



# Monitoring System

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The monthly newsletter for Region 1

## March 2016

### The 29 members of the IARUMS Region 1 Monitoring Team:



### Acknowledgements

ARAT: 3V8CB – Ahmed ++ ARI: DH7SA – Salvatore ++ ARSK: 5Z4NU - Ted ++ ASTRA: DL1BDF – Mustapha ++ DARC: DK2OM – Wolf ++ ERASD: SU1SA – Sayed ++ HRS: 9A5DGZ – Gianluca ++ IARC: 4Z1AB – Aмос ++ 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 ++ PTTs: BAKOM (Swiss), BNetzA Konstanz (Germany) ++ OFCOM (UK) ++ Dutch AT ++ YO9RIJ – Petrica

# Part 1: News and Infos

## 1. Shortwave propagation and space weather prediction

If you are observing or expecting intruders from a certain country or region, it is important to be informed about the shortwave propagation. The following recommendations can help you.

### DR2W DX-PROPAGATION

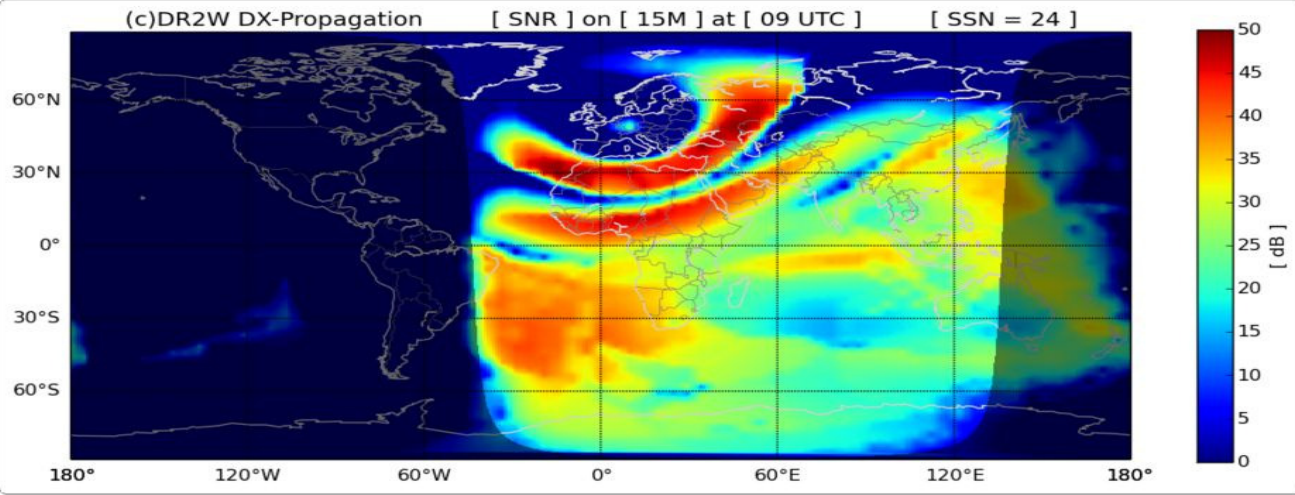
QTH: Europe Africa North America South America Asia Australia

EXP: VK0EK Heard Isl. (AN-003)

QRG: 10M 12M 15M 17M 20M 30M 40M 80M

VIEW: single image animation

(c)DR2W DX-Propagation [ SNR ] on [ 15M ] at [ 09 UTC ] [ SSN = 24 ]



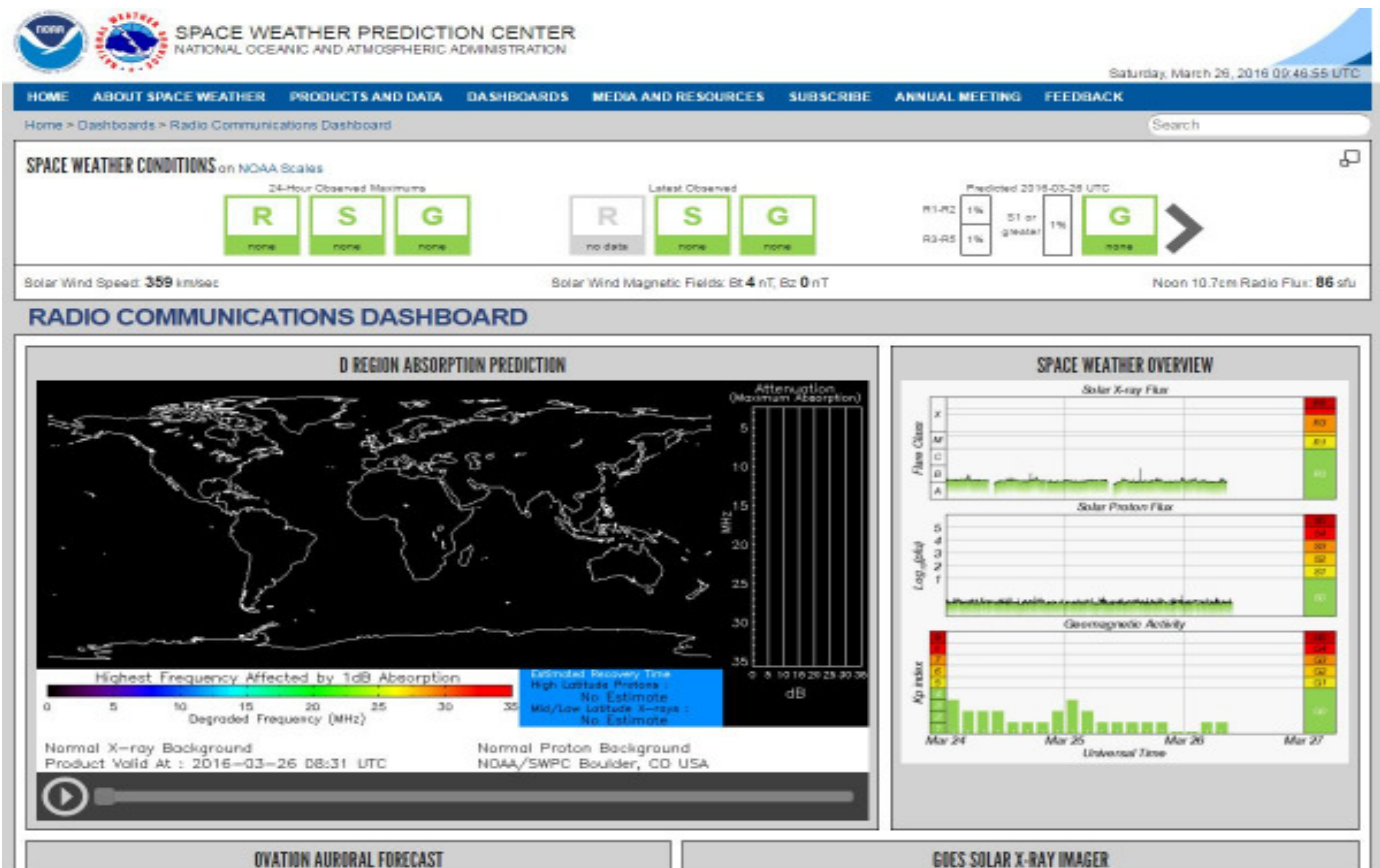
UTC: < 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 >

Image bundle generated on: Saturday, 26. March 2016 10:26AM in 10522 Seconds

DR2W DX Propagation v.0.9.4 , computed with: VOACAPL by HZ1JW  
Calculation parameters: [ Power: 100W, Antenna:3V2 monopole ]

Global Visitors: 00254876

link: <http://dr2w.de/dx-propagation/>



NOAA SPACE WEATHER PREDICTION CENTER  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

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Home > Dashboards > Radio Communications Dashboard

SPACE WEATHER CONDITIONS on NOAA Scales

24-Hour Observed Maximums: R, S, G (none)

Latest Observed: R, S, G (no data, none, none)

Predicted 2016-03-26 UTC: R1-R2 1%, S1 or greater 1%, R3-R5 1%, G (none)

Solar Wind Speed: 359 km/sec Solar Wind Magnetic Fields: Bt 4 nT, Bz 0 nT Noon 10.7cm Radio Flux: 86 sfu

RADIO COMMUNICATIONS DASHBOARD

D REGION ABSORPTION PREDICTION

Attenuation (Maximum Absorption) [dB]

Highest Frequency Affected by 1dB Absorption [MHz]

Degraded Frequency [MHz]

Estimated Recovery Time: High Latitude Protons: No Estimate, Mid/Low Latitude X-rays: No Estimate

Normal X-ray Background Product Valid At: 2016-03-26 08:31 UTC Normal Proton Background NOAA/SWPC Boulder, CO USA

SPACE WEATHER OVERVIEW

Solar X-ray Flux

Solar Proton Flux

Geomagnetic Activity

GOES SOLAR X-RAY IMAGER

link: <http://www.swpc.noaa.gov/communities/radio-communications>

## 2. 6998.5 Polish MIL

Polish Military was still transmitting on 6998.5 kHz on MIL-188-141A (ALE), MIL-188-110A and USB voice traffic. The 7 MHz-band was affected up to 7001.5 kHz every morning at about 07 utc. The German PTT (BNetzA) sent an official complaint to the Polish PTT in February 2016.

## 3. Chinese ship “Sea Treasure” on 14270 kHz

An amateur from UK informed me about a Chinese ship (ident 3FGM6), which had been heard with traffic on 14270 kHz on USB. I suppose that the traffic was in Region 3.

**Please observe: An ITU footnote says, that 14250 – 14350 kHz is also available for commercial and other purposes in Region 3, too!**



The Chinese ship “Sea Treasure”

source:

[https://www.fleetmon.com/vessels/sea-treasure\\_9634907\\_8133241/photos/1288219/](https://www.fleetmon.com/vessels/sea-treasure_9634907_8133241/photos/1288219/)

## 4. Legal traffic on the 80 m-band (shared band!)

3520.0 kHz – USB – female persons in Russian voice, often in the evenings – location: Astana, Kazakhstan purpose unknown – possibly MIL

3673.0 kHz – USB – Dutch coastguard Den Helder with weather reports

The band is crowded of many other legal services like military and police.

More infos -> see tables below!

## 5. Broadcast and (or) QRM on 7 MHz

7120 kHz – Radio Hargaysa Somalia – no change

7200 kHz – Radio Taiwan International and Chinese BC-jammer

7205 kHz – Voice of Islamic Republic Iran splattering down to 7195 kHz (1920 – 1950 UTC)

## 6. Hamradio 2016 – Invitation to all coordinators and friends!

**IARUMS Region 1 and DARC Monitoring System Meeting at the HAM-RADIO 2016 in Friedrichshafen:**

**Saturday, June 25<sup>th</sup> 2016 from 10.00 – 11.30 local time - Room Swiss (180) – Hall A2**

### Agenda:

#### 1. Official opening by DK2OM and HB9CET

#### 2. Main lecture “Monitoring and bearing today” by Dr. Ing. Christof Rohner (DL7TZ / 9V1CR) – Fa. Rohde&Schwarz

7. 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>



## 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)  
**FMOP** = frequency modulation on pulse (OTH radars) \*\*\* **5BL** = cyrillic 5 lettergroups

### ARSK MONITORING OVERVIEW FOR MARCH 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 **23** OTH radars on 40 m, **12** OTH radars on 20 m, **72** OTH radars on 17m, **77** OTH radars on 15 m and **30** OTH radars on 10 m in March 2016. Chinese OTH radars often appeared on the 15, 20, 40 and 80 m-bands.

