



Monitoring System

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The monthly newsletter for Region 1

July 2015

The 29 members of the IARUMS Region 1 Monitoring Team:



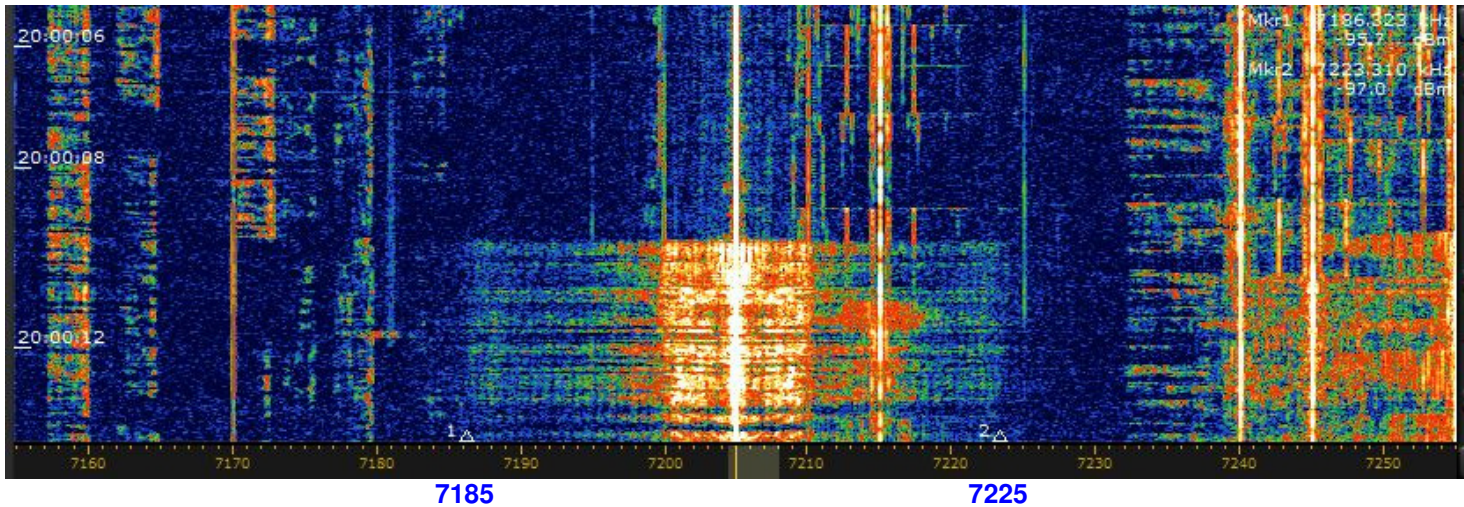
Acknowledgements

ARAT: 3V8CB – Ahmed ++ ARI: DH7SA – Salvatore ++ ARSK: 5Z4NU - Ted ++ ASTRA: DL1BDF – Mustapha ++ DARC: DK2OM – Wolf ++ ERASD: SU1SA – Sayed ++ HRS: 9A5DGZ – Gianluca ++ IARC: 4Z1AB – Amos ++ IRTS: EI9GSB - Lisa ++ KARS: 9K2RR – Faisal ++ MARL: 9H1M – Dominic ++ MRASZ: HA7PL - Laci ++ NARS: 5N9AYM – Yusuf ++ NRRL: LA4EU – Hans Arne ++ OEVSV: OE3GSA – Gerd ++ PZK: SP9BRP – Jan ++ RAL: OD5RI – Riri ++ REF: F5MIU – Francis ++ REP: CT4AN – Jose ++ ROARS: A41MA - Younis ++ RSGB: M0VRR - Vaughan ++ SARL: ZS4GJA - Gideon ++ SRAL: OH2BLU - Pekka ++ SSA – Ullmar ++ UBA: ON4PN - Patrick URE: EB1TR - Fabian ++ USKA: HB9CET - Peter ++ VERON: PA2GRU - Dick ++ ZRS: S56ZDB – Darko ++ G3VZV – Graham (satellite) ++ TG9ADV – Jorge (Co-ordinator Region 2) ++ VK3MV – Peter (Co-ordinator Region 3) ++ DF8FE – (Webmaster assis.) ++ DL8AAM (ALE) ++ DJ7KG (BUOYS) ++ DF5SX (BC) ++ DARC (server support) ++ OD5TE (Hani) ++ VE6SH – Tim (IARU President) ++ 9K2RR – Faisal (EC-IARU-R1 ++ PTTs: BAKOM (Swiss), BNetzA Konstanz (Germany) ++ OFCOM (UK) ++ Dutch AT ++ SK6AW – DX-Cluster ++ YO9RIJ – Petrica

Part 1: News and Infos

1. Broadcast problems

RFI (Radio France International) on 7205 kHz caused splatters down to 7185 kHz and up to 7225 kHz. Not solved until the end of July. Screenshot by DK2OM showing the RFI splatters at 2000 UTC and 10 sec on July 26th. RFI is transmitting from 2000 – 2200 UTC daily on 7205.



2. Sound of Hope on 18080 kHz

Sound of Hope (Taiwanese BC) and Chinese BC jammer again on 18080 kHz every morning.

Soundfile: <http://www.iarums-r1.org/iarums/sound/18080-soh-06082015.wav>

3. Fishery traffic on our bands

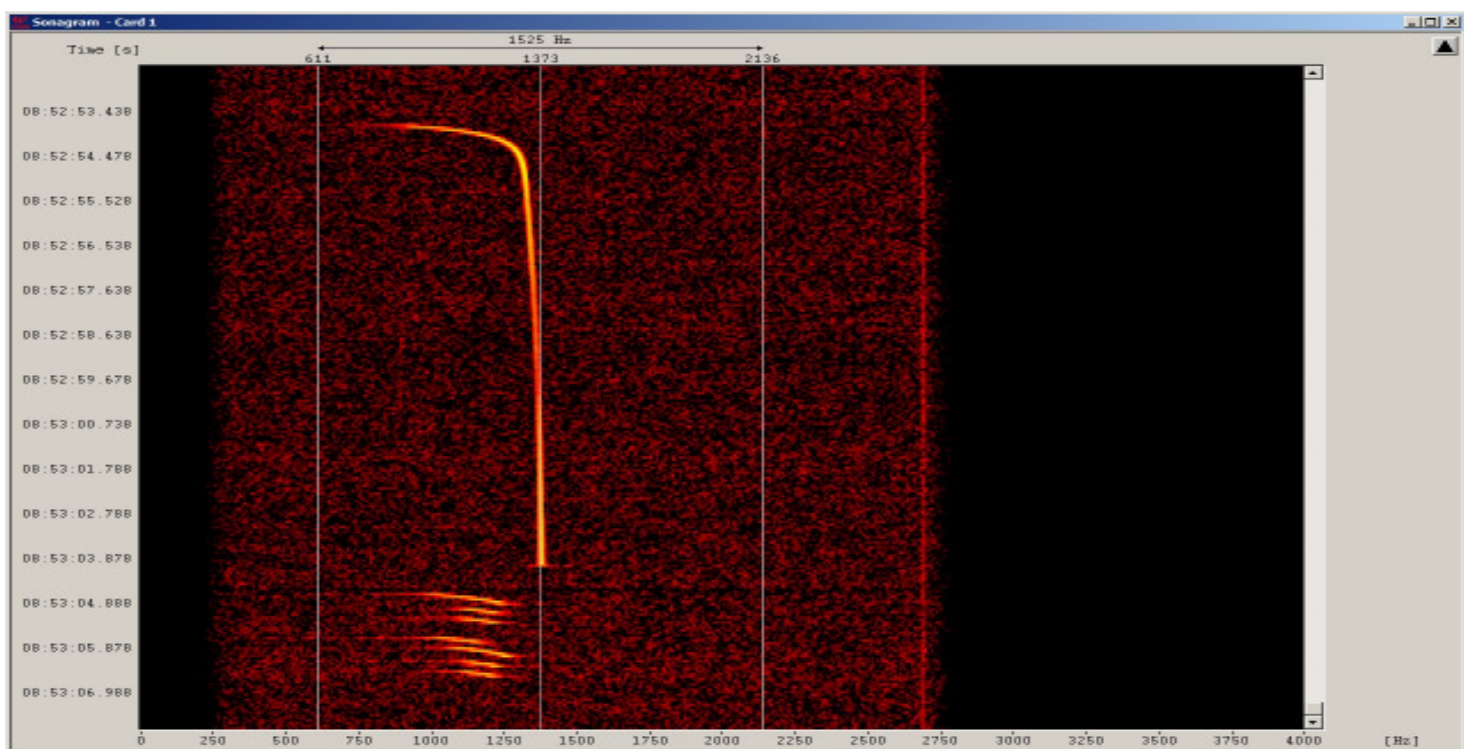
Spanish fishery abused 3500, 3520, 3540, 3550, 3590, 3744, 7000, 14000, 21122 kHz on USB or scrambler CRY2001 and 28335 kHz on AM and FM. Only names, no callsigns as usual. We asked them for callsigns especially on our exclusive bands in earlier times. They answered: “We need no callsigns!” Other reactions were very rude and obscene. I do not want to mention the details here. They do not respect any amateur traffic on exclusive amateur bands since more than 20 years. They do not respect any other legal traffic like MIL-traffic on shared bands. Other fishery traffic comes from UK, Netherlands, Portugal, France, Brazil and Italy.

4. Driftnetbuoys on 28 MHz - the endless story

Large parts of our oceans seem to be infested with illegal driftnet buoy emissions. **Please observe our “collection”:**

<http://www.iarums-r1.org/iarums/buoys.pdf>

Screenshot: DK2OM with W-Code – showing a driftnet buoy with a rising carrier followed by the CW-ident “DL” QRG: 28261.373 (carrier) on July 29th at 0852 UTC – location Adriatic Sea - Many buoys are produced in Far-East. Driftnets are not allowed in the EU. The transmissions on 28 MHz are illegal!



