75	425	
USKA	7084.0 VFO USB	1953	11	12			J7D		2k7	CIS12 idling
USKA	7085.0	1823	22	12			FMCW	50 sps	~13k	OTHR, affected BW approx 30k
USKA	7088.819	1732	17			UU2	A1A			long lasting UU2 in blocks of 3
USKA	7089.8	1748	14	12			G1D	2400	2k4	PSK-8: Link 11- SLEW often

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
USKA	7091.500	1955	11	12		V	A1A			Beacon ID "V" almost daily
USKA	7091.500	2341	13	12			A1A			fast endless serie of R only
USKA	7100.0	1827	31	12			J3E-L		~4k	music and voice
USKA	7115.0	1744	14	12			A3E		~10k	maybe Urdu; strong S9+30
USKA	7122.0	1719	17	12			F1B	75	500	
USKA	7130.0	0321	13	12	IRN		A3E		~6k	BC; arabian like music and voice
USKA	7164.0	1949	11	12			J7D		2k7	CIS12 idling
USKA	7179.0	1747	30	12			J7D	12x120	2k7	PSK-2: CIS12 – AT3004D
USKA	7185.0	2347	24	12			J7D		2k7	CIS12 idling
USKA	7192.9	0924	03	12			A1A			Jammer, dots only
USKA	7193.0	0924	03	12			F1B	50	200	Jammed
USKA	7194.0	1654	17	12			J7D		2k7	CIS12 idling
USKA	7195.0	1838	22	12			J7D		2k7	CIS12 idling
USKA	7200.0	2329	13	12			A3E			BC, interfering 40m band
USKA	7200.0	1615	15	12			A3E		~8k	BC, interfering 40m band
USKA	7200.0	0011	24	12			A3E		~8k	BC, sounds like asian music
USKA	14116.0 VFO USB	0959	09	12			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	14141.0	0936	30	12			F1B	75	500	
USKA	14192.0	1027	01	12			F1B	50	200	CIS 50-50 daily
USKA	14192.1	1125	15	12			NON			Jammer, carrier, set over F1B
USKA	14222.0	0935	19	12			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	14240.0 VFO LSB	1009	09	12			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	14240.0 VFO USB	1009	09	12			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	14260.0	1441	20	12			FMCW	50 sps	~13k	OTHR, affected BW approx 30k
USKA	14270.0	0853	19	12			FMCW	50 sps	20k	OTHR often
USKA	14314.0	1141	10	12			OFDM		1030	
USKA	14346.0	1136	10	12			F1B	75	250	
USKA	18085.0	1139	31	12			FMCW	50 sps	20k	OTHR; affected BW ~35k
USKA	18100.0	1013	28	12		G2	MFSK8	125	1750	MIL 188-141A
USKA	18100.0	1037	28	12		C3	MFSK8	125	1750	MIL 188-141A "LQA"
USKA	18109.0	1126	27	12			FMCW	50 sps	15k	OTHR; affected BW ~33k
USKA	18110.0 - 18270.0	0830	09	12			FMCW	10 sps	160k	OTHR
USKA	18145.5	0912	02	12			PSK2	1200	1200	ARQ system
USKA	21000.0	0943	03	12			NON			long lasting carrier
USKA	21109.0	0721	24	12			FMCW	50 sps	20k	OTHR
USKA	21145.0	1044	23	12		C3	MFSK8	125	1750	MIL 188-141A often
USKA	21145.0	1509	23	12		C4	MFSK8	125	1750	MIL 188-141A often
USKA	21145.0	1141	28	12		GS4	MFSK8	125	1750	MIL 188-141A often
USKA	21145.0	1237	28	12		G2	MFSK8	125	1750	MIL 188-141A often
USKA	21318.55	1001	12	12			PSK-2	1200	1200	ARQ system often
USKA	21409.5	0751	24	12			F1B	100	2k	harmonic of 10704.75 almost daily
USKA	21430.0	1134	15	12			FMCW	25 sps	20k	OTHR
USKA	21438.0	0938	03	12		RCV	A1A			letters and figures daily
USKA	28100.0	1415	02	12			F1B	51	300	ENAGAL GPS fishery buoy
USKA	28150.0	1431	02	12			F1B	51	300	ENAGAL GPS fishery buoy
USKA	28389.0	1136	27	12			FMCW	50 sps	20k	OTHR, affected BW ~ 30k
USKA	28710.0	0843	09	12			FMCW	50 sps	20k	OTHR
USKA	28812.0	1139	15	12			FMCW	25 sps	20k	OTHR, affected BW ~ 40k
USKA	28828.0	0936	23	12			FMCW	50 sps	20k	OTHR, affected BW ~ 30k
USKA	28990.0	0947	12	12			FMCW	50 sps	20k	OTHR, affected BW ~ 40k
USKA	29090.0	1224	04	12			FMCW	50 sps	20k	OTHR
USKA	29610.0	0807	29	12			FMCW	50 sps	20k	OTHR, affected BW ~ 30k
USKA	29675.0	1312	29	12			FMCW	50 sps	20k	OTHR, affected BW ~ 30k