#### 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	1812,0	1706	02	03	RUS		USB LSB			14 tones – hyperbolic radio navigation system – BRAS-3/RS-10 – Kaliningrad – no carrier - daily, all day
DK2OM	1852,0	vt	dly	03	I	IPP	USB			Palermo Radio, weather reports
DK2OM	1855,0	vt	dly	03	I	IQP	USB			San Benedetto Radio, weather reports
DK2OM	1876,0	vt	dly	03	I	IQN	USB			Lampedusa Radio, weather reports
DK2OM	1888,0	vt	dly	03	I	IPD	USB			Civitavecchia Radio, weather reports
DK2OM	1896,5	1725	03	03	D		PSK8	2400	2400	Stanag4285 – 600 bps long – German Navy – daily, all day
DK2OM	1925,0	vt	dly	03	I	IPL	USB			Livorno Radio, weather reports
DK2OM	<b>3500,0</b>	<b>1930</b>	<b>13</b>	<b>03</b>	<b>E</b>		<b>USB</b>			<b>Spanish fishery</b>
DK2OM	3500,0	---	--	03	F		FMCW		20k	French burst radar, 6 sps, similar Codar sounding, South France
DK2OM	3500,0	vt	dly	03	TUR		FSK8	125	1750	ALE, “2016” “4017” – Turkish Red Crescent – just for info!
DK2OM	3500,0	0845	15	03	F		USB			French fishery
DK2OM	3501,0	vt	dly	03	UKR		FSK8	125	1750	ALE, “H10” “B10” “I10” “D10” “G10”
DK2OM	3501,8	2158	14	03	F		PSK8	2400	2400	Stanag4285 - Langres
DK2OM	3502,0	2150	23	03					3000	broadband
DK2OM	3503,0	1806	02	03	F		USB			French fishery – just for info
DK2OM	3503,5	2016	07	03	G	no ITU	FSK8	125	1750	ALE – “XSS” “XPU” “XJR” – British MIL Tascomm – vt, daily - legal!
DK2OM	3503,5	1747	07	03	ISR		PSK4 PSK8	75 2400	2250 2400	hybrid modem – ISR Navy – PSK4 parallel and PSK8 serial

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	3504,0	1810	21	03	I		USB			Italian pirates
DK2OM	<b>3504,5</b>	<b>2120</b>	<b>03</b>	<b>03</b>	<b>CIS</b>		<b>A3E</b>			<b>CIS pirates – unstable carrier</b>
DK2OM	3505,0	1735	30	03	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	<b>3505,5</b>	<b>1938</b>	<b>24</b>	<b>03</b>	<b>CIS</b>		<b>A3E</b>			<b>CIS pirates – unstable carrier</b>
DK2OM	3506,0	2043	24	03	BLR		F1B	75	250	north of Minsk
DK2OM	3515,0	1742	30	03	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	<b>3516,9</b>	<b>2123</b>	<b>03</b>	<b>03</b>	<b>CIS</b>		<b>A3E</b>			<b>CIS pirates – unstable carrier</b>
DK2OM	3520,0	1801	15	03	KAZ		USB			2 women in Russian voice - Astana
DK2OM	3520,0	1520	27	03	FEa		FMOP		370k	4 OTH radars at the same time 3520 – 3890 kHz – 43 sps
DK2OM	<b>3520,8</b>	<b>1807</b>	<b>15</b>	<b>03</b>	<b>CIS</b>		<b>A3E</b>			<b>CIS pirates – unstable carrier</b>
DK2OM	3525,0	2124	03	03	F		PSK4	75	5800	LINK11-CLEW on both sidebands (5800 Hz wide) – area of Marseille – legal!
DK2OM	3527,0	2125	03	03			F1B	50	200	Severomorsk
DK2OM	3531,0	---	--	03	RUS	REA4	N0N			unclean carrier - RUS airforce Moscow, ident: 1940 utc - daily
DK2OM	3532,0	---	--	03	F		PSK4	75	5800	LINK11-CLEW on both sidebands (5800 Hz wide) – area of Brest – legal!
DK2OM	3533,0	1831	20	03	CHN		FSK8	125	1750	ALE, “544” “570”
DK2OM	3535,0	1710	06	03	E		USB			Spanish fishery – also 10.03.2016 at 2115 utc
DK2OM	3537,0	2126	03	03	CIS		A3E			<b>CIS pirates – unstable carrier</b>
DK2OM	3543,0	1805	22	03	CHN		FSK8	125	1750	ALE, “673” “731”
DK2OM	3545,0	1834	20	03	CHN		FSK8	125	1750	ALE. “220” “299”
DK2OM	<b>3550,0</b>	<b>0730</b>	<b>dly</b>	<b>03</b>	<b>F</b>		<b>A3E</b>			<b>French amateurs not respecting bandplans - daily</b>
DK2OM	3550,0	vt	vd	03	ALG	no ITU	FSK8	125	1750	ALE, “IU50” “IU52” “FN50”
DK2OM	3553,8	2128	03	03	TUR		PSK8	2400	2400	Stanag4285 – 600 bps long -TUR MIL - Ankara – daily, all day - legal operation
DK2OM	3557,0	1808	15	03	RUS		F1B	75	250	Kaliningrad
DK2OM	3562,0	2014	28	03			PSK2A	120	2600	AT3004D -
DK2OM	3570,0	2200	20	03	F		USB			French fishery
DK2OM	3576,6	ady	dly	03	I	IZ3DVW	A1A			3576.550 - uncoordinated beacon – disturbing JT65
DK2OM	3585,0	ady	dly	03	TWN	HLL	F1C		800	WX-fax Taiwan - 120 rpm, IOC 576, - daily, all day - legal!
DK2OM	3586,0	vt	dly	03	G		PSK2A	40	40	encrypted – every evening Great Britain – purpose unknown
DK2OM	3587,0	vt	vd	03	E	no ITU	FSK8	125	1750	ALE, “TVV” “TXX” - Spanish Guardia Civil
DK2OM	3587,0	2116	10	03			PSK2A	120	2600	AT3004D -
DK2OM	3590,0	vt	dly	03	PAK	no ITU	FSK8	125	1750	ALE, “KW” “KHAIBAR” – Pakistan navy
DK2OM	3593,7	---	--	03	RUS	D	A1A			Cluster beacon – Sevastopol RUS Navy – “RCV”
DK2OM	3593,8	---	--	03	RUS	P	A1A			Cluster beacon – Kaliningrad RUS Navy – “RMP”
DK2OM	3593,9	---	--	03	RUS	S	A1A			Cluster beacon – Severomorsk RUS Navy – „RIT“
DK2OM	3594,0	---	--	03	RUS	C	A1A			Cluster beacon C - Moscow RUS Navy - “RIW”
DK2OM	3595,0	---	--	03	RUS	K	A1A			Cluster beacon - Petropavlovsk Kamchatskiy - RUS Navy - Pacific fleet - “RCC”
DK2OM	3596,0	vt	dly	03	D, S, HRV		FSK8	125	1750	ALE, “DK3CW” “SA6CBK” “9A0PZ” – just for info!
DK2OM	3597,0	1736	09	03	CHN		FSK8	125	1750	ALE, “307” “706”
DK2OM	3617,0	vt	dly	03	HRV	9A5EX	FSK8	125	1750	ALE, “9A5EX” – HAM-ALE - just for info
DK2OM	3622,5	1925	12	03	J	JMH	F1C		800	Tokyo Meteo – 120 rpm – IOC 576 – daily, all day - legal!!!
DK2OM	3632,0	1509	09	03	FEa		FMOP		52k	Far East OTHR - 3632 – 3684 kHz – 43 sps
DK2OM	3636,0	1954	16	03	FEa		FMOP		89k	Far East OTHR - 3636 – 3725

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										kHz – 43 sps
DK2OM	3640,0	vt	dly	03	G		FSK8	125	1750	ALE, “XSS” - British MIL Tascomm – just for info!
DK2OM	3640,0	1638	17	03	FEa		FMOP		92k	OTH radar – 43 sps 3640 – 3732 kHz – 2 systems with alternating sweeps
DK2OM	3642,0	ady	dly	03	CHN		A1A			loop – DKG6 de 3A7D Chinese military – daily, all day
DK2OM	3648,0	---	--	03	ARS		FSK8 LSB	125	1750	ALE, “AAI” “AAN”
DK2OM	3649,0	vt	vd	03	ALG	no ITU	FSK8	125	1750	ALE, “BI20” PA20”
DK2OM	3658,0	vt	vd	03	UZB		A1A			beacon “V” - Tashkent
DK2OM	3671,0	1449	07	03	CHN		FSK8	125	1750	ALE, “155” “154”
DK2OM	<b>3673,0</b>	<b>vt</b>	<b>dly</b>	<b>03</b>	<b>HOL</b>		<b>USB</b>			<b>Dutch coastguard Den Helder – WX reports – legal!</b>
DK2OM	3686,0	1653	09	03	CHN		FSK8	125	1750	ALE, “776”
DK2OM	3692,0	1458	25	03	FEa		FMOP		85k	Far East OTHR - 3692 – 3777 kHz – 43 sps
DK2OM	3718,0	1515	26	03	FEA	7CJK	A1A			loop “7CJK”
DK2OM	3720,0	vt	dly	03	S		FSK8	125	1750	ALE, “YU” “YT” “YV” “DZ” – Swedish MIL
DK2OM	3751,0	ady	dly	03	FEa		A1A			“99 ?? 2T48 ??” - loop
DK2OM	3751,5	vt	dly	03	POL	no ITU	FSK8	125	1750	ALE, “IZ3” “MI3”
DK2OM	3756,0	1922	09	03	RUS		A3E			RUS MIL – channel marker – Tuapse – East Black Sea – night QRG – daily – even audible in Japan
DK2OM	3757,0	ady	dly	03	FEa	RIS9	A1A			“M8JF de RIS9” - loop
DK2OM	3761,5	vt	vd	03	POL	no ITU	FSK8	125	1750	ALE, “NI9” “PL7” “AB2” – Polish MIL
DK2OM	3772,0	1940	11	03	RUS		FMOP		45k	OTH radar – 43 sps – 3772 – 3817 kHz - Makhachkala
DK2OM	3772,0	ady	dly	03	FEa	A4JC	A1A			“A4JC” - loop
DK2OM	3777,0	ady	dly	03	FEa		A1A			“M8JF de RIS9” – loop – dly
DK2OM	3791,0	vt	vd	03	D	DK0ESD	FSK8	125	1750	ALE, “DK0ESD” – daily just for info!
DK2OM	3797,0	ady	dly	03	FEa		A1A			“M8JF de RIS9” – loop
DK2OM	6998,5	0904	15	03	POL		FSK8 PSK8 USB	125 2400	1750 2400	ALE, “ZE2” “OL1” “GO7” “MA3” and MIL-188-110A – until 7001.500 kHz – Polish MIL
DK2OM	7000,0	1540	01	03	INS		USB LSB			Indonesian pirates – daily – all day - audible in Europe in the evenings
DK2OM	<b>7000,0</b>	<b>ady</b>	<b>dly</b>	<b>03</b>	<b>RUS</b>		<b>H3E</b>		<b>3.4 k</b>	<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	7000,0	vt	dly	03	?	no ITU	FSK8	125	1750	ALE, “210” “20989” “2205” “203”
DK2OM	7000,0	1747	03	03	E		USB			Spanish fishery
DK2OM	7000,0	1830	18	03	E		USB			Spanish fishery
DK2OM	7001,5	0700	vd	03	POL		PSK8	2400	2400	RF QRG 6998.5 kHz – 7000.3 kHz center - MIL-188-110A – 600 / 300 bps short – Polish MIL
DK2OM	7001,8	1538	08	03	F		PSK4	75	2300	Link11 - Issoudun – west of Bourges
DK2OM	7001,8	1350	28	03	ROU		PSK8	2400	2400	Stanag-4285 – 600bps long - Constanta
DK2OM	7005,0	1541	01	03	INS		USB LSB			Indonesian pirates
DK2OM	7010,0	1542	01	03	INS		USB LSB			Indonesian and Philippine pirates
DK2OM	7015,0	1543	01	03	INS		USB LSB			Indonesian pirates
DK2OM	7018,0	---	--	03	RUS	REA4	F1B	100	800	mostly idling – Russian airforce Moscow – ident at full hour + 41 min. on F1A

