



Monitoring System

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Co-ordinator of IARUMS Region 1
Editor of the Newsletter

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The monthly newsletter for Region 1

April 2013

The 24 members of the IARUMS Region 1 Monitoring Team:



Acknowledgements

++ ARI: DH7SA – Salvatore ++ ARSK: 5Z4NU - Ted ++ ASTRA: DL1BDF – Mustapha ++ DARC: DJ9KR – Uli ++
++ ERASD: SU1SA – Sayed ++ IARC: 4Z1AB – Amos ++ IRTS: EI5DD - Steve ++ KARS: 9K2RR – Faisal ++
++ MARL: 9H1M – Dominic ++ MRASZ: HA7PL - Laci ++ NARS: 5N9AYM – Yusuf ++ NRRL: LA4EU – Hans Arne ++
++ OEVSV: OE3GSA – Gerd ++ PZK: SP3SUZ – Wladyslaw ++ RAL: OD5RI – Riri ++ REP: CT4AN – Jose ++
++ RSGB: G4BOH - Chris ++ SARL: ZS1FCS - Fred ++ SRAL: OH2BLU - Pekka ++ UBA: ON4VJ - Johny ++
++ URE: EA5DY - Salvador ++ 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) ++ PB2T – Hans (IARU R1 President) ++ 9A5W - Nikola (EC-IARU-R1
++ PTTs: German (BNetzA), BAKOM (Switzerland), OFCOM (UK) ++ Dutch AT ++ SK6AW – DX-Cluster ++ YO9RIJ - Petrica

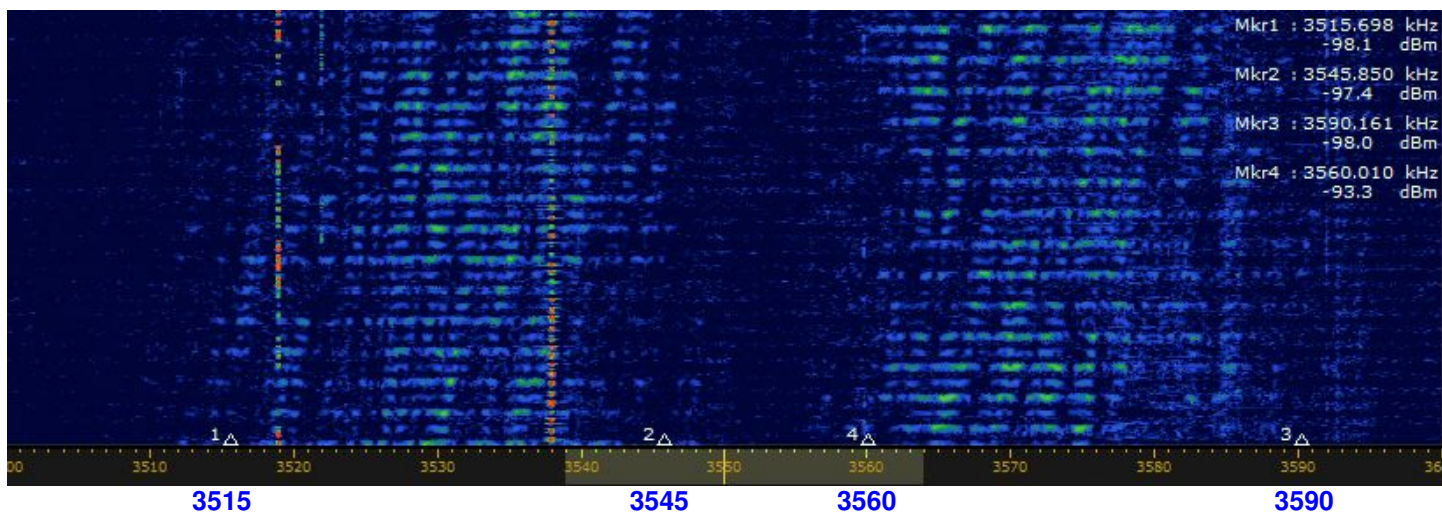
Part 1: News and Infos

1. Russian OTH Radar on 80 m still very active

A Russian OTH Radar was transmitting between 3515 – 3545 and 3560 – 3590 kHz (simultaneously), always 30 - 35 kHz wide and 43.5 sps. The location was the area of Makhachkala, Caspian Sea. Amateurradio and many other services were disturbed in the evening hours. The German and Dutch PTTs were informed.

Recording by DK2OM: <http://www.iarums-r1.org/iarums/sound/3570-rus-othr.wav>

Screenshot: DK2OM with Perseus – Russian OTH Radar on 80 m on April 26th



2. Iran OTH Radar daily on 10 m in April

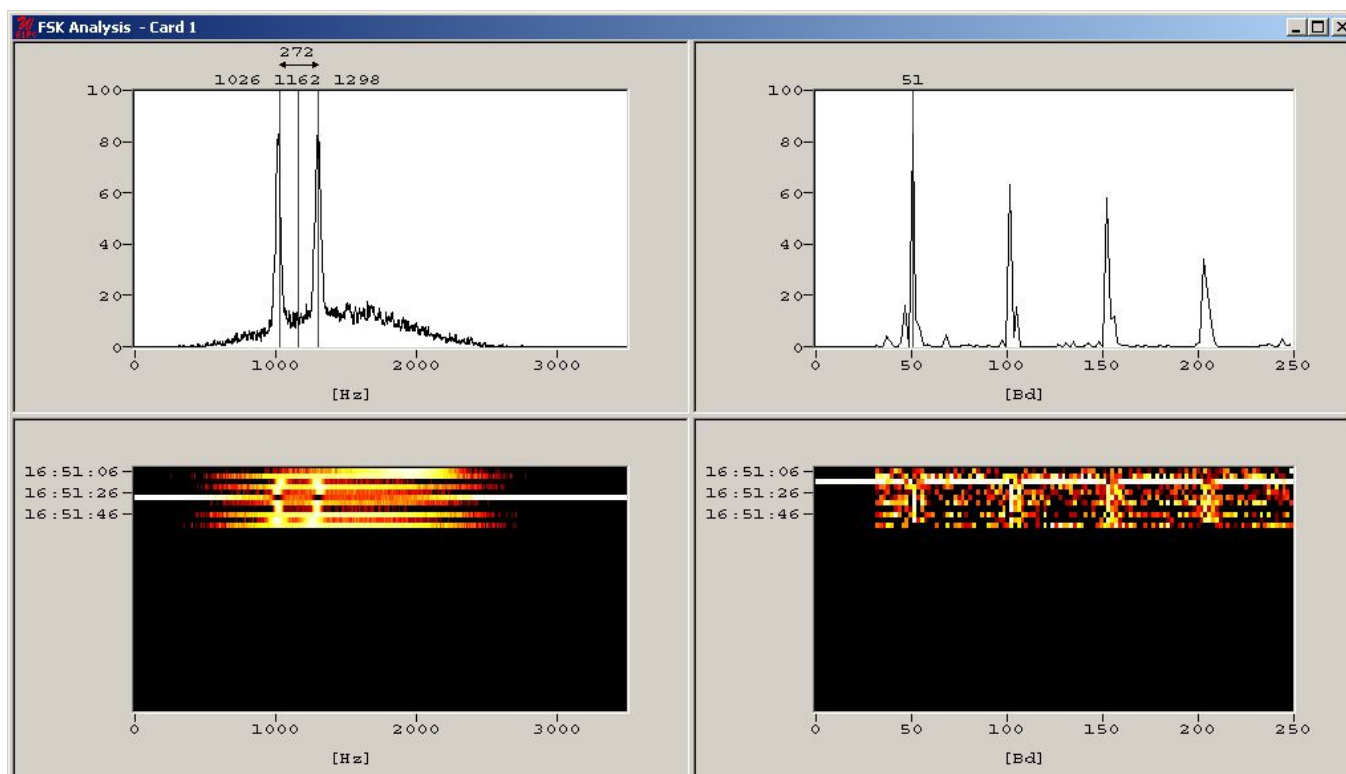
The Iran Radar was daily active on 26000 – 30000 kHz transmitting bursts with 307 and 870 sps and 60 kHz wide and often jumping. The splatters covered 700 kHz and more. The system was even heard in Brazil and Australia. The German PTT (BNetzA) sent an official complaint to Iran. OE3GSA informed the Austrian PTT.

3. Spanish fishery on 3774 kHz in USB

Spanish fishermen disturbed a German amateur net on 3777.5 kHz (LSB) every morning at 0600 utc. The illegal fishery net worked on 3774.0 USB often using the vocoder CRY2001 not respecting any amateur voice traffic as usual.

