



International Amateur Radio Union

Region 1



Monitoring System

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The monthly newsletter for Region 1

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Acknowledgements

ARAT: 3V8CB – Ahmed ++ ARI: DH7SA – Salvatore ++ ARSK: 5Z4BV - Kamweti ++ ASTRA: DL1BDF – Mustapha ++ DARC: DK2OM – Wolf ++ EARS: A61M – 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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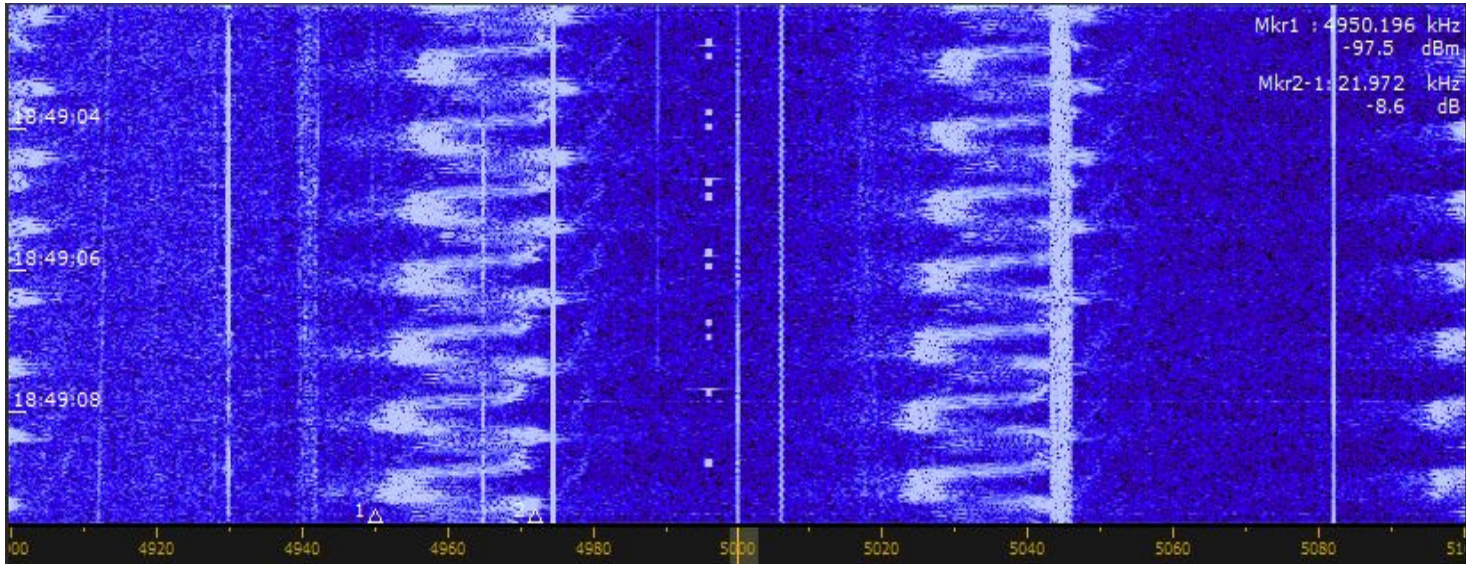
Part 1: News and Infos

1. Very bad news

My daily monitoring work is disturbed by a neighbouring LED lamp (various times). The owner does these actions intentionally since he knows the effect of his lamp. The German PTT Eschborn is informed since April 2016, when they have found the source (LED lamp). Reaction? Nothing to save my work.

Result: The owner kept the old lamp as a disturbance transmitter. Working under such conditions is a difficult mission. **“Many thanks”** to the German PTT Eschborn!

The example screenshot shows the situation on 5 MHz, where we got our new band. All bands from 3.5 – 28 MHz are concerned by the strong signals and harmonics.



2. 14180 kHz Russian F1B

The Russian Navy F1B (teleprinter 50 Bd – 250 Hz shift) was still active not regarding official complaints. Location: Sevastopol.

3. 7051 kHz Russian F1B

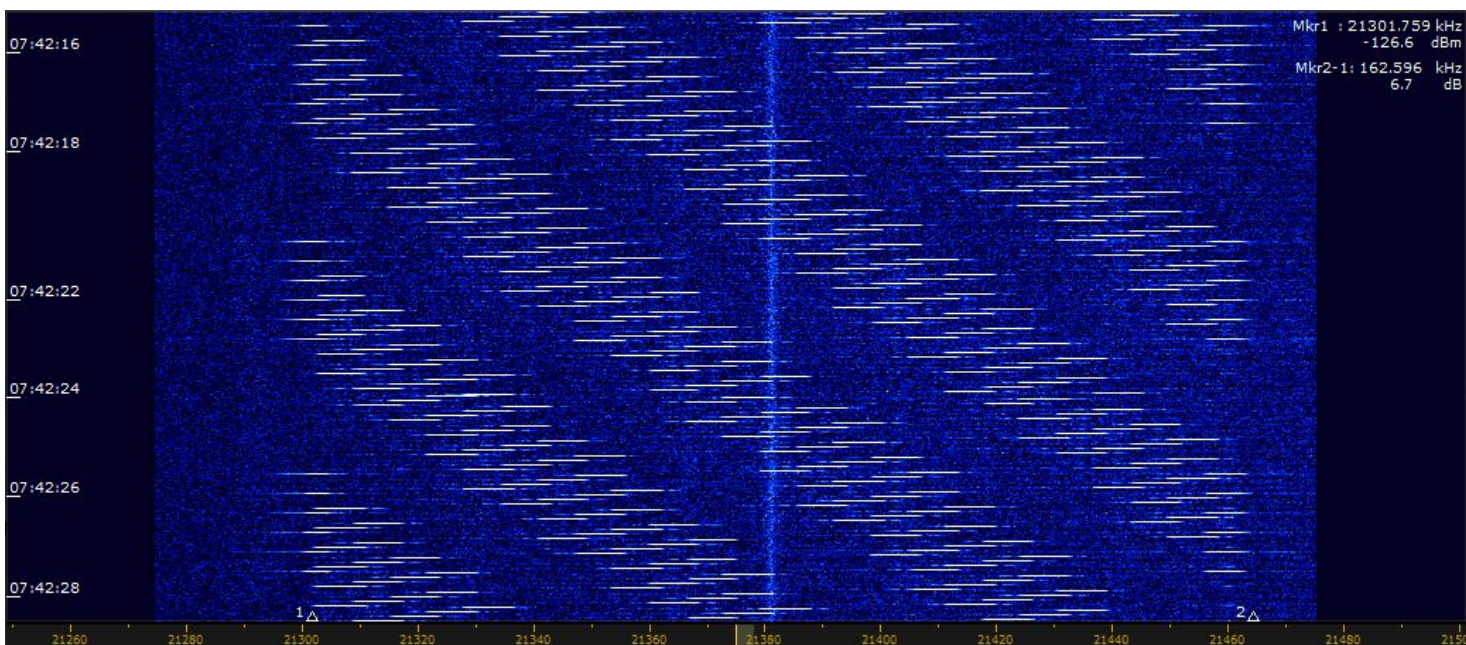
Another Russian F1B (teleprinter) appeared on 7051 kHz with 50 Bd and 200 Hz shift mostly idling and every evening. The German PTT Konstanz sent an official complaint.

4. 18080 kHz SOH again

We were not surprised to find SOH (Sound of Hope from Taiwan) again on 18080 kHz with BC transmissions every morning at about 0630 utc.