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	7020,0	1545	01	03	INS		USB LSB			Indonesian pirates
DK2OM	7020,0	vt	dly	03	ALB		FSK8	125	1750	ALE, "CS004A" "RS008D" "RS0" – Albanian coast - daily
DK2OM	7023,0	1833	02	03	RUS		FMCW		13k	OTH radar Contayner - 50 sps Gorodezh – long lasting
DK2OM	7024,0	1830	09	03	RUS		FMCW		13k	OTH radar Contayner - 50 sps Gorodezh
DK2OM	7025,0	1545	01	03	INS		USB LSB			Indonesian pirates
DK2OM	7027,5	---	--	03	KAZ	„V“	A1A			beacon "V" - Almaty
DK2OM	7029,0	2046	10	03	CHN		FMCW		160k	Chinese broadband OTH radar 7029 – 7189 kHz – 10 sps
DK2OM	7030,0	1546	01	03	INS		LSB			Indonesian pirates
DK2OM	7033,0	2056	10	03	CHN		FMCW		160k	Chinese broadband OTH radar 7033 – 7193 kHz – 10 sps
DK2OM	7035,0	1546	01	03	INS		USB LSB			Indonesian pirates
DK2OM	7035,0	0836	25	03	RUS		PSK2	120	2600	AT3004D – submode idle - Moscow
DK2OM	7039,0	2022	14	03	RUS	C	A1A			Cluster beacon C - Moscow RUS Navy - "RIW"
DK2OM	7039,1	---	--	03		A	A1A			beacon "A" - loop
DK2OM	7039,3	1527	13	03	RUS	K	A1A			Cluster beacon - Petropavlovsk Kamchatskiy - RUS Navy - Pacific fleet - "RCC" - daily
DK2OM	7039,4	1443	07	03	RUS	M	A1A			Cluster beacon – Magadan RUS Navy – „RTS“
DK2OM	7040,0	1547	01	03	INS		USB LSB			Indonesian pirates
DK2OM	7040,0	vt	dly	03	F	F6BAZ	FSK8	125	1750	ALE, "F6BAZ" – just for info
DK2OM	7040,0	ady	dly	03	I		A1A			<b>IZ3DVW – uncoordinated and unwanted beacon</b>
DK2OM	7040,5	vt	dly	03	HRV		FSK8	125	1750	ALE, "9A5EX" "9A0ALE" – just for info
DK2OM	7045,0	1547	01	03	INS		LSB			Indonesian pirates
DK2OM	7047,37	vt	vd	03	D		FSK8	125	1750	ALE, "DL0NOT" – just for info!
DK2OM	7049,0	1720	06	03	RUS		FMCW		13k	OTH radar Contayner - 50 sps Gorodezh
DK2OM	7049,5	vt	vd	03	HRV G F	9A0ALE MIDFO F6BAZ	FSK8	1250	1750	Amateur ALE, just for info! daily – various times
DK2OM	7050,0	1548	01	03	INS		USB			Indonesian pirates
DK2OM	7050,0	2149	18	03	CHN		FMCW		160k	Chinese broadband OTH burst radar – 10 sps – 7050 – 7210 kHz
DK2OM	7053,0	1633	09	03	FEa		FMCW		32k	Codar like ocean surface radar 2.6 sps – 7053 – 7085 kHz
DK2OM	7055,0	1925	03	03	RUS		FMCW		13k	OTH radar Contayner - 50 sps Gorodezh
DK2OM	7055,5	vt	vd	03	MEa	no ITU	FSK8	125	1750	ALE, "111" "132" "133" - Caucasus
DK2OM	7064,0	1946	09	03	RUS		FMCW		13k	OTH radar Contayner - 50 sps Gorodezh – long lasting
DK2OM	7066,0	2016	25	03	FEa		FMCW		32k	Codar like ocean surface radar 2.6 sps – 7066– 7098 kHz
DK2OM	7070,0	vt	vd	03	GEO	no ITU	FSK8	125	1750	ALE, "MV" "244" "686" "334" "204" "571" – daily active
DK2OM	7088,8	vt	vd	03	S	SL0FRO	A1A			7088.830 kHz - cw-trainee, Sweden - SL0FRO - just for info!
DK2OM	7089,8	---	--	03	TUR CYP		PSK8	2400	2400	Link11 - SLEW – aircraft – west of Cyprus
DK2OM	7090,0	1945	20	03	FEa		FMCW		32k	Codar like ocean surface radar 2.6 sps – 7090 – 7122 kHz
DK2OM	7091,5	---	--	03	KAZ	„V“	A1A			loop – ident "V" – Almaty - Kazakhstan
DK2OM	7092,0	vt	vd	03			FSK8	125	1750	ALE, "3014"
DK2OM	7092,0	2043	10	03	CHN		FMCW		160k	Chinese broadband OTH radar

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										7092 – 7252 kHz – 10 sps
DK2OM	7093,0	1641	17	03	CHN		FMCW		10K	Chinese OTH burst radar – 66 sps
DK2OM	7099,5	vt	dly	03	HRV	9A0ZG	FSK8	125	1750	ALE, “9A0ZG” “9A5EX1P” “9A0OS” – daily - just for info!
DK2OM	7101,8	1627	14	03	G		PSK8	2400	2400	Stanag4285 – 600 bps – area of King’s Lynn
DK2OM	7102,0	vt	dly	03	TWN		FSK8	125	1750	ALE, “BV4AS” – just for info!
DK2OM	7102,0	1109	22	03	HRV SUI D	9A0MIL	FSK8	125	1750	ALE, “9A0MIL” “9A2KS” “HB9MHB” “9A0ZG” “9A4OS” “DK0ESD” – just for info!
DK2OM	7110,0	vt	dly	03	HRV	9A0ALE	FSK8	125	1750	ALE, “9A0ALE” – just for info
DK2OM	7114,0	1640	06	03	RUS		F1B	50	200	Kaliningrad
DK2OM	<b>7120,0</b>	<b>vt</b>	<b>dly</b>	<b>03</b>	<b>SOM</b>		<b>A3E</b>		<b>9k</b>	<b>Radio Hargaysa – Somalia – daily – even audible in Australia and Japan</b>
DK2OM	7122,0	---	--	03	FEa	V	A1A			loop “V”
DK2OM	7137,0	1441	13	03	TWN		FSK8 LSB	125	1750	LSB - ALE, “CBIUN” “CBWPC” “CQYTX” “CAPLJ” “CTFOJ” “CEGTO” “CSNYI” - Taiwanese navy – daily
DK2OM	7137,0	1720	07	03	RUS		F1B	50	200	Kaliningrad
DK2OM	7140,0	1925	12	03	FEa		FSK8	125	1750	ALE. “1111”
DK2OM	7149,5	1550	30	03	RUS		PSK2A	120	2600	AT3004D - Severomorsk
DK2OM	7150,0	1710	22	03	FEa		FMCW		32k	Codar like ocean surface radar 2.6 sps – 7150 – 7182 kHz
DK2OM	<b>7163,0</b>	<b>---</b>	<b>--</b>	<b>03</b>	<b>UKR</b>		<b>A3E</b>			<b>encrypted MSGs - SZRU in Rivne</b>
DK2OM	7170,0	vt	vd	03	CHN	no ITU	FSK8	125	1750	ALE, “103” “103”
DK2OM	7179,0	1615	30	03	RUS		PSK2A	120	2600	AT3004D - Sevastopol
DK2OM	7183,0	vt	dly	03	SUI		FSK8	125	1750	ALE, “HB9MHB” – just for info!
DK2OM	7185,5	vt	vd	03	D HRV		FSK8	125	1750	ALE, “9A5EX” “DK0ESD” just for info - daily
DK2OM	<b>7195,0</b>	<b>1935</b>	<b>31</b>	<b>03</b>	<b>SDN</b>		<b>A3E</b>		<b>18k</b>	<b>splatters from Radio Sudan on 7205 kHz – 1930 – 2101 utc</b>
DK2OM	7197,0	1429	07	03	TUR	no ITU	FSK8	125	1750	ALE, “206102” “318013” “365013” – Turkish organisations and Turkish Civil Defense - source: DL8AAM – daily, various times
DK2OM	<b>7200,0</b>	<b>1350</b>	<b>15</b>	<b>03</b>	<b>MMR</b>		<b>A3E</b>			<b>Myanmar Radio – 0930 – 1500 utc</b>
DK2OM	<b>7200,0</b>	<b>---</b>	<b>--</b>	<b>03</b>	<b>TWN</b>		<b>A3E</b>			<b>Radio Taiwan Int. – 1000 – 1300 utc</b>
DK2OM	10100,8	ady	dly	03	D		F1B	50	450	Baudot - German Weatherservice – legal!
DK2OM	10110,0	vt	dly	03	SNG	no ITU	FSK8	125	1750	ALE, “CN6” “68” – Singapore Navy - Changi Naval Base
DK2OM	<b>10110,0</b>	<b>2010</b>	<b>18</b>	<b>03</b>	<b>MRC</b>		<b>USB</b>			<b>Moroccan fishery</b>
DK2OM	10112,0	1456	23	03	RUS		PSK4B	120	2600	AT3104D – submode idle and traffic - Kaliningrad
DK2OM	10112,0	1730	31	03	I		PSK8	2400	2400	Stanag-4285 – 600 bps long - Rome
DK2OM	10113,0	vt	vd	03	TUN	no ITU	FSK8	125	1750	ALE, “TUD” “STAT5” “STAT154”
DK2OM	10114,0	vt	dly	03	ALG	no ITU	FSK8	125	1750	ALE, “BSF” “ZEN” “CM2OR2”
DK2OM	10114,8	0814	18	03	RUS		F1B	100	1000	CIS14 – Moscow - daily
DK2OM	10115,0	vt	dly	03	MRC	no ITU	FSK8	125	1750	ALE, “100” “114” “201” “XXZ” – Western Sahara
DK2OM	<b>10115,0</b>	<b>1925</b>	<b>25</b>	<b>03</b>	<b>E</b>		<b>USB</b>			<b>Spanish fishery</b>
DK2OM	10116,5	---	--	03	AFS		F7D	54.3	2120	MHF50 – 33 tones - South African navy
DK2OM	10120,0	vt	dly	03	ALG	no ITU	FSK8	125	1750	ALE, “CM6” “01012016”
DK2OM	<b>10120,0</b>	<b>1600</b>	<b>22</b>	<b>03</b>	<b>TUR</b>		<b>USB</b>			<b>male persons – East Turkey</b>
DK2OM	10123,0	vt	dly	03	ALG	no ITU	FSK8	125	1750	ALE, “CM3” “COF” “BSF” “CM2” “ESA” – Algerian Airforce



DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	10127,0	1610	27	03	AUS		FMCW		10k	OTH burst radar JORN– intro tones - 23 sps – 2.7 sec bursts
DK2OM	10129,0	vt	dly	03	ALG	no ITU	FSK8	125	1750	ALE, “CM1” “CTF” “772”
DK2OM	10130,0	1710	02	03	MRC		USB			Moroccan fishery
DK2OM	10130,0	1847	02	03			FSK8	125	1750	ALE, “1144” “1608”
DK2OM	10133,0	1030	23	03	G		USB			UK fishermen
DK2OM	10135,0	1747	13	03	TUR		FMCW		20k	OTH radar – area of Antalya
DK2OM	10136,0	vt	dly	03	ALG	no ITU	FSK8	125	1750	ALE, “CM3” “BLD” “CNC” “TF2”
DK2OM	10136,0	ady	dly	03	RUS		F1B	50	200	CIS-50-200 - Chita – daily, all day
DK2OM	10140,0	vt	vd	03	CHN ?	no ITU	FSK8	125	1750	ALE, “205” “201” “LT”
DK2OM	10144,0	ady	dly	03	D	DK0WCY	A1A			10143.986 kHz - DK0WCY – German aurora beacon – <b>just for info!</b>
DK2OM	10145,5	0950	31	03	SUI	HB9MHB	FSK8	125	1750	ALE, “HBMHB” - just for info - daily
DK2OM	10145,5	vt	dly	03	TWN AUS	BV4AS	FSK8	125	1750	ALE, “BV4AS” “VK4SAA” – just for info!
DK2OM	10153,0	1829	24	03	AUS		FMCW		10k	OTH burst radar JORN– intro tones - 23 sps – 3 sec bursts – 10148 – 10158 kHz
DK2OM	14000,0	1940	07	03	B		USB			Brazilian pirates
DK2OM	14000,0	---	--	03	FEa		USB			pirates from Java Sea - daily
DK2OM	14000,0	1948	18	03	E		USB			Spanish fishery
DK2OM	14046,0	0952	31	03	RUS		PSK2A	120	2600	AT3004D – Far East Russia
DK2OM	14050,0	0943	15	03	RUS		F1B	75	200	area of Novosibirsk
DK2OM	14100,0	vt	dly	03	ALG	no ITU	FSK8	125	1750	ALE, “6206” – “6204” - “6202” “6207” “6217” “MTL” “IJI” – Mauritanian border – daily, all day
DK2OM	14109,0	vt	dly	03	S	HAM	FSK8	125	1750	ALE, “SM3FXL” – just for info!
DK2OM	14109,0	vt	dly	03	RUS	RV3APM	FSK8	120	1750	ALE, “RV3APM” – just for info!
DK2OM	14120,4	1414	16	03	IRN		F1B	600	600	DPRK-FSK600 – North Korean emba - Tehran
DK2OM	14135,0	1444	20	03	RUS		USB			music and BC-like transmission – area of Tver
DK2OM	14135,0	1512	22	03	RUS		FMCW		10k	OTH burst radar Contayner - 10 sps Gorodezh
DK2OM	14150,0	0900	27	03	CHN		FMCW		100k	Chinese broadband OTH radar – 25 sps – 14150 – 14250 kHz
DK2OM	14160,0	vt	dly	03	MRC		FSK8	125	1750	ALE, “9204” “9228” “9236”
DK2OM	14160,0	1046	03	03	RUS		F1B	100	250	idling - Moscow
DK2OM	14180,0	0814	18	03	RUS		F1B	50	250	Rostov
DK2OM	14192,0	1058	24	03	RUS		F1B	50 75	500 500	RUS navy Kaliningrad - daily
DK2OM	14205,0	vt	dly	03	CHN ?	no ITU	FSK8	125	1750	ALE, “505” “822” – 60 deg. from DL - CHN ?
DK2OM	14216,0	1210	10	03	UKR		A3E			Rivne
DK2OM	14221,0	---	--	03	KGZ		F1B	50	200	CIS-50-50 - Bishkek – daily
DK2OM	14223,5	---	--	03	RUS		F1B	600	600	DPRK-FSK 600 - DPRK emba Moscow
DK2OM	14228,0	1419	20	03	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	14228,0	1430	20	03	POR		F1B	75	1000	RUS ship – Portuguese coast
DK2OM	14239,0	---	--	03	CHN		PSK4	60	2350	PRC 30 tone modem – LSB mode – LSB QRG – pilot tone 450 Hz
DK2OM	14240,0	1008	03	03	RUS		F1B	75	250	Moscow
DK2OM	14242,0	0905	11	03	RUS		PSK4A	120	2600	AT3104D – Moscow
DK2OM	14253,0	1354	11	03	RUS		F1B	75	250	idling – Saransk – also 18.03.2016 at 1350 utc
DK2OM	14260,0	vt	dly	03	SRB	YU1BI	FSK8	125	1750	ALE, “YU1BI” – just for info!
DK2OM	14265,0	vt	vd	03	TUR	no ITU	FSK8	125	1750	ALE, “526”
DK2OM	14272,0	1400	08	03	RUS	RCV	A1A			RUS Navy Sevastopol
DK2OM	14280,0	1005	Wed.	03	UKR		A3E			<b>female voice with encrypted msgs – figures – “SZRU” = Foreign Intelligence Service</b>

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										<b>of Ukraine in Rivne – every Wednesday at 1005 utc</b>
DK2OM	14295,0	vt	dly	03	SRB	YU1BI	FSK8	125	1750	ALE, “YU1BI” – just for info!
DK2OM	<b>14295,0</b>	<b>0930</b>	<b>07</b>	<b>03</b>	<b>TJK</b>		<b>A3E</b>		<b>9k</b>	<b>3<sup>rd</sup> from Radio Tajik on 4765 kHz – daily, all day</b>
DK2OM	14301,8	0957	03	03	CHN		PSK2	75	2200	PRC 16 tone modem – USB mode – pilot tone 450 Hz - RF 14300.0 kHz - China – Shanghai – daily – all day
DK2OM	14306,0	0934	28	03	RUS		PSK2A	120	2600	AT3004 – submode idle and traffic - Jekaterinburg
DK2OM	14330,0	vt	dly	03			FSK8	125	1750	ALE, “BV4”
DK2OM	14334,0	vt	vd	03	CHN	no ITU	FSK8	125	1750	ALE, “249” “255” “763”
DK2OM	14340,0	1350	31	03			PSK2A	120	2600	AT3004D – submode idle - Vladivostok
DK2OM	14344,7	--	---	03	CHN		PSK8	2400	2400	modified MIL-188-110A - 600 bps short – 14344.650 kHz – daily, all day
DK2OM	14346,0	vt	dly	03	THA	HS0ZEA	A1A			HS0ZEA beacon – 14345.950 kHz - every 5 minutes – daily - just for info!
DK2OM	14346,0	vt	vd	03	HRV RUS D		FSK8	125	1750	ALE, “9A0ZG” “RX3ARZ” “DK0ESD” – just for info – various times, daily
DK2OM	<b>14351,7</b>	<b>ady</b>	<b>dly</b>	<b>03</b>	<b>E</b>		<b>OFDM</b>	<b>30</b>	<b>2700</b>	<b>OFDM 73 + intro tone – experimental transmissions – Las Palmas – just for info!</b>
DK2OM	18100,0	vt	dly	03	MRC	no ITU	FSK8	125	1750	ALE, “A2” “A5” “A7” “S6” – “C3” “G401” “CD” “09” “G2” “LG6” “G301” “ELJADIDNET4” - daily, various times
DK2OM	18106,0	vt	vd	03	POR	CT2GOY	FSK8	125	1750	ALE, “CT2GOY” – just for info!
DK2OM	18107,0	0944	15	03	RUS	RDL	F1B	50	200	CIS-50-200 - Moscow – idle and traffic – Russian navy – various days and times – shared band!
DK2OM	18117,5	vt	vd	03	POR	CT2IXQ	FSK8	125	1750	ALE, “CT2IXQ” – just for info
DK2OM	18140,0	vt	dly	03	SRB	YU1BI	FSK8	125	2600	ALE, “YU1BI” – just for info!
DK2OM	18171,0	1516	22	03	CYP		FMCW		20k	18161 – 18181 kHz - OTH radar Cyprus – 50 sps
DK2OM	21000,0	vt	dly	03	FEa		USB			Far East pirates - daily
DK2OM	<b>21000,0</b>	<b>vt</b>	<b>vd</b>	<b>03</b>	<b>B</b>		<b>USB</b>			<b>Brazilian pirates – Rio de Janeiro with North Brazil – also: 24.09.2015 at 1650 utc</b>
DK2OM	<b>21000,0</b>	<b>---</b>	<b>--</b>	<b>03</b>	<b>SDN</b>		<b>USB</b>			<b>MFA Sudan – Khartoum with emba Yemen – voice traffic</b>
DK2OM	21001,0	1619	18	03	MRC		USB			Moroccan fishery
DK2OM	<b>21002,2</b>	<b>---</b>	<b>--</b>	<b>03</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	21010,0	0907	09	03	CYP		FMCW		20k	OTH radar Cyprus – 50 sps
DK2OM	21050,0	1127	01	03	CYP		FMCW		20k	OTH radar Cypus – 50 sps
DK2OM	21096,0	vt	dly	03	INS	YD00XH	FSK8	125	1750	ALE, “YD00XH3” – daily, various times - just for info!
DK2OM	21100,0	0846	05	03	CYP		FMCW		20k	OTH radar Cyprus – 25 sps
DK2OM	21131,0	vt	vd	03	CHN	no ITU	FSK8	125	1750	ALE, “A92” “L02” – Chinese diplo
DK2OM	21141,0	---	--	03	GEO		PSK8A	2400	2400	Stanag4538 – GEO MIL with AFG - daily
DK2OM	21145,0	vt	dly	03	MRC	no ITU	FSK8	125	1750	ALE, “B301”, “C3”, “IR4” “T4” “E4” “A2” “CD” “K3” “KB2” “J5” “GS4” “R3” – various times, daily
DK2OM	21145,8	ady	dly	03	I	IZ3DVW	A1A			IZ3DVW beacon – 21145,75 kHz - not coordinated with IARU
DK2OM	21150,0	0920	09	03	CYP		FMCW		20k	OTH radar Cyprus – 50 sps
DK2OM	21160,0	---	--	03	RUS		F1B	100	2000	4th from 5290 kHz (500 Hz shift) – St. Peterburg