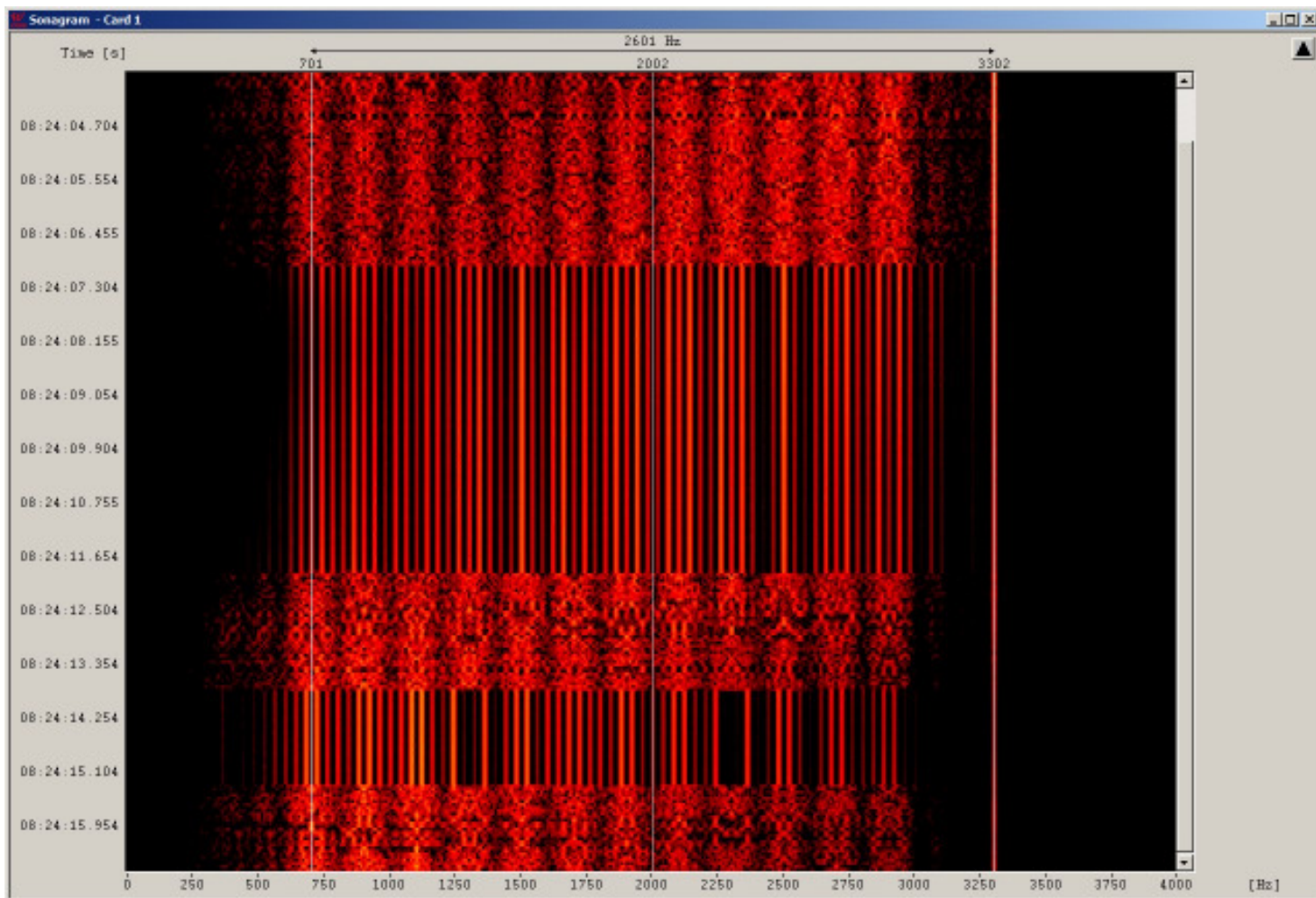
5. Brazilian pirates again on 21000

We found Brazilian pirates on 21000 kHz on USB often in the evenings. The voice traffic (fishery traffic) was between Rio de Janeiro and North Brazil.

6. The Russian MIL-system AT3004D (aka CIS-12) on 14026 kHz

The Russian MIL system AT3004D is a very common system on our bands. Traffic with 12 x 120 Bd BPSK or 12 x 120 Bd QPSK (= AT3104D) and a pilot tone on 3300 Hz AF.

Screenshot: DK2OM with W-Code showing the system on 14026 kHz in traffic and submode idle condition – July 29th at 0820 UTC – location: Moscow



7. 7163 – SZRU – Ukraine Foreign Intelligence Service

On 7163 kHz a female voice spelled encrypted messages on A3E on July 23rd at 0914 UTC. Source: SZRU – Ukraine Foreign Intelligence Service in Rivne / Ukraine.

8. Russian clusterbeacons after QSY now here

7508.7 = D --- 7508.9 = S --- 7509.0 = C --- 7509.2 = F

9. Silent Key - HB9COH

On July 20th Christian Kesselring, HB9COH passed away after a long and serious illness in the age of 61 years. He was the founder of WAVECOM Elektronik AG, the worldwide well renowned company for radio monitoring decoders and analyzers. Christian always supported ham-radio projects generously, particularly the IARU monitoring system with professional decoders and analyzing tools.

So the IARU Monitoring System community has lost a friend and great supporter. We are grateful for all his assistance.

May he rest in peace.

Peter A. Jost - HB9CET - IARU Region 1 Monitoring System Vice Co-ordinator - USKA Bandwacht Leader

10. Homepage IARU Region 1

<http://www.iaru-r1.org/>

Homepage IARUMS Region 1

<http://www.iarums-r1.org>

Homepage IARUMS Region 2

<http://www.iaru-r2.org/>

Homepage IARUMS Region 3

<http://iaru-r3.org/iaru-region-3-monitoring-system-newsletter/>

Intruderlogger Region 1

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

ITU-Monitoring Reports:

<http://www.itu.int/ITU-R/index.asp?category=terrestrial&mlink=terrestrial-monitoring&lang=en>

Part 2: Detailed reports of the national Co-ordinators

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

ARSK MONITORING OVERVIEW FOR JULY 2015

Most listening this month took place at Kilifi on the coast, but very little was observed. The broadcast station at Hargeisha, Somaliland, on 7120 kHz was heard daily, and broadcast station on 7175 was heard in the evenings from 29th July with an unmodulated intermittent carrier in the daytime. Whether this is the VOBM in Eritrea was not determined, although it appears likely.

E/H.M. Alleyne, 5Z4NU

ARSK National IARUMS Co-ordinator

ARSK – Kenya – 5Z4NU (Ted)

H'd by	kHz	UTC	dd	mm	ITU	IDENT	MODE	Details
ARSK	7000.0	var	dly	7	EA	UiPHONE	J3Eu	Unidentified, appears to be east or central Africa
ARSK	7075.0	v	dly	7	?	UiPHONE	J3Eu	French, English, phonetics.
ARSK	7175.0	vt	*	10	ERI?	VOBM?	A3E	Broadcast. *29,30,31.

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

DG0JBJ (Mario) observed 52 OTH radars on 20 m, 11 OTH radars on 15 m and 20 OTH radars on 10 m in July 2015. A Chinese OTH radar often appeared on the 80 m-band.

DARC 2 – Germany - DK2OM (Wolf)

FSK transmissions -> center frequency between mark and space

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

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

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

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	1812,0	1939	15	07	RUS		USB LSB			14 tones – hyperbolic radio navigation system – BRAS-3/RS-10 – Kaliningrad – no carrier - daily, all day
DK2OM	1852,0	1942	30	07	I	IPP	USB			Palermo Radio, weather reports
DK2OM	1855,0	1942	30	07	I	IQP	USB			San Benedetto Radio, weather reports
DK2OM	1876,0	1942	30	07	I	IQN	USB			Lampedusa Radio, weather reports
DK2OM	1880,0	---	--	07	BEL		PSK8	2400	2400	Stanag4285 – 600 bps long – area of Brugge – Belgium - daily
DK2OM	1888,0	1943	30	07	I	IPD	USB			Civitavecchia Radio, weather reports
DK2OM	1896,5	---	--	07	D		PSK8	2400	2400	Stanag4285 – 600 bps long – German Navy
DK2OM	1925,0	1943	30	07	I	IPL	USB			Livorno Radio, weather reports – daily, vt
DK2OM	3500,0	vt	dly	07	TUR		FSK8	120	1750	ALE, “201” - Turkish Red

