



# Monitoring System

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The monthly newsletter for Region 1

## June 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 ++ OEVS: 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

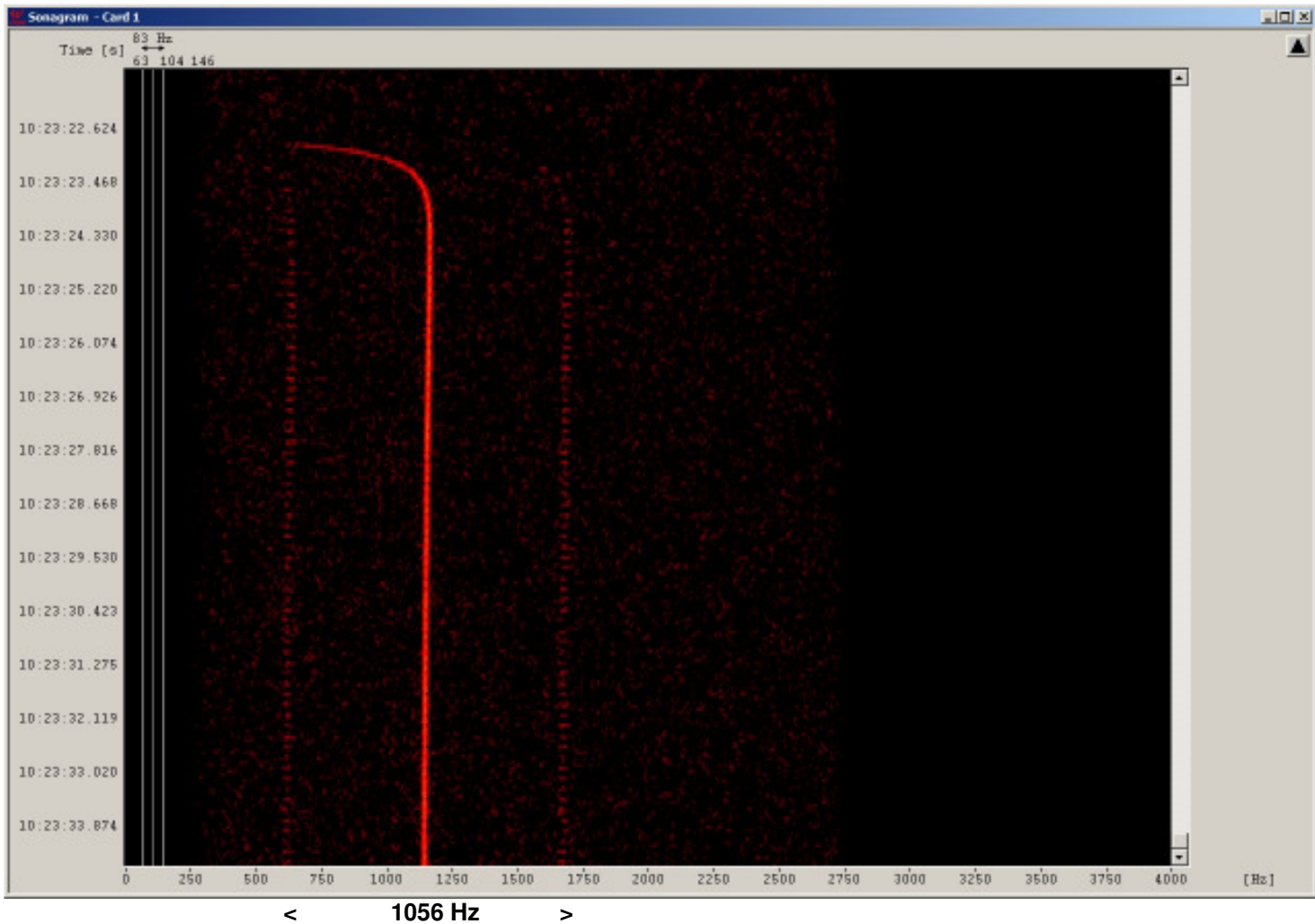
# Part 1: News and Infos

## 1. Mysterious signals from Gabon on 10 m

Mysterious signals in A3E (AM) on 28065.0, 28345, 28701.1 and 28901.1 from Gabon daily and all day. Details: Rising carrier and both sidebands with dots every 60 sec.. Purpose unknown. Perhaps beacons?

Screenshot: DK2OM with Wavecom W-Code

soundfile: <http://www.iarums-r1.org/iarums/sound/28345.wav>



## 2. Russian OTH radars disturbs large parts of the 14 MHz band

The Russian OTH radar Contayner on 13865 kHz caused a strong noise floor until 14500 kHz. We observed such noise floors several times.

## 3. Illegal fishery traffic on our bands as usual

Spanish fishery abused the 80 m band on USB using the voice scrambler CRY 2001. They were also audible on 7000 and 10125 kHz on USB and 28335 on FM. Moroccan fishery was active on 14014 kHz. They like special number combinations like 21121 or 21021 kHz on USB in earlier times.

## 4. Unknown voice traffic from Vietnam

Male people from Vietnam were chatting on 21000.0 kHz on USB. Purpose unknown.

## 5. North Korean diplo traffic on 21 MHz

We found North Korean diplo traffic (embassies) on 21006.4 and 21318.5 kHz. Details: System DPRK-FSK600 with 600 Bd and 600 Hz shift bursts. DPRK = Democratic People Republic of Korea. Observe the entries in my table!

## 6. 21200 kHz – Indonesian mailbox

An Indonesian mailbox was daily transmitting on 21200 kHz in Pactor 3. Purpose unknown. The idents (selcalls) seem to be encrypted.

## 7. Datawell buoy from Persian Gulf

I found a new Datawell buoy "Waverider" on 28499.875 kHz transmitting on FSK with 81.9 Ba and 140 Hz shift. Location: Persian Gulf

## 8. Radio Tajik still disturbing 14295.1 kHz

The harmonic from 4765 kHz is still disturbing 14295.1 kHz, no change.

### 9. 7205 – Broadcast problems

VOT (Voice of Turkey) no longer splattering down. RFI (Radio France International) on 7205 kHz caused splatters down to 7180 kHz. Not solved until the end of June. The German PTT (BNetzA) Konstanz confirmed my observations and measurements and filed official complaints. Many thanks to the German PTT in Konstanz for assistance!

### 10. Ocean surface radar on 7 MHz

While observing 7 MHz via remote HB9CET and I often found a CODAR-like ocean surface radar on 7 MHz in Region 3 on different frequencies but always with the same parameters 2,5 sweeps/sec and covering 32 kHz. Is there anybody who knows the location and more details?

### 11. Propagation on 21 MHz between Europe and Far East

If you want to check the propagation to Far East, please observe the beacons from HS0ZEA in CW on 21346 and 21446 on CW every 5 minutes. The frequencies are a bit unusual. Anyway: The beacons are a great help.

### 12. Hamradio 2015 in Friedrichshafen – DARC and IARU Region 1 monitoring meeting

We had a successful meeting with interesting lectures and about 130 listeners. After my introduction Mr. Grim from the German PTT (BNetzA) took over the next part. He reported detailed about the bearing systems of the German PTT. HB9CET, Peter, showed us his excellent tricks how to operate the Perseus successfully.

Very important for the classification of digital signals is an exact calibration of the receiver (Perseus or others).

You can use the time signals on 14996.0 kHz (RWM Moscow) and 25000 kHz (University of Helsinki) under good ionospheric conditions.



From left: HB9CET, Peter, Vice Coordinator of IARUMS Region 1 and leader of the USKA Monitoring System - DJ9KR, Uli, earlier Vice Coordinator of IARUMS Region 1 and earlier leader of the DARC Monitoring System - DK2OM, Wolf, Coordinator of IARUMS Region 1 and leader of the DARC Monitoring System - Mr. Grim – BNetzA Konstanz

13. 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 JUNE 2015

Radio Hargeisha remained on 7,120 kHz with broadcasts but the Voice of the Broad Masses, Eritrea, on 7175 kHz was not heard, nor was it apparently on 7185 or 7200 kHz. Propagation was generally poor but some local or Central African intruders were observed.