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	21190,0	---	--	03	RUS		F1B	100	1000	harmonic from 10595 kHz - Moscow - daily
DK2OM	21331,5	1530	14	03	EGY		F1B	1200	600	DPRK-FSK1200 – North Korean emba Cairo
DK2OM	21353,5	---	--	03	GAB		F1B	600 600	600 1200	DPRK-FSK 600 - Libreville DPRK-FSK 1200
DK2OM	21371,0	0901	30	03	AUS		FMCW		10k	OTH burst radar – 50 sps – 5 sec bursts
DK2OM	21400,0	---	--	03	RUS		F1B	50	2000	harmonic from 5350 kHz – area of Moscow - daily
DK2OM	21409,5	---	--	03	RUS		F1B	100	2000	F1B 100 / 2000 - CIS14 – harmonic from 10704.75 - Jekaterinburg, RUS - daily
DK2OM	21436,0	---	--	03	RUS		PSK2A	120	5200	AT3004D – harmonic from 10718.0 kHz - Sevastopol
DK2OM	21438,0	0920	04	03	RUS	RCV	A1A			RIP90, RCV. RGX94 - RUS Navy Sevastopol - daily
DK2OM	21446,0	ady	dly	03	THA	HSOZEA	A1A			HSOZEA beacon – every 5 minutes - just for info!
DK2OM	25000,0	vt	vd	03	FIN		A3E			time signal Helsinki – just for info – carrier on 25000 – dots on 25001 and 24999 – daily, all day
DK2OM	28000,0	vt	vd	03	B		A3E			<b>Brazilian CBers – 28000 – 28315 – daily, all day - no change</b>
DK2OM	28000,0	vt	dly	03	CIS		F3E			<b>28000 – 29700 numerous CIS taxi nets – no change</b>
DK2OM	28010,0	---	--	03	POR		F1B	51	300	F1B bursts –west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28025,0	1059	06	03	POR		F1B	51	300	F1B bursts – 28025.050 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28030,0	0927	11	03	POR		F1B	51	340	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28045,0	---	--	03	POR		F1B	51	280	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28050,0	---	--	03	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28051,5	---	--	03	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28060,0	---	--	03	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28065,2	---	--	03	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28065,6	---	--	03	GAB		A3E		980	carrier and dots in USB and LSB, bursts every 60 sec – carrier – Gabon – daily and all day
DK2OM	28075,0	---	--	03	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28085,0	---	--	03	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28100,2	0943	12	03	POR		F1B	51	300	F1B bursts - 28100.780 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28102,1	---	--	03	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28125,0	0955	11	03	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	28135,0	---	--	03	RUS		F3E			RUS taxi - daily
DK2OM	28146,0	vt	vd	03	ARG B		FSK8	125	1750	ALE, "LU8EX" "PY2TI" "DL1" - just for info!
DK2OM	28200,0	0931	11	03	POR		F1B	51	330	F1B bursts - west of Lisbon - Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28224,4	---	--	03	GAB		A3E			carrier and dots +/- 770 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28249,6	---	--	03	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28250,5	---	--	03	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28275,1	---	--	03	AF		F1B	51	300	F1B bursts -Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28312,5	vt	vd	03	POR	CT2IXQ	FSK8	125	1750	ALE. "CT2IXQ" - just for info
DK2OM	28315,0	vt	dly	03	POR		F1B	51	320	F1B bursts - west of Lisbon - Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28345,1	---	--	03	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28400,0	1850	01	03	MRC		USB			Moroccan fishery
DK2OM	28435,0	----	--	03	E		F1B	81.9	140	Datawell-buoy "Waverider" - 28435.040 kHz - Costa del Sol - Malaga
DK2OM	28459,8	----	--	03	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28459,9	---	--	03	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28499,8	---	--	03	MEa		F1B	81.9	140	Datawell-buoy "Waverider" - 28499.875 kHz - Persian Gulf
DK2OM	28701,1	---	--	03	GAB		A3E		1056	carrier and dots +/- 528 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28751,2	---	--	03	GAB		A3E		1080	carrier and dots +/- 540 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28845,5	---	--	03	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28901,1	---	--	03	GAB		A3E		1056	carrier and dots +/- 528 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	29114,0	---	--	03	RUS		F1B	100	2000	harmonic from14557.0 kHz - Moscow
DK2OM	29249,9	1039	06	03	E		F1B	81.9	140	Datawell-buoy "Waverider" - 29249.880 kHz - Fuerteventura - daily, all day
DK2OM	29375,0	---	--	03	I		F1B	81.9	140	Datawell-buoy "Waverider" - 29374.898 kHz - Gallipoli, South Italy - daily, all day
DK2OM	29387,5	---	--	03	IND		F1B	81.9	140	Datawell-buoy "Waverider" - 29387.460 kHz - Indian NW coast, close to Pakistan - daily, all day
DK2OM	29400,0	---	--	03	USA		F1B	81.9	140	Datawell-buoy "Waverider" - 29400.070 kHz - USA north- east coast - NY daily, all day
DK2OM	29450,0	1043	06	03	MRC		F1B	81.9	140	Datawell-buoy "Waverider" - 29449.920 kHz - area of El Aaiun - Morocco - daily, all day
DK2OM	29500,0	---	--	03	G		F1B	81.9	140	Datawell-buoy "Waverider" - area of Gibraltar - daily, all



DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										day
DK2OM	29525,0	---	--	03	MRC		F1B	81.9	140	Datawell-buoy "Waverider" – 29524.990 kHz - Agadir - Morocco – daily, all day
DK2OM	29625,0	---	--	03	USA		F1B	81.9	140	Datawell-buoy "Waverider" – 29625.024 kHz - USA north-east coast – daily, all day

### IRTS – Ireland – EI3GYB (Michael)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	DETAILS
IRTS	3504	2015-2050	02	03	HOL or MM		USB	Dutch fishermen, 2 male persons
IRTS	3515	2000	22	03	POR or MM		USB	Portuguese fishermen, 2 male voices. Loud motor noise.
IRTS	3520	1802	08	03	KAZ		USB	Female voice, Russian
IRTS	3520	1832-0100	08+09	03	KAZ		USB	Patrol check in Russian. Nearly always female voices. Periodic check every half hour 2 minutes past 30 or 60 minutes. Only very short messages like "I am listening for number x".Katarin , I am listening ".Calls always 2 letters and one number or 2 numbers and one letter. A few times a male voice came up. He called himself Roman
IRTS	3535	1745-1756	01	03	F or MM		USB	French Fishermen on incorrect frequency. 2 male persons
IRTS	3540	1415	16	03	POR or MM		USB	Portuguese Fishermen
IRTS	3540	0340	18	03			USB	2 male voices, Arabic
IRTS	3545	1950	22	03			USB	Spanish fishermen, 2 male persons.
IRTS	3548	0330-0415	10	03			USB/LSB	Male voice in Russian. Looks like a net. Many stations calling in for short reports. Switches over to LSB at 0410.
IRTS	3548	1950	22	03				1 male person calling in Russian
IRTS	3550	0330	10	03			USB	Female voice in Russian, calling others.
IRTS	5403.5	1815-1902	01	03			USB	Pop music and loud whistling on and off.
IRTS	7000	2140	20	03	RUS		AM	Buzzer
IRTS	7040	1910-2050	03	03				Very strong Radar from 7040 to 7071 kHz. This section of the band is unusable.
IRTS	7046	1930	09	03				Radar 7046 to 7078 kHz
IRTS	7047	0430	10	03				Radar from 7047 to 7067 kHz
IRTS	7080	1730	10	03				Radar 7080 to 7172 kHz. Band not usable.
IRTS	7088.8	1930-2025	05	03				Random CW letters and figures, nonstop
IRTS	7120	0330	18	03	SOM		AM	Radio Hargeysa , BC station
IRTS	7150	1940 to 2000 and beyond	31	03				Extremely strong monster digital signal. Frequency unusable.
IRTS	7200	1340 to 1400	12	03	CHN		AM	Radio Taiwan International, until s/off at 1400 z.
IRTS	10115	1930	25	03			USB	2 male voices, Portuguese
IRTS	10121	1130-1140	08	03			USB	2 male voices, conversation in an Asiatic language.
IRTS	10131.2	1810	08	03			USB	2 male voices, probably Korean
IRTS	14125	1300	16	03				Radar, 14125 to 14140 kHz.
IRTS	14128	0945	18	03				Radar from 14128 to 14250 kHz.
IRTS	14264	1215	15	03				Radar from 14264 to 14284 kHz
IRTS	14269	1400	21	03				Radar from 14269 to 14283 kHz
IRTS	18139	1445	23	03				Radar 18139 to 18173 kHz
IRTS	21292	1150	11	03				Radar 21292 to 21345 kHz.
IRTS	21313	1515	26	03				Radar 21313 to 21340 kHz
IRTS	21352.5	1410	09	03				Digital signals, very strong. Most likely a N.

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	DETAILS	
								Korean embassy in W. Africa	
IRTS	21400	1130	15	03				Radar from 21400 to 21429 kHz	
IRTS	24887	1120	02	03				Strong Radar, 24887 to 24910 kHz	
IRTS	24945,5	1225	15	03	BRA		LSB	Brazilian CB pirates, several male voices, Roger Beeps.	
IRTS	24977	1000	15	03				Radar from 24977 to 24999 kHz	

## KARS – Kuwait – 9K2RR (Faisal)

## MRASZ – Hungary - HA7PL (Laci)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SH	DETAILS
MRASZ	3514,0	2147	1	3			A1A		deliberate disturbance
MRASZ	3542,0	1929	23	3			A1A		"DKG6 de 3A7B V"
MRASZ	3557,0	2121	23	3			F1B	250	
MRASZ	3567,8	1826	9	3			A1A		Dashes, disturbance
MRASZ	3608,0	2041	23	3			F1B	200	
MRASZ	3610,0	2029	3	3			A1A		5 letters groups, morse practice
MRASZ	3615,0	1704	15	3			PSK2		AT3004D
MRASZ	7000,0	2029	3	3			H3E		buzzer, hrd on: 4, 9, 31
MRASZ	7001,5	918	28	3			???		abt 2,5 kHz wide, like a noise
MRASZ	7007,0	2027	3	3			USB		Ui language
MRASZ	7020,0	0941	31	3			F1B	250	
MRASZ	7025,0	1822	9	3			OTHR		7005-7040 kHz
MRASZ	7027,7	1310	24	3			A1A		lot of very fast morse groups
MRASZ	7041,0	2103	8	3			A1A		"de GRGC K", "L1FJ (3x) de GRGC K"
MRASZ	7050,0	1428	13	3			LSB		russian, chaos, hrd: 15,23,24,28,31
MRASZ	7060,0	2025	3	3			OTHR		7040-7075 kHz
MRASZ	7076,0	0916	28	3			F1B	250	
MRASZ	7080,0	1855	23	3			F1B	200	
MRASZ	7091,5	1359	31	3			A1A		continuous slow "V"
MRASZ	7100,0	2038	10	3			OTHR		7016-7190 kHz
MRASZ	7113,0	0725	28	3			PSK2		AT3004D
MRASZ	7120,0	1741	4	3	SOM		A3E		Radio Hargaysa, hrd: 9
MRASZ	7156,0	0731	2	3			F1B	400	
MRASZ	7205,0	2024	3	3			A3E		splatter 10 kHz down
MRASZ	10114,7	0728	2	3			F1B	1000	
MRASZ	10114,8	0730	28	3			F1B	1000	
MRASZ	10115,0	1509	25	3			F1B	200	
MRASZ	10118,0	1443	24	3			A1A		deliberate disturbance
MRASZ	10125,0	2123	23	3			OTHR		
MRASZ	10145,0	1502	24	3			OTHR		10 kHz wide
MRASZ	14008,0	0933	20	3			F1B	250	
MRASZ	14050,0	1016	3	3			N0N		
MRASZ	14138,0	1029	20	3			OTHR		
MRASZ	14160,0	1019	3	3			F1B	250	
MRASZ	14180,0	1044	3	3			F1B	200	
MRASZ	14180,0	1059	11	3			F1B	200	
MRASZ	14180,0	0957	20	3			F1B	200	
MRASZ	14205,0	1021	20	3			OTHR		
MRASZ	14240,0	1020	3	3			F1B	250	
MRASZ	14242,0	0949	11	3			PSK2		AT3004D
MRASZ	14253,0	1418	11	3			F1B	250	
MRASZ	14253,0	1314	15	3			F1B	250	
MRASZ	14253,0	0732	28	3			F1B	250	
MRASZ	14255,0	1514	11	3			OTHR		14240-14270 kHz
MRASZ	14265,0	1225	31	3			PSK2		AT3004D
MRASZ	14270,0	1515	19	3			OTHR		20 kHz wide
MRASZ	14280,0	1251	24	3			OTHR		40 kHz wide
MRASZ	14290,0	1442	11	3			OTHR		

