



# Monitoring System

DK2OM – Wolf Hadel  
Co-ordinator of IARUMS Region 1  
Editor of the Newsletter

HB9CET – Peter Jost  
Vice Co-ordinator of IARUMS Region 1

The monthly newsletter for Region 1

## April 2015

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



### Acknowledgements

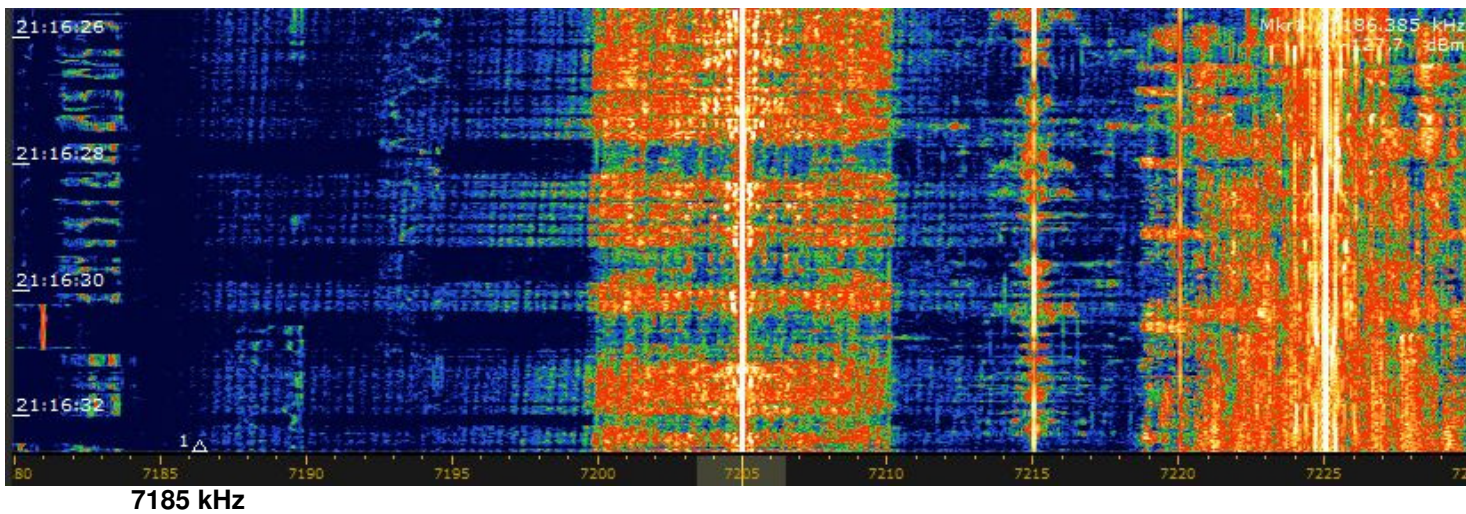
ARAT: 3V8CB – Ahmed ++ ARI: DH7SA – Salvatore ++ ARSK: 5Z4NU - Ted ++ ASTRA: DL1BDF – Mustapha ++ DARC: DK2OM – Wolf ++ ERASD: SU1SA – Sayed ++ HRS: 9A5DGZ – Gianluca ++ IARC: 4Z1AB – Amos ++ IRTS: EI9GSB - Lisa ++ KARS: 9K2RR – Faisal ++ MARL: 9H1M – Dominic ++ MRASZ: HA7PL - Laci ++ NARS: 5N9AYM – 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. Radio France International on 7005 kHz with splatters

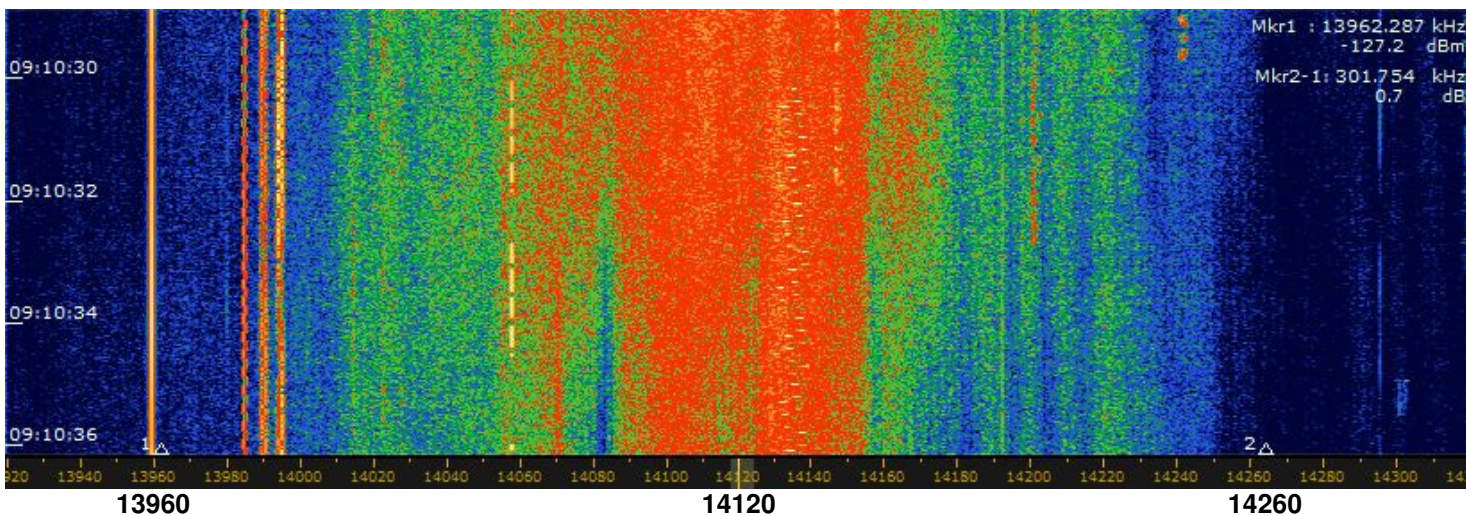
Radio France International (RFI) on 7205 kHz produced strong splatters down to 7185 and sometimes down to 7180 kHz every evening at about 2100 utc and later. I informed the German PTT BNetzA. The German PTT sent an official complaint to France. HB9CET confirmed my observations and informed the Swiss BAKOM. Many thanks dear Peter!

RFI on 7205 kHz with splatters on April 22<sup>nd</sup> at 2116 UTC – Screenshot: DK2OM



## 2. Strong Russian noise floor on 14 MHz

I found a strong Russian noise floor on 14120 kHz center QRG (S9 +40 dB) covering 13960 – 14260 kHz on April 28<sup>th</sup> at 0900 UTC and later. Location. Area of Moscow – The Nepal emergency frequency on 14205 USB was disturbed! Screenshot: DK2OM



## 3. Brazilian Cbers on 28 MHz – no change

Brazilian Cbers were daily transmitting on 28000 – 28315 kHz on AM, no change as expected.

## 4. Bad News – 21 MHz no change

The Russian voice scrambler “Yakhta” was daily heard on 21000 kHz with voice traffic and the inband synchro signal on 21001.5 kHz on F1B mode with 100 Bd and 150 Hz shift. Location: Nizhny Tagil (area of Jekaterinburg) The Australian OTH radar “JORN” was daily operating on 21295 in seeklight mode with different sweep rates. A Chinese long range OTH radar with 10 sps and 160 kHz wide was audible on our 15 m-band.

## 5. 14205 kHz – emergency frequency disturbed

**Uncredible and a shame:** The Nepal emergency frequency on 14205 kHz (USB) was often disturbed by fellows shouting “ola”, whistling and transmitting RTTY.

## 6. Recommendation – if you are interested in Moegel-Dellinger and Aurora predictions

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

Many thanks for the tip to Mr. Jens Mielich from the German Leibnitz Institute in Ruegen!

**7. CORRECTION - navigation systems and channelmarkers**

A Russian channelmarker on 3756 kHz (location Tuapse – East Black Sea) is audible every evening with pip-tones. Transmission mode A3E – carrier and both sidebands with short tone bursts. This system is not located in Ukraine! Earlier bearings were not precise enough. This system is no navigation system as reported before! The system on 1812 kHz is the navigation system BRAS-3/RS-10 in Kaliningrad – Russia. Many thanks for correction and assistance to A.B. !