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										Crescent – legal!
DK2OM	3500,0	2120	04	07	E		USB			Spanish fishery - also: 28.07.2015 at 2045 utc
DK2OM	3502,9	1830	01	07	RUS		PSK8B	35.6	2780	OFDM60 - Moscow
DK2OM	3503,5	vt	dly	07	G	no ITU	FSK8	125	1750	ALE – “XSS” “XPU” “XJR” – British MIL Tascomm – vt, daily - legal!
DK2OM	3520,0	2020	01	07	E		USB			Spanish fishery with voice scrambler CRY 2001
DK2OM	3531,0	2034	01	07	RUS	REA4	N0N			unclean carrier - RUS airforce Moscow, ident: 1940 utc - daily
DK2OM	3532,0	1948	08	07	F		PSK4	75	2400	LINK11-CLEW on both sidebands (5800 Hz wide) – area of Brest – legal!
DK2OM	3534,5	vt	dly	07	HOL		FSK8	125	1750	ALE, “A03” “A15” “A10”
DK2OM	3540,0	2112	27	07	E		USB			Spanish fishery - daily
DK2OM	3547,0	1534	19	07	CHN		FMCW		46k	Chinese OTH radar – 43 sps – 3547 – 3593 kHz
DK2OM	3547,3	1856	26	07	ISR		PSK4 PSK8	75 2400	2400 2400	hybrid modem – ISR Navy – PSK4 parallel and PSK8 serial – legal operation – just for info
DK2OM	3550,0	vt	vd	07	ALG	no ITU	FSK8	125	1750	ALE, “IU50” “IU52” “FN50”
DK2OM	3553,8	ady	dly	07	TUR		PSK8	2400	2400	Stanag4285 – 600 bps long -TUR MIL - Ankara – daily, all day - legal operation
DK2OM	3567,0	vt	dly	07	CHN ?	no ITU	FSK8	125	1750	ALE, “103” “106”
DK2OM	3576,0	1549	12	07	CHN		FMCW		43k	Chinese OTH radar – 43 sps – 3576 – 3619 kHz
DK2OM	3576,4	ady	dly	07	I	IZ3DVW	A1A			uncoordinated beacon
DK2OM	3585,0	2052	25	07	TWN	HLL	F1C			120 rpm, IOC 576, WX-fax - daily - legal!
DK2OM	3586,0	1956	08	07			F1B	75	200	
DK2OM	3586,0	1938	20	07	G		PSK2A	40	40	encrypted – every evening Great Britain – purpose unknown
DK2OM	3587,0	vt	vd	07	E	no ITU	FSK8	125	1750	ALE, “TVV” “TXX” - Spanish Guardia Civil
DK2OM	3590,0	vt	dly	07	PAK	no ITU	FSK8	125	1750	ALE, “KW” “KHAIBAR” – Pakistan navy
DK2OM	3590,0	2110	03	07	E		USB			Spanish fishery – also with scrambler CRY 2001 – every evening
DK2OM	3590,4	2105	14	07	AF	„V“	A1A			unid beacon”V” – endless slip – Horn of Africa
DK2OM	3591,6	2105	14	07	AF	„V“	A1A			unid beacon”V” – endless slip – Horn of Africa
DK2OM	3595,0	vt	dly	07	D		FSK8	125	1750	ALE – German customs
DK2OM	3596,0	vt	dly	07	D, S, HRV		FSK8	125	1750	ALE, “DK3CW” “SA6CBK” “9A0PZ” – just for info!
DK2OM	3617,0	vt	dly	07	HRV	9A5EX	FSK8	125	1750	ALE, “9A5EX” – HAM-ALE - just for info
DK2OM	3620,0	1534	19	07	CHN		FMCW		46k	Chinese OTH radar – 43 sps – 3620 – 3666 kHz
DK2OM	3622,5	2014	15	07	J	JMH	F1C			Tokyo Meteo – 120 rpm – IOC576 – daily, legal!!!
DK2OM	3638,0	1647	18	07	CHN		FMCW		50k	Chinese OTH radar – 43 sps 3638 – 3688 kHz
DK2OM	3640,0	vt	vd	07	G		FSK8	125	1750	ALE, “XSS” - British MIL Tascomm – just for info!
DK2OM	3640,0	1651	17	07	CHN		FMCW		46k	Chinese OTH radar – 43 sps 3640 – 3686 kHz
DK2OM	3642,0	ady	dly	07	CHN		A1A			endless slip – DKG6 de 3A7D Chinese military – daily, all day
DK2OM	3649,0	vt	vd	07	ALG	no ITU	FSK8	125	1750	ALE, “BI20” PA20”
DK2OM	3662,0	vt	vd	07	FEa		A1A			endless slip – RA5J de BP2S
DK2OM	3679,0	1708	22	07	CHN		FMCW		39k	Chinese OTH radar – 43 sps – 3679 – 3718 kHz
DK2OM	3712,0	1005	14	07	CHN		FMCW		40k	Chinese OTH radar – 43 sps –

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										3712 – 3752 kHz
DK2OM	3719,0	1456	24	07	CHN		FMCW		44k	Chinese OTH radar – 43 sps – 3719 – 3763 kHz
DK2OM	3720,0	vt	dly	07	S		FSK8	125	1750	ALE, “YU” “YT” “YV” “DZ” – Swedish MIL
DK2OM	3751,5	vt	dly	07	POL	no ITU	FSK8	125	1750	ALE, “IZ3” “MI3”
DK2OM	3756,0	1941	08	07	RUS		A3E			RUS MIL – channel marker – Tuapse – East Black Sea – night QRG
DK2OM	3761,5	vt	vd	07	POL	no ITU	FSK8	125	1750	ALE, “NI9” “PL7” “AB2” – Polish MIL
DK2OM	3777,0	1751	11	07	FEa		A1A			“RIS9 de M8JF” – endless slip – recvd via JA
DK2OM	3791,0	vt	vd	07	D	DK0ESD	FSK8	125	1750	ALE, “DK0ESD” – daily just for info!
DK2OM	6998,5	0930	22	07	POL		USB			woman in POL voice splattering up Polish MIL
DK2OM	6999,0	vt	dly	07			FSK8	125	1750	ALE, “537” “725” – signal center = 7000.625 kHz
DK2OM	7000,0	vt	dly	07	?	no ITU	FSK8	125	1750	ALE, “210” “20989” “2205” “203”
DK2OM	7000,0	1421	05	07	INS		USB LSB			Indonesian pirates – daily – audible in Europe in the evenings
DK2OM	7000,0	1740	15	07	F?		USB			pirates in French voice
DK2OM	7000,0	0822	05	07	E		USB			Spanish fishery – also 24.07.2015 at 2025 utc
DK2OM	7000,0	0616	26	07	F		USB			French fishery – Bay of Biscay
DK2OM	7001,5	vt	vd	07	ALG		PSK4A	62.5	1750	Clover 2000 – 8 x 62.5 Bd – Algeria – daily, vt
DK2OM	6998.5	1024	22	07	POL		FSK8	125	1750	ALE, “ZI3” “OL1” “OD6” “SZ4” - until 7001.000 kHz – Polish MIL
DK2OM	7005,0	1738	07	07	SNG		LSB			pirates from Singapur
DK2OM	7005,0	1948	15	07	FEa		FMCW		32k	Codan like ocean surface radar 2.6 sps – 7005 – 7037 kHz
DK2OM	7005,0	1825	23	07	I		LSB			Italian pirates
DK2OM	7015,0	1423	05	07	INS		USB LSB			Indonesian pirates
DK2OM	7018,0	---	--	07	RUS	REA4	F1B	100	1000	mostly idling – Russian airforce Moscow – ident at full hour + 40 min.
DK2OM	7020,0	1424	05	07	INS		USB LSB			Indonesian pirates
DK2OM	7023,0	1408	05	07	FEa		FMCW		32k	Codan like ocean surface radar 2.6 sps – 7023 – 7055 kHz
DK2OM	7030,0	1642	21	07	RUS		PSK2A	120	2600	AT3004D – Far East-Russia
DK2OM	7035,0	1426	05	07	INS		USB LSB			Indonesian pirates
DK2OM	7035,0	1846	13	07	FEa		FMCW		32k	Codan like ocean surface radar 2.6 sps – 7035 – 7067 kHz
DK2OM	7039,2	----	--	--	RUS	F	A1A			Cluster beacon - Vladivostok RUS Navy - “RJS” – now on 7509.2 kHz
DK2OM	7039,3	1628	09	07	RUS	K	A1A			Cluster beacon - Petropavlovsk Kamchatskiy - RUS Navy - Pacific fleet - “RCC”
DK2OM	7039,4	1628	09	07	RUS	M	A1A			Cluster beacon – Magadan RUS Navy – „RTS“
DK2OM	7040,0	vt	dly	07	F	F6BAZ	FSK8	125	1750	ALE, “F6BAZ” – just for info
DK2OM	7040,0	ady	dly	07	I		A1A			IZ3DVW – uncoordinated and unwanted beacon
DK2OM	7040,0	1427	05	07	INS		USB LSB			Indonesian pirates
DK2OM	7040,0	1713	22	07	FEa		FMCW		32k	Codan like ocean surface radar 2.6 sps – 7040 – 7072 kHz
DK2OM	7040,5	vt	dly	07	HRV		FSK8	125	1750	ALE, “9A5EX” “9A0ALE” – just for info
DK2OM	7045,0	1429	05	07	INS		LSB			Indonesian pirates