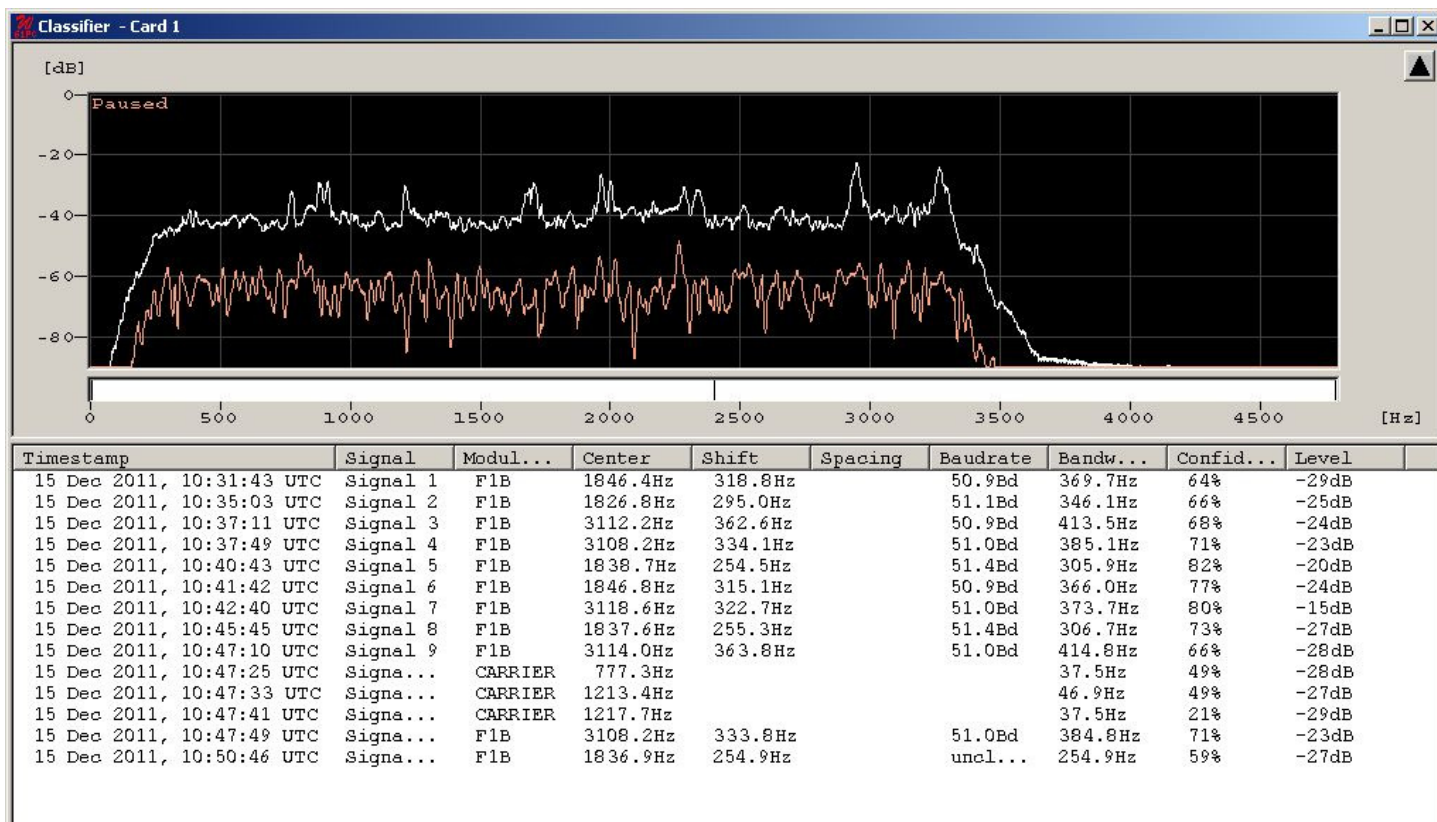
4. Spanish GPS buoys on 28 MHz

Spanish GPS buoys are the new threat of our 28 MHz-band. You can find their bursts between 28000 and 28500 kHz transmitting in F1B with 51 Bd and about 300 Hz shift. They were observed and measured by DK2OM and HB9CET. Location: Atlantic Ocean, west of Portugal. The Portuguese Monitoring System informed the Portuguese authorities. **Screenshot: DK2OM with Wavcom W-Code FSK analysis showing Baudrate and shift**



The Wavecom Classifier was an excellent tool during our observations. Many thanks to HB9CET, CT4AN and CT4IWW for assistance! [Screenshot: DK2OM with W-Code and Classifier](#)

Recording by DK2OM: <http://www.iarums-r1.org/iarums/sound/f1b-51.wav>



5. Russian military traffic and radar on our bands

Russian military traffic increased on 7, 14 and 21 MHz. Modes: F1B, PSK, OFDM60, vocoder Yakhta. The Russian OTH radar Nizhniy Novgorod was often active around 14250 kHz (50 sps, 20 kHz wide) during the morning hours.

6. Radio Eritrea and Radio Ethiopia

The hostile brothers were not audible on 7100 – 7200 kHz in Europe in April.

7. Membership of ARR in IARUMS

YO9RIJ Petrica Stolnicu, is the vice president of A.R.R. the new radioamateur society (**Asociatia Radioclubul Romaniei- Romanian Radioclub Association**). Petrica told me, that he is very interested in supporting our Monitoring System. Problem: ARR cannot be an official member of the IARU, because the FEDERATIA ROMANA DE RADIOAMATORISM (FRR) is already IARU member. PB2T, President of IARU Region 1, said that only one national society can be an IARU member. So ARR will be a non-official member of our system until the situation will be cleared. Anyway: Petrica is welcomed to our system and a participant of our services.

8. DARC Monitoring System and IARUMS Region 1 Meeting at the Hamradio 2013

The annual meeting of the DARC Monitoring System will take place on Saturday June 29th at room "Swiss" from 1000 – 1130 local time.

Program:

Opening by DK2OM

Lectures:

Mr. Grim (German BNetzA) tells us how the BNetzA is handling complaints of the DARC Monitoring Systems

The IARUMS Region1 Vice Coordinator HB9CET, Peter Jost, gives us valuable informations about the monitoring practice.

A small IARUMS Region 1 meeting will take place at 1140 local time at the stand of the DARC HF-Department. All Coordinators and friends are invited to meet us there.

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://www.iaru-r3.org/ms/>

Intruderlogger Region 1

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

ITU-Monitoring Reports:

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

Part 2: Detailed reports of the national Co-ordinators

DD = day ** MM = month ** dly = daily ** vt = various times ** vd = various days ** BD = Baud ** SH = shift ** SP = spacing ** Mode = mode of transmission ** A3E = AM ** A1A = CW ** J3E-U = USB ** J3E-L = LSB ** FSK (F1B) = frequency shift keying ** PSK = phase shift keying ** OFDM = othogonal 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 = 5 cyrillic lettergroups

ARSK MONITORING OVERVIEW FOR APRIL 2013

The only significant intercept was of two USB stations using a Chinese language (but which of the eight major ones was not known) on 7072 kHz, heard strongly on 21st April at 0638Z. They have not been heard again, however. Khartoum, Asmara, Addis Ababa and Hargeisha maintained their broadcasts on the 40 meter band as usual

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

ARSK – Kenya – 5Z4NU (Ted) ---

not available

DARC 1 – Germany – DJ9KR (Uli) Illicit and broadcast intruders

CLUB	kHz	UTC	DD	MM	ITU	Call Sign	MODE	BD	SH	Remarks and Comments
DARC	7038,7	vt	dly	04	UKR	beacon D	A1A			beacon "D" - Sevastopol
DARC	7038,9	vt	vd	04	RUS	beacon S	A1A			beacon "S" - Severomorsk
DARC	7039,0	vt	vd	04	RUS	beacon P	A1A			beacon "P", Kaliningrad
DARC	7039,0	vt	vd	04	RUS	beacon C	A1A			beacon "C" - Moscow heard 0700, 1800, 1900
DARC	7039,2	vt	vd	04	RUS	beacon L	A1A			beacon "L" - St. Petersburg
DARC	7039,2	vt	vd	04	RUS	beacon F	A1A			beacon "F" - Vladyvostok
DARC	7039,4	vt	vd	04	RUS	beacon K	A1A			beacon "K" - Petropavlovsk
DARC	7039,5	vt	vd	04	RUS	beacon M	A1A			beacon "M" - Magadan
DARC	7054,0	vt	dly	04	RUS	RUS Navy Moscow	F1B	50	200	heard 1817 (fast reversals), 2035 (printer), all month all day
DARC	7054,0	1703	01	04	RUS	RUS Navy Moscow	F1B	50	200	fast reversals
DARC	7078,6	vt	01	04	TWN	R.Taiwan Intl.	A3E			Fr px, IM, fundamental 7325, 2nd IM found on 7571,4 - ann 1956 - ID: www.rti.org.tw rti@rti.org.tw
DARC	7105,0	vt	15	04	TUR	R.Tunisia	A3E			S4-signal, fundamental found on 7225, 1858 - 2037
DARC	7120,0	1703	01	04	SOM	R.Hargaysa	A3E			is active
DARC	7120,0	1659	16	04	SOM	R.Hargaysa	A3E			typical mx
DARC	7120,0	1730	17	04	SOM	R.Hargaysa	A3E			is active
DARC	7145,0	vt	01	04	TUR	R.Turkey	A3E			compl. distorted Turkish px, fundamental on 7275 kHz, IM also on 7275 kHz - heard 1707 - 1730 s/off