E/H.M. Alleyne, 5Z4NU

ARSK National IARUMS Co-ordinator

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#### ARSK – Kenya – 5Z4NU (Ted)

H'd by	kHz	UTC	dd	mm	ITU	Identity	MODE	Details
ARSK	7.000.00	vt	dly	06	E. Africa	?	J3Eu	Unidentified, KiSwahili, East Africa. Possibly military or Police.
ARSK	7,000.00	1940	dly		DRC?	?	J3E	KiSwahili, Congolese accent.
ARSK	7,075.00	vt	dly		E. Africa	?	J3Eu	Unidentified language
ARSK	7,120.00	vt	dly		Rep.of Somalia	Hargeisha	A3E	Broadcast

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

DG0JBJ (Mario) observed **55** OTH radars on 20 m, **56** OTH radars on 15 m and **24** OTH radars on 10 m in June 2015. A Chinese OTH radar disturbed 160 kHz of our 21 MHz-band. The Russian OTH radar Contayner caused strong interference on 7 MHz on several evenings.

#### 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	2124	30	06	RUS		USB LSB			14 tones – hyperbolic radio navigation system – BRAS-3/RS-10 – Kaliningrad – no carrier - daily, all day
DK2OM	1852,0	2043	02	06	I	IPP	USB			Palermo Radio, weather reports
DK2OM	1855,0	2043	02	06	I	IQP	USB			San Benedetto Radio, weather reports
DK2OM	1876,0	2042	02	06	I	IQN	USB			Lampedusa Radio, weather reports
DK2OM	1880,0	---	--	06	BEL		PSK8	2400	2400	Stanag4285 – 600 bps long – area of Brugge – Belgium - daily
DK2OM	1888,0	2041	02	06	I	IPD	USB			Civitavecchia Radio, weather reports
DK2OM	1896,5	2039	02	06	D		PSK8	2400	2400	Stanag4285 – 600 bps long – German Navy
DK2OM	1925,0	2041	02	06	I	IPL	USB			Livorno Radio, weather reports

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										– daily, vt
DK2OM	3500,0	vt	dly	06	TUR		FSK8	120	1750	ALE, “201” - Turkish Red Crescent – legal!
DK2OM	3500,0	1323	12	06	CHN		FMCW		283k	3 Chinese OTH radars – 43 sps – 3500 between 3783 kHz
DK2OM	3503,5	vt	dly	06	G	no ITU	FSK8	125	1750	ALE – “XSS” “XPU” “XJR” – British MIL Tascomm – vt, daily - legal!
DK2OM	3504,0	2000	04	06	BLR		PSK2A	120	2600	AT3004D - Minsk
DK2OM	3519,5	2027	28	06	RUS		F1B	50	200	north of Arkhangelsk
DK2OM	3531,0	2044	01	06	RUS		N0N			unclean carrier - RUS airforce Moscow, ident: 1940 utc - daily
DK2OM	3534,5	vt	dly	06	HOL		FSK8	125	1750	ALE, “A03” “A15” “A10”
DK2OM	3550,0	vt	vd	06	ALG	no ITU	FSK8	125	1750	ALE, “IU50” “IU52” “FN50”
DK2OM	3553,8	ady	dly	06	TUR		PSK8	2400	2400	Stanag4285 – 600 bps long - TUR MIL - Ankara – daily, all day - legal operation
DK2OM	3567,0	vt	dly	06	CHN ?	no ITU	FSK8	125	1750	ALE, “103” “106”
DK2OM	3576,4	ady	dly	06	I	IZ3DVW	A1A			uncoordinated beacon
DK2OM	3585,0	2040	23	06	TWN	HLL	FIC			120 rpm, IOC 576, WX-fax - daily - legal!
DK2OM	3587,0	vt	vd	06	E	no ITU	FSK8	125	1750	ALE, “TVV” “TXX” - Spanish Guardia Civil
DK2OM	3590,0	vt	dly	06	PAK	no ITU	FSK8	125	1750	ALE, “KW” “KHAIBAR” – Pakistan navy
DK2OM	3592,0	2007	28	06	CHN		FMCW		46k	Chinese OTH radar – 43 sps – 3591 – 3637 kHz
DK2OM	3595,0	vt	dly	06	D		FSK8	125	1750	ALE – German customs
DK2OM	3596,0	vt	dly	06	D, S, HRV		FSK8	125	1750	ALE, “DK3CW” “SA6CBK” “9A0PZ” – just for info!
DK2OM	3617,0	vt	dly	06	HRV	9A5EX	FSK8	125	1750	ALE, “9A5EX” – HAM-ALE - just for info
DK2OM	3622,5	2033	30	06	J	JMH	FIC			Tokyo Meteo – 120 rpm – IOC576 – daily, legal!!!
DK2OM	3636,0	1654	09	06	CHN		FMCW		47k	Chinese OTH radar – 43 sps 3636 – 3683 kHz
DK2OM	3640,0	1918	22	06	G		FSK8	125	1750	ALE, “XSS” - British MIL Tascomm – just for info!
DK2OM	3640,0	1924	13	06	CHN		FMCW		41k	Chinese OTH radar – 43 sps 3640 – 3681 kHz
DK2OM	3642,0	ady	dly	06	CHN		A1A			endless slip – DKG6 de 3A7D Chinese military – daily, all day
DK2OM	3648,0	1413	30	06	CHN		FMCW		41k	Chinese OTH radar – 43 sps – 3648 – 3689 kHz
DK2OM	3649,0	vt	vd	06	ALG	no ITU	FSK8	125	1750	ALE, “BI20” PA20”
DK2OM	3662,0	vt	vd	06	FEa		A1A			endless slip – RA5J de BP2S
DK2OM	3678,0	1555	23	06	CHN		FMCW		42k	Chinese OTH radar – 43 sps – 3678 – 3720 kHz
DK2OM	3708,0	2004	20	06	CHN		FMCW		37k	Chinese OTH radar – 43 sps – 3708 – 3745 kHz
DK2OM	3711,2	2022	04	06	G		OFDM	20	2400	OFDM51 – UK MIL – daily, all day
DK2OM	3720,0	vt	dly	06	S		FSK8	125	1750	ALE, “YU” “YT” “YV” “DZ” – Swedish MIL
DK2OM	3751,5	vt	dly	06	POL	no ITU	FSK8	125	1750	ALE, “IZ3” “MI3”
DK2OM	3756,0	2045	01	06	RUS		A3E			RUS MIL – channel marker – Tuapse – East Black Sea – night QRG
DK2OM	3761,5	vt	vd	06	POL	no ITU	FSK8	125	1750	ALE, “NI9” “PL7” “AB2” – Polish MIL
DK2OM	3777,0	1657	09	06	FEa		A1A			“RIS9 de M8JF” – endless slip – rcvd via JA
DK2OM	3791,0	vt	vd	06	D	DK0ESD	FSK8	125	1750	ALE, “DK0ESD” – daily just for info!
DK2OM	6999,0	vt	dly	06			FSK8	125	1750	ALE, “537” “725” – signal center = 7000.625 kHz
DK2OM	7000,0	vt	dly	06	?	no ITU	FSK8	125	1750	ALE, “210” “20989” “2205”