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	7047,37	vt	vd	07	D		FSK8	125	1750	ALE, "DL0NOT" – just for info!
DK2OM	7049,5	0941	10	07	HRV G F	9A0ALE MIDFO F6BAZ	FSK8	1250	1750	Amateur ALE, just for info! daily – various times
DK2OM	7055,5	vt	vd	07	MEa	no ITU	FSK8	125	1750	ALE, "111" "132" "133" - Kaukasus
DK2OM	7059,0	1650	18	07	FEa		FMCW		32k	Codan like ocean surface radar 2.6 sps – 7059 – 7091 kHz
DK2OM	7070,0	vt	vd	07	GEO	no ITU	FSK8	125	1750	ALE, "MV" "244" "686" "334" "204" "571" – daily active
DK2OM	7071,0	1837	21	07	FEa		FMCW		32k	Codan like ocean surface radar 2.6 sps – 7071 – 7103 kHz
DK2OM	7074,0	2048	23	07			?		16k	broadband signal
DK2OM	7088,8	---	---	07	S	SL0FRO	A1A			7088.830 - cw-trainee, Sweden – kHz – SLOFRO - just for info!
DK2OM	7089,8	0040	24	07	TUR		PSK8	2400	2400	Link11 - SLEW – aircraft – west of Cyprus
DK2OM	7090,5	2300	22	07	RUS		PSK2A	120	2600	AT3004D – ship – area of Sevastopol
DK2OM	7092,0	vt	vd	07			FSK8	125	1750	ALE, "3014"
DK2OM	7099,5	vt	dly	07	HRV	9A0ZG	FSK8	125	1750	ALE, "9A0ZG" "9A5EX1P" "9A0OS" – daily - just for info!
DK2OM	7100,0	1413	05	07	INS		USB			Indonesian pirates
DK2OM	7102,0	vt	dly	07	HRV SUI D	9A0ALE	FSK8	125	1750	ALE, "9A0ALE" "9A2KS" "HB9MHB" "9A0ZG" "9A4OS" "DK0ESD" – just for info!
DK2OM	7110,0	vt	dly	07	HRV	9A0ALE	FSK8	125	1750	ALE, "9A0ALE" – just for info
DK2OM	7110,0	vt	dly	07			FSK8	125	1750	ALE, "1101" "1112"
DK2OM	7120,0	1432	05	07	SOM		A3E			Radio Hargaysa – Somalia – daily – even audible in Australia and Japan
DK2OM	7121,0	1655	18	07	CHN		PSK2	60	2450	PRC 30 tone modem – LSB mode – LSB QRG - pilottone 450 Hz - daily - China
DK2OM	7122,0	1502	24	07	FEa	V	A1A			endless slip "V"
DK2OM	7137,0	vt	dly	07	TWN	no ITU	FSK8	125	1750	LSB – ALE , "ACCENT" "ABLAZE" "ABOUND" "AGHAST" "ARTIST" "ANYWAY" "ABJECT" "ADROIT" – Taiwanese navy – daily – various times - tnx for info: DL8AAM
DK2OM	7162,0	1915	15	07	FEa		FMCW		32k	Codan like ocean surface radar 2.6 sps – 7162 – 7194 kHz
DK2OM	7163,0	0914	23	07	UKR		A3E			encrypted MSGs - Rivne
DK2OM	7183,0	vt	dly	07	SUI		FSK8	125	1750	ALE, "HB9MHB" – just for info!
DK2OM	7185,5	vt	dly	07	D HRV		FSK8	125	1750	ALE, "9A5EX" "DK0ESD" just for info - daily
DK2OM	7197,0	vt	dly	07	TUR	no ITU	FSK8	125	1750	ALE, "8241" "206102" "8151" "3021" "3761" "8021" "8141" "3061" "3241" "8411" – Turkish organisations and Turkish Civil Defense - source: DL8AAM – daily, various times
DK2OM	7200,0	1720	02	07	IRN		A3E/BC		9k	IRIB Tehran – 1720 – 1820 utc
DK2OM	7200,0	1010	14	07	BRM		A3E/BC			Myanmar Radio
DK2OM	7205,0	2020	21	07	F	RFI	A3E/BC		38k	Radio France International splattering 7185 – 7225 kHz – 2000 – 2200 utc
DK2OM	10100,8	ady	dly	07	D		F1B	50	450	Baudot - German Weatherservice – legal!
DK2OM	10108,0	1250	26	07	RUS		F1B	50	200	CIS-36-50 - Moscow
DK2OM	10110,0	vt	dly	07	SNG	no ITU	FSK8	125	1750	ALE, "CN6" "68" – Singapore Navy - Changi Naval Base
DK2OM	10113,0	vt	vd	07	TUN	no ITU	FSK8	125	1750	ALE, "TUD" "STAT5" "STAT154"
DK2OM	10114,0	vt	dly	07		no ITU	FSK8	125	1750	ALE, "BSF" "ZEN"

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										“CM2OR2”
DK2OM	10114,8	0708	08	07	RUS		F1B	100	1000	CIS14 – Moscow - daily
DK2OM	10115,0	vt	vd	07		no ITU	FSK8	125	1750	ALE, “2001” “2002”
DK2OM	10116,5	vt	vd	07	AFS		F7D	54.3	2120	MHF50 – 33 tones - South African navy
DK2OM	10120,0	vt	dly	07		no ITU	FSK8	125	1750	ALE, “9066” “9067” “8001” “2001”
DK2OM	10120,0	1935	10	07	RUS		PSK2A	120	2600	AT3004D – Moscow – also 17.06.2016 at 0918 utc
DK2OM	10123,0	vt	dly	07	ALG	no ITU	FSK8	125	1750	ALE, “CM3” “COF” “BSF” “CM2” “ESA”
DK2OM	10127,0	1930	07	07	AUS		FMCW		10k	Australian OTH burst radar JORN – 20 sps and 23 sps
DK2OM	10129,0	vt	dly	07	ALG	no ITU	FSK8	125	1750	ALE, “CM1” “CTF” “772”
DK2OM	10130,0	vt	dly	07	MRC		FSK8	125	1750	Thales 3000 – West Sahara – daily - vt
DK2OM	10130,0	vt	vd	07	Af	no ITU	FSK8	125	1750	ALE, – West Africa
DK2OM	10136,0	vt	dly	07	ALG	no ITU	FSK8	125	1750	ALE, “CM3” “BLD” “CNC” “TF2”
DK2OM	10136,0	ady	dly	07	RUS		F1B	50	200	Chita – all day
DK2OM	10140,0	vt	vd	07	CHN ?		FSK8	125	1750	ALE, “205” “201” “LT”
DK2OM	10144,0	ady	dly	07	D	DK0WCY	A1A			10143.986 kHz - DK0WCY – German aurora beacon – just for info!
DK2OM	10145,5	vt	dly	07	HRV S / D F / G	9A5EX	FSK8	125	1750	ALE, “9A5EX” “SM5VRH” “DK0ESD” “F6BAZ” “MIDFO”- just for info - daily
DK2OM	10150,0	1820	03	07	CYP		FMCW		20k	OTH radar Cyprus
DK2OM	13820,0	1545	07	07	EGY		A3E/BC			BC from Kairo – splattering up to 14129
DK2OM	14000,0	2110	12	07	E		USB			Spanish fishery – also: 29.07.2015 at 0730 utc
DK2OM	14000,0	1301	22	07	RUS		FMCW		13k	OTH radar Contayner – 50 sps – Nizhny Novgorod
DK2OM	14000,0	1225	17	07	RUS		FMCW		13k main signal	OTH radar Contayner - 50 sps – Nizhny Novgorod on 13892 kHz with spurious from 13640 until 14330 kHz
DK2OM	14000,3	1030	07	07	I	IK1HGI	A1A			beacon IK1HGI – 14000.314 kHz – just for info!
DK2OM	14003,0	0925	10	07	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod – long lasting
DK2OM	14008,0	0640	23	07	RUS		F1B	50	250	CIS-50-250 - Moscow
DK2OM	14011,0	1250	28	07	RUS		A1A			encrypted - Samara
DK2OM	14026,0	1422	18	07	RUS		PSK2A	120	2600	AT3004D – traffic and submode idle - Moscow – also 27.07.2015 at 0929 utc
DK2OM	14066,0	1039	31	07	RUS		PSK2A	120	2600	AT3004D - Novosibirsk
DK2OM	14086,0	1413	28	07	RUS		PSK2	120	2600	AT3004D – submode idle - Moscow
DK2OM	14091,0	0957	25	07	RUS		FMCW		13k	OTH radar Contayner - 50 sps Nizhny Novgorod
DK2OM	14097,0	1048	21	07	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod – splattering +/- 360 kHz
DK2OM	14100,0	0800	29	07	ALG	no ITU	FSK8	125	1750	ALE, “6206” – “6204” - “6202” “6207” “6217” “MTL” “IJJ” – Mauritanian border – daily, all day
DK2OM	14100,0	0952	20	07	RUS		FMCW		13k	OTH radar Contayner - 50 sps Nizhny Novgorod
DK2OM	14101,0	0915	11	07	RUS		FMCW		13k	OTH radar Contayner - 50 sps Nizhny Novgorod
DK2OM	14105,0	---	--	07	F		FMCW		20k	French burst radar, 6 sps, similar Codar sounding, South France
DK2OM	14109,0	2020	03	07	RUS		FMCW		9k	OTH radar Contayner - 50 sps – Nizhny Novgorod