CLUB	kHz	UTC	DD	MM	ITU	Call Sign	MODE	BD	SH	Remarks and Comments
DARC	7195,0	1952	13	04		UiMOD	XXX			bubbling noise
DARC	14295,1	0823	08	04	TJK	R.Tajikistan	A3E			pumping carrier
DARC	21001,5	1714	17	04	RUS	Vocoder	F1B	100	150	Yakhta heard, scrambled voice
DARC	21100,0	vt	17	04	E	UiILL	J3E-U			2 Spanish male persons, no hams - heard 1720 - 1724 - left QRG after request/DJ9KR in Spanish
DARC	21133,2	1704	16	04	S.As	UiILL	J3E-U			unid male voices, S.Asia
DARC	21197,1	vt	16	04	S.As	UiILL	J3E-L			unid S.Asian male voices, heard 1707 - 1722
DARC	21275,0	0821	12	04		UiOTH-Radar	FMCW			rattling pulses, is mirror of 21325
DARC	21325,0	0821	12	04		UiOTH-Radar	FMCW			rattling pulses
DARC	21375,0	0821	12	04		UiOTH-Radar	FMCW			rattling pulses, is mirror of 21325
DARC	21427,0	1710	16	04		UiOTH-Radar	FMCW			rattling pulses
DARC	28015,9	vt	vd	04		Driftnet Buoys	A1A			AC7GZ, DJ7KG, DK2OM, KG4GVV, and W5ZA reported 92 Driftnet Buoys in the range 28015,9 to 28456 kHz
DARC	28035,0	0820	08	04	CIS	Taxi	F3E			female in Russian voice
DARC	28045,0	vt	15	04	RUS	Taxi	F3E			Moscow region
DARC	28055,0	vt	15	04	CIS	Taxi	F3E			Moscow region
DARC	28095,0	vt	15	04	RUS	Taxi	F3E			Moscow city
DARC	28115,0	vt	15	04	RUS	Taxi	F3E			Moscow
DARC	28135,0	0740	15	04	RUS	UiILL	A3E			2 m in Russian voice
DARC	28135,0	0740	15	04	IRN	OTH-Radar	FMCW			2 tones, 307 and 870 Hz / sps, 600 kHz splatters
DARC	28144,4	1513	01	04	CIS	UiILL	F3E			unid dialect and Russian
DARC	28145,0	0820	08	04	CIS	Taxi	F3E			female in Russian voice
DARC	28145,0	0745	15	04	IRN	OTH-Radar	FMCW			2 tones, 307 and 870 Hz / sps, 600 kHz splatters
DARC	28155,0	0757	15	04	RUS	Taxi	F3E			male to female in Russian voice, S9-signal for female
DARC	28165,0	0814	15	04	RUS	Taxi	F3E			female in Russian voice
DARC	28193,0	0814	15	04	RUS	Taxi	F3E			male to female in Russian voice
DARC	28195,0	vt	15	04	UKR	Taxi	F3E			unknown, poor signal
DARC	28215,0	1815	13	04	B	UiILL	A3E			2 male persons in Portuguese voice
DARC	28225,0	vt	15	04	UKR	Taxi	F3E			unknown
DARC	28225,0	0815	15	04	RUS	Taxi	F3E			female in Russian voice
DARC	28235,0	vt	15	04	RUS	Taxi	F3E			Tsentrlnaya Taxis Moscow
DARC	28260,0	0745	15	04	IRN	OTH-Radar	FMCW			2 tones, 307 and 870 Hz / sps, 600 kHz splatters
DARC	28265,0	vt	15	04	RUS	Taxi	F3E			Moscow
DARC	28275,0	vt	15	04	RUS	Taxi	F3E			Moscow
DARC	28285,0	vt	15	04	RUS	Taxi	F3E			very strong
DARC	28285,0	0801	15	04	RUS	Taxi	F3E			male to female in Russian voice
DARC	28305,0	0828	08	04	CIS	Taxi	F3E			female in Russian voice
DARC	28305,0	vt	15	04	RUS	Taxi	F3E			no roger beeps
DARC	28305,0	0736	15	04	RUS	Taxi	F3E			Ru male to female, female is louder
DARC	28345,0	0828	08	04	CIS	Taxi	F3E			female in Russian voice
DARC	28375,0	0828	08	04	IRN	OTH-Radar	FMCW			2 tones, 307 and 870 Hz / sps, 600 kHz splatters
DARC	28595,0	vt	15	04	RUS	Taxi	F3E			poor signal

CLUB	kHz	UTC	DD	MM	ITU	Call Sign	MODE	BD	SH	Remarks and Comments
DARC	28615,0	vt	15	04	RUS	Taxi	F3E			unknown
DARC	28635,0	vt	15	04	RUS	Taxi	F3E			unknown
DARC	28655,0	vt	15	04	RUS	Taxi	F3E			unknown, very poor signal
DARC	28675,0	vt	15	04	RUS	Taxi	F3E			unknown, very poor signal
DARC	28715,0	vt	15	04	RUS	Taxi	F3E			unknown, very poor signal
DARC	28825,0	vt	15	04	RUS	Taxi	F3E			unknown, very poor signal
DARC	28890,0	0832	08	04	IRN	OTH-Radar	FMCW			2 tones, 307 and 870 Hz / sps, 600 kHz splatters
DARC	28930,0	vt	15	04	RUS	Taxi	F3E			unknown
DARC	28935,0	vt	15	04	UKR	Taxi	F3E			unknown
DARC	29015,0	vt	15	04	RUS	Taxi	F3E			Moscow region
DARC	29025,0	1012	15	04	RUS	Taxi	F3E			female in Russian voice
DARC	29045,0	0822	15	04	RUS	Taxi	F3E			female in Russian voice
DARC	29105,0	0826	15	04	RUS	Taxi	F3E			female in Russian voice
DARC	29110,0	vt	15	04	RUS	Taxi	F3E			Moscow
DARC	29115,0	vt	15	04	RUS	Taxi	F3E			Moscow
DARC	29155,0	vt	15	04	RUS	Taxi	F3E			Moscow region
DARC	29250,0	vt	13	04	E	Datawell Buoy	F1B	81,9 *)	140	location Fuerteventura, heard 1501 - 1813, S3-signal at rx of DJ9KR
DARC	29250,0	vt	15	04	E	Datawell Buoy	F1B	81,9 *)	140	location Fuerteventura, S3, heard 1723 - 1855 - report DJ9KR
DARC	29265,0	1012	15	04	RUS	Taxi	F3E			male to female in Russian voice
DARC	29305,0	vt	15	04	RUS	Taxi	F3E			Moscow region
DARC	29305,0	1012	15	04	RUS	Taxi	F3E			female in Russian voice
DARC	29370,0	1610	13	04	IRN	OTH-Radar	FMCW			2 tones, 307 and 870 Hz / sps, 600 kHz splatters
DARC	29375,0	1723	15	04	I	Datawell Buoy	F1B	81,9 *)	140	location Galatone, South Italy, S1-signal at rx of DJ9KR
DARC	29387,5	0801	14	04	IND	Datawell Buoy	F1B	81,9 *)	140	location NW-India close to PAK border, S-1-signal heard by DJ9KR
DARC	29395,0	0822	15	04	RUS	Taxi	F3E			male in Russian voice
DARC	29405,0	vt	15	04	RUS	Taxi	F3E			Northern Caucasus region, vy poor
DARC	29450,0	1756	12	04	MRC	Datawell Buoy	F1B	81,9 *)		location El-Aaiun, heard and reported by DJ9KR
DARC	29460,0	vt	15	04	RUS	Taxi	F3E			unknown
DARC	29465,0	vt	15	04	RUS	Taxi	F3E			Moscow region
DARC	29475,0	0822	15	04	RUS	Taxi	F3E			male to female in Russian voice
DARC	29519,0	vt	15	04	RUS	Taxi	F3E			Moscow
DARC	29525,0	1723	15	04	MRC	Datawell Buoy	F1B	81,9 *)	140	location nr. Agadir, S0-signal, barely audible at DJ9KR
DARC	29555,0	vt	15	04	RUS	Taxi	F3E			Moscow
DARC	29575,0	vt	15	04	RUS	Taxi	F3E			Moscow city
DARC	29595,0	vt	15	04	RUS	Taxi	F3E			Moscow region
DARC	29725,0	0822	15	04	RUS	Taxi	F3E			female in Russian voice
DARC	29855,0	vt	15	04	RUS	Taxi	F3E			Moscow area
DARC	29925,0	0822	15	04	RUS	Taxi	F3E			female in Russian voice
DARC	29945,0	0826	15	04	RUS	Taxi	F3E			female in Russian voice
DARC	*)	vt	vd	04	HOL	Datawell Buoy	F1B	81,9 *)	140	data courtesy of DK2OM

DG0JBJ (Mario) observed 24 OTH radars on 20 m, 117 OTH radars on 15 m and 25 OTH radars on 10 m (not included the numerous jumping Iran OTH radars) in April 2013.

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	1811,1	1959	18	04	CIS		A3E			CIS pirates, unstable carrier – now inside our band!
DK2OM	1812,0	1947	23	04	POL		USB LSB			Polish “PIP” – 14 tones – hyperbolic radio navigation system – BRAS-3/RS-10 - Polish Baltic coast - POL Navy – legal operation (ITU footnote) – daily, all day
DK2OM	1881,4	vt	dly	04	F		QPSK	100	100	BC-PSK – radio navigation - Nantes
DK2OM	1896,5	ady	dly	04	D		PSK8	2400	2400	Stanag4285 – 600 bps long – German Navy
DK2OM	3500,0	2000	03	04	E		USB			Spanish fishery – also: 25.04.2013 at 2032 utc
DK2OM	3500,0	1945	03	04	HOL		USB			Dutch fishery – also: 08.04.2013 at 1937 utc
DK2OM	3501,5	2011	19	04	CIS		A3E			CIS pirates, unstable carrier
DK2OM	3502,4	1915	16	04	CIS		A3E			CIS pirates, unstable carrier
DK2OM	3503,0	2045	06	04	CIS		USB			male persons spelling Russian figures
DK2OM	3503,5	vt	dly	04	G	no ITU	FSK8	125	1750	ALE – “XSS” “XPU” “XJR” – British MIL Tascomm – legal!
DK2OM	3504,9	2135	16	04	CIS		A3E			CIS pirates, unstable carrier
DK2OM	3505,0	1950	19	04	RUS		FMCW		40k	OTHR – 43.5 sps – 3505 – 3545 kHz – synchronuous: 3750 – 3790 – Makhachkala – Caspian Sea – also: 21.04.2013 at 1700 utc
DK2OM	3505,5	2051	06	04	CIS		A3E			CIS pirates, unstable carrier
DK2OM	3506,3	2022	15	04	CIS		A3E			CIS pirates, unstable carrier
DK2OM	3506,5	2024	20	04	CIS		A3E			CIS pirates, unstable carrier
DK2OM	3507,2	2134	16	04	CIS		A3E			CIS pirates, unstable carrier
DK2OM	3508,9	1855	16	04	CIS		A3E			CIS pirates, unstable carrier
DK2OM	3509,7	1839	21	04	CIS		A3E			CIS pirates, unstable carrier
DK2OM	3510,0	1746	14	04	RUS		FMCW		35k	OTHR – 43.5 sps – 3510 – 3545 kHz – synchronuous: 3810 – 3845 – Makhachkala – Caspian Sea
DK2OM	3510,6	1854	16	04	CIS		A3E			CIS pirates, unstable carrier
DK2OM	3511,0	1852	16	04	CIS		A3E			CIS pirates, unstable carrier
DK2OM	3514,3	2008	19	04	CIS		A3E			CIS pirates, unstable carrier
DK2OM	3515,0	1904	22	04	RUS		FMCW		30k	OTHR – 43.5 sps – 3515 – 3545 kHz - also: 3560 – 3590 kHz – Makhachkala – Caspian Sea – vy strong audible in Iceland
DK2OM	3515,0	1930	27	04	F		USB			French fishery
DK2OM	3520,0	1911	16	04	RUS		A3E			2 women in Russian voice, Kaliningrad
DK2OM	3520,0	1914	23	04	RUS		USB			Russian women
DK2OM	3521,2	1843	21	04	CIS		A3E			CIS pirates, unstable carrier
DK2OM	3525,0	2140	30	04	E		USB			Spanish fishery with vocoder CRY 2001
DK2OM	3527,0	1940	03	04	RUS		F1B	50	200	Severomorsk – daily, often idle
DK2OM	3528,3	1836	21	04	CIS		A3E			CIS pirates, unstable carrier
DK2OM	3530,0	1838	29	04			no ITU	125	1750	ALE, “5810”
DK2OM	3530,5	1947	29	04	CIS		A3E			CIS pirates, unstable carrier
DK2OM	3532,0	1919	08	04	F		PSK4	75	2400	LINK11-CLEW on both sidebands (5800 Hz wide) – area of Brest – legal!
DK2OM	3535,0	0550	25	04	HOL		USB			Dutch fishery, engine noise
DK2OM	3535,0	0635	11	04	E		USB			Spanish fishery, engine noise