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SH	DETAILS
MRASZ	14295,0	1300	11	3			N0N		
MRASZ	14295,0	1435	31	3			OTHR		10 kHz wide
MRASZ	14300,0	1506	11	3			OTHR		
MRASZ	14325,0	1746	4	3			LSB		Ui language
MRASZ	14335,0	1746	4	3			LSB		Ui language
MRASZ	14340,0	1225	31	2			PSK2		AT3004D
MRASZ	21010,0	1227	31	3			A3E		Ui BC

### OEVSV – Austria – OE3GSA (Gerd)

### PZK – Poland – SP9BRP (Jan)

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

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	Baud	Sh /Bw	DETAILS
REF	3510,0	0511	03	03	RUS	Russian Military	CIS-12/AT3004D/USB	120 per channel	2700	Encrypted messages
REF	3520,0	1625	05	03	RUS	Poss Russian Air Defense	USB			Tracking (Russian Voice)
REF	3523,0	1536	03	03	RUS	TSOB	CW			TSOB Wkg GRXK (CRXK de TSOB QTC 253 30 3 1825 253 = 439 = MMMMM NXDOR RHPWI IZKQB FXYEI IZKQB FXYEI IZKQB FXYEI ÔWTWJ ... / ... ) in Dx – Qsx on 3551
REF	3523,0	1602	26	03	RUS	XKLN	CW			XKLN worked 5 outstations (comms checks and QTCs) in Duplex – Qsx on 3551,0 kHz
REF	3525,0	1530	03	03	RUS	QWD5	CW			QWD5 Wkg 7 outstations in Dx – Qsx on 3194
REF	3525,0	1539	11	03	RUS	PVBP	CW			PVBP Wkg 7 outstations in Dx – Qsx on 3194
REF	3530,0	1537	17	03	RUS	Russian Military	CIS-12/AT3004D/USB	120 per channel	2700	Encrypted messages
REF	3545,0	1622	05	03	RUS	Russian Air Defense	USB			Tracking (Russian Voice)
REF	3548,0	0543	03	03	RUS	Russian Navy	FSK	50	200	Encrypted messages
REF	3548,0	0444	08	03	RUS	Russian Navy	FSK	50	200	Encrypted messages
REF	3548,0	0539	16	03	RUS	Russian Air Defense Army PVO	USB			Tracking (Russian Voice)
REF	3548,0	0550	16	03	RUS	Russian Air Defense Army PVO	LSB			Tracking (Russian Voice) : 2 networks on the frequency (1 in USB Mode and 1 in LSB Mode)
REF	3548,0	0735	19	03	RUS	Russian Air Defense Army PVO	USB			Tracking (Russian Voice)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	Baud	Sh /Bw	DETAILS
REF	3552,0	1542	03	03	RUS	Russian Navy	FSK	50	200	Encrypted messages
REF	3552,0	1622	26	03	RUS	Russian Navy	FSK	50	200	Encrypted messages - traffic to nuclear forces
REF	3554,0	1530	03	03	RUS	XNOT	CW			XNOT Wkg 6 outstations in Dx – Qsx on 3711
REF	3554,0	1530	11	03	RUS	TDJL	CW			TDJL wkg 6 outstations in Dx – Qsx on 3711
REF	3557,0	0539	16	03	RUS	Russian Military	FSK	75	250	Encrypted messages : frequency actived for trafic in QYT9 Mode
REF	3565,0	1853	22	03	RUS	RAU2	CW			Comms checks with RNI2 (For information : Qsx on 3270)
REF	3575,0	1503	04	03	RUS	SKLT	MCW			SKLT Wkg N71N (comms checks : use QRJ code) in Dx
REF	3587,0	1531	14	03	RUS	YFJA	CW			YFJA Wkg outstations in Dx
REF	3642,0	1517	06	03	CHN	3A7D	CW			3A7D wkd DKG6 (Only : DKG6 de 3A7D V) - Chinese Army
REF	3667,0	1525	14	03	RUS	Russian Military	CIS-12/AT30 04D/US B	120 per channel	2700	Encrypted messages
REF	3670,0	1517	14	03	RUS	RMP	CW			Encrypted messages – (QYT4 Mode Actived : RHM81 de RMP QYT4 QSX 4944 QWH 3670) In Dx - Qsx on 4944
REF	3709,0	0525	14	03	RUS	Russian Military	CIS-12/AT30 04D/US B	120 per channel	2700	Encrypted messages
REF	3720,0	1528	17	03	RUS	HXMQ	CW			HXMQ send QTCs for outstations in Broadcast
REF	3720,0	0718	25	03	RUS	MFWU	CW			MFWU comms checks and QTCs with 4 outstations in Duplex
REF	3740,0	0504	16	03	RUS	RUA41	FSK	100	500	Encrypted messages – End trafic at 0633z – For information Qsx on 3300 kHz
REF	3767,0	1348	07	03	RUS	Russian Military	CIS-12/AT30 04D/US B	120 per channel	2700	Encrypted messages
REF	3774,0	1407	07	03	RUS	PARNIK-15	LSB			PARNIK-15 Clg DAVOY-22 in Sx
REF	3776,0	1553	17	03	RUS	KWSM	CW			KWSM send QTCs for outstations in Duplex
REF	3776,0	1630	26	03	RUS	Russian Military	FSK	75	250	Encrypted messages
REF	3784,0	0450	23	03	RUS	ANEW	CW			Comms checks with outstations in Duplex
REF	3793,0	1923	02	03	RUS	Russian Military	FSK	75	250	Encrypted messages
REF	3797,0	1937	02	03	RUS	RCV	CW			RCV Wkg RIC87 (RIC87 de CRV QTC ...) in Bcast
REF	3799,5	1724	26	03	RUS	RJD56	CW			RJD56 send QTCs for RCP in Broadcast
REF	3801,0	1835	05	03	RUS	Russian Military	CIS-12/AT30 04D/US B	120 per channel	2700	Encrypted messages
REF	7003,0	1230	23	03	RUS	Russian Air Force	FSK	50	500	Encrypted messages – ACF=0
REF	7008,0	1218	11	03	RUS	Russian Military	CIS-12/AT30 04D/US B	120 per channel	2700	Encrypted messages
REF	7008,0	0729	14	03	RUS	Russian Military	FSK	75	250	Encrypted messages
REF	7011,0	0757	24	03	RUS	Russian Military	CIS-12/AT30	120 per	2700	Encrypted messages



SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	Baud	Sh/Bw	DETAILS
							04D/US B	chan nel		
<b>REF</b>	7020,0	0737	21	03	RUS	Russian Navy	FSK	50	250	Encrypted messages : probably naval traffic; HQ to fleet units
<b>REF</b>	7033,0	0838	25	03	RUS	Russian Military	CIS- 12/AT30 04D/US B	120 per chan nel	2700	Encrypted messages
<b>REF</b>	7048,0	0915	25	03	RUS	GPVG	CW			GPVG send QTCs for outstations in Duplex
<b>REF</b>	7050,0	1814	06				fmcw		20kHz	OTH Radar, S9, 40pps
<b>REF</b>	7060,0	0848	23	03	RUS	Russian Military	CIS- 12/AT30 04D/US B	120 per chan nel	2700	Encrypted messages
<b>REF</b>	7074,0	0921	24	03	RUS	Russian Military	CIS- 12/AT30 04D/US B	120 per chan nel	2700	Encrypted messages
<b>REF</b>	7076,0	0916	16	03	RUS	Russian Military	CIS- 12/AT30 04D/US B	120 per chan nel	2700	Encrypted messages -
<b>REF</b>	7076,0	0919	16	03	RUS	Russian Military	CW			Traffic in Duplex – Frequency actived for trafic in QYT4 Mode (numeric mode and CW : same network)
<b>REF</b>	7099,0	0948	23	03	RUS	MS2E	CW			MS2E comms checks with outstations in Duplex (Send ok QSU1)
<b>REF</b>	7099,0	0948	23	03	RUS	CRET-02	USB			Traffic (comms checks and message) in Duplex
<b>REF</b>	7099,5	0840	25	03	RUS	B9HM	CW			BH9M send QTCs in Broadcast
<b>REF</b>	7100,0	0939	23	03	RUS	GNQ7	CW			GNQ7 comms checks and QTCs for outstations in simplex
<b>REF</b>	7112,0	0905	25	03	RUS	Russian Military	CIS- 12/AT30 04D/US B	120 per chan nel	2700	Encrypted messages
<b>REF</b>	7119,0	1224	11	03	RUS	Russian Military	CIS- 12/AT30 04D/US B	120 per chan nel	2700	Encrypted messages
<b>REF</b>	7120,0	1742	28				fmcw		30kHz	OTH Radar, S9+10, 20pps
<b>REF</b>	7128,0	0841	23	03	RUS	Russian Military	FSK	100	500	Encrypted messages – ACF=2
<b>REF</b>	7138,0	0455	23	03	RUS	Russian Military	CIS- 12/AT30 04D/US B	120 per chan nel	2700	Encrypted messages
<b>REF</b>	7142,0	0850	16	03	RUS	Russian Military	FSK	75	250	Encrypted messages : frequency actived for trafic in QYT9 Mode
<b>REF</b>	7143,0	0803	21	03	RUS	Russian Air Force	FSK	50	500	Encrypted messages (ACF=15)
<b>REF</b>	7143,0	0841	23	03	RUS	Russian Air Force	FSK	50	500	Encrypted messages – ACF=7.5
<b>REF</b>	7143,0	0753	24	03	RUS	Russian Air Force	FSK	50	500	Encrypted messages – ACF=7.5
<b>REF</b>	7144,0	0749	24	03	RUS	VUOZ	CW			Alert message (type XXX) : xxx VUOZ 63357 BREMEN 6495 6880 K
<b>REF</b>	7147,0	1127	24	03	RUS	Russian Military	CIS- 12/AT30 04D/US B	120 per chan nel	2700	Encrypted messages
<b>REF</b>	7149,0	0709	24	03	RUS	RAVEZ- 46	USB			Traffic (comms checks and message) with outstations in Simplex
<b>REF</b>	7150,0	0737	21	03	RUS	Russian Military	FSK	96	500	Encrypted messages