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										“203”
DK2OM	7000,0	0912	08	06	INS		USB LSB			Indonesian pirates – daily – audible in Europe in the evenings
DK2OM	7000,0	2017	11	06	I		USB			French pirates
DK2OM	7000,0	1018	11	06	E		USB			Spanish fishery
DK2OM	7000,0	1748	15	06	CHN		FMCW		132k	Chinese OTH radar – 43.5 sps - 6920 – 7052 kHz
DK2OM	7000,0	0648	24	06	F		USB			French fishery – Bay of Biscay
DK2OM	7000,8	1550	30	06	SVN	S52AS	A1A			QRSS-beacon – Slovenia - just for info
DK2OM	7001,0	1820	30	06	I		LSB			Italian pirates
DK2OM	7001,5	2027	03	06	ALG		PSK4A	62.5	1750	Clover 2000 – 8 x 62.5 Bd – Algeria – daily, vt
DK2OM	7001,8	1751	06	06	TUR		PSK8	2400	2400	Stanag4285 – 600 bps long - Istanbul
DK2OM	7002,9	0645	24	06	RUS		OFDM	22.73	2960	CIS-93 – pilotone at 3360 Hz AF - Samara
DK2OM	7015,5	2100	13	05	AFG		PSK4A	62.5	1750	Clover 2000 – 8 x 62.5 Bd - Afghanistan
DK2OM	7016,0	1823	30	06	RUS		F1B	75	250	CIS-75-250 - Moscow
DK2OM	7018,0	---	--	06	RUS	REA4	F1B	100	1000	mostly idling – Russian airforce Moscow – ident at full hour + 40 min.
DK2OM	7027,0	2004	28	06	FEa		FMCW		32k	Codan like ocean surface radar 2.6 sps – 7026 – 7058 kHz
DK2OM	7030,0	1535	24	06	RUS		PSK2A	120	2600	AT3004D – Far East-Russia
DK2OM	7036,0	1853	17	06	RUS		PSK2A	120	2600	AT3004D – Far East Russia
DK2OM	7039,2	1744	06	06	RUS	F	A1A			Cluster beacon - Vladivostok RUS Navy - “RJS”
DK2OM	7039,3	1744	06	06	RUS	K	A1A			Cluster beacon - Petropavlovsk Kamchatskiy - RUS Navy - Pacific fleet - “RCC”
DK2OM	7039,4	1744	06	06	RUS	M	A1A			Cluster beacon – Magadan RUS Navy – „RTS“
DK2OM	7040,0	vt	dly	06	F	F6BAZ	FSK8	125	1750	ALE, “F6BAZ” – just for info
DK2OM	7040,0	ady	dly	06	I		A1A			<b>IZ3DVW – uncoordinated and unwanted beacon</b>
DK2OM	7040,5	vt	dly	06	HRV		FSK8	125	1750	ALE, “9A5EX” “9A0ALE” – just for info
DK2OM	7044,0	0729	29	06	RUS		PSK2A	120	2600	AT3004D - Sevastopol
DK2OM	7047,37	vt	vd	06	D		FSK8	125	1750	ALE, “DL0NOT” – just for info!
DK2OM	7049,5	vt	dly	06	HRV G F	9A0ALE MIDFO F6BAZ	FSK8	1250	1750	Amateur ALE, just for info! daily – various times
DK2OM	7055,5	vt	vd	06	MEa	no ITU	FSK8	125	1750	ALE, “111” “132” “133” - Caucasus
DK2OM	7067,0	1749	15	06	FEa		FMCW		30k	Codan like ocean surface radar 2.6 sps – 7067 – 7097 kHz
DK2OM	7070,0	vt	vd	06	GEO	no ITU	FSK8	125	1750	ALE, “MV” “244” “686” “334” “204” “571” – daily active
DK2OM	7088,8	---	---	06	S	SL0FRO	A1A			7088.830 - cw-trainee, Sweden – kHz – SL0FRO - just for info!
DK2OM	7089,8	1635	11	06	TUR		PSK8	2400	2400	Link11 - SLEW – aircraft – area of Izmir
DK2OM	7092,0	vt	vd	06			FSK8	125	1750	ALE, “3014”
DK2OM	7099,5	vt	dly	06	HRV	9A0ZG	FSK8	125	1750	ALE, “9A0ZG” “9A5EX1P” “9A0OS” – daily - just for info!
DK2OM	7102,0	vt	dly	06	HRV SUI D	9A0ALE	FSK8	125	1750	ALE, “9A0ALE” “9A2KS” “HB9MHB” “9A0ZG” “9A4OS” “DK0ESD” – just for info!
DK2OM	7103,0	1845	02	06	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	7110,0	vt	dly	06	HRV	9A0ALE	FSK8	125	1750	ALE, “9A0ALE” – just for info
DK2OM	7110,0	vt	dly	06			FSK8	125	1750	ALE, “1101” “1112”

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	7120,0	1818	19	06	SOM		A3E			Radio Hargaysa – Somalia – daily – even audible in Australia and Japan
DK2OM	7137,0	vt	dly	06	TWN	no ITU	FSK8	125	1750	LSB – ALE, “ACCENT” “ABLAZE” “ABOUND” “AGHA” “ARTIST” “ANYWAY” “ABJECT” “ADROIT” – Taiwanese navy – daily – various times - tnx for info: DL8AAM
DK2OM	7137,6	1548	23	06	CHN		PSK4B	44.44	2400	39 tone modem – China – pilottone at 450 Hz – LSB mode
DK2OM	7138,0	1746	06	06	FEa		FMCW		32k	Codan like ocean surface radar 2.6 sps – 7138 – 7170 kHz
DK2OM	7150,0	1545	23	06	FEa		FMCW		32k	Codan like ocean surface radar 2.6 sps – 7150 – 7182 kHz
DK2OM	7160,0	2115	06	06	CHN		PSK2 LSB QRG	60	2450	PRC 30 tone modem – LSB mode – LSB QRG - pilottone 450 Hz - China
DK2OM	7162,0	2044	17	06	FEa		FMCW		32k	Codan like ocean surface radar 2.6 sps – 7162 – 7194 kHz
DK2OM	7172,0	1748	06	06	RUS		F1B	75	250	Rostov na Donu
DK2OM	7175,0	1700	01	06	ERI		A3E			Asmara - Eritrea
DK2OM	7176,0	1830	22	06	RUS		PSK2A	120	2600	AT3004D – submode idle – Far East Russia
DK2OM	7179,0	1455	02	06	RUS		PSK2A	120	2600	AT3004D - Simferopol - Crimea
DK2OM	7180,0	2115	06	06	F	RFI	A3E		50k	Radio France International on 7205 kHz (2000 – 2100 utc) with splatters down to 7180 kHz - daily
DK2OM	7183,0	vt	dly	06	SUI		FSK8	125	1750	ALE, “HB9MHB” – just for info!
DK2OM	7185,5	vt	dly	06	D HRV		FSK8	125	1750	ALE, “9A5EX” “DK0ESD” just for info - daily
DK2OM	7197,0	vt	dly	06	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	10100,8	ady	dly	06	D		F1B	50	450	Baudot - German Weatherservice – legal!
DK2OM	10110,0	vt	dly	06	SNG	no ITU	FSK8	125	1750	ALE, “CN6” “68” – Singapore Navy - Changi Naval Base
DK2OM	10113,0	vt	vd	06	TUN	no ITU	FSK8	125	1750	ALE, “TUD” “STAT5” “STAT154”
DK2OM	10114,0	vt	dly	06		no ITU	FSK8	125	1750	ALE, “BSF” “ZEN” “CM2OR2”
DK2OM	10114,8	0743	03	06	RUS		F1B	100	1000	CIS14 – Moscow - daily
DK2OM	10115,0	vt	vd	06		no ITU	FSK8	125	1750	ALE, “2001” “2002”
DK2OM	10116,5	vt	vd	06	AFS		F7D	54.3	2120	MHF50 – 33 tones - South African navy
DK2OM	10118,0	1028	11	06	RUS		F1B	75	250	CIS-75-250 - Moscow
DK2OM	10120,0	vt	dly	06		no ITU	FSK8	125	1750	ALE, “9066” “9067” “8001” “2001”
DK2OM	10120,0	1509	08	06	RUS		PSK2A	120	2600	AT3004D – Moscow – also 17.06.2016 at 0918 utc
DK2OM	10120,0	1729	13	06	MRC		USB			Moroccan fishery
DK2OM	10122,0	2046	18	06	ALG		FSK8	125	1750	ALE, “
DK2OM	10123,0	vt	dly	06	ALG	no ITU	FSK8	125	1750	ALE, “CM3” “COF” “BSF” “CM2” “ESA”
DK2OM	10127,0	1722	01	06	AUS		FMCW		20k	Australian OTH burst radar JORN – 20 sps – 3.2 sec bursts
DK2OM	10129,0	vt	dly	06	ALG	no ITU	FSK8	125	1750	ALE, “CM1” “CTF” “772”
DK2OM	10130,0	vt	dly	06	MRC		FSK8	125	1750	Thales 3000 – West Sahara –

