



# Monitoring System

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The monthly newsletter for Region 1

## July 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) ++ PB2T – Hans (IARU R1 President) ++ 9A5W - Nikola (EC-IARU-R1) ++ PTTs: German (BNetzA), BAKOM (Swiss), OFCOM (UK) ++ Dutch AT ++ SK6AW – DX-Cluster ++ YO9RIJ – Petrica

## Part 1: News and Infos

### 1. 7166 – CW intrusion disabled Pierre-Louis Cassot - F5NED IARU Liaison Officer reports:

IARU Region 1 amateur bands monitoring system (IARUMS) reported numerous occasions and intrusions in the 40 meters band on 7166 kHz from France, and this since July 2013. The origin of these transmissions has been identified by REF. Contact was established with the relevant administrative body, recalling the primary status of the allocation to amateur service of the frequency band 7000 - 7200 kHz. This approach was successful and transmissions have stopped since the 7th of July 2014. REF especially thanks Francis F5MIU (in charge of intruder monitoring for France - [intruders@ref.org](mailto:intruders@ref.org)) and André F5JBR for their actions at French level and contacts with IARU Region 1 IARUMS specialists (<http://www.iarums-r1.org>). The German PTT (BNetzA) filed an official complaint! Many thanks to all involved Hams and PTTs! (Wolf, DK2OM)

### 2. M0VRR (Vaughan) – successor of G4BOH (Chris) RSGB Monitoring System G5BOH (Chris) left our Monitoring Team after many years of successful and faithful membership.



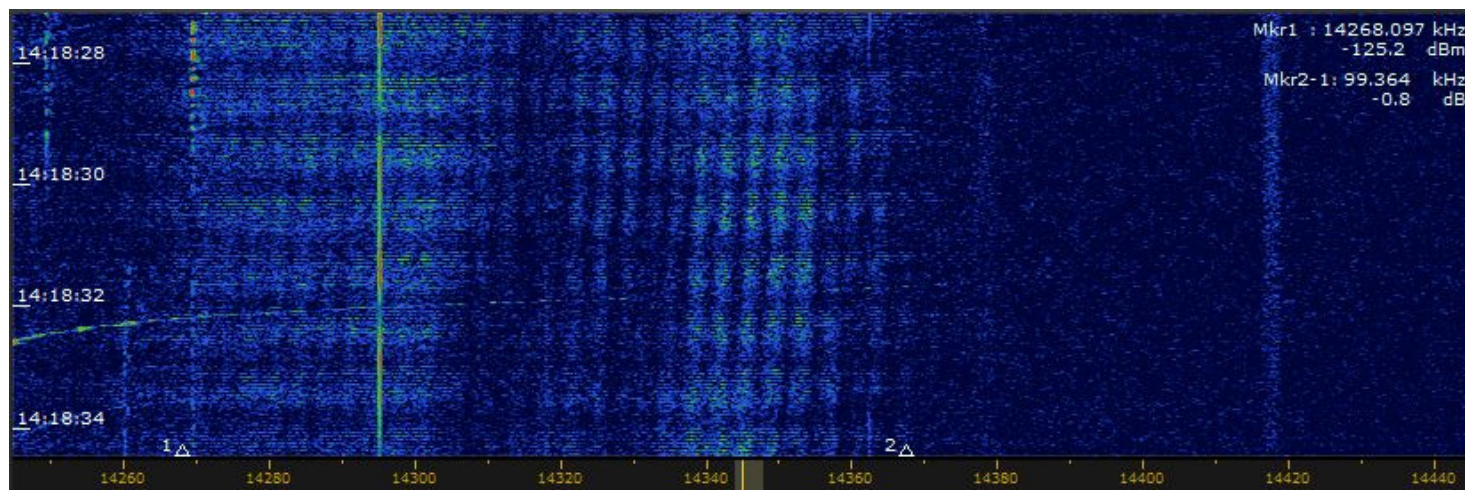
Dear Chris, many thanks for your long lasting assistance! Together with you and your excellent relations we could solve many problems very fast. Everytime when I called you for help, a quick reaction followed. Many thanks for preparing and teaching your successor M0VRR!

G4BOH - Chris



M0VRR – Vaughan – in his shack. Welcome to our Monitoring Team dear Vaughan!

### 3. Mysterious OTH radar signals on the upper part of our 20 m-band



I found this OTH radar signals (approx. 100 kHz wide) on 14268 – 14368 kHz on July 21<sup>st</sup> at 1400 utc. Bearing results: Nizhny Novgorod, Russia. The Wavecom W-Code analysis showed a sweeprate of 50 sps. Original emission or spurious?

### 6. Voice of Turkey – Intermodulation on 10110.0 kHz

Found by DK2OM at about 1900 utc on July 25<sup>th</sup>. DF6JL found th the same transmission few days earlier.

**DF5SX helped us to find out the sources:**

TURKEY 9135 / 10110 kHz. Intermodulation Mixture of TRT Emirler, fundamentals 9460 Turkish service, and 9785 kHz English service. formula:  $2 \times 9785 \text{ kHz} = 19570$  minus  $9460 \text{ kHz} = 10110 \text{ kHz}$ . exact footprint is 10110.029 kHz. The German PTT (BNetzA) has been informed.

### 7. Moroccan fishery still on our bands (as usual)

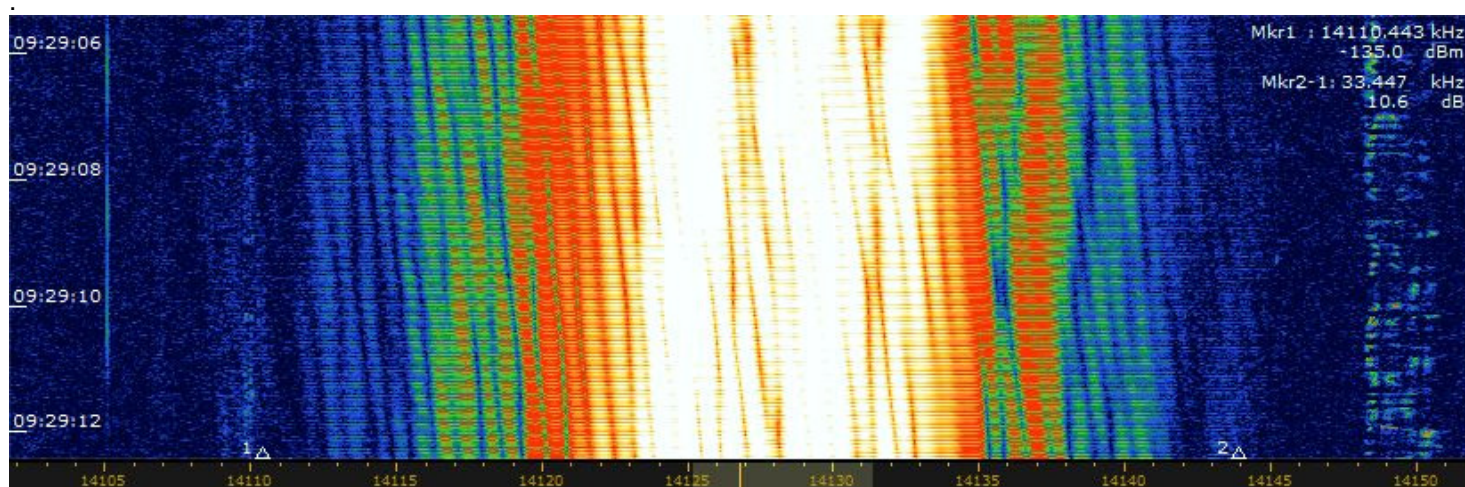
I found Moroccan fishermen transmitting on USB on 7001, 14000, 21000, 21002.6 and 21100 kHz.

### 8. Russian military traffic

We found Russian military traffic on 24 frequencies on our 14 MHz-band including digital and CW emissions. On our 7 MHz-band they used 22 frequencies including digital and CW emissions. The AT3004D on 7032 kHz located at Smolensk was active longer than 3 weeks. The German PTT filed an official complaint. The Russian OTH radar “Contayner” at Nizhny Novgorod was very busy on our 14 MHz-band and caused a lot of interference.

**Screenshot by DK2OM:**

Russian OTH radar “Contayner” centered 14128 MHz with 50 sps and many splatters stretching over 35 kHz.



### 9. 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://www.iaru-r3.org/ms/>

Intruderlogger Region 1

<http://peditio.net/intruder/bluechat.cgi>

**ITU-Monitoring Reports:**

<http://www.itu.int/ITU-R/index.asp?category=terrestrial&mlink=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 JULY 2014

Most listening in July took place at Kilifi on the coast, but very little was observed and propagation was not very good. The broadcast stations at Hargeisha, Somaliland, on 7120 kHz and Kampala on 7195 kHz were heard daily. Some unidentifiable SSB stations were heard at random times over the 40 meter band, possibly from Indonesia.

E.H.M. Alleyne, 5Z4NU

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#### ARSK – Kenya – 5Z4NU (Ted)

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

DG0JBJ (Mario) observed 183 OTH radars on 20 m, 32 OTH radars on 15 m and 16 OTH radars on 10 m in July 2014. Russian OTH radars were active again on 20 m with 10 and 50 sps – partly 40 kHz wide with splatters!