**8. Hamradio 2015 – Invitation to all coordinators and friends!**

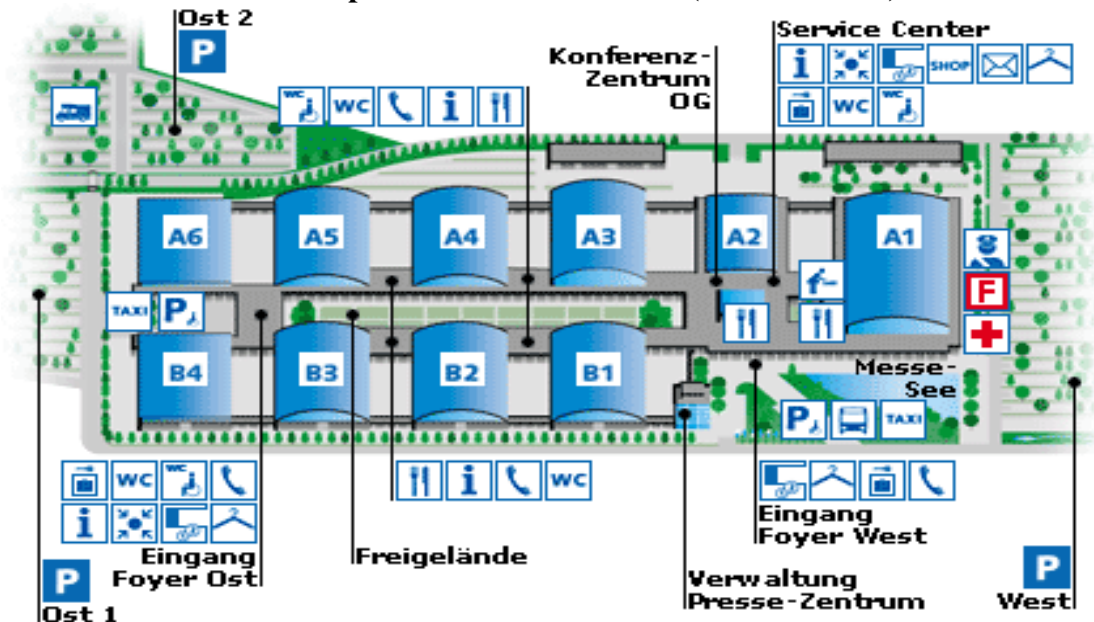
**IARUMS Region 1 and DARC Monitoring System Meeting at the HAM-RADIO 2015 in Friedrichshafen:**

**Saturday, June 27<sup>th</sup> 2015 from 10.00 – 11.30 local time - Room Swiss (180) – Hall A2**

**Program:**

- 1. Official opening by DK2OM and HB9CET
- 2. Main lecture “Monitoring and bearing today” by Dr. Ing. Christof Rohner (DL7TZ / 9V1CR) – Fa. Rohde&Schwarz

Hall plan of the HAM-Radio (source DARC)



**Please visit us!**



DK2OM, Wolf



DL7TZ, Christof



HB9CET, Peter

- 9. Homepage IARU Region 1 <http://www.iaru-r1.org/>
- Homepage IARUMS Region 1 <http://www.iarums-r1.org>
- Homepage IARUMS Region 2 <http://www.iaru-r2.org/>
- Homepage IARUMS Region 3 <http://iaru-r3.org/iaru-region-3-monitoring-system-newsletter/>
- Intruderlogger Region 1 <http://peditio.net/intruder/bluechat.cgi>
- ITU-Monitoring Reports:** <http://www.itu.int/ITU-R/index.asp?category=terrestrial&rlink=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 APRIL 2015

Radio Hargeisha remained on 7,120 kHz with broadcasts and what is apparently the Voice of the Broad Masses, Eritrea, on 7175 kHz. They seem to have left 7185 kHz.

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	Adm	Identity	Mode	Details
ARSK	7.000.00	vt	dly	4	E. Africa	?	J3Eu	Unidentified, KiSwahili, East Africa. Possibly Kenya military or Police.
ARSK	7,075.00	vt	dly	4	E. Africa	?	J3Eu	Unidentified language
ARSK	7,120.00	vt	dly	4	Rep.of Somalia	Hargeisha	A3E	Broadcast
ARSK	7,175.00	vt	dly	4	ERI	VOBM	A3E	Voice of the Broad Masses, Eritrea

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

DG0JBJ (Mario) observed **39** OTH radars on 20 m, **117** OTH radars on 15 m and **47** OTH radars on 10 m in April 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	1935	09	04	RUS		USB LSB			14 tones – hyperbolic radio navigation system – BRAS-3/RS-10 – Kaliningrad – no carrier - daily, all day
DK2OM	1852,0	2057	29	04	I	IPP	USB			Palermo Radio, weather reports
DK2OM	1855,0	2056	29	04	I	IQP	USB			San Benedetto Radio, weather reports
DK2OM	1876,0	2056	29	04	I	IQN	USB			Lampedusa Radio, weather reports
DK2OM	1880,0	---	--	04	BEL		PSK8	2400	2400	Stanag4285 – 600 bps long – area of Brugge – Belgium - daily
DK2OM	1888,0	2056	29	04	I	IPD	USB			Civitavecchia Radio, weather reports
DK2OM	1896,5	2045	29	04	D		PSK8	2400	2400	Stanag4285 – 600 bps long – German Navy
DK2OM	1925,0	2055	29	04	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	04	TUR		FSK8	120	1750	ALE, “201” - Turkish Red Crescent – legal!
DK2OM	3500,0	1851	03	04	RUS		F1B	40.5	500	CIS-40.5-500 - Far East-Russia
DK2OM	3502,0	1937	14	04			LSB			unid male voicetraffic
DK2OM	3503,5	2119	01	04	G	no ITU	FSK8	125	1750	ALE – “XSS” “XPU” “XJR” – British MIL Tascomm – vt, daily - legal!
DK2OM	3503,5	2102	14	04	BLR		F1B	81	250	CIS-81-250 - Minsk
DK2OM	3515,0	2010	29	04	G		USB			UK fishery
DK2OM	3518,0	1925	21	04	RUS		F1B	100	200	Moscow
DK2OM	3518,0	2030	23	04	G		USB			UK fishery – rude and obscene
DK2OM	3520,0	1953	22	04	RUS		PSK2A	120	2600	AT3004D - Kaliningrad
DK2OM	3520,0	2110	23	04			USB			women in Russian voice
DK2OM	3522,0	2105	07	04	D		PSK8	2400	2400	Stanag4285 - Rostock
DK2OM	3527,0	2008	02	04	RUS		F1B	50	200	Severomorsk - daily
DK2OM	3534,5	1827	14	04	HOL		FSK8	125	1750	ALE, “A03” “A15” “A10”
DK2OM	3540,0	1813	05	04	E		USB			Spanish fishery
DK2OM	3540,0	2015	08	04	G		USB			UK fishery
DK2OM	3545,0	1915	21	04	RUS		PSK2A	120	2600	AT3004D - Kaliningrad
DK2OM	3550,0	vt	vd	04	ALG	no ITU	FSK8	125	1750	ALE, “IU50” “IU52” “FN50”
DK2OM	3552,0	1848	05	04	RUS		F1B	50	250	CIS-50-50 – Murmansk – also 30.04.2015 at 2020 utc
DK2OM	3553,8	1950	02	04	TUR		PSK8	2400	2400	Stanag4285 – 600 bps long - TUR MIL - Ankara – daily, all day - legal operation
DK2OM	3567,0	vt	dly	04	CHN ?	no ITU	FSK8	125	1750	ALE, “103” “106”
DK2OM	3570,0	1822	17	04	I		USB			Italian pirates
DK2OM	3576,4	ady	dly	04	I	IZ3DVW	A1A			uncoordinated beacon
DK2OM	3585,0	2112	28	04	TWN	HLL	F1C			120 rpm, IOC 576, WX-fax - daily - legal!
DK2OM	3587,0	vt	vd	04	E	no ITU	FSK8	125	1750	ALE, “TVV” “TXX” - Spanish Guardia Civil
DK2OM	3590,0	vt	dly	04	PAK	no ITU	FSK8	125	1750	ALE, “KW” “KHAIBAR” – Pakistan navy
DK2OM	3595,0	vt	dly	04	D		FSK8	125	1750	ALE – German customs
DK2OM	3595,0	1650	05	04	RUS		USB			men in Russian voice – often spelling figures - St. Peterburg - daily
DK2OM	3596,0	vt	dly	04	D, S, HRV		FSK8	125	1750	ALE, “DK3CW” “SA6CBK” “9A0PZ” – just for info!
DK2OM	3617,0	vt	dly	04	HRV	9A5EX	FSK8	125	1750	ALE, “9A5EX” – HAM-ALE - just for info
DK2OM	3622,5	2123	26	04	J	JMH	F1C			Tokyo Meteo – 120 rpm – IOC576 – daily, legal!!!
DK2OM	3640,0	vt	vd	04	G		FSK8	125	1750	ALE, “XSS” - British MIL Tascomm – just for info!
DK2OM	3642,0	1951	17	04	CHN		A1A			endless slip – DKG6 de 3A7D Chinese military – daily, all day
DK2OM	3649,0	vt	vd	04	ALG	no ITU	FSK8	125	1750	ALE, “BI20” PA20”
DK2OM	3662,0	vt	vd	04	FEa		A1A			endless slip – RA5J de BP2S
DK2OM	3697,0	1846	03	04	FEa		F1B	200	850	200 Bd async.
DK2OM	3698,0	1849	03	04	CHN		FMCW		52k	Chinese OTH radar – 43.5 sps 3698 – 3750 kHz
DK2OM	3711,2	1949	02	04	G		OFDM	20	2400	OFDM51 – UK MIL – daily, all day
DK2OM	3720,0	vt	dly	04	S		FSK8	125	1750	ALE, “YU” “YT” “YV” “DZ” – Swedish MIL
DK2OM	3720,0	1955	02	04	UKR		PSK2A	120	2600	AT3004D – submode idle and traffic - Lviv
DK2OM	3751,5	vt	dly	04	POL	no ITU	FSK8	125	1750	ALE, “IZ3” “MI3”
DK2OM	3756,0	1930	30	04	RUS		A3E			RUS MIL – channel marker – Tuapse – East Black Sea – night QRG
DK2OM	3761,5	vt	vd	04	POL	no ITU	FSK8	125	1750	ALE, “NI9” “PL7” “AB2” – Polish MIL
DK2OM	3777,0	2048	29	04	FEa		A1A			“RIS9 de M8JF” – endless slip