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	Baud	Sh /Bw	DETAILS
REF	7150,0	0630	22	03	RUS	Russian Military	FSK	96	500	Encrypted messages
REF	7150,0	0630	24	03	RUS	Russian Military	FSK	96	500	Encrypted messages
REF	7152,0	0516	21	03	RUS	Russian Military	FSK	75	250	Encrypted messages : frequency actived for trafic in QYT9 Mode
REF	7158,0	0618	22	03	RUS	AEHS	CW			AEHS ZQD ZCT AR (Probably Z coes for QSY
REF	7160,0	0830	15	03	RUS	RMW32	CW			RMW32 comms chexks and QTC with RFH45 ; RFH47 ; RFH49 ; RKP65 ; RKP55 ; RFH39 in Simplex
REF	7160,0	0600	24	03	RUS	RMW32	CW			RMW32 comms chexks and QTC with Outstations in Simplex
REF	7169,0	0639	07	03	RUS	PTH9	CW			PTH9 Wkg GKFG (GKFG de PTH9 QTC 460 28 7 0900 460 = 321 MMMMM UWIEP VDLKB XSOWL ETPRO XSOWL ETPRO XSOWL ETPRO ... / ... KVKBD 519 QLN AR) in Bcat
REF	7169,0	0607	22	03	RUS	Russian Military	CIS-12/AT30 04D/US B	120 per channel	2700	Encrypted messages
REF	7176,0	0630	21	03	RUS	Russian Navy	FSK	50	250	Encrypted messages : probably naval traffic; HQ to fleet units
REF	7182,0	0602	22	03	RUS	Russian Military	CIS-12/AT30 04D/US B	120 per channel	2700	Encrypted messages
REF	7182,0	0730	24	03	RUS	Russian Military	MCW			Comms checks and QTC in Duplex
REF	7196,0	0638	01	03	RUS	3WHQ	CW			3WHQ Wkg 7 outstations (Calling, exchanges QSA, Authentications) in Sx
REF	7196,0	0843	12	03	RUS	HPMD	CW			HPMD Wkg 6 outstations (comms checks and QTCs:DDDDD) in Sx
REF	7196,0	0740	15	03	RUS	UDWY	CW			UWDY ZRH ZCH AR
REF	7196,0	0603	17	03	RUS	HPMD	CW			HPMD comms checks 6 outstations in simplex
REF	7196,0	0855	23	03	RUS	KC9L	CW			KC9L comms checks and QTCs for 6 outstations in simplex
REF	7196,0	0749	24	03	RUS	VUOZ	CW			Alert message (type XXX) : XXX VUOZ 63357 BREMEN 6495 6880 K
REF	7198,0	0912	23	03	RUS	Russian Mil	FSK	100	500	Encrypted messages – ACF=162
REF	7198,0	0640	24	03	RUS	Russian Military	FSK	100	500	Encrypted messages – ACF=162
REF	7214,0	0902	16	03	RUS	Russian Military	CIS-12/AT30 04D/US B	120 per channel	2700	Encrypted messages
REF	10130,0	1810	01	03			fmcw		20kHz	OTH Radar, S6, 40pps
REF	10130,0	1810	01	03			fmcw		20kHz	OTH Radar, S6, 40pps
REF	10150,0	1739	28				fmcw		30kHz	OTH Radar, S8, 20pps
REF	14008,0	0828	17	03	RUS	Russian Navy	FSK	50	200	Encrypted messages
REF	14202,0	0806	11	03	RUS	Russian Military	USB – OFDM 60 tone		2800	OFDM 60 tones : between 545 and 3170 Hz – Tone separation = 44,5 Hz – Symbol rate = 35,5 – Modulation = 8PSK and in USB Mode : ODERVAT-04 send « End traffic »
REF	14240,0	0915	11	03	RUS	Russian Military	CIS-12/AT30 04D/US B	120 per channel	2700	Encrypted messages

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	Baud	Sh /Bw	DETAILS
REF	14253,0	0830	14	03	RUS	Russian Military	FSK	75	250	Encrypted messages
REF	18107,0	0928	26	03	RUS	RDL	MCW			RDL send messages „type XXX“
REF	18107,0	0931	26	03	RUS	RDL	FSK	50	200	Encrypted messages - traffic to nuclear forces

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

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	3500	21.02	01	03	E		J3E-U			Spanish fishery
REP	3500	19.40	13	03	E		J3E-U			Spanish fishery
REP	3535	19.50	13	03			J3E-U			Unid language fishery
REP	3539	10.12	04	03			J3E-U			Unid French language ops
REP	3600	10.54	24	03	E		J3E-U			Spanish fishery, Galicia
REP	3605	07.19	05	03	E		J3E-U			Spanish fishery
REP	7005	07.02	14	03			J3E-U			Unid language ops
REP	7018	18.31	01	03	RUS		F1B	50	200	CIS 50, Russian Mil
REP	7025	22.08	06	03			FMCW	50	20k	OTH radar
REP	7025	19.59	13	03			J3E-U			Unid arabic language ops
REP	7038	22.10	02	03	UKR	D	A1A			SEVASTOPOL
REP	7039	23.07	01	03	RUS	C	A1A			MOSCOW
REP	7064	21.15	09	03			FMCW	50	15k	OTH Radar
REP	7088	18.33	03	03	S	SLOFRO	A1A			Amateur CW pratice, legal (FYI only)
REP	7090	23.02	12	03	KAZ	V	A1A			ALMATY
REP	7120	17.13	10	03	SOM		8k00 A3EGN			Radio Hargeysa
REP	10123	19.11	10	03	E		J3E-U			Spanish fishery
REP	10130	19.55	12	03			FMCW			OTH radar 20kHz wide
REP	14007	09.56	23	03			F1B	50	200	Burst mode CIS50
REP	14010	14.55	16	03			J3E-U			Unid language
REP	14010	09.52	23	03			J3E-U			Unid language fishery
REP	14124	13.15	13	03	RUS		J3E-U			Russian religious broadcast
REP	14180	11.03	11	03	RUS		F1B	50	200	CIS 50, Russia Mil
REP	14200	10.29	18	03			FMCW	10	100k	100kHz wide OTH radar
REP	18075	13.50	15	03			FMCW	25	17k	OTH radar
REP	18107	11.57	18	03	RUS		F1B	50	200	CIS50, Russia
REP	18107	10.28	30	03	RUS		A1A/F1B	50	200	Russian Navy, A1A and CIS 50
REP	18140	15.51	05	03			FMCW	50	20k	OTH radar
REP	21015	14.08	27	03	MRC		J3E-U			Fishermen
REP	21200	15.00	22	03			FMCW			OTH radar
REP	28105	10.40	07	03		CM	A1A			Drifnet buoy cluster
REP	28105	10.41	07	03	B		A3E			Brazilian CB´rs
REP	28114	10.23	07	03		CM	A1A			Drifnet buoy cluster
REP	28125	10.12	07	03		CM	A1A			Drifnet buoy cluster
REP	28149	10.31	07	03		CM	A1A			Drifnet buoy cluster
REP	28155	10.44	04	03	RUS		F3E			Russian taxis dispatchers
REP	29165	10.12	18	03	RUS		F3E			Russian YL taxis dispatcher
REP	29180	11.53	20	03			FMCW			OTH radar 50sps/20kHz
REP	29255	10.05	18	03			F1B	82	142	Datawell buoy
REP	28x-29x		Dly	03			F3E/A3E			Russian taxi and brazilian truckers, daily

### RSGB - Great Britain – M0VRR (Vaughan)

**SRAL – Finland – OH2BLU (Pekka)**

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BAUD	SHIFT	REMARKS
SRAL	6998,0	0500-2030	dly	3	RUS	UiTone	R3E			120 Hz tones
SRAL	7001,8	1915-0000	28.	3	ROU	STANAG	4285			
SRAL	7001,8	0000-1230	29.	3	ROU	STANAG	4285			
SRAL	7002,4	0600-0620/	30.	3		UiCarr	N0N			
SRAL	7002,9	1230-1432/	23.	3		UiPTR	F1B/ N0N		500	
SRAL	7008,0	0440	30.	3		UiPTR	F1B		250	
SRAL	7016,0	0645-1930	19. 31.	3		UiPTR	F1B		250	
SRAL	7018,0	1440-1545	14.	3		UiMUX	PSK2	120	2600	
SRAL	7021,0	0915-1345	*	3		UiMUX	PSK2	120	2600	Days: 3. 11. 22.
SRAL	7022,0	0930-0940/	11.	3		UiMUX	PSK2	120	2600	
SRAL	7030,0	0925	5.	3		UiMUX	PSK2	120	2600	
SRAL	7030,0	0655-0710	26.	3		UiPTR	F1A		250	
SRAL	7030,0	/1300-1440/	dly	3	PAK	VoJ&K	A3E			Islamabad tx (on 26. Off?)
SRAL	7033,0	1050-1217/	4.	3		UiPTR	F1B			
SRAL	7034,0	0755-0925	4.	3		UiMUX	PSK2	120	2600	
SRAL	7037,0	1335-1850	22. 31.	3		UiMUX	PSK2	120	2600	
SRAL	7039,0	0630-2000	dly	3	RUS	C	A1A			Moscow ( on SK3W WEBSDR)
SRAL	7040,0	0815-1800	31.	3		UiPTR	F1B		500	
SRAL	7066,0	1130-1300	*	3		UiPTR	F1B		200	Days: 3. 16. 18.
SRAL	7066,0	1300-1317/	18.	3		UiCW	A1A			5L
SRAL	7076,0	0545-0900	28.	3		UiPTR	F1B			
SRAL	7112,0	0830-1300	13. 15.	3		UiPTR	F1B			
SRAL	7113,0	0645	28.	3		UiMUX	PSK2	120	2600	
SRAL	7114,0	0745-0915	7.	3		UiMUX	PSK2	120	2600	
SRAL	7119,0	0715-0730	27.	3		UiMUX	PSK2	120	2600	
SRAL	7120,0	/0330-0500/	dly	3	SOM	R.Hargeis a	A3E			
SRAL	7120,0	/1500-1900/	dly	3	SOM	R.Hargeis a	A3E			
SRAL	7121,0	0645-1300	11. 12.	3		UiMUX	PSK2	120	2600	
SRAL	7142,0	0800-1115	10. 16.	3		UiPTR	F1B			
SRAL	7144,0	0755-0845	27. 29.	3		UiMUX	PSK2	120	2600	
SRAL	7149,5	0540-1920	30. 31.	3	RUS	UiMUX	PSK2	120	2600	
SRAL	7156,0	0745	2.	3		UiPTR	F1B			
SRAL	7160,0	0700-0800	16. 24.	3	RUS	RMW32	A1A			5BL
SRAL	7162,0	0645-0800	16. 24.	3		UiPTR	F1B			
SRAL	7166,0	0425	21.	3		UiMUX	PSK2	120	2600	



Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BAUD	SHIFT	REMARKS
SRAL	7177,0	1855-2020	11.28.	3		UiPTR	F1B			
SRAL	7179,0	0505-1730	30.31.	3		UiMUX	PSK2	120	2600	
SRAL	7184,0	0850-1520	17.24.	3		UiMUX	PSK2	120	2600	
SRAL	7196,0	0830-0845	13.	3	RUS	3WHQ	A1A			
SRAL	7198,0	0900-1300	4.21.	3		UiMUX	PSK2	120	2600	
SRAL	7200,0	/0955-1400/	dly	3	CHN	CNR1	A3E			Used as jammer on TWN
SRAL	7201,0	1040	24.	3		UiMUX	PSK2	120	2600	
SRAL	7 MHz	1715-0500	*	3	RUS	29B6	FMCW			50Hz / 15 kHz, days: 1. 2. 5. 10. 20. (WebSDR 15 days)
SRAL	10 MHz	0630-0723/	14.22.	3	RUS	29B6	FMCW			50Hz / 15 kHz (WebSDR 16 days)
SRAL	14000,0	1030	1.	3		UiCarr	N0N			
SRAL	14050,0	0920	16.	3		UiPTR	F1B		250	
SRAL	14160,0	1020	3.	3		UiPTR	F1B		250	
SRAL	14180,0	0600-1353/	*	3	RUS	UiPTR	F1B		200	Days: 2. 3. 5. 8. 9. 11.-17. 21. 24. 25. 28. 31.
SRAL	14221,0	0400-0600	6.-31.	3		UiPTR	F1B		200	
SRAL	14240,0	1030	3.	3		UiPTR	F1B		250	
SRAL	14242,0	0830	11.	3		UiMUX	PSK2	120	2600	
SRAL	14253,0	0550-1530	*	3	RUS	UiPTR	F1B		250	Days: 11. 14. 21. 28.
SRAL	14295,0	0500-1530	dly	3	TJK	R Tojikiston	A3E			3f 4765,00 kHz, Yangiyul TX
SRAL	14 MHz	0615-0900	5.	3	RUS	29B6	FMCW			50Hz / 15 kHz (WebSDR 5 days)
SRAL	14 MHz	0600-1900	dly	3	RUS	UiOTHR	FMCW			10Hz / 15 kHz, 30 sec transmit with 16 min cycle
SRAL	18 MHz	0500-1400	*	3	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz, days: 1. 16. 22. 26. (WebSDR 16 days)
SRAL	18107,0	0630-1300	*	3	RUS	UiPTR	F1B		200	Days: 5. 9. 11.
SRAL	21 MHz	0515-1315/	*	3	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz, days: 1. 2. 4. 5. 11. 13. (WebSDR 13 days)
SRAL	21438,0	0830-1330	*	3	RUS	RCV	A1A			Days: 11. 12. 13. 15. 16.
SRAL	24 MHz	1115-1150	2.	3		UiOTHR	FMCW			(WebSDR 4 days)
SRAL	28 MHz	0700-1200	*	3	IRN	UiOTHR	FMCW			307 & 870 Hz / 60 kHz – 300 kHz, days: 5. 11. 12. 20. 28. On 28960 151 & 312 Hz
SRAL	28 MHz	1015-1115	2.	3		UiOTHR	FMCW			25/50Hz / 20 kHz
SRAL	28 MHz			3	RUS	Taxi disp.	F3E			no reports

