



International Amateur Radio Union

Region 1



# Monitoring System

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The monthly newsletter for Region 1

## November 2016

The 30 members of the IARUMS Region 1 Monitoring Team:



## Acknowledgements

ARAT: 3V8CB – Ahmed ++ ARI: DH7SA – Salvatore ++ ARSK: 5Z4NU - Ted ++ ASTRA: DL1BDF – Mustapha ++ DARC: DK2OM – Wolf ++ EARS: A61DJ – Obaid ++ ERASD: SU1SA – Sayed ++ HRS: 9A5DGZ – Gianluca ++ IARC: 4Z1AB – Amos ++ IRTS: EI3GYB - Michael KARS: 9K2RR – Faisal ++ MARL: 9H1M – Dominic ++ MRASZ: HA7PL - Laci ++ NARS: 5N9AYM – Yusuf ++ NRRL: LA4EU – Hans Arne ++ OEVS: OE3GSA – Gerd ++ PZK: SP9BRP – Jan ++ RAL: OD5RI – Riri ++ REF: F5MIU – Francis ++ REP: CT4AN – Jose ++ ROARS: A41MA - Younis ++ RSGB: M0VRR - Vaughan ++ SARL: ZS6NS - James ++ SRAL: OH2BLU - Pekka ++ SSA – Ullmar ++ UBA: ON8IM – Ivan +++ URE: EB1TR - Fabian ++ USKA: HB9CET - Peter ++ VERON: PA2GRU - Dick ++ ZRS: S56ZDB – Darko ++ G3VZV – Graham (satellite) ++ TG9ADV – Jorge (Co-ordinator Region 2) ++ YB3PET – Titon (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) ++ YO9RIJ – Petrica ++ PTTs: BAKOM (Swiss) ++ OFCOM (UK) ++ Dutch AT

Part 1: News and infos

Part 2: Detailed reports of the national co-ordinators

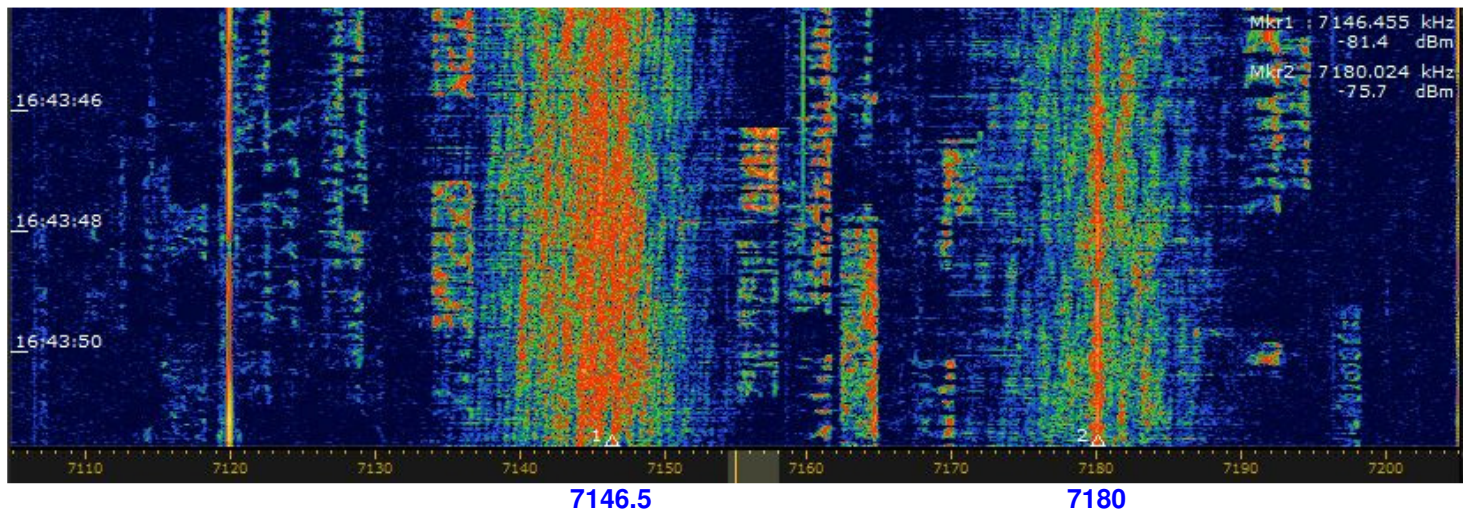
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# Part 1: News and Infos (screenshots DK2OM)

## 1. Radio Eritrea and Ethiopian QRM on the 7 MHz-band

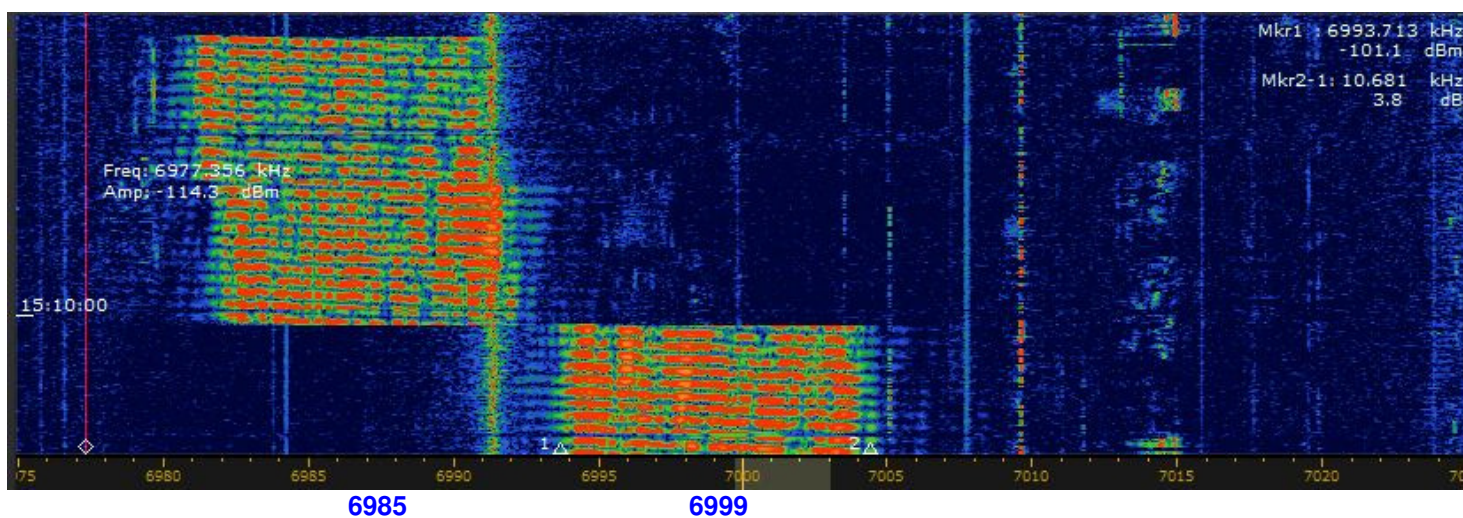
Radio Eritrea appeared on 7180 kHz together with white noise from Ethiopia. 7146.5, 7175 and 7185 kHz were still in use, too.

Screenshot (DK2OM): Radio Eritrea and QRM by Ethiopia on 7146.5 and 7180 kHz on Nov. 19<sup>th</sup> at 1643 UTC



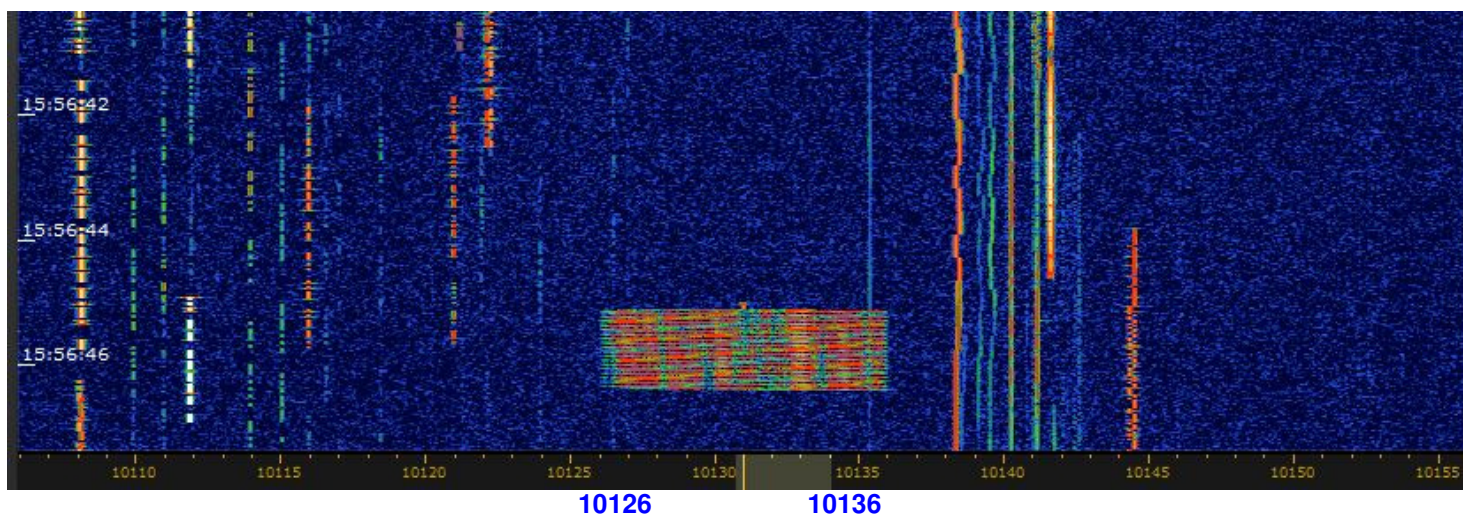
## 2. Chinese OTH radar on 6999.0 kHz

A jumping Chinese OTH radar covered the CW DX-edge of our exclusive 7 MHz band on Nov. 17<sup>th</sup> at about 1500 UTC and later (long lasting). Parameters: 67 sps and 10 kHz wide



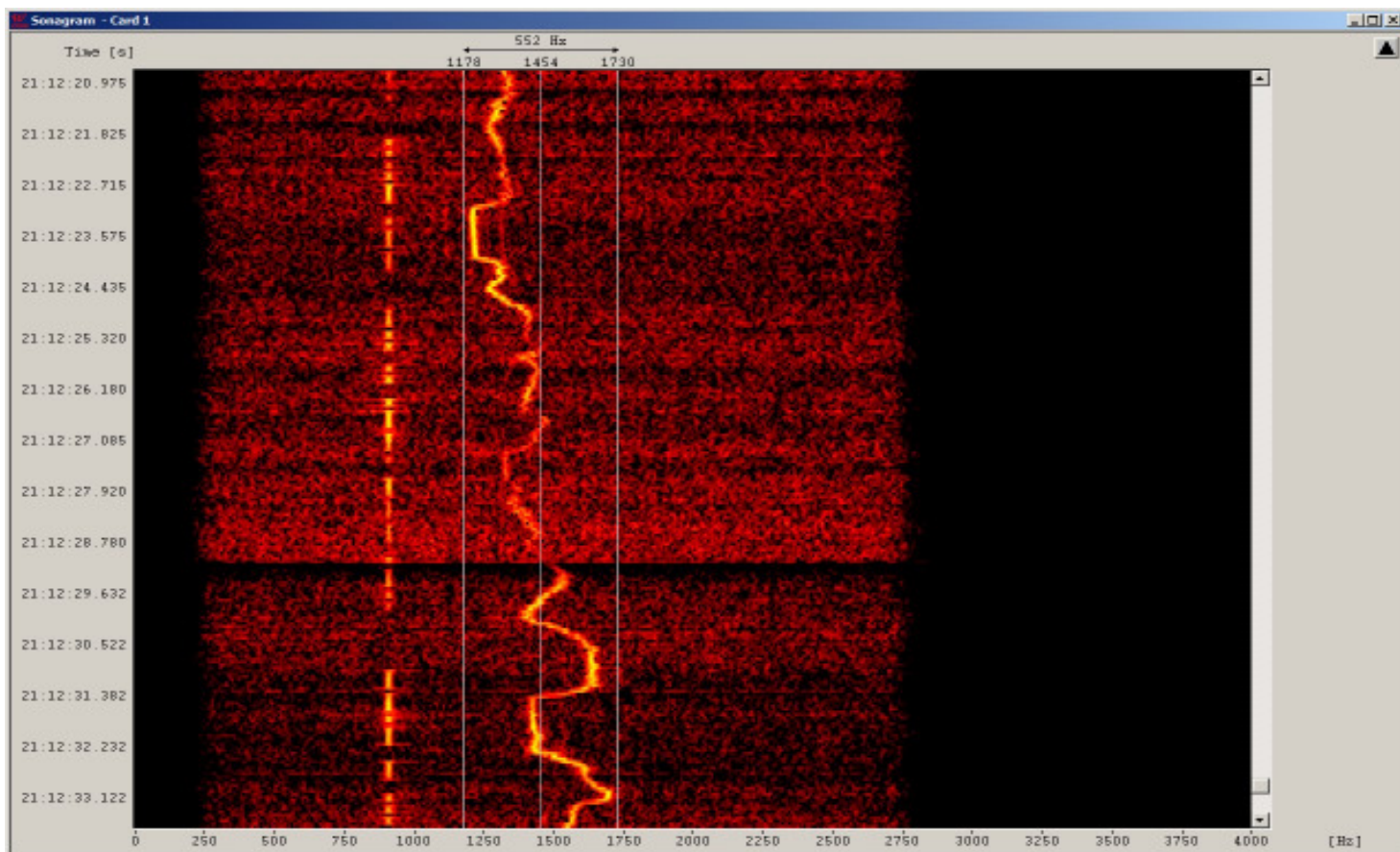
## 3. Australian OTH radar JORN (Jindalee Operational Radar Network) on 10131 kHz