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										– rcvd via JA
DK2OM	3791,0	2010	23	04	D	DK0ESD	FSK8	125	1750	ALE, “DK0ESD” – daily just for info!
DK2OM	6998,0	vt	dly	04	GRC		FSK8	125	1750	ALE, “GEF” “EK9” – highest tone on 7000.5 kHz – Greek military
DK2OM	6999,0	vt	dly	04			FSK8	125	1750	ALE, “537” “725” – signal center = 7000.625 kHz
DK2OM	7000,0	vt	dly	04	?	no ITU	FSK8	125	1750	ALE, “210” “20989” “2205” “203”
DK2OM	7000,0	vt	dly	04	INS		USB LSB			Indonesian pirates – daily – audible in Europe in the evenings
DK2OM	7000,0	---	--	04	RUS	D	A1A			spurious from Cluster beacon – Sevastopol RUS Navy – “RCV” on 7038.7 kHz
DK2OM	7001,5	2125	03	04	ALG		PSK4A	62.5	1750	Clover 2000 – 8 x 62.5 Bd – Algeria – daily, vt
DK2OM	7012,5	1504	30	04	UKR		F1B	100	250	Kyiv
DK2OM	7018,0	---	--	04	RUS	REA4	F1B	100	1000	mostly idling – Russian airforce Moscow – ident at full hour + 40 min.
DK2OM	7033,8	1742	26	04	FEa		PSK8	2400	2400	MIL-188-110A – 150 bps short
DK2OM	7038,7	1733	29	04	RUS	D	A1A			Cluster beacon – Sevastopol RUS Navy – “RCV” - daily – all day
DK2OM	7038,8	---	--	04	RUS	P	A1A			Cluster beacon – 7038.780 kHz - Kaliningrad RUS Navy – “RMP”
DK2OM	7038,9	1734	29	04	RUS	S	A1A			Cluster beacon – Severomorsk RUS Navy – „RIT“
DK2OM	7039,0	---	--	04	RUS	C	A1A			Cluster beacon - Moscow RUS Navy - “RIW”
DK2OM	7039,2	1730	29	04	RUS	F	A1A			Cluster beacon - Vladivostok RUS Navy - “RJS”
DK2OM	7039,3	1731	29	04	RUS	K	A1A			Cluster beacon - Petropavlovsk Kamchatskiy - RUS Navy - Pacific fleet - “RCC”
DK2OM	7039,4	1732	29	04	RUS	M	A1A			Cluster beacon – Magadan RUS Navy – „RTS“
DK2OM	7040,0	vt	dly	04	F	F6BAZ	FSK8	125	1750	ALE, “F6BAZ” – just for info
DK2OM	7040,0	ady	dly	04	I		A1A			<b>IZ3DVW – uncoordinated and unwanted beacon</b>
DK2OM	7040,5	vt	dly	04	HRV		FSK8	125	1750	ALE, “9A5EX” “9A0ALE” – just for info
DK2OM	7047,37	vt	vd	04	D		FSK8	125	1750	ALE, “DL0NOT” – just for info!
DK2OM	7049,5	1430	14	04	HRV G F	9A0ALE M1DFO F6BAZ	FSK8	1250	1750	Amateur ALE, just for info! daily – various times
DK2OM	7054,0	1844	03	04	FEa		FMCW		32k	Codan like ocean surface radar 2.6 sps – 7054 – 7086 kHz
DK2OM	7054,0	1733	28	04	FEa		FMCW		30k	Codan like ocean surface radar 2.6 sps – 7054 – 7084 kHz
DK2OM	7055,5	vt	vd	04	MEa	no ITU	FSK8	125	1750	ALE, “111” “132” “133” - Caucasus
DK2OM	7057,0	2013	10	04	RUS		FMCW		13k	OTH radar “Contayner” – 50 sps – Nizhny Novgorod
DK2OM	7070,0	2033	17	04	GEO	no ITU	FSK8	125	1750	ALE, “MV” “244” “686” “334” “204” “571” – daily active
DK2OM	7077,4	---	--	04	RUS	D	A1A			spurious from Cluster beacon – Sevastopol RUS Navy – “RCV” on 7038.7 kHz
DK2OM	7085,0	1729	29	04	FEa		FMCW		30k	Codan like ocean surface radar 2.6 sps – 7085 – 7115 kHz
DK2OM	7088,8	---	---	04	S	SL0FRO	A1A			7088.830 - cw-trainee, Sweden – kHz – SL0FRO - just for

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										info!
DK2OM	7089,8	1840	05	04	TUR		PSK8	2400	2400	Link11 - SLEW – aircraft – area of Izmir
DK2OM	7091,5	---	--	04	KAZ	V	A1A			beacon “V” endless – Almaty – Kazakhstan – daily, all day
DK2OM	7092,0	vt	vd	04			FSK8	125	1750	ALE, “3014”
DK2OM	7099,5	vt	dly	04	HRV	9A0ZG	FSK8	125	1750	ALE, “9A0ZG” “9A5EX1P” “9A0OS” – daily - just for info!
DK2OM	7102,0	vt	dly	04	HRV SUI D	9A0ALE	FSK8	125	1750	ALE, “9A0ALE” “9A2KS” “HB9MHB” “9A0ZG” “9A4OS” “DK0ESD” – just for info!
DK2OM	7110,0	vt	dly	04	HRV	9A0ALE	FSK8	125	1750	ALE, “9A0ALE” – just for info
DK2OM	7110,0	vt	dly	04			FSK8	125	1750	ALE, “1101” “1112”
DK2OM	7111,0	1735	28	04	CHN		PSK2 LSB QRG	75	2200	PRC 16 tone modem – LSB mode – LSB QRG - pilotone 450 Hz - China
DK2OM	7120,0	1700	05	04	SOM		A3E			Radio Hargaysa – Somalia – daily – even audible in Australia and Japan
DK2OM	7134,0	1812	03	04	RUS		F1B	50	250	CIS-50-50 – Far East-Russia
DK2OM	7137,0	vt	dly	04	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	7141,0	1726	29	04	RUS		PSK2A	120	2600	AT3004D – Far East Russia
DK2OM	7175,0	1720	vd	04	ERI		A3E			BC – unstable carrier – Voice of Eritrea
DK2OM	7180,0	2110	13	04	F	RFI	A3E			Radio France International on 7205 kHz with splatters down to 7180 kHz - daily
DK2OM	7183,0	vt	dly	04	SUI		FSK8	125	1750	ALE, “HB9MHB” – just for info!
DK2OM	7185,5	vt	dly	04	D HRV		FSK8	125	1750	ALE, “9A5EX” “DK0ESD” just for info - daily
DK2OM	7190,0	1830	dly	04	TUR		A3E			Voice of Turkey from 7205 kHz
DK2OM	7195,5	1720	14	04	IRN	IRIB	A3E		9k	Voice of Iran from 7200.0 kHz – daily – 1720 – 1820 utc
DK2OM	7197,0	vt	dly	04	TUR	no ITU	FSK8	125	1750	ALE, “8241” “206102” “8151” “3021” “3761” “8021” “8141” “3061” “3241” “8411” – Turkish organisations = Turkish Civil Defense - source: DL8AAM – daily, various times
DK2OM	10100,8	ady	dly	04	D		F1B	50	450	Baudot - German Weatherservice – legal!
DK2OM	10105,0	1540	30	04			PSK2	120	2600	AT3004D – submode idle
DK2OM	10110,0	vt	dly	04	SNG	no ITU	FSK8	125	1750	ALE, “CN6” “68” – Singapore Navy - Changi Naval Base
DK2OM	10113,0	1927	23	04	TUN	no ITU	FSK8	125	1750	ALE, “TUD” “STAT5” “STAT154”
DK2OM	10114,0	vt	dly	04		no ITU	FSK8	125	1750	ALE, “BSF” “ZEN” “CM2OR2”
DK2OM	10114,7	2010	23	04	TUR		D8PSK	100	200	Pactor 2 - Ankara
DK2OM	10114,8	0724	01	04	RUS		F1B	100	1000	CIS14 – Moscow - daily
DK2OM	10115,0	vt	vd	04		no ITU	FSK8	125	1750	ALE, “2001” “2002”
DK2OM	10116,5	vt	vd	04	AFS		F7D	54.3	2120	MHF50 – 33 tones - South African navy
DK2OM	10120,0	vt	dly	04		no ITU	FSK8	125	1750	ALE, “9066” “9067” “8001” “2001”
DK2OM	10123,0	vt	dly	04	ALG	no ITU	FSK8	125	1750	ALE, “CM3” “COF” “BSF” “CM2” “ESA”
DK2OM	10129,0	vt	dly	04	ALG	no ITU	FSK8	125	1750	ALE, “CM1” “CTF” “772”

