



# Monitoring System

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The monthly newsletter for Region 1

## December 2015

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



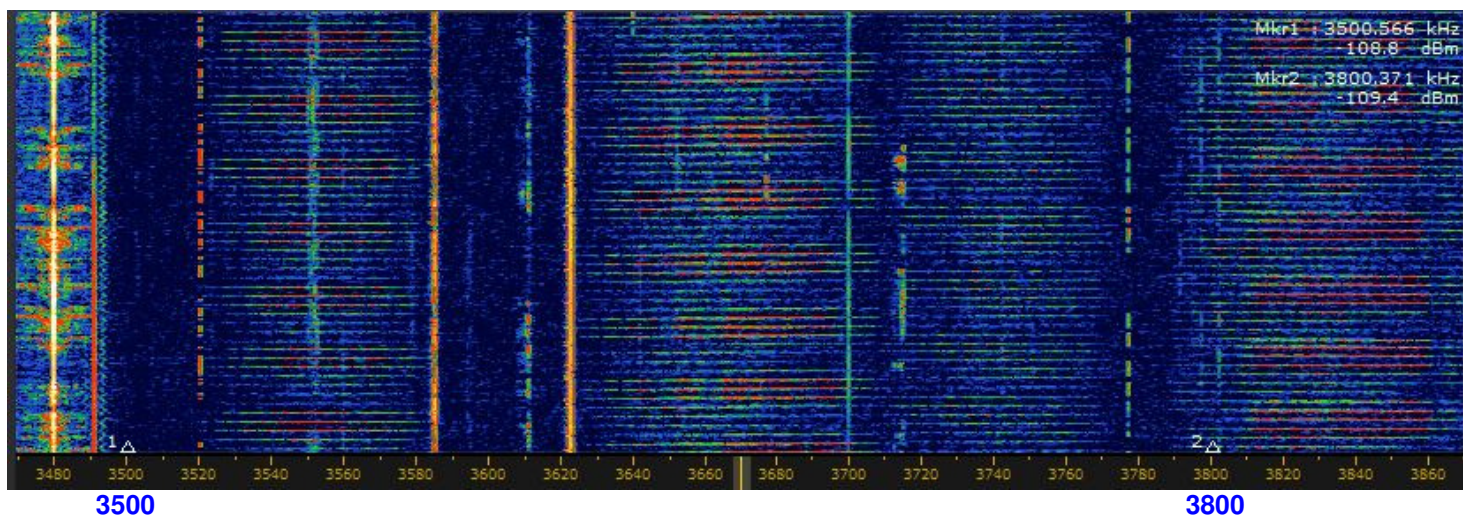
### Acknowledgements

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: EI3GYB - Michael KARS: 9K2RR – Faisal ++ MARL: 9H1M – Dominic ++ MRASZ: HA7PL - Laci ++ NARS: 5N9AYM – Yusuf ++ NRRL: LA4EU – Hans Arne ++ OEVS: OE3GSA – Gerd ++ PZK: SP9BRP – Jan ++ RAL: OD5RI – Riri ++ REF: F5MIU – Francis ++ REP: CT4AN – Jose ++ ROARS: A41MA - Younis ++ RSGB: M0VRR - Vaughan ++ SARL: ZS6NS - James ++ SRAL: OH2BLU - Pekka ++ SSA – Ullmar ++ UBA: ON8IM – Ivan +++ URE: EB1TR - Fabian ++ USKA: HB9CET - Peter ++ VERON: PA2GRU - Dick ++ ZRS: S56ZDB – Darko ++ G3VZV – Graham (satellite) ++ TG9ADV – Jorge (Co-ordinator Region 2) ++ YB3PET – Titon (Co-ordinator Region 3) ++ DF8FE – (Webmaster assis.) ++ DL8AAM (ALE) ++ DJ7KG (BUOYS) ++ DF5SX (BC) ++ DARC (server support) ++ OD5TE (Hani) ++ VE6SH – Tim (IARU President) ++ 9K2RR – Faisal (EC-IARU-R1 ++ PTTs: BAKOM (Swiss), BNetzA Konstanz (Germany) ++ OFCOM (UK) ++ Dutch AT ++ YO9RIJ – Petrica

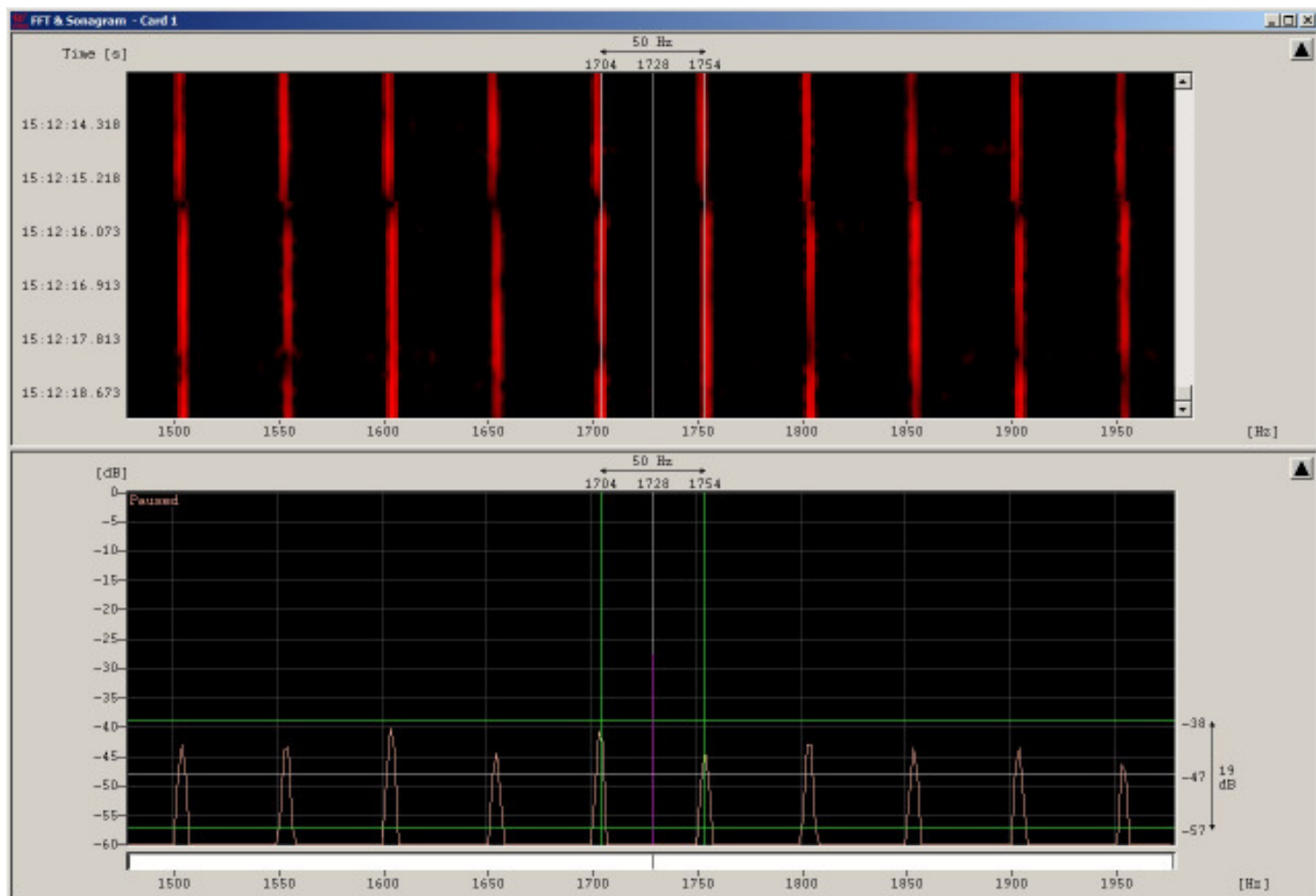
# Part 1: News and Infos

## 1. OTH radars on 80 m in Region 3

Chinese OTH radars are disturbing large parts of the 80 m very often. The whole Region 3 is affected including Australia and West USA. The Perseus sonogram from Dec. 17<sup>th</sup> 2015 is showing 3 radars at the same time. Screenshot: DK2OM



- 2. **Easy measurement of the sweep rate (PRF) - FMCW** = frequency modulated continuous wave  
While using the FFT-display (spectrum analysis) you have to compare the difference between 2 neighbored peaks. The following example is established with Wavecom W-Code. It is also showing the spectral lines on the sonogram. Screenshot: DK2OM with W-Code – Turkish OTH radar (FMCW mode) with 50 sweeps/sec = PRF 50  
PRF = pulse repetition frequency – The **FMCW** systems are showing stable spectral lines and spectrum peaks. The sweeps are unmodulated.  
HB9CET prefers the FFT-method. The sonogram spectral lines are not as exact as the FFT peaks!



## 3. Russian military traffic on 40 m

We observed a lot of Russian military traffic on our 40 m-band including the OTH radar in Gorodezh, mostly AT3004D (12 x 120 Bd BPSK) and the pilot tone on 3300 Hz AF. The Russian “Buzzer” on 6998 kHz was still on.

#### 4. Mysterious carriers

We found long lasting carriers on 14000.0 and 21000.0 kHz. They came from South China and were heard in Region 3 and Europe. Another carrier on 7000.0 kHz came from Almaty (Kazakhstan). The purpose is unknown.