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										daily - vt
DK2OM	10130,0	1720	01	06	Af	no ITU	FSK8	125	1750	ALE, – West Africa
DK2OM	10130,0	1950	23	06			FMCW		20k	OTH radar Cyprus – 50 sps
DK2OM	10131,0	0626	24	06	RUS		F1B	75	250	CIS-75-250 - Jekaterinburg
DK2OM	10136,0	vt	dly	06	ALG	no ITU	FSK8	125	1750	ALE, “CM3” “BLD” “CNC” “TF2”
DK2OM	10136,0	1920	13	06	RUS		F1B	50	200	Chita – all day
DK2OM	10140,0	vt	vd	06	CHN ?		FSK8	125	1750	ALE, “205” “201” “LT”
DK2OM	10143,0	1836	22	06	FEa		F1B	50	250	CIS-50-250 – Far East
DK2OM	10144,0	ady	dly	06	D	DK0WCY	A1A			10143.986 kHz - DK0WCY – German aurora beacon – <b>just for info!</b>
DK2OM	10145,5	vt	dly	06	HRV S / D F / G	9A5EX	FSK8	125	1750	ALE, “9A5EX” “SM5VRH” “DK0ESD” “F6BAZ” “MIDFO”- just for info - daily
DK2OM	13865,0	1430	29	06	RUS		FMCW		13k	OTH radar Contayner on 13865 kHz – 50 sps – 13 kHz wide - splattering up to 14500 kHz (78 kHz increments) – Nizhny Novgorod
DK2OM	14000,0	1430	29	06	E		USB			Spanish fishery
DK2OM	14000,0	1620	11	06	RUS		FMCW		13k	OTH radar Contayner on 13870 kHz – 50 sps – 13 kHz wide - splattering up to 14500 kHz (78 kHz increments) – Nizhny Novgorod
DK2OM	14000,0	2025	15	06	RUS		FMCW		13k main signal	OTH radar Contayner - 50 sps – Nizhny Novgorod on 13892 kHz with spurious from 13640 until 14330 kHz
DK2OM	14001,8	0933	09	06	F		PSK4	75	2300	LINK11-CLEW – Marseille
DK2OM	14002,0	1355	16	06	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod
DK2OM	14005,0	0650	03	06	RUS		FMCW		10k	OTH burst radar Contayner - 10 sps – Nizhny Novgorod
DK2OM	14006,0	0916	01	06	RUS		PSK2A	120	2600	AT3004D – Moscow
DK2OM	14008,0	0808	07	06	RUS		F1B	50	250	CIS-50-250 - Moscow
DK2OM	14014,0	1455	28	06			USB			south-west
DK2OM	14015,0	1621	19	06	MRC		USB			Moroccan fishery
DK2OM	14026,0	0824	13	06	RUS		PSK2A	120	2600	AT3004D – Moscow – also 26.06. at 1110 utc
DK2OM	14050,0	1334	04	06	RUS		F1B	75	250	Ulan Ude
DK2OM	14064,0	0920	22	06	RUS		F1B	75	250	CIS-75-250 – Novosibirsk
DK2OM	14074,6	0825	21	06	CHN		PSK4B	44.44	2400	39 tone modem – China – pilottone at 450 Hz – USB mode
DK2OM	14098,0	1530	21	06	RUS		PSK2A	120	2600	AT3004D – Irkutsk
DK2OM	14100,0	vt	dly	06	ALG	no ITU	FSK8	125	1750	ALE, “6206” – “6204” - “6202” “6207” “6217” “MTL” “IJJ” – Mauritanian border – daily, all day
DK2OM	14101,5	vt	dly	06	ALG		PSK4A	62.5	1750	Clover 2000 – 8 x 62.5 Bd – Moroccan border
DK2OM	14105,0	0649	09	06	F		FMCW		20k	French burst radar, 6 sps, similar Codar sounding, South France
DK2OM	14109,0	1436	29	06	POR	HAM	FSK8	125	1750	ALE, “CT2IXQ” “DK0ESD” “HB9MHB” – just for info!
DK2OM	14109,0	vt	dly	06	CAN		FSK8	125	1750	ALE, “VE3GDZ” – just for info!
DK2OM	14109,0	vt	dly	06	RUS	RV3APM	FSK8	120	1750	ALE, “RV3APM” – just for info!
DK2OM	14109,0	1940	11	06	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod
DK2OM	14112,0	0538	24	06	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod
DK2OM	14114,0	0628	18	06	RUS		FMCW		13k	OTH radar Contayner - 50 sps



DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										– Nizhny Novgorod
DK2OM	14116,0	0743	09	06	RUS		F1B	75	200	CIS-75-200 – Moscow – also 13.06.2015 at 0840 utc
DK2OM	14116,0	1030	22	06	RUS		F1B	75	250	CIS-75-250 - Moscow
DK2OM	14118,0	0822	07	06	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	14120,0	0800	23	06	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod
DK2OM	14130,0	0700	30	06	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod
DK2OM	14135,0	0929	19	06	RUS		FMCW		10k	OTH burst radar Contayner - 10 sps – Nizhny Novgorod
DK2OM	14141,0	0834	14	06	RUS		F1B	75	500	CIS-75-500 - Moscow
DK2OM	14160,0	1001	15	06			FSK8	125	1750	ALE,
DK2OM	14162,0	0835	06	06	RUS		PSK4B	120	2600	AT3104D – Moscow
DK2OM	14177,0	0855	06	06	RUS		F1B	75	500	Astrakhan – Caspian Sea
DK2OM	14192,0	1512	08	06	RUS		F1B	50	200	CIS-50-200 - RUS navy Kaliningrad – vd, vt
DK2OM	14192,0	0717	20	06	RUS		F1B	50	500	CIS-50-500 - Kaliningrad
DK2OM	14201,8	1025	24	06	EGY		PSK4	44.45	2200	Stanag4197 (bursts) – 39 tones parallel - Kairo
DK2OM	14205,0	vt	dly	06	CHN	no ITU	FSK8	125	1750	ALE, “505” “822” – 60 deg. from DL - CHN ?
DK2OM	14221,0	2017	16	06	KGZ		F1B	50	200	Bishkek – daily
DK2OM	14240,0	0737	29	06	RUS		F1B	75	250	CIS-75-250 - Moscow
DK2OM	14240,0	1310	22	06	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod
DK2OM	14242,0	0947	30	06	RUS		PSK2A	120	2600	AT3004D - Smolensk
DK2OM	14260,0	vt	dly	06	SRB	YU1BI	FSK8	125	1750	ALE, “YU1BI” – just for info!
DK2OM	14265,0	vt	vd	06	TUR	no ITU	FSK8	125	1750	ALE, “526”
DK2OM	14267,0	0934	19	06	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod
DK2OM	<b>14280,0</b>	<b>1005</b>	<b>Wed.</b>	<b>06</b>	<b>UKR</b>		<b>A3E</b>			<b>female voice with encrypted msgs – figures – “SZRU” = Foreign Intelligence Service of Ukraine in Rivne – every Wednesday at 1005 utc</b>
DK2OM	14292,0	0635	18	06	RUS		A1A			encrypted – splattering +/- 50 kHz – Moscow - also 20.06.2015 at 0720 utc -
DK2OM	14294,0	1253	24	06	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	14295,0	vt	dly	06	SRB	YU1BI	FSK8	125	1750	ALE, “YU1BI” – just for info!
DK2OM	<b>14295,1</b>	<b>1515</b>	<b>08</b>	<b>06</b>	<b>TJK</b>		<b>A3E</b>			<b>3<sup>rd</sup> from Radio Tajik on 4765 kHz – daily, all day – exact (14295.136 kHz)</b>
DK2OM	14301,7	1601	01	06	CHN		PSK2	75	2200	PRC 16 tone modem – USB mode – pilot tone 450 Hz - China – Shanghai – daily – all day - audible worldwide
DK2OM	14322,0	vt	dly	06	CHN	no ITU	FSK8	125	1750	ALE, “402”
DK2OM	14328,0	vt	dly	06	CHN	no ITU	FSK8	125	1750	ALE, “139” “534” “772” – West China
DK2OM	14330,0	vt	dly	06			FSK8	125	1750	ALE, “BV4”
DK2OM	14330,0	2040	13	06	RUS		FMCW		13k main signal	Russian OTH radar Contayner on 13945 kHz causing spurious emissions from 13590 – 14330 kHz
DK2OM	14334,0	vt	vd	06	CHN	no ITU	FSK8	125	1750	ALE, “249” “255” “763”
DK2OM	14336,5	0727	20	06	D		F1B	200	200	German Pactor net – bandplans unknown ???
DK2OM	14344,7	1600	01	06	CHN		PSK8	2400	2400	modified MIL-188-110A - 600 bps short – 14344.650 kHz – daily, all day
DK2OM	14346,0	vt	dly	06	HRV RUS D		FSK8	125	1750	ALE, “9A0ZG” “RX3ARZ” “DK0ESD” – just for info – various times, daily
DK2OM	14346,0	vt	dly	06	THA	HSOZEA	A1A			HSOZEA beacon – 14345.950 kHz - every 5 minutes – just for info!