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	10130,0	vt	dly	04	MRC		FSK8	125	1750	Thales 3000 – West Sahara – daily - vt
DK2OM	10130,0	0645	02	04	MLI	no ITU	FSK8	125	1750	ALE, “106001” “103001” “105001” – Mali
DK2OM	10130,0	1750	13	04	I		USB			Italian pirates
DK2OM	10136,0	vt	dly	04	ALG	no ITU	FSK8	125	1750	ALE, “CM3” “BLD” “CNC” “TF2”
DK2OM	10140,0	2042	19	04	CHN ?		FSK8	125	1750	ALE, “205” “201” “LT”
DK2OM	10140,0	2054	26	04	CYP		FMCW		20k	OTH radar Cyprus - 25 sps
DK2OM	10144,0	ady	dly	04	D	DK0WCY	A1A			10143.986 kHz - DK0WCY – German aurora beacon – <b>just for info!</b>
DK2OM	10145,5	vt	dly	04	HRV S / D F / G	9A5EX	FSK8	125	1750	ALE, “9A5EX” “SM5VRH” “DK0ESD” “F6BAZ” “MIDFO”- just for info - daily
DK2OM	14000,0	1300	dly	04	PHL		USB LSB			Philippine pirates – daily 1300 utc and later
DK2OM	14001,4	---	--	04	VTN	V	A1A			unid beacon “V” – southern part of Vietnam
DK2OM	14001,9	0917	27	04	RUS		OFDM	22.2	3000	OFDM112 - Moscow
DK2OM	14008,0	0731	04	04	RUS		F1B	50	250	mostly idling - Moscow
DK2OM	14026,0	0910	07	04	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	14060,0	vt	vd	04	ISR	no ITU	FSK8	125	1750	ALE, “AAA” - Israel
DK2OM	14088,0	0929	11	04	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod
DK2OM	14100,0	vt	dly	04	ALG	no ITU	FSK8	125	1750	ALE, “6206” – “6204” - “6202” “6207” “6217” “MTL” “IJJ” – Mauritanian border
DK2OM	14101,5	vt	dly	04	ALG		PSK4A	62.5	1750	Clover 2000 – 8 x 62.5 Bd – Moroccan border
DK2OM	14109,0	vt	dly	04	POR	HAM	FSK8	125	1750	ALE, “CT2IXQ” “DK0ESD” “HB9MHB” – just for info!
DK2OM	14109,0	vt	dly	04	CAN		FSK8	125	1750	ALE, “VE3GDZ” – just for info!
DK2OM	14109,0	vt	dly	04	RUS	RV3APM	FSK8	120	1750	ALE, “RV3APM” – just for info!
DK2OM	14113,0	0844	01	04	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod
DK2OM	14120,0	0900	28	04	RUS		noise			<b>noise floor – 14000 – 14300 kHz - Moscow</b>
DK2OM	14130,0	1000	11	04	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod
DK2OM	14132,0	0905	02	04	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod
DK2OM	14140,0	1126	28	04	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod
DK2OM	14141,0	0638	06	04	RUS		F1B	75	200	CIS-75-200 - Moscow
DK2OM	14157,0	1317	13	04	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod
DK2OM	14165,0	1724	11	04	RUS		FMCW		10k	OTH burst radar Contayner - 10 sps – Nizhny Novgorod
DK2OM	14192,0	1548	01	04	RUS		F1B	50	200	CIS-50-50 - RUS navy Kaliningrad – vd, vt
DK2OM	14205,0	vt	dly	04	CHN ?	no ITU	FSK8	125	1750	ALE, “505” “822” – 60 deg. from DL - CHN ?
DK2OM	14208,0	1542	23	04	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod
DK2OM	14211,0	0730	29	04	RUS		F1B	50	250	Far East Russia
DK2OM	14253,0	0650	06	04	RUS		F1B	75	250	Penza
DK2OM	14260,0	vt	dly	04	SRB	YU1BI	FSK8	125	1750	ALE, “YU1BI” – just for info!
DK2OM	14265,0	vt	vd	04	TUR	no ITU	FSK8	125	1750	ALE, “526”
DK2OM	14278,0	0938	28	04	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod
DK2OM	14280,0	1005	Wed.	04	UKR		A3E			<b>female voice with encrypted msgs – figures – “SZRU” = Foreign Intelligence Service of Ukraine in Rivne – every</b>



DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										<b>Wednesday at 1005 utc</b>
DK2OM	14280,0	1010	13	04	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Nizhny Novgorod
DK2OM	14285,0	0907	16	04	RUS		PSK2A	26.85	26.85	2 x PSK2A – 14284.75 and 14285.25 kHz - Moscow
DK2OM	14295,0	vt	dly	04	SRB	YU1BI	FSK8	125	1750	ALE, “YU1BI” – just for info!
DK2OM	<b>14295,2</b>	<b>1510</b>	<b>03</b>	<b>04</b>	<b>TJK</b>		<b>A3E</b>			<b>3<sup>rd</sup> from Radio Tajik on 4765 kHz – daily, all day</b>
DK2OM	14301,7	ady	dly	04	CHN		PSK2	75	2200	PRC 16 tone modem – USB mode – pilottone 450 Hz - China - daily
DK2OM	14322,0	vt	dly	04	CHN	no ITU	FSK8	125	1750	ALE, “402”
DK2OM	14328,0	vt	dly	04	CHN	no ITU	FSK8	125	1750	ALE, “139” “534” “772” – West China
DK2OM	14330,0	vt	dly	04			FSK8	125	1750	ALE, “BV4”
DK2OM	14334,0	1210	04	04	CHN	no ITU	FSK8	125	1750	ALE, “249” “255” “763”
DK2OM	14344,7	vt	dly	04	CHN		PSK8	2400	2400	modified MIL-188-110A - 600 bps short – 14344.650 kHz – daily, all day
DK2OM	14346,0	vt	dly	04	HRV RUS D		FSK8	125	1750	ALE, “9A0ZG” “RX3ARZ” “DK0ESD” – just for info – various times, daily
DK2OM	14346,0	vt	dly	04	THA	HS0ZEA	A1A			HS0ZEA beacon – 14345.950 kHz - every 5 minutes – just for info!
DK2OM	<b>18080,0</b>	<b>0742</b>	<b>04</b>	<b>04</b>	<b>TWN CHN</b>		<b>A3E</b>			<b>BC Sound of Hope (Taiwan) and Chinese mainland BC QRM – every morning</b>
DK2OM	18100,0	0904	16	04	MRC	no ITU	FSK8	125	1750	ALE, “CD” “C3” “R3” “G3” “E4” “E5” “Z2” “FORD” – daily, various times
DK2OM	18106,0	0646	12	04	POR	CT2GOY	FSK8	125	1750	ALE, “CT2GOY” – just for info!
DK2OM	18107,0	0900	16	04	RUS	RDL	F1B	50	200	CIS-50-50 - Moscow – idle and traffic – Russian navy – various days and times – legal operation
DK2OM	18107,0	0646	12	04			F1B	50	200	short burst
DK2OM	18109,0	0706	21	04	RUS	RCV	PSK2A	120	2600	AT3004D – Sevastopol
DK2OM	18117,5	vt	vd	04	POR	CT2IXQ	FSK8	125	1750	ALE, “CT2IXQ” – just for info
DK2OM	18136,0	0630	22	04	RUS		F1B	75	200	Vladivostok
DK2OM	18140,0	vt	dly	04	SRB	YU1BI	FSK8	125	2600	ALE, “YU1BI” – just for info!
DK2OM	<b>21000,0</b>	<b>---</b>	<b>--</b>	<b>--</b>	<b>SDN</b>		<b>USB</b>			<b>MFA Sudan – Khartoum with emba Yemen – voice traffic</b>
DK2OM	21000,0	---	--	04	F		FMCW		20k	OTH radar – 6 sps bursts - South France
DK2OM	21000,0	0716	03	04	RUS		USB			voice scrambler Yakhta – encrypted speech – Nizhny Tagil - daily
DK2OM	21000,0	1347	29	04	INS		USB			Indonesian pirates
DK2OM	21001,5	0716	03	04	RUS		F1B	100	150	voice scrambler Yakhta – F1B inband synchro – Nizhny Tagil - daily
DK2OM	<b>21002,2</b>	<b>---</b>	<b>--</b>	<b>04</b>	<b>SDN</b>	<b>!0000</b>	<b>F1B</b>	<b>100</b>	<b>170</b>	<b>21002.15 kHz - Pactor 1 encrypted – MFA Sudan – Khartoum with emba Yemen – daily, vt</b>
DK2OM	21096,0	vt	dly	04	INS	YD00XH	FSK8	125	1750	ALE, “YD00XH3” – daily, various times - just for info!
DK2OM	21111,0	0925	15	04	Af		LSB			NW-African pirates
DK2OM	21131,0	vt	vd	04	CHN	no ITU	FSK8	125	1750	ALE, “A92” “L02” – Chinese Navy?
DK2OM	21140,9	0800	04	04	GEO		PSK8A	2400	2400	Stanag4538 – GEO MIL with AFG - daily
DK2OM	21145,0	vt	dly	04	MRC	no ITU	FSK8	125	1750	ALE, “B301”, “C3”, “IR4” “T4” “E4” “A2” “CD” “K3” “KB2” “J5” “GS4” “R3” – various times, daily
DK2OM	<b>21145,8</b>	<b>vt</b>	<b>dly</b>	<b>04</b>	<b>I</b>	<b>IZ3DVW</b>	<b>A1A</b>			<b>21145.764 kHz – IZ3DVW</b>