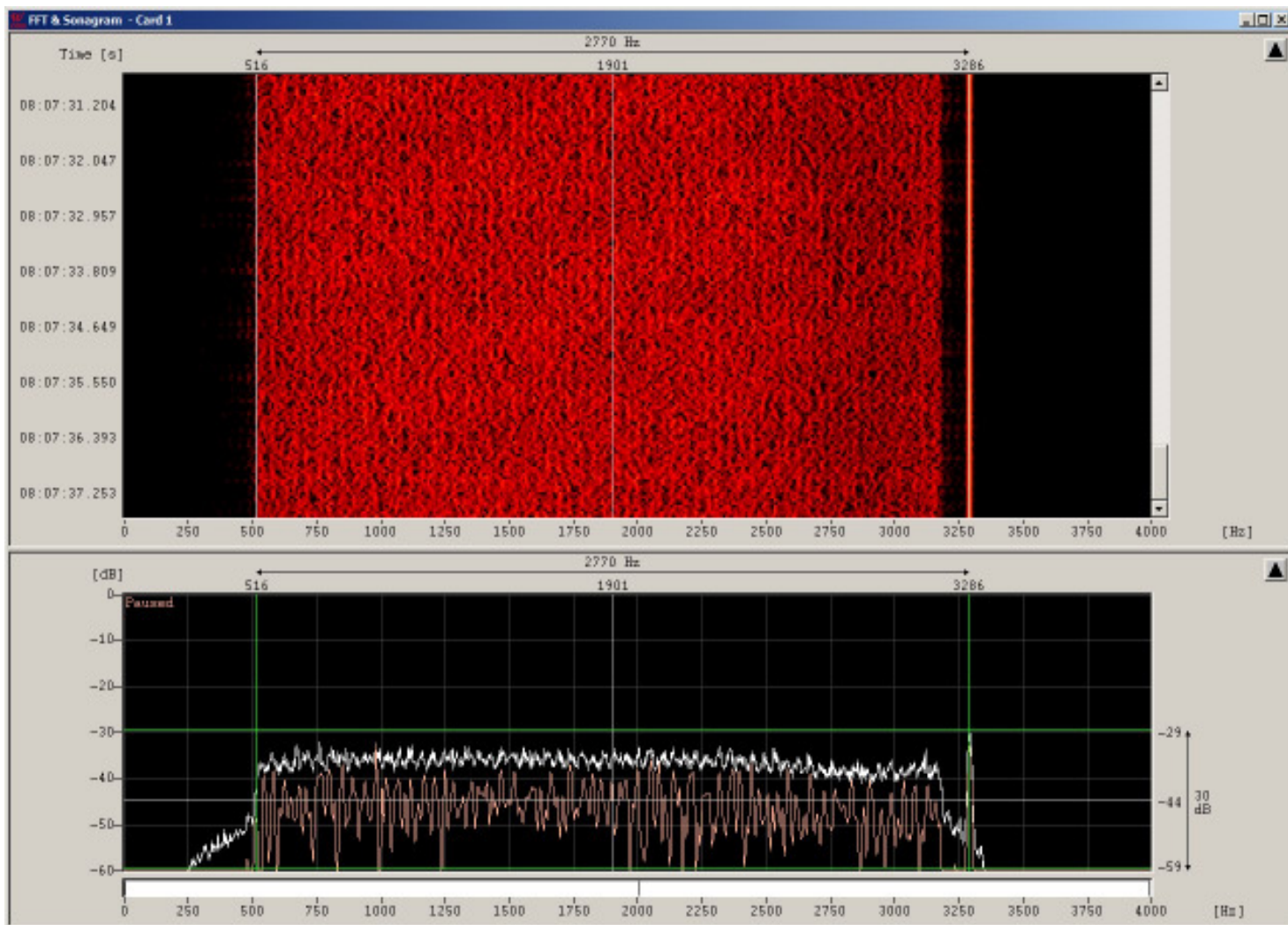
5. Chinese wideband OTH radar on 21 MHz

The screenshot shows a Chinese wideband radar (2128 – 21458 kHz) with 10 sps and 160 kHz wide. No woodpecker as some HAMs believe! Date: April 23rd



6. Russian OFDM 60 on 14 MHz

We found several OFDM 60 transmissions from Moscow (60 tones with PSK4B – each tone 35.55 or 29.6 Bd). Screenshot with Wavcom W-Code showing sonogram and FFT. Observe the pilot tone at 3300 Hz AF. Notice the entries in my table!



7. 21000 kHz Brazilian pirates

Brazilian pirates were again observed on 21000 kHz on USB. They are abusing this QRG like telefon between Rio and North Brazil. We suppose fishery traffic.

8. Buoys on 28 MHz

Due to bad conditions we did not observe fishery and Datawell buoys.

9. 6999.0 Spanish fishery

Spanish fishermen were transmitting on 6999.0 kHz USB and splattering up. The low edge of the 14 Mz-band was disturbed.

10. Miscellaneous or bad news:

- 7120.0 kHz – Radio Hargaysa Somalia – aus usual
- 7200.0 kHz – Radio Taiwan and Chinese jammer
- 14180.0 kHz – Russian Navy Sevastopol on F1B still active
- 14295.0 kHz - Radio Tajik (harmonic from 4765 kHz)
- 18080.0 kHz – Sound of Hope - Taiwan
- 21438.0 kHz – Russian Navy Sevastopol on A1A again as usual

11. Homepage IARU Region 1

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 APRIL 2017

N.A. Kamweti Mutu, 5Z4BV - ARSK National IARUMS Co-ordinator

ARSK – Kenya – 5Z4BV (Kamweti)

H'd by	kHz	UTC	dd	mm	ITU	Identity	MODE	Details
ARSK	7000,00	vt	dly	04	Kenya	?	J3E-u	Unidentified, KiSwahili, Kenya. Possibly military.
ARSK	7066,00	1325		04	E. Africa	?	J3E-l	Message traffic in phonetics, military style
ARSK	7075,00	0600	dly	04	E. Africa ?	?	J3E-l	Unidentified language, possibly Amharic
ARSK	7075,00	~0600	dly	04	E. Africa	?	J3E-u	Unidentified language, possibly Amharic
ARSK	7080,20	0400-0600; 1300-1500	near dly	04	E. Africa	?	J3E-u	Unidentified, ethnic Sino language
ARSK	7120,00	vt	dly	04	Rep.of Somalia	Hargeisha	A3E	Broadcast
ARSK	7145,00	AM/PM	dly	04	Eritrea	VOBM	A3E	Voice of he Broad Masses? Broadcast, Amharic, Arabic
ARSK	7164,00	AM/PM	dly	04	Kenya	?	J3E-U	Information net, Kiswahili/English
ARSK	7175,00	AM/PM	dly	04	Eritrea	VOBM	A3E	Probable hopping to avoid jamming

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

DG0JBJ (Mario) observed **14** OTH radars on 40 m, **15** OTH radars on 20 m, **26** OTH radars on 17m, **1** OTH radars on 15 m and **0** OTH radars on 10 m in April 2017.

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	1956	08	04	D		QRM			3.5 - 30 MHz disturbed by a neighbouring LED lamp – daily - various times
DK2OM	1812,0	vt	dly	04	RUS		USB LSB			14 tones – hyperbolic radio navigation system – BRAS-3/RS-10 – Kaliningrad – no carrier - daily, all day
DK2OM	1852,0	vt	dly	04	I	IPP	USB			Palermo Radio, weather reports
DK2OM	1855,0	vt	dly	04	I	IQP	USB			San Benedetto Radio, weather reports

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	1876,0	vt	dly	04	I	IQN	USB			Lampedusa Radio, weather reports
DK2OM	1888,0	vt	dly	04	I	IPD	USB			Civitavecchia Radio, weather reports
DK2OM	1896,5	ady	dly	04	D		PSK8	2400	2400	Stanag4285 – 600 bps long – German Navy – daily, all day
DK2OM	1925,0	vt	dly	04	I	IPL	USB			Livorno Radio, weather reports
DK2OM	3500,0	2005	03	04	D		QRM			disturbed by a neighbouring LED lamp with S9
DK2OM	3501,0	vt	vd	04	UKR		FSK8	125	1750	ALE, “B10” “X”
DK2OM	3503,5	vt	dly	04	G	no ITU	FSK8	125	1750	ALE – “XSS” “XPU” “XJR” – British MIL Tascomm – vt, daily - legal!
DK2OM	3512,0	2009	05	04	RUS		PSK2A	120	2600	AT3004D - Kaliningrad
DK2OM	3522,0	2035	03	04	G		PSK8A	2400	2400	Stanag-4285 – 600 bps long – Isle of Lewis
DK2OM	3525,0	---	--	04	F		PSK4	75	5800	LINK11-CLEW on both sidebands (5800 Hz wide) – area of Marseille – legal!
DK2OM	3527,0	2104	03	04	RUS		F1B	50	200	Severomorsk
DK2OM	3531,0	---	--	04	RUS	REA4	N0N			unclean carrier - RUS airforce Moscow, ident: 1940 utc - daily
DK2OM	3532,0	---	--	04	F		PSK4	75	5800	LINK11-CLEW on both sidebands (5800 Hz wide) – area of Brest – legal!
DK2OM	3535,6	1930	17	04	CIS		A3E			CIS pirates – unstable carriers
DK2OM	3550,0	0730	dly	04	F		A3E			French amateurs not respecting bandplans - daily
DK2OM	3550,0	vt	vd	04	ALG	no ITU	FSK8	125	1750	ALE, “IU50” “IU52” “FN50”
DK2OM	3550,7	---	--	04	ISR		PSK4 PSK8	75 2400	2400 2400	hybrid modem – ISR Navy – PSK4 parallel and PSK8 serial - legal operation!
DK2OM	3553,8	ady	dly	04	TUR		PSK8	2400	2400	Stanag4285 – 600 bps long - TUR MIL - Ankara – daily, all day - legal operation
DK2OM	3576,6	ady	dly	04	I	IZ3DVW	A1A			3576.550 - uncoordinated beacon – disturbing JT65
DK2OM	3585,0	ady	dly	04	TWN	HLL	FIC		800	WX-fax Taiwan - 120 rpm, IOC 576, - daily, all day - legal!
DK2OM	3586,0	1800	dly	04	G		PSK2A	40	40	encrypted – every evening Great Britain – purpose unknown
DK2OM	3587,0	vt	vd	04	E	no ITU	FSK8	125	1750	ALE, “TVV” “TXX” - Spanish Guardia Civil
DK2OM	3593,7	---	--	04	RUS	D	A1A			Cluster beacon – Sevastopol RUS Navy – “RCV”
DK2OM	3593,8	---	--	04	RUS	P	A1A			Cluster beacon – Kaliningrad RUS Navy – “RMP”
DK2OM	3593,9	---	--	04	RUS	S	A1A			Cluster beacon – Severomorsk RUS Navy – „RIT“
DK2OM	3594,0	---	--	04	RUS	C	A1A			Cluster beacon C - Moscow RUS Navy - “RIW”
DK2OM	3594,2	---	--	04	RUS	F	A1A			Cluster beacon F - Vladivostok RUS Navy - “RJS”
DK2OM	3595,0	---	--	04	RUS	K	A1A			Cluster beacon - Petropavlovsk Kamchatskiy - RUS Navy - Pacific fleet - “RCC”
DK2OM	3596,0	vt	dly	04	SUI		FSK8	125	1750	ALE, “HB9MHBst for info!
DK2OM	3596,0	vt	dly	04	J		FSK8	125	1750	ALE, “JH1ESB” – just for info!
DK2OM	3617,0	vt	dly	04	HRV	9A5EX	FSK8	125	1750	ALE, “9A5EX” – HAM-ALE - just for info
DK2OM	3622,5	ady	dly	04	J	JMH	FIC		800	Tokyo Meteo – 120 rpm – IOC 576 – daily, all day - legal!!!
DK2OM	3640,0	vt	dly	04	G		FSK8	125	1750	ALE, “XSS” - British MIL