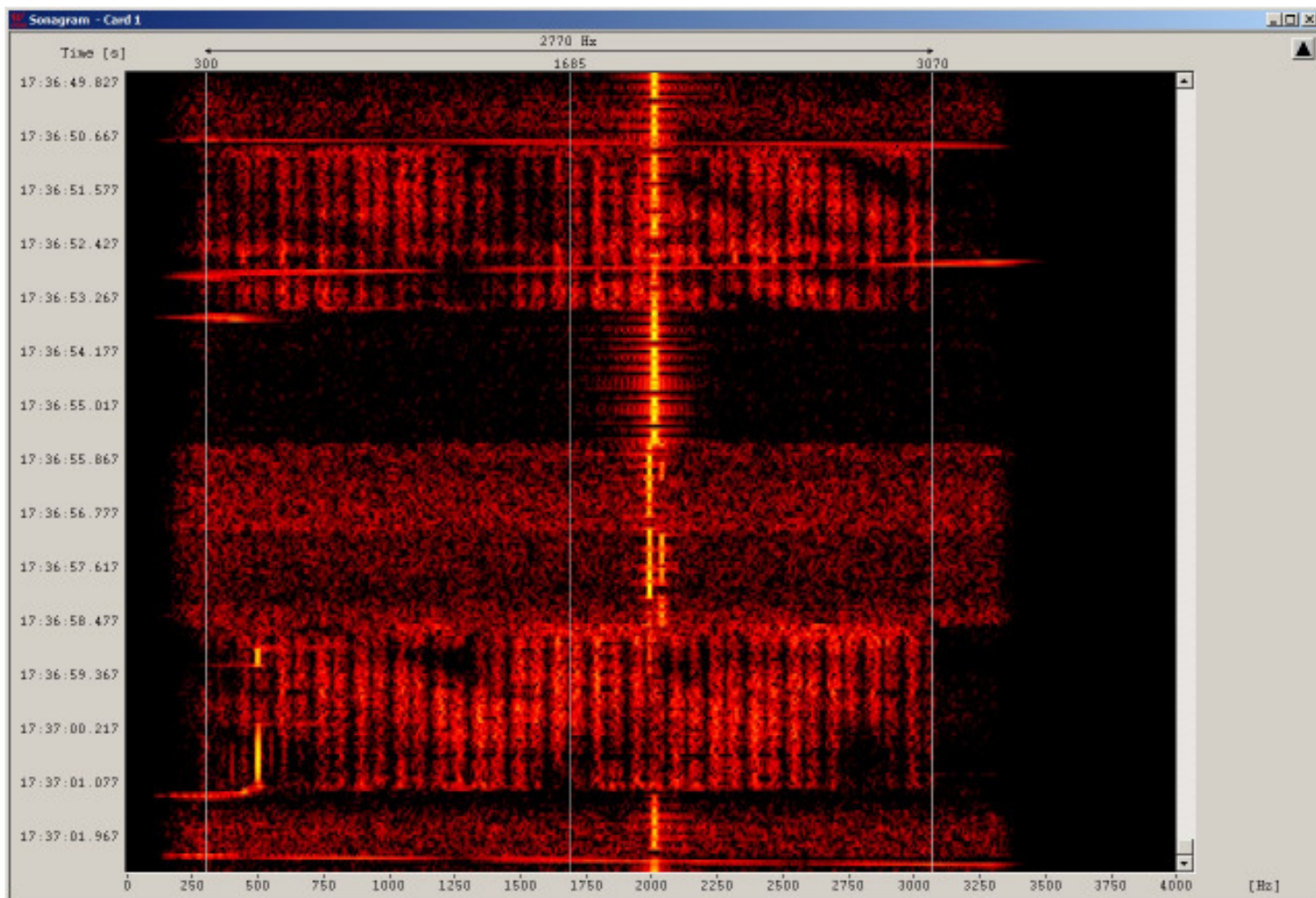
#### 5. BC-problems as usual

**Bad news:** Radio Hargaysa did not leave 7120 kHz. The 3<sup>rd</sup> harmonic from Radio Tajikistan on 4765 kHz was still audible on 14295.174 kHz. The splatters from RFI on 7205 kHz appeared again on 7190 kHz, when the signal strength was larger than S 9 + 15 dB.

#### 6. Unknown digital system from Egypt

We detected an unknown digital system on 14011.7 kHz (center) working in burst mode with 2400 Bd over several days. A short preamble with PSK8 could be measured. The signal covered about 2770 Hz. The source was Egypt. Purpose unknown, system unknown, perhaps a MIL-188-110A variant.

Screenshot: DK2OM with W-Code – showing the digital signal together with 2 ionosondes and the unimpressed CW-freaks



#### 7. RUS taxi traffic on 28275 kHz

Russian taxi service was daily active on 28275 kHz on FM. Location: Mosocw

#### 8. Spanish fishery on 21400 kHz

Spanish fishery has occupied 21400 kHz on USB now since more than 20 years. You can find them daily at about 0800 UTC or later.

#### 9. Changes in Region 3

VK3MV – Peter - IARUMS Coordinator of Region 3 finished his job. His successor is YB3PET – Titon – more details in our next newsletter. Welcome to our worldwide IARU Monitoring System dear Titon!

#### 10. Homepage IARU Region 1

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

#### Homepage IARUMS Region 1

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

#### Homepage IARUMS Region 2

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

#### Homepage IARUMS Region 3

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

#### Intruderlogger Region 1

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

#### ITU-Monitoring Reports

<http://www.itu.int/en/ITU-R/terrestrial/monitoring/Pages/Regular.aspx>

## Part 2: Detailed reports of the national Co-ordinators

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

### ARSK MONITORING OVERVIEW FOR DECEMBER 2015

Radio Hargeisha remained on 7,120 kHz with broadcasts. As usual there were some local or Central African intruders observed on 7,000, 7,074 and 7,075 kHz.

E.H.M. Alleyne, 5Z4NU - ARSK National IARUMS Co-ordinator

#### ARSK – Kenya – 5Z4NU (Ted)

N.A.

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

DG0JBJ (Mario) observed **22** OTH radars on 20 m, **70** OTH radars on 15 m and **3** OTH radars on 10 m in December 2015. Chinese OTH radars often appeared on the 20, 40 and 80 m-bands in Region 3.

#### DARC 2 – Germany - DK2OM (Wolf)

**FSK transmissions -> center frequency between mark and space**

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

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

**SH = shift - SP = spread (radar) – SPS = sweeps/sec (radar)-> (aka PRF)**

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	1810,0	1811	02	12	POR		USB			Portuguese fishery
DK2OM	1812,0	1935	04	12	RUS		USB LSB			14 tones – hyperbolic radio navigation system – BRAS-3/RS-10 – Kaliningrad – no carrier - daily, all day
DK2OM	1852,0	vt	dly	12	I	IPP	USB			Palermo Radio, weather reports
DK2OM	1855,0	1940	30	12	I	IQP	USB			San Benedetto Radio, weather reports
DK2OM	1876,0	2000	28	12	I	IQN	USB			Lampedusa Radio, weather reports
DK2OM	1888,0	1941	30	12	I	IPD	USB			Civitavecchia Radio, weather reports
DK2OM	1896,5	2000	28	12	D		PSK8	2400	2400	Stanag4285 – 600 bps long – German Navy - daily
DK2OM	1925,0	1942	30	12	I	IPL	USB			Livorno Radio, weather reports – daily, vt
DK2OM	3500,0	---	--	12	F		FMOP		20k	French burst radar, 6 sps, similar Codar sounding, South France
DK2OM	3500,0	vt	dly	12	TUR		FSK8	120	1750	ALE, “201” - Turkish Red Crescent – legal!
DK2OM	3500,0	1750	03	12	E		USB			Spanish fishery – daily, all day
DK2OM	3500,3	2204	11	12	CIS		A3E			CIS pirates – unstable carrier
DK2OM	3500,5	1628	31	12	CIS		A3E			CIS pirates – unstable carrier
DK2OM	3501,0	1641	31	12			FSK8	125	1750	ALE, “H10” “B10” “I10” “D10”

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	3502,0	1728	13	12	RUS		PSK2	120	2600	AT3004D – modem idle and traffic – Moscow
DK2OM	3503,5	1808	14	12	G	no ITU	FSK8	125	1750	ALE – “XSS” “XPU” “XJR” – British MIL Tascomm – vt, daily - legal!
DK2OM	3506,0	1534	13	12	CHN		FMOP		54k	Chinese OTH radar – 43 sps 3506 – 3560 kHz
DK2OM	3512,8	1750	17	12	CHN		PSK4B	44.44	2400	PRC 39 – USB mode – pilot tone 450 Hz
DK2OM	3515,0	1936	06	12	CHN		FMOP		52k	Chinese OTH radar – 43 sps 3515 – 3567 kHz
DK2OM	3519,0	2006	10	12	CHN		FMOP		51k	Chinese OTH radar – 43 sps 3519 – 3570 kHz
DK2OM	3527,0	1403	20	12	CHN		FMOP		52k	Chinese OTH radar – 43 sps 3527 – 3579 kHz
DK2OM	3531,0	---	--	12	RUS	REA4	N0N			unclean carrier - RUS airforce Moscow, ident: 1940 utc - daily
DK2OM	3531,0	2206	11	12	RUS		PSK2A	120	2600	AT3004D – traffic and submode idle - Sevastopol
DK2OM	3531,0	1920	15	12	RUS		PSK2A	120	2600	AT3004D - Sevastopol
DK2OM	3531,8	1611	30	12	PHL		PSK2A	1350	1350	short bursts with intro tone
DK2OM	3532,0	1600	25	12	CHN		FMOP		51k	Chinese OTH radar – 43 sps 3532 – 3583 kHz
DK2OM	3532,0	2204	11	12	F		PSK4	75	5800	LINK11-CLEW on both sidebands (5800 Hz wide) – area of Brest – legal!
DK2OM	3535,0	1935	04	12	E		USB			Spanish fishery
DK2OM	3535,0	0833	18	12	HOL		USB			Dutch fishery
DK2OM	3540,0	1718	17	12	E		USB			Spanish fishery – sometimes with voice scrambler CRY 2001 – very often
DK2OM	3544,0	2107	15	12	CHN		FMOP		97k	Chinese OTH radar – 43 sps 3544 – 3641 kHz
DK2OM	3550,0	0700	02	12	F		A3E			French amateurs not respecting bandplans - daily
DK2OM	3550,0	vt	vd	12	ALG	no ITU	FSK8	125	1750	ALE, “IU50” “IU52” “FN50”
DK2OM	3552,0	2110	21	12	E		USB			Spanish fishery
DK2OM	3553,8	1919	01	12	TUR		PSK8	2400	2400	Stanag4285 – 600 bps long - TUR MIL - Ankara – daily, all day - legal operation
DK2OM	3557,0	2136	28	12	RUS		F1B	75	250	Nizhny Novgorod
DK2OM	3560,0	2025	07	12			USB			Scandinavians
DK2OM	3563,0	1547	28	12	RUS		PSK2A	120	2600	AT3004D - Kaliningrad
DK2OM	3567,0	vt	dly	12	CHN	no ITU	FSK8	125	1750	ALE, “103” “106”
DK2OM	3574,5	1955	19	12	RUS		PSK2	120	2600	AT3004D – submode idle - Sevastopol
DK2OM	3576,6	ady	dly	12	I	IZ3DVW	A1A			3576.550 - uncoordinated beacon
DK2OM	3582,0	2127	27	12	RUS		PSK2	120	2600	AT3004D – submode idle - Moscow
DK2OM	3585,0	1738	05	12	TWN	HLL	F1C		800	WX-fax Taiwan - 120 rpm, IOC 576, - daily, all day - legal!
DK2OM	3586,0	vt	dly	12	G		PSK2A	40	40	encrypted – every evening Great Britain – purpose unknown
DK2OM	3587,0	vt	vd	12	E	no ITU	FSK8	125	1750	ALE, “TVV” “TXX” - Spanish Guardia Civil
DK2OM	3590,0	vt	dly	12	PAK	no ITU	FSK8	125	1750	ALE, “KW” “KHAIBAR” – Pakistan navy
DK2OM	3590,0	1853	23	12	BLR		PSK2A	120	2600	AT3004D - Minsk
DK2OM	3590,0	vt	vd	12	E		USB			Spanish fishery – also with scrambler CRY 2001 - daily
DK2OM	3593,7	---	--	12	RUS	D	A1A			Cluster beacon – Sevastopol RUS Navy – “RCV”
DK2OM	3593,8	2017	08	12	RUS	P	A1A			Cluster beacon – Kaliningrad RUS Navy – “RMP”