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										<b>uncoordinated and unwanted beacon</b>
DK2OM	21190,0	---	--	04	RUS		F1B	100	1000	harmonic from 10595 kHz - Moscow - daily
DK2OM	21243,0	0919	24	04	FEa		FDM			frequency hopper
DK2OM	21270,0	0830	18	04	TUR		FMCW		20k	OTH radar West Turkey – 50 sps
DK2OM	21295,0	vt	vd	04	AUS		FMCW		10k	Australian OTH burst radar
DK2OM	21300,0	0935	21	04	CHN		FMCW		10k	Chinese OTH burst radar – 67 sps – 3.8 sec bursts
DK2OM	<b>21313,0</b>	<b>0824</b>	<b>24</b>	<b>04</b>	<b>CHN</b>		<b>FMCW</b>		<b>160k</b>	<b>Chinese OTH radar – 21313 – 21473 kHz – 10 sps</b>
DK2OM	21346,0	ady	dly	04	THA	HSOZEA	A1A			beacon “HSOZEA” – just for info!
DK2OM	21385,0	0927	21	04	CHN		FMCW		10k	Chinese OTH burst radar – 83 sps – 3 sec bursts
DK2OM	21400,0	0807	06	04	RUS		F1B	50	2000	harmonic from 5350 kHz – area of Moscow - daily
DK2OM	21409,5	---	--	04	RUS		F1B	100	2000	F1B 100 / 2000 - CIS14 – harmonic from 10704.75 - Jekaterinburg, RUS - daily
DK2OM	21420,0	0930	21	04	CHN		FMCW		10k	Chinese OTH burst radar – 83 sps – 3 sec bursts – jumping 21385 and 21420
DK2OM	21432,5	vt	dly	04	SUI	HB9	FSK8	125	1750	ALE, “HB9” – missing complete ident – just for info
DK2OM	21436,0	---	--	04	RUS		PSK2A	120	5200	AT3004D – harmonic from 10718.0 kHz - Sevastopol
DK2OM	21438,0	0830	09	04	RUS	RCV	A1A			RIP90 de RCV - RUS Navy Sevastopol - daily
DK2OM	<b>21445,0</b>	<b>1300</b>	<b>04</b>	<b>04</b>	<b>TWN?</b>		<b>A3E</b>			<b>2 Chinese BCs</b>
DK2OM	21446,0	ady	dly	04	THA	HSOZEA	A1A			HSOZEA beacon – every 5 minutes - just for info!
DK2OM	<b>25000,0</b>	<b>vt</b>	<b>dly</b>	<b>04</b>	<b>FIN</b>		<b>A3E</b>			<b>time signal Helsinki – just for info – carrier on 25000 – dots on 25001 and 24999 – daily, all day</b>
DK2OM	<b>28000,0</b>	<b>vt</b>	<b>dly</b>	<b>04</b>	<b>CIS</b>		<b>F3E</b>			<b>28000 – 29700 numerous CIS taxi nets – mostly Russia</b>
DK2OM	<b>28000,0</b>	<b>ady</b>	<b>dly</b>	<b>04</b>	<b>B</b>		<b>A3E</b>			<b>Brazilian CBers – 28000 – 28315 – no change</b>
DK2OM	<b>28000,0</b>	<b>1520</b>	<b>13</b>	<b>04</b>	<b>B</b>		<b>F3E</b>			<b>pirates in Portuguese voice - Fortaleza</b>
DK2OM	<b>28005,0</b>	<b>1008</b>	<b>10</b>	<b>04</b>	<b>FEa</b>		<b>A3E</b>			<b>Far East pirates</b>
DK2OM	28025,0	vt	vd	04	POR		F1B	51	300	F1B bursts - 28100.160 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28030,0	vt	vd	04	POR		F1B	51	340	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28045,0	1740	27	04	POR		F1B	51	280	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28050,0	vt	dly	04	POR		F1B	51		F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28051,5	vt	dly	04	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28060,0	vt	vd	04	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28065,0	vt	vd	04	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28066,8	---	--	04	GAB		A3E		980	carrier and dots in USB and LSB, bursts every 60 sec –

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										carrier – Gabon – daily and all day
DK2OM	28085,0	vt	vd	04	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28101,0	vt	dly	04	POR		F1B	51	320	F1B bursts - 28100.780 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28102,1	1628	20	04	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28125,0	vt	vd	04	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28146,0	vt	vd	04	ARG B		FSK8	125	1750	ALE, “LU8EX” “PY2TI” “DL1” – just for info!
DK2OM	28200,0	vt	vd	04	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28275,1	vt	vd	04	AF		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28312,5	1035	21	04	POR	CT2IXQ	FSK8	125	1750	ALE. “CT2IXQ” – just for info
DK2OM	28315,0	vt	dly	04	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28435,0	----	--	04	E		F1B	81.9	140	Datawell-buoy “Waverider” – 28435.040 kHz – Costa del Sol – Malaga
DK2OM	28499,9	---	--	04			F1B	81.9	140	Datawell-buoy “Waverider” – 29524.990 kHz – south-east
DK2OM	28600,0	1335	06	04	IRN		FMCW		50k	OTH radar Iran – 307 and 870 sps – splattering +/- 300kHz – even audible in Japan
DK2OM	28980,0	---	--	04	CHN	CNR	A3E		9k	harmonic from 7245.0 kHz – China National Radio - Beijing
DK2OM	29250,0	----	--	04	E		F1B	81.9	140	Datawell-buoy “Waverider” – 29249.905 kHz – Fuerteventura - daily, all day
DK2OM	29375,0	----	--	04	I		F1B	81.9	140	Datawell-buoy “Waverider” – 29374.898 kHz – Gallipoli, South Italy - daily, all day
DK2OM	29387,5	---	--	04	IND		F1B	81.9	140	Datawell-buoy “Waverider” – 29387.460 kHz – Indian NW coast, close to Pakistan - daily, all day
DK2OM	29400,0	---	--	04	USA		F1B	81.9	140	Datawell-buoy “Waverider” – 29400.070 kHz - USA north-east coast – NY daily, all day
DK2OM	29450,0	---	--	04	MRC		F1B	81.9	140	Datawell-buoy “Waverider” – 29449.870 kHz - area of El Aaiun – Morocco - daily, all day
DK2OM	29500,0	---	--	04	G		F1B	81.9	140	Datawell-buoy “Waverider” – area of Gibraltar – daily, all day
DK2OM	29525,0	---	--	04	MRC		F1B	81.9	140	Datawell-buoy “Waverider” – 29524.990 kHz - Agadir - Morocco – daily, all day
DK2OM	29625,0	---	--	04	USA		F1B	81.9	140	Datawell-buoy “Waverider” – 29625.024 kHz - USA north-east coast – daily, all day
DK2OM	29685,5	---	--	04	I				2000	serial modem, Italian MIL Brescia – report: SWL
DK2OM	29699,8	---	--	04	I				2000	serial modem, Italian MIL Brescia – report: SWL