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										Tascomm – just for info!
DK2OM	3642,0	ady	dly	04	CHN		A1A			loop – DKG6 de 3A7D Chinese military – daily, all day
DK2OM	3649,0	vt	vd	04	ALG	no ITU	FSK8	125	1750	ALE, “BI20” PA20”
DK2OM	3718,0	vt	vd	04	FEa	7CJK	A1A			loop “7CJK”
DK2OM	3720,0	vt	dly	04	S		FSK8	125	1750	ALE, “YU” “YT” “YV” “DZ” – Swedish MIL
DK2OM	3751,5	vt	dly	04	POL	no ITU	FSK8	125	1750	ALE, “IZ3” “MI3”
DK2OM	3756,0	2015	30	04	RUS		A3E			RUS MIL – channel marker – Tuapse – East Black Sea – night QRG – daily – even audible in Japan
DK2OM	3757,0	ady	dly	04	FEa	RIS9	A1A			“M8JF de RIS9” - loop
DK2OM	3761,5	vt	vd	04	POL	no ITU	FSK8	125	1750	ALE, “NI9” “PL7” “AB2” – Polish MIL
DK2OM	3772,0	ady	dly	04	FEa	A4JC	A1A			“A4JC” - loop
DK2OM	3777,0	vt	dly	04	FEa		A1A			“M8JF de RIS9” – loop – dly
DK2OM	3791,0	vt	vd	04	D	DK0ESD	FSK8	125	1750	ALE, “DK0ESD” – daily - just for info!
DK2OM	3797,0	ady	dly	04	FEa		A1A			“M8JF de RIS9” – loop
DK2OM	5351,5	1956	08	04	D		QRM			disturbed by a neighbouring LED lamp with S9
DK2OM	5351,5	---	--	04	FEA		FMOP		58k	Far East OTH radar 5316 – 5374kHz – 43 sps – even audible in Europe (vy strong in Northern Europe) – covering weak CW-signals on 5351.5 – 5366.5 kHz
DK2OM	6998,5	vt	dly	04	POL		FSK8	125	1750	MIL-188-141A – “BU2” “OD6” “OL1” “SZ4” “ZE2” “MA3” until 7001.0 kHz – also voice traffic male and female - Polish MIL
DK2OM	6999,0	1825	11	04	E		USB			Spanish fishery – splattering up to 7001.4 kHz – also 22.04.2017 at 1845 utc
DK2OM	7000,0	vt	dly	04	INS		USB LSB			Indonesian pirates – daily – all day – singing - audible in Europe in the evenings
DK2OM	7000,0	2009	03	04	D		QRM			disturbed by a neighbouring LED lamp – every evening
DK2OM	7000,0	0650	05	04	I		USB			Italian pirates
DK2OM	7000,0	0828	21	04	G		USB			UK fishery
DK2OM	7001,5	ady	dly	04	POL		PSK8	2400	2400	RF QRG 6998.5 kHz – 7000.3 kHz center - MIL-188-110A – 600 / 300 bps short – Polish MIL
DK2OM	7005,0	1855	06	04	INS		USB LSB			Indonesian pirates
DK2OM	7008,0	1533	17	04	RUS		F1B	75	250	Moscow
DK2OM	7010,0	1944	06	04	INS		USB LSB			Indonesian and Philippine pirates
DK2OM	7010,0	vt	vd	04	ALB	no ITU	FSK8	125	1750	ALE, “RS0” - Tirana
DK2OM	7015,0	1943	08	04	INS		USB LSB			Indonesian pirates
DK2OM	7018,0	---	--	04	RUS	REA4	F1B	100	800	mostly idling – Russian airforce Moscow – ident at full hour + 41 min. on F1A
DK2OM	7020,0	vt	vd	04	ALB		FSK8	125	1750	ALE, “CS004A” “RS004D” “CS004” - daily
DK2OM	7020,0	0700	12	04	RUS		F1B	100	250	unclean idle - Moscow
DK2OM	7025,0	1940	08	04	INS		USB LSB			Indonesian pirates
DK2OM	7027,5	---	--	04	UKR	„V“	A1A			beacon “V” – Kyiv
DK2OM	7030,0	1942	08	04	INS		LSB USB			Indonesian pirates
DK2OM	7030,0	1851	15	04	RUS		PSK2A	120	2600	AT3004D – Far East Russia

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	7030,0	1752	23	04	FEa		FMOP		32k	Codar like ocean surface radar 2.6 sps – 7030 – 7062 kHz
DK2OM	7035,0	0818	14	04	RUS		PSK2	120	2600	AT3004D – submode idle and modem idle - Kaliningrad
DK2OM	7037,0	1914	25	04	FEa		FMOP		35k	Far East OTH radar – 43 sps – 7037 – 7072 kHz - possibly “Sunflower”
DK2OM	7039,0	---	--	04	RUS	C	A1A			Cluster beacon C - Moscow RUS Navy - “RIW”
DK2OM	7039,1	---	--	04		A	A1A			beacon “A” - loop
DK2OM	7039,2	---	--	04	RUS	F	A1A			Cluster beacon F - Vladivostok RUS Navy - “RJS”
DK2OM	7039,3	---	--	04	RUS	K	A1A			Cluster beacon K Petropavlovsk Kamchatskiy - RUS Navy - Pacific fleet - “RCC” - daily
DK2OM	7039,4	ady	dly	04	RUS	M	A1A			Cluster beacon M – Magadan RUS Navy – „RTS“
DK2OM	7040,0	1945	08	04	INS		USB LSB			Indonesian pirates
DK2OM	7040,0	ady	dly	04	I		A1A			IZ3DVW – uncoordinated and unwanted beacon
DK2OM	7040,5	vt	dly	04	HRV		FSK8	125	1750	ALE, “9A5EX” “9A0ALE” – just for info
DK2OM	7047,37	vt	vd	04	D		FSK8	125	1750	ALE, “DL0NOT” – just for info!
DK2OM	7049,5	vt	vd	04	HRV G F	9A0ALE M1DFO F6BAZ	FSK8	125	1750	Amateur ALE, just for info! daily – various times
DK2OM	7050,0	vt	dly	04	RUS UKR		LSB			music transmissions – private war ?
DK2OM	7050,0	vt	dly	04	KGZ		FSK8	125	1750	ALE, “X” “810” “820615” “810698” – Kyrgyzstan MIL
DK2OM	7051,0	2020	13	04	RUS		F1B	50	200	unclean – Sevastopol – mostly idling - daily
DK2OM	7053,0	1658	14	04	FEa		FMOP		32k	Codar like ocean surface radar 2.6 sps – 7053 – 7085 kHz
DK2OM	7061,0	1910	24	04	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Gorodezh
DK2OM	7068,0	1957	27	04	RUS		PSK2	120	2600	AT3004D – submode idle – Far East Russia
DK2OM	7070,0	vt	vd	04	GEO	no ITU	FSK8	125	1750	ALE, “MV” “244” “686” “334” “204” “571” – daily active
DK2OM	7072,0	1627	01	04	FEa		FMOP		32k	Codar like ocean surface radar 2.6 sps – 7072 – 7104 kHz
DK2OM	7088,0	1827	22	04	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Gorodezh
DK2OM	7088,8	1905	15	04	S	SL0FRO	A1A			7088.830 kHz - cw-trainee, Sweden - SL0FRO - just for info!
DK2OM	7089,8	---	--	03	TUR CYP		PSK8	2400	2400	Link 11 - SLEW – aircraft – west of Cyprus
DK2OM	7090,0	2040	04	04	RUS		PSK2A	120	2600	AT3004D – submode idle and traffic - Far East Russia
DK2OM	7091,5	---	--	04	KAZ	„V“	A1A			7091.543 kHz - loop with spurious – ident “V” – Almaty - Kazakhstan
DK2OM	7096,5	1242	01	04	FEa		PSK2A	62.5	1750	Clover-2000
DK2OM	7099,5	vt	dly	04	HRV	9A0ZG	FSK8	125	1750	ALE, “9A0ZG” “9A5EX1P” “9A0OS” – daily - just for info!
DK2OM	7101,0	1217	17	04	CHN		FMOP		10k	Chinese OTH radar (foghorn) – 83 sps – 3.0 sec bursts
DK2OM	7102,0	1855	19	04	TWN		FSK8	125	1750	ALE, “BV4AS” – just for info!
DK2OM	7102,0	vt	vd	04	HRV SUI D	9A0MIL	FSK8	125	1750	ALE, “9A3MIL” “9A2KS” “HB9MHB” “9A0ZG” “9A4OS” “DK0ESD” – just for info!