#### 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	1812,0	ady	dly	07	RUS		USB LSB			14 tones – hyperbolic radio navigation system – BRAS-3/RS-10 – Kaliningrad – daily, all day
DK2OM	1880,0	ady	dly	07	BEL		PSK8	2400	2400	Stanag4285 – 600 bps long – area of Brugge – Belgium - daily
DK2OM	1881,4	ady	dly	07	F		QPSK	100	100	BC-PSK – radio navigation – Nantes – daily, all day
DK2OM	1896,5	ady	dly	07	D		PSK8	2400	2400	Stanag4285 – 600 bps long – German Navy – daily, all day
DK2OM	1925,0	vt	dly	07	I	IPL	USB			Livorno Radio, weather reports – daily, vt
DK2OM	3500,0	vt	dly	07	TUR		FSK8	120	1750	ALE, “201” - Turkish Red Crescent – legal!
DK2OM	3500,0	2015	31	07	E		USB F1B	100	170	Spanish fishery with scrambler CRY 2001 and F1B synchro signal
DK2OM	3503,5	2206	21	07	G	no ITU	FSK8	125	1750	ALE – “XSS” “XPU” “XJR” – British MIL Tascomm – vt, daily - legal!
DK2OM	3525,5	1949	28	07	CIS		A3E			CIS pirate, unstable carrier
DK2OM	3530,0	vt	dly	07			FSK8	125	1750	ALE, “11141”
DK2OM	3531,0	1830	dly	07	RUS	REA4	N0N			carrier with spurious emissions, RUS airforce

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										<b>Moscow, ident: 1940 utc</b>
DK2OM	3550,0	vt	vd	07	ALG		FSK8	125	1750	ALE, "TU50" "TU52" "FN50"
DK2OM	3550,7	2005	02	07	ISR		PSK4 PSK8	75 2400	2400 2400	hybrid modem – ISR Navy – PSK4 parallel and PSK8 serial
DK2OM	3553,8	ady	dly	07	TUR		PSK8	2400	2400	Stanag4285 – TUR MIL - Ankara – legal operation
DK2OM	3567,0	vt	dly	07	CHN ?		FSK8	125	1750	ALE, "103" "106"
DK2OM	3576,4	ady	dly	07	I	IZ3DVW	A1A			uncoordinated beacon
DK2OM	3585,0	ady	dly	07	TWN	HLL	F1C			120 rpm, IOC 576, Wxfax - daily - legal!
DK2OM	3587,0	vt	vd	07	E	no ITU	FSK8	125	1750	ALE, "TVV" "TXX" - Spanish Guardia Civil
DK2OM	3590,0	vt	dly	07	PAK	no ITU	FSK8	125	1750	ALE, "KW" "KHAIBAR" – Pakistan navy
DK2OM	<b>3592,0</b>	<b>1834</b>	<b>06</b>	<b>07</b>	<b>RUS</b>		<b>FMCW</b>		<b>53k</b>	<b>OTHR – 43.5 sps – 3592 – 3645 kHz – Makhachkala – Caspian Sea</b>
DK2OM	<b>3594,0</b>	<b>1953</b>	<b>05</b>	<b>07</b>	<b>RUS</b>		<b>FMCW</b>		<b>48k</b>	<b>OTHR – 43.5 sps – 3594 - 3644 kHz – Makhachkala – Caspian Sea</b>
DK2OM	3595,0	vt	dly	07	D		FSK8	125	1750	ALE – German customs
DK2OM	3595,0	1945	05	07	RUS		USB			woman in Russian voice – often spelling figures - St. Peterburg
DK2OM	3596,0	vt	dly	07	D, S, HRV		FSK8	125	1750	ALE, "DK3CW" "SA6CBK" "9A0PZ" – just for info!
DK2OM	3617,0	vt	dly	07	HRV	9A5EX	FSK8	125	1750	ALE, "9A5EX" – HAM-ALE - just for info
DK2OM	3622,5	ady	dly	07	J	JMH	F1C			Tokyo Meteo – 120 rpm – IOC576 – daily, legal!!!
DK2OM	3642,0	1842	06	07	CHN		A1A			endless slip – DKG6 de 3A7D Chinese military – daily, all day
DK2OM	3751,5	vt	dly	07	POL	no ITU	FSK8	125	1750	ALE, "IZ3" "MI3"
DK2OM	3756,0	ady	dly	07	UKR		A3E			UKR – pip – 14 tones – hyperbolic navigation system – BRAS-2/RS-10
DK2OM	3761,5	vt	vd	07	POL		FSK8	125	1750	ALE, "NI9" "PL7" "AB2" – Polish MIL
DK2OM	<b>3772,0</b>	<b>1907</b>	<b>01</b>	<b>07</b>	<b>RUS</b>		<b>FMCW</b>		<b>55k</b>	<b>OTHR – 43.5 sps – 3772 – 3827 kHz – Makhachkala – Caspian Sea</b>
DK2OM	3782,0	ady	dly	07	POR	CTP	F1B	75	850	POR Navy headquarter Lisbon – disturbed by Russian OTH radar on 18.08.2013 at 1945 utc
DK2OM	<b>3784,0</b>	<b>1836</b>	<b>06</b>	<b>07</b>	<b>RUS</b>		<b>FMCW</b>		<b>50k</b>	<b>OTHR – 43.5 sps – 3784 – 3834 kHz - Makhachkala – Caspian Sea</b>
DK2OM	3791,0	vt	vd	07	D	DK0ESD	FSK8	125	1750	ALE, "DK0ESD" – just for info!
DK2OM	7000,0	vt	vd	07	?		FSK8	125	1750	ALE, "210" "20989" "2205"
DK2OM	7000,0	2015	03	07	E		USB			Spanish fishery – also 24.07.2014 at 1940 utc
DK2OM	7000,0	1834	15	07	RUS		PSK4B	120	2600	AT3104D – producing harmonic on 14000.0 kHz – west of Moscow
DK2OM	7000,0	0849	18	07	FEa		FMCW		32k	CODAR like ocean radar with 2.5 sps – 7000 – 7032 kHz – daily – audible via Japan and Australia
DK2OM	7000,0	2000	28	07	F		USB			French fishery – engine noise
DK2OM	7001,0	2155	18	07	MRC		USB			Moroccan fishery
DK2OM	7001,5	2207	30	07	ALG		PSK4	62.5	1750	Clover 2000 – 8 x 62.5 Bd – South Algeria
DK2OM	7005,0	1733	14	07	FEa		FMCW		32k	CODAR like ocean radar with 2.5 sps – 7005 – 7037 kHz – daily – audible via Japan and Australia
DK2OM	7009,0	1831	16	07	RUS		PSK2A	120	2600	AT3004D – Kaliningrad

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	7010,0	1550	02	07	RUS		PSK2A	120	2600	AT3004D – west of Moscow, RUS
DK2OM	7010,2	1954	28	07	RUS I	Hams	PSK2	31.25	31.25	PSK31 – a Russian with an Italian Ham – bandplans ???
DK2OM	7012,0	1818	14	07	RUS		PSK2A	120	2600	AT3004D – area of Moscow
DK2OM	7013,0	1533	15	07	RUS		PSK4B	120	2600	AT3104D - Severomorsk
DK2OM	7014,0	2010	23	07	RUS		F1B	75	200	Omsk - also audible via Japan and Australia
DK2OM	7015,0	1540	10	07	RUS		PSK2	120	2600	AT3004D – producing harmonic on 14030.0 kHz (5600 shift!) - Moscow
DK2OM	7015,6	1730	14	07	NEu		PSK4A	62.5	1750	Clover 2000 – 8 x 62.5 Bd – NE Europe
DK2OM	<b>7020,0</b>	<b>1830</b>	<b>02</b>	<b>07</b>	<b>INS</b>		<b>LSB USB</b>			<b>Indonesian pirates – village radio – daily, all day</b>
DK2OM	7020,0	vt	vd	07			FSK8	125	1750	ALE, “CS5004A” “RS0013D” – NC3A network? – area of Kosovo
DK2OM	7022,0	1526	15	07	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	7027,0	1819	25	07	RUS		PSK2A	120	2600	AT3004D -
DK2OM	7031,0	2000	01	07	UKR		PSK2A	120	2600	AT3004D - Donezk
DK2OM	7032,0	1958	15	07	RUS		PSK2A	120	2600	AT3004D – Kaliningrad - daily
DK2OM	7036,0	1900	29	07	RUS		PSK2A	120	2600	AT3004D - Krasnoyarsk
DK2OM	7038,7	2004	01	07	RUS	D	A1A			Cluster beacon – Sevastopol RUS Navy – “ <b>RCV</b> ”
DK2OM	7038,8	2004	01	07	RUS	P	A1A			Cluster beacon – 7038.780 kHz - Kaliningrad RUS Navy – “ <b>RMP</b> ”
DK2OM	7038,9	2004	01	07	RUS	S	A1A			Cluster beacon – Severomorsk RUS Navy – „ <b>RIT</b> “
DK2OM	7039,0	1940	22	07	RUS	C	A1A			Cluster beacon - Moscow RUS Navy - “ <b>RIW</b> ”
DK2OM	7039,2	---	---	07	RUS	F	A1A			Cluster beacon - Vladivostok RUS Navy - “ <b>RJS</b> ”
DK2OM	7039,3	1744	12	07	RUS	K	A1A			Cluster beacon - Petropavlovsk Kamchatskiy - RUS Navy - Pacific fleet - “ <b>RCC</b> ”
DK2OM	7039,4	1744	12	07	RUS	M	A1A			Cluster beacon – Magadan RUS Navy – „ <b>RTS</b> “
DK2OM	7040,0	vt	dly	07	F	F6BAZ	FSK8	125	1750	ALE, “F6BAZ” – just for info
DK2OM	<b>7040,0</b>	<b>ady</b>	<b>dly</b>	<b>07</b>	<b>I</b>		<b>A1A</b>			<b>IZ3DVW – uncoordinated and unwanted beacon</b>
DK2OM	7040,5	vt	dly	07	HRV		FSK8	125	1750	ALE, “9A5EX” “9A0ALE” – just for info
DK2OM	7043,5	1830	08	07	MEa		A1A			encrypted emission – ship – Black Sea
DK2OM	7047,37	vt	vd	07	D		FSK8	125	1750	ALE, “DL0NOT” – just for info!
DK2OM	7049,5	vt	dly	07	HRV G F	9A0ALE M1DFO F6BAZ	FSK8	1250	1750	Amateur ALE, just for info!
DK2OM	<b>7050,0</b>	<b>1950</b>	<b>02</b>	<b>07</b>	<b>UKR RUS</b>		<b>LSB</b>			<b>music and chats mentioning Ukraine - daily</b>
DK2OM	7054,0	---	---	07	RUS		F1B	50	200	CIS50-50 - RUS Navy Moscow – <b>not active</b>
DK2OM	7055,5	vt	vd	07	GEO		FSK8	125	1750	ALE, “111” “132” “133” - Georgia
DK2OM	7065,0	1745	11	07	FEa		FMCW		32k	CODAR like ocean radar with 2.5 sps – 7065 – 7097 kHz – daily – audible via Japan and Australia
DK2OM	7070,0	vt	dly	07	GEO	no ITU	FSK8	125	1750	ALE, “MV” “244” “686” “334” “204” “571” – daily active
DK2OM	7086,0	1702	23	07	RUS		F1B	75	250	Novosibirsk
DK2OM	7088,8	2015	17	07	S	SL0FRO	A1A			7088.830 - cw-trainee, Sweden – kHz – SL0FRO - just for info!