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	3535,0	2034	09	04	RUS		FMCW		35k	OTHR – 43.5 sps – 3535 – 3570 kHz – Makhachkala – Caspian Sea
DK2OM	3546,0	2056	09	04	BLR		PSK2A	1202	2600	AT3004D - daily
DK2OM	3548,0	1933	23	04	RUS		F1B	50	200	Severomorsk
DK2OM	3550,0	0600	dly	04	F		A3E			French amateurs not respecting the bandplans
DK2OM	3550,0	vt	vd	04	ALG		FSK8	125	1750	ALE, “IU50” “IU52” “FN50”
DK2OM	3550,0	1900	16	04	G		PSK4	75	5800	LINK11-CLEW on both sidebands (5800 Hz wide) - Scotland
DK2OM	3550,6	2016	17	04	ISR		PSK4 PSK8	75 2400	2400 2400	hybrid modem – ISR Navy – PSK4 parallel and PSK8 serial - also: 22.04.13 – 1830 utc
DK2OM	3553,8	ady	dly	04	TUR		PSK8	2400	2400	Stanag4285 – TUR MIL - Ankara
DK2OM	3555,0	2210	01	04	RUS		FMCW		35k	OTHR – 43.5 sps – 3555 – 3590 kHz – Makhachkala Caspian Sea – also: 3745 – 3780 kHz – simultaneous
DK2OM	3571,0	1934	24	04	RUS		F1B	75	200	Tver
DK2OM	3585,0	2000	dly	04	TWN	HLL	F1C			120 rpm, IOC 576, Wxfax - daily legal!
DK2OM	3587,0	vt	vd	04	E	no ITU	FSK8	125	1750	ALE, “TVV” “TXX” - Spanish Guardia Civil
DK2OM	3590,0	1655	16	04	RUS		FMCW		50k	OTHR – 43.5 sps – also: 3590 – 3640 kHz – Makhachkala – Caspian Sea – also: 17.04.13 and 18.04.13 at 1900 utc
DK2OM	3593,8	1926	08	04	TUR		PSK8	2400	2400	Stanag4285 – 600 bps long
DK2OM	3595,0	vt	dly	04	D		FSK8	125	1750	ALE – German customs
DK2OM	3597,0	vt	dly	04	D		PSK8	2400	2400	Link11 SLEW
DK2OM	3617,0	vt	dly	04	HRV	9A5EX	FSK8	125	1750	ALE, “9A5EX” – HAM-ALE - just for info
DK2OM	3622,5	1800	dly	04	J	JMH	F1C			Tokyo Meteo – 120 rpm – IOC576 – daily, legal!!!
DK2OM	3702,0	2150	30	04	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	3756,0	ady	dly	04	UKR		A3E			UKR – pip – 10 tones – radio navigation system – BRAS-2/RS-10
DK2OM	3761,5	vt	vd	04	POL		FSK8	125	1750	ALE, “NI9” “PL7” “AB2” – Polish MIL
DK2OM	3767,0	2127	29	04	RUS		FMCW		50k	OTHR – 43.5 sps – 3767 – 3817 kHz – Makhachkala Caspian Sea
DK2OM	3770,0	1822	30	04	RUS		FMCW		30k	OTHR – 43.5 sps – 3770 – 3800 kHz – simultaneous: 3868 – 3898 kHz - Makhachkala Caspian Sea
DK2OM	3774,0	0600	26	04	E	names	USB			Spanish fishery with vocoder CRY2001
DK2OM	3775,0	2035	09	04	RUS		FMCW		35k	OTHR – 43.5 sps – 3775 – 3810 kHz – Caucasian region
DK2OM	3782,0	ady	dly	04	POR	CTP	F1B	75	850	POR Navy headquarter Lisbon – disturbed by Russian OTH radar on 11.03.2013 at 2100 utc
DK2OM	3791,0	vt	vd	04	D	DK0ESD	FSK8	125	1750	ALE, “DK0ESD” – just for info!
DK2OM	6998,5	0644	11	04	E		LSB			Spanish male persons, splattering up
DK2OM	7000,0	ady	dly	04	INS		U/LSB			Indonesian pirates in USB and LSB – every evening audible in Europe – at 1000 utc audible in West Canada
DK2OM	7000,0	2003	14	04	I		LSB			Italian fellows
DK2OM	7007,0	ady	03	04	G		A1A			dashes of 1.3 sec duration – covering the complete range from 3.5 – 35 MHz in 30 kHz increments

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	7007,0	1930	19	04						frequency hopper
DK2OM	7008,0	0625	16	04	RUS		F1B	75	250	St. Petersburg
DK2OM	7035,0	0616	19	04	RUS		PSK2	12	2600	AT3004D – submode idle - Kaliningrad
DK2OM	7038,7	ady	dly	04	UKR	D	A1A			Cluster beacon – Sevastopol RUS Navy – “RCV”
DK2OM	7038,8	ady	dly	04	RUS	P	A1A			Cluster beacon – Kaliningrad RUS Navy – “RMP”
DK2OM	7038,9	ady	dly	04	RUS	S	A1A			Cluster beacon – Severomorsk RUS Navy – „RIT“
DK2OM	7039,0	ady	dly	04	RUS	C	A1A			Cluster beacon - Moscow RUS Navy - “RIW”
DK2OM	7039,1	---	---	---	KGZ	A	A1A			Cluster beacon – Bishkek RUS Navy – “RJH25”
DK2OM	7039,2	ady	dly	04	RUS	F	A1A			Cluster beacon - Vladivostok RUS Navy - “RJS”
DK2OM	7039,3	ady	dly	04	RUS	K	A1A			Cluster beacon - Petropavlovsk Kamchatskiy - RUS Navy - Pacific fleet - “RCC”
DK2OM	7039,4	ady	dly	04	RUS	M	A1A			Cluster beacon – Magadan RUS Navy – „RTS“
DK2OM	7039,95	ady	dly	04	I	IZ3DVW	A1A			IZ3DVW – uncoordinated beacon, daily, all day
DK2OM	7040,0	vt	dly	04	F	F6BAZ	FSK8	125	1750	ALE, “F6BAZ” – just for info
DK2OM	7040,5	vt	dly	04	HRV		FSK8	125	1750	ALE, “9A5EX” “9A0ALE” – just for info
DK2OM	7049,5	1644	14	04	HRV	9A0ALE	FSK8	1250	1750	Amateur ALE, just for info!
DK2OM	7054,0	1700	dly	04	RUS		F1B	50	200	CIS50-50 - RUS Navy Moscow - daily
DK2OM	7055,5	vt	dly	04	TUR		FSK8	125	1750	ALE, “145” “168” – NE of Turkey – area of Black Sea
DK2OM	7070,0	vt	vd	04	GEO	no ITU	FSK8	125	1750	ALE, “MV” “244” “686” “334” “204”
DK2OM	7080,0	0629	22	04	RUS		F1B	50	200	Kaliningrad
DK2OM	7088,8	vt	vt	04	S	SL0FRO	A1A			cw-trainee, Sweden – 7088.816 kHz – just for info!
DK2OM	7099,5	vt	vd	04	HRV	9A0ZG	FSK8	125	1750	ALE, “9A0ZG” “9A5EX” “9A0OS” – just for info!
DK2OM	7102,0	vt	vd	04	HRV SUI	9A0ALE	FSK8	125	1750	ALE, “9A0ALE” “HB9MHB” “9A0ZG” – just for info!
DK2OM	7105,0	2245	21	04	TWN CHN		A3E			Sound of Hope – Taiwan and Chinese music jammer - daily
DK2OM	7105,0	vt	dly	04	TUN		A3E			RTV Tunisia - intermodulation
DK2OM	7110,0	0706	12	04	HRV	9A0ALE	FSK8	125	1750	ALE, “9A0ALE” – just for info
DK2OM	7114,0	1933	19	04	RUS		F1B	50	200	Kaliningrad
DK2OM	7120,0	1845	23	04	SOM		A3E		9k	Radio Hargaysa Somalia, daily
DK2OM	7137,3	1745	28	04	CHN		OFDM	60	2400	OFDM 32 – Chinese ARQ burst system
DK2OM	7142,0	0657	20	04	RUS		F1B	75	250	Kaliningrad
DK2OM	7162,0	2058	08	04	RUS		F1B	75	250	Kaliningrad
DK2OM	7176,0	0644	10	04	RUS		F1B	100	250	dirty signal - Kaliningrad
DK2OM	7178,0	1630	22	04	RUS		PSK2A	120	2600	AT3004D – Severomorsk
DK2OM	7185,5	vt	dly	04	D HRV		FSK8	125	1750	ALE, “9A5EX” “DK0ESD” just for info - daily
DK2OM	7197,0	1736	07	04	RUS		PSK2A	64	64	several PSK2 channels with 64 Bd and 64 Hz shift – 7197 – 7200 kHz – together with Voice of Russia on 7215 kHz
DK2OM	7197,0	1900	30	04	TUR		FSK8	125	1750	ALE, “8241” “206102” “8151” “3021” – Turkish Sivil Avunma – source: DL8AAM
DK2OM	7198,0	1819	07	04						frequency hopper
DK2OM	7198,0	1942	15	04						frequency hopper
DK2OM	10100,8	1920	26	04	D		F1B	50	450	Baudot - German Weatherservice – legal!
DK2OM	10112,0	ady	dly	04	TUR		PSK8	2400	2400	Stanag4285 – 600 bps long – TUR MIL - Izmir
DK2OM	10113,0	vt	dly	04	TUN	no ITU	FSK8	125	1750	ALE, “TUD”