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	7110,0	vt	dly	04	HRV	9A0ALE	FSK8	125	1750	ALE, "9A0ALE" – just for info
DK2OM	7111,0 LSB	ady	dly	04	CHN		PSK4A	60	2400	burst system "PRC-30" – 30 tones – 450 Hz pilot tone
DK2OM	7111,0	1949	02	04	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Gorodezh
DK2OM	7112,0 LSB	1942	20	04	CHN		PSK4A	60	2400	burst system "PRC-30" – 30 tones – 450 Hz pilot tone
DK2OM	7117,0	---	--	04	RUS	REA4	F1B	100	1000	mostly idling – Russian airforce Moscow – ident on CW at 1640 utc on the mark-QRG
DK2OM	7119,0	1155	05	04	RUS		PSK2A	120	2600	AT3004D – Far East Russia
DK2OM	7120,0	1500	vd	04	SOM		A3E		9k	Radio Hargaysa – Somalia – daily – even audible in Australia and Japan
DK2OM	7122,0	0757	16	04	RUS		PSK2A	120	2600	AT3004D – Far East Russia
DK2OM	7127,0	1219	17	04	CHN		FMOP		10k	Chinese OTH radar (foghorn) – 83 sps – 3.0 sec bursts – jumping 7101
DK2OM	7130,0 LSB	vt	vd	04	CHN		PSK4A	60	2400	burst system "PRC-30" – 30 tones – 450 Hz pilot tone
DK2OM	7132,0	1353	03	04	FEa		FMOP		32k	Codar like ocean surface radar 2.6 sps – 7132 – 7164 kHz
DK2OM	7137,0	vt	dly	04	TWN		FSK8 LSB	125	1750	ALE, "DEGDG" "DRYHD" "DCOY" "DSQLK" "DEIQW" "DETWY" Taiwanese navy – daily
DK2OM	7144,0 LSB	1906	07	04	CHN		PSK4A	60	2400	burst system "PRC-30" – 30 tones – 450 Hz pilot tone
DK2OM	7144,0	vt	vd	04	CHN		FSK8	125	1750	ALE, "577" "314"
DK2OM	7144,0	1638	17	04	FEa		FMOP		32k	Codar like ocean surface radar 2.6 sps – 7144 – 7176 kHz
DK2OM	7155,0	1435	13	04			FMOP		10k	Chinese OTH radar (foghorn) – 66.66 sps – 3.7 sec bursts
DK2OM	7162,0	2125	13	04	FEa		FMOP		32k	Codar like ocean surface radar 2.6 sps – 7162 – 7194 kHz – daily, various times
DK2OM	7171,0	0748	18	04	RUS		PSK2A	12	2600	AT3004D - Arkhangelsk
DK2OM	7175,0	1702	18	04	ERI ETH		A3E		9k	carrier on 7174.989 kHz Radio Eritrea disturbed by Radio Ethiopia with white noise emissions - daily
DK2OM	7183,0	vt	dly	04	SUI		FSK8	125	1750	ALE, "HB9MHB" – just for info!
DK2OM	7184,0	1950	23	04	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Gorodezh
DK2OM	7185,5	vt	dly	04	D HRV		FSK8	125	1750	ALE, "9A5EX" "DK0ESD" just for info - daily
DK2OM	7200,0	vt	dly	04	CHN TWN		A3E/BC		9k	Chinese jammer disturbing Taiwan BC
DK2OM	10100,0	2009	03	04	D		QRM			disturbed by a neighbouring LED lamp with S9
DK2OM	10100,8	ady	dly	04	D		F1B	50	450	Baudot - German Weatherservice – legal!
DK2OM	10110,0	vt	dly	04	SNG	no ITU	FSK8	125	1750	ALE, "CN6" "68" – Singapore Navy - Changi Naval Base
DK2OM	10113,0	vt	vd	04	TUN	no ITU	FSK8	125	1750	ALE, "TUD" "STAT5" "STAT154"
DK2OM	10114,0	vt	dly	04	ALG	no ITU	FSK8	125	1750	ALE, "BSF" "ZEN" "CM2OR2"
DK2OM	10114,8	0745	11	04	RUS		F1B	100	1000	CIS14 – Moscow - daily
DK2OM	10115,0	vt	dly	04	MRC	no ITU	FSK8	125	1750	ALE, "100" "114" "203" "XXZ" – Western Sahara
DK2OM	10116,5	---	--	04	AFS		F7D	54.3	2120	MHF50 – 33 tones - South African navy
DK2OM	10120,0	vt	dly	04	ALG	no ITU	FSK8	125	1750	ALE, "CM6" "01012016"
DK2OM	10123,0	vt	dly	04	ALG	no ITU	FSK8	125	1750	ALE, "CM3" "COF" "BSF" "CM2" "ESA" – Algerian

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										Airforce
DK2OM	10123,0	1915	03	04			USB			male prsons in Portuguese voice
DK2OM	10129,0	vt	dly	04	ALG	no ITU	FSK8	125	1750	ALE, "CM1" "CTF" "772"
DK2OM	10136,0	vt	dly	04	ALG	no ITU	FSK8	125	1750	ALE, "CM3" "BLD" "CNC" "TF2"
DK2OM	10144,0	ady	dly	04	D	DK0WCY	A1A			10144.000 kHz - DK0WCY – German aurora beacon – just for info!
DK2OM	10145,5	vt	dly	04	SUI	HB9MHB	FSK8	125	1750	ALE, "HBMHB" - just for info - daily
DK2OM	10145,5	vt	dly	04	TWN AUS	BV4AS	FSK8	125	1750	ALE, "BV4AS" "VK4SAA" – just for info!
DK2OM	13986,0	1605	15	04	RUS		FMCW		20k	OTH radar Contayner - 50 sps
DK2OM	13992,0	0942	22	04	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Gorodezh – splattering up
DK2OM	14000,0	1535	14	04	FEa		USB			pirates from Java Sea - daily
DK2OM	14000,0	2009	03	04	D		QRM			disturbed by a neighbouring LED lamp with S9 – daily various times
DK2OM	14008,0	1309	17	04	RUS		F1B	50	250	Moscow
DK2OM	14026,0	1019	03	04	RUS		PSK2A	120	2600	AT3004D – Moscow – submode idle
DK2OM	14045,0	0856	27	04	RUS		PSK2	120	2600	AT3004D – submode idle – Far East Russia
DK2OM	14060,0	0748	17	04	CHN		FMOP		10k	Chinese OTH radar (foghorn) – 66.66 sps – 3.8 sec bursts – jumping 14291 kHz
DK2OM	14091,0	0834	28	04	CHN		FMOP		160k	Chinese broadband OTH radar – 10 sps – 14091 – 14251 kHz
DK2OM	14094,0	0807	09	04	CHN		FMCW		160k	Chinese broadband OTH radar – 10 sps – 14094 – 14254 kHz
DK2OM	14100,0	vt	dly	04	ALG	no ITU	FSK8	125	1750	ALE, "6206" "6204" "6212" "6202" "6203" "6207" "6217" "MTL" "IJI" – Mauritanian border – daily, all day
DK2OM	14100,0	1956	08	04	D		QRM			disturbed by a neighbouring LED lamp with S9 – daily various times
DK2OM	14108,0	---	--	04	RUS		A1A			"BXCS de 9KHQ" - RUS MIL area of Moscow – many spurious emissions
DK2OM	14109,0	vt	vd	04	TWN	HAM	FSK8	125	1750	ALE, "BV4AS" – daily - just for info!
DK2OM	14109,0	vt	dly	04	INS	HAM	FSK8	120	1750	ALE, "YD00XH" – just for info!
DK2OM	14109,0	vt	dly	04	S HRV D		FSK8	125	1750	ALE, "SM3FXL" "9A4OS" "9A3BRV" "DK0ESD" - just for info!
DK2OM	14109,0	vt	vd	04	G		FSK8	125	1750	ALE, "M1DFO" – just for info
DK2OM	14119,0	0848	20	04	RUS		PSK2A	120	2600	AT3004D – FarEast Russia
DK2OM	14119,0	1730	25	04	RUS		PSK2A	120	2600	AT3004D – Far East Russia
DK2OM	14133,0	0812	22	04	RUS		F1B	81	200	system 81 – Black Sea
DK2OM	14135,0	0919	11	04	CHN		FMOP		10k	Chinese OTH radar (foghorn) – 66.66 sps – 7.6 sec bursts
DK2OM	14135,0	0840	20	04	RUS		F1B	75	250	Moscow
DK2OM	14137,0	0811	09	04	CHN		FSK8	125	1750	ALE, "109" "102"
DK2OM	14140,0	1013	18	04	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Gorodezh
DK2OM	14160,0	vt	dly	04	MRC		FSK8	125	1750	ALE, "9204" "9228" "9236"
DK2OM	14171,0	0727	18	04	RUS		PSK2A	120	2600	AT3004D – Moscow
DK2OM	14178,0	0835	14	04	CHN		FMOP		10k	Chinese OTH radar (foghorn) – 66.66 sps – 3.8 sec bursts – jumping 14323 kHz
DK2OM	14180,0	0750	02	04	RUS	RDL	F1B	50	250	RUS navy Sevastopol
DK2OM	14191,0	0845	20	04	RUS		F1B	75	250	
DK2OM	14192,0	vt	dly	04	RUS		F1B	50	500	RUS navy Kaliningrad - daily

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
								75 50 100 100	500 200 500 200	
DK2OM	14195,0	0921	18	04	CHN		FMOP		10k	Chinese OTH radar (foghorn) – 66.66 sps – 3.8 sec bursts
DK2OM	14201,8	0800	01	04	CHN		PSK2	75	2200	PRC 16 tone modem – RF 14200.0 kHz - China – Shanghai - daily
DK2OM	14203,9	---	--	04	RUS		OFDM	35.6	2750	OFDM 60 – Omsk
DK2OM	14211,0	0757	01	04	CHN		FMOP		10k	Chinese OTH radar (foghorn) – 66.66 sps – 3.8 sec and 7.6 sec bursts – jumping 14290 and 14302 kHz
DK2OM	14212,0	---	--	04	UKR		A3E			female voice with encrypted msgs – figures – “SZRU” = Foreign Intelligence Service of Ukraine in Rivne – heard by MOODV
DK2OM	14221,0	---	--	04	KGZ		F1B	50	200	CIS-50-50 - Bishkek – daily
DK2OM	14236,9	0923	13	04	RUS		OFDM	29.7	2770	OFDM 60 – PSK4A - Mosocw
DK2OM	14242,0	0833	28	04	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	14253,0	1545	21	04	RUS		F1B	75	250	Moscow
DK2OM	14255,0	0745	12	04	RUS		PSK2A	120	2600	AT3004D - Samara
DK2OM	14260,0	vt	dly	04	SRB	YU1BI	FSK8	125	1750	ALE, “YU1BI” – just for info!
DK2OM	14260,9	0740	12	04	RUS		OFDM	35.6	2750	CIS-60 – PSK4B - Moscow
DK2OM	14263,0	0837	24	04	RUS		F1B	75	250	Moscow
DK2OM	14272,0	---	--	04	RUS	RCV	A1A			RUS Navy Sevastopol
DK2OM	14277,0	0742	17	04	RUS		PSK2A	120	2600	AT3004D – Far East Russia
DK2OM	14284,9	0900	13	04	RUS		OFDM	29.7	2770	OFDM 60 – PSK4A - Moscow
DK2OM	14291,0	0744	17	04	CHN		FMOP		10k	Chinese OTH radar (foghorn) – 66.66 sps – 3.8 sec bursts
DK2OM	14293,0	0756	23	04	CHN		FMOP		10k	Chinese OTH radar (foghorn) – 42 sps and 83 sps – 10 sec double bursts together with 14300
DK2OM	14295,0	vt	dly	04	SRB	YU1BI	FSK8	125	1750	ALE, “YU1BI” – just for info!
DK2OM	14295,0	ady	dly	04	TJK		A3E		9k	3 rd from Radio Tajik on 4765 kHz – daily, all day
DK2OM	14302,0	1203	01	04	CHN		FMOP		10k	Chinese OTH radar (foghorn) – 66.66 sps – 3.8 sec bursts
DK2OM	14308,0	0956	06	04	RUS		F1B	50	250	
DK2OM	14308,0	0848	11	04	CHN		FMOP		10k	Chinese OTH radar (foghorn) – 66.66 sps – 3.8 sec bursts
DK2OM	14311,0	0947	03	04	CHN		FMOP		10k	Chinese OTH radar (foghorn) – 66.66 sps – 3.8 sec bursts
DK2OM	14313,0	0901	17	04	RUS		PSK2A	120	2600	AT3004D – Far East Russia
DK2OM	14330,0	vt	dly	04	TWN		FSK8	125	1750	ALE, “BV4”
DK2OM	14340,0	---	--	04	RUS		PSK2A	120	2600	AT3004D – Vladivostok with spurious emissions +/- 35 kHz and +/- 70 kHz - daily
DK2OM	14346,0	vt	dly	04	POR		FSK8	125	1750	ALE, “CT2IXQ” just for info – various times, daily
DK2OM	14348,0	vt	dly	04	THA	HS0ZEA	A1A			HS0ZEA beacon – 14347.950 kHz - every 5 minutes – daily - just for info!
DK2OM	14348,7	0857	17	04	RUS		PSK2A	120	2600	AT3004D – unstable and unclean signal – Far East Russia
DK2OM	14351,7	---	--	04	E		OFDM PSK4A	30	2700	OFDM 73 + intro tone – HFD+VL - experimental transmissions – Las Palmas – just for info!
DK2OM	18080,0	0739	11	04	TWN		A3E/BC			Sound of Hope – Taiwan and Chinese BC jammer – daily at 06 utc and later
DK2OM	18100,0	vt	dly	04	MRC	no ITU	FSK8	125	1750	ALE, “A2” “A4” “A5” “A7”