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

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
MRASZ	3502,0	1932	16	4			A3E			Ui music
MRASZ	3515,0	1615	7	4			OTHR			
MRASZ	3518,0	2011	23	4			A3E			unstable carrier
MRASZ	3526,0	2015	23	4			LSB			russian female, numbers
MRASZ	3593,8	2104	10	4	RUS	P	A1A			"P" beacon, hrd on: 20
MRASZ	3658,0	1956	1	4			A1A			5F, "99773 13737 T1T63 K"
MRASZ	3667,0	1729	12	4			F1B		250	
MRASZ	3700,0	1947	12	4			LSB			similar chaos as on 7050 kHz
MRASZ	3700,0	1719	14	4			LSB			similar chaos as on 7050 kHz
MRASZ	7000,0	2057	10	4	UKR	D	A1A			„D” beacon, hrd on: 12,14,16,20,23,28
MRASZ	7000,0	1716	18	4			N0N			
MRASZ	7012,0	1441	5	4			LSB			"0 linate"?
MRASZ	7036,0	1911	20	4			F1B		500	
MRASZ	7038,7	vt	dly	4	UKR	D	A1A			"D" beacon
MRASZ	7038,9	vt	dly	4	RUS	S	A1A			"S" beacon
MRASZ	7039,2	vt	dly	4	RUS	C	A1A			"C" beacon
MRASZ	7049,3	1804	1	4			A1A			5L, "GOLDX CY JPZQV H"
MRASZ	7050,0	1803	1	4			LSB			chaos, music hrd on: 7,12,14,18,20,23
MRASZ	7055,0	1956	20	4			LSB			chaos with music
MRASZ	7065,0	2059	10	4			OTHR			
MRASZ	7070,0	0816	5	4			LSB			music
MRASZ	7077,5	2100	10	4	UKR	D	A1A			„D” beacon, hrd on: 14,16,20,23
MRASZ	7080,0	1754	4	4			F1B		200	hrd on: 16
MRASZ	7120,0	vt	dly	4	SOM		A3E			Radio Hargaysa
MRASZ	7123,0	1806	28	4			F1B		170	
MRASZ	7137,0	1734	4	4			F1B		200	
MRASZ	7137,0	1803	23	4			N0N			
MRASZ	7157,0	1727	14	4			A3E			UiBC, music
MRASZ	7185,0	1812	1	4			A3E			hrd on: 14,16,18
MRASZ	7200,0	1730	12	4			A3E			german l; splatter down 10 kHz
MRASZ	7200,0	1729	14	4			A3E			german l.splatter till 7180 kHz
MRASZ	7200,0	1803	23	4			A3E			UiBC, splatter down 10 kHz
MRASZ	10101,3	1752	14	4			USB			russian language "1-2-3, 1-2-3"
MRASZ	10126,0	1750	14	4			USB			spanish fishery
MRASZ	14024,0	1338	10	4			F1B		500	
MRASZ	14150,0	1735	7	4			OTHR			
MRASZ	14192,0	1811	28	4			F1B		200	
MRASZ	14218,0	1817	27	4			OTHR			
MRASZ	14295,1	1455	16	4	TJK		A3E			R.Tajikistan, 3rd. harm, hrd on: 18
MRASZ	18107,0	1335	27	4	RUS	RDL	F1B	50	200	
MRASZ	18154,0	1340	10	4			PSK2			AT3004D
MRASZ	21001,5	1745	12	4	RUS		F1B	100	150	Vocoder „Yachta”. hrd on: 27
MRASZ	21305,0	1747	12	4			A3E			
MRASZ	21435,0	1905	16	4			A3E			

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
MRASZ	21445,0	1747	12	4			A3E			
MRASZ	21450,0	1812	28	4			OTHR			50 Hz
MRASZ	28600,0	1347	10	4	IRN		OTHR			28500-28650 kHz

### OEVSV – Austria – OE3GSA (Gerd)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
oevsv	7174.7	0318	22	04	unid	unid	A3A			music (PTT informed)
oevsv	14013.5	0512	23	04	unid	unid	J3Eu			male voices
oevsv	14220.0	0510	21	04	unid	unid	F3E	50	190	idling
oevsv	14220.0	0503	23	04	unid	unid	F3E	50	190	idling
oevsv	18079.0	0600	06	04	BY	unid	A3A			Chinese Radio + 1

### PZK – Poland – SP9BRP (Jan)

### REF 1 – France – F5MIU (Francis)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	Baud	Sh /Bw	DETAILS
REF	7025	03h30	23	04			fmcw		20kHz	OTHR rapport from F5YD
REF	7070	08h10	6	04			LSB		3kHz	Music S9+20
REF	7120	17h54	14	04			AM		10kHz	German broadcasting station S9+20
REF	14120	07h58	15	04			fmcw		20kHz	Pulsed OTHR S7
REF	14295	17h50	17	04			AM		10kHz	Arabic + music S8
REF	18128.5	07h53	7	04			rtty		1kHz	Commercial data ?
REF	21001.5	08h25	22	04			Rtty+		2.5kHz	Russian vocoder
REF	21001.5	08h00	28	04			Rtty+		2.5kHz	Russian vocoder S7
REF	21001.5	08h00	29	04			Rtty+		2.5kHz	Russian vocoder S6
REF	21010	17h23	29	04			fmcw		30kHz	Pulsed OTHR S9+20
REF	21170	14h40	22	04			fmcw		20kHz	OTHR rapport from F5YD
REF	21405	07h54	9	04			fmcw		20kHz	Pulsed OTHR S8
REF	21430	15h31	03	04			fmcw		20kHz	Pulsed OTHR S4 end 15h35
REF	28600	08h11	30	04			fmcw		400kHz	OTHR Iran ? S9 occupied ¼ of 10m band

### REF 2 – France – F5JBR (Andre)

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

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	3550	21.34	10	04			J3E-U			Unid comms
REP	3700	20.00	02	04	RUS		J3E-U			Russian Navy
REP	7030	10.26	20	04	E		J3E-U			Fishermen talking
REP	7038	22.30	13	04	RUS	S	A1A			KALININGRAD, ADY, DLY
REP	7038	22.20	13	04	UKR	D	A1A			SEVASTOPOL, ADY, DLY
REP	7039	22.48	13	04	RUS	C	A1A			MOSCOW, ADY, DLY
REP	7070	18.48	19	04	I		J3E-L			MUSIC jamming QSO's 50uV
REP	7070	15.00	17	04	I		J3E-L			MUSIC jamming QSO's
REP	7070	18.57	08	04	I		J3E-L			Italian music, jammer over QSO's
REP	7070	06.55	14	04	I		J3E-L			Rebroadcast of an Italian FM station
REP	7090	10.25	15	04			A1A			letters and numbers groups, no id
REP	10110	20.34	13	04			J3E-U			Unid language fishery
REP	10122	10.26	05	04	E		J3E-U			Spanish fishery
REP	10122	10.38	08	04	E		J3E-U			Spanish fishery, daily, repeat offenders
REP	10130	18.40	01	04			FMCW			OTH radar
REP	10135	20.05	28	04	MRC		J3E-U			Fishery
REP	10140	20.10	26	04			FMCW			OTH radar 50sps/20kHz
REP	10140	11.27	28	04			FMCW			OTH radar 50sps/20kHz

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	14010	10.26	14	04			J3E-U			Unid language ops
REP	14132	09.19	02	04	R		FMCW			OTH Radar Contayner, Russia. 50/20kHz
REP	14205	12.02	27	04		!----->	F1B	45.5	170	Insults to Nepal Emergency Net
REP	14205	21.03	30	04		!----->	J3E-U			Interference to Nepal Emergency Net with tunings, singing and music
REP	14215	18.10	28	04		!----->	J3E-U			Interference to Nepal Emergency Net
REP	14270	19.48	29	04	B		J3E-U			Brazilian ops, no callsigns
REP	14278	11.18	13	04			FMCW			Oth radar 50sps/15kHz
REP	21010	17.29	29	04			FMCW			OTH radar 50sps / 20kHz wide
REP	21050	12.42	27	04	E		J3E-U			Spanish fishery
REP	21110	14.45	20	04			FMCW			OTH radar
REP	21125	13.33	28	04	MRC		J3E-U			Fishermen on sea
REP	21220	11.15	11	04			FMCW			OTH radar
REP	28062	18.00	06	04			F1B	50	270	Enagal GPS buoy
REP	28100	18.04	06	04			F1B	50	270	Enagal PS buoy
REP	28150	11.53	20	04	RUS		F3E			Russian taxis dispatchers
REP	28185	13.53	06	04	IRN		FMCW			OTH radar
REP	29250	11.59	17	04			F1B	82	142	Datawell Waverider buoy
REP	29375	11.24	17	04			FMCW			OTH radar 50sps/20kHz

REP	28 to 29xxx		Dly	04	B		A3E			Brazilian CB's
REP	28 to 29xxx		Dly	04	RUS		F3E			Russian language taxi dispatchers