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	3593,9	---	--	12	RUS	S	A1A			Cluster beacon – Severomorsk RUS Navy – „RIT“
DK2OM	3595,0	vt	dly	12	D		FSK8	125	1750	ALE – German customs
DK2OM	3596,0	vt	dly	12	D, S, HRV		FSK8	125	1750	ALE, “DK3CW” “SA6CBK” “9A0PZ” – just for info!
DK2OM	3600,5	1809	28	12			A1A			encrypted msg, figures
DK2OM	3617,0	vt	dly	12	HRV	9A5EX	FSK8	125	1750	ALE, “9A5EX” – HAM-ALE - just for info
DK2OM	3622,5	1737	05	12	J	JMH	F1C		800	Tokyo Meteo – 120 rpm – IOC 576 – daily, all day - legal!!!
DK2OM	3630,0	1600	25	12	CHN		FMOP		55k	Chinese OTH radar – 43 sps 3630 – 3685 kHz
DK2OM	3637,0	2123	12	12	CHN		FMOP		78k	Chinese OTH radar – 43 sps - 3637 – 3715 kHz
DK2OM	3640,0	vt	vd	12	G		FSK8	125	1750	ALE, “XSS” - British MIL Tascomm – just for info!
DK2OM	3642,0	ady	dly	12	CHN		A1A			loop – DKG6 de 3A7D Chinese military – daily, all day
DK2OM	3647,0	2025	01	12	CHN		FMOP		104k	2 Chinese OTH radars – 43 sps 3647 – 3751 kHz
DK2OM	3648,0	---	--	12	ARS		FSK8 LSB	125	1750	ALE, “AAI” “AAN”
DK2OM	3649,0	vt	vd	12	ALG	no ITU	FSK8	125	1750	ALE, “BI20” PA20”
DK2OM	3658,0	1510	08	12	UZB		A1A			beacon “V” - Tashkent
DK2OM	3673,0	2004	10	12	CHN		FMOP		53k	Chinese OTH radar – 43 sps 3673 – 3726 kHz
DK2OM	3673,0	1020	02	12	CHN		FMOP		57k	Chinese OTH radar – 43 sps 3673 – 3724 kHz
DK2OM	3679,0	1933	16	12	CHN		FMOP		58k	Chinese OTH radar – 43 sps 3679 – 3737 kHz
DK2OM	3688,0	1604	30	12	CHN		FMOP		56k	Chinese OTH radar – 43 sps 3688 – 3744 kHz
DK2OM	3709,0	1938	06	12	CHN		FMOP		73k	Chinese OTH radar – 43 sps 3709 – 3782 kHz
DK2OM	3713,0	2059	15	12	CHN		FMOP		57k	Chinese OTH radar – 43 sps 3713 – 3770 kHz
DK2OM	3720,0	vt	dly	12	S		FSK8	125	1750	ALE, “YU” “YT” “YV” “DZ” – Swedish MIL
DK2OM	3727,0	1934	06	12	CHN		PSK4	60	2350	PRC 30 tone modem – LSB mode – pilot tone 450 Hz
DK2OM	3730,0	1600	25	12	CHN		FMOP		83k	Chinese OTH radar – 43 sps 3730 – 3813 kHz
DK2OM	3743,0	1020	02	12	CHN		FMOP		55k	Chinese OTH radar – 43 sps 3743 – 3798 kHz
DK2OM	3751,0	1738	17	12	FEa		A1A			“99 ?? 2T48 ??” - loop
DK2OM	3751,5	vt	dly	12	POL	no ITU	FSK8	125	1750	ALE, “IZ3” “MI3”
DK2OM	3753,0	1537	13	12	CHN		PSK4B	44.4	2400	PRC 39 – LSB mode – pilot tone 450 Hz
DK2OM	3756,0	1917	01	12	RUS		A3E			RUS MIL – channel marker – Tuapse – East Black Sea – night QRG – daily – even audible in Japan
DK2OM	3761,5	vt	vd	12	POL	no ITU	FSK8	125	1750	ALE, “NI9” “PL7” “AB2” – Polish MIL
DK2OM	3772,0	ady	dly	12	FEa	A4JC	A1A			“A4JC” - loop
DK2OM	3777,0	2003	10	12	FEa		A1A			“M8JF de RIS9” – loop – dly
DK2OM	3790,0	1932	28	12	RUS		PSK2	120	2600	AT3004D – submode idle - Kaliningrad
DK2OM	3791,0	vt	vd	12	D	DK0ESD	FSK8	125	1750	ALE, “DK0ESD” – daily just for info!
DK2OM	3797,0	ady	dly	12	FEa		A1A			“M8JF de RIS9” – loop – rcvd via JA
DK2OM	6890,0	1630	07	12	CHN		FMCW		160k	Chinese broadband OTH radar 6890 – 7050 kHz – 10 sps
DK2OM	6998,5	0841	16	12	POL		FSK8 PSK8 USB	125 2400	1750 2400	ALE, “ZE2” “OL1” “GO7” “MA3” and MIL-188-110A – until 7001.500 kHz – Polish MIL

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	6999,0	1500	01	12	RUS		PSK2	120	2600	AT3004D – submode idle – pilot tone at 7000.3 - Moscow
DK2OM	7000,0	vt	dly	12	?	no ITU	FSK8	125	1750	ALE, “210” “20989” “2205” “203”
DK2OM	<b>7000,0</b>	<b>1505</b>	<b>01</b>	<b>12</b>	<b>RUS</b>		<b>H3E</b>		<b>3.4 k</b>	<b>buzzer – 1 sec bursts - 125 Hz AF rough sinus – carrier on 6998.0 + upper sideband - with splatters 10 kHz wide – daily, all day - Moscow</b>
DK2OM	7000,0	2127	15	12	KAZ		N0N			carrier – Almaty
DK2OM	7000,0	0944	17	12	INS		USB LSB			Indonesian pirates – daily – all day - audible in Europe in the evenings
DK2OM	7001,5	---	--	12	ALG		PSK4A	62.5	1750	Clover 2000 – 8 x 62.5 Bd – Algeria – daily, vt
DK2OM	7001,8	2006	21	12	ROU		PSK8A	2400	2400	Stanag-4285 – 600 bps long - Constanta
DK2OM	7005,0	1630	25	12	INS		USB LSB			Indonesian pirates
DK2OM	7010,0	0833	18	12	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	7010,0	1631	25	12	INS		USB LSB			Indonesian and Philippine pirates
DK2OM	7012,0	2111	15	12	RUS		F1B	75	250	Far East Russia
DK2OM	7012,5	1940	15	12	CPV		USB			male persons – Cape Verde Islands
DK2OM	7014,0	1049	03	12	RUS		PSK2A	120	2600	AT3004D – Far East Russia
DK2OM	7015,0	1632	25	12	INS		USB LSB			Indonesian pirates
DK2OM	7015,5	---	--	12	AFG		PSK4A FSK	62.5 100	1750 170	Clover 2000 – 8 x 62.5 Bd Codan 8580 selcall
DK2OM	7018,0	1501	25	12	RUS	REA4	F1B	100	1000	mostly idling – Russian airforce Moscow – ident at full hour + 40 min.
DK2OM	7020,0	0945	17	12	INS		USB LSB			Indonesian pirates
DK2OM	7025,0	1610	22	12	RUS		FMCW			OTH radar Contayner - 50 sps Gorodezh – many splatters
DK2OM	7025,0	1633	25	12	INS		USB LSB			Indonesian pirates
DK2OM	7027,5	---	--	12	KAZ	„V“	A1A			beacon “V” - Almaty
DK2OM	7030,0	1634	25	12	INS		LSB			Indonesian pirates
DK2OM	7034,0	2035	22	12	RUS		PSK4B	120	2600	AT3104D - Kaliningrad
DK2OM	7035,0	1425	27	12	INS		USB LSB			Indonesian pirates
DK2OM	7038,0	1426	27	12	CHN		FMCW		10k	CHN OTH burst radar – 50 sps – 5 sec bursts
DK2OM	7039,3	2024	01	12	RUS	K	A1A			Cluster beacon - Petropavlovsk Kamchatskiy - RUS Navy - Pacific fleet - “RCC” - daily
DK2OM	7039,4	2024	01	12	RUS	M	A1A			Cluster beacon – Magadan RUS Navy – „RTS“
DK2OM	<b>7040,0</b>	<b>ady</b>	<b>dly</b>	<b>12</b>	<b>I</b>		<b>A1A</b>			<b>IZ3DVW – uncoordinated and unwanted beacon</b>
DK2OM	7040,0	vt	dly	12	F	F6BAZ	FSK8	125	1750	ALE, “F6BAZ” – just for info
DK2OM	7040,0	vt	dly	12	INS		USB LSB			Indonesian pirates
DK2OM	7040,5	vt	dly	12	HRV		FSK8	125	1750	ALE, “9A5EX” “9A0ALE” – just for info
DK2OM	7047,37	vt	vd	12	D		FSK8	125	1750	ALE, “DL0NOT” – just for info!
DK2OM	7048,0	1536	07	12	RUS		FMCW		13k	OTH radar Contayner - 50 sps Gorodezh
DK2OM	7049,5	0849	17	12	HRV G F	9A0ALE M1DFO F6BAZ	FSK8	1250	1750	Amateur ALE, just for info! daily – various times
DK2OM	7050,0	vt	dly	12	INS		USB			Indonesian pirates
DK2OM	7055,5	vt	vd	12	MEa	no ITU	FSK8	125	1750	ALE, “111” “132” “133” -