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										“S6” – “C3” “R3” “G401” “CD” “09” “G2” “LG6” “G301” “ELJADIDNET4” - daily, various times
DK2OM	18106,0	vt	vd	04	POR	CT2GOY	FSK8	125	1750	ALE, “CT2GOY” – just for info!
DK2OM	18107,0	vd	vt	04	RUS	RDL	F1B	50	200	CIS-50-200 - Moscow – idle and traffic – daily - Russian navy – shared band!
DK2OM	18117,5	vt	vd	04	POR	CT2IXQ	FSK8	125	1750	ALE, “CT2IXQ” – just for info
DK2OM	18140,0	vt	dly	04	SRB	YU1BI	FSK8	125	2600	ALE, “YU1BI” – just for info!
DK2OM	18150,0	---	--	04	RUS		F1B	100	1000	harmonic from 9075 (100 Bd, 500 Hz) - Kaliningrad
DK2OM	21000,0	1220	08	04	B		USB			Brazilian pirates – Rio de Janeiro with North Brazil – very often
DK2OM	21000,0	---	--	04	SDN		USB			MFA Sudan – Khartoum with emba Yemen – voice traffic
DK2OM	21000,0	2009	03	04	D		QRM			disturbed by a neighbouring LED lamp with S9
DK2OM	21002,2	---	--	04	SDN	!0000 !9999 !8888	F1B	100	170	21002.15 kHz - Pactor 1 encrypted – MFA Sudan – Khartoum with emba Yemen
DK2OM	21031,5 USB	1046	18	04	CHN ship		PSK4A	75	2250	PRC4+4 – 8 x 75 Bd – ship – Horn of Africa
DK2OM	21090,0	0950	21	04	?		FMOP		34k	OTH radar – 13 sps – QTE 70 deg from DL
DK2OM	21096,0	vt	dly	04	INS	YD00XH	FSK8	125	1750	ALE, “YD00XH3” – daily, various times - just for info!
DK2OM	21096,0	vt	vd	04	G		FSK8	125	1750	ALE, “M1DFO” – just for info!
DK2OM	21145,0	vt	dly	04	MRC	no ITU	FSK8	125	1750	ALE, “A” “B301” “C3”, “IR4” “H4” “IR6” “T4” “E4” “A2” “CD” “K3” “KB2” “J5” “J52” “GR2” “GS4” “R3” “R301” “R33” “R8” “R5” “Y1” “S51” “S3” “S4” “S512” “S552” “G2” “G501” - various times, daily
DK2OM	21145,8	ady	dly	04	I	IZ3DVW	A1A			IZ3DVW beacon – 21145,790 kHz – daily, all day - not coordinated with IARU
DK2OM	21377,0	0917	24	04	CHN ?		FMOP		20k	Far East OTH radar – 50 sps - 5 sec bursts – jumping 21430 and 21460
DK2OM	21378,0	0729	25	04	CHN		FMOP		160k	Chinese wideband OTH radar – 10 sps – 21298 – 21458 kHz
DK2OM	21400,0	---	--	04	RUS		F1B	50	2000	harmonic from 5350 kHz – area of Moscow
DK2OM	21430,0	0917	24	04	CHN ?		FMOP		20k	Far East OTH radar – 50 sps - 5 sec bursts
DK2OM	21438,0	vt	vd	04	RUS	RCV	A1A			RIP90, RCV, RGX94 - RUS Navy Sevastopol - daily
DK2OM	21446,0	ady	dly	04	THA	HS0ZEA	A1A			HS0ZEA beacon – every 5 minutes - just for info!
DK2OM	25000,0	ady	dly	04	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	vd	vt	04	B		A3E			Brazilian CBers – 28000 – 28325 – daily, all day - no change
DK2OM	28000,0	---	--	04	CIS		F3E			28000 – 29700 numerous CIS taxi nets – no change
DK2OM	28000,0	2009	03	04	D		QRM			disturbed by a neighbouring LED lamp with S9
DK2OM	28146,0	vt	vd	04	ARG B		FSK8	125	1750	ALE, “LU8EX” “PY2TI” “DL1” – just for info!
DK2OM	28435,0	----	--	04	E		F1B	81.9	140	Datawell-buoy “Waverider” –

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										28435.040 kHz – Costa del Sol – Malaga
DK2OM	28499,8	---	--	04	MEa		F1B	81.9	140	Datawell-buoy “Waverider” – 28499.875 kHz – Persian Gulf
DK2OM	29114,0	---	--	04	RUS		F1B	100	2000	harmonic from 14557.0 kHz - Moscow
DK2OM	29249,9	---	--	04	E		F1B	81.9	140	Datawell-buoy “Waverider” – 29249.880 kHz – Spain Fuerteventura - daily, all day
DK2OM	29375,0	---	--	04	I		F1B	81.9	140	Datawell-buoy “Waverider” – 29374.898 kHz – Gallipoli, South Italy - daily, all day
DK2OM	29387,5	---	--	04	IND		F1B	81.9	140	Datawell-buoy “Waverider” – 29387.460 kHz – Indian NW coast, close to Pakistan - daily, all day
DK2OM	29400,0	---	--	04	USA		F1B	81.9	140	Datawell-buoy “Waverider” – 29400.070 kHz - USA north-east coast – NY daily, all day
DK2OM	29450,0	---	--	04	MRC		F1B	81.9	140	Datawell-buoy “Waverider” – 29449.863 kHz - area of El Aaiun – Morocco - daily, all day
DK2OM	29500,0	---	--	04	G		F1B	81.9	140	Datawell-buoy “Waverider” – 29499.974 kHz- area of Gibraltar – daily, all day
DK2OM	29525,0	---	--	04	MRC		F1B	81.9	140	Datawell-buoy “Waverider” – 29524.990 kHz - Agadir - Morocco – daily, all day
DK2OM	29625,0	---	--	04	USA		F1B	81.9	140	Datawell-buoy “Waverider” – 29625.024 kHz - USA north-east coast – daily, all day
DK2OM	29685,0	---	--	04	I		VFT		2300	Italian MIL - Brescia
DK2OM	29699,5	---	--	04	I		VFT		1600	Italian MIL - Brescia

IRTS – Ireland – EI3GYB (Michael)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
IRTS	1838	1750	11	04	E or MM		USB			2 male Spanish fishermen having a chat.
IRTS	1896.5	0520	06	04	D		PSK8	2400	2400	German navy- hours of darkness only now.
IRTS	1980	1514-1520	14	04	UK or MM		USB			2 English fishermen. Not a single sentence without the “f-word”.
IRTS	1986	1932	18	04	HOL or MM		USB			Several Dutch fishermen having fun with plenty of laughter and singing. Huge signals.
IRTS	3519	1203-1219	15	04	UK or MM		USB			2 male English fishermen just saying good bye. “I’ll see you tomorrow!”
IRTS	3535	1403	22	04	UK or MM		USB			2 male Scottish fishermen. VHF traffic heard in the background of one of them. Loud and clear signals.
IRTS	3595	1142	17	04	UK or MM		USB			2 male English fishermen chatting happily.
IRTS	3636	1257	06	04	UK or MM		USB			2 Scottish fishermen. Usual foul language.
IRTS	3664	1012-1040	28	04	E or MM		USB			2 male Spanish fishermen. Strong motor noise from both of them.
IRTS	3699	0954-	04	04	HOL		USB			2 male Dutch fishermen, very