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	14109,0	vt	vd	07	POR	HAM	FSK8	125	1750	ALE, "CT2IXQ" "DK0ESD" "HB9MHB" – just for info!
DK2OM	14109,0	vt	dly	07	CAN		FSK8	125	1750	ALE, "VE3GDZ" – just for info!
DK2OM	14109,0	vt	dly	07	RUS	RV3APM	FSK8	120	1750	ALE, "RV3APM" – just for info!
DK2OM	14114,0	0842	03	07	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod
DK2OM	14116,0	1437	10	07	RUS		F1B	75	250	CIS-75-250 – Moscow
DK2OM	14116,0	0818	19	07	RUS		F1B	100	250	idling - Moscow
DK2OM	14116,8	0745	31	07	CHN		PSK4B	44.44	2400	39 tone modem – China – pilottone at 450 Hz – USB mode
DK2OM	14118,0	0834	15	07	RUS		PSK2A	120	2600	AT3004D – Moscow – also: 31.07.2015 at 1041 utc
DK2OM	14131,8	2135	23	07	EGY		PSK8A	2400	2400	Cairo
DK2OM	14140,0	0917	23	07	RUS		FMCW		13k	OTH radar Contayner - 50 sps - Nizhny Novgorod
DK2OM	14140,0	0718	26	07	RUS		FMCW		13k	OTH radar Contayner - 50 sps - Nizhny Novgorod
DK2OM	14171,0	1236	27	07	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	14192,0	0640	02	07	RUS		F1B	50	200	CIS-50-200 - RUS navy Kaliningrad
DK2OM	14192,0	0756	18	07	RUS		F1B	50	500	CIS-50-500 – RUS navy Kaliningrad
DK2OM	14192,0	0917	03	07	RUS		F1B	50	200	CIS-50-200 – RUS navy Kaliningrad
DK2OM	14192,0	0736	04	07	RUS		F1B	75	200	CIS-75-200 – RUS Navy Kaliningrad
DK2OM	14192,0	0750	08	07	RUS		F1B	62.5	500	async. - RUS Navy Kaliningrad
DK2OM	14202,0	1125	30	07	RUS		PSK4B	35.55	2760	CIS-60 HDR modem – (HDR = high data rate) - Samara
DK2OM	14205,0	vt	dly	07	CHN	no ITU	FSK8	125	1750	ALE, "505" "822" – 60 deg. from DL - CHN ?
DK2OM	14221,0	2034	01	07	KGZ		F1B	50	200	CIS-50-50 - Bishkek – daily
DK2OM	14240,0	0928	15	07	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod – splatters covering the whole band
DK2OM	14260,0	vt	dly	07	SRB	YU1BI	FSK8	125	1750	ALE, "YU1BI" – just for info!
DK2OM	14265,0	vt	vd	07	TUR	no ITU	FSK8	125	1750	ALE, "526"
DK2OM	14274,0	1525	31	07	RUS		PSK2A	120	2600	AT3004D – traffic and submode idle - Sevastopol
DK2OM	14278,0	2013	08	07	RUS		PSK2A	120	2600	AT3004D - Sevastopol
DK2OM	14280,0	1005	Wed.	07	UKR		A3E			female voice with encrypted msgs – figures – "SZRU" = Foreign Intelligence Service of Ukraine in Rivne – every Wednesday at 1005 utc
DK2OM	14295,0	vt	dly	07	SRB	YU1BI	FSK8	125	1750	ALE, "YU1BI" – just for info!
DK2OM	14295,1	1013	26	07	TJK		A3E			3rd from Radio Tajik on 4765 kHz – daily, all day – exact (14295.136 kHz)
DK2OM	14301,7	1410	05	07	CHN		PSK2	75	2200	PRC 16 tone modem – USB mode – pilottone 450 Hz - China – Shanghai – daily – all day - audible worldwide
DK2OM	14318,5	0638	29	07	RUS		F1B bursts	1200	1200	DPRK-FSK 1200 – North Korean emba Moscow
DK2OM	14322,0	vt	dly	07	CHN	no ITU	FSK8	125	1750	ALE, "402"
DK2OM	14328,0	vt	dly	07	CHN	no ITU	FSK8	125	1750	ALE, "139" "534" "772" – West China
DK2OM	14330,0	vt	dly	07			FSK8	125	1750	ALE, "BV4"
DK2OM	14334,0	vt	vd	07	CHN	no ITU	FSK8	125	1750	ALE, "249" "255" "763"
DK2OM	14344,7	1705	08	07	CHN		PSK8	2400	2400	modified MIL-188-110A - 600 bps short – 14344.650 kHz – daily, all day
DK2OM	14346,0	vt	dly	07	HRV RUS D		FSK8	125	1750	ALE, "9A0ZG" "RX3ARZ" "DK0ESD" – just for info – various times, daily
DK2OM	14346,0	vt	dly	07	THA	HSOZEA	A1A			HSOZEA beacon – 14345.950 kHz - every 5 minutes – just for

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										info!
DK2OM	18100,0	vt	vd	07	MRC	no ITU	FSK8	125	1750	ALE, "CD" "C3" "R3" "G3" "E4" "E5" "Z2" "FORD" – daily, various times
DK2OM	18101,7	1122	15	07	EGY		F1B	100	170	Sitor A – MFA Cairo calling emba Madrid (XBVF) – info: mco
DK2OM	18106,0	vt	vd	07	POR	CT2GOY	FSK8	125	1750	ALE, "CT2GOY" – just for info!
DK2OM	18107,0	vt	vd	07	RUS	RDL	F1B	50	200	CIS-50-50 - Moscow – idle and traffic – Russian navy – various days and times – legal operation
DK2OM	18109,0	0823	29	07	RUS		PSK2A	120	2600	AT3004D - Sevastopol
DK2OM	18117,5	vt	vd	07	POR	CT2IXQ	FSK8	125	1750	ALE, "CT2IXQ" – just for info
DK2OM	18140,0	vt	dly	07	SRB	YU1BI	FSK8	125	2600	ALE, "YU1BI" – just for info!
DK2OM	18150,0	0753	08	07	RUS		F1B	100	1000	harmonic from 9075 kHz (500 Hz shift) - Kaliningrad
DK2OM	20999,0	1044	21	07	CHN		FMCW		20k	Chinese OTHR – 83 sps - +/- 10 kHz
DK2OM	21000,0	1258	01	07	SDN		USB			MFA Sudan – Khartoum with emba Yemen – voice traffic
DK2OM	21000,0	---	--	07	F		FMCW		20k	OTH radar – 6 sps bursts - South France
DK2OM	21000,0	0923	03	07	VTN		USB			pirates from Vietnam
DK2OM	21000,0	1945	19	07	B		USB			Brazilian pirates – Rio de Janeiro with North Brazil – also: 28.07.2015 at 1940 utc
DK2OM	21002,2	1306	01	07	SDN	!0000 !9999	F1B	100	170	21002.15 kHz - Pactor 1 encrypted – MFA Sudan – Khartoum with emba Yemen – daily, vt - also 16.07.2015 at 1615 utc
DK2OM	21050,0	0856	04	07	ZAI		PSK2A	1200	1200	Goma
DK2OM	21067,5	1025	31	07	EGY		F1B PSK4	100 75	170 1700	Sitor A Codan9001 - Cairo
DK2OM	21096,0	vt	dly	07	INS	YD00XH	FSK8	125	1750	ALE, "YD00XH3" – daily, various times - just for info!
DK2OM	21099,0	1052	21	07	CHN		FMCW		20k	Chinese OTHR – 83 sps - +/- 10 kHz
DK2OM	21113,0	0901	04	07	RUS		F1B	50	200	CIS-50-200 - Vladivostok
DK2OM	21131,0	vt	vd	07	CHN	no ITU	FSK8	125	1750	ALE, "A92" "L02" – Chinese diplo
DK2OM	21140,9	vt	dly	07	GEO		PSK8A	2400	2400	Stanag4538 – GEO MIL with AFG - daily
DK2OM	21145,0	vt	dly	07	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	0710	28	07	I	IZ3DVW	A1A			IZ3DVW beacon – 21145,75 kHz - not coordinated with IARU
DK2OM	21190,0	---	--	07	RUS		F1B	100	1000	harmonic from 10595 kHz - Moscow - daily
DK2OM	21200,0	vt	dly	07	INS		PSK	100	1300	Pactor 3 mailbox - Indonesia
DK2OM	21200,0	1725	27	07	E		F3E			short messages - Madrid
DK2OM	21300,0	1045	30	07	CHN		FMCW		160k	Chinese OTHR – 10 sps - 21300 – 21460 kHz
DK2OM	21318,5	1027	31	07	GUI		F1B burst	600	600	DPRK-FSK 600 – Conakry North Korean emba – 21318.549 kHz
DK2OM	21346,0	ady	dly	07	THA	HS0ZEA	A1A			beacon "HS0ZEA" – just for info!
DK2OM	21400,0	---	--	07	RUS		F1B	50	2000	harmonic from 5350 kHz – area of Moscow - daily
DK2OM	21409,5	---	--	07	RUS		F1B	100	2000	F1B 100 / 2000 - CIS14 – harmonic from 10704.75 - Jekaterinburg, RUS - daily
DK2OM	21436,0	---	--	07	RUS		PSK2A	120	5200	AT3004D – harmonic from 10718.0 kHz - Sevastopol
DK2OM	21438,0	0902	04	07	RUS	RCV	A1A			RIP90 de RCV - RUS Navy

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										Sevastopol - daily
DK2OM	21446,0	ady	dly	07	THA	HS0ZEA	A1A			HS0ZEA beacon – every 5 minutes - just for info!
DK2OM	25000,0	vt	vd	07	FIN		A3E			time signal Helsinki – just for info – carrier on 25000 – dots on 25001 and 24999 – daily, all day
DK2OM	28000,0	vt	dly	07	CIS		F3E			28000 – 29700 only few CIS taxi nets
DK2OM	28000,0	ady	dly	07	B		A3E			Brazilian CBers – 28000 – 28315 – no change
DK2OM	28000,0	1120	07	07	S		USB			male persons from Växjö in Sweden talking in English voice
DK2OM	28002,4	0849	26	07	I	IS0FFU	A1A			beacon – IS0FFU - just for info
DK2OM	28025,0	1924	05	07	POR		F1B	51	300	F1B bursts - 28100.160 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28030,0	vt	vd	07	POR		F1B	51	340	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28045,0	1925	05	07	POR		F1B	51	280	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28050,0	1830	27	07	POR		F1B	51		F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28051,5	vt	dly	07	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28060,0	vt	vd	07	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28065,0	1613	27	07	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28065,6	0838	03	07	GAB		A3E		980	carrier and dots in USB and LSB, bursts every 60 sec – carrier – Gabon – daily and all day
DK2OM	28075,0	0845	05	07	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28085,0	vt	vd	07	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28100,2	1844	07	07	POR		F1B	51	250	F1B bursts - 28100.780 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28102,1	1552	15	07	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28125,0	1700	04	07	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28146,0	vt	vd	07	ARG B		FSK8	125	1750	ALE, “LU8EX” “PY2TI” “DL1” – just for info!
DK2OM	28200,0	vt	vd	07	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28224,4	1602	27	07	GAB		A3E			carrier and dots +/- 770 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28249,6	2029	08	07	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28250,0	1955	07	07	E		USB			Spanish CBers
DK2OM	28250,5	1928	05	07	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28275,1	1412	08	07	AF		F1B	51	300	F1B bursts - west of Lisbon –