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	7089,8	2012	17	07	TUR		PSK8	2400	2400	Link11 - SLEW – aircraft – area of Izmir
DK2OM	7092,0	vt	vd	07			FSK8	125	1750	ALE, “3014”
DK2OM	7096,0	1650	02	07	OMA		PSK4	75	5800	LINK11-CLEW on both sidebands (5800 Hz wide) – Gulf of Oman
DK2OM	7099,5	vt	dly	07	HRV	9A0ZG	FSK8	125	1750	ALE, “9A0ZG” “9A5EX” “9A0OS” – daily - just for info!
DK2OM	7100,0	1734	14	07	CHN		FMCW		62k	Chinese OTH radar – 7100 – 7162 kHz - 43.5 sps
DK2OM	7102,0	vt	dly	07	HRV SUI D	9A0ALE	FSK8	125	1750	ALE, “9A0ALE” “9A2KS” “HB9MHB” “9A0ZG” “DK0ESD” – just for info!
DK2OM	7110,0	vt	dly	07	HRV	9A0ALE	FSK8	125	1750	ALE, “9A0ALE” – just for info
DK2OM	7110,0	vt	dly	07			FSK8	125	1750	ALE, “1101” “1112”
DK2OM	<b>7120,0</b>	<b>1700</b>	<b>dly</b>	<b>07</b>	<b>SOM</b>		<b>A3E</b>		<b>9k</b>	<b>Radio Hargaysa Somalia, daily</b>
DK2OM	7132,0	1900	27	07	RUS		PSK2A	120	2600	AT3004D - Smolensk
DK2OM	7137,0	vt	dly	07	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	7137,0	1535	02	07	RUS		PSK2	120	2600	AT3004D – modem idle – west of Moscow
DK2OM	7145,5	1407	30	07	UKR		PSK2	120	2600	AT3004D – submode idle - Lviv
DK2OM	7146,5	1818	29	07	UKR		PSK2A	120	2600	AT3004D – Lviv
DK2OM	7150,0	0850	30	07	RUS		F1B	100	500	F1B burst with link protection - Moscow
DK2OM	7152,0	1727	08	07	RUS		PSK2	120	2600	AT3004D – producing harmonic on 14304.0 kHz - Moscow
DK2OM	7178,5	1501	18	07		OA9B	A1A			OA9B calling ZI3X – WIGI
DK2OM	7183,0	vt	dly	07	SUI		FSK8	125	1750	ALE, “HB9MHB” – just for info!
DK2OM	7185,5	vt	dly	07	D HRV		FSK8	125	1750	ALE, “9A5EX” “DK0ESD” just for info - daily
DK2OM	7197,0	1948	05	07	TUR		FSK8	125	1750	ALE, “8241” “206102” “8151” “3021” “3761” “8021” “8141” “3061” “3241” “8411” – Turkish Sivil Ayunma = Turkish Civil Defense - source: DL8AAM – daily, various times
DK2OM	10100,8	ady	dly	07	D		F1B	50	450	Baudot - German Weatherservice – legal!
DK2OM	10101,0	1830	04	07	IND		USB			male persons - Mumbai
DK2OM	10103,0	1950	04	07	KOR		USB			Korean fishery - Atlantic
DK2OM	10103,8	1834	09	07	E		USB			Spanish fishery
DK2OM	10110,0	1900	25	07	TUR	VOT	A3E			IM from Voice of Turkey, 9460 and 9785 kHz (info DF5SX)
DK2OM	10113,0	vt	dly	07	TUN	no ITU	FSK8	125	1750	ALE, “TUD”
DK2OM	10114,8	0500	dly	07	RUS		F1B	100	1000	CIS14 – Moscow
DK2OM	10115,0	vt	vd	07			FSK8	125	1750	ALE, “2001” “2002”
DK2OM	10118,0	2007	24	07	RUS		F1B	75	250	Moscow
DK2OM	10123,0	vt	dly	07	ALG	no ITU	FSK8	125	1750	ALE, “CM3” “COF” “BSF” “CM2” “ESA”
DK2OM	10129,0	vt	dly	07	ALG		FSK8	125	1750	ALE, “CM1” “CTF” “772”
DK2OM	10130,0	vt	dly	07	MRC		FSK8	125	1750	Thales 3000 – West Sahara – daily - vt
DK2OM	10130,0	2016	18	07	MLE	no ITU	FSK8	125	1750	ALE, “001” “068” – Kuala Lumpur
DK2OM	10131,0	0922	11	07	RUS		F1B	75	250	St. Peterburg - also: 28.07.2014 at 0900 utc
DK2OM	10131,7	1952	24	07	RUS		A1A			synchronous on 10131.13 and

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										10132.26 - Kaliningrad
DK2OM	10136,0	vt	dly	07	ALG		FSK8	125	1750	ALE, "CM3" "BLD" "CNC" "TF2"
DK2OM	10136,0	1900	09	07	RUS		F1B	50	200	Chita – Far East Russia - daily
DK2OM	<b>10140,0</b>	<b>1800</b>	<b>09</b>	<b>07</b>	<b>RUS</b>		<b>FMCW</b>		<b>54k</b>	<b>OTHR – 10140 – 10194 kHz - 43.5 sps - Makhachkala – Caspian Sea</b>
DK2OM	10143,0	1550	30	07	RUS		F1B	75	250	Orenburg
DK2OM	10144,0	ady	dly	07	D	DK0WCY	A1A			10143.986 kHz - DK0WCY – German aurora beacon – <b>just for info!</b>
DK2OM	10145,5	2102	10	07	HRV S / D F / G	9A5EX	FSK8	125	1750	ALE, "9A5EX" "SM5VRH" "DK0ESD" "F6BAZ" "MIDFO" – <b>just for info - daily</b>
DK2OM	14000,0	1715	06	07	RUS		FMCW		13k	13995 kHz center - OTH radar 50 sps – Nizhny Novgorod
DK2OM	14000,0	1646	18	07	PHL		USB			Philippine pirates – also: 21.07.2014 at 2200 utc – daily 1400 utc
DK2OM	14000,0	2135	20	07	MRC		USB			Moroccan fishery
DK2OM	14000,0	1940	23	07	E		USB			Spanish fishery, engine noise in the background
DK2OM	14001,8	vt	dly	07			F1B	100	170	14001.785 kHz - Codan selcal – idents: 9503 - 9504
DK2OM	14008,0	1339	17	07	RUS		F1B	50	250	Moscow
DK2OM	14012,3	1750	30	07	FEa		LSB			Far East pirates
DK2OM	14026,0	0831	07	07	RUS		PSK2A	120	2600	AT3004D – west of Moscow – also 30.07.2014 at 1720 utc
DK2OM	14026,0	0900	30	07	RUS	RCA	PSK4B	120	2600	AT3104D - Moscow
DK2OM	14050,0	1655	24	07	IND		USB			pirates – long lasting – South East India
DK2OM	14052,0	1554	23	07			A1A			enciphered – 90°
DK2OM	14057,5	0100	01	07	CHN		PSK4A	44.44	2400	PRC-39 tone
DK2OM	14060,0	vt	vd	07	ISR		FSK8	125	1750	ALE, "AAA" - Israel
DK2OM	14081,0	0638	17	07	RUS		F1B	75	250	
DK2OM	14086,0	1709	12	07	RUS		PSK2A	120	2600	AT3004D - Tver
DK2OM	14108,0	vt	vd	07	RUS		A1A			RUS MIL Moscow
DK2OM	14109,0	vt	dly	07	ISR	4X1	FSK8	125	1750	ALE, "4X1" "CT2IXQ" – <b>just for info!</b>
DK2OM	14109,0	vt	dly	07	CAN		FSK8	125	1750	ALE, "VE3GDZ" – <b>just for info!</b>
DK2OM	14110,0	1610	07	07	RUS		FMCW		10k	OTH radar 50 sps – Nizhny Novgorod
DK2OM	14110,0	1352	21	07	RUS		FMCW		20k	OTH radar 10 sps – Nizhny Novgorod
DK2OM	14110,7	1408	04	06	TUR		F1B	100	200	14110.65 – Pactor - TA2BBS – <b>just for info!</b>
DK2OM	14116,0	0636	17	07	RUS		F1B	75	250	Kaliningrad – 24.07.2014 at 1400 utc
DK2OM	14130,0	1716	25	07	RUS		FMCW		14k	OTH radar 50 sps – Nizhny Novgorod
DK2OM	14140,0	0730	05	07	RUS		FMCW		10k	OTH radar 50 sps – Nizhny Novgorod
DK2OM	14141,0	0825	02	07	RUS		F1B	75	500	Moscow
DK2OM	14141,0	0737	18	07	RUS		F1B	75	200	Moscow
DK2OM	14160,0	0830	01	07	RUS		F1B	75	250	Moscow – also: 17.07.2014 at 0634 utc
DK2OM	14170,0	1550	30	07	RUS		FMCW		20k	OTH radar 10 sps – Nizhny Novgorod
DK2OM	14171,0	0946	16	07	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	14177,0	0727	18	07	UKR		F1B	75	500	Kharkiv
DK2OM	14186,0	0828	02	07	RUS		F1B FSK4	50 50	500 750	Far East Russia
DK2OM	14192,0	0833	02	07	RUS		F1B	50	200	RUS navy Kaliningrad – vd, vt
DK2OM	14204,8	1701	08	07	RUS		OFDM	35.6	2750	OFDM60 – Bryansk
DK2OM	14205,0	vt	dly	07	CHN ?	no ITU	FSK8	125	1750	ALE, "505" "822" – 60 deg. from DL - CHN ?
DK2OM	14218,0	1241	17	07	RUS		FMCW		10k	OTHR Contayner – 50 sps –



DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										Nizhny Novgorod
DK2OM	14221,0	2202	16	07	KGZ		F1B	50	200	Bishkek – also: 21.07.2014 at 1940 utc and daily
DK2OM	14221,0	0836	02	07			F1B	75	500	
DK2OM	14230,0	0650	18	07	RUS		FMCW		10k	OTH radar 50 sps – Nizhny Novgorod
DK2OM	14234,0	0907	30	07	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	14240,0	0953	16	07	RUS		F1B	50	250	Tver
DK2OM	14240,0	0704	22	07	RUS		PSK2A	120	2600	AT3004D
DK2OM	14260,0	vt	dly	06	SRB		FSK8	125	1750	ALE, “YU1BI” – just for info!
DK2OM	14260,0	1316	22	07	RUS		FMCW		15k	OTH radar 50 sps – Nizhny Novgorod – also 30.07.2014 at 1600 utc
DK2OM	14265,0	0643	18	07	RUS		FMCW		20k	OTH radar 10 sps – Nizhny Novgorod
DK2OM	14265,0	vt	vd	07	TUR		FSK8	125	1750	ALE, “526”
DK2OM	14265,0	1400	21	07	RUS		FMCW		115k	spurious emissions - 14265 – 14380 kHz – 50 Hz spectral lines – Nizhny Novgorod
DK2OM	14270,0	1712	13	07	RUS		FMCW		14k	OTH radar 50 sps – Nizhny Novgorod
DK2OM	14272,0	0833	07	07	RUS		PSK2A	120	2600	AT3004D – Moscow
DK2OM	14274,0	1450	16	07	RUS		PSK2A	120	2600	AT3004D – area of Crimea
DK2OM	<b>14280,0</b>	<b>1010</b>	<b>Wed</b>	<b>07</b>	<b>UKR</b>		<b>A3E</b>			<b>female voice with encrypted msgs – figures – “SZRU” = Foreign Intelligence Service of Ukraine at Rivne – every Wednesday</b>
DK2OM	14292,0	0720	01	07	RUS		F1B	75	500	Moscow
DK2OM	14295,0	vt	dly	07	SRB	YU1BI	FSK8	125	1750	ALE, “YU1BI” – just for info!
DK2OM	<b>14295,1</b>	<b>ady</b>	<b>dly</b>	<b>07</b>	<b>TJK</b>		<b>A3E</b>			<b>3<sup>rd</sup> from Radio Tajik on 4765 kHz</b>
DK2OM	14304,0	1727	08	07	RUS		PSK2	120	5200	AT3004D - harmonic from 7152.0 kHz - Moscow
DK2OM	14314,0	1732	08	07	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	14317,0	vt	vd	07	RUS	RCV	A1A			RUS naval base Sevastopol - encrypted, cyrillic letters
DK2OM	14321,5	0110	01	07	CHN		PSK4A	44.44	2400	PRC-39 tone
DK2OM	14322,0	vt	dly	07	CHN		FSK8	125	1750	ALE, “402”
DK2OM	14324,5	0114	01	07	CHN		PSK4A	44.44	2400	PRC-39 tone
DK2OM	14326,8	1240	13	07	CHN		PSK4A	44.44	2400	PRC-39 tone– South China
DK2OM	14328,0	vt	dly	07	CHN		FSK8	125	1750	ALE, “139” “534” “772” – West China
DK2OM	14330,0	vt	dly	07			FSK8	125	1750	ALE, “BV4”
DK2OM	14330,0	1409	24	07	RUS		FMCW		20k	OTH radar 10 sps – Nizhny Novgorod
DK2OM	14344,7	1917	01	07	CHN		PSK8	2400	2400	modified MIL-188-110A - 600 bps short – 14344.650 kHz – daily, all day
DK2OM	14346,0	0658	15	07	HRV RUS D		FSK8	125	1750	ALE, “9A0ZG” “RX3ARZ” “DK0ESD” – just for info – various times, daily
DK2OM	14346,0	vt	dly	07	THA	HS0ZEA	A1A			HS0ZEA beacon – 14345.950 kHz - every 5 minutes – just for info!
DK2OM	14348,5	1930	02	07	KWT		F1D	600	600	North Korean emba Kuwait
DK2OM	<b>14350,0</b>	<b>0837</b>	<b>19</b>	<b>07</b>	<b>E</b>		<b>USB</b>			<b>Spanish pirates, male and female, well known from 21420 – one of them located at Melilla</b>
DK2OM	<b>18070,0</b>	<b>1545</b>	<b>26</b>	<b>07</b>	<b>CYP</b>		<b>FMCW</b>		<b>20k</b>	<b>OTH radar Cyprus – 25 sps</b>
DK2OM	<b>18080,0</b>	<b>0600</b>	<b>dly</b>	<b>07</b>	<b>TWN CHN</b>	<b>SOH</b>	<b>A3E</b>		<b>9k</b>	<b>Sound of Hope / Taiwan and Chinese mainland BC</b>
DK2OM	18100,0	vt	dly	07	MRC	no ITU	FSK8	125	1750	ALE, “CD” “C3” “R3” “G3” “E4” “E5” “Z2” “FORD” – daily, various times
DK2OM	18107,0	vt	vd	07	RUS	RDL	F1B	50	200	Moscow – idle and traffic – Russian navy – various days

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										and times – legal operation
DK2OM	18117,5	vt	vd	07	POR	CT2IXQ	FSK8	125	1750	ALE, “CT2IXQ” – just for info
DK2OM	18140,0	vt	dly	07	SRB	YU1BI	FSK8	125	2600	ALE, “YU1BI” – just for info!
DK2OM	18150,0	0718	08	07	RUS		F1B	100	1000	harmonic from 9075 - Kaliningrad
DK2OM	20998,8	1750	17	07	ARG	TB8 LU4	USB			illegal traffic in Spanish voice, splattering up – also 31.07.2014 at 1740 utc
DK2OM	<b>21000,0</b>	<b>vt</b>	<b>vd</b>	<b>07</b>	<b>SDN</b>		<b>USB</b>			<b>MFA Sudan – Khartoum with emba Yemen – voice traffic</b>
DK2OM	21000,0	1925	05	07	B		USB			Brazilian pirates – Rio de Janeiro with North Brazil – every Saturday
DK2OM	21000,0	0614	07	07	MRC		USB			Maroccan fishery – also 14.07.2014 at 2135 utc
DK2OM	21000,0	2005	22	07	KOR		USB			Korean fishery – South Atlantic Ocean
DK2OM	21001,0	1236	17	07	FEa		USB			Far East pirates
DK2OM	<b>21002,1</b>	---	---	<b>07</b>	<b>SDN</b>	<b>!0000</b>	<b>F1B</b>	<b>100</b>	<b>170</b>	<b>21002.15 kHz - Pactor 1 encrypted – MFA Sudan – Khartoum with emba Yemen – daily, vt</b>
DK2OM	21002,6	2018	15	07	MRC		USB			Moroccan fishery
DK2OM	21089,5	1754	15	07	FEa		LSB			Far East pirates
DK2OM	21096,0	vt	dly	07	INS	YD00XH	FSK8	125	1750	ALE, “YD00XH3” – daily, various times - just for info!
DK2OM	21100,0	1445	16	07	MRC		USB			Moroccan fishery
DK2OM	21130,0	1755	23	06	MRC		USB			Moroccan fishery
DK2OM	21131,0	vt	vd	07	CHN		FSK8	125	1750	ALE, “A92” “L02” – Chinese Navy?
DK2OM	21141,8	vt	vd	07	MEa		PSK8	2400	2400	MIL-188-141B – App.C and Stanag5438 – daily, various times
DK2OM	21145,0	2011	10	07	MRC		FSK8	125	1750	ALE, “B301”, “C3”, “IR4” “T4” “E4” “A2” “CD” “K3” “KB2” “J5” “GS4” “R3” – various times, daily
DK2OM	<b>21145,8</b>	<b>1729</b>	<b>02</b>	<b>07</b>	<b>I</b>	<b>IZ3DVW</b>	<b>A1A</b>			<b>21145.764 kHz – IZ3DVW uncoordinated and unwanted beacon</b>
DK2OM	<b>21150,0</b>	<b>1929</b>	<b>28</b>	<b>07</b>			<b>A3E</b>			<b>BC IM – distorted – 90 °</b>
DK2OM	21190,0	0905	23	07	RUS		F1B	100	1000	harmonic from 10595 kHz - Moscow
DK2OM	21230,0	0726	09	07	AUS		FMCW		10k	Australian OTH burst radar JORN
DK2OM	21230,0	0835	14	07	TUR		FMCW		20k	OTH radar – 25 sps – NW Turkey
DK2OM	21231,8	0855	09	07	GEO		PSK8A	2400	2400	Stanag4538
DK2OM	21236,0	0840	18	07	AUS		FMCW	10k		Australian OTH burst radar JORN
DK2OM	21279,0	0726	08	07	AUS		FMCW		10k	Australian OTH radar JORN – 36 sps bursts of 2.1 sec length
DK2OM	21281,0	0630	17	07	AUS		FMCW		10k	Australian OTH burst radar JORN
DK2OM	21291,0	0637	25	07	AUS		FMCW		10k	Australian OTH radar JORN – 50 sps bursts of 1.3 sec length
DK2OM	21310,0	0910	11	07	TUR		FMCW		20k	OTH radar – 25 sps – NW Turkey
DK2OM	21346,0	0858	09	07	THA	HS0ZEA	A1A			beacon “HS0ZEA” – every 5 min. - just for info!
DK2OM	21400,0	vt	dly	07	RUS		F1B	50	2000	harmonic from 5350 kHz – area of Moscow - daily
DK2OM	21400,0	0826	19	07			N0N			carrier – 90 deg.
DK2OM	21409,5	0602	07	07	RUS		F1B	100	2000	21409,5 - F1B 100 / 2000 - CIS14 – harmonic from 10704.75 - Jekaterinburg, RUS
DK2OM	21410,5	0600	07	07			A1A			only dashes and carrier
DK2OM	21430,0	0817	19	07	FEa		FMCW			unid OTH burst radar – 25.64