We observed JORN often in the evenings covering 10 kHz, 50 sps, intro tone, jumping – Nov. 12<sup>th</sup> at 1556 UTC



#### 4. CIS pirates on 80 m

CIS pirates were active again during the evenings with their well known AM-signals (very unstable carriers and weak modulation). Screenshot: W-Code sonagram showing a carrier on 3549.5 kHz – Nov. 16<sup>th</sup> at 2112 UTC



unstable carrier

#### 5. Kyrgyzstan military on 7 MHz

Military from Kyrgyzstan was using 7050.0 kHz for ALE-transmissions (system MIL-188-141A).

#### 6. Radar Iran on 28960 kHz - no change

The Iranian radar was daily transmitting 28960 kHz on FMOP with 150 and 313 sps covering about 50 kHz and many spurious emissions.

#### 7. Spanish fishery on 3535.0 kHz

Spanish fishermen were found on 3535.0 kHz on USB and voice scrambler CRY 2001 – often in the evenings.

#### 8. No changes or bad news

3590.0 kHz – USB – Spanish fishery with voice scrambler “CRY 2001” often in the evenings

6998.0 kHz - Russian buzzer – daily and all day

7120.0 kHz – Radio Hargaysa Somalia

7146.5 kHz – Radio Eritrea with Ethiopian QRM

7175.0 kHz - Radio Eritrea with Ethiopian QRM

7180.0 kHz - Radio Eritrea with Ethiopian QRM

7185.0 kHz – Radio Eritrea with Ethiopian QRM

7200.0 kHz – Radio Myanmar

14295.0 kHz - Radio Tajik (harmonic from 4765 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://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/en/ITU-R/terrestrial/monitoring/Pages/Regular.aspx>

10. Many thanks to all coordinators and friends for the contributions during 2016. Season's greetings and best wishes for a healthy and successful 2017 to you and your families.

DK2OM – Wolf and HB9CET - Peter

## 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 \*\*\* **PRF** = pulse repetition frequency (radar) = **sps** \*\*\* **sps** = sweeps/sec (radar systems) \*\*\* **FMCW** = frequency modulated continuous wave (OTH radars)  
**FMP** = frequency modulation on pulse (OTH radars) \*\*\* **5BL** = cyrillic 5 lettergroups

### ARSK MONITORING OVERVIEW FOR NOVEMBER 2016

Radio Hargeisha remained on 7,120 kHz with broadcasts. As usual there were some local or Central African intruders observed on 7,000, 7,074 and 7,075 kHz.

E.H.M. Alleyne, 5Z4NU - ARSK National IARUMS Co-ordinator

#### ARSK – Kenya – 5Z4NU (Ted)

N.A.

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

DG0JBJ (Mario) observed 4 OTH radars on 40 m, 27 OTH radars on 20 m, 70 OTH radars on 17m, 47 OTH radar on 15 m and 7 OTH radar on 10 m in November 2016.

#### DARC 2 – Germany - DK2OM (Wolf)

FSK transmissions -> center frequency between mark and space

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

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

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

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	3,5 – 30 MHz	vt	dly	11	D		QRM			3.5 - 30 MHz disturbed by a neighbouring LED lamp – daily - various times
DK2OM	1812,0	2150	01	11	RUS		USB LSB			14 tones – hyperbolic radio navigation system – BRAS-3/RS-10 – Kaliningrad – no carrier - daily, all day
DK2OM	1852,0	vt	dly	11	I	IPP	USB			Palermo Radio, weather reports
DK2OM	1855,0	vt	dly	11	I	IQP	USB			San Benedetto Radio, weather reports
DK2OM	1876,0	vt	dly	11	I	IQN	USB			Lampedusa Radio, weather reports
DK2OM	1888,0	vt	dly	11	I	IPD	USB			Civitavecchia Radio, weather reports
DK2OM	1896,5	2020	06	11	D		PSK8	2400	2400	Stanag4285 – 600 bps long – German Navy – daily, all day
DK2OM	1925,0	1831	17	11	I	IPL	USB			Livorno Radio, weather reports
DK2OM	3500,0	vt	dly	11	TUR		FSK8	125	1750	ALE, “2016” “4017” – Turkish Red Crescent – just for info!
DK2OM	3500,0	1548	08	11	HOL		USB			Durch fishermen
DK2OM	3500,2	1816	13	11	CIS		A3E			CIS – pirates – unstable carrier
DK2OM	3500,6	2217	07	11	CIS		A3E			CIS – pirates – unstable carrier
DK2OM	3500,7	2200	21	11	CIS		A3E			CIS – pirates – unstable carrier
DK2OM	3501,0	2040	30	11	CIS		A3E			CIS – pirates – unstable carrier

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	3502,0	1715	21	11	RUS		PSK2	120	2600	AT3004D – submode idle - Krasnodar
DK2OM	3503,5	vt	dly	11	G	no ITU	FSK8	125	1750	ALE – “XSS” “XPU” “XJR” – British MIL Tascomm – vt, daily - legal!
DK2OM	3508,9	1940	02	11	RUS		OFDM	30	2750	OFDM 60 – 44.5 Hz tone spacing – pilot tone at 3290 Hz - Kaliningrad
DK2OM	3519,5	1802	15	11	RUS		F1B	50	200	St. Peterburg
DK2OM	3522,0	2035	02	11			PSK8A	240	2400	Stanag-4285 – 600 bps/long -
DK2OM	3522,0	1740	09	11	RUS		F1B	75	250	Kaliningrad
DK2OM	3524,0	2029	30	11	RUS		F1B	75	250	Nizhny Novgorod
DK2OM	3526,8	1733	20	11	F		PSK4	75	2300	LINK11-CLEW – west of Marseille
DK2OM	3531,0	---	--	11	RUS	REA4	N0N			unclean carrier - RUS airforce Moscow, ident: 1940 utc - daily
DK2OM	3532,0	2005	21	11	F		PSK4	75	5800	LINK11-CLEW on both sidebands (5800 Hz wide) – area of Brest – legal!
DK2OM	3532,0	1510	22	11			PSK2	120	2600	AT3004D – submode idle -
DK2OM	<b>3535,0</b>	<b>vt</b>	<b>dly</b>	<b>11</b>	<b>G</b>		<b>USB</b>			<b>fishermen – north-east coast of Scotland – every evening</b>
DK2OM	<b>3535,0</b>	<b>2100</b>	<b>dly</b>	<b>11</b>	<b>E</b>		<b>USB</b>			<b>Spanish fishery</b>
DK2OM	<b>3535,0</b>	<b>1804</b>	<b>22</b>	<b>11</b>	<b>E</b>		<b>USB</b>			<b>Spanish fishery with voice scrambler CRY 2001 and USB voice traffic</b>
DK2OM	<b>3538,6</b>	<b>1758</b>	<b>18</b>	<b>11</b>	<b>CIS</b>		<b>A3E</b>			<b>CIS – pirates – unstable carrier</b>
DK2OM	3541,0	1638	10	11	RUS		F1B	75	250	Moscow
DK2OM	3542,0	1707	18	11	RUS		PSK2A	120	2600	AT3004D – Kaliningrad
DK2OM	3548,0	2030	30	11	RUS		F1B	50	200	Kaliningrad
DK2OM	3548,0	1800	18	11	RUS		F1B	50	200	Vladimir
DK2OM	<b>3549,5</b>	<b>2112</b>	<b>16</b>	<b>11</b>	<b>CIS</b>		<b>A3E</b>			<b>CIS – pirates – unstable carrier</b>
DK2OM	<b>3550,0</b>	<b>vt</b>	<b>dly</b>	<b>11</b>	<b>F</b>		<b>A3E</b>			<b>French amateurs not respecting bandplans - daily</b>
DK2OM	3550,0	vt	vd	11	ALG	no ITU	FSK8	125	1750	ALE, “IU50” “IU52” “FN50”
DK2OM	3550,5	1817	07	11	ISR		PSK4 PSK8	75 2400	2400 2400	hybrid modem – ISR Navy – PSK4 parallel and PSK8 serial - legal operation!
DK2OM	3553,8	ady	dly	11	TUR		PSK8	2400	2400	Stanag4285 – 600 bps long - TUR MIL - Ankara – daily, all day - legal operation
DK2OM	3559,0	2032	30	11			PSK2	120	2600	AT3004D – submode idle -
DK2OM	<b>3560,0</b>	<b>1836</b>	<b>07</b>	<b>11</b>	<b>E</b>		<b>USB</b>			<b>Spanish fishery – very often</b>
DK2OM	3562,0	2048	28	11	RUS		PSK2A	12	2600	AT3004D – submode idle and traffic - Kaliningrad
DK2OM	3572,0	1814	17	11	BLR		PSK2	120	2600	AT3004D – submode idle
DK2OM	3576,6	ady	dly	11	I	IZ3DVW	A1A			3576.550 - uncoordinated beacon – disturbing JT65
DK2OM	<b>3580,0</b>	<b>1501</b>	<b>17</b>	<b>11</b>			<b>USB</b>			<b>male persons in Russian voice</b>
DK2OM	3582,0	2025	10	11	RUS		PSK2	120	2600	AT3004D – submode idle – disturbing digital modes – St. Peterburg
DK2OM	3585,0	1324	01	11	TWN	HLL	F1C		800	WX-fax Taiwan - 120 rpm, IOC 576, - daily, all day - legal!
DK2OM	3586,0	1800	dly	11	G		PSK2A	40	40	encrypted – every evening Great Britain – purpose unknown
DK2OM	3587,0	vt	vd	11	E	no ITU	FSK8	125	1750	ALE, “TVV” “TXX” - Spanish Guardia Civil
DK2OM	3590,0	vt	dly	11	PAK	no ITU	FSK8	125	1750	ALE, “KW” “KHAIBAR” – Pakistan navy
DK2OM	<b>3590,0</b>	<b>1827</b>	<b>22</b>	<b>11</b>	<b>E</b>		<b>USB</b>			<b>Spanish fishery</b>
DK2OM	3593,7	---	--	11	RUS	D	A1A			Cluster beacon – Sevastopol RUS Navy – “RCV”