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	18090,0	1113	26	06	CYP		FMCW		20k	OTH radar Cyprus – 50 sps
DK2OM	18100,0	vt	vd	06	MRC	no ITU	FSK8	125	1750	ALE, “CD” “C3” “R3” “G3” “E4” “E5” “Z2” “FORD” – daily, various times
DK2OM	18106,0	vt	vd	06	POR	CT2GOY	FSK8	125	1750	ALE, “CT2GOY” – just for info!
DK2OM	18107,0	vt	vd	06	RUS	RDL	F1B	50	200	CIS-50-50 - Moscow – idle and traffic – Russian navy – various days and times – legal operation
DK2OM	18117,5	vt	vd	06	POR	CT2IXQ	FSK8	125	1750	ALE, “CT2IXQ” – just for info
DK2OM	18140,0	vt	dly	06	SRB	YU1BI	FSK8	125	2600	ALE, “YU1BI” – just for info!
DK2OM	18150,0	0744	03	06	RUS		F1B	100	1000	harmonic from 9075 kHz (500 Hz shift) - Kaliningrad
DK2OM	<b>21000,0</b>	<b>1258</b>	<b>01</b>	<b>07</b>	<b>SDN</b>		<b>USB</b>			<b>MFA Sudan – Khartoum with emba Yemen – voice traffic</b>
DK2OM	21000,0	---	--	06	F		FMCW		20k	OTH radar – 6 sps bursts - South France
DK2OM	21000,0	1300	19	06	VTN		USB			pirates from Vietnam
DK2OM	21002,0	1333	19	06	FEa		LSB			Far East pirates
DK2OM	21002,2	vt	vd	06	SDN		F1B	100	170	<b>21002.15 kHz - Pactor 1 encrypted – MFA Sudan – Khartoum with emba Yemen – daily, vt</b>
DK2OM	21006,4	0527	26	06	RUS		F1B	600	600	DPRK-FSK600 – North Korean emba Moscow
DK2OM	21050,0	0900	13	06	RUS		FMCW		13k main signal	OTH radar Contayner – Nizhny Novgorod on 19721 kHz - 50 sps - splattering up 21050 kHz (noise floor 1.329 kHz wide!)
DK2OM	21096,0	vt	dly	06	INS	YD00XH	FSK8	125	1750	ALE, “YD00XH3” – daily, various times - just for info!
DK2OM	21131,0	vt	vd	06	CHN	no ITU	FSK8	125	1750	ALE, “A92” “L02” – Chinese Navy?
DK2OM	21140,9	vt	dly	06	GEO		PSK8A	2400	2400	Stanag4538 – GEO MIL with AFG - daily
DK2OM	21145,0	vt	dly	06	MRC	no ITU	FSK8	125	1750	ALE, “B301”, “C3”, “IR4” “T4” “E4” “A2” “CD” “K3” “KB2” “J5” “GS4” “R3” – various times, daily
DK2OM	21190,0	---	--	06	RUS		F1B	100	1000	harmonic from 10595 kHz - Moscow - daily
DK2OM	21200,0	vt	dly	06	INS		PSK	100	1300	Pactor 3 mailbox - Indonesia
DK2OM	21230,0	0832	21	06	RUS		FMCW		20k	OTH burst radar Contayner - 10 sps – Nizhny Novgorod
DK2OM	21291,0	0830	13	06	AUS		FMCW		10k	Australian OTH burst radar JORN – 34 sps, 39 sps and 40 sps
DK2OM	21295,0	0836	24	06	AUS		FMCW		10k	Australian OTH burst radar JORN - 49 sps
DK2OM	21318,5	0940	25	06	SRL		F1B	600	600	DPRK-FSK600 – North Korean embassy Freetown
DK2OM	21346,0	ady	dly	06	THA	HS0ZEA	A1A			beacon “HS0ZEA” – just for info!
DK2OM	21400,0	---	--	06	RUS		F1B	50	2000	harmonic from 5350 kHz – area of Moscow - daily
DK2OM	21409,5	---	--	06	RUS		F1B	100	2000	F1B 100 / 2000 - CIS14 – harmonic from 10704.75 - Jekaterinburg, RUS - daily
DK2OM	21436,0	---	--	06	RUS		PSK2A	120	5200	AT3004D – harmonic from 10718.0 kHz - Sevastopol
DK2OM	21438,0	0830	24	06	RUS	RCV	A1A			RIP90 de RCV - RUS Navy Sevastopol - daily
DK2OM	<b>21445,0</b>	<b>1335</b>	<b>01</b>	<b>06</b>	<b>CHN</b>		<b>A3E</b>			<b>IM from RCI on 17650 and 13855 kHz - 1300 – 1357 UTC - daily</b>
DK2OM	21446,0	ady	dly	06	THA	HS0ZEA	A1A			HS0ZEA beacon – every 5 minutes - just for info!
DK2OM	25000,0	1523	14	06	FIN		A3E			time signal Helsinki – just for

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										info – carrier on 25000 – dots on 25001 and 24999 – daily, all day
DK2OM	28000,0	vt	dly	06	CIS		F3E			28000 – 29700 numerous CIS taxi nets – mostly Russia
DK2OM	28000,0	ady	dly	06	B		A3E			Brazilian CBers – 28000 – 28315 – no change
DK2OM	28025,0	vt	vd	06	POR		F1B	51	300	F1B bursts - 28100.160 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28030,0	vt	vd	06	POR		F1B	51	340	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28045,0	1540	02	06	POR		F1B	51	280	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28050,0	1830	27	06	POR		F1B	51		F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28051,5	vt	dly	06	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28060,0	vt	vd	06	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28065,0	1955	20	06	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28065,5	1956	20	06	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	06	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28085,0	vt	vd	06	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28100,7	0723	06	06	POR		F1B	51	250	F1B bursts - 28100.780 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28102,1	1552	15	06	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28125,0	1700	04	06	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28146,0	vt	vd	06	ARG B		FSK8	125	1750	ALE, “LU8EX” “PY2TI” “DL1” – just for info!
DK2OM	28200,0	vt	vd	06	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28275,1	1750	13	06	AF		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28312,5	vt	vd	06	POR	CT2IXQ	FSK8	125	1750	ALE. “CT2IXQ” – just for info
DK2OM	28315,0	vt	dly	06	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28315,0	1227	26	06	D	names	F3E			2 German CBers – area of Stuttgart
DK2OM	28335,0	1605	02	06	E		A3E F3E			Spanish fishery – daily – “Juan”
DK2OM	28435,0	----	--	06	E		F1B	81.9	140	Datawell-buoy “Waverider” – 28435.040 kHz – Costa del Sol – Malaga
DK2OM	28459,8	0937	04	06	GAB		A3E		1060	carrier and dots +/- 530 Hz -

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										bursts every 60 sec – Gabon – daily and all day
DK2OM	28499,8	0924	05	06	MEa		F1B	81.9	140	Datawell-buoy “Waverider” – 28499.875 kHz – Persian Gulf
DK2OM	28600,0	1712	02	06	IRN		FMCW		50k	OTH radar Iran – 307 and 870 sps – splattering +/- 300kHz – even audible in Japan - daily
DK2OM	28701,1	0816	13	06	GAB		A3E		1056	carrier and dots +/- 528 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	28901,1	1007	25	06	GAB		A3E			carrier and dots +/- 528 Hz - bursts every 60 sec – Gabon – daily and all day
DK2OM	29250,0	----	--	06	E		F1B	81.9	140	Datawell-buoy “Waverider” – 29249.905 kHz – Fuerteventura - daily, all day
DK2OM	29375,0	----	--	06	I		F1B	81.9	140	Datawell-buoy “Waverider” – 29374.898 kHz – Gallipoli, South Italy - daily, all day
DK2OM	29387,5	---	--	06	IND		F1B	81.9	140	Datawell-buoy “Waverider” – 29387.460 kHz – Indian NW coast, close to Pakistan - daily, all day
DK2OM	29400,0	---	--	06	USA		F1B	81.9	140	Datawell-buoy “Waverider” – 29400.070 kHz - USA north-east coast – NY daily, all day
DK2OM	29450,0	---	--	06	MRC		F1B	81.9	140	Datawell-buoy “Waverider” – 29449.870 kHz - area of El Aaiun – Morocco - daily, all day
DK2OM	29500,0	---	--	06	G		F1B	81.9	140	Datawell-buoy “Waverider” – area of Gibraltar – daily, all day
DK2OM	29525,0	---	--	06	MRC		F1B	81.9	140	Datawell-buoy “Waverider” – 29524.990 kHz - Agadir - Morocco – daily, all day
DK2OM	29625,0	---	--	06	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	SH	DETAILS
MRASZ	3502,0	1844	23	6			A1A		"WTNTU GAKCK MGYZV"
MRASZ	3511,0	1826	15	6			USB		numbers, russian
MRASZ	3524,0	1750	10	6			F1B	250	
MRASZ	7010,6	1640	16	6			A3E		dual tone system?
MRASZ	7022,0	1824	12	6			PSK4		similar to AT3004D ?
MRASZ	7027,5	1840	12	6			A1A		slow "V" string, hrd on: 13,15,16,17,23,29
MRASZ	7050,0	vt	dly	5			LSB		chaos, russian music, singing
MRASZ	7054,2	1754	10	6			A1A		"CQ CQ CQ PUTIN HUILO K"
MRASZ	7055,0	1755	10	6			LSB		russian, chaos, hrd on: 11,16, 22, 29
MRASZ	7058,0	1815	16	6			OTHR		
MRASZ	7070,0	1812	10	6			LSB		music, hrd on: 29
MRASZ	7090,0	1743	11	6			PSK8		link 11 SLEW, hrd on: 29
MRASZ	7120,0	1724	10	6	SOM		A3E		R. Harg. hrd on: 11,12,16,17,23,29