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										Kaukasus
DK2OM	7058,0	0835	18	12	RUS		PSK2A	120	2600	AT3004D – Rostov na Donu
DK2OM	7060,8	2015	09	12	RUS	M	A1A			spurious from Cluster beacon – Magadan RUS Navy – „RTS“
DK2OM	7070,0	vt	vd	12	GEO	no ITU	FSK8	125	1750	ALE, “MV” “244” “686” “334” “204” “571” – daily active
DK2OM	7085,0	1544	27	12	CHN		FMCW		10k	CHN OTH burst radar – 50 sps
DK2OM	7087,0	1044	03	12	CHN		FMOP		10k	Chinese OTH burst radar – 43 sps
DK2OM	7087,0	1753	24	12	RUS		PSK2A	120	2600	AT3004D - Sevastopol
DK2OM	7088,0	1545	27	12	CHN		FMCW		10k	CHN OTH burst radar – 50 sps
DK2OM	7088,8	---	--	12	S	SL0FRO	A1A			7088.820 - cw-trainee, Sweden – kHz – SL0FRO - just for info!
DK2OM	7089,0	1716	04	12	RUS		PSK2A	120	2600	AT3004D – SE of Penza
DK2OM	7089,8	---	--	12	TUR		PSK8	2400	2400	Link11 - SLEW – aircraft – west of Cyprus - often
DK2OM	7091,5	---	--	12	KAZ	„V“	A1A			loop – ident “V” – Almaty - Kazakhstan
DK2OM	7092,0	vt	vd	12			FSK8	125	1750	ALE, “3014”
DK2OM	7096,0	0935	17	12	FEa		FMCW		32k	Codan like ocean surface radar 2.6 sps – 7096 – 7128kHz
DK2OM	7098,0	1635	25	12	FEa		FMCW			unid burst OTHR – 40 sps
DK2OM	7099,5	vt	dly	12	HRV	9A0ZG	FSK8	125	1750	ALE, “9A0ZG” “9A5EX1P” “9A0OS” – daily - just for info!
DK2OM	7102,0	1048	03	12	FEa		FMCW		32k	Codan like ocean surface radar 2.6 sps – 7102 – 7134 kHz
DK2OM	7102,0	vt	dly	12	HRV SUI D	9A0ALE	FSK8	125	1750	ALE, “9A0ALE” “9A2KS” “HB9MHB” “9A0ZG” “9A4OS” “DK0ESD” – just for info!
DK2OM	7102,5	1335	26	12	RUS	RCV	PSK2A	120	2600	AT3004D - Sevastopol
DK2OM	7110,0	vt	dly	12	HRV	9A0ALE	FSK8	125	1750	ALE, “9A0ALE” – just for info
DK2OM	7110,0	vt	dly	12			FSK8	125	1750	ALE, “1101” “1112”
DK2OM	<b>7120,0</b>	<b>1830</b>	<b>25</b>	<b>12</b>	<b>SOM</b>		<b>A3E</b>			<b>Radio Hargaysa – Somalia – daily – even audible in Australia and Japan</b>
DK2OM	7122,0	---	--	12	FEa	V	A1A			loop “V”
DK2OM	7133,0	1920	29	12	CHN		FMOP		28k	Chinese OTH radar – 43 sps – 7133 – 7161 kHz – also 31.12.2015 at1808 utc
DK2OM	7134,0	2022	01	12	RUS		F1B	50	200	Far East Russia – also 25.12.15 at 1732 utc
DK2OM	7137,0	1636	25	12	TWN	no ITU	FSK8	125	1750	LSB – ALE , “BENVY” “BYGCV” “BTIEU” “BWFGG” “BBRDA” – Taiwanese navy – daily – various times - tnx for info: DL8AAM
DK2OM	7137,0	1718	04	12	RUS		PSK2A	120	2600	AT3004D – North Caucasus
DK2OM	7137,0	1417	19	12	RUS		PSK2A	120	2600	AT3004D - Grozny
DK2OM	7138,5	1119	02	12	RUS		PSK2	120	2600	AT3004 – submode idle – Far East Russia
DK2OM	7142,0	1210	18	12	RUS		PSK2A	120	2600	AT3004D - Chelyabinsk
DK2OM	7161,0	0836	18	12	RUS		PSK2A	120	2600	AT3004D - Sevastopol
DK2OM	7162,0	2000	13	12	FEa	99	A1A			loop: 99? 2313? 99??
DK2OM	<b>7163,0</b>	<b>---</b>	<b>--</b>	<b>12</b>	<b>UKR</b>		<b>A3E</b>			<b>encrypted MSGs - SZRU in Rivne</b>
DK2OM	7179,0	1528	19	12	RUS		PSK2A	120	2600	AT3004D – Sevastopol – spurious on 7147,7115 an 7084 kHz
DK2OM	7182,0	1934	23	12	RUS		PSK2	120	2600	AT3004D – modem idle - Moscow
DK2OM	7183,0	vt	dly	12	SUI		FSK8	125	1750	ALE, “HB9MHB” – just for info!
DK2OM	7185,5	vt	dly	12	D HRV		FSK8	125	1750	ALE, “9A5EX” “DK0ESD” just for info - daily



DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	7197,0	vt	dly	12	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	7205,0	1852	10	12	TUR	VOT	A3E		30k	splatter from Voice of Turkey down to 7190 kHz
DK2OM	7205,0	2000	21	12	F	RFI	A3E/BC		38k	Radio France International splattering 7185 – 7225 kHz – again !
DK2OM	10100,8	ady	dly	12	D		F1B	50	450	Baudot - German Weatherservice – legal!
DK2OM	10110,0	vt	dly	12	SNG	no ITU	FSK8	125	1750	ALE, "CN6" "68" – Singapore Navy - Changi Naval Base
DK2OM	10110,4	1503	03	12	FEa		USB			Far East pirates
DK2OM	10113,0	vt	vd	12	TUN	no ITU	FSK8	125	1750	ALE, "TUD" "STAT5" "STAT154"
DK2OM	10114,0	vt	dly	12		no ITU	FSK8	125	1750	ALE, "BSF" "ZEN" "CM2OR2"
DK2OM	10114,8	0730	dly	12	RUS		F1B	100	1000	CIS14 – Moscow - daily
DK2OM	10115,0	vt	vd	12		no ITU	FSK8	125	1750	ALE, "2001" "2002"
DK2OM	10116,5	---	--	12	AFS		F7D	54.3	2120	MHF50 – 33 tones - South African navy
DK2OM	10120,0	vt	dly	12		no ITU	FSK8	125	1750	ALE, "9066" "9067" "8001" "2001"
DK2OM	10122,0	1730	25	12	MRC		USB			Moroccan fishery
DK2OM	10123,0	vt	dly	12	ALG	no ITU	FSK8	125	1750	ALE, "CM3" "COF" "BSF" "CM2" "ESA" – Algerian Airforce
DK2OM	10123,0	1830	25	12	ALG ?		USB			male persons in Arabic voice
DK2OM	10125,0	1450	08	12	CYP		FMCW		20k	OTH radar Cyprus – 50 sps
DK2OM	10129,0	vt	dly	12	ALG	no ITU	FSK8	125	1750	ALE, "CM1" "CTF" "772"
DK2OM	10132,0	1030	09	12			USB			men in Arabic voice
DK2OM	10136,0	ady	dly	12	RUS		F1B	50	200	CIS-50-200 - Chita – daily, all day
DK2OM	10136,0	vt	dly	12	ALG	no ITU	FSK8	125	1750	ALE, "CM3" "BLD" "CNC" "TF2"
DK2OM	10140,0	1515	18	12	TUR		FMCW		20k	OTH radar West-Turkey – 25 sps - disturbing digital modes
DK2OM	10140,0	vt	vd	12	CHN ?		FSK8	125	1750	ALE, "205" "201" "LT"
DK2OM	10144,0	ady	dly	12	D	DK0WCY	A1A			10143.986 kHz - DK0WCY – German aurora beacon – just for info!
DK2OM	10145,5	vt	dly	12	HRV S / D F / G	9A5EX	FSK8	125	1750	ALE, "9A5EX" "SM5VRH" "DK0ESD" "F6BAZ" "MIDFO" - just for info - daily
DK2OM	10148,0	1411	14	12	AUS		FMCW		10k	Australian OTH burst radar JORN – 20 sps – 10148 – 10158 kHz – 6 sec bursts – intro tones – also audible in VE3, VE6 and VE7 and Europe
DK2OM	14000,0	1520	02	12	RUS		F1B	600	600	DPRK-FSK 600 - splatter from 13997.45 kHz - Moscow
DK2OM	14000,0	0740	17	12	RUS		FMCW		10k	OTH radar Contayner - 10 sps Gorodezh
DK2OM	14000,0	1048	09	12	CHN		NON			carrier – via JA – not audible in Europe and via VK – location South China
DK2OM	14000,0	1046	15	12	CHN		unid		8k	broadband signal similar white noise – Central China
DK2OM	14000,0	1205	14	12	FEa		USB			pirates from Java Sea - daily
DK2OM	14000,2	1124	10	12	FEa		USB			male persons
DK2OM	14001,2	1320	19	12	FEa		USB			Far East pirates
DK2OM	14006,0	0802	02	12	RUS		PSK2	120	2600	AT3004D – submode idle -

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										Moscow
DK2OM	14012,7	1300	21	12	EGY		PSK8	2400	2750	unid burst modem - MIL-188-110A variant?
DK2OM	14026,0	0814	03	12	RUS		PSK2A	120	2600	AT3004D – Moscow
DK2OM	14064,0	1319	02	12	RUS		F1B	75	200	Novosibirsk
DK2OM	14066,0	1026	02	12	RUS		PSK4B	120	2600	AT3104D - Kaliningrad
DK2OM	14084,0	0916	06	12	RUS		F1B	75	250	Moscow
DK2OM	14100,0	vt	dly	12	ALG	no ITU	FSK8	125	1750	ALE, “6206” – “6204” - “6202” “6207” “6217” “MTL” “IJJ” – Mauritanian border – daily, all day
DK2OM	14105,0	---	--	12	F		FMOP		20k	French burst radar, 6 sps, similar Codar sounding, South France
DK2OM	14109,0	vt	vd	12	POR	HAM	FSK8	125	1750	ALE, “CT2IXQ” “DK0ESD” “HB9MHB” – just for info!
DK2OM	14109,0	vt	dly	12	RUS	RV3APM	FSK8	120	1750	ALE, “RV3APM” – just for info!
DK2OM	14123,0	0858	30	12	RUS		FMCW		13k	OTH radar Contayner - 50 sps Gorodezh
DK2OM	14139,0	vt	dly	12	CHN		FSK8	125	1750	ALE, “809”
DK2OM	14160,0	vt	dly	12	MRC		FSK8	125	1750	ALE, “9204” “9228” “9236”
DK2OM	14162,0	1000	02	12	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	14175,0	vt	vd	12	CHN ?		FSK8	125	1750	ALE, “147”
DK2OM	14179,0	0850	25	12	CHN		FMCW		10k	Chinese OTH burst radar – 66 sps – 3.7 sec bursts
DK2OM	14186,0	0900	23	12	RUS		FMCW		13k	OTH Contayner - 50 sps - Gorodezh
DK2OM	14192,0	0928	06	12	RUS		F1B	50 75	500 500	RUS navy Kaliningrad - daily
DK2OM	14200,0	1007	24	12	CHN		FMCW		160k	Chinese broadband OTH radar 14200 – 14360 kHz – 10 sps
DK2OM	14205,0	vt	dly	12	CHN ?	no ITU	FSK8	125	1750	ALE, “505” “822” – 60 deg. from DL - CHN ?
DK2OM	14221,0	---	--	12	KGZ		F1B	50	200	CIS-50-50 - Bishkek – daily
DK2OM	14239,0	---	--	12	CHN		PSK4	60	2350	PRC 30 tone modem – LSB mode – LSB QRG – pilot tone 450 Hz
DK2OM	14260,0	vt	dly	12	SRB	YU1BI	FSK8	125	1750	ALE, “YU1BI” – just for info!
DK2OM	14265,0	vt	vd	12	TUR	no ITU	FSK8	125	1750	ALE, “526”
DK2OM	<b>14280,0</b>	<b>1005</b>	<b>Wed.</b>	<b>12</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	0937	15	12	RUS		FMCW		13k	OTH burst radar Contayner - 10 sps - Gorodezh
DK2OM	14294,0	1015	03	12	RUS		PSK2	120	2600	AT3004D – submode idle - Moscow
DK2OM	14295,0	vt	dly	12	SRB	YU1BI	FSK8	125	1750	ALE, “YU1BI” – just for info!
DK2OM	14295,0	vt	dly	12	CHN		FSK8	125	1750	ALE, “320” – “532”
DK2OM	<b>14295,2</b>	<b>0930</b>	<b>06</b>	<b>12</b>	<b>TJK</b>		<b>A3E</b>		<b>9k</b>	<b>3<sup>rd</sup> from Radio Tajik on 4765 kHz – daily, all day – exact (14295.174 kHz on Nov. 13<sup>th</sup>)</b>
DK2OM	14301,8	--	---	12	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	12	CHN	no ITU	FSK8	125	1750	ALE, “402”
DK2OM	14328,0	vt	dly	12	CHN	no ITU	FSK8	125	1750	ALE, “139” “534” “772” – West China
DK2OM	14330,0	vt	dly	12			FSK8	125	1750	ALE, “BV4”
DK2OM	14334,0	vt	vd	12	CHN	no ITU	FSK8	125	1750	ALE, “249” “255” “763”
DK2OM	14344,7	--	---	12	CHN		PSK8	2400	2400	modified MIL-188-110A - 600 bps short – 14344.650 kHz – daily, all day
DK2OM	14346,0	1121	16	12	THA	HS0ZEA	A1A			HS0ZEA beacon – 14345.950