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										sps
DK2OM	21438,0	vt	dly	07	RUS	RCV	A1A			RIP90 de RCV - RUS Navy Sevastopol - daily
DK2OM	21445,0	1025	29	07			A3E			BC splatters from 21455
DK2OM	21446,0	ady	dly	07	THA	HS0ZEA	A1A			HS0ZEA beacon – every 5 minutes - just for info!
DK2OM	25000,0	ady	dly	07	FIN		A3E			time signal Helsinki – just for info – carrier on 25000 – dots on 25001 and 24999 – daily, all day
DK2OM	28000,0	vt	dly	07	CIS		F3E			28000 – 29700 numerous CIS taxi nets – mostly Russia
DK2OM	28000,0	ady	dly	07	B		A3E			Brazilian CBers – 28000 – 28315 – no change
DK2OM	28000,0	0907	08	07	IRN		FMCW		50k	OTH radar Iran – 307 and 870 sps – splattering +/- 300kHz
DK2OM	28002,0	1640	20	07	?		NON			oscillating unstable carrier – 210 deg. from DL
DK2OM	28005,0	vt	dly	06	RUS		F3E			taxi net St. Peterburg, daily, all day
DK2OM	28035,0	1748	27	07	RUS		F3E			taxi Moscow - daily
DK2OM	28035,0	1859	31	07	F		F3E			French pirates, engine noise
DK2OM	28045,0	0826	13	07	POR		F1B	51	320	F1B bursts - west of Lisbon – Enagal GPS buoys - daily
DK2OM	28055,0	1910	01	07	RUS		F3E			taxi Moscow - daily
DK2OM	28055,0	1659	20	07	I		USB			Italian pirates, roger beep
DK2OM	28065,0	0825	22	07	RUS		F3E			taxi Moscow - daily
DK2OM	28065,9	0802	13	07	GAB		A3E		1000	carrier and dots in USB and LSB, bursts every 60 sec, daily
DK2OM	28085,0	1530	26	07	RUS		F3E			RUS taxi
DK2OM	28101,0	2012	12	07	POR		F1B	51	320	F1B bursts - 28100.780 kHz - west of Lisbon – Enagal GPS buoys – daily, all day
DK2OM	28105,0	vt	dly	07	RUS		F3E			taxi Moscow
DK2OM	28105,0	0951	02	07	E		A3E			Spanish CBers – daily, vt – area of Murcia
DK2OM	28115,0	0849	25	07	RUS		F3E			taxi – Kazan – daily – disturbing AFU PSK on 28120
DK2OM	28125,0	vt	dly	07	POR		F1B	51	320	F1B bursts - 28100.160 kHz - west of Lisbon – Enagal GPS buoys - daily
DK2OM	28125,0	0834	25	07	RUS		F3E			Russian taxi
DK2OM	28130,0	1820	31	07	IRN		FMCW		50k	OTH radar Iran – 307 and 870 sps – splattering +/- 300kHz
DK2OM	28135,0	vt	dly	07	RUS		F3E			taxi – Barnaul - daily
DK2OM	28146,0	vt	vd	07	ARG B		FSK8	125	1750	ALE, “LU8EX” “PY2TI” “DL1” – just for info!
DK2OM	28155,0	ady	dly	07	RUS		F3E			taxi Moscow
DK2OM	28155,0	1007	23	07	E		A3E			Spanish CBers
DK2OM	28175,0	0758	29	07	RUS		F3E			Russian taxi
DK2OM	28185,0	0910	25	07	RUS		F3E			Russian taxi
DK2OM	28195,0	1829	27	07	RUS		FM			Russian taxi
DK2OM	28200,0	vt	dly	07	POR		F1B	51	300	F1B bursts - west of Lisbon – Enagal GPS buoys - daily
DK2OM	28205,0	vt	dly	07	RUS		F3E			taxi Moscow
DK2OM	28215,0	1837	27	07	RUS		F3E			taxi Moscow
DK2OM	28224,8	1417	19	07	GAB		A3E		1500	carrier and dots in USB and LSB, bursts every 60 sec
DK2OM	28235,0	0823	25	07	RUS		F3E			Russian taxi
DK2OM	28255,0	vt	dly	07	RUS		F3E			taxi Moscow
DK2OM	28265,0	vt	dly	07	RUS		F3E			taxi Moscow
DK2OM	28275,0	1815	27	07	RUS		FM			RUS taxi
DK2OM	28275,1	vt	dly	07	AF		F1B	51	320	F1B bursts – African west-coast – Enagal GPS buoys - daily
DK2OM	28305,0	vt	dly	07	RUS		F3E			taxi - Arkhangelsk
DK2OM	28305,0	1701	20	07	I		A3E			Italian CBers
DK2OM	28305,0	1026	31	07	E		A3E			Spanish CBers
DK2OM	28345,1	0849	20	07	GAB		A3E			carrier and dots in USB and

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										LSB, bursts every 60 sec – 28346.110 kHz carrier – Gabon – daily and all day
DK2OM	28435,0	1904	31	07	E		F1B	81.9	140	Datawell-buoy “Waverider” – 28435.040 kHz – Costa del Sol - Malaga
DK2OM	29250,0	1120	03	07	E		F1B	81.9	140	Datawell-buoy “Waverider” – 29249.905 kHz – Fuerteventura - daily, all day
DK2OM	29375,0	---	--	07	I		F1B	81.9	140	Datawell-buoy “Waverider” – 29374.898 kHz – Gallipoli, South Italy - daily, all day
DK2OM	29387,5	---	--	07	IND		F1B	81.9	140	Datawell-buoy “Waverider” – 29387,460 kHz – Indian NW coast, close to Pakistan - daily, all day
DK2OM	29450,0	---	--	07	MRC		F1B	81.9	140	Datawell-buoy “Waverider” – 29449.870 kHz - area of El Aaiun – Morocco - daily, all day
DK2OM	29500,0	---	--	07	G		F1B	81.9	140	Datawell-buoy “Waverider” – area of Gibraltar – daily, all day
DK2OM	29525,0	---	---	07	MRC		F1B	81.9	140	Datawell-buoy “Waverider” – 29524.990 kHz - Agadir - Morocco – daily, all day
DK2OM	29685,5	1036	31	07	I				2000	serial modem, Italian MIL Brescia
DK2OM	29699,8	1036	31	07	I				2000	serial modem, Italian MIL Brescia
DK2OM	50085,0	0644	22	07			NON			TV carrier with 50 Hz hum – 90°
DK2OM	50095,0	0644	22	07			NON			TV carrier with 50 Hz hum – 90°

### IRTS – Ireland – EI9GSB (Lisa)

### KARS – Kuwait – 9K2RR (Faisal)

### MRASZ – Hungary - HA7PL (Laci)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
MRASZ	3507,7	1942	8	7			A1A			quick dotter
MRASZ	3510,0	1905	5	7			A1A			dotter
MRASZ	3552,6	1736	25	7			A1A			"118TT TT 99T3998T4 752T32 51799T3..."
MRASZ	3595,0	1813	7	7			USB			russian female: numbers, hrd: 18
MRASZ	3602,0	1904	6	7			F1B		250	
MRASZ	3608,0	2029	22	7			F1B		200	
MRASZ	3700,0	2030	22	7			A3E			music
MRASZ	3727,3	1906	6	7			F1B		850	
MRASZ	3770,0	1903	5	7			USB			russian: "prijom prijom"
MRASZ	3790,0	1905	5	7			OTHR			3770-3800
MRASZ	7000,0	1646	16	7			LSB			italian male's
MRASZ	7000,0	1924	16	7			PSK2			AT3004D
MRASZ	7006,5	1837	1	7			F1B		500	
MRASZ	7014,0	2018	22	7			F1B		200	
MRASZ	7019,0	1911	5	7			A1A			"BT VGHZF OGGXS SPJGF"
MRASZ	7025,0	0732	31	7			F1B		250	
MRASZ	7027,0	1820	5	7			A1A			slow V V V string
MRASZ	7027,0	1902	6	7			A1A			slow V V V string

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
MRASZ	7032,0	2019	22	7			PSK2			AT3004D
MRASZ	7032,0	1834	30	7			PSK2			AT3004D
MRASZ	7036,0	1657	16	7			PSK2			AT3004D
MRASZ	7038,7	vt	ady	7	UKR	D	A1A			"D" beacon
MRASZ	7038,8	1839	1	7	RUS	P	A1A			„P” beacon,
MRASZ	7038,9	1942	1	7	RUS	S	A1A			"S" beacon, hrd on: 7,8,22,23
MRASZ	7050,0	1123	27	7	UKR		LSB			ukr. "revolution" hrd allmost every evening
MRASZ	7051,1	1841	1	7			N0N			
MRASZ	7055,0	1842	1	7	UKR		LSB			ukr. "revolution" hrd allmost every evening
MRASZ	7070,0	1935	22	7			LSB			"IOQMN +50dB +-8 kHz splatter" (info only)
MRASZ	7081,0	1955	5	7			A1A			"ANWOG JAPHF OTNPE"
MRASZ	7086,0	2022	22	7			F1B		250	
MRASZ	7090,0	1650	16	7			LSB			same chaos as on 7050!
MRASZ	7092,0	0906	20	7			F1C			Weather fax
MRASZ	7100,0	1908	30	7			N0N			
MRASZ	7120,0	vt	ady	7	SOM		A3E			BC, Radio Hargaysa
MRASZ	7139,5	0724	31	7			PSK2			AT3004D
MRASZ	7145,0	1843	1	7			N0N			
MRASZ	7155,0	0450	18	7			PSK2			AT3004D
MRASZ	7158,0	1844	1	7			N0N			
MRASZ	7182,0	1939	26	7			N0N			or weak carrier
MRASZ	7195,0	1859	6	7			A3E			music
MRASZ	10110,0	1918	16	7			A3E			ui language
MRASZ	10125,0	1951	8	7			USB			ui language, arabian?
MRASZ	10130,0	1647	5	7			OTHR			
MRASZ	10140,0	1645	16	7			OTHR			10120-10150
MRASZ	10143,0	1857	30	7			F1B		250	
MRASZ	14000,0	1838	30	7			OTHR			
MRASZ	14003,0	0833	20	7			A1A			"2T51 51T2 1951" "HRZY K" with hum
MRASZ	14008,0	0855	20	7			F1B			
MRASZ	14008,0	0813	27	7			F1B		250	
MRASZ	14026,0	1854	7	7			PSK2			AT3004D
MRASZ	14026,0	1827	30	7			PSK2			AT3004D
MRASZ	14026,0	1836	30	7			PSK2			AT3004D
MRASZ	14064,0	1821	1	7			F1B		250	
MRASZ	14108,0	0904	5	7			A1A			"O8FG de H7DL R 345? K" with hum
MRASZ	14116,0	2026	22	7			F1B		250	
MRASZ	14118,0	1106	18	7			PSK2			AT3004D
MRASZ	14140,0	0858	5	7			OTHR			14115-14150
MRASZ	14140,0	0909	5	7			OTHR			
MRASZ	14142,0	0920	20	7			PSK2			AT3004D wrong sigs, soon stopped
MRASZ	14160,0	1822	1	7			F1B		250	
MRASZ	14160,0	1113	27	7			OTHR			
MRASZ	14180,0	0910	20	7			OTHR			
MRASZ	14192,0	0901	20	7			F1B		200	
MRASZ	14192,0	0843	27	7			F1B		200	
MRASZ	14212,8	0924	5	7			F1B		150	
MRASZ	14221,0	1854	6	7			F1B		200	
MRASZ	14221,0	0451	18	7			F1B		200	
MRASZ	14274,0	1658	16	7			PSK2			AT3004D
MRASZ	14285,0	1954	8	7			LSB			"November Yankee Whiskey"
MRASZ	14295,1	vt	ady	6	TJK		A3E			Radio Tajikistan, 3 x 4765 kHz
MRASZ	14350,0	1626	26	7			OTHR			
MRASZ	21000,0	1114	18	7			OTHR			21000-21015
MRASZ	21200,0	0830	4	7			OTHR			
MRASZ	21270,0	0738	27	7			OTHR			