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SH	DETAILS
MRASZ	7145,0	1734	29	6			???		some multichannel system
MRASZ	7162,0	1720	10	6			F1B	250	
MRASZ	7175,0	1802	15	6			A3E		Ui. BC
MRASZ	7179,0	1824	13	6			PSK2		AT3004D
MRASZ	7195,0	1735	29	6			A3E		splatter 5 kHz down fm 7200 kHz
MRASZ	7200,0	1735	11	6			A3E		german lang. Splatter 10 kHz down
MRASZ	7200,0	1757	15	6			A3E		10 kHz down splatter, hrd on: 22,
MRASZ	10117,9	1723	10	6			F1B	250	
MRASZ	10130,0	1746	11	6			OTHR		10115-10145 kHz
MRASZ	10130,0	1947	23	6			OTHR		10105-10150 kHz
MRASZ	10137,0	1814	15	6			A3E		Ui. intsable carrier
MRASZ	10145,0	1953	23	6			OTHR		10140-10150 kHz, agn hrd at: 1958
MRASZ	14108,0	1225	14	6			F1B	250	
MRASZ	14110,0	0727	14	6			FMCW		OTHR
MRASZ	14116,0	1728	10	6			F1B	200	hrd on: 11, 13, 14, 15, 16,
MRASZ	14180,0	1220	13	6			OTHR		
MRASZ	14190,0	1250	13	6			OTHR		14110-14270 kHz
MRASZ	14192,0	0928	12	6			F1B	500	hrd on: 13,14,15,23,29
MRASZ	14200,0	1241	13	6			OTHR		13250-14300 kHz
MRASZ	14240,0	0927	12	6			F1B	250	
MRASZ	14240,0	1722	29	6			F1B	250	
MRASZ	14257,0	1923	10	6			F1B	200	
MRASZ	14270,0	0856	19	6			OTHR		14250-14285
MRASZ	14295,1	1729	10	6	TJK		A3E		R.Tajikistan, 3rd. harm, hrd on: 16,17,22
MRASZ	14322,0	1730	10	6			F1B	850	
MRASZ	18074,0	0922	12	6			OTHR		18068-18080 kHz
MRASZ	18090,0	1243	13	6			OTHR		18070-18110 kHz
MRASZ	18095,0	1218	12	6			OTHR		18068-18120 kHz
MRASZ	18124,9	0728	14	6			USB		DOB working, scolding of Putin
MRASZ	21010,0	1812	11	6			A3E		female singing
MRASZ	21318,5	0944	12	6			F1B	600	ARQ?
MRASZ	21455,0	1247	13	6			A3E		splatter 5 kHz down

### OEVSV – Austria – OE3GSA (Gerd)

### PZK – Poland – SP9BRP (Jan)

### REF 1 – France – F5MIU (Francis)

### REF 2 – France – F5JBR (Andre)

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

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	3552	21.02	12	06			J3E-U			Encrypted voice
REP	3572	07.23	04	06		E	J3E-U			Spanish fishery vocoder CRY2011
REP	7000	19.07	05	06	I		J3E-U			Italian pirates
REP	<b>7025</b>	<b>10.33</b>	<b>17</b>	<b>06</b>	<b>E</b>		<b>J3E-L</b>			<b>Spanish OM, tuning &amp; whistling</b>
REP	<b>7039,0</b>	<b>23.01</b>	<b>01</b>	<b>06</b>	<b>RUS</b>	<b>C</b>	<b>A1A</b>			<b>MOSCOW, ADY, DLY</b>
REP	<b>7039,3</b>	<b>21.12</b>	<b>01</b>	<b>06</b>	<b>RUS</b>	<b>K</b>	<b>A1A</b>			<b>VOLGOGRAD, ADY, DLY</b>
REP	<b>7120</b>	<b>18.59</b>	<b>09</b>	<b>06</b>	<b>SOM</b>		<b>8k00 A3EGN</b>			<b>Radio Hargaysa, Somalia</b>
REP	10110	22.45	23	06			A3E			Number Station - female - 5 letters groups
REP	10118	07.00	10	06			F1B	50	250	Unid FSK
REP	10120	09.01	13	06			J3E-U			Arabic language fishery, Morocco
REP	10122	09.40	11	06			J3E-U			Unid language fishery
REP	<b>10130</b>	<b>17.33</b>	<b>11</b>	<b>06</b>			<b>FMCW</b>			<b>OTH radar 50sps abt 15kHz wide</b>

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	10131	18.10	18	06			FMCW			OTH radar
REP	14000	19.09	05	06	B		J3E-U			Brazilian pirates
REP	14008	09.50	07	06	RUS		F1B	50	250	Russian MIL unid
REP	14008	10.24	03	06			F1B			Encrypted baudot, unid
REP	14017	20.59	05	06	MRC		J3E-U			Moroccan fishery
REP	14024	10.54	08	06	RUS		PSK2			AT3004D CIS-12 modem, Russia
REP	14025	09.36	22	06			BPSK			AT3004D idling
REP	14064	08.41	14	06			F1B	50	250	Unid
REP	14110	08.00	14	06			FMCW			OTH radar 15kHz wide
REP	14116	09.03	22	06	RUS		F1B	75	250	CIS-75 modem, Russia
REP	14145	14.23	23	06			FMCW			OTH radar 50sps / 20kHz
REP	14150	10.52	08	06			FMCW			OTH radar
REP	14153	16.43	25	06	I		J3E-U			Talk ship to ship
REP	14180	10.34	17	06			FMCW			OTH radar 50sps/20kHz
REP	14195	10.20	03	06	RUS		F1B	50	250	Encrypted russian MIL FSK
REP	14237	08.02	04	06			F1B	75	250	Encrypted baudot, unid
REP	14240	14.38	11	06			FMCW			OTH radar, 20kHz wide
REP	14240	13.09	10	06	RUS		F1B	75	250	CIS encrypted baudot 75/250
REP	14252	12.28	13	06			FMCW			OTH radar 50sps/15kHz
REP	14260	07.45	06	06	RUS		BPSK			AT3004D system (CIS12)
REP	14282	08.05	28	06			FMCW			OTH radar 50 sps 20kHz
REP	14285	16.37	05	06			FMCW			OTH radar, short bursts
REP	14300	16.10	04	06			FMCW			OTH radar 50sps 20kHz
REP	18090	23.23	05	06			FMCW			OTH radar
REP	18090	12.22	13	06			FMCW			OTH radar 20 sps 20 kHz
REP	18100	19.22	29	06	B		J3E-U			Brazilian pirates
REP	18100	10.35	08	06	POR		J3E-U			Portuguese fishery, Madeira Islands
REP	21020	07.56	17	06			FMCW			OTH radar 20kHz
REP	21075	14.14	05	06			FMCW			OTH radar
REP	28195	13.40	02	06			F3E			YL taxi network dispatcher
REP	28265	09.36	17	06			F3E			CIS taxi dispatchers
REP	28300	19.59	19	06	G		F3E			UK ham ops not respecting Bandplan
REP	28305	15.27	06	06	B		A3E			Brazilian ops
REP	28500	07.42	09	06	POR		A3E			Portuguese fishermen
REP	28715	15.30	15	06			F3E			CIS taxi dispatcher
REP	29125	08.05	20	06	RUS		F3E			Russian taxi dispatcher
REP	28xxx	Dly	Dly	06	B		A3E			Brazilian CB ops, everyday in afternoon
REP	28x 29x	Dly	Dly	06	RUS		A3E/F3E			Daily mess of Russian taxi services