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	3593,8	---	--	11	RUS	P	A1A			Cluster beacon – Kaliningrad RUS Navy – “RMP”
DK2OM	3593,9	---	--	11	RUS	S	A1A			Cluster beacon – Severomorsk RUS Navy – „RIT“
DK2OM	3594,0	---	--	11	RUS	C	A1A			Cluster beacon C - Moscow RUS Navy - “RIW”
DK2OM	3595,0	---	--	11	RUS	K	A1A			Cluster beacon - Petropavlovsk Kamchatskiy - RUS Navy - Pacific fleet - “RCC”
DK2OM	3596,0	vt	dly	11	D		FSK8	125	1750	ALE, “DK0ESD” – just for info!
DK2OM	3596,0	vt	dly	11	J		FSK8	125	1750	ALE, “JHIESB” – just for info!
DK2OM	3597,0	1920	24	11	CHN		PSK4A	60	2350	PRC 30 tone modem - USB mode - pilot tone 450 Hz - daily
DK2OM	3605,8	2028	05	11	I		PSK4A	75	2300	LINK11 – CLEW – Northern Italy
DK2OM	3617,0	vt	dly	11	HRV	9A5EX	FSK8	125	1750	ALE, “9A5EX” – HAM-ALE - just for info
DK2OM	3622,5	ady	dly	11	J	JMH	FIC		800	Tokyo Meteo – 120 rpm – IOC 576 – daily, all day - legal!!!
DK2OM	3632,8	1833	29	11			PSK8A	2400	2400	MIL-188-110A – 300 and 600 bps short
DK2OM	3640,0	vt	dly	11	G		FSK8	125	1750	ALE, “XSS” - British MIL Tascomm – just for info!
DK2OM	3642,0	ady	dly	11	CHN		A1A			loop – DKG6 de 3A7D Chinese military – daily, all day
DK2OM	3649,0	vt	vd	11	ALG	no ITU	FSK8	125	1750	ALE, “BI20” PA20”
DK2OM	3656,0	1738	26	11	CHN		PSK4A	60	2350	PRC 30 tone modem - LSB mode - pilot tone 450 Hz
DK2OM	3658,0	1830	27	11	CHN		FSK8	125	1750	ALE, “468” “942”
DK2OM	3718,0	vt	vd	11	FEa	7CJK	A1A			loop “7CJK”
DK2OM	3720,0	vt	dly	11	S		FSK8	125	1750	ALE, “YU” “YT” “YV” “DZ” – Swedish MIL
DK2OM	3727,0	1622	25	11	CHN		PSK4A	60	2350	PRC 30 tone modem - LSB mode - pilot tone 450 Hz
DK2OM	3751,5	vt	dly	11	POL	no ITU	FSK8	125	1750	ALE, “IZ3” “MI3”
DK2OM	3756,0	1450	06	11	RUS		A3E			RUS MIL – channel marker – Tuapse – East Black Sea – night QRG – daily – even audible in Japan
DK2OM	3757,0	ady	dly	11	FEa	RIS9	A1A			“M8JF de RIS9” - loop
DK2OM	3761,5	vt	vd	11	POL	no ITU	FSK8	125	1750	ALE, “NI9” “PL7” “AB2” – Polish MIL
DK2OM	3772,0	ady	dly	11	FEa	A4JC	A1A			“A4JC” - loop
DK2OM	3774,0	2039	19	11	RUS		PSK2A	120	2600	AT3004D – Far East Russia
DK2OM	3777,0	1627	25	11	FEa		A1A			“M8JF de RIS9” – loop – dly
DK2OM	3788,0	1922	21	11	RUS		PSK2	120	2600	AT3004D – submode idle – Far East Russia
DK2OM	3791,0	vt	vd	11	D	DK0ESD	FSK8	125	1750	ALE, “DK0ESD” – daily just for info!
DK2OM	3797,0	ady	dly	11	FEa		A1A			“M8JF de RIS9” – loop
DK2OM	6998,5	---	--	11	POL		PSK8	2400	2400	MIL-188-110A – until 7001.500 kHz – Polish MIL
DK2OM	6999,0	1440	17	11	CHN		FMCW		10k	Chinese OTH radar – jumping 6986 kHz - 67 sps - 3.8 sec bursts
DK2OM	7000,0	1520	10	11	INS		USB LSB			Indonesian pirates – daily – all day - audible in Europe in the evenings
DK2OM	7000,0	ady	dly	11	RUS		H3E		3.4 k	<b>buzzer – 1 sec bursts - 118 Hz AF rough sinus – carrier on 6998.0 + upper sideband - with splatters 10 kHz wide – daily, all day - Moscow</b>
DK2OM	7001,5	---	--	11	POL		PSK8	2400	2400	RF QRG 6998.5 kHz – 7000.3 kHz center - MIL-188-110A –

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										600 / 300 bps short – Polish MIL
DK2OM	7005,0	1525	10	11	INS		USB LSB			Indonesian pirates
DK2OM	7010,0	vt	dly	11	INS		USB LSB			Indonesian and Philippine pirates
DK2OM	7010,0	2127	11	11	UKR		PSK2A	120	2600	AT3004D - Vinnytsia
DK2OM	7010,0	1918	21	11	CHN		FMOP		35k	Chinese OTH radar - 43 sps – 7010 – 7045 kHz
DK2OM	7011,0	1735	28	11	RUS		F1B	75	500	Moscow
DK2OM	7014,0	0811	29	11	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	7015,0	1525	10	11	INS		USB LSB			Indonesian pirates
DK2OM	7015,5	0405	22	11	AFG					Clover 2000
DK2OM	7018,0	---	--	11	RUS	REA4	F1B	100	800	mostly idling – Russian airforce Moscow – ident at full hour + 41 min. on F1A
DK2OM	7020,0	1526	10	11	INS		USB LSB			Indonesian pirates
DK2OM	7020,0	---	--	11	ALB		FSK8	125	1750	ALE, “CS004A” “RS008D” “RS0” – Albanian coast - daily
DK2OM	7025,0	vt	dly	11	INS		USB LSB			Indonesian pirates
DK2OM	7027,5	---	--	11	UKR	„V“	A1A			beacon “V” – Kyiv
DK2OM	7030,0	1527	10	11	INS		LSB			Indonesian pirates
DK2OM	7030,0	1925	11	11	SYR		PSK2A	120	2600	AT3004D – Russian ship - Tartus
DK2OM	7035,0	1524	10	11	INS		USB LSB			Indonesian pirates
DK2OM	7036,0	1914	20	11	RUS		F1B	50	250	Moscow
DK2OM	7039,0	---	--	11	RUS	C	A1A			Cluster beacon C - Moscow RUS Navy - “RIW”
DK2OM	7039,1	---	--	11		A	A1A			beacon “A” - loop
DK2OM	7039,2	1014	24	11	RUS	F	A1A			Cluster beacon F - Vladivostok RUS Navy - “RJS”
DK2OM	7039,3	---	--	11	RUS	K	A1A			Cluster beacon K Petropavlovsk Kamchatskiy - RUS Navy - Pacific fleet - “RCC” - daily
DK2OM	7039,4	1005	01	11	RUS	M	A1A			Cluster beacon M – Magadan RUS Navy – „RTS“
DK2OM	7040,0	1527	10	11	INS		USB LSB			Indonesian pirates
DK2OM	7040,0	vt	dly	11	F	F6BAZ	FSK8	125	1750	ALE, “F6BAZ” – just for info
DK2OM	7040,0	ady	dly	11	I		A1A			<b>IZ3DVW – uncoordinated and unwanted beacon</b>
DK2OM	7040,5	vt	dly	11	HRV		FSK8	125	1750	ALE, “9A5EX” “9A0ALE” – just for info
DK2OM	7047,37	vt	vd	11	D		FSK8	125	1750	ALE, “DL0NOT” – just for info!
DK2OM	7049,5	vt	vd	11	HRV G F	9A0ALE M1DFO F6BAZ	FSK8	125	1750	Amateur ALE, just for info! daily – various times
DK2OM	7050,0	vt	dly	11	RUS UKR		LSB			<b>music transmissions – private war ?</b>
DK2OM	7050,0	1935	22	11	KGZ		FSK8	125	1750	ALE, “X” “810” “820615” “810698” – Kyrgyzstan MIL
DK2OM	7055,0	0855	14	11	INS		LSB			Indonesian pirates
DK2OM	7055,5	vt	vd	11	MEa	no ITU	FSK8	125	1750	ALE, “111” “132” “133” - Caucasus
DK2OM	7056,0	0535	22	11	RUS		USB			RUS MIL-net – Rostov na Donu
DK2OM	7060,0	1927	25	11	FEa		FMOP		32k	Codar like ocean surface radar 2.6 sps – 7060 – 7092 kHz
DK2OM	7065,0	1924	10	11	FEa		FMOP		32	Codar like ocean surface radar 2.6 sps – 7065 – 7097 kHz
DK2OM	7070,0	vt	vd	11	GEO	no ITU	FSK8	125	1750	ALE, “MV” “244” “686” “334”

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										“204” “571” – daily active
DK2OM	7081,0	1545	11	11	ISR		PSK4 PSK8	75 2400	2400 2400	hybrid modem – ISR Navy – PSK4 parallel and PSK8 serial
DK2OM	7084,0	1008	24	11	CHN		FMOP		34k	Chinese OTH radar - 43 sps – 7084 – 7118 kHz
DK2OM	7088,8	---	--	11	S	SL0FRO	A1A			7088.830 kHz - cw-trainee, Sweden - SL0FRO - just for info!
DK2OM	7089,8	---	--	11	TUR CYP		PSK8	2400	2400	Link 11 - SLEW – aircraft – west of Cyprus
DK2OM	7091,5	ady	dly	11	KAZ	„V“	A1A			7091.543 kHz - loop with spurious – ident “V” – Almaty - Kazakhstan
DK2OM	7099,5	vt	dly	11	HRV	9A0ZG	FSK8	125	1750	ALE, “9A0ZG” “9A5EX1P” “9A0OS” – daily - just for info!
DK2OM	7102,0	vt	dly	11	TWN		FSK8	125	1750	ALE, “BV4AS” – just for info!
DK2OM	7102,0	vt	dly	11	HRV SUI D	9A0MIL	FSK8	125	1750	ALE, “9A0MIL” “9A2KS” “HB9MHB” “9A0ZG” “9A4OS” “DK0ESD” – just for info!
DK2OM	7108,0	2045	03	11	CHN		FMCW		10k	Chinese OTH radar – 67 sps – 7.7 sec bursts
DK2OM	7110,0	vt	dly	11	HRV	9A0ALE	FSK8	125	1750	ALE, “9A0ALE” – just for info
DK2OM	7111,0 LSB	1415	21	11	CHN		PSK4A	60	2350	PRC 30 tone modem - LSB mode - pilot tone 450 Hz – daily
DK2OM	7116,0	0932	11	11	RUS		PSK4B	120	2600	AT3104D - Kaliningrad
DK2OM	7117,0	---	--	11	RUS	REA4	F1B	100	1000	mostly idling – Russian airforce Moscow – ident on CW at 1640 utc on the mark-QRG
DK2OM	<b>7120,0</b>	<b>1440</b>	<b>dly</b>	<b>11</b>	<b>SOM</b>		<b>A3E</b>		<b>9k</b>	<b>Radio Hargaysa – Somalia – daily – even audible in Australia and Japan</b>
DK2OM	7129,8	0042	24	11	GRC		PSK8A	2400	2400	LINK11-SLEW + CLEW – Aegean region
DK2OM	7130,0	0957	21	11	CHN		FMOP		38k	Chinese OTH radar - 43 sps – 7130 – 7168 kHz
DK2OM	7135,0	---	--	11			FSK8	125	1750	ALE, “UDR” “YDM”
DK2OM	7135,0	1000	01	11	CHN		FMOP		30k	Chinese OTH radar – 7135 – 7165 kHz - 43 sps
DK2OM	7137,0	vt	dly	11	TWN		FSK8 LSB	125	1750	ALE, “CBIUN” “CBWPC” “CQYTX” “CAPLJ” “CTFOJ” “CEGTO” “CSNYI” “CEIPN” “CRXWT”- Taiwanese navy – daily
DK2OM	7144,0	1153	28	11	CHN		FMOP		32k	Chinese OTH radar – 7144 – 7176 kHz - 43 sps
DK2OM	<b>7146,5</b>	<b>1609</b>	<b>06</b>	<b>11</b>	<b>ERI</b>		<b>A3E/BC</b>		<b>9k</b>	<b>carrier on 7146.557 kHz - Radio Eritrea + ETH QRM - daily</b>
DK2OM	7150,0	0954	21	11	FEa		FMOP		32k	Codar like ocean surface radar 2.6 sps – 7150 – 7182 kHz
DK2OM	<b>7163,0</b>	<b>---</b>	<b>--</b>	<b>11</b>	<b>UKR</b>		<b>A3E</b>			<b>encrypted MSGs - SZRU in Rivne</b>
DK2OM	<b>7175,0</b>	<b>1728</b>	<b>08</b>	<b>11</b>	<b>ERI ETH</b>		<b>A3E</b>		<b>9k</b>	<b>carrier on 7174.989 kHz Radio Eritrea disturbed by Radio Ethiopia with white noise emissions</b>
DK2OM	<b>7180,0</b>	<b>1539</b>	<b>18</b>	<b>11</b>	<b>ERI ETH</b>		<b>A3E</b>		<b>9k</b>	<b>carrier on 7179,989 kHz - Radio Eritrea + ETH QRM</b>
DK2OM	7183,0	vt	dly	11	SUI		FSK8	125	1750	ALE, “HB9MHB” – just for info!
DK2OM	<b>7185,0</b>	<b>1609</b>	<b>06</b>	<b>11</b>	<b>ERI ETH</b>		<b>A3E</b>		<b>9k</b>	<b>carrier on 7184.989 kHz Radio Eritrea disturbed by Radio Ethiopia with white noise emissions</b>
DK2OM	7185,5	vt	dly	11	D		FSK8	125	1750	ALE, “9A5EX” “DK0ESD”



DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
					HRV					just for info - daily
DK2OM	7193,0	0845	09	11	RUS	RDL	F1B	50	200	CIS 36-50 – Kaliningrad – RUS navy
DK2OM	7197,0	vt	dly	11	TUR	no ITU	FSK8	125	1750	ALE, “206102” “318013” “328013” “355013” “365013” “329018” “308013” “331730” “355013” “337013” “381013” “311013” Turkish organisations and Turkish Civil Defense - source: DL8AAM – daily, various times
DK2OM	<b>7200,0</b>	<b>1300</b>	<b>dly</b>	<b>11</b>	<b>MMR</b>		<b>A3E/BC</b>		<b>9k</b>	<b>Myanma Radio – 0900 – 1400 UTC - daily</b>
DK2OM	10100,8	ady	dly	11	D		F1B	50	450	Baudot - German Weatherservice – legal!
DK2OM	10101,0	2053	11	11	AF		USB			ship – Gulf of Guinea – unknown language
DK2OM	10110,0	vt	dly	11	SNG	no ITU	FSK8	125	1750	ALE, “CN6” “68” – Singapore Navy - Changi Naval Base
DK2OM	10113,0	vt	vd	11	TUN	no ITU	FSK8	125	1750	ALE, “TUD” “STAT5” “STAT154”
DK2OM	10114,0	vt	dly	11	ALG	no ITU	FSK8	125	1750	ALE, “BSF” “ZEN” “CM2OR2”
DK2OM	10114,8	0750	dly	11	RUS		F1B	100	1000	CIS14 – Moscow - daily
DK2OM	10115,0	vt	dly	11	MRC	no ITU	FSK8	125	1750	ALE, “100” “114” “201” “XXZ” – Western Sahara
DK2OM	10116,5	---	--	11	AFS		F7D	54.3	2120	MHF50 – 33 tones - South African navy
DK2OM	10117,5	1000	19	11	I		PSK8A	2400	2400	Stanag-4285 – 600 bps long – empty, no info - Rome
DK2OM	10120,0	vt	dly	11	ALG	no ITU	FSK8	125	1750	ALE, “CM6” “01012016”
DK2OM	10121,0	0933	01	11	RUS		F1B	75	250	Moscow - daily
DK2OM	10123,0	vt	dly	11	ALG	no ITU	FSK8	125	1750	ALE, “CM3” “COF” “BSF” “CM2” “ESA” – Algerian Airforce
DK2OM	10125,0	1820	13	11	MRC		USB			Moroccan fishery
DK2OM	10129,0	vt	dly	11	ALG	no ITU	FSK8	125	1750	ALE, “CM1” “CTF” “772”
DK2OM	10130,0	1540	12	11	AUS		FMCW		10k	Australian OTH radar JORN – intro tones - 50 sps – 1.3 sec bursts
DK2OM	10132,0	vt	vd	11	F		USB			French amateurs not respecting bandplans
DK2OM	10133,0	1710	12	11	NIG		USB			unid voice traffic
DK2OM	10136,0	vt	dly	11	ALG	no ITU	FSK8	125	1750	ALE, “CM3” “BLD” “CNC” “TF2”
DK2OM	10140,0	1454	28	11	CYP		FMCW		20k	OTH radar Cyprus – 50 sps
DK2OM	10143,0	1832	11	11	AUS		FMCW		10k	Australian OTH radar JORN – 7 sps – intro tones – jumping 10110 kHz – 18 sec bursts
DK2OM	<b>10144,0</b>	<b>ady</b>	<b>dly</b>	<b>10</b>	<b>D</b>	<b>DK0WCY</b>	<b>A1A</b>			<b>10144.000 kHz - DK0WCY – German aurora beacon – just for info!</b>
DK2OM	10145,5	vt	dly	11	SUI	HB9MHB	FSK8	125	1750	ALE, “HBMHB” - just for info - daily
DK2OM	10145,5	vt	vd	11	TWN AUS	BV4AS	FSK8	125	1750	ALE, “BV4AS” “VK4SAA” – just for info!
DK2OM	10147,0	2017	21	11	AUS		FMCW		10k	Australian OTH radar JORN – intro tones - 19 sps – 2.8 sec bursts – 10142 – 10152 kHz
DK2OM	10150,0	1556	08	11	CYP		FMCW		20k	OTH radar Cyprus – 50 sps
DK2OM	13938,0	1252	01	11	RUS		FMCW		13k	OTH radar Contayner - 50 sps Gorodezh with spurious emissions +/- 1 MHz
DK2OM	14000,0	vt	dly	11	FEa		USB			pirates from Java Sea - daily
DK2OM	<b>14000,0</b>	<b>0956</b>	<b>13</b>	<b>11</b>	<b>I</b>		<b>USB</b>			<b>Italian BC transmission replay</b>
DK2OM	14005,0	1030	25	11	RUS		FMCW		13k	OTH radar Contayner - 50 sps –

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										Gorodezh
DK2OM	14030,0	vt	vd	11	CHN		FSK8	125	1750	ALE, "Y" "473" "853"
DK2OM	14055,0	0844	30	11	CHN		FMOP		10k	Chinese OTH radar – 67 sps – 3.8 sec bursts
DK2OM	14090,0	1123	25	11	RUS		FMCW		13k	OTH burst radar Contayner - 10 sps – Gorodezh
DK2OM	14091,0	0840	09	11	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Gorodezh
DK2OM	14100,0	vt	dly	11	ALG	no ITU	FSK8	125	1750	ALE, "6206" "6204" "6212" "6202" "6203" "6207" "6217" "MTL" "IJ" – Mauritanian border – daily, all day
DK2OM	14100,0	---	--	11	F		FMCW		20k	French OTH burst radar, 6 sps, similar Codar sounding, South France
DK2OM	14105,0	1335	08	11	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Gorodezh – long lasting
DK2OM	14108,0	---	--	11	RUS		A1A			"BXCS de 9KHQ" - RUS MIL area of Moscow – many spurious emissions
DK2OM	14109,0	vt	vd	11	TWN	HAM	FSK8	125	1750	ALE, "BV4AS" – daily - just for info!
DK2OM	14109,0	1439	23	11	INS	HAM	FSK8	120	1750	ALE, "YD00XH" – just for info!
DK2OM	14109,0	vt	dly	11	S HRV D		FSK8	125	1750	ALE, "SM3FXL" "9A4OS" "9A3BRV" "DK0ESD" - just for info!
DK2OM	14109,0	vt	vd	11	G		FSK8	125	1750	ALE, "M1DFO" – just for info
DK2OM	14113,0	1205	17	11	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Gorodezh
DK2OM	14130,0	1520	15	11	RUS		FMCW		13k	OTH burst radar Contayner - 10 sps – Gorodezh
DK2OM	14132,0	0834	19	11	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Gorodezh
DK2OM	14134,0	0838	30	11	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Gorodezh
DK2OM	14135,0	0929	01	11	RUS		FMCW		13k	OTH burst radar Contayner - 10 sps – Gorodezh
DK2OM	14138,0	1210	21	11	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Gorodezh
DK2OM	14140,0	0826	07	11	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Gorodezh
DK2OM	14160,0	vt	dly	11	MRC		FSK8	125	1750	ALE, "9204" "9228" "9236"
DK2OM	14185,0	1345	04	11	RUS		FMCW		13k	OTH burst radar Contayner - 10 sps - Gorodezh
DK2OM	14192,0	vt	dly	11	RUS		F1B	50 75 50 100 100	500 500 200 500 200	RUS navy Kaliningrad - daily
DK2OM	14201,8	vt	vd	11	CHN		PSK2	75	2200	PRC 16 tone modem – USB mode – pilot tone 450 Hz - RF 14200.0 kHz - China – Shanghai - daily
DK2OM	14205,0	vt	dly	11	CHN	no ITU	FSK8	125	1750	ALE, "505" "822"
DK2OM	14210,0	0951	27	11	CHN		FMOP		10k	Chinese OTH radar – 67 sps – 3.8 sec bursts – jumping 14315
DK2OM	14221,0	vt	vd	11	KGZ		F1B	50	200	CIS-50-50 - Bishkek – daily
DK2OM	14260,0	vt	dly	11	SRB	YU1BI	FSK8	125	1750	ALE, "YU1BI" – just for info!
DK2OM	14272,0	---	--	11	RUS	RCV	A1A			RUS Navy Sevastopol
DK2OM	14280,0	1007	16	11	UKR		A3E			female voice with encrypted msgs – figures – "SZRU" = Foreign Intelligence Service of Ukraine in Rivne – every Wednesday at 1005 utc
DK2OM	14295,0	vt	dly	11	SRB	YU1BI	FSK8	125	1750	ALE, "YU1BI" – just for info!
DK2OM	14295,0	1320	09	11	TJK		A3E		9k	3 <sup>rd</sup> from Radio Tajik on 4765