## OEVSV – Austria – OE3GSA (Gerd)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
oevsv	14140.0	0813	17	07	unid	unid	FMcw			broad ( +45db !)
oevsv	14155.0	0535	01	08	unid	unid	FMcw			broad
oevsv	14159.0	0555	17	07	unid	unid	F1B	100	150	
oevsv	18080.0	0635	24	07	BY	unid	A3A			chinese BC

## PZK – Poland – SP9BRP (Jan)

### REF 1 – France – F5MIU (Francis)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD kHz	Sh Hz	DETAILS
REF	14115	1524	04	07			fmcw	20		OTHR 20Hz pulses S8 Dir Est
REF	14130	1622	25				fmcw	20		OTHR 20Hz pulses S8
REF	14230	1735	04				fmcw	20		OTHR 20Hz pulses S9+ Dir Est
REF	14240	0808	09				fmcw	20		OTHR 20Hz pulses S9
REF	14270	0734	21				fmcw	20		OTHR 20Hz pulses S9
REF	18070	0804	09				fmcw	20		OTHR 20Hz pulses S8+ Dir ?
REF	21000	0756	24				usb			S1 weak German language
REF	210002	0800	24				cw			S2 very fast CW (data ?)

### REF 2 – France – F5JBR (Andre)

### REP – Portugal – CT4AN (Jose Francisco)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	3500	07.58	14	07	E		J3E-U			Spanish fishery, roger beeps, whistles
REP	3562	09.53	15	07	E		J3E-U			Spanish fishery
REP	3577	08.22	22	07	E		J3E-U			Spanish fishery
REP	3650	08.43	22	07	F		J3E-U			French fishery, engine noises
REP	3790	07.22	18	07	E		J3E-U			Spanish fishery
REP	7025	06.34	06	07	MRC		J3E-U			French speaking fishermen
REP	7000	18.55	16	07	RUS		BPSK			AT3104 Russia
REP	7035	07.11	25	07	E		J3E-U			Fishermen
REP	7038	22.02	16	07	RUS	S	A1A			KALININGRAD, ADY, DLY
REP	7038	22.36	16	07	UKR	D	A1A			SEVASTOPOL, ADY, DLY
REP	7038	22.38	07	07	RUS	P	A1A			MURMANSK, ADY, DLY
REP	7039	21.55	07	07	RUS	A	A1A			VOLGOGRAD, ADY, DLY
REP	7050	21.50	18	07	UKR		J3E-L			Music and jamming
REP	7050	19.18	25	07	UKR RUS		J3E-L			Music and discussions
REP	7070	14.05	18	07	I		J3E-L			Music and jamming over QSOs
REP	7070	21.47	02	07	MRC		J3E-U			Fishermen
REP	7073	22.00	13	07			F1B	75	240	Unid transmission
REP	7086	20.47	23	07			F1B	75	250	encrypted
REP	7103	16.35	27	07	E		J3E-L			Music, jamming, a big mess on the freq !
REP	7120	18.34	05	07	SOM		8k00 A3EGN			Radio Hargeya broadcasting
REP	7124	20.15	15	07	RUS					Russian military FSK
REP	10100	20.52	15	07			A3E			Numbers Station
REP	10101	10.04	01	07			J3E-U			Unid language fishermen, engines
REP	10105	21.39	23	07	MRC		J3E-U			Moroccan fishermen
REP	10120	12.03	22	07	MRC		J3E-U			Fishermen
REP	10121	1552	17	07			A1A			Stuck keyer, dits. via Twente SDR
REP	10131	22.09	13	07			J3E-U			Unid language net, also OTH radar
REP	10132	22.34	19	07	MRC		J3E-U			Moroccan fishermen
REP	10140	21.38	23	07			J3E-U			Arabic language, fishermen
REP	10144	21.40	23	07	MRC		J3E-U			Moroccan fishermen

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	14026	08.51	07	07	RUS		BPSK	12	120	BPSK AT3004D - Moscow
REP	14088	07.10	12	07						Unid mil
REP	<b>14105</b>	<b>12.20</b>	<b>17</b>	<b>07</b>			<b>FMCW</b>			<b>OTH radar 10kHz wide</b>
REP	<b>14110</b>	<b>06.51</b>	<b>12</b>	<b>07</b>			<b>FMCW</b>			<b>OTH radar</b>
REP	14111	08.54	07	07	P		J3E-U			Portuguese fishermen, moved to 8414kHz
REP	14116	09.02	17	07	RUS		F1B	75	250	encrypted
REP	14116	13.15	25	07	RUS		F1B	75	250	encrypted
REP	<b>14130</b>	<b>08.49</b>	<b>07</b>	<b>07</b>			<b>FMCW</b>			<b>OTH radar 20kHz wide</b>
REP	14160	10.21	01	07			A1A			“dit” jammer
REP	14170	09.18	16	07			BPSK			AT3004D and “dit” jammer
REP	14192	09.35	17	07			F1B	~	200	200Hz shift iddling
REP	<b>14195</b>	<b>15.55</b>	<b>26</b>	<b>07</b>	<b>I</b>		<b>J3E-U</b>			<b>Italian music jamming over QSOs</b>
REP	14217	10.19	01	07	E		F3E			Spanish ham tuning in FM mode
REP	<b>14225</b>	<b>16.55</b>	<b>04</b>	<b>07</b>			<b>FMCW</b>			<b>OTH radar 50sps 20kHz</b>
REP	14270	08.46	07	07	RUS		BPSK	12	120	BPSK AT3004D Moscow
REP	<b>18070</b>	<b>10.37</b>	<b>17</b>	<b>07</b>			<b>FMCW</b>			<b>OTH radar 50sps, 20kHz wide</b>
REP	<b>18090</b>	<b>11.38</b>	<b>22</b>	<b>07</b>			<b>FMCW</b>			<b>OTH radar 50sps/20kHz</b>
REP	<b>18129</b>	<b>10.28</b>	<b>01</b>	<b>07</b>			<b>FMCW</b>			<b>OTH radar</b>
REP	<b>18160</b>	<b>13.32</b>	<b>17</b>	<b>07</b>			<b>FMCW</b>			<b>OTH radar 18170MHz, 25sps/20kHz</b>
REP	<b>21000</b>	<b>08.11</b>	<b>14</b>	<b>07</b>			<b>FMCW</b>			<b>OTH radar</b>
REP	21121	20.01	19	07			J3E-U			Unid arabic fishermen
REP	<b>21250</b>	<b>14.18</b>	<b>21</b>	<b>07</b>			<b>FMCW</b>			<b>OTH radar 50sps/20kHz</b>
REP	28065	19.56	30	07	B		A3E			Brazilian illegal users
REP	28100	07.44	07	07			F1B	50	200	Sea buoy
REP	28151	13.30	05	07		M	A1A			Beacon
REP	28175	19.57	30	07	RUS		A3E			Taxi illegal users
REP	28700	14.12	02	07	B		A3E			Brazilian pirates
REP	29500	18.38	14	07			F1B	82	130	Datawell Sea buoy

## RSGB - Great Britain – M0VRR (Vaughan)

## SRAL – Finland – OH2BLU (Pekka)

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	REMARKS
SRAL	7000,0	0830-1930	*	7		UiMUX	PSK2	120	2600	Days: 15. 16. 19.
SRAL	7007,0	1520-1930	1.	7		UiPTR	F1B/ N0N			
SRAL	7008,0	0630-0712/	*	7		UiPTR	F1B		250	Days: 4. 24. 30.
SRAL	7008,0	0800-1130	10. 19.	7		UiMUX	PSK2	120	2600	
SRAL	7013,0	0440-1930	15. 16.	7		UiMUX	PSK2	120	2600	
SRAL	7014,0	0250-1930	*	7		UiPTR	F1B/ N0N			Days: 11. 23. 24. 26.
SRAL	7015,0	1400-1800	10.	7		UiMUX	PSK2	120	2600	
SRAL	7016,0	0810-1625	6. 10.	7		UiMUX	PSK2	120	2600	
SRAL	7018,6	0255-1930	*	7		UiPTR	F1B/ N0N			Days: 28. 29. 30.
SRAL	7018,8	0615-1020	12.	7		UiPTR	F1B/ N0N		200	
SRAL	7022,0	0615-1700	5.	7		UiMUX	PSK2	120	2600	
SRAL	7025,0	1200-1410	6.	7		UiPTR	F1B			
SRAL	7032,0	h24	15.-31.	7	RUS	UiMUX	PSK2	120	2600	
SRAL	7038,7	h24	dly	7	RUS	D	A1A			Sevastopol
SRAL	7038,8	0330-1930	1. 2. 15.	7	RUS	P	A1A			Kaliningrad