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										kHz - every 5 minutes – daily - just for info!
DK2OM	14346,0	1115	16	12	RUS		F1B	75	250	Chita
DK2OM	14346,0	vt	vd	12	HRV RUS D		FSK8	125	1750	ALE, “9A0ZG” “RX3ARZ” “DK0ESD” – just for info – various times, daily
DK2OM	14351,7	0735 ady	02 dly	12	E		OFDM	30	2700	OFDM 73 + intro tone – experimental transmissions – Las Palmas – just for info!
DK2OM	18100,0	vt	vd	12	MRC	no ITU	FSK8	125	1750	ALE, “CD” “C3” “R3” “G3” “E4” “E5” “Z2” “FORD” – daily, various times
DK2OM	18106,0	vt	vd	12	POR	CT2GOY	FSK8	125	1750	ALE, “CT2GOY” – just for info!
DK2OM	18107,0	vt	vd	12	RUS	RDL	F1B	50	200	CIS-50-200 - Moscow – idle and traffic – Russian navy – various days and times – shared band!
DK2OM	18117,5	vt	vd	12	POR	CT2IXQ	FSK8	125	1750	ALE, “CT2IXQ” – just for info
DK2OM	18140,0	vt	dly	12	SRB	YU1BI	FSK8	125	2600	ALE, “YU1BI” – just for info!
DK2OM	21000,0	1046	09	12	CHN		NON			carrier – via VK weak – vy weak audible in Europe at 1145 utc, not in JA - location South China
DK2OM	21000,0	vt	vd	12	SDN		USB			MFA Sudan – Khartoum with emba Yemen – voice traffic
DK2OM	21000,0	vt	vd	12	B		USB			Brazilian pirates – Rio de Janeiro with North Brazil – also: 24.09.2015 at 1650 utc
DK2OM	21002,2	vt	vd	12	SDN	!0000 !9999 !8888	F1B	100	170	21002.15 kHz - Pactor 1 encrypted – MFA Sudan – Khartoum with emba Yemen
DK2OM	21020,0	0902	17	12	CYP		FMCW		20k	splatter from 20990 – OTH radar Cyprus – 50 sps
DK2OM	21070,0	1028	18	12	CYP		FMCW		20k	OTH radar Cyprus – 50 sps – disturbing digital modes
DK2OM	21096,0	vt	dly	12	INS	YD00XH	FSK8	125	1750	ALE, “YD00XH3” – daily, various times - just for info!
DK2OM	21100,0	0740	11	12	CYP		FMCW		20k	OTH radar Cyprus – 50 sps
DK2OM	21131,0	vt	vd	12	CHN	no ITU	FSK8	125	1750	ALE, “A92” “L02” – Chinese diplo
DK2OM	21141,0	vt	vd	12	GEO		PSK8A	2400	2400	Stanag4538 – GEO MIL with AFG - daily
DK2OM	21145,0	vt	dly	12	MRC	no ITU	FSK8	125	1750	ALE, “B301”, “C3”, “IR4” “T4” “E4” “A2” “CD” “K3” “KB2” “J5” “GS4” “R3” – various times, daily
DK2OM	21145,8	ady	dly	12	I	IZ3DVW	A1A			IZ3DVW beacon – 21145,75 kHz - not coordinated with IARU
DK2OM	21150,0	1330	20	12	TUR		FMCW		20k	OTH radar Cyprus - 50 sps
DK2OM	21160,0	1103	02	12	RUS		F1B	100	2000	4th from 5290 kHz (500 Hz shift) – St. Peterburg
DK2OM	21190,0	---	--	12	RUS		F1B	100	1000	harmonic from 10595 kHz - Moscow - daily
DK2OM	21231,0	0855	18	12	AUS		FMCW		10k	Australian OTH radar JORN – 2.0 sec bursts – 30, 32, 34 and 36 sps – intro tones
DK2OM	21295,0	0918	18	12	AUS		FMCW		10k	Australian OTH radar JORN – 1.7 sec bursts – 42, 44, 46 and 48 sps – intro tones
DK2OM	21400,0	0928	24	12	RUS		F1B	50	2000	harmonic from 5350 kHz – area of Moscow - daily
DK2OM	21400,0	0928	17	12	CYP		FMCW		20k	OTH radar Cyprus – 50 sps
DK2OM	21409,5	0756	17	12	RUS		F1B	100	2000	F1B 100 / 2000 - CIS14 – harmonic from 10704.75 - Jekaterinburg, RUS - daily
DK2OM	21436,0	---	--	12	RUS		PSK2A	120	5200	AT3004D – harmonic from

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										10718.0 kHz - Sevastopol
DK2OM	21438,0	0855	02	12	RUS	RCV	A1A			RIP90 de RCV - RUS Navy Sevastopol - daily
DK2OM	21446,0	ady	dly	12	THA	HS0ZEA	A1A			HS0ZEA beacon – every 5 minutes - just for info!
DK2OM	25000,0	vt	vd	12	FIN		A3E			time signal Helsinki – just for info – carrier on 25000 – dots on 25001 and 24999 – daily, all day
DK2OM	28000,0	vt	vd	12	B		A3E			Brazilian CBers – 28000 – 28315 – daily, all day - no change
DK2OM	28000,0	0930	dly	12	CIS		F3E			28000 – 29700 numerous CIS taxi nets – no change
DK2OM	28025,0	---	--	12	POR		F1B	51	300	F1B bursts – 28025.050 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28030,0	---	--	12	POR		F1B	51	340	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28045,0	---	--	12	POR		F1B	51	280	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28050,0	---	--	12	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28051,5	---	--	12	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28060,0	---	--	12	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28065,2	---	--	12	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28065,6	---	--	12	GAB		A3E		980	carrier and dots in USB and LSB, bursts every 60 sec – carrier – Gabon – daily and all day
DK2OM	28075,0	---	--	12	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28085,0	---	--	12	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28100,2	1450	26	12	POR		F1B	51	300	F1B bursts - 28100.780 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28102,1	---	--	12	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28105,0	0927	29	12	RUS		F3E			RUS taxi - daily
DK2OM	28125,0	---	--	12	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28135,0	0928	29	12	RUS		F3E			RUS taxi - daily
DK2OM	28146,0	vt	vd	12	ARG B		FSK8	125	1750	ALE, “LU8EX” “PY2TI” “DL1” – just for info!
DK2OM	28165,0	0939	29	12	RUS		F3E			RUS taxi - daily
DK2OM	28175,0	1017	31	12	RUS		F3E			RUS taxi - daily
DK2OM	28200,0	vt	vd	12	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28224,4	---	--	12	GAB		A3E			carrier and dots +/- 770 Hz - bursts every 60 sec – Gabon – daily and all day

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	28225,0	0925	29	12	RUS		F3E			RUS taxi - daily
DK2OM	28249,6	---	--	12	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28250,0	1041	20	12	E		A3E			Spanish CBers
DK2OM	28250,5	---	--	12	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28255,0	0940	29	12	RUS		F3E			RUS taxi - daily
DK2OM	28265,0	0914	29	12	RUS		F3E			RUS taxi
DK2OM	28275,0	1012	15	12	E		A3E			Spanish pirates
DK2OM	28275,0	0958	18	12	RUS		F3E			RUS taxi - daily - Moscow
DK2OM	28275,1	---	--	12	AF		F1B	51	300	F1B bursts - west of Lisbon - Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28312,5	vt	vd	12	POR	CT2IXQ	FSK8	125	1750	ALE. "CT2IXQ" - just for info
DK2OM	28315,0	vt	dly	12	POR		F1B	51	320	F1B bursts - west of Lisbon - Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28345,1	---	--	12	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28425,0	1058	21	12	POR		F3E			pirates in Portuguese voice
DK2OM	28435,0	----	--	12	E		F1B	81.9	140	Datawell-buoy "Waverider" - 28435.040 kHz - Costa del Sol - Malaga
DK2OM	28459,8	----	--	12	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28459,9	---	--	12	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28499,8	---	--	12	MEa		F1B	81.9	140	Datawell-buoy "Waverider" - 28499.875 kHz - Persian Gulf
DK2OM	28521,0	1050	25	12	FEa		F1B	50	200	Far East
DK2OM	28567,0	1046	25	12	FEa		F1B	40.5	500	Far East
DK2OM	28701,1	---	--	12	GAB		A3E		1056	carrier and dots +/- 528 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28751,2	---	--	12	GAB		A3E		1080	carrier and dots +/- 540 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28845,5	---	--	12	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28901,1	---	--	12	GAB		A3E		1056	carrier and dots +/- 528 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28935,0	0940	29	12	RUS		F3E			RUS taxi
DK2OM	28968,0	0852	17	12	IRN		FMCW		50k	OTH radar Iran - 307 sps
DK2OM	29114,0	---	--	12	RUS		F1B	100	2000	harmonic from 14557.0 kHz - Moscow
DK2OM	29175,0	0908	12	12	RUS		F3E			RUS taxi
DK2OM	29230,0	0942	29	12	RUS		F3E			RUS taxi
DK2OM	29249,9	---	--	12	E		F1B	81.9	140	Datawell-buoy "Waverider" - 29249.890 kHz - Fuerteventura - daily, all day
DK2OM	29335,0	0941	29	12	RUS		F3E			RUS taxi - daily
DK2OM	29375,0	---	--	12	I		F1B	81.9	140	Datawell-buoy "Waverider" - 29374.898 kHz - Gallipoli, South Italy - daily, all day
DK2OM	29387,5	---	--	12	IND		F1B	81.9	140	Datawell-buoy "Waverider" - 29387.460 kHz - Indian NW coast, close to Pakistan - daily, all day
DK2OM	29400,0	---	--	12	USA		F1B	81.9	140	Datawell-buoy "Waverider" - 29400.070 kHz - USA north-

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										east coast – NY daily, all day
DK2OM	29420,0	0955	13	12	IRN		FMCW		50k	OTH radar Iran – 925 sps splatters from 29750
DK2OM	29450,0	---	--	12	MRC		F1B	81.9	140	Datawell-buoy “Waverider” – 29449.880 kHz - area of El Aaiun – Morocco - daily, all day
DK2OM	29500,0	---	--	12	G		F1B	81.9	140	Datawell-buoy “Waverider” – area of Gibraltar – daily, all day
DK2OM	29525,0	---	--	12	MRC		F1B	81.9	140	Datawell-buoy “Waverider” – 29524.990 kHz - Agadir - Morocco – daily, all day
DK2OM	29625,0	---	--	12	USA		F1B	81.9	140	Datawell-buoy “Waverider” – 29625.024 kHz - USA north-east coast – daily, all day