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										<b>kHz – daily, all day</b>
DK2OM	14298,0	0830	18	11	TJK		unid		4000	unid signal - Dushanbe
DK2OM	14300,0	0948	21	11			FMCW		25k	50 sps
DK2OM	14308,0	0906	01	11	RUS		F1B	75 50	500	Moscow – also 23.11.2016 at 0824 utc
DK2OM	14315,0	0957	27	11	CHN		FMOP		10k	Chinese OTH radar – 67 sps – 3.8 sec bursts
DK2OM	14320,0	1023	07	11	RUS		FMCW		13k	OTH burst radar Contayner - 10 sps - Gorodezh
DK2OM	14330,0	vt	dly	11	TWN		FSK8	125	1750	ALE, “BV4”
DK2OM	14334,0	vt	vd	11	CHN	no ITU	FSK8	125	1750	ALE, “249” “255” “763”
DK2OM	14340,0	---	--	11	RUS		PSK2A	120	2600	AT3004D – Vladivostok with spurious emissions +/- 35 kHz and +/- 70 kHz - daily
DK2OM	14340,0	vt	vd	11	CHN		FSK8	125	1750	ALE, “106” “591”
DK2OM	14346,0	vt	dly	11	THA	HS0ZEA	A1A			HS0ZEA beacon – 14345.950 kHz - every 5 minutes – daily - just for info!
DK2OM	14346,0	vt	dly	11	POR		FSK8	125	1750	ALE, “CT2IXQ” just for info – various times, daily
DK2OM	<b>14347,0</b>	---	--	<b>11</b>	<b>UKR</b>		<b>A3E</b>			<b>female voice with encrypted msgs – figures – “SZRU” = Foreign Intelligence Service of Ukraine in Rivne</b>
DK2OM	14351,7	---	--	<b>11</b>	<b>E</b>		<b>OFDM PSK4A</b>	<b>30</b>	<b>2700</b>	<b>OFDM 73 + intro tone – HFD+VL - experimental transmissions – Las Palmas – just for info!</b>
DK2OM	<b>18080,0</b>	<b>0600</b>	<b>dly</b>	<b>11</b>	<b>TWN</b>		<b>A3E/BC</b>			<b>Sound of Hope – Taiwan and Chinese BC jammer – daily at 06 utc and later</b>
DK2OM	18090,0	1106	04	11	CYP		FMCW		20k	OTH radar Cyprus – 50 sps
DK2OM	18095,0	1050	03	11	CYP		FMCW		20k	OTH radar Cyprus – 25 sps
DK2OM	18100,0	1415	28	11	MRC	no ITU	FSK8	125	1750	ALE, “A2” “A4” “A5” “A7” “S6” – “C3” “R3” “G401” “CD” “09” “G2” “LG6” “G301” “ELJADIDNET4” - daily, various times
DK2OM	18106,0	vt	vd	11	POR	CT2GOY	FSK8	125	1750	ALE, “CT2GOY” – just for info!
DK2OM	18107,0	vd	vt	11	RUS	RDL	F1B	50	200	CIS-50-200 - Moscow – idle and traffic – daily - Russian navy – shared band!
DK2OM	18117,5	vt	vd	11	POR	CT2IXQ	FSK8	125	1750	ALE, “CT2IXQ” – just for info
DK2OM	18140,0	vt	dly	11	SRB	YU1BI	FSK8	125	2600	ALE, “YU1BI” – just for info!
DK2OM	18150,0	---	--	11	RUS		F1B	100	1000	harmonic from 9075 (100 Bd, 500 Hz) - Kaliningrad
DK2OM	21000,0	1100	17	11	INS		USB			Indonesian pirates - daily
DK2OM	<b>21000,0</b>	---	--	<b>11</b>	<b>B</b>		<b>USB</b>			<b>Brazilian pirates – Rio de Janeiro with North Brazil – very often</b>
DK2OM	<b>21000,0</b>	---	--	<b>11</b>	<b>SDN</b>		<b>USB</b>			<b>MFA Sudan – Khartoum with emba Yemen – voice traffic</b>
DK2OM	21000,0	---	--	11	F		FMCW			French OTH burst radar – every 15 minutes – South France
DK2OM	21002,2	---	--	<b>11</b>	<b>SDN</b>	<b>!0000 !9999 !8888</b>	<b>F1B</b>	<b>100</b>	<b>170</b>	<b>21002.15 kHz - Pactor 1 encrypted – MFA Sudan – Khartoum with emba Yemen</b>
DK2OM	21096,0	vt	dly	11	INS	YD00XH	FSK8	125	1750	ALE, “YD00XH3” – daily, various times - just for info!
DK2OM	21096,0	vt	vd	11	G		FSK8	125	1750	ALE, “M1DFO” – just for info!
DK2OM	21131,0	vt	vd	11	CHN	no ITU	FSK8	125	1750	ALE, “A92” “L02” – Chinese diplo
DK2OM	21145,0	0909	30	11	MRC	no ITU	FSK8	125	1750	ALE, “A” “B301” “C3”, “IR4” “H4” “IR6” “T4” “E4” “A2” “CD” “K3” “KB2” “J5” “GR2” “GS4” “R3” “R301”

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										“R33” “R8” “R5” “Y1” “S51” “S3” “S512” “S552” “G2” “G501” - various times, daily
DK2OM	21145,8	ady	dly	11	I	IZ3DVW	A1A			IZ3DVW beacon – 21145,790 kHz – daily, all day - not coordinated with IARU
DK2OM	21270,0	1002	27	11	CYP		FMCW		20k	OTH radar Cyprus - 25 sps
DK2OM	21438,0	0858	05	11	RUS	RCV	A1A			RIP90, RCV, RGX94 - RUS Navy Sevastopol - daily
DK2OM	21446,0	ady	dly	11	THA	HS0ZEA	A1A			HS0ZEA beacon – every 5 minutes - just for info!
DK2OM	25000,0	ady	dly	11	FIN		A3E			time signal Helsinki – just for info – carrier on 25000 – dots on 25001 and 24999 – daily, all day – just for info!
DK2OM	28000,0	vt	vd	11	B		A3E			<b>Brazilian CBers – 28000 – 28325 – daily, all day - no change</b>
DK2OM	28000,0	vt	dly	11	CIS		F3E			<b>28000 – 29700 numerous CIS taxi nets – no change</b>
DK2OM	28010,1	---	--	11	POR		F1B	51	300	F1B bursts –west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28025,0	---	--	11	POR		F1B	51	300	F1B bursts – 28025.050 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28030,0	---	--	11	POR		F1B	51	340	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28045,0	---	--	11	POR		F1B	51	280	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28050,0	---	--	11	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28051,5	---	--	11	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28060,0	---	--	11	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28065,1	1302	13	11	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28065,8	---	--	11	GAB		A3E		980	carrier and dots in USB and LSB, bursts every 60 sec – carrier – Gabon – daily and all day
DK2OM	28075,0	---	--	11	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28085,0	---	--	11	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28090,1	---	--	11	POR		F1B	51	320	F1B bursts - 28100.780 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28100,2	1340	13	11	POR		F1B	51	300	F1B bursts - 28100.780 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28102,1	---	--	11	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28125,0	---	--	11	POR		F1B	51	320	F1B bursts - west of Lisbon –

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28146,0	vt	vd	11	ARG B		FSK8	125	1750	ALE, "LU8EX" "PY2TI" "DL1" – just for info!
DK2OM	28175,0	1102	11	11	RUS		F3E			RUS taxi
DK2OM	28200,0	---	--	11	POR		F1B	51	330	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28224,4	---	--	11	GAB		A3E			carrier and dots +/- 770 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28249,6	---	--	11	GAB		A3E		1380	carrier and dots +/- 745 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28250,5	---	--	11	GAB		A3E		1000	carrier and dots +/- 500 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28255,0	0957	11	11	RUS		F3E			RUS taxi
DK2OM	28275,1	---	--	11	AF		F1B	51	320	F1B bursts -Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28305,0	0959	11	11	RUS		F3E			RUS taxi
DK2OM	28312,5	vt	vd	11	POR	CT2IXQ	FSK8	125	1750	ALE. "CT2IXQ" – just for info
DK2OM	28315,0	---	--	11	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28345,1	---	--	11	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28435,0	----	--	11	E		F1B	81.9	140	<b>Datawell-buoy "Waverider" – 28435.040 kHz – Costa del Sol – Malaga</b>
DK2OM	28459,8	----	--	11	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28459,9	---	--	11	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28499,8	---	--	11	MEa		F1B	81.9	140	<b>Datawell-buoy "Waverider" – 28499.875 kHz – Persian Gulf</b>
DK2OM	28701,1	---	--	11	GAB		A3E		1056	carrier and dots +/- 528 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28745,3	---	--	11	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28751,2	---	--	11	GAB		A3E		1080	carrier and dots +/- 540 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28751,3	---	--	11	GBN		A3E		1040	carrier and dots +/- 520 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28801,5	---	--	11	GBN		A3E		1090	carrier and dots +/- 545 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28845,5	---	--	11	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28901,1	---	--	11	GAB		A3E		1056	carrier and dots +/- 528 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28960,0	ady	dly	11	IRN		FMOP		55k	radar Iran – burst mode – 150 and 313 sps
DK2OM	29114,0	---	--	11	RUS		F1B	100	2000	harmonic from14557.0 kHz - Moscow
DK2OM	29249,9	1022	03	11	E		F1B	81.9	140	<b>Datawell-buoy "Waverider" – 29249.880 kHz – Spain</b>

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										Fuerteventura - daily, all day
DK2OM	29375,0	---	--	11	I		F1B	81.9	140	Datawell-buoy "Waverider" – 29374.898 kHz – Gallipoli, South Italy - daily, all day
DK2OM	29387,5	---	--	11	IND		F1B	81.9	140	Datawell-buoy "Waverider" – 29387.460 kHz – Indian NW coast, close to Pakistan - daily, all day
DK2OM	29400,0	---	--	11	USA		F1B	81.9	140	Datawell-buoy "Waverider" – 29400.070 kHz - USA north-east coast – NY daily, all day
DK2OM	29450,0	1020	03	11	MRC		F1B	81.9	140	Datawell-buoy "Waverider" – 29449.863 kHz - area of El Aaiun – Morocco - daily, all day
DK2OM	29500,0	1017	03	11	G		F1B	81.9	140	Datawell-buoy "Waverider" – 29499.974 kHz- area of Gibraltar – daily, all day
DK2OM	29525,0	---	--	11	MRC		F1B	81.9	140	Datawell-buoy "Waverider" – 29524.990 kHz - Agadir - Morocco – daily, all day
DK2OM	29625,0	---	--	11	USA		F1B	81.9	140	Datawell-buoy "Waverider" – 29625.024 kHz - USA north-east coast – daily, all day
DK2OM	29685,0	---	--	11	I		VFT		2300	Italian MIL - Brescia
DK2OM	29699,5	---	--	11	I		VFT		1600	Italian MIL - Brescia

### **IRTS – Ireland – EI3GYB (Michael)**

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	DETAILS
IRTS	1896.5	1245	20	11	D		PSK8	German Navy. Every day and night, non-stop now with winter propagation. Huge signal. Frequency not usable.
IRTS	1917	1725	20	11	UK		USB	2 Scottish fishermen. Loud and good audio. Motor noise in the background.
IRTS	3500	1755	03	11	HOL or MM		USB	2 male Dutch fishermen. One very strong, the other a good bit weaker.
IRTS	3508	1425-1440	08	11	RUS/UKR		USB	Male Russian voice gives numbers, but not like a classical number station. Sounds like reporting something and giving locations. On and off. Probably military.
IRTS	3535	2215	30	11				2 male Spanish fishermen. Very loud. Usual motor noise in the background.
IRTS	3544	2212	30	11				2 male Japanese persons chatting happily to each other. Strong signals.
IRTS	3551	1616	03	11	POR or MM		USB	2 male Portuguese fishermen. Very strong signals.
IRTS	3555	1415	26	11	UK or MM		USB	2 Scottish fishermen
IRTS	3560	1830-1850	07	11	POR or MM		USB	2 male Portuguese fishermen happily chatting. One of them comes in quite strong, the other one has a weak signal.
IRTS	3560	1715	20	11	E or MM		USB	2 male Spanish fishermen. Very strong signals.
IRTS	3600	1256	28	11	IRL or MM		USB	2 male Irish fishermen just saying good bye to each other. "Talk to you later!" Cork accent.
IRTS	3670	1734 to 1743	09	11	POR or MM		USB	2 male Portuguese fishermen, very strong signals.
IRTS	3735	1408	15	11	UK or		USB	2 male Scottish fishermen.