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28285,0	1403	08	07	E		A3E			Spanish CBers
DK2OM	28312,5	vt	vd	07	POR	CT2IXQ	FSK8	125	1750	ALE. "CT2IXQ" – just for info
DK2OM	28315,0	vt	dly	07	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28335,0	1750	07	07	E		A3E F3E			Spanish fishery – daily – "Juan"
DK2OM	28345,1	1848	07	07	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28435,0	----	--	07	E		F1B	81.9	140	Datawell-buoy "Waverider" – 28435.040 kHz – Costa del Sol – Malaga
DK2OM	28459,8	----	--	--	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28459,9	1858	07	07	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28499,8	1554	03	07	MEa		F1B	81.9	140	Datawell-buoy "Waverider" – 28499.875 kHz – Persian Gulf
DK2OM	28600,0	1035	07	07	IRN		FMCW		50k	OTH radar Iran – 307 and 870 sps – splattering +/- 300kHz – even audible in Japan - daily
DK2OM	28701,1	0819	18	07	GAB		A3E		1056	carrier and dots +/- 528 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28751,2	1618	27	07	GAB		A3E		1080	carrier and dots +/- 540 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28845,5	0943	07	07	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28901,1	1433	02	07	GAB		A3E		1056	carrier and dots +/- 528 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	29250,0	2018	02	07	E		F1B	81.9	140	Datawell-buoy "Waverider" – 29249.880 kHz – Fuerteventura - daily, all day
DK2OM	29357,0	1135	31	07	F		FSK8	125	1750	Thales 3000 - Djibouti
DK2OM	29375,0	----	--	07	I		F1B	81.9	140	Datawell-buoy "Waverider" – 29374.898 kHz – Gallipoli, South Italy - daily, all day
DK2OM	29387,5	---	--	07	IND		F1B	81.9	140	Datawell-buoy "Waverider" – 29387.460 kHz – Indian NW coast, close to Pakistan - daily, all day
DK2OM	29400,0	---	--	07	USA		F1B	81.9	140	Datawell-buoy "Waverider" – 29400.070 kHz - USA north-east coast – NY daily, all day
DK2OM	29450,0	---	--	07	MRC		F1B	81.9	140	Datawell-buoy "Waverider" – 29449.870 kHz - area of El Aaiun – Morocco - daily, all day
DK2OM	29500,0	---	--	07	G		F1B	81.9	140	Datawell-buoy "Waverider" – area of Gibraltar – daily, all day
DK2OM	29525,0	---	--	07	MRC		F1B	81.9	140	Datawell-buoy "Waverider" – 29524.990 kHz - Agadir - Morocco – daily, all day
DK2OM	29625,0	---	--	07	USA		F1B	81.9	140	Datawell-buoy "Waverider" – 29625.024 kHz - USA north-east coast – daily, all day

IRTS – Ireland – EI9GSB (Lisa)**KARS – Kuwait – 9K2RR (Faisal)****MRASZ – Hungary - HA7PL (Laci)**

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
MRASZ	3501,0	1835	1	7			USB			russian male
MRASZ	3504,3	1900	1	7			USB			ui. male singing
MRASZ	3595,0	1820	9	7			LSB			numbers, russian female, hrd on: 23
MRASZ	7000,0	1604	13	7			LSB			ui. male singing
MRASZ	7000,0	1548	21	7			LSB			ui. male singing
MRASZ	7011,3	1507	12	7			USB			changeable two tone, $\Delta f = 370$ Hz
MRASZ	7011,3	1506	24	7			USB			changeable two tone, $\Delta f = 370$ Hz
MRASZ	7011,3	1705	27	7			USB			changeable two tone, $\Delta f = 370$ Hz
MRASZ	7018,0	1549	21	7			N0N			
MRASZ	7018,6	1546	10	7			N0N			
MRASZ	7025,0	1544	16	7			LSB			ui. male
MRASZ	7027,5	1834	1	7			A1A			slow "V" string, hrd on: 6, 13
MRASZ	7048,0	1923	23	7			A1A			"dzczn kfuwo rgku rpt all glu k"
MRASZ	7050,0	vt	dly	7			LSB			chaos, russian music
MRASZ	7055,0	vt	dly	7			LSB			chaos, russian music
MRASZ	7056,0	1532	10	7			OTHR			
MRASZ	7059,0	1746	12	7			N0N			
MRASZ	7070,0	1832	1	7			LSB			music
MRASZ	7070,0	0810	2	7			LSB			music
MRASZ	7070,0	1810	29	7			LSB			russian chaos
MRASZ	7090,0	1831	1	7			PSK8			link 11 SLEW
MRASZ	7090,0	1551	21	7			PSK8			link 11 SLEW
MRASZ	7120,0	1724	1	7	SOM		A3E			R. Harg.hrd: 9,12,13,16,17,21,27,28,29
MRASZ	7175,0	1553	21	7			A3E			ui. BC, hrd on: 27,
MRASZ	7200,0	1758	9	7			A3E			splatter till 5 kHz down
MRASZ	10130,0	1523	30	7			OTHR			50 Hz
MRASZ	10131,0	1458	24	7			F1B		250	
MRASZ	10140,0	1609	30	7			OTHR			10040-10160 kHz till 1637 ÚT
MRASZ	10144,0	1645	30	7			A1A			"...de O1W2 QRV K"
MRASZ	10145,5	1759	13	7			USB			ui. male
MRASZ	14020,0	1751	9	7			OTHR			
MRASZ	14064,0	1450	10	7			F1B		250	
MRASZ	14097,8	1715	27	7			USB			ui. male
MRASZ	14100,0	0952	19	7			OTHR			
MRASZ	14100,0	0952	24	7			OTHR			14090 -14105 kHz
MRASZ	14100,0	1717	27	7			OTHR			14085-14110 kHz
MRASZ	14100,0	1738	27	7			OTHR			14085-14110 kHz
MRASZ	14100,0	1905	27	7			OTHR			14085-14110 kHz
MRASZ	14108,0	1221	30	7			A1A			"KN6Q (3X9 de Y8O9 (2X))"
MRASZ	14110,0	1454	12	7			OTHR			
MRASZ	14116,0	1445	10	7			F1B		250	
MRASZ	14141,0	1204	30	7			F1B		500	
MRASZ	14177,0	1202	30	7			F1B		500	
MRASZ	14192,0	1616	16	7			F1B		200	
MRASZ	14192,1	0950	19	7			F1B		200	
MRASZ	14280,0	1438	10	7			OTHR			
MRASZ	14280,0	1201	30	7			OTHR			
MRASZ	14295,1	vt	dly	7	TJK		A3E			R.Tajikistan, 3rd. harm.
MRASZ	14301,7	1923	6	7	CHN		PSK2	75	2200	

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
MRASZ	14301,7	1703	27	7	CHN		PSK2	75	2200	
MRASZ	14330,0	1333	30	7			OTHR			1433-14405 kHz
MRASZ	21100,0	1818	1	7			A3E			ui. BC
MRASZ	21235,0	1816	1	7			A3E			ui. BC

OEVSV – Austria – OE3GSA (Gerd)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
oevsv	7070.0	0733	02	07	unid	unid	J3E1			music, males in russian
oevsv	14190.0	0742	02	07	unid	unid	F3E			fast RTTY
oevsv	18080.0	0736	30	06	BY	unid	A3A			BC in chinese as usual

PZK – Poland – SP9BRP (Jan)

REF 1 – France – F5MIU (Francis)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	Baud	Sh /Bw	DETAILS
				June	2015					
REF	14270	0839	19	06			fmcw		25kHz	OTHR Mil S7
REF	14280	1704	23	06			fmcw		30/80kHz	OTHR Mil S9+10 bad spectrum
REF	14300	1621	29	06			Data		4kHz	Strange idle data on 14300kHz, band pass 4kHz. Subcarrier à 143017 & 143029kHz. Sometime ident or checksum covering 14300 to 14304kHz.
REF	18135	0748	12	06			fmcw		90kHz	From 18.000 to 18.090 S9
REF	21390	0804	18	06			fmcw		20kHz	OTHR Mil S7
				July	2015					
REF	10145.5	1720	13	07			USB		3kHz	Unidentified language S4
REF	10150	0950	23	07			fmcw		40kHz	OTHR Mil S9
REF	14100	0802	22	07			fmcw		40kHz	OTHR Mil S9
REF	14100	0819	24	07			fmcw		10kHz	OTHR Mil S9+ 10Hz swp
REF	14100	0819	27	07			fmcw		10kHz	OTHR Mil S9+ 10Hz swp
REF	14150	0952	23	07			fmcw		40kHz	OTHR Mil S9
REF	21200	1645	27	07			FM		12.5kHz	Spanish fisherman? S9

REF 2 – France – F5JBR (Andre)

REP – Portugal – CT4AN (Jose Francisco)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	3550	07.26	03	07			J3E-U			Unid fishermen
REP	3790	08.01	10	07	E		J3E-U			Spanish fishery
REP	7039	23.44	25	07	RUS	C	A1A			MOSCOW, ADY, DLY
REP	7040	06.38	11	07	E		J3E-U			Fishermen
REP	10125	22.12	11	07			FMCW			OTH radar
REP	10130	10.03	22	07	IRL		J3E-U			Fishermen
REP	10132	10.16	21	07	F		J3E-U			Amateurs not observing Bandplan
REP	10135	22.11	13	07	MRC		J3E-U			Arabic
REP	10140	13.22	26	07	E		J3E-U			Spanish fishery
REP	10140	23.02	05	07			A3E			Female voice - 5 Letter groups code
REP	14003	11.35	06	07			F1B			Not on a standard speed
REP	14010	07.55	12	07			FMCW			OTH radar 40sps/20kHz
REP	14015	14.00	15	07			FMCW			OTH radar 50 cps, abt 20kHz wide