### IRTS – Ireland – EI3GYB (Michael)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
EI3GYB	1810.0	1815-1846	02	12	POR or MM		USB			Portuguese fishermen
EI3GYB	1810.0	1800-1820	04	12	POR or MM		USB			Portuguese fishermen
EI3GYB	1812.0	0010	15	12	RUS		USB/LS B			Russian navigation system, very weak
EI3GYB	1812.0	1900	15	12	RUS		USB/LS B			Russian navigation system, extremely weak
EI3GYB	1896.5	0115	11	12	D		PSK8	2400	2400	German Navy, all day and night, every day. Always a monster signal.
EI3GYB	1929.0	1745	13	12	POR or MM		USB			Portuguese fishermen
EI3GYB	3500.0	2145	11	12	POR or MM		USB			Portuguese fishermen
EI3GYB	3515.0	1910	16	12	POR or MM		USB			Portuguese fishermen
EI3GYB	3520.0	1900-1910	16	12	E or MM		USB			Spanish fishermen. Stopped their conversation and signed off after I called “CQ” all the time.
EI3GYB	3533	1800-1815	09	12	HOL or MM		USB			Dutch fishermen
EI3GYB	3525.8	1420	18	12	IRL or MM		USB			Three people with Cork accent, Irish fishermen
EI3GYB	3525.8	1710-1724	18	12	IRL or MM		USB			Irish fishermen, Cork accent. One is called David. “Talk to you later”
EI3GYB	3535.0	1500-1520	14	12	POR or MM		USB			Portuguese fishermen
EI3GYB	3540.0	0915	19	12	E or MM		USB			Spanish fishermen
EI3GYB	3543.3	1755	15	12	IRL or G		USB			Irish fishermen, strong Northern Irish accent
EI3GYB	3543.3	1130	17	12	IRL or MM		USB			Irish fishermen
EI3GYB	3538.9	1835	18	12	F or MM		USB			French fishermen. Stopped their conversation and left after I started calling “CQ”.
EI3GYB	3550.0	1850-1855	15	12	IRL		USB			Irish fishermen, very strong. “Until tomorrow”.
EI3GYB	3597.5	1740	13	12	F or MM		USB			French fishermen
EI3GYB	3525.80	1910-1926	16	12	IRL		USB			Irish fishermen with strong Cork accent. Called each other Dennis and Jim. Kenmare, Ballycotton mentioned. Talk

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
										about "fucking" food.
EI3GYB	3651.5	1415	01	12	E or MM		USB			Spanish fishermen
EI3GYB	3738.0	1520	16	12	POR or MM		USB			Portuguese fishermen
EI3GYB	3756.0	1930	07	12	RUS		A1A			The Pip- daily, every evening and night
EI3GYB	3770.0	1000	10	12	E or MM		USB			Spanish fishermen
EI3GYB	7000.00	2100	14	12	RUS		H3E			Buzzer
EI3GYB	7000.0	1430	18	12	RUS		H3E			Buzzer, not strong
EI3GYB	7000.0	1900	25	12	RUS		H3E			Buzzer- not strong
EI3GYB	7041.0	2115	14	12	UNID		Radar			7021 to 7051 kHz
EI3GYB	7200.0	1030	11	12	CHN		AM			CRI BC station
EI3GYB	10140.0	1910	21	12	UNID		USB			Arab voices.2 persons in conversation
EI3GYB	14080.0	1930-1950	14	12	UNID		USB			Arab voices, two men, conversation
EI3GYB	14170.0	1330-1355	18	12	UNID		USB			Loud music
EI3GYB	14295.0	1330	20	12	TJK		A3E			Harmonic from Radio Tajikistan
EI3GYB	14350.0	1500	01	12	UNID		Digi			Wide signal from 14348 to 14352 kHz. Daily.
EI3GYB	14350.0	1820	03	12	UNID		DIGI			Wide signal from 14348 to 14352 kHz. Daily.
EI3GYB	14350.0	1100	07	12	UNID		Digi			Wide signal from 14348 to 14352 kHz. Daily.
EI3GYB	14350.0	1345	08	12	UNID		Digi			Wide signal from 14348 to 14352 kHz- daily
EI3GYB	21000.0	1010	10	12	UNID		Carrier			Weak carrier
EI3GYB	21179.0	1145	10	12	UNID		Radar			Radar from 21160 to 21200 kHz, very strong
EI3GYB	21207.0	1430	01	12	UNID		CRY 2001			Probably Spanish fishermen
EI3GYB	21240.0	1400	21	12	UNID		Radar			Radar from 21213 to 21253 kHz, very strong
EI3GYB	21357.0	1000	12	12	UNID		CRY 2001			Probably Spanish fishermen

### KARS – Kuwait – 9K2RR (Faisal)

### MRASZ – Hungary - HA7PL (Laci)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SH	DETAILS
MRASZ	3515,0	2113	10	12			USB		Ui. language
MRASZ	3520,0	2044	10	12			LSB		"hallo hallo"
MRASZ	3520,0	2106	20	12			A3E		music
MRASZ	3522,0	1657	6	12			F1B	250	Ui.
MRASZ	3522,0	1933	22	12			F1B	250	Ui.
MRASZ	3525,0	1909	13	12			A3E		Ui. language
MRASZ	3525,0	1937	29	12			A1A		dots, deliberate disturbance
MRASZ	3540,0	1923	29	12			A3E		Ui. language
MRASZ	3547,0	1945	10	12			A1A		5f "83637 83637 57445 57445" 0=T
MRASZ	3572,0	1742	17	12			A1A		figs. 9746993T7472 9739993T75142"
MRASZ	3583,6	1902	29	12			LSB		english fonetic letters, I, P, R, U
MRASZ	3589,6	1517	20	12			N0N		
MRASZ	3590,0	1628	18	12			USB		italian man
MRASZ	3593,7	2110	27	12	RUS	"D"	A1A		Cluster beacon "D"
MRASZ	3593,8	vt	ady	12	RUS	"P"	A1A		Cluster beacon "P"
MRASZ	3594,0	2107	27	12	RUS	"C"	A1A		Cluster beacon "C"
MRASZ	3600,0	1651	5	12			N0N		

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SH	DETAILS
MRASZ	3600,0	1625	17	12			A1A		OK0EN, QRP beacon
MRASZ	3608,0	1659	6	12			F1B	250	Ui.
MRASZ	3658,0	vt	ady	12		"V"	A1A		slow V string, solitary beacon?
MRASZ	3682,5	2018	22	12			F1B	250	Ui.
MRASZ	3700,0	1701	6	12			LSB		Russian language, music, chaos
MRASZ	7000,0	1702	6	12	RUS		H3E		buzzer, hrd: 10, 18, 23, 24
MRASZ	7016,0	1313	13	12			PSK2		AT3004D
MRASZ	7018,0	1702	6	12			F1B	800	Ui.
MRASZ	7018,0	1349	26	12			F1B	1000	Ui. hrd: 26
MRASZ	7034,0	1935	22	12			PSK2		AT3004D
MRASZ	7041,0	1218	10	12	I		A1A		"vvv vvv de IW2ODG" beacon
MRASZ	7048,0	2056	27	12	I		LSB		italian hams
MRASZ	7050,0	1201	10	12			LSB		russian, music chaos, hrd:18, 23, 24, 26, 31
MRASZ	7055,0	1200	10	12			LSB		Russian language, politics, music, chaos
MRASZ	7055,0	1310	26	12			LSB		Russian language, music, chaos
MRASZ	7070,0	1325	13	12			LSB		music, chaos
MRASZ	7072,0	1543	23	12			PSK2		AT3004D
MRASZ	7089,0	1542	23	12			PSK2		AT3004D
MRASZ	7102,5	1417	26	12			PSK2		AT3004D
MRASZ	7120,0	1645	5	12	SOM		A3E		BC, Radio Hargaysa, hrd: 15, 17, 18,
MRASZ	7144,0	1611	26	12			A1A		non ham
MRASZ	7200,0	1208	10	12			A3E		BC splatter 5 kHz down
MRASZ	7205,0	1828	20	12			A3E		BC splatter, 10 kHz down
MRASZ	10130,0	1709	23	12			OTHR		10100-10150 kHz
MRASZ	10132,0	1743	23	12			OTHR		
MRASZ	14000,2	1337	24	12			N0N		
MRASZ	14135,0	1249	26	12			OTHR		14125-14140 kHz
MRASZ	14192,0	1130	31	12			F1B		
MRASZ	14345,0	1335	24	12			USB		Ui. non ham
MRASZ	21000,3	1339	24	12			N0N		
MRASZ	28000,5	1340	24	12			N0N		

### OEVSV – Austria – OE3GSA (Gerd)

### PZK – Poland – SP9BRP (Jan)

### REF 1 – France – F5MIU (Francis)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	Sh /Bw	DETAILS
R.E.F.									<b>December 2015</b>
F4FRO	3622	2240	1	12			fmCW	Wide !	OTHR (no more info)
F5MIU	7035	1722	14	12			fmCW	20kHz	OTHR S8, 20pps
F5MIU	10065	1835	12	12			USB	3kHz	Fisherman Spanish or Portugese S3
F5MIU	10122	1728	25	12			USB	3kHz	Fisherman ? S7Arabic lang.
F5MIU	10130	1820	4	12			fmCW	20kHz	OTHR S9, 20pps clean !
F5MIU	10145	1846	6	12			fmCW	20kHz	OTHR S7, 20pps
F5MIU	14180	0854	25	12			fmCW	10kHz	OTHR S7, 15pps 3s on, 2s off
F5MIU	14185	0857	23	12			fmCW	20kHz	OTHR S7, 20pps
F5MIU	14200	0840	15	12			fmCW	180kHz	OTHR S8, 5pps
F5MIU	18070	0850	12	12			fmCW	20kHz	OTHR S8, 20pps
F5MIU	18210	0851	25	12			fmCW	<b>100kHz</b>	OTHR S4, 40pps Merry Xmas !
F5MIU	21060	0845	25	12			fmCW	20kHz	OTHR S7, 20pps Merry Xmas !
F5MIU	21310	0900	14	12			fmCW	20kHz	OTHR S4, 20pps
F5MIU	21390	0852	22	12			fmCW	20kHz	OTHR S6, 20pps
F5MIU	21450	0855	22	12			fmCW	20kHz	OTHR S6, 20pps