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	DETAILS
					MM			
IRTS	3781	1750	03	11			LSB	Loud Dutch music and songs
IRTS	3778.8	1903 to 1910	07	11	F or MM		USB	Group of French fishermen discussing fish prices. Loud motor noise from all of them in the background. A German HAM comes along and tells them to stop talking and better catch fish instead. The French are gone a second later.
IRTS	4141	2300	20	11	E or MM		USB	Group of 3 Spanish fishermen. Huge signals. Loud machine noise from all of them. Happily chatting to each other. Note: Not a HAM frequency.
IRTS	4755	1919	10	11	E or MM		USB	2 Spanish fishermen. Very clear audio and huge signals from both ships. Frequency is a BC frequency, not a HAM frequency.
IRTS	5325	1350 to 1355	28	11	IRL or MM		USB	2 Irish fishermen. One has a Waterford accent and keeps cursing all the time. Strong wind noise in the microphone.
IRTS	5335	1225-1237	07	11	IRL or MM		USB	Group of 3 fishermen. Names Brendan, Howard and Gerry. One of them is always whistling, heard him before many times. He has an Ulster accent. Plenty of foul language. 2 stations have a good audio, one a mediocre one. Another one of the fishers has a Cork accent. "Talk to you later!" in the end.
IRTS	5345	1420	26	11	F or MM		USB	2 male French fishermen.
IRTS	5398	1745	03	11	CHN			Chinese radar on and off from 5398 to 5405 KHz
IRTS	5400	1540 to 1600	16	11	POR or MM		USB	2 male Portuguese fishermen. One very strong, the other weakfish.
IRTS	5400	1303	28	11	POR or MM		USB	2 Portuguese fishermen. Loud motor noise. VHF traffic in the background. One station very loud, the other one very weak.
IRTS	5398.5	1625	20	11	CHN			Radar from China. Short busts on and off.
IRTS	5405	2025 to 2035	14	11	POR or MM		USB	2 male Portuguese fishermen. Motor noise. Clear and loud signals.
IRTS	5405	2040 to 2055	25	11	POR or MM		USB	2 Portuguese fishermen. Motor noise and coastal VHF traffic in the background.
IRTS	7000	1830	04	11	RUS		AM	Buzzer, very weak.
IRTS	7000	1853	04	11	INS		LSB	Male voices in Indonesian, not too strong.
IRTS	7000	0151	30	11	RUS/UKR		LSB	Female voices in Russian.
IRTS	7117	1255	11	11	RUS		Digital	Huge persistent digital signals from 7115 to 7120 KHz. Russian military.
IRTS	7120	1840	28	11	SOM		AM	Radio Hargeisa, huge signal. Frequency unusable.
IRTS	7140	1620	03	11	ETH			Jamming noise from 7140 to 7152 KHz. Aimed at R. Eritrea. All frequencies unusable.
IRTS	7146.5	1834	03	11	ERI		AM	Radio Eritrea also here. Jamming from Ethiopia is gone. Signing off as on 7185 KHz.
IRTS	7185	1830	03	11	ERI		AM	Radio Eritrea. Signing off at 1834 z after national anthem.
IRTS	7200	1245 to 1300	11	11	Taiwan		AM	Voice of Free China, Taipei till sign off at 1300z. Station is audible all morning from as early as 0900z with various signal strengths. Frequency not usable.
IRTS	7200	1250	11	11	BRM		AM	Radio Myanmar, medium signal.
IRTS	10123	1908-1935	05	11			USB	2 male Korean fishermen.
IRTS	10123	1910	26	11			USB	Group of Korean fishermen.
IRTS	13979	1305 to 1329	11	11				Big radar signal from 13979 to 14011 KHz. Persistent.
IRTS	14115	1022	30	11				Radar. Strong signal from 14115 to 14150 KHz.
IRTS	14192	1240	20	11	RUS		F1B	RUS Navy Kaliningrad. Every day during daylight hours. Very strong. Frequency not

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	DETAILS
								usable.
IRTS	14295	1252	28	11	TJK		AM	Radio Tajikistan 3 <sup>rd</sup> harmonic.
IRTS	18047.5	1342	13	11				Radar from 18047.5 to 18094 KHz. Strong and persistent.
IRTS	21333.3	0925 to 1014	30	11			USB	2 male Korean voices. One voice is the same as heard on 30 metres in the evenings very often in the past.
IRTS	21352.5	1541	02	11			Digital	Strong digital signals. Probably a North Korean embassy in West Africa. Very often heard during the day.
IRTS	21358	0925 to 0935	30	11				Radar from 21358 to 21383 KHz. Big signal .

### KARS – Kuwait – 9K2RR (Faisal)

### MRASZ – Hungary - HA7PL (Laci)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SH	DETAILS
MRASZ	1852,0	1942	14	11			A3E		air traffic
MRASZ	3511,0	1754	18	11			A1A		"ZNHGB MKQZD OMYQR"
MRASZ	3513,0	1900	18	11			LSB		probably russian
MRASZ	3522,0	1756	9	11			F1B	250	
MRASZ	3522,0	2034	10	11			F1B	250	
MRASZ	3522,0	1809	12	11			F1B	250	
MRASZ	3524,0	2053	30	11			F1B	250	
MRASZ	3527,0	2127	3	11			F1B	200	
MRASZ	3532,0	2116	3	11			A3E		russian male
MRASZ	3535,0	2040	24	11			USB		ui. language
MRASZ	3539,6	1630	14	11			NON		
MRASZ	3541,0	2033	10	11			F1B	250	
MRASZ	3549,0	0553	19	11			A1A		"de ER1AAZ QRP 4 W dipole, QTH Moldova 73"
MRASZ	3550,0	0554	1	11			USB		ui. male
MRASZ	3557,0	2119	3	11			A1A		"7T553 64T91 44961"
MRASZ	3559,0	2053	30	11			PSK2		AT3004D
MRASZ	3562,0	2051	28	11			PSK2		AT3004D
MRASZ	3565,0	1653	2	11			USB		ui. male
MRASZ	3568,0	1626	14	11			F1B	250	
MRASZ	3584,0	1740	2	11			PSK2		AT3004D
MRASZ	3586,0	2038	10	11			F1B	250	
MRASZ	3588,0	1916	18	11			F1B	250	
MRASZ	3593,0	1731	16	11			F1B	250	
MRASZ	3593,6	1627	14	11			NON		
MRASZ	3593,8	1758	9	11	RUS	P	A1A		beacon "P"
MRASZ	3593,7	2057	10	11	RUS	D	A1A		beacon "D"
MRASZ	3594,0	2056	10	11	RUS	C	A1A		beacon "C"
MRASZ	3594,0	2051	30	11	RUS	C	A1A		beacon "C"
MRASZ	3606,0	1917	18	11			F1B	250	
MRASZ	3624,0	1725	14	11			PSK2		AT3004D
MRASZ	3629,0	2030	24	11			A1A		dotter, deliberate disturbance
MRASZ	3633,0	2025	24	11			PSK2		AT3004D
MRASZ	3640,0	2050	30	11			F1B	250	
MRASZ	3658,0	2026	24	11			A1A		"V V V V V"
MRASZ	3676,0	1733	16	11			NON		
MRASZ	3678,8	1804	9	11			LSB		music, chaotic
MRASZ	3700,0	2040	10	11			F1B	250	
MRASZ	7000,0	1800	9	11			H3E		hrd: 16, 18, 24, 25, 28
MRASZ	7011,0	2047	28	11			F1B	500	
MRASZ	7017,5	1800	9	11			NON		
MRASZ	7017,5	1623	14	11			NON		
MRASZ	7030,0	0834	1	11			OTHR		
MRASZ	7030,0	0920	1	11			F1B		
MRASZ	7033,5	1026	10	11			PSK2		AT3004D



SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SH	DETAILS
MRASZ	7039,0	1506	3	11	RUS	C	A1A		beacon "C"
MRASZ	7050,0	0955	1	11			LSB		russian male, hrd: 3, 14
MRASZ	7055,0	1222	3	11			LSB		overmodulated, russian-ukrainian cursing
MRASZ	7055,0	1204	25	11			LSB		russian, chaotic
MRASZ	7114,0	0814	21	11			PSK2		AT3004D
MRASZ	7120,0	1710	2	11	SOM		A3E		R. Hargaysa, hrd every evening
MRASZ	7144,0	1303	25	11			PSK2		AT3004D
MRASZ	7146,5	1625	14	11			A3E		
MRASZ	7146,5	1736	16	11			A3E		
MRASZ	7180,0	1738	16	11			A3E		hrd: 24
MRASZ	7181,5	1207	25	11			NON		
MRASZ	7185,0	1808	2	11			A3E		hrd.3,
MRASZ	7200,0	1210	25	11			A3E		music
MRASZ	7205,0	1739	16	11			A3E		splattering 5 kHz down
MRASZ	10121,0	0553	1	11			F1B	250	
MRASZ	14001,0	0837	21	11			A3E		russian
MRASZ	14005,0	0851	21	11			OTHR		14000-14010 kHz
MRASZ	14010,0	1029	3	11			OTHR		14000-14020 kHz
MRASZ	14010	1214	25	11			OTHR		14000-14020 kHz, 50 Hz
MRASZ	14022,0	0817	21	11			F1B	200	
MRASZ	14192,0	1028	10	11			F1B	250	
MRASZ	14295,0	1028	10	11	TJK		A3E		Radio Tajik, 3rd. harmonic, hrd: 25
MRASZ	21001,0	1030	10	11			NON		very strong

### OEVSV – Austria – OE3GSA (Gerd)

### PZK – Poland – SP9BRP (Jan)

### REF 1 – France – F5MIU (Francis) - F5JBR (Andre)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	Sh /Bw	DETAILS
REF.	3660	1835	25	11			fmcw	10kHz	OTH radar S8 unident
REF.	7120	1820	19	11			AM	10kHz	BC station weak S4
REF.	7120	1726	26	11			AM	10kHz	BC station S7 Arabic
REF.	7146	1608	20	11			AM	20kHz	BC station S9 + & noise QRM
REF.	7146	1608	22	11			AM	15kHz	BC station S9+ Arabic +noise
REF.	7146	1825	25	11			AM	10kHz	BC station S9 Arabic
REF.	7146	1726	26	11			AM	10kHz	BC station S9 Arabic
REF.	7146.5	1744	17	11			AM	10kHz	BC station Eritrea ?
REF.	7175	1825	25	11			AM	25kHz	BC station S9+20 Arabic no noise different program
REF.	7175	1726	26	11			AM	25kHz	BC station S9+20 Arabic different program
REF.	7180	1744	17	11			AM	15kHz	BC station Asiatic program, bad modulation, splatters
REF.	7180	1820	19	11			AM	15kHz	BC station Eritrea ? S9+10
REF.	7180	1608	20	11			AM	20kHz	BC station S7 & noise QRM
REF.	7180	1608	22	11			AM	15kHz	BC station S9 Arabic + noise
REF.	10130	1702	11	11			fmcw	50kHz	OTH radar S9 pulsed 40ms end 17h07
REF.	10130	1810	28	11			fmcw	20kHz	OTH radar S9+10 pulsed 20Hz
REF.	14010	0850	18	11			fmcw	20kHz	OTH radar S9 pulsed
REF.	14090	0934	9	11			fmcw	30kHz	OTH radar S9+20 pulsed 20ms
REF.	14090	0846	23	11			fmcw	15kHz	OTH radar S9 pulsed 10Hz
REF.	14135	0900	30	11			fmcw	20kHz	OTH radar S9+20 pulsed 50Hz
REF.	14138	0904	28	11			fmcw	12kHz	OTH radar S9 pulsed 5Hz
REF.	18090	0854	1	11			fmcw	20kHz	OTH radar S9+ pulsed 20ms
REF.	18095	0858	28	11			fmcw	20kHz	OTH radar S9 pulsed 20Hz
REF.	21210	0850	11	11			fmcw	20kHz	OTH radar S9 pulsed 22ms
REF.	21270	0904	30	11			fmcw	20kHz	OTH radar S9+20 pulsed 38mS
REF.	24950	0908	3	11			fmcw	20kHz	OTH radar S9+40 pulsed 20ms

Highlighted frequencies are on shared bands

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REF	3500.5	1542	20	11	RUS	RJD99	CW			RJD99 send QTCs SML for RMU in Broadcast
REF	3507.5	1822	14	11	RUS	RCV	CW			RCV send QTCS SML for RKZ in Broadcast
REF	3507.5	1730	20	11	RUS	RCV				RCV send QTCS SML for RKZ in Broadcast
REF	3513.0	0603	21	11	RUS	RABOK-42	LSB			RABOK-42 calling outstations in Duplex
REF	3527.0	0458	18	11	RUS	Russian Navy	F1B	50	200	Encrypted messages
REF	3550.0	1341	02	11	RUS	8P3N	CW			8P3N working 3RI2 (comms checks and QTCs) in Simplex – Use fixed callsigns
REF	3550.0	0836	12	11	RUS	8P3N	CW			8P3N working 3RI2 L8CT (comms checks and QTCs) in Simplex – Use fixed callsigns
REF	3550.0	0814	15	11	RUS	8P3N	CW			8P3N working 3RI2 L8CT (comms checks and QTCs) in Simplex – Use fixed callsigns
REF	3550.0	0734	16	11	RUS	8P3N	CW			8P3N working 3RI2 L8CT (comms checks and QTCs) in Simplex – Use fixed callsigns
REF	3550.0	0732	24	11	RUS	8P3N	CW			8P3N working 3RI2 L8CT (comms checks and QTCs) in Simplex – Use fixed callsigns
REF	3550.0	0840	27	11	RUS	8P3N	CW			8P3N working 3RI2 L8CT (comms checks and QTCs) in Simplex – Use fixed callsigns
REF	3557.0	1815	26	11	RUS	RJC20	CW			RJC20 working RCV (comms checks) in Duplex – Qsx on 3507.5 kHz
REF	3568.0	1500	17	11	RUS	Russian Military	CIS-12/AT30 04D/US B	120 per channel	2700	Encrypted messages
REF	3567.5	0921	01	11	RUS	BWVI	CW			BWVI working 3 outstations in Simplex
REF	3567.5	0631	15	11	RUS	L6GG	CW			L6GG working 3 outstations (comms checks) in Simplex
REF	3572.0	0441	17	11	RUS	P69X	CW			P69X Working 4 outstations in Duplex – Qsx on 3619 kHz
REF	3593.0	1332	16	11	RUS	Russian Military	F1B	75	250	Encrypted messages
REF	3604.0	0458	17	11	RUS	Russian Military	CIS-12/AT30 04D/US B	120 per channel	2700	Encrypted messages
REF	3622.0	0800	16	11	RUS	W84P	CW			W84P Working 3 outstations in Simplex
REF	3642.0	1900	19	11	CHN	3A7D	CW			3A7D working DKG6 (Only : DKG6 de 3A7D V)
REF	3642.0	1745	21	11	CHN	3A7D	CW			3A7D working DKG6 (Only : DKG6 de 3A7D V)
REF	3653.0	1312	16	11	RUS	RDL	F1B	50	200	Encrypted messages and XXX