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
		1015			or MM					strong.
IRTS	5380	2036	14	04	E or MM		USB			2 male Spanish fishermen with huge signals.
IRTS	5400	1037	13	04	E or MM		USB			2 male Spanish fishermen chatting. Very popular frequency among the fishing community of the Iberian Peninsula.
IRTS	5398.5	1451	16	04	D		USB			A DL station calls into the pre-RSGB net and makes contact with 3 UK stations.
IRTS	5398.5	1210- 1250	28	04			USB			Music being played on and off.
IRTS	5398.5	1345	30	04			USB			Radar weak in the background from 5396 to 5402 KHz.
IRTS	5399.9	0435- 0531	09	04	E or MM		USB			2 Spanish fishermen having fun. A lot of singing and shouting. One seems to be drunk.
IRTS	6999	0620	11	04	E or MM		USB			2 Spanish fishermen. Heard also a few other times during the month. Signal bleeding up and down the spectrum.
IRTS	7000	1714	20	04	I ?		LSB			Male Italian voice with an endless monologue.
IRTS	7050	1450	02	04	RUS/ UKR		LSB			Russian-Ukrainian radio war. Shouting of slogans, propaganda music. Every day, all day. Pest !
IRTS	7050	1734	11	04	RUS or MM		LSB			Russian- Ukrainian radio war with propaganda MX and shouting of slogans. Every day all day. Another pest.
IRTS	7111.5	1131	14	04	RUS ?		Digi			Strong digital signal from 7111.5 to 7114.8 KHz.
IRTS	7120	1730	03	04	SOM		AM			Radio Haragaysa. MX and talk. Every day.
IRTS	10101	1320	01	04						2 male Arab fishermen, Maghreb accent. Huge signals.
IRTS	10099.2	1805	22	04						Radar from 10099.2 to 10131.1 KHz.
IRTS	10105	1801	18	04						Radar from 10105 to 10132 KHz
IRTS	10106	1745	11	04						Radar from 10106 to 10130.5 KHz. Persistent and strong.
IRTS	10116.5	1748	30	04						Radar from 10116.5 to 10139.8 KHz. Huge signal, persistent.
IRTS	10130.4	1143	14	04						2 male Arab fishermen with Maghreb accent.
IRTS	14098	1104- 1125	04	04						Radar from 14098 to 14138 KHz. Huge monster signal wiping out everything.
IRTS	14192	0947	05	04	RUS		F1B			Russian navy, Kaliningrad. All day every day during daylight hours.
IRTS	14295	1810	18	04	TJK		AM			Radio Tajikistan with MX. Strong.
IRTS	14342.5	1305	14	04			Digi			Digital signals, on and off. Strong. Probably a North Korean embassy in West Africa.
IRTS	14348	1155	17	04	RUS		Digi			Non-stop strong digital signals.
IRTS	14350	1815	18	04			Digi			Very strong digital signals.
IRTS	14350	1218- 1228	26	04			USB			2 male Arab voices chatting.
IRTS	21386.5	1213	26	04						Massive radar signal from 21386.5 to 21414.8 KHz.

MRASZ – Hungary - HA7PL (Laci)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SH	DETAILS
MRASZ	3510,00	1928	6	4			A3E		instable carrier
MRASZ	3516,50	1929	6	4			OTHR		
MRASZ	3524,00	1756	1	4			F1B	200	
MRASZ	3526,00	1808	30	4			A1A		"85752, 681TI QLN K" "3789165" with 50 Hz hum"
MRASZ	3546,00	1757	1	4			PSK2		AT3004D
MRASZ	3560,00	1910	2	4			USB		ui
MRASZ	3597,00	1748	3	4			PSK2		AT3004D
MRASZ	3629,30	1931	6	4			A1A		dashes, deliberate disturbance
MRASZ	3698,50	1907	2	4			A1A		"IRKEFS BNQH XOKWERB EZQQ"
MRASZ	3699,20	1934	6	4			A1A		dashes, deliberate disturbance
MRASZ	3701,20	1956	6	4			F1B	200	
MRASZ	3738,00	1936	6	4			LSB		music and song
MRASZ	3742,00	1949	6	4			NON		
MRASZ	3787,00	1905	2	4			A1A		"46468 85834 11471"
MRASZ	3797,00	1938	6	4			A1A		"plawanie opasmo rajona 44/40/0"
MRASZ	5350,00	2033	11	4			USB		fishermans
MRASZ	5380,00	2033	11	4			USB		fishermans
MRASZ	7000,00	1110	15	4			NON		
MRASZ	7000,00	1420	24	4			LSB		italians, non HAM's
MRASZ	7018,00	1459	18	4			NON		
MRASZ	7020,00	1458	18	4			LSB		ui. whistle for tuning
MRASZ	7027,00	1344	15	4			NON		deliberate disturbance
MRASZ	7036,00	1917	6	4			F1B	500	
MRASZ	7050,00	1816	6	4			LSB		russian, music, cursing, chaos; hrd: 7, 10, 12
MRASZ	7052,00	1104	15	4			A3E		ui BC, russian language,
MRASZ	7055,00	1816	6	4			LSB		russian, music, cursing, chaos; hrd: 7,9,10,12,16,17
MRASZ	7068,80	1725	1	4			F1B	170	
MRASZ	7080,00	1924	6	4			F1B	200	
MRASZ	7117,00	0950	8	4			A1A		"07486 75569 96978= + RMPK"
MRASZ	7117,00	1443	12	4			A1A		"5 letrs; PFVKCh ÖÁVGA ÁÜKTM" "REO3 QTC"
MRASZ	7117,00	1448	12	4			A1A		"RGL85 (3) RMP (2) QSA2 QSA? K"
MRASZ	7120,00	1600	1	4	SOM		A3E		R. Hargaysa, hrd: 2, 6, 30
MRASZ	7126,00	1452	12	4			USB		russian traffic, "125 prijom", numbers on russian
MRASZ	7126,00	1507	12	4			OTHR		
MRASZ	7127,00	1101	15	4			A1A		dots; 1 dot/sec
MRASZ	7169,00	1450	1	4			A1A		"728 21 1 17 38 B28=75T= DDDDD ÜWYIT "
MRASZ	7175,00	1926	6	4			A3E		ui BC
MRASZ	7179,00	0652	14	4			PSK2		AT3004D
MRASZ	7179,00	1543	30	4			PSK2		AT3004D
MRASZ	10017,00	1423	24	4			OTHR		
MRASZ	10114,75	0655	14	4			FAX		weather fax?
MRASZ	10114,75	0753	14	4			F1B	1000	
MRASZ	10114,75	738	16	4			F1B	1000	
MRASZ	10115,80	1551	10	4			F1B	250	
MRASZ	10145,00	0736	16	4			OTHR		10140-10150 kHz
MRASZ	14000,00	1555	10	4			OTHR		13990 - 14015 kHz
MRASZ	14001,00	1452	1	4			NON		
MRASZ	14008,00	0717	23	4			F1B	250	
MRASZ	14253,00	0740	16	4			F1B	250	
MRASZ	14295,00	0917	6	4	TJK		A3E		Radio Tajik, 3rd. harmonic, hrd: 30
MRASZ	28035,00	1115	23	4			A3E		ui.

OEVSV – Austria – OE3GSA (Gerd)

PZK – Poland – SP9BRP (Jan)

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

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REF	7088.0	0444	06	04	RUS	Russian Military	CIS-12/AT300 4D/USB	120 per channel	2700	Encrypted messages
REF	7174.0	0356	11	04	RUS	Russian Military	CIS-12/AT300 4D/USB	120 per channel	2700	Encrypted messages
REF	14110	16h35	14	04			cw			One Hertz timing pulses beacon
REF	14346	8h15	17	04		RU	Digit		3500	Tx AT3004D S5-S9
REF	6999	07h38	20	04		IT	Usb		3000	Italian fishermen ? S6
REF	7085	17h05	22	04			fmcw		20kHz	OTH radar S9+10 pulsed 20ms

REP – Portugal – CT4AN (Jose Francisco)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	3520	03.41	04	04	E		J3E-U			Fishery
REP	3570	20.49	27	04			J3E-U			English language fishery, hard accents
REP	3659	07.00	11	04	F		J3E-U			French fishery
REP	3687	07.12	20	04			A1			Constant carrier, no modulation, QSB
REP	3690	07.12	20	04	E		J3E-U			Spanish fishery, Galicia province
REP	3737	07.14	13	04	F		J3E-U			French fishery
REP	6999	07.31	20	04	E		J3E-U			Spanish truckers, up to 7002kHz
REP	7000	21.09	18	04	B		J3E-U			Brazilian fishery, everyday
REP	7000	19.48	07	04	B		J3E-U			Brazilian fishery, phone patches, everyday
REP	7007	14.11	04	04			F1B	75	250	Encrypted
REP	7015	16.24	17	04	MRC		J3E-U			Fishermen
REP	7015	08.33	07	04	E		J3E-U			Spanish comms
REP	7020	22.37	01	04	RUS	V	A1A			BEACON
REP	7039	23.25	08	04	RUS	D	A1A			BEACON
REP	7058	19.45	12	04			FMCW	50	18k	OTH radar
REP	7070	16.26	27	04			J3E-L			Russian musics and talks
REP	7073	07.44	11	04						Unid buzzsaw like mode
REP	7120	19.09	23	04	SOM		8k00 A3EGN			Radio Hargaysa
REP	7175	19.28	16	04	ETH		8k00 A3EGN			Radio Eritreia
REP	7175	17.05	04	04	RUS		PSK4	120		CIS12 mode, 12 x 120bpsk channels 3k tone
REP	7175	17.06	04	04	ETH		8k00 A3EGN			Radio Free Eritreia
REP	7185	13.20	02	04			MFSK			Mil-ALE secall
REP	7185	07.16	20	04	MRC		J3E-U			Moroccan fishery, Arabic/French language
REP	7205	20.03	12	04	F		A3E			RFI splattering down to 7185kHz
REP	10105	07.30	13	04			J3E-U			Unid Arabic fishery net
REP	10110	07.59	11	04	MRC		J3E-U			Arabic/French lang. fishery, prob Morocco
REP	10115	10.08	10	04	E		J3E-U			Fishery
REP	10130	16.50	24	04			MFSK			Mil-ALE 304003
REP	10144	11.49	27	04			F1B	50	200	Encrypted
REP	10150	21.44	28	04			FMCW	50	20k	OTH radar, down to 10140kHz
REP	14000	12.41	03	04	B		J3E-U			Brazilian fishery, everyday
REP	14035	11.54	07	04			J3E-U			Unid Arabic fishery net
REP	14110	18.31	12	04			1s Pulses			Beacon ??
REP	14160	07.48	28	04			FMCW	50	18k	OTH radar
REP	14192	10.13	13	04	RUS		F1B	50	200	CIS36 – Russia mil
REP	14210	15.00	02	04	E		J3E-U			Fishermen
REP	14253	07.58	12	04	RUS		PSK4			CIS12 mode, 12 x 120bpsk channels 3k tone
REP	14345	07.14	12	04			DBPSK	120		
REP	18065	14.09	11	04	CYP		FMCW	50	20k	Cyprus OTH Radar, up to 18075kHz
REP	21000	14.55	03	04	E		J3E-U			Intruders