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	10114,8	0640	02	04	RUS		F1B	100	1000	CIS14 – Penza - daily
DK2OM	10120,0	0703	26	04	CIS		USB			women in Russian voice
DK2OM	10125,0	vt	vd	04	CHN		FSK8	125	1750	ALE, “277” “278” – China
DK2OM	10130,0	vt	dly	04			FSK8	125	1750	Thales 3000
DK2OM	10136,0	1845	16	04	RUS		F1B	50	200	Far East Russia – also: 28.04.2013 at 1916 utc
DK2OM	10145,5	vt	vd	04	HRV S / D	9A5EX	FSK8	125	1750	ALE, “9A5EX” “SM5VRH” “DK0ESD” - just for info
DK2OM	10146,0	1904	26	04	RUS		PSK4B	120	2600	AT3104D – submode idle and traffic - Moscow
DK2OM	10150,0	2030	09	04	FEa		USB			Far East persons
DK2OM	10150,0	0617	16	04	MRC		USB			Moroccan fishery
DK2OM	10150,3	1630	23	04	CHN		OFDM	60	2400	OFDM 32 – Chinese ARQ burst system
DK2OM	14000,0	1630	29	04	FEa		USB			Far East pirates – “Sayed” - INS?
DK2OM	14000,0	2020	04	04	AF		USB			unid pirates in French voice and African tribal language – also 14.4.13 at 1945 utc
DK2OM	14000,0	1635	27	04	CLN		USB			Sinhala fishery
DK2OM	14000,0	1822	27	04	E		A3E			Spanish pirates in A3E
DK2OM	14001,0	1435	05	04	CHN		FSK8	125	1750	ALE, “397”
DK2OM	14001,0	1600	27	04	RUS		FSK3	75	1000	interlaced system - possibly Kara Sea or North Russia
DK2OM	14008,0	0658	11	04	RUS		F1B	50	250	Moscow – also: 28.04.2013 at 0628 utc
DK2OM	14008,3	1405	27	04	CHN		PSK4	75	2250	PRC4+4 - 8 x 75 Bd PSK4 – South China
DK2OM	14026,0	1853	12	04	RUS		PSK2A	120	2600	AT3004D – Moscow - submode idle and traffic – also: 20.04.2013 at 1324 utc
DK2OM	14030,0	2155	08	04	E?		USB			pirates in Spanish voice
DK2OM	14052,0	0806	02	04	RUS		PSK2A	120	2600	AT3004D – east of Novosibirsk
DK2OM	14058,0	1827	26	04						frequency hopper
DK2OM	14060,0	vt	vd	04	ISR		FSK8	125	1750	ALE, “AAA” - Israel
DK2OM	14109,0	vt	vd	04	ISR	4X1	FSK8	125	1750	ALE, “4X1” “CT2IXQ” – just for info!
DK2OM	14112,0	1245	09	04	RUS		F1B	75	250	Krasnoyarsk
DK2OM	14162,0	0920	02	04	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	14165,0	0703	18	04	RUS		FMCW		20k	OTH Radar – 50 sps - Moscow
DK2OM	14180,0	1612	24	04	RUS		F1B	50	250	ship Black Sea
DK2OM	14192,0	1133	05	04	RUS		F1B	50	200	RUS Navy Kaliningrad – often daily
DK2OM	14200,0	0927	12	04	RUS		FMCW		20k	OTH Radar Moscow
DK2OM	14226,0	0934	20	04	RUS		F1B	75	250	Nizhniy Novgorod
DK2OM	14236,0	0740	23	04	RUS		OFDM	35.5	2800	OFDM 60 – Moscow
DK2OM	14242,0	1045	04	04	RUS		PSK4B	120	2600	AT3104D - Omsk
DK2OM	14243,0	0710	22	04	RUS		FMCW		20k	OTH Radar, 50 sps – Nizhniy Novgorod – also: 25.04.2013 at 0620 utc
DK2OM	14253,0	0855	01	04	RUS		F1B	75	250	Penza also: 18.04.2013 at 0953 utc and 29.04.2013 at 0615 utc
DK2OM	14255,0	1420	23	04	RUS		PSK2A	120	2600	AT3004D - Penza
DK2OM	14255,0	0923	02	04	RUS		PSK2A	120	2600	AT3004D – Voronezh – also: 23.04.13 at 1350 utc
DK2OM	14255,0	1111	25	04	RUS		FMCW		20k	OTH Radar – 50 sps – Nizhniy Novgorod
DK2OM	14261,0	1114	23	04	RUS		OFDM	35.5	2800	OFDM 60 – Moscow
DK2OM	14265,0	vt	vd	04	TUR		FSK8	125	1750	ALE, “526”
DK2OM	14265,0	1422	23	04	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	14280,0	Wedne sday	vd	04	UKR		A3E			Ukraine secret service SZRU – female voice spelling encrypted msgs
DK2OM	14286,0	0634	25	04	RUS		OFDM	35.5	2800	OFDM 60 - Kaliningrad
DK2OM	14294,0	0640	25	04	RUS		PSK2	120	2600	AT3004D - Tver
DK2OM	14295,1	ady	dly	04	TJK		A3E			3 rd from Radio Tajik on 4765 kHz
DK2OM	14297,0	0649	25	04	RUS		FMCW		20k	OTH Radar – 50 sps – Nizhniy Novgorod

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	14304,0	0620	22	04			F1B	75	250	area of Smolensk
DK2OM	14340,0	1118	05	04	RUS		PSK2A	120	2600	AT3004D – traffic and submode idle – long lasting – Far East Russia
DK2OM	14344,7	1704	17	04	CHN		PSK8	2400	2400	MIL-188-110A variant – daily, 600 bps short – 14344.650 kHz
DK2OM	14346,0	vt	vd	04	HRV RUS D		FSK8	125	1750	ALE, “9A0ZG” “RX3ARZ” “DK0ESD” – just for info
DK2OM	14346,0	1958	02	04	THA	HS0ZEA	A1A			HS0ZEA – beacon – every 5 minutes – 14345.956 kHz – just for info
DK2OM	18060,0	1107	26	04	CYP		FMCW		20k	OTH Radar Cyprus – 50 sps
DK2OM	18071,0	0640	19	04			FMCW		20k	OTH Radar Cyprus – 50 sps
DK2OM	18103,0	0800	04	04						frequency hopper
DK2OM	18107,0	0645	10	04	RUS	RDL	F1B	50	200	Moscow – idle and traffic – Russian navy – various days and times – legal operation
DK2OM	18136,0	0742	04	04	RUS		F1B	75	200	Irkutsk
DK2OM	19060,0	0950	20	04	TJK		A3E			Radio Tajik – 4 th from 4765 – just for info!
DK2OM	21000,0	1700	09	04	INS		USB			Indonesian pirates – also: 23.04.2013 at 1700 utc
DK2OM	21000,0	2009	06	04	B		USB			Brazilian pirates – Rio de Janeiro with North Brazil
DK2OM	21000,0	1724	02	04						frequency hopper
DK2OM	21000,0	0921	11	04	RUS		USB			vocoder Yakhta – scrambled speech – Nizhniy Tagil
DK2OM	21001,5	1704	09	04	RUS		F1B	100	150	vocoder Yakhta inband synchro – Nizhny Tagil – daily since March 1 st
DK2OM	21003,2	0915	11	04	RUS		PSK2	1200	1200	Nizhniy Tagil – spurious from 20998.3
DK2OM	21066,0	1435	23	04	MEa		PSK2A	120	2600	AT3004D – Russian ship – Persian Gulf
DK2OM	21070,0	2015	25	04	E		USB			Spanish pirates interfering PSK31
DK2OM	21096,0	1105	06	04	INS	YD00XH	FSK8	125	1750	ALE, “YD00XH3” – daily, various times - just for info!
DK2OM	21100,0	1058	06	04	RUS		PSK2	120	2600	AT3004D – submode idle
DK2OM	21100,0	1716	11	04	E		USB			Spanish fisherman and wife
DK2OM	21115,0	1251	29	04	IRN		A3E			BC, spurious from Radio Tehran on 21500 kHz
DK2OM	21135,0	0614	16	04			A3E			unid BC product
DK2OM	21145,0	vt	dly	04	MRC		FSK8	125	1750	ALE, “B301”, “C3”, “IR4” “T4” “E4” “A2” “CD” “K3”
DK2OM	21149,0	0651	19	04						frequency hopper
DK2OM	21160,0	1053	10	04	RUS		F1B	100	2000	4th from 5290 kHz (500 Hz shift) – St. Peterburg
DK2OM	21190,0	0658	16	04	RUS		F1B	100	1000	Ivanovo – harmonic from 10595
DK2OM	21190,0	1646	19	04	TUR		FMCW		20k	OTH Radar NW-Turkey – 50 sps
DK2OM	21210,0	1045	02	04	CYP		FMCW		20k	OTH Radar Cyprus – 50 sps
DK2OM	21210,0	0648	19	04	AUS		FMCW		20k	OTH Radar JORN bursts
DK2OM	21225,0	1055	06	04	AUS		FMCW		10k	OTH Radar JORN
DK2OM	21247,0	0652	19	04						frequency hopper
DK2OM	21250,0	0716	12	04	TUR		FMCW		20k	OTH Radar NW-Turkey – 50 sps
DK2OM	21265,0	0612	16	04	AUS		FMCW		10k	OTH Radar JORN – various sps
DK2OM	21293,3	0905	09	04	CHN		PSK4	75	2250	PRC4+4 - 8 x 75 Bd PSK4 – traffic and idle – ship - also: 0936 utc on 11.04.13
DK2OM	21300,0	0900	02	04	CYP		FMCW		20k	OTH Radar Cyprus – 50 sps
DK2OM	21323,5	0945	09	04	NPL		F1B	600	600	DPRK-FSK 600 – Kathmandu
DK2OM	21335,0	1250	29	04	IRN		A3E			BC, spurious from Radio Tehran on 21500 kHz
DK2OM	21335,0	1002	24	04						frequency hopper
DK2OM	21363,3	0850	01	04	CHN		PSK4	75	2250	PRC4+4 - 8 x 75 Bd PSK4 – traffic and idle – Beijing – also: 07.04.13 at 0720 utc and