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
										mes
REF	3665.0	0802	16	11	RUS	4PQZ	CW			4PQZ working outstation in Duplex
REF	3665.0	0804	16	11	RUS	4PQZ	F1B	50	500	4PQZ in FSK 50 Bd 500 Hz
REF	3682.0	1553	20	11	RUS	NBLU	CW			NBLU send messages in Dimplex
REF	3683.0	0501	08	11	RUS	RJD99	CW			RJD99 comms checks and QTCs in Simplex
REF	3691.0	1615	20	11	RUS	Russian Military	CIS-12/AT30 04D/US B	120 per channel	2700	Encrypted messages
REF	3690.5	1742	21	11	RUS	RKN	CW			RKN send messages (QTCS SML) in Broadcast
REF	3696.0	0530	28	11	RUS	MEDS	CW			MEDS working 4 outstations (comms checks) in Simplex
REF	3696.0	0540	28	11	RUS	SDAO	CW			SDAO working 5 outstations (comms checks) in Simplex
REF	3692.5	0559	26	11	RUS	RJD99	CW			RJD99 send QTCs for outstations in Duplex or Broadcast
REF	3700.0	0518	23	11	RUS	Russian Military	F1B	75	250	Encrypted messages
REF	3700.5	1623	20	11	RUS	8M8E	CW			8M8E working 6 outstations in Duplex
REF	3700.5	1724	28	11	RUS	M1G2	CW			M1G2 working 6 outstations in Duplex
REF	3734.0	1232	27	11	RUS	RMP	CW			RMP send QTCS SML in Broadcast
REF	3734.0	1338	28	11	RUS	RMP	CW			RMP send QTCS SML in Broadcast
REF	3742.0	0532	02	11	RUS	Russian Military	CW			Responses 11 outstations from comms checks NCS
REF	3742.0	0501	17	11	RUS	Russian Military	CW			Responses 11 outstations form comms checks NCS
REF	3742.0	1331	28	11	RUS	Russian Military	CW			Responses 11 outstations from comms checks NCS
REF	3746.0	0842	27	11	RUS	Russian Military	CIS-12/AT30 04D/US B	120 per channel	2700	Encrypted messages
REF	3747.0	1600	20	11	RUS	L65N	CW			L65N working 4 outstations in duplex
REF	3748.0	1808	28	11	RUS	Russian Navy	F1B	50	250	Encrypted messages
REF	3745.5	0530	25	11	RUS	2MNO	CW			2MNO working 3 soutstations (comms chekcs) in Duplex
REF	3745.5	1724	28	11	RUS	SDXJ	CW			SDXJ working 3 soutstations (comms chekcs) in Duplex
REF	3762.0	0618	08	11	RUS	RJQ56	CW			RJQ56 send QTCS SML in Duplex
REF	3762.0	0603	20	11	RUS	RAG43	CW			RAG43 working RIT in Duplex
REF	3777.0	1824	18	11	CHN	RIS9	CW			RIS9 working M8JF (Only : M8JF de RIS9 V)
REF	3777.0	1834	27	11	CHN	RIS9	CW			RIS9 working M8JF (Only : M8JF de RIS9 V)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REF	3778.0	0728	24	11	RUS	Russian Military	CIS-12/AT30 04D/US B	120 per chann el	2700	Encrypted messages
REF	3782.5	1350	13	11	RUS	8A6E	CW			8A6E working outstations in Simplex : after QSO, traffic in QRR3 mode
REF	3789.0	1321	01	11	RUS	AGPI	CW			AGPI working 3 outstations in Simplex
REF	3789.0	0753	16	11	RUS	5AOM	CW			5AOM working outstations in Duplex
REF	3789.0	1800	21	11	RUS	Russian Air Defense	USB			Tracking (russian voice)
REF	3789.0	1545	23	11	RUS	2UEO	CW			2UEO working 3 soutstations (comms chekcs and QTCs) in Duplex
REF	3789.0	0730	24	11	RUS	W27C	CW			W27C working 3 soutstations (comms chekcs and QTCs) in Duplex
REF	3789.0	0516	28	11	RUS	Russian Air Defense	USB			Tracking (russian voice)
REF	3789.0	1312	28	11	RUS	6MK4	CW			6MK4 working 3 soutstations (comms chekcs and QTCs) in Duplex
REF	3795.0	1620	20	11	RUS	BZ4E	CW			BZ4E working 4 outstations in Duplex
REF	3792.5	0530	21	11	RUS	Russian Military	CIS-12/AT30 04D/LS B	120 per chann el	2700	Encrypted messages
REF	3798.0	0652	27	11	RUS	Russian Military	F1B	75	250	Encrypted messages
REF	7008.0	0759	08	11	RUS	Russian Military	F1B	75	250	Encrypted messages
REF	7008.0	0923	15	11	RUS	Russian Military	F1B	75	250	Encrypted messages
REF	7030.0	0809	14	11	RUS	Russian Military	F1B	75	250	Encrypted messages
REF	7087.0	0924	14	11	RUS	Russian Military	CIS-12/AT30 04D/US B	120 per chann el	2700	Encrypted messages
REF	7111.0	0800	14	11	RUS	Russian Navy	F1B	50	250	Encrypted messages
REF	7122.0	0800	14	11	RUS	Russian Navy	F1B	50	250	Encrypted messages
REF	7142.0	0957	28	11	RUS	Russian Military	CIS-12/AT30 04D/US B	120 per chann el	2700	Encrypted messages
REF	7169.0	0811	30	11	RUS	Russian Navy	F1B	75	200	Encrypted messages
REF	7187.6	0745	08	11	RUS	P	CW			Cluster Beacons Kaliningrad
REF	7193.0	0901	08	11	RUS	Russian Navy	F1B	50	200	Encrypted messages – Probably RDL
REF	21348.0	0931	06	11	RUS	RCV	CW			RCV send QTCS SML for SHIPS in Broadcast

## REP – Portugal – CT4AN (Jose Francisco)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	1896	21.03	15	11	D		PSK8	2400		Stanag 4285 600/Ion German Navy
REP	3520	22.10	16	11	E		J3E-U			Spanish fishery
REP	3550	22.08	11	11	G		J3E-U			Fishermen
REP	3585	19.02	05	11	RUS		J3E-U			Russian Navy
REP	3590	07.03	11	11	E		J3E-U			Spanish fishery CRY2000 encryption
REP	3625	07.00	21	11	POR		J3E-U			Portuguese fishery
REP	7015	07.12	18	11	E		J3E-U			Fishermen to harbour
REP	7015	08.07	18	11	E		J3E-U			Fishermen talking about Wx
REP	7039	22.44	15	11	RUS	C	A1A			MOSCOW, ADY, DLY
REP	7078	22.16	14	11			Unid			Unid ultra-tone modem, every 2 seconds
REP	7110	22.11	15	11	RUS	S99H	A1A			MIL to 4NAZ
REP	7116	16.52	11	11	RUS		PSK2	120		CIS-12 AT3004D, 3k pilot tone
REP	7120	19.42	11	11	SOM		8k00 A3EGN			Radio Hargaysa
REP	7146	16.48	05	11	ETH		A3E			Radio Eritrea
REP	7185	16.47	05	11	ETH		A3E			Radio Ethiopia
REP	7205	21.21	14	11	F		A3E			Radio France Int, splattering badly
REP	7205	20.10	20	11	F		A3E			Radio France Int, splattering down to 7190kHz
REP	10115	19.09	14	11			A3E			Letters Station - 5 letters
REP	10132	10.35	24	11	F	F6xx	J3E-U			<i>French amateurs ignoring IARU 10 MHz Bandplan</i>
REP	10140	20.43	21	11	B		J3E-U			Brazilian male ops discussing travel times
REP	10150	16.04	01	11			FMCW	50	20k	OTH radar, 10k into amateur band
REP	14085	10.17	12	11	RUS		F1B	50	250	CIS-35
REP	14090	11.33	09	11	RUS		FMCW	50	18k	OTH radar, Russia
REP	14095	17.44	15	11	E		J3E-U			Spanish fishery
REP	14105	12.58	08	11	RUS		FMCW	50	18k	OTH radar, Russia
REP	14110	10.33	17	11			FMCW			OTH Radar
REP	14112	11.06	02	11			FMCW		10k	Burst mode OTH radar
REP	14113	11.46	17	11	RUS		FMCW	50	18k	OTH radar, Russia
REP	14195	11.00	03	11	RUS		F1B	75	500	CIS-50
REP	14280	14.36	12	11	RUS		FMCW	50	18k	OTH radar, Russia
REP	14285	10.55	08	11	CYP		FMCW	50	20k	OTH Radar, Cyprus
REP	14310	10.56	04	11			FMCW	50	18k	OTH radar, Russia
REP	18070	10.35	02	11			FMCW	50	20k	OTH radar
REP	21105	16.00	20	11	MRC		J3E-U			Fishermen
REP	21425	15.10	10	11			A1A			RKZ
REP	28150	11.39	21	11	RUS		F3E			Russian taxis female dispatchers
REP	28185	18.01	14	11	IRN		FMCW			OTH radar
REP	28225	13.48	03	11	B		A3E			Brazilian CB'rs, everyday
REP	28275	11.31	09	11	RUS		F3E			YL taxi dispatcher DLY
REP	28300	15.51	06	11	B		A3E			Brazilian intruders AM
REP	29145	12.01	01	11	RUS		F3E			Russian taxis

## RSGB - Great Britain – M0VRR (Vaughan)

### SRAL – Finland – OH2BLU (Pekka)

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	REMARKS
SRAL	6998,0	0530-1600	dly	11	RUS	UiTone	R3E			125 Hz tones
SRAL	7004,3	1245	2.	11		UiCarr	N0N			
SRAL	7005,0	1310-1330/	2.	11		UiMUX	PSK2	120	2600	
SRAL	7006,0	0600-0650/	3.	11		UiCarr	N0N			50 Hz brum
SRAL	7008,0	0620-1730	*	11		UiPTR	F1B		250	Days: 8. 11. 13. 15. 22.
SRAL	7010,0	0930-1200	17. 22.	11		UiMUX	PSK2	120	2600	
SRAL	7011,0	0630-1400	29.	11	RUS	UiPTR	F1B		500	
SRAL	7012,0	0920-1415/	9. 11.	11		UiPTR	F1B		250	
SRAL	7014,0	0810-1330	3. 29.	11		UiMUX	PSK2	120	2600	