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	21000	15.22	01	04	B		J3E-U			Intruders
REP	21000	12.06	08	04	B		J3E-U			Brazilian fishery
REP	21030	15.14	14	04			FMCW	50	20k	OTH radar
REP	21050	14.01	22	04	E		J3E-L			Fishermen
REP	28035	18.36	03	04	B		A3E			Brazilian intruders, everyday
REP	28075	18.35	03	04	B		A3E			Brazilian intruders, everyday
REP	28145	11.37	08	04	RUS		F3E			Taxis female dispatchers
REP	28265	10.53	03	04	RUS		F3E			YL taxis dispatcher
REP	28305	18.35	03	04	B		A3E			Brazilian intruders, multiple modes, everyday

RSGB - Great Britain – M0VRR (Vaughan)

SRAL – Finland – OH2BLU (Pekka)

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BAUD	SHIFT	REMARKS
SRAL	7002,0	1330-1345/	6.	4		UiMUX	PSK2	120	2600	
SRAL	7008,0	0800-1640/	17. 20.	4		UiPTR	F1B		200/250	
SRAL	7008,0	1645	20.	4		UiCW	A1A			Z-codes
SRAL	7016,0	0830-1523/	10.	4		UiPTR	F1B			
SRAL	7018,62	1700-1920	28.	4		UiCarr	N0N			F1 at 1845 250 Hz
SRAL	7022,0	0830-0930	10. 25.	4		UiMUX	PSK2	120	2600	
SRAL	7030,0	0800-0830	20.	4		UiPTR	F1B		250	
SRAL	7035,0	0815-0850/	14.	4	RUS	UiMUX	PSK2	120	2600	
SRAL	7051,0	/2000-0600/	11.- 30.	4	RUS	UiPTR	F1B		200	
SRAL	7055,0	0545	27.	4		UiPTR	F1B		200	
SRAL	7057,5	0920-1055	14. 21.	4		G1PJ	A1A			MR 5F
SRAL	7076,0	0515-0845	7. 19.	4		UiPTR	F1A/B			
SRAL	7099,0	0800-0900	13.	4		UiPTR	F1B		200	
SRAL	7104,0	1300-1330	10.	4		UiPTR	F1B		500	
SRAL	7110,0	1320-1420	14.	4		UiPTR	F1B		250	
SRAL	7110,8	1345	10.	4		UiCarr	N0N			
SRAL	7111,0	0645-1300	2. 5.	4		UiPTR	F1B/ N0N			
SRAL	7112,0	1315-1400/	14. 25.	4		UiPTR	F1B		250	
SRAL	7113,9	0450-0558/	26.	4		UiCarr	N0N			
SRAL	7114,0	-0555/	28.	4		UiPTR	F1B		250	
SRAL	7116,62	1400-1435/	30.	4		UiCarr	N0N			
SRAL	7117,0	0700-1730	7.- 24.	4	RUS	RMP	A1A			MR 5F
SRAL	7117,0	1145-1200	11.	4		UiMUX	PSK2	120	2600	
SRAL	7117,5	1620	5.	4	RUS	RMP	A1A			MR 5F
SRAL	7120,0	/0330-0530/	dly	4	SOM	R.Hargeis a	A3E			
SRAL	7120,0	/1500-1900/	1.-3.	4	SOM	R.Hargeis a	A3E			
SRAL	7120,0	/1500-2000/	4.- 30.	4	SOM	R.Hargeis a	A3E			

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BAUD	SHIFT	REMARKS
SRAL	7122,0	1000-1420	13. 14.	4		UiMUX	PSK2	120	2600	
SRAL	7124,0	0815-0825	20.	4		UiMUX	PSK2	120	2600	
SRAL	7133,0	0900	20.	4		UiMUX	PSK2	120	2600	
SRAL	7137,0	1650-1750	27.	4		UiPTR	F1B/N0N		200	
SRAL	7160,0	0640-0900	19.	4	RUS	RMW32	A1A			MR 5BL
SRAL	7162,0	0800-1640/	*	4		UiPTR	F1B		250	Days: 3. 20. 28.
SRAL	7169,0	0540	19.	4		KFRF	A1A			MR 5BL
SRAL	7175,0	1500-1845/	*	4	ERI	VoBM	A3E			Days: 4. 6. 8. 9. 10. 11.
SRAL	7175,0	1845-0530	6. 7.	4	ERI	VoBM	A3E			
SRAL	7175,0	0400-0500	12.	4	ERI	VoBM	A3E			
SRAL	7176,0	0645	27.	4		UiPTR	F1B		250	
SRAL	7179,0	0700-1900	*	4		UiMUX	PSK2	120	2600	Days: 13. 14.20. 26. 30.
SRAL	7193,0	0510-0655	16.	4		UiPTR	F1B			
SRAL	7198,0	0900-1200	14.	4		UiMUX	PSK2	120	2600	
SRAL	7199,0	0500-0700	27.	4		UiPTR	F1B		200	
SRAL	7 MHz	1600-0445	*	4	RUS	29B6	FMCW			50Hz / 15 kHz (WebSDR 11d) days: 11. 22. 23. 24.
SRAL	7 MHz	0540	26.	4	RUS	UiOTHR	FMCW			10Hz / 15 kHz, 30 sec, with 16 min cycle. (WebSDR 5d)
SRAL	10 MHz			4	RUS	29B6	FMCW			50Hz / 15 kHz (WebSDR 14d)
SRAL	14016,0	0840-0845/	25.	4		UiMUX	PSK2	120	2600	
SRAL	14022,0	0545	10.	4		UiMUX	PSK2	120	2600	
SRAL	14026,0	1220-1315	25.	4		UiMUX	PSK2	120	2600	
SRAL	14180,0	0700-1330	*	4	RUS	UiPTR	F1B/A		250	Days: 3. 4. 10. 11. 13. 14. 15. 16. 23.
SRAL	14221,0	0330-0600/	dly	4	KGZ	UiPTR	F1B		200	
SRAL	14221,0	1110	28.	4		UiPTR	F1B		500	
SRAL	14240,0	0530	13.	4		UiPTR	F1B		250	
SRAL	14252,0	0555	3.	4		UiPTR	F1B			
SRAL	14253,0	0810-0830	17. 24.	4	RUS	UiPTR	F1B		250	
SRAL	14295,0	0330-1500	dly	4	TJK	R Tojikiston	A3E			3f 4765,00 kHz, Yangiyul TX
SRAL	14 MHz			4	RUS	29B6	FMCW			50Hz / 15 kHz, (WebSDR 6d)
SRAL	14 MHz	0500-1430	dly	4	RUS	UiOTHR	FMCW			10Hz / 15 kHz, 30 sec, with 16 min cycle.
SRAL	18080,0	0600-0730	*	4	TWN	Sound of Hope	A3E			Days: 5. 6. 21.
SRAL	18 MHz			4	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz, (WebSDR 19d)
SRAL	21 MHz			4	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz, days: 5. 10. 29. (WebSDR 4d)
SRAL	21438,0			4	RUS	RCV	A1A			
SRAL	24 MHz			4		UiOTHR	FMCW			(WebSDR 0d)
SRAL	28960,0			4	IRN	UiOTHR	FMCW			150 & 313 Hz / 60 kHz
SRAL	28 MHz			4		UiOTHR	FMCW			25/50Hz / 20 kHz (WebSDR 0d)
SRAL	28 MHz			4	RUS	Taxi disp.	F3E			no reports