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										09.04.13 at 0900 ut
DK2OM	21370,0	1001	24	04						frequency hopper
DK2OM	21390,0	1252	20	04	IRN		A3E			BC, spurious from Radio Tehran on 21500 kHz
DK2OM	21400,0	1230	02	04	CYP		FMCW		20k	OTH Radar Cyprus – 50 sps
DK2OM	21400,0	0845	03	04	RUS		F1B	50	2000	harmonic from 5350 kHz – area of Moscow - daily
DK2OM	21400,0	1530	10	04	CYP		FMCW		20k	OTH Radar Cyprus – 50 sps
DK2OM	21405,0	0812	17	04						frequency hopper
DK2OM	21409,5	0627	08	04	RUS		F1B	100	2000	CIS14 – harmonic from 10704.75 - Jekaterinburg
DK2OM	21426,0	0654	07	04	CHN		FMCW		10k	OTH Radar – 66.7 sps – 2 sec bursts
DK2OM	21433,5	0844	22	04	CHN		PSK4	75	2250	PRC4+4 - 8 x 75 Bd PSK4 – traffic and idle
DK2OM	21435,0	1124	23	04	IRN		A3E			spurious from Radio Iran on 21505 kHz – distorted, no carrier
DK2OM	21435,0	1636	28	04						frequency hopper
DK2OM	21438,0	vt	dly	04	UKR	RCV	A1A			RIP90 de RCV - RUS Navy Sevastopol
DK2OM	21440,8	1240	02	04	KOS		PSK8	2400	2400	serial modem – area of Kosovo - daily
DK2OM	21445,0	1200	17	04	IRN		A3E			BC, spurious from Radio Tehran on 21500 kHz – first time heard on Oct. 1st 2012
DK2OM	21446,0	1010	21	04	THA	HS0ZEA	A1A			HS0ZEA beacon – every 5 minutes - just for info!
DK2OM	21450,0	1758	11	04	E		USB			Spanish fisherman and wife from 21100
DK2OM	23825,3	0939	19	04	TJK		A3E			Radio Tajik – 5 th from 4765 – daily, all day - just for info!
DK2OM	24905,0	1455	02	04						frequency hopper
DK2OM	24915,0	1635	30	04	CYP		FMCW		20k	OTH Radar Cyprus – 50 sps
DK2OM	25000,0	ady	dly	04	FIN		A3E			time signal Helsinki – just for info – carrier on 25000 – dots on 25001 and 24999 – daily, all day
DK2OM	28000,0	vt	dly	04	B		A3E			28000 – 28325 numerous Brazilian CBers
DK2OM	28000,0	vt	dly	04	CIS		F3E			28000 – 29700 numerous CIS taxi nets
DK2OM	28001,3	1407	26	04			A1A			only dots – 28001.337 kHz
DK2OM	28005,0	1923	28	04	B		A3E			Brazilian CBers
DK2OM	28015,0	1835	11	04	B		A3E			Brazilian CBers
DK2OM	28025,0	1904	11	04	B		A3E			Brazilian CBers
DK2OM	28025,3	ady	dly	04	POR		F1B	51	300	F1B bursts - west of Lisbon
DK2OM	28030,1	ady	dly	04	POR		F1B	51	250	F1B bursts – west of Lisbon
DK2OM	28032,0	0920	20	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28035,0	1837	11	04	B		A3E			Brazilian CBers
DK2OM	28035,0	0905	19	04	FEa		A3E			Far East pirates
DK2OM	28040,1	ady	dly	04	POR		F1B	51	320	F1B bursts – west of Lisbon
DK2OM	28045,0	ady	dly	04	POR		F1B	51	320	F1B bursts - west of Lisbon
DK2OM	28045,0	2028	09	04	B		A3E			Brazilian CBers
DK2OM	28045,0	1602	16	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28049,5	1633	30	04	POR		F1B	51	320	F1B bursts – west of Lisbon
DK2OM	28050,0	1604	16	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28055,0	1920	28	04	B		A3E			Brazilian CBers
DK2OM	28065,0	1337	08	04	FEa		F3E			Far East pirates
DK2OM	28065,0	2013	09	04	B		A3E			Brazilian CBers
DK2OM	28068,0	1404	26	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28075,0	1630	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28075,0	2012	09	04	B		A3E			Brazilian CBers
DK2OM	28085,0	2012	09	04	B		A3E			Brazilian CBers
DK2OM	28088,0	1059	17	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28092,0	1627	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps - jumping
DK2OM	28095,0	1741	30	04	B		A3E			Brazilian CBers
DK2OM	28100,0	ady	dly	04	POR		F1B	51	320	F1B bursts - 28100.010 kHz - west of Lisbon

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	28100,0	1102	17	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28100,1	ady	dly	04	POR		F1B	51	320	F1B bursts - 28100.100 kHz - west of Lisbon
DK2OM	28100,2	ady	dly	04	POR		F1B	51	320	F1B bursts - 28100.160 kHz - west of Lisbon
DK2OM	28100,8	ady	dly	04	POR		F1B	51	320	F1B bursts - 28100.800 kHz - west of Lisbon
DK2OM	28102,0	0956	30	04	POR		F1B	51	320	F1B bursts – 28102.000 kHz - west of Lisbon
DK2OM	28105,0	1628	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28105,0	2020	09	04	B		A3E			Brazilian CBers
DK2OM	28110,0	0655	19	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28115,0	1640	08	04	RUS		F3E			taxi net– area of Moscow – Oleg is called by a woman – daily, all day – very busy net
DK2OM	28115,0	1837	11	04	B		A3E			Brazilian CBers
DK2OM	28120,0	1516	11	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28125,0	vt	vd	04	POR		F1B	51	300	F1B bursts – 28125.0 kHz - west of Lisbon
DK2OM	28125,0	1826	27	04	B		A3E			Brazilian CBers
DK2OM	28130,0	1520	11	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28135,0	1630	10	04	RUS		F3E			taxi - Caucasus
DK2OM	28135,0	1057	17	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28145,0	1838	11	04	B		A3E			Brazilian CBers
DK2OM	28145,0	vt	dly	04	RUS		F3E			taxi - Caucasus
DK2OM	28145,0	1600	16	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28150,0	1604	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28155,0	1609	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28160,0	1622	08	04	IRN		FMCW		60k	OTH Radar – 870 sps
DK2OM	28165,0	1613	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps - jumping
DK2OM	28165,0	1838	11	04	B		A3E			Brazilian CBers
DK2OM	28175,0	2015	09	04	B		A3E			Brazilian CBers
DK2OM	28180,0	1710	14	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28185,0	2020	09	04	B		A3E			Brazilian CBers
DK2OM	28195,0	2015	09	04	B		A3E			Brazilian CBers
DK2OM	28200,0	ady	dly	04	POR		F1B	51	320	F1B bursts - west of Lisbon
DK2OM	28200,0	1617	08	04	IRN		FMCW		60k	OTH Radar – 307 sps (5.9 sec) - and 870 sps (3.2 sec) – splattering 28150 – 28750 kHz
DK2OM	28205,0	1804	30	04	B		A3E			Brazilian CBers
DK2OM	28205,0	1716	14	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28210,0	vt	dly	04	UKR		F3E			taxi - Dnepropetrovsk
DK2OM	28215,0	1839	11	04	B		A3E			Brazilian CBers
DK2OM	28220,0	1519	11	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28225,0	1840	11	04	B		A3E			Brazilian CBers
DK2OM	28225,0	0756	06	04	FEa		A3E			Far East pirates
DK2OM	28225,0	1519	11	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28230,0	0834	27	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28235,0	1840	11	04	B		A3E			Brazilian CBers
DK2OM	28235,0	1618	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28245,0	1841	11	04	B		A3E			Brazilian CBers
DK2OM	28255,0	vt	dly	04	KAZ		F3E			taxi – Almaty
DK2OM	28255,0	2014	09	04	B		A3E			Brazilian CBers
DK2OM	28265,0	ady	dly	04	RUS		F3E			taxi net, area of Moscow - daily
DK2OM	28265,0	2027	09	04	B		A3E			Brazilian CBers
DK2OM	28275,0	vt	dly	04	POR		F1B	51	270	F1B bursts – 28275.040 kHz - west of Lisbon
DK2OM	28275,0	ady	dly	04	RUS		F3E			taxi net, area of Moscow - daily
DK2OM	28275,0	2027	09	04	B		A3E			Brazilian CBers
DK2OM	28276,0	1608	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28280,0	1559	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28285,0	vt	dly	04	RUS		F3E			taxi – Rostov na Donu
DK2OM	28285,0	2019	09	04	B		A3E			Brazilian CBers
DK2OM	28285,0	0945	17	04	FEa		A3E			Far East pirates
DK2OM	28290,0	1712	14	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28295,0	1842	11	04	B		A3E			Brazilian CBers