Wishing all of you a joyfull, happy and prosperous New Year, vy73 de Peter, HB9CET

Veron 1 – Netherlands – PA2GRU (Dick)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SHIFT	DETAILS
VERON	7000,5	19.50	9	12		UiCAR	NON		carrier
VERON	7017,0	16.06	12	12	RUS	UiCAR	NON		carrier
VERON	7018,0	14.35	1	12	RUS	UiPTR	F1B		Dotter (followed by F1A REA4 5F)
VERON	7018,0	14.40	1	12	RUS	REA4	F1A		REA4 01130 99900 5F
VERON	7018,0	14.40	8	12	RUS	REA4	F1A		REA4 08130 99900 5F
VERON	7018,0	15.45	18	12	RUS	UiPtr	F1B	1k	Printer; idling; bad modulation
VERON	7038,7	19.51	9	12	RUS	D	A1A		beacon Navy
VERON	7038,7	19.04	24	12	RUS	D	A1A		beacon Navy
VERON	7038,7	14.48	8	12	UKR	D	A1A		D-beacon (also at 1812)
VERON	7038,7	vt	vd	12	RUS/UKR	D	A1A		Beacon Sevastopol
VERON	7038,9	15.18	18	12	RUS	S	A1A		S-beacon
VERON	7038,9	vt	vd	12	RUS	S	A1A		Beacon Severomorsk
VERON	7060,0	18.49	11	12		OTHR	FMCW		radar
VERON	7060,0	17.53	27	12	RUS	UiRadar	FMCW	15k	OTHR; 50sps; sounds like "contayner"
VERON	7120,0	15.35	18	12	SOM	R. Hargaysa	A3E		Weak signal; music/speech
VERON	7200,0	20.59	27	12			A3E		Arabic speech; s9; R.Omdurman (SDN) back?
VERON	14001,5	09.43	4	12		UiPTR	F1B		Ptr (Pactor ?)
VERON	14123,0	09.41	4	12		UiPTR	F1B		Fast Revs/Ptr
VERON	14141,0	13.25	16	12		UiPTR	F1B		Ptr
VERON	14160,0	09.41	4	12		UiPTR	F1B		Ptr
VERON	14192,0	vt	vd	12		UiPTR	F1B		Revs/Ptr (often heard)
VERON	14192,0	15.18	18	12	RUS	UiPtr	F1B	200	Printer
VERON	14192,0	10.51	27	12	RUS	UiPtr	F1B	200	Printer
VERON	14206,0	10.53	27	12		UiBC	A3E		Italian speech&music; unstable car; s7
VERON	14240,0	09.40	4	12		UiPTR	F1B		Ptr
VERON	21438,0	15.36	10	12		RCV	A1A		calling RIP90 qtc 34946 etc
VERON	21438,0	09.47	4	12	RUS	RCV	A1A		RBE86 de RCV QTC 723 Nawarea 038
VERON	21438,0	09.51	4	12	RUS	RCV	A1A		RBE86 de RCV QTC 721 Nawip 038
VERON	21438,0	09.57	4	12	RUS	RCV	A1A		RIP90 de RCV QTC 267 Nawip 032
VERON	21438,0	09.54	11	12	RUS	RCV	A1A		RKZ de RCV QTC 473 Chtormowoe
VERON	21438,0	10.07	11	12	RUS	RCV	A1A		RBE86 de RCV QTC 673 Nawip 034
VERON	21438,0	10.35	12	12	RUS	RCV	A1A		RGX94 de RCV QTC 843 Nawip 037
VERON	21438,0	10.46	12	12	RUS	RCV	A1A		RIP90 de RCV QTC 345 NawIp 033
VERON	21438,0	15.15	18	12	RUS	RCV	A1A		RKZ de RCV QTC 493 Prognoz Pogody
VERON	28155,0	10.35	27	12	RUS		F3E		Taxi traffic
VERON	28265,0	10.36	27	12	RUS		F3E		Taxi traffic
VERON	28305,0	11.19	14	12	IRN	UiRadar	FMCW	60k	OTHR; 308&870sps
VERON	28390,0	11.58	13	12					Frequency hopper
VERON	28390,0	11.50	27	12	CYP	UiRadar	FMCW	30k	OTHR; 50sps
VERON	28420,0	10.37	27	12					Frequency hopper
VERON	28590,0	11.02	13	12	IRN	UiRadar	FMCW	70k	OTHR; 308&870sps
VERON	28600,0	12.28	27	12	IRN	UiRadar	FMCW	50k	OTHR; 308&870sps

The monitoring team of IARU Region 1

credits:

Wavecom Elektronik – Buelach – Switzerland

German BNetzA Konstanz

Many thanks for your interest!

compiled and published by DK2OM

January 2015