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	REMARKS
SRAL	7038,9	h24	dly	7	RUS	S	A1A			Severomorsk
SRAL	7039,0	0730-1415	*	7	RUS	C	A1A			Moscow, days: 6. 13. 19. 20. 26. 27.
SRAL	7042,0	0830-1600	*	7		UiMUX	PSK2	120	2600	Days: 25. 26. 27. 28.
SRAL	7053,0	1030-1100	19.	7		UiMUX	PSK2	120	2600	
SRAL	7056,0	1530	23.	7		UiCW	A1A			MR 5F
SRAL	7057,4	1615-1920	11.	7		WTQO	F1B/A/N0N		400	
SRAL	7072,0	1105-1240/	23.	7		UiMUX	PSK2	120	2600	
SRAL	7076,0	0800-1200	20. 22.	7		UiPTR	F1B			
SRAL	7081,0	0415	6.	7	F	UiCW	A1A			MR 5L
SRAL	7081,0	1035-1105/	23.	7		UiMUX	PSK2	120	2600	
SRAL	7086,0	1450-1800	23.	7		UiPTR	F1B		250	
SRAL	7093,0	0730-0915	19.	7		UiMUX	PSK2	120	2600	
SRAL	7112,0	0400-0600	1.	7		UiMUX	PSK2	120	2600	
SRAL	7120,0	0330-0430	dly	7	SOM	R. Hargeisa	A3E			
SRAL	7120,0	1500-2100	1.- 28.	7	SOM	R. Hargeisa	A3E			
SRAL	7120,0	1500-1900	29.- 31.	7	SOM	R. Hargeisa	A3E			
SRAL	7125,0	1315-1415	28.	7		UiMUX	PSK2	120	2600	
SRAL	7140,5	0800-1400	30. 31.	7		UiMUX	PSK2	120	2600	
SRAL	7142,7	0255-0430	30.	7		UiCarr	N0N/ F1A			
SRAL	7152,0	1800-1830	8.	7		UiMUX	PSK2	120	2600	
SRAL	7152,5	0530	17.	7		UiPTR	F1B		250	
SRAL	7154,0	1315	12.	7		UiMUX	PSK2	120	2600	
SRAL	7155,0	0230-0800	18.	7		UiMUX	PSK2	120	2600	
SRAL	7160,0	0540-0740	16. 25.	7	RUS	RMW32	A1A			MR 5BL
SRAL	7162,0	0640	25.	7		UiPTR	F1B			
SRAL	7169,0	1600-1802/	15. 16.	7		UiPTR	F1B		200	
SRAL	7172,0	1950	2.	7		UiCW	A1A			5BL
SRAL	7179,0	0440	16.	7		OA9B	A1A			
SRAL	7181,62	0330-1940	25.- 27.	7		UiCarr	N0N			At 0515 F1A
SRAL	7187,5	1200-1915	6. 19.	7		UiPTR	F1B/ N0N		250	
SRAL	14008,0	0655-1305/	*	7		UiPTR	F1B/ N0N		250	Days: 7. 23. 29. 30.
SRAL	14017,0	1040	19.	7		UiMUX	PSK2	120	2600	
SRAL	14018,0	0915	4.	7	RUS	UiMUX	PSK2	120	2600	
SRAL	14026,0	0040-1930	*	7	RUS	UiMUX	PSK2	120	2600	Days: 7. 8. 14. 21. 24. 30.
SRAL	14108,0	0700-1105	10.- 16.	7	RUS	8ZMC etc	A1A			MR 5BL
SRAL	14116,0	0245-1930	*	7	RUS	UiPTR	F1B		250	Days: 10. 16. 17. 23. 24. 25.
SRAL	14118,0	0955	22.	7		UiMUX	PSK2	120	2600	
SRAL	14142,0	1310	9.	7		UiPTR	F1B		200	
SRAL	14169,0	1155-1300	28.	7		UiPTR	F1B		200	
SRAL	14171,0	0900-0940	16.	7	RUS	UiMUX	PSK2	120	2600	



Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	REMARKS
SRAL	14192,0	h24	dly	7	RUS	UiPTR	F1B		200	
SRAL	14221,0	1900-0500	dly	7	RUS/ KAZ	UiPTR	F1B		200	
SRAL	14234,0	1540	16.	7		UiCW	A1A			
SRAL	14235,0	-1426/	13.	7		UiMUX	PSK2	120	2600	
SRAL	14240,0	0625-1250	*	7	RUS	UiPTR	F1B		200/250	Days: 16. 20. 30.
SRAL	14274,0	1625-1930	16.	7	RUS	UiMUX	PSK2	120	2600	
SRAL	14292,0	0600-1115	*	7	RUS	CCWH	A1A			Days: 1. 6. 12. 14. 21. 27.
SRAL	14295,2	h24	dly	7	TJK	R Tojikiston	A3E			3f 4765,07 kHz, Yangiyul TX
SRAL	14 MHz	0300-1930	dly	7	RUS	29B6	FMCW			50Hz / 15 kHz
SRAL	14 MHz	0415-1930	dly	7	RUS	UiOTHR	FMCW			10Hz / 15 kHz, 30 sec burst, next burst up fq
SRAL	18 MHz	0600-1615	*	7	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz, days: 3. 7. 10. 11. 20. 21. 23. 28. 30.
SRAL	18080,0	0600-0800	*	7	TWN/ CHN	UiBC	A3E			Days: 11. 18. 21. 31.
SRAL	21 MHz	0600-1530	*	7	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz, days: 7. 11. 14. 16.
SRAL	21438,0	0730-1545	*	7	RUS	RCV	A1A			Days: 1.- 20. 27.
SRAL	28 MHz	0730-0915	19. 20.	7	IRN	UiOTHR	FMCW			307 & 870 Hz / 60 kHz
SRAL	28 MHz	0730-1340	*	7	RUS	Taxi disp.	F3E			Days: 6. 19. 20. 26. 27, 46 reports

### USKA – Switzerland – HB9CET (Peter)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
USKA	7000.0	1712	11	07			J3E-U			Italian often
USKA	7000.0	2014	16	07			J7D	12x120	2k7	PSK-4: CIS12 = AT3104D often
USKA	7000.0	2148	16	07			N0N			long lasting carrier
USKA	7000.0	2224	25	07			J3E-U			like SE-Asian language
USKA	7000.0 (VFO USB)	2237	25	07			QPSK	75		LINK 11 CLEW
USKA	7000.947	2151	27	07			A1			undefined dots
USKA	7001.5	2203	25	07			BPSM QPSM	8x62.5	2k0	Clover 2000 8 tones, spacing 250Hz
USKA	7009.0	1059	19	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	7012.0	1623	14	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	7013.8	2221	23	07			J3E-L			German "curious content"
USKA	7014.0	2217	23	07			F1B	75	200	
USKA	7015.5	1642	14	07				8x62.5	2k	Clover 2000; tone spacing 250Hz
USKA	7020.0	1631	18	07			J3E-L			Bahasa language; Village radio from Indonesia
USKA	7020.0	2302	18	07		820601	MFSK8	125	1750	MIL 188-141A
USKA	7024.0	2054	25	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	7027.500	2122	15	07		V	A1A			Beacon V often
USKA	7030.0	2249	30	07			J3E-L			unidentified language
USKA	7032.0	2039	29	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D daily
USKA	7036.0	2041	29	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D with carrier at 7034 kHz
USKA	7038.7	2244	03	07	UKR	D	A1A			Beacon D Sevastopol daily
USKA	7038.9	2243	03	07	RUS	S	A1A			Beacon S Murmansk daily
USKA	7039.3	0858	29	07	RUS	K	A1A			Beacon K Petropavlovsk (via JA)
USKA	7039.4	2126	07	07	RUS	M	A1A			Beacon M Magadan (via JA)
USKA	7042.0	1628	27	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	7050.0	2140	18	07			J3E-L			Music, chant and voice daily
USKA	7054.0	1104	19	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	7081.040	2306	05	07			A1A	24 wpm		Letters in groups of 5; msg headers with #/date/time