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
							USB			
DK2OM	28295,0	1713	14	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28300,0	1605	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28305,0	vt	dly	04	RUS		F3E			taxi - Krasnodar
DK2OM	28305,0	2014	09	04	B		A3E			Brazilian CBers
DK2OM	28315,0	1604	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28315,0	1842	11	04	B		A3E			Brazilian CBers
DK2OM	28320,0	1605	08	04	IRN		FMCW		60k	OTH Radar – 307 sps
DK2OM	28325,0	1600	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28330,0	1621	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28330,0	1625	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28350,0	1615	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28365,0	vt	dly	04	RUS		F3E			taxi net, area of Moscow - daily
DK2OM	28365,0	0727	15	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28370,0	0957	10	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28375,0	1620	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28380,0	0657	10	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28390,0	vt	dly	04	RUS		F3E			taxi - Vladikavkaz
DK2OM	28390,0	1611	08	04	IRN		FMCW		60k	OTH Radar – 307 sps
DK2OM	28395,0	1624	08	04	IRN		FMCW		60k	OTH Radar – 870 sps - jumping
DK2OM	28400,0	1621	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28405,0	1619	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28410,0	1623	08	04	IRN		FMCW		60k	OTH Radar – 307 sps
DK2OM	28470,0	1611	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28525,0	1634	08	04	IRN		FMCW		60k	OTH Radar – 307 sps - jumping
DK2OM	28580,0	1456	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28595,0	1620	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28595,0	0718	10	04	FEa		A3E			Far East pirates
DK2OM	28695,0	vt	dly	04	RUS		F3E			taxi net, area of Moscow - daily
DK2OM	28705,0	0800	01	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28715,0	1632	08	04	IRN		FMCW		60k	OTH Radar – 307 and 870 sps
DK2OM	28825,0	vt	dly	04	UKR		F3E			taxi - Odessa
DK2OM	28865,0	vt	dly	04	RUS		F3E			taxi - area of Moscow – male and female – daily, all day
DK2OM	28886,0	0955	16	04	FEa		A3E			Far East pirates
DK2OM	28895,0	vt	dly	04	RUS		F3E			taxi - Stavropol
DK2OM	28945,0	vt	dly	04	UKR		F3E			taxi - Donetsk
DK2OM	28980,0	1000	16	04	TWN		A3E			Radio Taiwan International, harmonic from 9660 kHz
DK2OM	29055,0	vt	dly	04	RUS		F3E			taxi Stavropol
DK2OM	29174,5	1030	01	04	CHN		F3E			South-East China
DK2OM	29250,0	vt	vd	04	E		F1B	81.9	140	Datawell-buoy “Waverider” – 29249.907 kHz – Fuerteventura - daily, all day
DK2OM	29375,0	vt	vd	04	I		F1B	81.9	140	Datawell-buoy “Waverider” – 29374.898 kHz – Galatone, South Italy - daily, all day
DK2OM	29387,5	1417	14	04	IND		F1B	81.9	140	Datawell-buoy “Waverider” – 29387,460 kHz – Indian NW coast, close to Pakistan - daily, all day
DK2OM	29450,0	1918	14	04	MRC		F1B	81.9	140	Datawell-buoy “Waverider” – 29449.963 kHz - area of El Aaiun – Morocco - daily, all day
DK2OM	29500,0	ady	dly	04	G		F1B	81.9	140	Datawell-buoy “Waverider” – area of Gibraltar – daily, all day
DK2OM	29525,0	1919	14	04	MRC		F1B	81,9	140	Datawell-buoy “Waverider” – 29524.990 kHz - Agadir - Morocco – daily, all day
DK2OM	29555,0	vt	dly	04	RUS		F3E			taxi - area of Moscow - daily
DK2OM	29575,0	vt	dly	04	RUS		F3E			taxi - area of Moscow – male and female – very active - daily, all day
DK2OM	29645,0	1018	10	04	FEa		F3E			Far East pirates

IRTS – Ireland – EI5DD (Steve)**KARS – Kuwait – 9K2RR (Faisal)****MRASZ – Hungary - HA7PL (Laci)**

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
MRASZ	3500,0	2024	20	4			OTHR			3500-3540 kHz
MRASZ	3509,5	1742	4	4			A1A			"vvv vvv vvv"
MRASZ	3520,0	1722	18	4			USB			Ui male
MRASZ	3520,0	2214	20	4			USB			russian male/female
MRASZ	3600,0	1758	15	4			OTHR			
MRASZ	3750,0	1817	20	4			OTHR			3750-3800 kHz
MRASZ	7000,1	1954	17	4			A1A			"GGG HSHHHHSIIIIIIIIII"
MRASZ	7000,4	1832	30	4			LSB			italian male
MRASZ	7009,8	1759	4	4			USB			"allo, allo"
MRASZ	7011,7	1802	4	4			LSB			"1,2,3,4" german male
MRASZ	7026,0	1958	29	4			USB			Ui male
MRASZ	7030,0	1849	8	4			F1B		250	
MRASZ	7032,5	1537	18	4			LSB			"allo"
MRASZ	7038,7	vt	vd	4	UKR	D	A1A			beacon "D"
MRASZ	7038,9	vt	vd	4	RUS	S	A1A			beacon "S"
MRASZ	7039,0	1806	23	4	RUS	P	A1A			beacon "P"
MRASZ	7039,0	vt	vd	4	RUS	C	A1A			beacon "C"
MRASZ	7039,4	1826	4	4	RUS	M	A1A			beacon „M”
MRASZ	7040,3	1700	10	4	RUS	P	A1A			"P" beac. with strong 100 Hz hum
MRASZ	7040,4	1427	6	4	RUS	P	A1A			"P" beac. with strong 100 Hz hum
MRASZ	7041,0	1823	2	4			A1A			"A9XR de 7NWN QTC"
MRASZ	7041,0	1701	10	4			A1A			"7NWN C K"
MRASZ	7054,0	1842	10	4			N0N			
MRASZ	7054,0	vt	vd	4	RUS		F1B	50	200	RUS Navy
MRASZ	7061,0	1833	30	4	RUS		J7D			AT3004D
MRASZ	7070,0	2030	20	4			LSB			call: S01LA? splatter till 7060!
MRASZ	7080,0	1932	25	4			F1B		200	
MRASZ	7094,9	1146	11	4			N0N			
MRASZ	7105,0	1956	17	4			A3E			UiBC
MRASZ	7110,0	1704	15	4			A3E			UiBC
MRASZ	7114,0	1515	19	4			F1A		200	
MRASZ	7114,0	1520	19	4			F1B		200	
MRASZ	7117,5	1903	4	4			A1A			"N5GU de FFQN K"
MRASZ	7120,0	1822	2	4	SOM		A3E			BC + on day's: 4,8,10,15,23,28
MRASZ	7122,0	1452	19	4			F1B		250	Ui
MRASZ	7138,0	1710	15	4			XXX			10 kHz wide splatter fm 7210 BC
MRASZ	7162,0	1902	8	4			F1B		250	
MRASZ	7162,0	1937	18	4			F1B		250	
MRASZ	7165,0	1656	10	4			OTHR			between 7165-7185
MRASZ	7170,0	1726	15	4			A3E			UiBC
MRASZ	7178,0	1700	28	4	RUS		J7D			AT3004D
MRASZ	7175,0	1655	10	4		UiBC	A3E			UiBC
MRASZ	7178,0	1655	10	4	RUS		J7D			AT3004D
MRASZ	7195,0	1957	17	4			A3E			UiBC
MRASZ	7195,1	1814	23	4			A1A			"VAASC ZGVFY GTPChV..."
MRASZ	7199,5	1728	15	4			LSB			splatter
MRASZ	14027,0	1909	20	4	RUS		F1B			AT3004D
MRASZ	14253,0	1325	26	4			F1B		250	
MRASZ	14308,0	1647	19	4			A3E			music

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
MRASZ	18107,0	1830	30	4			F1B			Ui
MRASZ	21001,5	1330	26	4	RUS		F1B			vocoder Yakhta on day's: 14, 28
MRASZ	21057,0	1325	14	4			A1A			"KUMOL 6864 8524 K"

OEVSV – Austria – OE3GSA (Gerd)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
oevsv	14024,50	2000	14	04		UNID	FMCW			OTHR
oevsv	14026,00	0505	26	04		UNID	F3E			
oevsv	18080,00	0555	07	04		UNID	FMCW			OTHR
oevsv	28055,00	1930	28	04		UNID	A3E			Portuguese using R-beep
oevsv	28065,00	1937	28	04		UNID	A3E			Portuguese using R-beep
oevsv	28105,00	1935	28	04		UNID	A3E			Portuguese using R-beep
oevsv	28500,00	0625	07	04		UNID	F1B			2 tones alternating
oevsv	28705,00	0854	09	04			F1B			Testing
oevsv	29186,00	0930	28	10	RU		A3E			Female control stn

PZK – Poland – SP3UZ (Wladyslaw)

REP – Portugal – CT4AN (Jose Francisco)

	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	3500,0	09.29	06	04			J3E-U			Unid language ssb ops
REP	3505,0	07.42	05	04	E		J3E-U			Fishermen
REP	3505,5	06.20	08	04	E		J3E-U			Fishermen
REP	3510,0	07.19	10	04	E		J3E-U			Fishermen net with harbour
REP	3518,0	20.06	22	04			J3E-U			Fishermen
REP	3525,0	08.03	23	04			J3E-U			Unid ssb ops
REP	3535,0	09.39	22	04	F		J3E-U			French fishery
REP	3535,0	19.14	26	04			J3E-U			Unid ops
REP	3541,0	09.34	22	04	F		J3E-U			French fishery
REP	3542,0	17.26	19	04			J3E-U			Unid language fishery
REP	3550,0	06.52	03	04	F		A3E			INFRINGE - French amateurs ignoring IARU R1 Bandplan, daily
REP	3550,0	07.15	16	04	F		A3E			INFRINGE - French amateurs ignoring IARU R1 Bandplan, daily
REP	3566,0	06.54	03	04			J3E-U			Unid language fishermen
REP	3701,0	07.41	18	04	RUS		J3E-U			Navy comms
REP	3790,0	08.27	22	04	E		J3E-U			Spanish fishery
REP	7000,0	18.00	06	04	E		J3E-L			INFRINGE - Spanish amate ignoring IARU Bandplans
REP	7005,0	19.09	14	04	E		J3E-U			Female voices
REP	7012,5	07.11	29	04	E		J3E-U			Fishermen talking with family
REP	7035,0	07.11	06	04	E		J3E-U			Fishermen talking
REP	7038,6	20.12	16	04	RUS	S	A1A			KALININGRAD, ADY, DLY
REP	7038,7	23.56	04	04	UKR	D	A1A			SEVASTOPOL, ADY, DLY
REP	7038,8	23.18	04	04	RUS	P	A1A			MURMANSK, ADY, DLY
REP	7039,0	23.09	04	04	RUS	C	A1A			MOSCOW, ADY, DLY
REP	7039,1	21.26	11	04	RUS	A	A1A			VOLGOGRAD, ADY, DLY
REP	7039,2	22.26	11	04	RUS	F	A1A			KAMCHATSKY, ADY, DLY
REP	7039,3	21.45	11	04	RUS	K	A1A			VOLGOGRAD, ADY, DLY
REP	7039,5	22.55	11	04	RUS	M	A1A			MAGADAN, ADY, DLY
REP	7045,0	23.33	27	04	E		J3E-U			Fishermen
REP	7065,0	07.00	16	04	MRC		J3E-U			Fishermen
REP	7070,0	17.24	29	04	I		J3E-L			Italian music jamming QSOs
REP	7070,0	19.02	30	04	MRC		J3E-U			Fishermen talking
REP	7073,5	20.38	04	04	B		F1B	75	240	Encrypted FSK
REP	7105,0	22.12	10	04	TWN		8k00 A3EGN			Sounds of Hope
REP	7120,0	18.41	19	04	SOM		8k00			Radio Hargeysa