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	14026	12.10	06	07	RUS		J7D			Russian AT300D FSK
REP	14135	15.20	01	07	RUS		FMCW			OTH radar 10kHz/10 sps
REP	14141	15.06	24	07			F1B	75	500	Unid FSK encrypted
REP	14240	11.05	04	07	RUS		F1B	75	250	Mil station, daily
REP	14290	18.30	23	07			FMCW			OTH radar
REP	14310	08.04	02	07			A1A			Letters and numbers - code station
REP	18080	12.08	18	07			FMCW			OTH radar 10kHz 48cps
REP	21025	16.21	17	07			FMCW			OTH radar 20kHz 50cps
REP	21375	16.05	19	07	E		J3E-U			Spanish fishery
REP	24900	12.50	19	07	B		J3E-L			Brazilians not amateurs
REP	28050	15.19	10	07	E		F1B	50	270	Spanish Enagal buoy
REP	28060	09.41	06	07			F3E			Taxi dispatchers
REP	28065	14.55	06	07	RUS		F3E			YL taxi dispatcher
REP	28120	09.35	11	07			FMCW			OTH radar
REP	28165	09.10	21	07	RUS		F3E			Russian dispatcher
REP	28277	14.22	15	07			F1B	50	270	Enagal buoy
REP	28620	11.23	18	07			FMCW			OTH radar
REP	28715	16.17	20	07	RUS		F3E			Taxi dispatcher
REP	29205	16.35	27	07	RUS		F3E			Russian taxi dispatcher
REP	29505	16.03	27	07	RUS		F3E			Taxi dispatcher

RSGB - Great Britain – M0VRR (Vaughan)

SRAL – Finland – OH2BLU (Pekka)

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	REMARKS
SRAL	7000,0	1500-1600	6.	7		UiMUX	PSK2	120	2600	
SRAL	7000,0	0815-1630	4. 5. 6.	7		UiCarr	N0N			
SRAL	7008,0	0600-1945	*	7		UiPTR	F1B		250	Days: 13. 20. 31.
SRAL	7011,4	2300-1830	dly	7		UiTone	A2		1200/ 1900	2-tone
SRAL	7016,0	0600-1150	*	7		UiPTR	F1B		250	Days: 13. 20. 31.
SRAL	7018,0	1410	21.	7		UiMUX	PSK2	120	2600	
SRAL	7018,75	h24	7. – 31.	7		UiPTR	F1B/ N0N		250	N0 on 7018,625 kHz
SRAL	7020,0	0630-1800	5. 31.	7		UiPTR	F1B		250	
SRAL	7025,0	0645-1530	*	7		UiPTR	F1B		200	Days: 5. 6. 11.
SRAL	7027,5	1600-2400	Dly	7	UZB	V	A1A			Khiva
SRAL	7030,0	1450	28.	7		UiMUX	PSK2	120	2600	
SRAL	7034,0	1600-1800	*	7		UiPTR	F1B		250	Days: 4. 25. 28.
SRAL	7036,0	1730-1800	4.	7		UiMUX	PSK2	120	2600	
SRAL	7048,0	1030-1400	4.	7		UiCW	A1A			5BL
SRAL	7051,0	2300-0600	*	7		UiPTR	F1B		250	Days: 4. 9. 10. 18. 19. 20. 21.
SRAL	7059,6	1110-1750	12.	7		UiCarr	N0N			
SRAL	7059,6	0200-0550	13.	7		UiCarr	N0N			
SRAL	7068,0	2240	29.	7		UiMUX	PSK2	120	2600	
SRAL	7070,4	1750-	19.	7		UiPTR	F1B		500	

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	REMARKS
		1835/								
SRAL	7088,6	0730-1845	25.	7		UiCarr	N0N			
SRAL	7088,6	0310-1205	26.	7		UiCarr	N0N			
SRAL	7090,5	0730-1840	25.	7		UiMUX	PSK2	120	2600	
SRAL	7091,5	1115	12.	7		UiPTR	F1B			
SRAL	7097,0	1450-1535	28.	7		UiPTR	F1B		200	
SRAL	7099,0	1010-1300	28.	7		UiMUX	PSK2	120	2600	
SRAL	7111,0	0855-1950	31.	7	RUS	UiPTR	F1B		250	
SRAL	7116,6	1500-1930	23.	7		UiCarr	N0N			
SRAL	7120,0	1345-1910/	dly	7	SOM	R.Hargeis a	A3E			
SRAL	7122,0	0810-0900	13.	7		UiPTR	F1B		250	
SRAL	7122,0	1530-2300	23.-31.	7	UZB	V	A1A			// 7027,5 kHz
SRAL	7133 A	1755	6.	7	IRN	IRIB	A3E?			Spur. // 7200,0 kHz
SRAL	7133,0	1030-1700	*	7		UiPTR	F1B			Days: 4. 6. 13.
SRAL	7135,0	1210	8.	7		UiMUX	PSK2	120	2600	
SRAL	7151,0	1100-1930	4.	7		UiMUX	PSK2	120	2600	
SRAL	7152,0	1600-1930	1. 2.	7		UiMUX	PSK2	120	2600	
SRAL	7152,0	1145	11.	7		UiPTR	F1B			
SRAL	7160,0	0750-1110/	21. 22.	7	RUS	RMW32	A1A			
SRAL	7162,0	0630-10001	5. 27.	7		UiPTR	F1B		250	
SRAL	7169,0	1010	28.	7		UiPTR	F1B			
SRAL	7175,0	1530-1806/	*	7	ERI	VoBME2	A3E			Days: 22. 23. 26. 29. +Jamming
SRAL	7175,0	0250	31.	7	ERI	VoBME2	A3E			
SRAL	7179,0	1140	19.	7		UiMUX	PSK2	120	2600	
SRAL	7181,6	1400-0640/	*	7		UiCarr	N0N			Days: 12. 19. 20. 23. 31.
SRAL	7184,0	0420-0830	5. 8.	7		UiPRT	F1B			
SRAL	7184,0	1600-1630	2.	7		UiMUX	PSK2	120	2600	
SRAL	7200,0	/1720-1820/	dly	7	IRN	IRIB	A3E			German PX
SRAL	7200,0	/1000-1300/	dly	7	CHN	CNR1	A3E			Used as jammer
SRAL	14008,0	1400-0640/	*	7		UiPTR	F1B			Days: 12. 19. 20. 23. 31.
SRAL	14026,0	0850-1815	*	7		UiMUX	PSK2	120	2600	Days: 7. 12. 18. 29.
SRAL	14108,0	0435-1015	*	7		9YV5	A1A			Days: 1. 3. 7.
SRAL	14116,0	1305	5.	7		UiCW	A1A			5BL
SRAL	14116,0	0650-1440	9. 10.	7	RUS	UiPTR	F1B		250	
SRAL	14118,0	1130	18.	7	RUS	UiMUX	PSK2	120	2600	
SRAL	14131,1	0400-0945	18.	7		UiCarr	N0N			
SRAL	14141,0	0850-1155	*	7	RUS	UiPTR	F1B		500	Days: 8. 12. 30.
SRAL	14160,0	0425-0555/	29.	7		UiPTR	F1B		250	
SRAL	14169,0	0810-0845	6.	7		UiPTR	F1B		200	

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	REMARKS
SRAL	14177,0	0850-1155	*	7	RUS	UiPTR	F1B		500	Days: 8. 12. 30.
SRAL	14192,0	0600-1930	*	7	RUS	UiPTR	F1B		200/500	Days: 4. 6. 8. 9. 12. 17. 18. 31.
SRAL	14221,0	2230-0600/	dly	7	KGZ	UiPTR	F1B		250	
SRAL	14240,0	0710-1150	9. 10.	7		UiPTR	F1B/A		200/250	
SRAL	14274,0	0710-1520	31.	7		UiMUX	PSK2	120	2600	
SRAL	14278,0	0650-0710	9.	7		UiMUX	PSK2	120	2600	
SRAL	14295,2	h24	dly	7	TJK	R Tojikiston	A3E			3f 4765,07 kHz, Yangiyul TX
SRAL	14 MHz	0600-2000	*	7	RUS	29B6	FMCW			50Hz / 15 kHz, days: 1. 3. 7. 10. 11. 18. 20. 21. 22. 23. 25.
SRAL	14 MHz	0430-1930	dly	7	RUS	UiOTHR	FMCW			10Hz / 15 kHz, 30 sec bursts
SRAL	18080,0	0630-0800	*	7	CHN	CNR1	A3E+			Days: 3. 9. 18. 27. Used as jammer
SRAL	18 MHz	0545	18.	7	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz
SRAL	21 MHz	0730-0830	18.	7	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz
SRAL	21275,0	1010-1040	11.	7		UiMUX	PSK2	120	2600	
SRAL	21438,0	0830-1300	*	7	RUS	RCV	A1A			Days: 2. 4. 5. 8. 11. 16.
SRAL	24 MHz	1210	18.	7	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz
SRAL	28 MHz	0730-1300	*	7	IRN	UiOTHR	FMCW			307 & 870 Hz / 60 kHz – 300 kHz, days: 5. 7. 18.
SRAL	28 MHz	1020	18.	7	RUS	Taxi disp.	F3E			1 report