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
USKA	7086.0	2207	23	07			F1B	75	200	
USKA	7089.7	2317	22. 23.	07			G1D	2400	2k4	PSK-8: Link 11- SLEW
USKA	7089.8	2055	17	07			G1D	2400	2k4	PSK-8: Link 11- SLEW often
USKA	7120.0	1849	05	07	SOM		A3E			Radio Hargaysa daily
USKA	7121.0 LSB	2157	16	07			OFDM30 BPSK	60	~2k4	Burst system; spacing 75Hz preamble 4x PSK4 60Bd, spacing 600Hz; Pilotone at 450Hz
USKA	7126.8	2221	27	07			PSK-8		2k4	MIL 1800Hz singelton system strong selective fading
USKA	7131.00	2154	06	07		TAES	A1A			periodic intervals
USKA	7140.5	0824	31	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	7142.5	2112	29	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	7145.5	1405	30	07			J7D	12x120	2k7	CIS12 idling
USKA	7146.5	1456	29	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	7155.0	0754	17	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D often
USKA	7193.5	0816	23	07			PSK-8		2k4	MIL 1800Hz singelton system
USKA	7195.0	2122	06	07			A3E			BC; unid language sounds like arabian or african language
USKA	7197.0	2144	18	07		8011	MFSK8	125	1750	MIL 188-141A
USKA	7200.0	2317	19	07			A3E		±10k	BC, interfering 40m band daily
USKA	10110.03	1830 - 1930	11	07	TUR		A3E			BC: Intermodulation of 9460 and 9785 kHz (Details by DF5SX)
USKA	13995.0	1719	06	07			FMCW	50 sps	~ 14k	OTHR, splatters into 20m band (full occupied BW was ~30k)
USKA	14000.0	2210	30	07			J3E-U			unidentified language; assumed as Tagalog (Philippines) often
USKA	14000.5	0853	16	07			A1A			encoded traffic
USKA	14002.0	0624	29	07			F1B	100	100	
USKA	14008.0	0721	07	07			F1B	50	250	often
USKA	14081.0	0803	07	07			F1B	75	250	
USKA	14116.0	1419	24	07			F1B	75	250	
USKA	14127.0	2213	16	07			FMCW	10 sps	~10k	OTHR; burst system
USKA	14140.0	2305	04	07			FMCW	50 sps	~10k	OTHR; occupied BW >20k
USKA	14160.0	0926	02	07			F1B	75	250	daily
USKA	14171.0	0913	16	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	14179.0	2217	06	07			FMCW	66.66 sps	10k	OTHR burst system, ~10k wide
USKA	14184.0	2214	06	07			FMCW	66.66 sps	10k	OTHR burst system, ~10k wide
USKA	14192.0	1914	03	07			F1B	50	200	daily
USKA	14221.0	2223	01	07			F1B	50	200	daily
USKA	14223.0	2252	20	07			FMCW	50 sps	~10k	OTHR
USKA	14225.0	2225	06	07			FMCW	50 sps	~10k	OTHR often
USKA	14234.0	1202	30	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	14235.0	2210	13	07			FMCW	66.66 sps	10k	OTHR burst system BD approx 3.9s; BRI approx 41s
USKA	14240.0	0918	16	07			F1B	50	250	
USKA	14268.0	1853	05	07			FMCW	50 sps	~15k	OTHR, occ. BW >25k
USKA	14274.0	2016	16	07			J7D		2k7	CIS-12 system idling few short 120Bd parts BPSK
USKA	14289.0	2251	04	07			FMCW	50 sps	~15k	OTHR; occupied BW 30k
USKA	14295.1	1940	11	07	TJK		A3E			BC: 3 <sup>rd</sup> of Radio Tajik at 4765 kHz
USKA	14311.0	2246	01	07			FMCW	66.66 sps	10k	OTHR BD 3.8s BRI ~44s
USKA	14318.55	0901	28	07			F1B	600	600	ARQ system
USKA	14344.65	2115	27	07			PSK-8	2400	2k4	MIL 188-110A variant daily
USKA	18074.0	1639	11	07			FMCW	50 sps	20k	OTHR
USKA	18080.0	0716	24	07			A3E			Sound of Hope + Firedrake often
USKA	18089.0	1346	21	07			FMCW	50 sps	20k	OTHR
USKA	18150.0	0709	07	07			F1B	100	1k	harmonic of 9075 (500Hz shift)
USKA	21000.0	0945	29	07			J3E-U			some spanish. maybe Tagalog?
USKA	21150.0	1936	28	07			A3E			Intermodulation row bearing: approx 95-105°
USKA	21293.0	0745	28	07			FMCW	47 sps	10k	OTHR, burst system often BD ~ 5.5s BRI 35.5s
USKA	21310.0	0954	11	07			FMCW	25 sps	20k	OTHR
USKA	21318.55	0907	09	07			F1B	600	600	ARQ system often
USKA	21438.0	0954	02	07		RCV	A1A			letters and figures daily

## Veron 1 – Netherlands – PA2GRU (Dick)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SHIFT	DETAILS
VERON	7011,0	19.18	15	7	RUS	UiMUX	PSK		12 MPSK AT3004D
VERON	7022,0	17.46	16	7	RUS	UiMUX	PSK		12 MPSK AT3004D
VERON	7022,0	13.37	25	7		UiMUX	PSK		12 MPSK AT3004D
VERON	7031,0	16.44	26	7		UiMUX	PSK		12 MPSK AT3004D
VERON	7038,7	18.45	14	7	UKR	D	A1A		D-beacon
VERON	7038,7	19.21	12	7	RUS	D	A1A		Beacon Sevastopol
VERON	7038,9	20.00	18	7	RUS	S	A1A		S-beacon
VERON	7038,9	19.21	12	7	RUS	S	A1A		Beacon Severomorsk
VERON	7135,0	21.19	12	7					Frequency hopper
VERON	10108,0	14.30	3	7	CIS	UiPTR	F1B		Carrier/Revs/Ptr
VERON	10118,0	08.24	11	7	CIS	UiCW	F1A		QRJ? QLS2 (followed by: F1B Ptr)
VERON	10118,0	08.25	11	7		UiPTR	F1B		Ptr (also at 24/7 and 25/7)
VERON	14025,0	15.20	21	7		UiMUX	PSK		12 MPSK AT3004D
VERON	14082,0	10.30	5	7	RUS	UiMUX	PSK		12 MPSK AT3004D
VERON	14108,0	09.00	15	7	CIS	8ZMC	A1A		Calls to: GMHY JETR Y9HL B4N2
VERON	14108,0	09.02	15	7	CIS	8ZMC	A1A		Calls to: GZLK 1CFK LS2H
VERON	14116,0	09.42	17	7		UiPtr	F1B		Ptr
VERON	14116,0	11.41	24	7		UiPtr	F1B		Ptr
VERON	14116,0	08.16	16	7		UiPTR	F1B		Ptr (also at 24/7)
VERON	14127,0	10.07	23	7		OTHR	FMCW		radar
VERON	14140,0	10.44	5	7		UiRadar	FMCW	20k	OTHR; 50sps
VERON	14141,0	08.24	18	7		UiPTR	F1B		Ptr
VERON	14160,0	07.48	1	7	RUS	UiPtr	F1B	250	Ptr, loc. Moscow
VERON	14160,0	10.30	3	7	RUS	UiCAR	A1A		
VERON	14160,0	09.43	17	7	RUS	UiPtr	F1B		Ptr
VERON	14160,0	14.20	3	7		UiPTR	F1B		Ptr (also at 17/7)
VERON	14182,00	11.00	21	7		OTHR	FMCW		radar
VERON	14192,0	11.01	16	7	RUS	UiPtr	F1B		Revs
VERON	14192,0	vt	21	7	RUS	UiPtr	F1B		Ptr, also 22/7 and 23/7
VERON	14192,0	08.15	16	7		UiPTR	F1B		Revs
VERON	14192,0	11.26	27	7	RUS	UiPtr	F1B	200	Navy Kaliningrad
VERON	14221,0	23.04	12	7	KGZ		F1B	200	Printer Bishkek; idling
VERON	14240,0	11.00	16	7	RUS	UiPtr	F1B	250	Ptr, loc. Tver
VERON	14240,0	09.44	17	7	RUS	UiMUX	PSK		12 MPSK AT3004D, also on 18/7 09.41
VERON	14240,0	08.15	16	7		UiPTR	F1B		Fast Revs/Ptr
VERON	14268,0	18.06	5	7		UiRadar	FMCW	20k	OTHR; 50sps
VERON	14292,0	11.41	8	7	CIS	UiCW	A1A		5BL (ending 050 k)
VERON	14295,1	23.19	12	7	TJK	Radio Tajik	A3E		Asean music; weak modulation
VERON	14304,0	13.09	25	7		UiPtr	F1B		Ptr
VERON	14340,0	12.41	25	7		UiPtr	F1B		Ptr
VERON	18083,0	11.21	6	7		UiRadar	FMCW	20k	OTHR; 50sps
VERON	18155,0	17.10	6	7					Frequency hopper
VERON	21210,0	10.59	27	7		UiRadar	FMCW	20k	OTHR; 50sps
VERON	21268,0	09.58	6	7		UiRadar	FMCW	14k	OTHR; 50sps; bursts of 1,5sec; rep 6sec
VERON	21287,0	17.30	12	7					Frequency hopper
VERON	21438,0	08.32	3	7	RUS	RCV	A1A		RCV QSL 144 k
VERON	21438,0	08.41	7	7	RUS	RCV	A1A		RJT22 de RCV QSU1 SK
VERON	21438,0	08.42	7	7	RUS	RCV	A1A		RJT22 de RCV QYT4 QSX 6302 QWH 5971
VERON	21438,0	11.45	7	7	RUS	RCV	A1A		RKZ de RCV QTC 123 (prognoz pogody)
VERON	21438,0	11.54	7	7	RUS	RCV	A1A		RKZ de RCV QTC 861 (prognoz pogody)
VERON	21438,0	11.38	8	7	RUS	RCV	A1A		RKZ de RCV QTC 160 (prognoz pogody)
VERON	21445,0	10.01	13	7					Frequency hopper
VERON	24929,0	11.49	5	7					Frequency hopper

## Veron 2 – Netherlands – PA2GRU (Dick)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SHIFT	DETAILS
VERON	14108,0	07.55	23	7	RUS	NKSP	A1A		3C9V DE NKSP proc
VERON	14108,0	07.56	23	7	RUS	NKSP	A1A		XD9U DE NKSP proc
VERON	14108,0	07.57	23	7	RUS	NKSP	A1A		BP6P DE NKSP proc
VERON	14108,0	06.58	31	7	RUS	BIL9	A1A		B4HL DE BIL9 QTC 136 26 31 1046 136 BT
VERON	14108,0	07.08	31	7	RUS	NKSP	A1A		Q2GK DE NKSP QTC 726 20 31 1104 726
VERON	14192,0	08.50	8	7	RUS		F1B	50   200	revs, ptr
									RIP90 DE RCV QTC 269 65 7 1730 269 BT
VERON	21438,0	14.30	7	7	RUS	RCV	A1		NAWAREA (etc)
VERON	21438,0	14.30	7	7	RUS	RCV	A1A		BT 158 BT (5BL) 763 RPT AL K
VERON	21438,0	14.30	7	7	RUS	RCV	A1A		BT ZDT 546 BT (5BL) 230 K
VERON	21438,0	14.30	7	7	RUS	RCV	A1A		ZSA 002 BT (5BL)
VERON	21438,0	14.30	7	7	RUS	RCV	A1A		BT 002 BT (5BL) 123 AR

# The monitoring team of IARU Region 1

## credits:

**Wavecom Elektronik – Buelach – Switzerland**

**German PTT (BNetzA = Federal Network Agency)**

**Many thanks for your interest!**

**compiled and published by DK2OM**

**August 2014**