## REF 2 – France – F5JBR (Andre)

## REP – Portugal – CT4AN (Jose Francisco)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	3520	19.08	07	12			J3E-U			Fishermen, unid language
REP	<b>3522</b>	<b>00.31</b>	<b>25</b>	<b>12</b>	<b>RUS</b>		<b>F1B</b>	<b>75.75</b>	<b>250</b>	<b>CIS 36-50, Russia</b>
REP	3525.7	17.10	13	12			J3E-U			English speaking fishery
REP	3640	17.06	13	12	E		J3E-U			Spanish fishery
REP	3651.5	11.45	03	12	E		J3E-U			Spanish fishery
REP	3690	22.21	26	12	E		J3E-L			Spanish fishery, Galician dialect
REP	<b>3697.5</b>	<b>18.21</b>	<b>14</b>	<b>12</b>			<b>PSK2</b>			<b>AT3004D modem, unid</b>
REP	<b>3723</b>	<b>18.26</b>	<b>14</b>	<b>12</b>	<b>RUS</b>		<b>F1B</b>	<b>75.75</b>	<b>250</b>	<b>CIS 36-50 inverse mode, Russia</b>
REP	<b>3743</b>	<b>19.07</b>	<b>10</b>	<b>12</b>			<b>PSK2</b>			<b>AT3004D modem, unid</b>
REP	<b>3756</b>	<b>18.51</b>	<b>14</b>	<b>12</b>	<b>RUS</b>		<b>A3E</b>			<b>Russian mil channel marker</b>
REP	<b>3795</b>	<b>21.12</b>	<b>06</b>	<b>12</b>	<b>I</b>		<b>J3E-L</b>			<b>Italian hams, music, fake DX Qso's</b>
REP	7000	18.21	02	12			J3E-L			Several Intruders and jam
REP	<b>7034</b>	<b>19.48</b>	<b>22</b>	<b>12</b>	<b>RUS</b>		<b>QPSK</b>			<b>Russian AT3104 – Kaliningrad</b>
REP	<b>7035</b>	<b>18.54</b>	<b>14</b>	<b>12</b>			<b>FMCW</b>	<b>50</b>	<b>15k</b>	<b>OTH radar</b>
REP	7060	19.01	11	12			F1B	75	200	Unid transmissions
REP	<b>7089</b>	<b>18.15</b>	<b>04</b>	<b>12</b>	<b>RUS</b>		<b>PSK2</b>			<b>AT3004D – Moscow mil</b>
REP	<b>7100</b>	<b>19.27</b>	<b>10</b>	<b>12</b>			<b>FMCW</b>	<b>10</b>	<b>20k</b>	<b>OTH radar burst mode</b>
REP	7114	22.03	12	12			J3E-U			Unid language fishery
REP	<b>7120</b>	<b>17.40</b>	<b>09</b>	<b>12</b>	<b>SOM</b>		<b>8k00 A3EGN</b>			<b>Voice of Hargaysa BC</b>
REP	<b>7120</b>	<b>18.16</b>	<b>04</b>	<b>12</b>			<b>8k00 A3EGN</b>			<b>BC station, carrier barely audible</b>
REP	10102	11.53	04	12	MRC		J3E-U			Moroccan fishery
REP	10102	11.46	09	12	MRC		J3E-U			Moroccan fishery
REP	10120	17.20	05	12			J3E-U			Unid language fishermen
REP	<b>10130</b>	<b>17.53</b>	<b>12</b>	<b>12</b>			<b>J3E/PSK</b>			<b>STANAG 4285</b>
REP	10130	11.41	09	12	E		J3E-U			Spanish fishery, Galician dialect
REP	10130	11.06	28	12	MRC		J3E-U			Moroccan and Spanish fisheries
REP	10134	11.43	09	12	MRC		J3E-U			Moroccan fishery
REP	10135	20.19	12	12			J3E-L			Unid language
REP	10135	19.42	19	12	MRC		J3E-U			Moroccan fishery
REP	10138	20.25	21	12	B		J3E-U			Brazilian net
REP	<b>10145</b>	<b>18.40</b>	<b>11</b>	<b>12</b>			<b>FMCW</b>			<b>OTH radar</b>
REP	14080	10.18	23	12			J3E-U			Unid language fishry, qrm rtty qso
REP	<b>14105</b>	<b>09.08</b>	<b>20</b>	<b>12</b>			<b>FMCW</b>			<b>OTH radar, 50sps/20kHz</b>
REP	<b>14123</b>	<b>09.55</b>	<b>30</b>	<b>12</b>			<b>FMCW</b>	<b>50</b>	<b>15k</b>	<b>OTH radar</b>
REP	<b>14127</b>	<b>13.24</b>	<b>04</b>	<b>12</b>	<b>RUS</b>		<b>J3E-U</b>			<b>American religious speech dubbed russian</b>
REP	<b>14135</b>	<b>13.34</b>	<b>04</b>	<b>12</b>			<b>FMCW</b>	<b>10</b>	<b>10k</b>	<b>OTH radar burst mode</b>
REP	<b>14190</b>	<b>09.44</b>	<b>19</b>	<b>12</b>	<b>RUS</b>		<b>F1B</b>	<b>75</b>	<b>400</b>	<b>Russian military</b>
REP	<b>14192</b>	<b>11.52</b>	<b>07</b>	<b>12</b>	<b>RUS</b>		<b>F1B</b>	<b>50</b>	<b>250</b>	<b>CIS-50, Russian mil</b>
REP	<b>14225</b>	<b>09.00</b>	<b>16</b>	<b>12</b>			<b>FMCW</b>			<b>OTH radar, 50sps/20kHz</b>
REP	<b>14250</b>	<b>09.38</b>	<b>21</b>	<b>12</b>	<b>RUS</b>		<b>F1B</b>	<b>50</b>	<b>250</b>	<b>CIS 50</b>
REP	<b>18080</b>	<b>13.29</b>	<b>17</b>	<b>12</b>			<b>FMCW</b>	<b>50</b>	<b>20k</b>	<b>OTH radar</b>
REP	<b>18115</b>	<b>17.31</b>	<b>04</b>	<b>12</b>		<b>2004</b>	<b>MFSK</b>			<b>MilAle 2004 clg 2001 – not ham service</b>
REP	28000	14.30	01	12	B		J3E-U			Brazilian CBs
REP	28120	11.44	22	12	E		F1B	50	200	Enagal GPS buoy
REP	28145	15.08	11	12	RUS		F3E			Taxis
REP	28185	14.55	15	12	RUS		F3E			Russian taxi dispatcher
REP	28240	18.17	20	12	RUS		F3E			Taxis
REP	<b>28300</b>	<b>11.29</b>	<b>10</b>	<b>12</b>			<b>FMCW</b>			<b>OTH radar 50sps/20kHz</b>
REP	29145	10.31	13	12	RUS		F3E			Russian taxi dispatch
REP	29150	12.20	07	12			F1B	82	160	Datawell buoy
REP	29165	10.01	14	12	RUS		F3E			Russian taxi dispatcher
REP	29185	11.00	14	12	RUS		F3E			Russian taxi dispatcher
REP	<b>29205</b>	<b>12.11</b>	<b>03</b>	<b>12</b>			<b>FMCW</b>			<b>OTH radar</b>
REP	29250	11.14	28	12			F1B	82	120	Datawell buoy

## RSGB - Great Britain – M0VRR (Vaughan)

SOC	KHz	0000	DD	MM	ITU	IDENT	MODE	BD	SHIFT	DETAILS
RSGB	7009 – 7027	1534	03	12			FMCW			OTHR 50 Hz PRF
RSGB	14024	0856	03	12			J2X			MS5 on tfc
RSGB	14048.5	0857	04	12			F1B ?			2 tones spaced 600 Hz – pulsing at 500 mSecs
RSGB	14084	0856	06	12			F1B	75	250	sync cipher tfc & revs
RSGB	14084	0903	22	12			F1B	75	250	sync cipher tfc & revs
RSGB	14102- 14114	0854	16	12			FMCW			OTHR 10 Hz PRF
RSGB	14110 – 14133	0902	30	12			FMCW			OTHR 50 Hz PRF
RSGB	14121 – 14133	0916	26	12			FMCW			OTHR 10 Hz PRF
RSGB	14128 – 14291	0856	15	12			FMCW			OTHR 10 Hz PRF
RSGB	14162 – 14325	0855	15	12			FMCW			OTHR 10 Hz PRF
RSGB	14163 – 14323	0858	15	12			FMCW			OTHR 10 HZ PRF
RSGB	14174 – 14195	0920	23	12			FMCW			OTHR 50 Hz PRF
RSGB	14178 – 14192	1350	22	12			FMCW			OTHR 10 Hz PRF
RSGB	14181 – 14198	0923	29	12			FMCW			OTHR 10 Hz PRF
RSGB	14192	ady	vd	12			F1B	50	500	sync cipher tfc & revs
RSGB	14192	0902	31	12			F1B	50	200	sync cipher tfc & revs
RSGB	14208 – 14227	1318	12	12			FMCW			OTHR 50 Hz PRF
RSGB	14234.7	0858	16	12			J2X			wideband data signal + 3300 Hz pilot – off 0903
RSGB	14242 – 14253	0856	01	12			FMCW			OTHR 10 Hz PRF
RSGB	14259	0859	16	12			J2X			wideband data signal + 3300 Hz pilot – off 0903
RSGB	14283.3	0859	16	12			J2X			wideband data signal + 3300 Hz pilot – off 0903
RSGB	14308	0859	05	12			F1B	75	500	sync cipher tfc & revs
RSGB	14308	0908	21	12			F1B	75	500	sync cipher tfc & revs
RSGB	18052 – 18076	0922	28	12			FMCW			OTHR 50 Hz PRF
RSGB	18119	0859	04	12			A3A			weak BC station ?
RSGB	18150	0846	09	12			F1B	100	1000	Sync cipher tfc - 2nd harmonic of 9075 KHz 100bd/500 Hz shift
RSGB	21290 – 21300	0833	01	12			FMCW			30 Hz PRF pulse 5 second duration every 30 seconds
RSGB	21300 – 21320	0922	14	12			FMCW			OTHR 50 Hz PRF
RSGB	21438	ady	vd	12			A1A			Russian Mil (Navy)
RSGB	21448.5	ady	vd	12			?		600	2 tones spaced 600 Hz – “sounds like” continuous Pactor 1 calls