USKA – Switzerland – HB9CET (Peter)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
USKA	3550.0	0102	23	07			J7D	12x120	2k7	PSK-2: CIS12 – AT3004D
USKA	3552.0 VFO USB	0051	23	07			PSK8	2400	~2k4	Stanag 4285; often frame format 600bps/long
USKA	3568.0	2153	31	07			F1B	75	250	
USKA	3586.0	2145	31	07			F1B	75	200	
USKA	3745.0	0054	23	07			F1B	75	250	
USKA	7000.0	2243	23	07			NON			long lasting carrier often
USKA	7008.0	0642	31	07			F1B	75	250	often
USKA	7010.0	2201	21	07		810403	MFSK8	125	1750	MIL 188-141A
USKA	7016.0	0748	09	07			J7D	12x120	2k7	PSK-2: CIS12 – AT3004D
USKA	7018.7	0012	23	07			NON			long lasting carrier
USKA	7020.0	1231	21	07		Names	J3E-L			unid language (Asian)
USKA	7020.0	2134	31	07			F1B	75	250	also some short F1A
USKA	7021.0	2157	22	07			MFSK8	125	1750	MIL 188-141A To: B16
USKA	7027.0	0007	23	07			MFSK8	125	1750	MIL 188-141A To: G6T3
USKA	7027.5	2129	20	07		V	A1A			Beacon ID "V" almost daily
USKA	7031.5	1136	09	07			F1B	100	250	
USKA	7035.0	0022	23	07			J3E-U			unid language
USKA	7039.4	2228	08	07	RUS	M	A1A			Beacon M Magadan daily
USKA	7049.0	2214	30	07			?		825	unident burst system (weak)
USKA	7050.0	2132	13	07			J3E-L		≥ 3k3	Music, voice, often
USKA	7051.0	2131	05	07			F1B	50	200	CIS 50-50 almost daily
USKA	7060.0	0901	10	07			J7D	12x120	2k7	PSK-2: CIS12 – AT3004D
USKA	7064.0	2230	08	07			J7D	12x120	2k7	PSK-2: CIS12 – AT3004D
USKA	~7075.	1949	24	07			?		~20k	wide Jammer
USKA	7088.0 VFO USB	1527	01	07			G1D	2400	2k4	PSK-8: Link 11- SLEW often

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
USKA	7088.5 VFO USB	0030	23	07			J7D BPSK	12x120	2k7	PSK-2: CIS12 – AT3004D
USKA	7088.5 VFO USB	2246	25	07			J7D QPSK	12x120	2k7	PSK-4: CIS12 – AT3104D with carrier and pilottone
USKA	7091.5	0847	10	07			F1B	100	250	
USKA	7093.5	1125	09	07			J7D	12x120	2k7	PSK-2: CIS12 – AT3004D
USKA	7102.5	0747	09	07			J7D	12x120	2k7	PSK-2: CIS12 – AT3004D
USKA	7111.0	2122	31	07			F1B	75	250	
USKA	7113.0	0753	09	07			F1B	50	200	
USKA	7120.0	1645	09	07	SOM		A3E			Radio Hargaysa (back) daily
USKA	7121.0 VFO LSB	2049	26	07			BPSK	60	~2k4	Burst system; spacing 75Hz preamble 4x BPSK 60Bd, spacing 600Hz; Pilottone at 450Hz often
USKA	7122.0	2221	20	07		V	A1A			Beacon V almost daily
USKA	7141.0	2226	31	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	7160.0	1505	31	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D with carrier at 7158.0
USKA	7168.5	1211	03	07			F1B		250	
USKA	7169.0	1459	31	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	7175.0	1539	30	07			A3E			BC, jammed
USKA	7176.0	2154	23	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	7177.0	1712	09	07			F1B	50	200	often
USKA	7181.625	2241	31	07			N0N			long lasting carrier
USKA	7197.0	2204	20	07		335013	MFSK8	125	1750	MIL 188-141A daily
USKA	7197.0	2218	20	07		348013	MFSK8	125	1750	MIL 188-141A daily
USKA	7200.0	1222	21	07		MYA	A3E		~20k	BC lower sideband down to 7190 maybe 2 different TX !
USKA	7200.0	2242	21	07		IRN	A3E		~10k	BC IRIB, voice of I.R. Iran lower sideband down to 7195
USKA	7205.0	2127	19	07		RFI	A3E			BC, splattering down to ca. 7185!
USKA	14003.0	0855	10	07			FMOP	50	~13k	OTHR
USKA	14021.0	2059	20	07			QPSK	8x75	2k5	CHN 4+4
USKA	14099.0	2222	20	07			FMOP	10 sps	~10k	OTHR burst system, short sequence only
USKA	14100.0	1624	20	07			FMOP	10 sps	~10k	OTHR burst system
USKA	14105.0	2141	31	07			FMOP	10 sps	~10k	OTHR burst system
USKA	14118.0	1016	31	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	14135.0	1221	03	07			FMCW	50	~13k	OTHR
USKA	14192.0	1225	03	07			F1B	50	200	CIS 50-50 daily
USKA	14192.0	2219	08	07			F1B	50	500	CIS 50-50 daily
USKA	14221.0	2237	01	07			F1B	50	200	often
USKA	14274.0	0926	31	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	14278.0	2213	08	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	14295.1	1738	01	07	TJK		A3E			BC: 3 rd of Radio Tajik at 4765 kHz daily
USKA	14300.0 VFO USB	1734	01	07			BPSK	16x75	2k2	Burst system; 16 tones, tone spacing appx 104Hz; 2 pilottones
USKA	21275.0	0905	10	07			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	21318.55	0947	10	07			F1B	600	600	ARQ system often
USKA	21438.0	0901	07	07		RCV	A1A			letters and figures daily
USKA	28600.0	0918	05	07			?	307 sps 870 sps	app 50k	OTHR Burst system; affected BW often > 100k daily

Veron 1 – Netherlands – PA2GRU (Dick)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SHIFT	DETAILS
VERON	3532,0	19.37	17	7		UiPTR	F1B		Ptr
VERON	3594,0	17.46	1	7	RUS	RGR79	A1A		RGR79 OK QRU k
VERON	7005,0	17.20	6	7		UiBC	LSB		Arabic songs
VERON	7018,0	20.17	7	7	RUS	UiCAR	A1A		strong carrier S9
VERON	7040,0	17.36	17	7		UiPTR	F1B		Revs
VERON	7120,0	18.54	26	7	SOM	R.Har	A3E		speech
VERON	10108,0	12.23	10	7	CIS	UiPTR	F1B		Revs/Ptr
VERON	10143,0	17.32	17	7		UiPTR	F1B		Ptr
VERON	14008,0	14.21	6	7	RUS	UiPtr	F1B		Ptr

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SHIFT	DETAILS
VERON	14008,0	10.25	23	7	CIS	UiPTR	F1B		Carrier/Revs/Ptr
VERON	14025,0	16.13	7	7		OTHR	FMCW		radar
VERON	14050,0	11.11	15	7	RUS	UiPtr	F1B		Ptr,
VERON	14090,0	13.03	25	7		OTHR	FMCW		radar
VERON	14092,0	16.19	7	7		UiPtr	F1B		Ptr
VERON	14097,0	17.50	1	7		UiCAR	A1A		Strong Carrier
VERON	14099,0	11.23	17	7		OTHR	FMCW		radar
VERON	14100,0	08.00	22	7	RUS	OTHR	FMCW		50 sps Nizhny Novogorod mni hours
VERON	14108,0	08.23	24	7	CIS	Y8O9	A1A		Y8O9 R 817 ? K (to: FP1Q 3T9Q)
VERON	14108,0	08.25	24	7	CIS	Y8O9	A1A		Y8O9 R 817 ? K (to: 1ZWF L65R)
VERON	14108,0	08.32	24	7	CIS	Y8O9	A1A		L65R de Y8O9 QTC 453 MMMMM 5BL
VERON	14108,0	08.39	24	7	CIS	Y8O9	A1A		KN6Q de Y8O9 QTC 354 MMMMM 5BL
VERON	14108,0	08.41	24	7	CIS	UiCW	A1A		Y1CQ ZPO ZAR ZVK k
VERON	14108,0	08.47	24	7	CIS	Y8O9	A1A		CPFE de Y8O9 k
VERON	14115,0	07.15	9	7	RUS	UiPtr	F1B		Ptr
VERON	14117,0	11.11	17	7	RUS	UiMUX	PSK2		12 MPSK
VERON	14135,0	09.31	3	7		OTHR	FMCW		radar
VERON	14140,0	09.15	23	7		OTHR	FMCW		radar
VERON	14169,0	08.29	6	7	RUS	UiPtr	F1B		Ptr
VERON	14192,0	09.33	3	7	RUS	UiPtr	F1B	200	Ptr
VERON	14192,0	14.01	27	7	RUS	UiPtr	F1B	200	Ptr-Revs
VERON	14192,0	vt	vd	7	CIS	UiPTR	F1B		Revs/Ptr (almost daily)
VERON	14199,5	12.00	1	7		UiMOD			Unidentified Modulation, Noise
VERON	14235,0	10.55	15	7		OTHR	FMCW		radar
VERON	14242,0	07.11	9	7	RUS	UiPtr	F1B		Ptr,
VERON	14259,0	08.28	23	7		UiPTR	F1B		Idling
VERON	14264,0	16.18	7	7		OTHR	FMCW		radar
VERON	14275,0	09.36	3	7		OTHR	FMCW		radar
VERON	14300,0	14.14	6	7		UiLL	J3-		tfc military
VERON	21275,0	10.35	23	7		UiMUX	PSK2		12 MPSK
VERON	21399,0	08.30	29	7		UiMOD			Unidentified Modulation, Noise
VERON	28010,0	11.05	15	7		CF	A1A		beacon, every 3 minutes
VERON	28020,0	14.21	9	7		FTN	A1A		beacon

The monitoring team of IARU Region 1

credits:

Wavecom Elektronik – Buelach – Switzerland

German BNetzA Konstanz

Many thanks for your interest!

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