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

### SRAL – Finland – OH2BLU (Pekka)

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	REMARKS
SRAL	7000,0	1400-1930	*	4		UiCarr	N0N			Days: 1. 17. 19. 23.
SRAL	7015,0	1915	22.	4		UiMUX	PSK2	120	2600	
SRAL	7016,0	1225-1620	20.	4		UiPTR	F1B		250	
SRAL	7017,0	1210	29.	4		UiMUX	PSK2	120	2600	
SRAL	7020,0	0700-1645/	*	4		UiPTR	F1B		250	Days: 8. 20. 22. 24.
SRAL	7026,0	0645-1430	*	4		UiMUX	PSK2	120	2600	Days: 1. 3. 8. 16. 23.
SRAL	7036,0	1900-1919/	*	4		UiPTR	F1B		500	Days: 6. 20. 21. 22. 25.
SRAL	7036,0	1030-1200	30.	4		UiMUX	PSK2	120	2600	
SRAL	7037,0	1750	25.	4		UiMUX	PSK2 ?			No subcarrier
SRAL	7038,7	h24	dly	4	RUS	D	A1A			Sevastopol, spur. +/- 38.7 kHz on day 19.
SRAL	7038,8			4	RUS	P	A1A			Kaliningrad, not heard
SRAL	7038,9	1430-0700	dly	4	RUS	S	A1A			Severomorsk
SRAL	7039,0	0415-0700	*	4	RUS	C	A1A			Moscow, days: 2. 23. 27.
SRAL	7061,0	1330-1400	22.	4		UiMUX	PSK2	120	2600	
SRAL	7072,0	1015-1200	23.	4		UiMUX	PSK2	120	2600	
SRAL	7078,0	0530-0730	9.	4		UiMUX	PSK2	120	2600	
SRAL	7080,0	1740-1900	*	4		UiPTR	F1B		250	Days: 4. 11. 25.
SRAL	7120,0	0300-0500	dly	4	SOM	R.Hargeis a	A3E			
SRAL	7120,0	1430-1900/	dly	4	SOM	R.Hargeis a	A3E			

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	REMARKS
SRAL	7121,0	0830	13.	4		UiMUX	PSK2	120	2600	
SRAL	7122,0	0830-1035	29.	4		UiPTR	F1B		250	
SRAL	7134,0	1405-1409/	24.	4		UiMUX	PSK2	120	2600	
SRAL	7138,0	1020	23.	4		UiMUX	PSK2	120	2600	
SRAL	7140,0	0620-0815	28.	4		UiMUX	PSK2	120	2600	
SRAL	7142,0	0945-1630/	*	4		UiMUX	PSK2	120	2600	Days: 7. 14. 22. 27.
SRAL	7145,0	0920-0945/	29.	4		UiMUX	PSK2	120	2600	
SRAL	7160,0	0920	29.	4	RUS	RMW32	A1A			5BL
SRAL	7162,0	0630-1749/	*	4		UiPTR	F1B		250	Days: 1. 3. 8. 13. 16.
SRAL	7166,0	0830	16.	4		UiMUX	PSK2	120	2600	
SRAL	7169,0	1400-1500	15.	4		UiPTR	F1B		250	
SRAL	7175 A	0300-0445	1. – 28.	4	ERI	VoBME	A3E			
SRAL	7175 A	1500-1835/	1. – 28.	4	ERI	VoBME	A3E			Changes fq to avoid jamming
SRAL	7176,0	0450	2.	4		UiPTR	F1B		250	
SRAL	7179,0	0400-1200	18. 26.	4		UiMUX	PSK2	120	2600	
SRAL	7184,0	0330-0600	25.	4		UiMUX	PSK2	120	2600	
SRAL	7198,0	0500-0910	*	4		UiMUX	PSK2	120	2600	Days: 7. 10. 26.
SRAL	7200,0	/1720-1820/	dly	4	IRN	IRIB	A3E			German PX
SRAL	7200,0	1100-1310/	dly	4	CHN	CNR1	A3E			Used as jammer
SRAL	7200,02	1530-1840/	*	4	ERI	VoBME	A3E			Days: 11. 14. 16. 18.- 28.
SRAL	7 MHz	2200-0600	*	4	RUS	29B6	FMCW			50Hz / 15 kHz, days: 1. 2. 4. 5. 6. 16.
SRAL	14000,0	1150	12.	4		UiCarr	N0N			
SRAL	14000,0	0940	17.	4		UiCarr	N0N			
SRAL	14024,0	1345-1400	10.	4		UiPTR	F1B		500	
SRAL	14050,0	0815	17.	4		UiPTR	F1B		250	
SRAL	14141,0	0550-1045	*	4		UiPTR	F1B		250/500	Days: 1. 6. 8. 15. 23. 25. 26.
SRAL	14160,0	0450	24.	4		UiPTR	F1B		250	
SRAL	14180,0	0540-1145	23.	4		UiPTR	F1B		200	
SRAL	14192A	1530-1557/	24.	4		UiBC	A3E?			Distorted Arab. MX
SRAL	14192,0	0815-1115	29. 30.	4	RUS	UiPTR	F1B		200	
SRAL	14221,0	2200-0600/	dly	4		UiPTR	F1B		250	
SRAL	14253,0	0530-1600	*	4		UiPTR	F1B		250	Days: 1. 3. 6. 13. 20. 24. 27.
SRAL	14263,0	1450	3.	4		UiPTR	F1B		250	
SRAL	14263,0	1205-1222/	7.	4		UiPTR	F1B		250	
SRAL	14295,2	0300-1930	dly	4	TJK	R Tojikiston	A3E			3f 4765,07 kHz, Yangiyul TX
SRAL	14 MHz	0700-1545	*	4	RUS	29B6	FMCW			50Hz / 15 kHz, days: 1. 2. 11.- 15. 23. 25. 28.
SRAL	14 MHz	0515-1830	*	4	RUS	UiOTHR	FMCW			10Hz / 15 kHz, days: 1. 2. 6. 7. 8. 12. 13. 14. 17. 23. 24.
SRAL	18107,0	0540-1600	22. 27.	4	RUS	RDL	F1B		250	Calls RGT77 etc.
SRAL	18 MHz	1115	29.	4	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	REMARKS
SRAL	18 MHz	1650	14,	4	RUS	UiOTHR	FMCW			10Hz / 15 kHz
SRAL	21001,5	0530-1700	dly	4	RUS	UiVocod	F1B		140	
SRAL	21 MHz	0500-1610	*	4	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz, days: 1. 2. 5. 6. 7. 12. 18. 20. 21. 22. 24. 26. 28. 30.
SRAL	21 MHz	1710	13.	4	RUS	UiOTHR	FMCW			10Hz / 15 kHz
SRAL	21438,0	0845-1400	*	4	RUS	RCV	A1A			Days: 1. - 5. 7. 13. 17. 21. 24. 26. 28. 30. 31.
SRAL	28 MHz	0830-1600	*	4	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz, days: 1. 8. 20. 24.
SRAL	28 MHz	0430-1630	dly	4	IRN	UiOTHR	FMCW			307 & 870 Hz / 60 kHz – 300 kHz, usually on 28600 kHz
SRAL	28 MHz	1010	3.	4	RUS	Taxi disp.	F3E			
SRAL	28 MHz	0655	9.	4	RUS	Taxi disp.	F3E			

## USKA – Switzerland – HB9CET (Peter)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
USKA	3548.0	2213	20	04			F1B	50	200	
USKA	3591.0	2219	20	04			DQPSK	14x75	5k9	LINK 11 CLEW DSB mode
USKA	3699.5	2228	20	04			F1B	50	200	
USKA	3711.2	2229	20	04			OFDM		2k4	52 tones, spacing 45Hz often
USKA	7000.0	2243		04		D	A1A			Beacon ID "D", spurious daily
USKA	7000.0	22.01	04	04			N0N			often
USKA	7001.5	2026	01	04			BPSM QPSM	8x62.5	1k75	Clover 2000 often
USKA	7018.0	1211	29	04			J7D	12x120	2k7	PSK-2: CIS12 – AT3004D often
USKA	7031.5 VFO USB	1637	05	04			J7D	12x120	2k7	PSK-2: CIS12 – AT3004D
USKA	7035.0	1625	10	04			FMCW	10 sps	10k	OTHR
USKA	7037.0	1537	25	04			J7D	12x120	2k7	CIS12 idling
USKA	7038.7	2237	03	04	UKR	D	A1A			Beacon D Sevastopol daily
USKA	7038.9	2239	03	04	RUS	S	A1A			Beacon S Murmansk daily
USKA	7039.2	2115	12	04	RUS	F	A1A			Beacon F Vladivostok daily
USKA	7039.4	2118	12	04	RUS	M	A1A			Beacon M Magadan daily
USKA	7043.5	2131	26	04			J7D	12x120	2k7	PSK-2: CIS12 – AT3004D
USKA	7050.0	2036	21	04			J3E-L		≥ 3k3	Music, voice, often
USKA	7056.0	2131	10	04			FMCW	50 sps	~ 13k	OTHR
USKA	7057.0	2111	12	04			FMCW	50 sps	~ 13k	OTHR
USKA	7069.0	2207	04	04			FMCW	50 sps	~ 13k	OTHR
USKA	7089.8	1651	05	04			G1D	2400	2k4	PSK-8: Link 11- SLEW often
USKA	7104.0	2210	28	04			J7D	12x120	2k7	PSK-2: CIS12 – AT3004D
USKA	7120.0	1645	05	04	SOM		A3E			Radio Hargaysa daily
USKA	7134.0	1211	20	04			F1B	50	250	
USKA	7137.0	1634	10	04			F1B	50	200	
USKA	7137.0	1544	28	04			J7D		2k7	CIS12 idling
USKA	7140.0	0759	28	04			J7D	12x120	2k7	PSK-2: CIS12 – AT3004D
USKA	7141.0	1710	30	04			J7D		2k7	CIS12 idling
USKA	7175.0	1643	05	04			A3E		~5k	unidentified language, music and voice daily
USKA	7175.0	1549	28	04					~15k	BC and strong Jammer
USKA	7175.5	0807	20	04			J7D	12x120	2k7	PSK-4: CIS12 – AT3104D
USKA	7178.5	0824	20	04			F1B	100	250	
USKA	7179.0	2027	26	04			J7D	12x120	2k7	PSK-2: CIS12 – AT3004D often
USKA	7200.0	2221	03	04			A3E		~09k	BC lower sideband ~4k inside 40m band; Music and Voice
USKA	7200.0	1207	20	04			A3E		~09k	BC lower sideband ~4k inside 40m band; Music and Voice
USKA	7205.0	2149	24	04		RFI	A3E			BC, splattering down to 7185!
USKA	10140.0	2213 2137	04 26	04			FMCW	25 sps	20 k	OTHR often



SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
USKA	14024.0	0853	10	04			F1B	75	500	often
USKA	14050.0 VFO USB	0854	12	04			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D with carrier (2 <sup>nd</sup> pilot-tone?)
USKA	14113.0	0907	01	04			FMOP	50 sps	~13k	OTHR, affected BW approx 30k
USKA	14116.0	2034	12	04			FMCW	50	25k	OTHR
USKA	14134.0	1544	29	04			FMOP	50 sps	~13k	OTHR, affected BW approx 30k
USKA	14140.0	1018	28	04			FMOP	50 sps	~13k	OTHR, affected BW approx 30k
USKA	14141.0	0931	01	04			F1B	75	500	often
USKA	14162.0	1157	20	04			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	14180.0	2031	21	04			F1B	50	200	
USKA	14185.0	0812	14	04			FMCW	50 sps	~13k	OTHR, affected BW ~ 35k
USKA	14185.0	2044	21	04			A3E		~ 6k	very weak, no id possible
USKA	14192.0	0756	20	04			F1B	50	200	CIS 50-50 daily
USKA	14220.0 VFO USB	0753	20	04			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	14221.0	2207	17	04			F1B	50	200	often
USKA	14253.0	0851	12	04			F1B	75	250	often
USKA	14255.0	0936	01	04			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D often
USKA	14273.0	1036	17	04			FMCW	10 sps	~15k	OTHR
USKA	14277.0	0848	12	04			FMCW	50 sps	~13k	OTHR, affected BW ~ 35k
USKA	14295.1	1909	01	04	TJK		A3E			BC: 3 <sup>rd</sup> of Radio Tajik at 4765 kHz
USKA	14300.0 VFO USB	2206 1000 2211	07 08 12	04			BPSK		~2k2	Burst system; intro tone and preamble
USKA	14300.0	1116	30	04				50 sps	20k	OTHR
USKA	14344.65	2148	17	04			PSK-8	2400	2k4	MIL 188-110A, variant daily burst system, short intro tone
USKA	18100.0	0900	14	04		various	MFSK8	125	1750	MIL 188-141A often
USKA	18100.0	1045	17	04		X2	MFSK8	125	1750	MIL 188-141A
USKA	18100.0	1054	17	04		CD	MFSK8	125	1750	MIL 188-141A
USKA	18100.0	1111	17	04		C3	MFSK8	125	1750	MIL 188-141A
USKA	18100.0	1144	17	04		IR4	MFSK8	125	1750	MIL 188-141A
USKA	18107.0	0932	06	04			F1B	36+50	200	CIS 36-50 often
USKA	18107.0	0759	20	04			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	18170.0	1654	07	04			FMCW	50 sps	20k	OTHR, partly in the 17m band
USKA	21001.5	1031	01	04			F1B	100	150	Vocoder Yaktha daily
USKA	21115.0	0936	06	04			FMCW	50 sps	20k	OTHR
USKA	21145.0	0937	14	04		J5	MFSK8	125	1750	MIL 188-141A often
USKA	21145.0	1012	14	04		C3	MFSK8	125	1750	MIL 188-141A often
USKA	21145.0	1045	28	04		T4	MFSK8	125	1750	MIL 188-141A often
USKA	21145.0	1112	28	04		X2	MFSK8	125	1750	MIL 188-141A often
USKA	21250.0	0856	10	04			FMCW	50 sps	20k	OTHR
USKA	21270.0	0743	26	04			FMCW	50 sps	20k	OTHR
USKA	21318.55	1019	17	04			F1B	600	600	ARQ system often
USKA	21349.0	0837	13	04			FMCW	66.66 sps	40k	OTHR, burst system
USKA	21350.0	1043	21	04			FMCW	50 sps	20k	OTHR
USKA	21370.0	0837	20	04			FMCW	50 sps	20k	OTHR
USKA	21390.0	0848	20	04			FMCW	50 sps	20k	OTHR
USKA	21412.0	0821	13	04			FMCW	66.66 sps	10k	OTHR, burst system
USKA	21448.45	1408	04	04			F1B	600	600	ARQ system often
USKA	28390.0	0944	08	04			FMCW	50 sps	20k	OTHR
USKA	28600.0	1418	04	04			?	307 sps 870 sps	app 50k	OTHR Burst system; affected BW often > 100k
USKA	29545.0	0939	08	04			FMCW	25 sps	20k	OTHR, affected BW approx 30k

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

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SHIFT	DETAILS
VERON	7000,0	17.24	10	4	Italy	UiILL	J3E-u		male voices, no HAM
VERON	7000,0	17.32	21	4	UKR	D	A1A		D-beacon
VERON	7038,7	18.23	18	4	RUS	D	A1A		Beacon Sevastopol
VERON	7038,8	19.30	16	4	UKR	D	A1A		D-beacon

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SHIFT	DETAILS
VERON	7038,9	19.30	16	4	RUS	S	A1A		S-beacon
VERON	7038,9	18.23	18	4	RUS	S	A1A		Beacon Severomorsk
VERON	7039,0	17.44	13	4	RUS	C	A1A		C-beacon
VERON	7039,0	18.44	18	4	RUS	C	A1A		C-beacon
VERON	7039,2	19.10	30	4	RUS	F	A1A		F-beacon
VERON	7057,0	20.41	10	4	RUS	OTHR	FMCW		radar, "Contayner" Nizhny Novgorod
VERON	7080,0	19.14	16	4	?	UiPtr	F1B	200	Ptr and Revs
VERON	7120,0	18.50	16	4	SOM	Rhagaysa	A3E		BC. Stops at 19.00 UTC
VERON	7200,0	17.33	10	4	IRN	VOI	A3E		Voice of Iran, news
VERON	7200,0	18.16	18	4	IRN	VOI	A3E		Splatter>7186,0kHz;German lang; S9+30
VERON	14024,0	13.08	10	4	RUS	UiPtr	F1B	500	Ptr
VERON	14120,0	08.12	15	4		OTHR	FMCW		radar
VERON	14130,0	07.52	17	4		OTHR	FMCW		radar
VERON	14137,0	10.38	28	4		OTHR	FMCW		radar, 50 p/sec
VERON	14141,0	09.49	15	4	RUS	UiPtr	F1B	500	Ptr
VERON	14141,0	09.25	23	4	RUS	UiPtr	F1B	500	Ptr
VERON	14141,0	08.36	1	4	?	?	F1B	250	UiPtr
VERON	14207,0	14.46	23	4		OTHR	FMCW		radar
VERON	14221,0	19.59	18	4		UiPtr	F1B	200	Printer; bad modulation
VERON	14232,0	09.50	29	4		UiPtr	F1B	500	Ptr
VERON	14260,0	07.36	29	4		UiCAR	NON		strong carrier, S-9
VERON	21270,0	08.54	18	4		UiRadar	FMCW	30k	OTHR 50 sps
VERON	21310,0	09.52	6	4		OTHR	FMCW		radar, wide
VERON	21438,0	17.35	9	4	RUS	RCV	A1A		RBDE DE RCV OK QYT4 QSX 7748 K
VERON	28600,00	09.39	25	4	IRN	OTHR	FMCW		307/870
VERON	28600,0	10.39	30	4	IRN	OTHR	FMCW		307/870
VERON	28605,0	08.30	18	4	IRN	UiRadar	FMCW	50k	OTHR 307 & 870 sps

# The monitoring team of IARU Region 1

credits:

**Wavecom Elektronik – Buelach – Switzerland**

**German BNetzA Konstanz**

**Many thanks for your interest!**

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