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	REMARKS
SRAL	7012,8	0930-1200/	18.	11		UiCarr	N0N			
SRAL	7017,5	0640-1930	*	11		UiCarr	N0N			Days: 9. 17. 18. 20.
SRAL	7018,62	1130-1310	10.	11		UiCarr	N0N			Ends F1B 250 Hz
SRAL	7029,5	0925-1005	21.	11		UiMUX	PSK2	120	2600	
SRAL	7030,0	0530-1405	*	11		UiPTR	F1B		250	Days: 1. 14. 22.
SRAL	7031,0	0645-1330	18. 20.	11		UiCarr	N0N			
SRAL	7032,0	0945-1000	3.	11		UiMUX	PSK2	120	2600	
SRAL	7042,0	0900-0930	7.	11		UiMUX	PSK2	120	2600	
SRAL	7062,0	0825-0839/	2.	11	RUS	464	R3E-u			Synth. Fem. Until 0830 N0N
SRAL	7072,0	1145-1325/	2.	11		UiMUX	PSK2	120	2600	
SRAL	7089,0	0745-1400	*	11		UiMUX	PSK2	120	2600	Days: 7. 18. 19.
SRAL	7098,0	0700-1730	2. 15.	11		UiPTR	F1B		250	
SRAL	7101,0	0900-1238/	19. 30.	11		UiPTR	F1B/A1A		250	A1 25 Hz dotter
SRAL	7101,0	1400	22.	11		SKA4	A1A			
SRAL	7111,0	0750-0834/	14.	11		UiPTR	F1B			
SRAL	7114,0	0640-0940	21.	11		UiMUX	PSK2	120	2600	
SRAL	7116,0	0700-1700	*	11	RUS	UiMUX	PSK2	120	2600	Days: 11. 12. 15.
SRAL	7120,0	0320-0545	dly	11	SOM	R.Hargeis a	A3E			
SRAL	7120,0	1330-1900/	dly	11	SOM	R.Hargeis a	A3E			
SRAL	7120,0	1900-2000/	*	11	SOM	R.Hargeis a	A3E			Days: 11. 18. 23. 25.
SRAL	7122,0	0750-0800	14.	11		UiPTR	F1B		250	
SRAL	7126,88	0700-0725/	23.	11		UiCarr	N0N			
SRAL	7141,0	1930	27.	11		UiPTR	F1B		250	
SRAL	7144,0	0700-1300	*	11		UiMUX	PSK2	120	2600	Days. 23. 25. 28.
SRAL	7146,6	0330-0600	*	11	ERI	VoBME1	A3E			Jammed by ETH Days: 1. – 6. 8. 10. 16. 17. 19. – 27. 29. 30.
SRAL	7146,6	1330-1840	dly	11	ERI	VoBME1	A3E			Jammed by ETH Days: 1. – 6. 8. 10. 16. 17. 19. – 27. 29. 30.
SRAL	7160,0	0630-0900	15. 16.	11	RUS	RMW32	A1A			
SRAL	7167,0	1315-1345/	9.	11		UiPTR	F1B		250	
SRAL	7170,0	0725	23.	11		UiMUX	PSK2	120	2600	
SRAL	7171,0	1330	16.	11		UiMUX	PSK2	120	2600	
SRAL	7175,0	0330-0545	25. – 30.	11	ERI	VoBME2	A3E			Jammed by ETH
SRAL	7175,0	1330-1840/	25. – 30.	11	ERI	VoBME2	A3E			Jammed by ETH
SRAL	7176,0	1350	18.	11		UiPTR	F1B		250	
SRAL	7180,0	0330-0545	16. – 24.	11	ERI	VoBME2	A3E			Jammed by ETH
SRAL	7180,0	1330-1840/	16. – 24.	11	ERI	VoBME2	A3E			Jammed by ETH
SRAL	7185,0	0330-0545	1. – 15.	11	ERI	VoBME2	A3E			Jammed by ETH

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	REMARKS
SRAL	7185,0	1330-1840/	1. – 15.	11	ERI	VoBME2	A3E			Jammed by ETH
SRAL	7186,0	0630-0700	17.	11		UiMUX	PSK2	120	2600	
SRAL	7193,0	0800-1500	*	11	RUS	UiPTR	F1B/N0N		200	Days: 3. – 10. 13. – 20.
SRAL	7200,0	1000-1300/	dly	11	CHN	CNR1	A3E			Used as jammer on TWN, 2 transmitters +0 & -7 Hz.
SRAL	7200,0	1300-1500/	*	11	MMR	R Myanmar	A3E			Days: 1. 2. 5. 6.
SRAL	7 MHz	0330-0600	3. 15.	11	RUS	29B6	FMCW			50Hz / 15 kHz
SRAL	7 MHz	/1637-1825/	21.	11	RUS	29B6	FMCW			50Hz / 15 kHz
SRAL	7 MHz	0640-1305	23. 30.	11	RUS	UiOTHR	FMCW			10Hz / 15 kHz, 30 sec transmit with 16 min cycle
SRAL	10 MHz	0650-0710/	17.	11	RUS	29B6	FMCW			50Hz / 15 kHz (WebSDR 21 days)
SRAL	13999,0	0915	28.	11		UiMUX	PSK2	120	2600	Subcarrier on 14000,3 kHz
SRAL	14000,0	0905-0935	6. 9.	11		UiCarr	N0N			
SRAL	14116,0	0710	10.	11	RUS	UiPTR	F1B		250	
SRAL	14160,0	0935	6.	11		UiPTR	F1B		250	
SRAL	14295,0	0440-1330	dly	11	TJK	R Tojikiston	A3E			3f 4765,00 kHz, Yangiyul TX
SRAL	14 MHz	0615-1310	*	11	RUS	29B6	FMCW			50Hz / 15 kHz, days: 4. 5. 7. 8. 11. 13. 15. 19. 24. 29. 30. (WebSDR 20 days)
SRAL	14 MHz	0630-1500	*	11	RUS	UiOTHR	FMCW			10Hz / 15 kHz, 30 sec transmit with 16 min cycle, days: 9. - 15. 18. 30. (WebSDR dly)
SRAL	18 MHz	0640-1030	*	11	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz, days: 18. 22. - 26. 28. (WebSDR dly)
SRAL	21 MHz	0640-0915	*	11	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz, days: 10. 11. 22. 30. (WebSDR dly)
SRAL	21438,0	0930-1000	*	11	RUS	RCV	A1A			Days: 2. 5. 8. 17. 30.
SRAL	24 MHz			11		UiOTHR	FMCW			(WebSDR 3 days)
SRAL	28960,0	0630-1200	*	11	IRN	UiOTHR	FMCW			150 & 313 Hz / 60 kHz , days: 3. 6. 10. 11. - 15.
SRAL	28 MHz			11		UiOTHR	FMCW			25/50Hz / 20 kHz
SRAL	28 MHz	0930-1000	11. 12.	11	RUS	Taxi disp.	F3E			10 reports

### USKA – Switzerland – HB9CET (Peter)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
<b>80m band informational only, shared with other also primary allocated services !</b>										
USKA	3519.5	2217	09	11			F1B	50	200	often
USKA	3522.0	2215	09	11			F1B	75	250	often
USKA	3527.0	2301	09	11			F1B	50	200	
USKA	3540.0	2320	11	11			MFSK ?	125 ?	1750 2k7	MIL 188-141A, followed by Vocoder (Start and stop with short F1B sequence)
USKA	3548.0	2344	04	11			F1B	50	200	almost daily
USKA	3553.8	2347	04	11			G1D	2400	~2k4	Stanag 4285; PSK8 almost daily
USKA	3586.0	2253	10	11			F1B	75	250	often
USKA	3591.0	2352	04	11			DQPSK	14x75	5k9k	LINK 11 CLEW often Stanag 5511; DSB mode
USKA	3604.0 VFO LSB	2138	06	11			DQPSK	14x75	2k5	LINK 11 CLEW (STANAG 5511)
USKA	3604.0 VFO USB	2218	09	11			DQPSK	14x75	2k5	LINK 11 CLEW; almost daily (STANAG 5511)
USKA	3697.0	0011	12	11			PSK8	2400	~2k7	MIL188-110A (Hybrid), often

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
										preamble 4 tone PSK4 75Bd
USKA	3700.0	2210	09	11			F1B	75	250	
USKA	3724.0	0014	12	11			F1B	75	200	
USKA	3744.0	2207	09	11			F1B	75	250	
USKA	7020.0	2118	09	11		820609	MFSK8	125	1750	MIL 188-141A
USKA	7020.0	2120	09	11		820615	MFSK8	125	1750	MIL 188-141A
USKA	7020.0	2121	09	11		810699	MFSK8	125	1750	MIL 188-141A
USKA	7030.0	2311	11	11			J7D	12x120	2k7	BPSK; CIS12
USKA	7050.0	2201	09	11		810605	MFSK8	125	1750	MIL 188-141A
USKA	7050.0	2310	10	11		810602	MFSK8	125	1750	MIL 188-141A
USKA	7050.0	2311	10	11		810614	MFSK8	125	1750	MIL 188-141A
USKA	7052.0	1229	07	11			J3E-L			Patriotic music and slogans often
USKA	7055.0	1249	07	11			J3E-L			Patriotic music and slogans often
USKA	7070.0	2339	10	11		820211	MFSK8	125	1750	MIL 188-141A often
USKA	7089.0	1241	07	11			J7D	12x120	2k7	BPSK; CIS12
USKA	7115.5	2101	11	11			F1B	50	200	
USKA	7116.0	1051	11	11			J7D	12x120	2k7	BPSK; CIS12
USKA	7120.0	1536	07	11	SOM		A3E	A3E	10k	Radio Hargaysa almost daily
USKA	7169.0	0843	30	11			F1B	75	200	
USKA	7174.991	1654	29	11	ERI		A3E		10k	BC; VOBM - Voice of the broad Masses: Eritrea (jammed)
USKA	71764.0	1654	29	11					~ 20k	Jammer
USKA	7193.0	1233	07	11			F1B	50	200	often
USKA	7197.0	1529	12	11		various	MFSK8	125	1750	MIL 188-141A daily
USKA	13992.0 - 14005.0	1101	11	11			OTHR	50 sps	~13k	OTHR; occup. BW ≥30k
USKA	14043.0	0918	19	11			OTHR	50 sps	~13k	OTHR; occup. BW ≥30k
USKA	14091.0	0913	09	11			OTHR	50 sps	~13k	OTHR; occup. BW ≥30k
USKA	14134.0	0850	30	11			OTHR	50 sps	~13k	OTHR; occup. BW ≥30k
USKA	14192.0	1105	11	11			F1B	50	250	
USKA	14298.0	0853	30	11			FMOP	10 sps	~10k	OTHR; only short period
USKA	21270.0	0858	30	11			FMCW	25 sps	20k	OTHR

### Veron – Netherlands – PA2GRU (Dick)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SH	DETAILS
VERON	3724.0	18.37	11	11		UiPTR	F1B		Ptr
VERON	3732.0	15.30	21	11		UiPTR	F1B		Ptr
VERON	3792.0	18.44	11	11	CIS	UiPTR	F1B		Revs/Ptr
VERON	6698.0	20.37	19	11	RUS		H3E		Buzzer 118Hz; 1 sec bursts; splatter in 40m band
VERON	7008.0	14.54	15	11		UiPTR	F1B		Ptr
VERON	7055.0	14.48	19	11		UiBC	A3E		Music & Russian speech; S7
VERON	7098.0	14.53	15	11		UiPTR	F1B		Ptr
VERON	7145.0	15.50	19	11	ETH		QRM	15k	White noise
VERON	7175.0	15.09	19	11	ERI	BC	A3E		East Afr. Music.
VERON	7175.0	15.09	19	11	ETH		QRM	15k	White noise
VERON	7180.0	18.03	19	11	ERI	BC	A3E		East Afr. Speech male; S8
VERON	7180.0	15.27	24	11	ETH		QRM	15k	White noise
VERON	7193.0	09.37	3	11	CIS	UiPTR	F1B		Revs/Ptr
VERON	10116,5	15.05	19	11		UiMux	F7D	2k2	Multitone system
VERON	10121,0	09.35	1	11		UiPTR	F1B		Ptr
VERON	14192,0	09.33	2	11	CIS	UiPTR	F1B		Revs/Ptr (also 4/11 09.28 17/11 09.13)
VERON	21438,0	09.39	2	11	RUS	RCV	A1A		RIP90 de RCV QTC 281 Nawip
VERON	21438,0	09.45	3	11	RUS	RCV	A1A		RGZ58 de RCV QSA ? K
VERON	21438,0	09.50	3	11	RUS	RCV	A1A		RBE86 de RCV QTC 541 NawIp 038
VERON	28126,0	15.02	15	11		UiCAR	A1A		Unid Carrier, Very Strong



# **The monitoring team of IARU Region 1**

**credits:**

**Wavecom Elektronik – Buelach – Switzerland**

**All friends and contributors!**

**Many thanks for your interest!**

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