## USKA – Switzerland – HB9CET (Peter)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
<b>80m Band informational only (primary but not exclusive)</b>										
USKA	1896.5	2327	04	03			PSK8	2400	2k4	STANAG 4285 (all days) legal
USKA	3503.5	2218	08	03			PSK8	2400	~2k7	MIL188-110A (Hybrid), preamble 4 tone PSK4
USKA	3525.0	2318	04	03			DQPSK	14x75	5k9	LINK 11 CLEW; (STANAG 5511) DSB Mode almost daily
USKA	3527.0	2315	04	03			F1B	50	200	
USKA	3530.0	1744	16	03		5880	MFSK8	125	1750	MIL 188-141A
USKA	3532.0 VFO USB	2315	21	03			DQPSK	14x75	2k34	LINK 11 CLEW; (STANAG 5511) in upper sideband
USKA	3532.0 VFO USB	1937	30	03			DQPSK	14x75	5k9	LINK 11 CLEW; (STANAG 5511) DSB mode
USKA	3548.0	0011	07	03			F1B	50	200	
USKA	3549.0 VFO USB	2320	09	03			PSK8	2400	~2k7	MIL188-110A (Hybrid), often preamble 4 tone PSK4
USKA	3553.6	2338	07	03			PSK8	2400	~2k4	Stanag 4285 daily
USKA	3557.0	2325	21	03			F1B	75	250	almost daily
USKA	3582.0	1944	30	03			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	3608.0	2320	04	03			F1B	50	200	often
USKA	3608.0	2320	04	03			F1B	50	200	often
USKA	3767.0	1941	30	03			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	6998.0	0235	01	03			H3E-U Bursts		~3k6	"Buzzer" up to $\geq 7001.5$ kHz modulated with 120Hz BD 1.2", BRI 3" Pause 1.8s
USKA	6998.5	1234 1255	08	03		OL1 MA3	MFSK8	125	1750	MIL 188-141A, To OD6 and SY1 partially in 40m band
USKA	6998.5 VFO USB	1312	08	03			PSK8	2400	2k4	MIL 188-110A; often
USKA	7000.0 VFO USB	1216	08	03			DQPSK	14x75	~2k7	LINK 11 CLEW TADIL A MIL-STD 188-203-1A
USKA	7001.8	1638	28	03			PSK8	2400	2k4	Stanag 4285
USKA	7005.0	2316	01	03			J3E-L			Indonesian village radio
USKA	7010.0	2320	05	03			J3E-L			Indonesian village radio
USKA	7016.0	2303	01	03			F1B	75	250	
USKA	7020.0	2323	01	03			J3E-L			Indonesian village radio
USKA	7020.0	1638	07	03			J3E-L		2k4	Spanish, calling "Victoria"
USKA	7020.0	1750	07	03		CS004A	MFSK8	125	1750	MIL 188-141A To:RS0012D
USKA	7020.0	1937	07	03		820699	MFSK8	125	1750	MIL 188-141A To:RS008D
USKA	7020.0	2030	07	03		810612	MFSK8	125	1750	MIL 188-141A To:RS008D
USKA	7020.0	2034	07	03		810616	MFSK8	125	1750	MIL 188-141A To:RS0012D
USKA	7020.0	2034	07	03		823199	MFSK8	125	1750	MIL 188-141A To:RS008D
USKA	7020.0	2036	07	03		820612	MFSK8	125	1750	MIL 188-141A To:RS0012D
USKA	7023.0	2331	02	03			FMOP	50 sps	~13k	OTHR; occup. BW approx 30k
USKA	7026.0	0854	10	03			J7D	12x120	2k7	PSK-4: CIS12 = AT3104D
USKA	7035.0	2325	01	03			J3E-L			Village radio
USKA	7037.0	1937	31	03			J7D	12x120	2k7	PSK-2: CIS12 = AT3004
USKA	7039.3	2319	15	03	RUS	K	A1A			Beacon K Petropavlovsk
USKA	7039.4	2301	01	03	RUS	M	A1A			Beacon M Magadan
USKA	7050.0	2305	08	03			J3E-L			Village radio
USKA	7064.0	0008	10	03			FMOP	50 sps	~13k	OTHR; occ BW approx >30k
USKA	7077.0	1714	11	03			?		2k1	undefined burst signal most probably jammer
USKA	7080.0	1742	03	03			F1B	50	200	often
USKA	7111.0 VFO LSB	2244	01	03			MPSK	30x60 Bd	~2k4	Burst system; spacing 75 Hz preamble 4x PSK4 60Bd, spacing 600Hz; Pilottone at 450Hz
USKA	7114.0	2239	01	03			F1B	50	200	CIS 50-50
USKA	7115.5	2257	01	03			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	7119.0	2259	01	03			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
USKA	7120.0	0344	01	03	SOM		A3E			Radio Hargaysa almost daily
USKA	7121.0	1705	11	03			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	7134.0	1508	05	03			F1B	50	200	
USKA	7140.0	1934	28	03			FMOP	50	~13k	OTHR
USKA	7141.0	2248	01	03			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	7148.0	1015	01	03			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	7149.5	1922	30	03			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D often
USKA	7197.0	2234	04	03	TUR	314018	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	2234	04	03	TUR	340013	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	2240	04	03	TUR	319013	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	2240	04	03	TUR	347018	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	2242	04	03	TUR	332018	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	2245	04	03	TUR	83401	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	2246	04	03	TUR	317018	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	2255	04	03	TUR	357018	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	2256	04	03	TUR	358013	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	2257	04	03	TUR	315018	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	2257	04	03	TUR	349013	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	2259	04	03	TUR	309018	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	2303	04	03	TUR	364013	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	2304	04	03	TUR	360018	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	2305	04	03	TUR	302018	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	2305	04	03	TUR	353013	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	2306	04	03	TUR	355013	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	2307	04	03	TUR	352013	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	2309	04	03	TUR	348018	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	2311	04	03	TUR	334113	MFSK8	125	1750	MIL 188-141A
USKA	14026.0	0901	10	03			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D often
USKA	14180.0	0939	03	03			F1B	36+50	200	CIS 36-50
USKA	14192.0	1022	01	03			F1B	50	500	CIS 50-50 almost daily
USKA	14253.0	0833	14	03			F1B	75	250	
USKA	14295.0	1302	02	03	TJK		A3E			BC: almost daily 3 <sup>rd</sup> of Radio Tajik at 4765 kHz
USKA	14300.0 VFO USB	1026	01	03			BPSK	16x75	2k2	Burst system; 16 tones often
USKA	18107.0	1030	04	03		RDL	F1A		200	CIS36-50
USKA	18107.0	1031	04	03			F1B	36 + 50	200	CIS36-50
USKA	21200.0	1327	05	03			FMCW	50	20k	OTHR
USKA	21438.0	0952	03	03		RCV	A1A			letters and figures almost daily

### Veron – Netherlands – PA2GRU (Dick)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SHIFT	DETAILS
VERON	3538,0	18.35	30	3	CIS	UiCW	A1A		5BL ending 908 K
VERON	3548,0	18.45	3	3	CIS	UiPTR	F1B		Revs/Ptr
VERON	3557,0	19.26	25	3		UiPTR	F1B		Ptr
VERON	3579,0	18.34	30	3		UiPTR	F1B		Ptr
VERON	7020,0	12.00	31	3		UiPTR	F1B		Ptr
VERON	7080,0	19.43	26	3		UiPtr	F1B	200	
VERON	10124,0	13.22	18	3	CIS	UiPTR	F1B		Revs/Ptr
VERON	14008,0	10.00	24	3	CIS	UiPTR	F1B		Carrier/Revs/Ptr
VERON	14132,0	11.43	18	3		OTHR	FMCW		radar
VERON	14135,0	14.19	7	3		OTHR	FMCW		radar
VERON	14180,0	12.45	3	3	CIS	UiPTR	F1B		Revs/Ptr
VERON	14180,0	12.55	3	3	RUS	RDL	F1A		RDL 18517 30321 K (par 18107)
VERON	14180,0	13.11	3	3	RUS	RDL	F1A		RDL 87556 58097 K
VERON	14180,0	16.22	18	3		UiCW	F1A		5F
VERON	14180,0	15.42	5	3		UiPtr	F1B	200	
VERON	14180,0	15.42	26	3		UiPtr	F1B	200	
VERON	14192,0	11.28	5	3	RUS	UiPtr	F1B	500	
VERON	14192,0	10.50	6	3	RUS	UiPtr	F1B	500	

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SHIFT	DETAILS
VERON	14264,0	14.45	5	3		UiMux	FSK8	1k8	
VERON	14266,0	11.50	31	3		UiMOD			Strong Wideband Signal
VERON	14268,0	11.08	10	3		OTHR	FMCW		radar
VERON	18070,0	13.00	1	3		OTHR	FMCW		radar
VERON	18107,0	12.42	3	3	CIS	UiPTR	F1B		Revs/Ptr
VERON	21050,0	11.41	1	3	Cyp	OTHR	FMCW		radar, Cyprus
VERON	21123,0	18.23	27	3	EA	UiILL	j3e-U		Spanish fishery, male
VERON	21210,0	10.53	5	3		UiRadar	FMCW	20k	OTHR; 50sps
VERON	21330,0	15.13	26	3	CYP	UiRadar	FMCW	20k	OTHR; 50sps
VERON	21438,0	09.39	3	3	RUS	RCV	A1A		RIP90 de RCV QTC 473 Nawip 033 398
VERON	21438,0	09.42	3	3	RUS	RCV	A1A		RIP90 de RCV QTC 466 Nawip 033 381
VERON	21438,0	09.51	3	3	RUS	RCV	A1A		RIP90 de RCV QTC 454 Nawarea 033 98
VERON	21438,0	09.56	3	3	RUS	RCV	A1A		RGX94 de RCV QTC 877 Nawip 037 251

# The monitoring team of IARU Region 1

credits:

Wavecom Elektronik – Buelach – Switzerland

German BNetzA Konstanz

Many thanks for your interest!

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