USKA – Switzerland – HB9CET (Peter)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
USKA	3520.0	2234	11	04			J7D	12x120	2k7	BPSK; CIS12
USKA	3522.0	2148	16	04			PSK8	2400	~2k7	STANAG 4285;
USKA	3524.0	2238	11	04			F1B	50	200	
USKA	3525.0 (Center)	2150 2234	03 11	04			DQPSK	14x75	5k9	LINK 11 CLEW; almost daily (Stanag5511); ISP or DSP Mode
USKA	3526.0	2128	09	04			J7D	12x120	2k7	BPSK; CIS12
USKA	3527.0	2151	04	04			F1B	50	200	often
USKA	3530.0 VFO USB	2153	03	04			DQPSK	14x75	2k7	LINK 11 CLEW(Stanag5511) SSB mode
USKA	3532.0	0646	01	04			DQPSK	14x75	5k9	LINK 11 CLEW; often (Stanag5511); ISP or DSP Mode
USKA	3549.0 VFO USB	2159		04			PSK8	2400	~2k7	MIL188-110A (Hybrid), often preamble 4 tones, 450Hz spacing
USKA	3550.0	2238	11	04			J7D	12x120	2k7	BPSK; CIS12
USKA	3552.0	2147	04	04		RDL	F1A		250	
USKA	3552.0	2149	04	04		RDL	F1B	50	250	
USKA	3553.8	2156	03	04			G1D	2400	~2k4	Stanag 4285; PSK8 almost daily
USKA	3699.5.0	2135	16	04			F1B	50	200	
USKA	3744.5	2135 2139	09 16	04			PSK8	2400	~2k7	MIL188-110A (Hybrid), often preamble 4 tone PSK4 75Bd
USKA	3748.0	2157	04	04			F1B	75	200	
USKA	6999.0	0648	10	04			J3E-U		2k4	Spanish (fishery)
USKA	6999.9	0643	10	04			J3E-U		2k7	English dialect (Patois)
USKA	7003.5	2117	09	04					2k6	Fishery; French
USKA	7008.0	0822	10	04			F1B	75	250	often
USKA	7008.5	0904	12	04			J7D	12x120	2k7	BPSK; CIS12 system
USKA	7016.0	0826	10	04			F1A	75	250	
USKA	7020.0	0756	12	04			F1B	75	250	
USKA	7022.0	0832	10	04			J7D	12x120	2k7	BPSK; CIS12 system
USKA	7051.0	2229 0543	11 25	04			F1B	50	200	often
USKA	7055.0	0726	13	04			J3E-L		~3k	Patriotic music and slogans
USKA	7070.0	2213	11	04			J7D	12x120	2k7	BPSK; CIS12 system
USKA	7089.8.0	1917	05	04			PSK8	2400	~2k4	LINK11 SLEW
USKA	7090.0	2218	04	04			J7D	12x120	2k7	BPSK; CIS12 system, strong via JA rx
USKA	7090.0	1928	05	04			J7D	12x120	2k7	BPSK; CIS12 system
USKA	7093.0	1923	05	04			J7D	12x120	2k7	QPSK; CIS12 system
USKA	7111.0 VFO LSB	2039	05	04			BPSK	30x60Bd	~2k5	Burst system; tone spacing 75 Hz. Preamble 4x PSK4 60Bd, spacing 600Hz; Pilotone at 450Hz
USKA	7112.0	0908	12	04			F1B	75	250	
USKA	7114.0	0813	12	04			J7D	12x120	2k7	BPSK; CIS12 system
USKA	7118.0	2049	05	04			J7D	12x120	2k7	CIS12 system
USKA	7126.0 VFO USB	0619	12	04			PSK8		~3k	MIL188-141B (BW1) ALE3G
USKA	7126.0 VFO USB	0633	12	04			PSK8	2400	~3k	MIL188-110A (D2)
USKA	7130.0 VFO LSB	0611	12	04			BPSK	30x60Bd	~2k5	Burst system; tone spacing 75 Hz. Preamble 4x PSK4 60Bd, spacing 600Hz; Pilotone at 450Hz
USKA	7144.0	0821 1152	11 25	04			J7D	12x120	2k7	CIS12 system
USKA	7179.0	1229	04	04			J7D	12x120	2k7	BPSK; CIS12 often
USKA	7197.0	1948	05	04		315013	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	1957	05	04		302018	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	1958	05	04		390013	MFSK8	125	1750	MIL 188-141A
USKA	14008.0	0839	12	04			F1B	50	250	often
USKA	14026.0	0925 1130	19 24	04			J7D	12x120	2k7	BPSK; CIS12 system
USKA	14044.0	0744	21	04			F1B	75	250	

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
USKA	14139.0	1016	18	04			FMCW	50 sps	~13k	OTHR (occupied BW ≥ 30k) Contayner 29B6 system
USKA	14142.0	0751	27	04			F1B		200	unclean; idling
USKA	14180.0	1416	06	04		RDL	F1A		250	followed by F1B
USKA	14180.0	1419 1420	06	04		RDL	F1B	36 50	250	CIS 36-50 almost daily
USKA	14184.0	0823	12	04			F1B	50	250	often
USKA	14192.0	1013	15	04			F1B	50	200	
USKA	14201.0	0655	10	04			FMCW	50 sps	~13k	OTHR (occupied BW ≥ 30k) Contayner 29B6 system
USKA	14212.5	0831	12	04			OFDM60	35.55	~2k7	PSK-4 modulated, tone spacing 44.44Hz; pilottone at 3k3
USKA	14221.0	0555		04			F1B	50	200	
USKA	14221.0	0528	25	04			F1B	50	200	
USKA	14248.5	0753	27	04			F1B	600	600	ARQ system often
USKA	14253.0	0704 1545	10 21	04			F1B	75	250	often
USKA	14253.0	0630	11	04			FMCW	50 sps	~13k	OTHR (occupied BW ≥ 30k) Contayner 29B6 system
USKA	14255.0	0920	19	04			J7D	12x120	2k7	BPSK; CIS12 system
USKA	14261.0	0849	12	04			OFDM60	35.55	~2k7	PSK-4B modulated, tone spacing 44.44Hz; pilottone at 3k3
USKA	14261.0	1008	13	04			OFDM60	30.0	~2k7	PSK-4B modulated, tone spacing 44.44Hz; pilottone at 3k3
USKA	14285.0	0848	12	04			OFDM60	35.55	~2k7	PSK-4B modulated, tone spacing 44.44Hz; pilottone at 3k3
USKA	14308.0	1355	06	04			F1B	50	250	
USKA	14313.0	0854	17	04			J7D	12x120	2k7	BPSK; CIS12 system (weak) strong via JA-SDR
USKA	14333.0	0946	21	04			FMCW	50 sps	10k	OTHR; BD appx 5s, BRI 40s
USKA	14348.5	0817	17	04			J7D	12x120	2k7	BPSK; CIS12 system (weak) strong via JA-SDR
USKA	18070.0	0616	25	04			FMOP		40k	OTHR
USKA	18080.0	0710 0738 0658	07 11 25	04	TWN	SOH	A3E		appx 10k	BC: Sound of Hope almost daily often jammed
USKA	21000.0	1132	07	04			J3E-U		~2k4	Spanish, probably fishery

Veron – Netherlands – PA2GRU (Dick)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
VERON	3544,0	17.35	7	4		UiPTR	F1B			Ptr
VERON	3548,0	17.20	8	4	CIS	UiPTR	F1B			Revs/Ptr
VERON	3560,0	18.38	29	4		UiCW	A1A			Pln tfc in Ui language
VERON	3568,0	17.30	14	4		UiPTR	F1B			Ptr
VERON	3580,0	17.19	8	4	CIS	UiPTR	F1B			Revs/Ptr
VERON	3738,0	17.37	7	4		UiPTR	F1B			Ptr
VERON	3787,0	18.30	29	4	CIS	AU8.	A1A			UDGE de AU8. k (Calls)
VERON	3797,0	17.47	7	4	RUS	RCV	A1A			RKZ de RCV QTC 730 chtormowoe pred.
VERON	3797,0	19.17	25	4	RUS	RCV	A1A			RIC87 de RCV QTC 109 Prip Noworossijsk
VERON	3797,0	19.21	25	4	RUS	RCV	A1A			RJ186 de RCV QSW 1 ar
VERON	3797,0	19.27	25	4	RUS	RCV	A1A			RKZ de RCV QTC 452 ch tormowoe opow.
VERON	7016,0	07.21	10	4	RUS	UiPtr	F1B		250	Ptr
VERON	7020,0	06.54	12	4	RUS	UiPtr	F1B			Ptr
VERON	7048,0	07.30	18	4	RUS		A1A			5BL, proc
VERON	7048,0	07.04	24	4	RUS	DOPO	A1A			proc, 5BL
VERON	7048,0	06.55	26	4	RUS	DOPO	A1A			DOPO 837 34 26 0945 837 BT ZTD 074 BT
VERON	7048,0	06.55	26	4	RUS	DOPO	A1A			QQQRM (etc, 5BL)
VERON	7050,0	17.56	8	4	RUS/	UiBC	J3E-I			Russian speech; no

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
					UKR					calls/identifiers
VERON	7051,0	20.55	29	4		UiPtr	F1B		200	
VERON	7055,0	15.06	8	4	RUS/ UKR	UiBC	J3E-1			Russian speech; no calls/identifiers
VERON	7055,0	15.09	29	4	RUS/ UKR	UiBC	J3E-1			Russian music; s9
VERON	7080,0	19.20	8	4		UiPtr	F1B		200	
VERON	7080,0	19.20	29	4		UiPtr	F1B		200	
VERON	7117,0	10.16	24	4	CIS	UiCW	A1A			QTC ... MMMMM 5BL
VERON	14008,0	11.11	2	4	RUS	UiPtr	F1B			Ptr
VERON	14008,0	08.48	16	4	RUS	UiPtr	F1B			Ptr
VERON	14008,0	12.06	3	4	CIS	UiPTR	F1B			Carrier/Revs/Ptr (also 13/4 08.27 UTC)
VERON	14134,0	10.27	13	4		OTHR	FMCW			radar
VERON	14137,0	14.17	8	4		UiRadar	FMCW		10k	OTHR; 10sps
VERON	14180,0	10.51	5	2	RUS	UiPtr	F1B		200	Ptr
VERON	14180,0	10.21	28	4		UiPtr	F1B		200	Ptr
VERON	14180,0	08.48	3	4	CIS	UiPTR	F1B			Revs/Ptr
VERON	14180,0	12.15	3	4	RUS	RDL	F1A			RDL 26928 77407 k
VERON	14180,0	12.20	3	4	RUS	RDL	F1A			RDL 95079 21716 k
VERON	14180,0	06.55	18	4	RUS		F1B	50	250	revs, ptr
VERON	14180,0	vt	vd	4	RUS	UiPtr	F1B		250	
VERON	14253,0	08.43	3	4		UiPTR	F1B			Ptr
VERON	14335,0	10.21	25	4		UiCAR	NON			carrier
VERON	14350,0	13.50	7	4	Italy	UiILL	J3e-U			Italian, male voices
VERON	21438,0	09.40	24	4	RUS	RCV	A1A			RIP90 DE RCV QTC 345 NAWIP
VERON	21438,0	09.45	24	4	RUS	RCV	A1A			RBE86 DE RCV QTC 737 NAWIP
VERON	21438,0	09.55	24	4	RUS	RCV	A1A			RGX94 DE RCV NAWIP

The monitoring team of IARU Region 1

credits:

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All HAMS, friends and contributors worldwide!

Many thanks for your interest!

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