**SRAL – Finland – OH2BLU (Pekka)**

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BAUD	SHIFT	REMARKS
SRAL	6998,0	h24	dly	12	RUS	UiTone	R3E			125 Hz tones
SRAL	7012,0	1955	14.	12		UiPTR	F1B			
SRAL	7014,0	1245	9.	12		UiMUX	PSK2	120	2600	
SRAL	7014,0	1100-1200	7.	12		UiPTR	F1A		250	
SRAL	7016,0	1055-1224	5. 8. 13.	12		UiMUX	PSK2	120	2600	
SRAL	7018,0	0320-2030	*	12	RUS	REA4	F1B/A		800/1000	Days: 3. 4. 7. 11. 12. 14. 15. 16. 24. 25. 26. 29.
SRAL	7018,62	0710-1135	*	12		UiCarr	N0N/ F1A		250	Days: 22. 24. 25.
SRAL	7030,0	0600-1410/	*	12		UiPTR	F1B		250	Days: 5. 7. 9. 31.
SRAL	7034,0	1030-1950	22.	12		UiMUX	PSK2	120	2600	
SRAL	7039,0	0600-2030	*	12	RUS	C	A1A			Days: 16. 26. – 29. Moscow
SRAL	7060,0	0640-0910	9.	12		UiPTR	F1B		500	
SRAL	7072,0	1130-1630	23.	12		UiMUX	PSK2	120	2600	
SRAL	7089,0	h24	*	12	RUS	UiMUX	PSK2	120	2600	Days: 4. 5. 22. 23.
SRAL	7098,0	0830-1436/	1. 4.	12		UiPTR	F1B			
SRAL	7120,0	/0330-0500/	dly	12	SOM	R.Hargeis a	A3E			
SRAL	7120,0	/1500-1900/	dly	12	SOM	R.Hargeis a	A3E			
SRAL	7137,0	1450	4.	12		UiMUX	PSK2	120	2600	
SRAL	7140,0	1940-2010/	24.	12		UiCarr	N0N			
SRAL	7144,0	1105-1245/	18.	12		UiMUX	PSK2	120	2600	
SRAL	7162,0	1230-1320/	11.	12		UiPTR	F1B		250	
SRAL	7169,0	0810-1532/	12. 16.	12		UiPTR	F1B/ N0N			
SRAL	7176,0	0745-0800	7.	12		UiPTR	F1B		250	
SRAL	7179,0	0700-1400	6. 19.	12	RUS	UiMUX	PSK2	120	2600	
SRAL	7184,0	0645-0700	24.	12		UiMUX	PSK2	120	2600	
SRAL	7192,9	0920-1455	*	12		UiCarr	N0N			Days: 1. 5. 7. 8. 14. 16.
SRAL	7198,0	0915-0930	4.	12		UiMUX	PSK2	120	2600	
SRAL	7200,0	/0950-1300/	dly	12	CHN	CNR1	A3E			Used as jammer on TWN
SRAL	7 MHz	1600-0630	*	12	RUS	29B6	FMCW			50Hz / 15 kHz , days: 3. 4. 6. 8. 12. 14. 19. 22. 27. 29. 30.
SRAL	10 MHz	1500-0700	*	12		UiOTHR	FMCW			Days: 1. 2. 5. 6. 11. 12. 21.24. 25. 15 & 20 kHz
SRAL	14066,0	1040-1120/	2.	12	RUS	UiMUX	PSK2	120	2600	
SRAL	14084,0	0750	22.	12		UiPTR	F1B		250	
SRAL	14192,0	0800-1230	6. 7.	12	RUS	UiPTR	F1B		200/500	
SRAL	14259,0	0800-0835	11. 16.	12		UiPTR	F1B		500	
SRAL	14280,0	1000-1016/	16. 23.	12		629	R3E-u			
SRAL	14295,0	0530-	dly	12	TJK	R	A3E			3f 4765,00 kHz,

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BAUD	SHIFT	REMARKS
		1330				Tojikiston				Yangiyul TX
SRAL	14 MHz	0700-1400	*	12	RUS	29B6	FMCW			50Hz / 15 kHz, days 1. 9. 12. 23. 25. 30.
SRAL	14 MHz	0600-1500	dly	12	RUS	UiOTHR	FMCW			10Hz / 15 kHz, 30 sec bursts
SRAL	18 MHz	0745-1400	*	12	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz , days: 2. 7. 10. 11. 13. 17. 18. 19. 22. 24.
SRAL	21 MHz	0700-1330	*	12	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz, days: 1. 2. 10. 11. 13. 17. 18. 19. 22. 24.
SRAL	21438,0	0830-1400	*	12	RUS	RCV	A1A			Days: 2. 7. 8. 9. 10. 11. 14. 16. 17. 23. 24. 25. 26. 30.
SRAL	24 MHz	0700-0800	3	12		UiOTHR	FMCW			
SRAL	28 MHz	0630-1230	*	12	IRN	UiOTHR	FMCW			(307 &) 870 Hz / 60 kHz – 300 kHz, days: 1. – 16. 25.
SRAL	28 MHz			12		UiOTHR	FMCW			25/50Hz / 20 kHz, no reports
SRAL	28 MHz			12	RUS	Taxi disp.	F3E			no reports

### USKA – Switzerland – HB9CET (Peter)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
USKA	3532.0	2249	09	12			DQPSK	14x75	5k9	LINK 11 CLEW DNCSB; mode
USKA	3544.5	2233	18	12			J7D	12x120	2k7	PSK-2: CIS12 – AT3004D
USKA	3554.0	2253	09	12			PSK8	2400	~2k4	Stanag 4285 often
USKA	3574.5	2227	18	12			J7D	12x120	2k7	PSK-2: CIS12 – AT3004D
USKA	3595.0 VFO USB	2252	08	12			DQPSK	14x75		LINK 11 CLEW often
USKA	3602.0	0002	09	12			F1B	75	250	
USKA	3738.0	2223	18	12			J7D	(12x120)	2k7	CIS12 idling
USKA	6998.0	1719	01	12			H3E-U Bursts		~3k6	"Buzzer" up to ≥7001.5kHz modulated with 120Hz BD 1.2", BRI 3" Pause 1.8s
USKA	7000.0	0031	01	12			N0N			long lasting carrier often
USKA	7012.6	1937	15	12			J3E-U		2k6	unid language, 2 or more stations
USKA	7014.0	1324	09	12			J7D	(12x120)	2k7	CIS-12 idling
USKA	7018.0	1732	02	12		REA4	F1B	100	1000	ID in F1A
USKA	7018.0	0449	05	12			F1B	100	800	
USKA	7020.0	2218	18	12			J3E-L			unid language, like Asian probably village radio ?
USKA	7033.5	0736	10	12			J7D	(12x120)	2k7	CIS12 idling
USKA	7034.0	1822	14	12			FMOP	50	~13k	OTHR
USKA	7039.3	0515	06	12	RUS	K	A1A			Beacon K Petropavlovsk daily
USKA	7039.4	0616	12	12	RUS	M	A1A			Beacon M Magadan
USKA	7072.0	1619	23	12			J7D	12x120	2k7	PSK-4: CIS12 = AT3104D
USKA	7087.0	2201	24	12			J7D	(12x120)	2k7	CIS12 idling
USKA	7089.0	1327	04	12			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D often
USKA	7089.0	1614	23	12			J7D	12x120	2k7	PSK-4: CIS12 = AT3104D
USKA	7100.0	1726	02	12			OTHR	10	≥ 160k	
USKA	7101.0	0523	06	12			FMOP	50 sps	~13k	OTHR
USKA	7107.0	1733	16	12			FMOP	~41 sps	~10k	OTHR (weak)
USKA	7111.0	1816	21	12			F1B	75	250	
USKA	7120.0	1813	01	12	SOM		A3E			Radio Hargaysa almost daily
USKA	7197.0	1822	01	12	TUR	338013	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	1823	01	12	TUR	303018	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	1824	01	12	TUR	123456	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	1825	01	12	TUR	341013	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	1826	01	12	TUR	317013	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	1827	01	12	TUR	335013	MFSK8	125	1750	MIL 188-141A

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
USKA	7197.0	1836	01	12	TUR	343013	MFSK8	125	1750	MIL 188-141A
USKA	7197.0	1624	18	12	TUR	375013	MFSK8	125	1750	MIL 188-141A; LQA
USKA	7198.0	0441	06	12			J7D	12x120	2k7	PSK-4: CIS12 = AT3104D
USKA	7200.0	1224	25	12			A3E		10k	BC; (TWN or/and MYA ?)
USKA	7205.0	1852	10	12	TUR	VOT	A3E		30k	BC; splattering down to 7190 kHz
USKA	14066.0	0935	02	12			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D with carrier at 14064.0
USKA	14084.0	0946	06	12			F1B	75	250	
USKA	14162.0	0931	02	12			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
USKA	14174.0	0501	06	12				10	≥ 160k	OTHR
USKA	14192.0	1139	01	12			F1B	50	500	CIS 50-50 daily
USKA	14295.0	0612	12	12	TJK		A3E			BC: 3 <sup>rd</sup> of Radio Tajik at 4765 kHz daily
USKA	14300.0 VFO USB	0510	06	12			BPSK	16x75	2k2	Burst system; 16 tones, tone spacing appx 114Hz; 2 pilottones
USKA	21070.0	1122	08	12			FMCW	50	20k	OTHR
USKA	21145.0	0948	02	12		K3	MFSK8	125	1750	MIL 188-141A, To: E45; LQA
USKA	21151.0	0944	02	12			FMCW	50	20k	OTHR
USKA	21410.0	0923	08	12			FMCW	50	20k	OTHR
USKA	21438.0	0920	02	12		RCV	A1A			letters and figures daily

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

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SHIFT	DETAILS
VERON	3557,0	18.04	15	12		UiPTR	F1B		Ptr
VERON	3589,5	18.06	15	12		CIS UiCW	F1A		5BL
VERON	3593,7	18.15	7	12		RUS P	A1A		P-beacon
VERON	3608,0	20.23	12	12		UiPtr	F1B	200	Idling; bad modulation
VERON	3700,0	23.14	19	12		RUS/UKR? UiBC	A3E		Russian music/songs;S9
VERON	3757,5	18.18	7	12		UiCW	A1A		Time Signal
VERON	7011,0	16.04	3	12		OTHR	FMCW		radar
VERON	7036,0	19.12	20	12		UiPtr	F1B	250	Ptr
VERON	7055,5	21.22	19	12		UiMux	PSK8	1k8	
VERON	7089,8	19.57	19	12		TUR UiMux	PSK8	2k4	
VERON	7098,0	09.32	4	12		UiPTR	F1B		Ptr
VERON	7114,0	22.02	12	12		Non- ham	J3E-u		Pirates; Maroc fishery?
VERON	7120,0	18.09	15	12		SOM R.Har	A3E		BC speech
VERON	7120,0	17.24	12	12		SOM R.Hargaysa	A3E		weak S3
VERON	10129,0	15.08	6	12		UiRadar	FMCW	20k	OTHR; 50sps
VERON	10135,0	15.11	11	12		UiRadar	FMCW	20k	OTHR;50sps;QSB
VERON	14192,0	10.37	8	12		UiPtr	F1B	500	Revs
VERON	14192,0	09.35	4	12		CIS UiPTR	F1B		Revs/Ptr (also at 15/12 09.48 utc)
VERON	14245,0	10.23	3	12		OTHR	FMCW		radar
VERON	14270,0	09.12	16	12		OTHR	FMCW		radar
VERON	14280,0	12.30	22	12		OTHR	FMCW		radar
VERON	14334,7	10.27	28	28		UiPTR	F1B		Revs/Ptr (also at 15/12 09.48 utc)
VERON	21438,0	09.43	4	12		RUS RCV	A1A		RCV QTC 793 Nawip 037 2476
VERON	21438,0	14.51	15	12		RUS RCV	A1A		RCIG de RCV QCZ, Nr 278 rpt 32, ads k
VERON	21438,0	09.57	16	12		RUS RCV	A1A		RIP90 de RCV QTC 490 Nawip 033 2512
VERON	21438,0	10.03	16	12		RUS RCV	A1A		RBE86 de RCV QTC 669 Nawip 38 2502
VERON	21438,0	10.09	16	12		RUS RJV	A1A		XXX RJV 46225 Boliwarit 0571 5388 k
VERON	21438,0	10.13	16	12		RUS RCV	A1A		RGX94 de RCV QTC 791 Nawip 030 2466
VERON	21438,0	12.19	18	12		RUS RCV	A1A		RKZ de RCV QTC 235 Prognoz Pogody

# **The monitoring team of IARU Region 1**

**credits:**

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**Many thanks for your interest!**

**A peaceful and successful year 2016!**

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