## RSGB - Great Britain – M0VRR (Vaughan)

## SRAL – Finland – OH2BLU (Pekka)

Society	QRG	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	REMARKS
SRAL	6999,0	1330	25.	6		UiMUX	PSK2	120	2600	Subcarrier on 7000,3 kHz
SRAL	7008,0	0930-1500	*	6		UiPTR	F1B		250	Days: 15. 19. 21.
SRAL	7008,0	0845-0900	28.	6		UiMUX	PSK2	120	2600	
SRAL	7011,4	0500-1800	25.-29.	6		UiTone	A2		1200	Same TX: J3E-u Russian vox on 7009,0 kHz on WebSDR
SRAL	7016,0	1725-1840/	30.	6		UiPTR	F1B		250	
SRAL	7016,5	0750	6.	6		UiPTR	F1B			
SRAL	7018,75	h24	*	6		UiPTR	F1B/NON		250	Days: 10.-12. 28.-30.
SRAL	7020,0	0750-1420	*	6		UiPTR	F1B		250	Days: 19. 20. 24. 30.
SRAL	7021,0	1400-1410	28.	6		UiMUX	PSK2	120	2600	
SRAL	7027,5	1330-2400	12.-30.	6	UZB	V	A1A			Khiva
SRAL	7034,0	0650-	9.	6		UiPTR	F1B		2550	

Society	QRG	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	REMARKS
		1725								
SRAL	7035,0	0400-1930	3.-9.	6		UiMUX	PSK2	120	2600	
SRAL	7058,0	1315-1415	18.	6		UiPTR	F1B			
SRAL	7060,0	1800	3.	6		UiMUX	PSK2	120	2600	
SRAL	7072,0	0600-0630	9.	6		UiMUX	PSK2	120	2600	Carrier on 7070,0 kHz
SRAL	7076,0	0820-0830	30.	6		UiPTR	F1B		250	
SRAL	7078,0	0900-1430	11. 19.	6		UiMUX	PSK2	120	2600	
SRAL	7088,0	1820-1920	30.	6	TUR	UiMUX	PSK8			
SRAL	7093,0	1300-1640/	21.	6		UiMUX	PSK2	120	2600	
SRAL	7093,5	1535	11.	6		UiMUX	PSK2	120	2600	
SRAL	7103,0	1150-1930	2. 3.	6		UiMUX	PSK2	120	2600	
SRAL	7111,0	0600-1800	9. 21.	6	RUS	UiPTR	F1B		250	
SRAL	7111,88	0610-1123/	16.	6		UiCarr	N0N			
SRAL	7116,65	1550-1635	4.	6		UiCarr	N0N			
SRAL	7120,0	1500-1900/	dly	6	SOM	R.Hargeis a	A3E			18.-22. & 30. 1900 – 1924 (Ramadan)
SRAL	7122,0	0645-1400	8. 10.	6		UiPTR	F1B		250	
SRAL	7122,0	0650-1645	3. 4.	6		UiMUX	PSK2	120	2600	
SRAL	7122,0	1730-1930	*	6	UZB	V	A1A			Days: 16.-19. 21. 27. 28.
SRAL	7160,0	0600-0900	8. 16.	6	RUS	RMW32	A1A			5BL
SRAL	7161,0	0915	11.	6		624	R3E-u			Synth. VOX
SRAL	7162,0	0810	10.	6		UiPTR	F1B		250	
SRAL	7167,0	0650-1555	*	6		UiPTR	F1B		200/250	Days: 8. 10. 15. 25.
SRAL	7169,0	1015	4.	6		UiPTR	F1B		200	
SRAL	7175 A	1515-1806/	*	6	ERI	VoBME2	A3E			Days: 1. – 10. 15. 16. Changes fq to avoid jamming
SRAL	7178,0	1530	16.	6		UiMUX	PSK2	120	2600	
SRAL	7181,62	1850-0640	24. – 29.	6		UiCarr	N0N			
SRAL	7197,0	1155-1215	8.	6		UiMUX	PSK2	120	2600	
SRAL	7200,0	/1720-1820/	dly	6	IRN	IRIB	A3E			German PX
SRAL	7200,0	1000-1300/	4. – 30.	6	CHN	CNR1	A3E			Used as jammer
SRAL	10108,0	-0640/	23.	6	RUS	29B6	FMCW			50Hz / 15 kHz
SRAL	14006,0	0425-0530	2.	6		UiMUX	PSK2	120	2600	
SRAL	14008,0	0845-1335	14. 17.	6		UiPTR	F1B			
SRAL	14026,0	0845	13.	6		UiMUX	PSK2	120	2600	
SRAL	14050,0	1710-1930	3. 4.	6		UiPTR	F1B			
SRAL	14108,0	0800-1000	*	6		7DXE	A1A			Days: 9. 16. 18. 24. 29.
SRAL	14116,0	0430-1930	*	6	RUS	UiPTR	F1B		250	Days: 6. 9.-13. 16.-24.
SRAL	14118,0	1015	4.	6	RUS	UiMUX	PSK2	120	2600	
SRAL	14141,0	0810-1010	14. 28.	6	RUS	UiPTR	F1B		500	

Society	QRG	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	REMARKS
SRAL	14162,0	0750-0930	6. 21.	6		UiMUX	PSK2	120	2600	
SRAL	14177,0	0850-1010	6. 28.	6	RUS	UiPTR	F1B			
SRAL	14192,0	0730-1230	13. 27.	6	RUS	UiPTR	F1B		200/500	
SRAL	14221,0	2130-0600	dly	6	KGZ	UiPTR	F1B		250	
SRAL	14238,0	0710-1002/	4.	6		UiPTR	F1B			
SRAL	14240,0	0550-1550	*	6	RUS	UiPTR	F1B/A			Days:12. 24. 26. 29.
SRAL	14261,0	1155	10.	6		UiMUX	PSK2	120	2600	
SRAL	14272,0	1010	27.	6		UiCW	A1A			5BL
SRAL	14293,0	0810	29.	6		UiPTR	F1B			
SRAL	14295,2	h24	dly	6	TJK	R Tojikiston	A3E			3f 4765,07 kHz, Yangiyul TX
SRAL	14 MHz	0530-1939	*	6	RUS	29B6	FMCW			50Hz / 15 kHz, days: 4. 6. 14. 15. 18. 19. 23. 25. 27. 30.
SRAL	18080,0	0600-0800	*	6	CHN	CNR1	A3E+			Days: 1. 4. 12. 13. Used as jammer
SRAL	18 MHz	0515-1615	*	6	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz, days: 2. 5. 6. 11. 12. 16. 17. 18. 23.-26.
SRAL	21 MHz	0550-1415	*	6	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz, days: 9. 14. 15. 18. 26. 27.
SRAL	21438,0	0830-1530	*	6	RUS	RCV	A1A			Days: 2. 21.-28.
SRAL	28 MHz			6	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz, not heard
SRAL	28600A	0520-1415	*	6	IRN	UiOTHR	FMCW			307 & 870 Hz / 60 kHz – 300 kHz, days: 2.-7. 21. 26.-27.
SRAL	28 MHz	0745-0800	13. 28.	6	RUS	Taxi disp.	F3E			2 reports

### USKA – Switzerland – HB9CET (Peter)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
USKA	7000.0	2325	16	06			J3E-U			maybe Indonesian village radio
USKA	7001.5	2205	11	06			BPSM	8x62.5	1k75	Clover 2000 often 8 tones, spacing 250Hz
USKA	7019.875	0838	24	06			A1A			Jammer, long lasting fast dots
USKA	7020.0	0837	24	06			F1B	50	250	jammed
USKA	7027.5	2243	13	06		V	A1A			Beacon ID "V"
USKA	7039.2	1907	01	06	RUS	F	A1A			Beacon F Vladivostok
USKA	7039.3	0926	10	06	RUS	K	A1A			Beacon K Petropavlovsk
USKA	7039.4	1907	01	06	RUS	M	A1A			Beacon M Magadan
USKA	7050.0	2213	10	06			J3E-L		≥ 3k3	Music, voice, often
USKA	7089.8	1604	11	05			G1D	2400	2k4	PSK-8: Link 11- SLEW often
USKA	7122.0	2212	17	06		V	A1A			Beacon V
USKA	7176.0	1128	24	06			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	7179.0	1537	13	06			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	7197.0	1910	24	06		373013	MFSK8	125	1750	MIL 188-141A often
USKA	7200.0	2221	17	06			A3E		~20k	BC lower sideband inside 40m band
USKA	10122.0	2157	11	06			J3E-U			english accent
USKA	14000.002	0901	24	06			NON			long lasting carrier
USKA	14008.0	1000	15	06			F1B	50	250	
USKA	14050.0	2103	04	06			F1B	75	250	CIS 75
USKA	14098.0	0959	24	06			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	14107.5	1001	24	06			A1A			no ID, text only (Jammer)
USKA	14116.0	1617	11	06			F1B	75	200	often
USKA	14130.036	2200	29	06			NON			long lasting carrier
USKA	14135.0	1652	11	06			FMCW		15k	OTHR
USKA	14175.0	2112	02	06			FMCW	50 sps	~ 14k	OTHR
USKA	14177.0	0851	14	06			F1B	75	500	



SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
USKA	14192.0	0918	10	06			F1B	50	200	CIS 50-50 daily
USKA	14192.0	0726	12	06			F1B	50	500	CIS 50-50 daily
USKA	14221.0	2201	17	06			F1B	50	200	often
USKA	14240.0	1449	12	06			F1B	75	250	
USKA	14276.0	1529	13	06			FMCW	50 sps	~ 14k	OTHR
USKA	14295.1	1904	02	06	TJK		A3E			BC: 3 <sup>rd</sup> of Radio Tajik at 4765 kHz
USKA	14301.7	1854	01	06			BPSK	16x75	2k2	Burst system; 16 tones, 2 pilottones when idling dots only
USKA	14344.65	2158	10	06			PSK-8	2400	2k4	MIL 188-110A, variant daily Frame format mostly 600 bps/short
USKA	18070.0	0856	24	06			FMCW	50	20k	OTHR
USKA	18105.0	2204	02	06			A3E			BC: unid language (Portuges accent; behind maybe a 2 <sup>nd</sup> tx or IM
USKA	18150.0	0803	02	06			F1B	100	1000	Harmonic of 9075 (100Bd/500Hz)
USKA	21010.0	1627	11	06			FMCW	50	20k	OTHR
USKA	21113.0	1510	12	06			F1B	50	200	
USKA	21275.0	0955	15	06			FMCW	50	20k	OTHR
USKA	21318.55	1034	03	06			F1B	600	600	ARQ system often
USKA	21438.0	1536	13	06		RCV	A1A			letters and figures daily
USKA	28600.0	0811	02	06				307 sps 870 sps	app 50k	OTHR Burst system; daily affected BW > 100k

### Veron 1 – Netherlands – PA2GRU (Dick)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
VERON	7003,0	20.00	6	6	RUS	UiMUX	PSK			12x BPSK AT3004D
VERON	7019,0	18.46	9	6		UiCAR	NON			carrier
VERON	7077,0	18.58	1	6		UiPTR	F1B			Ptr
VERON	7120,0	19.05	19	6	SOM	R.Har	A3E			speech
VERON	10118,0	18.54	11	6		UiPTR	F1B			Ptr
VERON	10131,0	11.55	4	6		UiPTR	F1B			Ptr
VERON	10132,0	19.47	18	6		936	A1A			936 followed by 5F (Words Twice)
VERON	14000,0	17.00	13	6	RUS	UiMOD				noise floor 14100-14350 KHz
VERON	14000,0	17.48	19	6	RUS	UiMOD				14000-14350 Khz noise floor nr Moscow
VERON	14006,0	15.43	1	6	RUS	UiMUX	PSK			12x BPSK AT3004D
VERON	14006,0	19.00	1	6	RUS	UiMUX	PSK			12x BPSK AT3004D
VERON	14008,0	15.22	22	6	RUS	UiPtr	F1B		200	Ptr, at 15.23 utc QRT
VERON	14008,0	13.20	1	6	CIS	UiPTR	F1B			Carrier/Revs/Ptr also 25/6 08.09 UTC
VERON	14040,0	06.43	29	6		UiMOD				tone and pulses
VERON	14050,0	19.39	3	6	RUS	UiPtr	F1B		250	Ptr
VERON	14050,0	06.55	29	6	RUS	UiPtr	F1B		250	Ptr
VERON	14064,0	13.23	22	6	RUS	UiPtr	F1B		200	Ptr
VERON	14064,0	08.30	23	6		UiPTR	F1B			Ptr
VERON	14097,0	13.21	1	6		UiCAR	A1A			Strong Carrier
VERON	14100,00	19.40	3	6	RUS	UiMOD				noise floor 14100-14350 KHz
VERON	14108,0	08.12	12	6	RUS	E7DX	A1A			IOZ4 DE E7DX QTC ZDJ K
VERON	14108,0	08.16	12	6	RUS	E7DX	A1A			E7DX 552 23 12 1102 552 BT ZDJ 289 BT
VERON	14108,0	08.16	12	6	RUS	E7DX	A1A			MMMMM RNUCO (etc 5BL)
VERON	14108,0	11.15	18	6	RUS	WKTS	A1A			tfc with RGW8
VERON	14108,0	08.24	19	6	CIS	7DXE	A1A			MMMMM 5BL ending 315 ar (to MOHA)
VERON	14108,0	08.06	25	6	CIS	UiCW	A1A			ZOK ZDR ZG. ar (to Y1CQ)
VERON	14114,0	11.14	12	6		UiCW	A1A			String MMMMSSHHMMOOOH
VERON	14116,0	10.43	22	6	RUS	UiPtr	F1B		250	Ptr, encrypted
VERON	14116,0	06.27	29	6	RUS	UiPtr	F1B		250	Ptr
VERON	14116,0	18.52	11	6		UiPTR	F1B			Ptr also 16/6 08.40 23/6 08.26 UTC
VERON	14119,0	10.00	4	6	RUS	UiMUX	PSK			12x BPSK AT3004D

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
VERON	14119,0	09.10	29	6		UiMOD				on 14239-14278-14160 tone+pulse 2 p/s
VERON	14120,0	09.13	23	6		OTHR	FMCW			radar,joeke+dick+arie
VERON	14135,0	13.25	22	6		OTHR	FMCW			radar, 20 KHz wide
VERON	14141,0	10.38	9	6		UiPtr	F1B		500	Ptr
VERON	14180,0	09.07	8	6		OTHR	FMCW			radar, 20 KHz wide
VERON	14200,0	10.46	10	6		OTHR	FMCW			radar, 20 KHz wide
VERON	14221,0	22.43	6	6	RUS	UiPtr	F1B		200	Bad modulation
VERON	14237,0	13.27	22	6		OTHR	FMCW			radar, 20 KHz wide
VERON	14240,0	08.00	12	6		UiPtr	F1B		250	Ptr, at 14.36 utc still on air
VERON	14240,0	08.53	12	6		UiPTR	F1B			Ptr
VERON	14285,0	18.37	9	6		OTHR	FMCW			radar, 20 KHz wide
VERON	14290,0	07.31	25	6	CIS	9W8V	A1A			tfc, calling IO5X
VERON	14290,0	13.07	27	6	CIS	F1Y5	A1A			qtc zwu 44426 27008 684 RPT
VERON	14292,0	11.56	2	6		UiPTR	F1B			Ptr
VERON	14293,0	08.26	23	6		UiPTR	F1B			Ptr
VERON	18159,0	12.59	23	6		UiRadar	FMCW		20k	OTHR; 25sps
VERON	21187,0	14.51	7	6						Frequency hopper
VERON	21210,0	10.12	7	6		UiRadar	FMCW		10k	OTHR; 33sps
VERON	21438,0	14.41	9	6	RUS	RCV	A1A			RHI99 DE RCV QYT4 QSX 12414 K
VERON	21438,0	08.45	10	6	RUS	RCV	A1A			RIP90 DE RCV QTC 294 30 6 1250 294 BT
VERON	21438,0	08.57	7	6	RUS	RCV	A1A			RBE86 de RCV QTC 714 Nawip 038 1222
VERON	21438,0	09.11	7	6	RUS	RCV	A1A			RIP90 de RCV QTC 289 Nawip 032 1219
VERON	21438,0	09.16	7	6	RUS	RCV	A1A			RBE86 de RCVQTC 703 Nawip 038 1147
VERON	21438,0	09.23	7	6	RUS	RCV	A1A			RIP90 de RCV QTC 268 Nawip 032 1143
VERON	28600,0	10.54	9	6	IRN	OTHR	FMCW			307-870 sps
VERON	28600,0	13.30	22	6	IRN	OTHR	FMCW			radar,307-870 sps
VERON	28615,0	09.20	7	6	IRN	Radar	FMCW		170k	OTHR; 307&870sps

# The monitoring team of IARU Region 1

credits:

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**Many thanks for your interest!**

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