	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
							A3EGN			
REP	7175,0	17.29	23	04	ERI		8k00 A3EGN			Voice of the Broad Masses (?)
REP	7189,0	01.44	18	04	CLN		8k00 A3EGN			SLBC (?) Low Signal levels (0.39uV / S2)
REP	10100,0	21.39	13	04			A3E			Numbers Station - 5 letters groups
REP	10101,0	07.46	27	04	E		J3E-U			Spanish fishery
REP	10115,0	22.30	03	04			A1A			Numbers Station – 6 digit groups
REP	10120,0	06.48	16	04			J3E-U			Unid language ops
REP	10120,0	12.00	27	04	MRC		J3E-U			Many morrocan fishermen discussing
REP	10124,5	02.23	19	04			J3E-U			Unid language talks
REP	10130,25	21.18	13	04	MRC		J3E-U			Moroccan fishermen disturbing JT9X qso's
REP	10131,0	18.55	11	04			FMCW			OTH radar
REP	10131,0	16.01	15	04			FMCW			OTH radar
REP	10131,5	01.56	19	04	MRC		J3E-U			Fishermen net
REP	10135,0	19.02	03	04	MRC		J3E-U			Arabic ops, morrocan fishermen
REP	10135,0	08.03	20	04			J3E-U			Unid Arabic ops, fishermen
REP	10143,0	21.03	20	04			FMCW			OTH radar
REP	10145,0	21.20	23	04			FMCW			OTH radar
REP	14000,0	09.30	02	04			F1B	300	425	RY RY RY
REP	14000,0	11.24	11	04			J3E-U			Unid language
REP	14001,0	09.00	29	04			F1B			Not on standard speeds
REP	14004,0	12.45	06	04			F1B	75	500	Unid encrypted FSK
REP	14010,0	23.00	30	04	E		J3E-U			Several male voices
REP	14030,0	19.34	08	04	E		J3E-U			Unid spanish ops
REP	14141,0	09.08	23	04			FMCW			OTH radar 10kHz wide
REP	14152,5	21.18	30	04	I		J3E-U			Talks ship to ship
REP	14160,0	16.53	25	04			FMCW			OTH radar
REP	14185,0	15.04	02	04			J3E-U			Music jamming QSOs
REP	14192,0	07.48	05	04	RUS		F1B	50	200	Russian Navy 50/200 encrypted, daily
REP	14192,0	16.55	25	04			CW			Long carrier
REP	14195,0	12.28	15	04	RUS		F1B	50	250	Encrypted russian FSK
REP	14260,0	10.52	25	04			FMCW			OTH radar, short bursts 10kHz wide
REP	14288,0	07.49	18	04			J3E-U			Flute playing
REP	14288,0	07.49	23	04			J3E-U			'Pied Piper' flute player, every morning at the same time
REP	18070,0	09.55	28	04			FMCW			OTH radar
REP	18073,0	12.04	28	04			FMCW			OTH radar
REP	18080,0	10.16	18	04			FMCW			OTH radar 20kHz wide
REP	18100,0	19.28	27	04	B		J3E-U			Brazilian intruders, prob. Fishermen
REP	18165,0	15.29	24	04			FMCW			OTH radar
REP	21001,5	07.38	03	04	RUS		F1B	100	150	vocoder "Yakhta" inband sychro Russia, daily
REP	21001,5	12.30	16	04	RUS		FSK	100	150	vocoder "Yakhta" inband sychro Russia, daily
REP	21001,5	13.48	21	04	RUS		F1B	100	150	vocoder "Yakhta" inband sychro Russia, daily
REP	21010,0	22.25	28	04			J3E-U			Encoded transmissions
REP	21020,0	18.02	23	04	MRC		J3E-U			Male talks
REP	21050,0	11.36	15	04			FMCW			OTH radar
REP	21077,0	11.22	25	04			FMCW			OTH radar
REP	21190,0	07.45	16	04			FMCW			OTH radar
REP	21200,0	09.52	30	04			FMCW			OTH radar
REP	21207,0	16.27	25	04	P		J3E-U			Portuguese fishermen, repeat offenders
REP	21207,0	12.45	26	04	P		J3E-U			Portuguese fishermen @ 30°N/19°W
REP	21250,0	13.46	21	04			FMCW			OTH radar 20kHz wide
REP	21270,0	10.53	28	04			FMCW			OTH radar 20kHz wide
REP	24950,0	16.22	16	04			FMCW			OTH radar
REP	24985,0	14.31	18	04			A3E			Unid language AM ops
REP	28040,0	16.51	02	04	E		F1B			Spanish Enagal GPS buoy
REP	28050,0	11.03	11	04			F3E			Far East ops
REP	28175,0	1023	25	04			F3E			Far East fishermen
REP	28175,0	09.51	30	04			F3E			CIS taxis and Far East fishermen
REP	28195,0	11.34	11	04			F3E			YL taxi dispatcher
REP	28200,0	12.04	11	04			F3E			Far East fishermen

	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	28265,0	08.46	29	04			F3E			CIS taxi dispatchers
REP	28470,0	11.51	16	04			FMCW			OTH radar
REP	28475,0	16.45	25	04	P		A3E			Portuguese fishermen
REP	28500,0	08.45	29	04	P		A3E			Portuguese fishermen
REP	28510,0	13.53	15	04			FMCW			OTH radar
REP	28585,0	15.22	28	04			F3E			Far East fishermen
REP	28600,0	16.30	04	04			FMCW			OTH radar
REP	28700,0	15.24	28	04	B		A3E			Brazilian pirates
REP	28715,0	15.30	28	04			F3E			CIS taxi dispatcher
REP	28790,0	12.41	15	04			FMCW			OTH radar
REP	28815,0	15.44	28	04			F3E			CIS taxi dispatcher
REP	28940,0	09.11	23	04	P		J3E-U			Portuguese fishermen, repeat offenders
REP	28940,0	10.24	25	04	P		J3E-U			Portuguese fishermen, repeat offenders
REP	29125,0	11.54	16	04	P		A3E			Portuguese fishermen, northern Portugal
REP	29125,0	07.42	17	04	P		A3E			Portuguese fishermen, repeat offenders
REP	29230,0	11.30	22	04			FMCW			OTH radar
REP	29450,0	11.38	15	04			F3E			Far East fishermen
REP	29500,0	13.45	21	04			FMCW			OTH radar 20kHz wide
REP	29510,0	10.50	28	04			FMCW			OTH radar 20kHz wide
REP	29550,0	12.24	16	04			FMCW			OTH radar, drifting on the Band
REP	29695,0	12.31	10	04	P	"PEIXOTO"	A3E			Northern Portugal CB's, repeat offenders
REP	29695,0	13.02	12	04	P	"PEIXOTO"	A3E			Northern Portugal CB's, repeat offenders
REP	29695,0	16.21	15	04	P	"PEIXOTO"	A3E			Northern Portugal CB's, repeat offenders
REP	29695,0	14.58	16	04	P	"PEIXOTO"	A3E			Daily CB-like chat near Gaia/Oporto (North)
REP	29695,0	16.02	28	04	P	"PEIXOTO"	A3E			Daily CB-like chat near Gaia/Oporto (North)
REP	710030,0	22.44	04	04			FMCW			OTH radar
REP	28x 29x	Dly	Dly	04	RUS B		A3E			Daily mess of Russian taxis and Brazilian CB's

RSGB - Great Britain – G4BOH (Chris)

SRAL – Finland – OH2BLU (Pekka)

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BAUD	SHIFT	REMARKS
SRAL	7006,87	1345-1500	10.	4		UiCarr	N0N			Space of F1?
SRAL	7008,0	0600-0930	29.	4		UiPTR	F1B		250	
SRAL	7010,0	1400-1455	1.	4		UiMUX	J7D	12x120	12x200	
SRAL	7016,0	1145-1630	21. 22.	4		UiPTR	F1B		250	
SRAL	7018,0	0730-0800	29.	4		UiMUX	J7D	12x120	12x200	
SRAL	7020,0	0630-1145	*	4		UiPTR	F1B		250	Days: 11. 12. 18.
SRAL	7026,0	0835	15.	4		UiMUX	J7D	12x120	12x200	
SRAL	7030,0	0900-1930	8.	4		UiPTR	F1B		250	
SRAL	7038,7	1500-0700	dly	4	UKR	D	A1A			Sevastopol
SRAL	7038,8	0430-1930	3. – 19.	4	RUS	P	A1A			Kaliningrad
SRAL	7038,9	1600-0600	dly	4	RUS	S	A1A			Severomorsk
SRAL	7039,0	1400-0600	*	4	RUS	C	A1A			Moscow, days: 1. 3.-7. 13.-15. 18. 19. 21. 24. 25. 30.
SRAL	7054,0	/1700-0700/	dly	4	RUS		F1B		200	Moscow
SRAL	7057,0	1600-1630	11.	4		UiMUX	J7D	12x120	12x200	
SRAL	7080,0	0715-1930	22.- 25.	4		UiPTR	F1B			

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BAUD	SHIFT	REMARKS
SRAL	7086,0	1030-1230	1.	4		UiMUX	J7D	12x120	12x200	
SRAL	7096,0	0330-1415	*	4		UiMUX	J7D	12x120	12x200	Days: 8. 22. 24.
SRAL	7114,0	0430	5. 13.	4	RUS	UiPTR	F1B		200	Kaliningrad
SRAL	7115,0	0900-0922/	15.	4		R. Free Europe	A3E			Test transmissions
SRAL	7119,0	1555	5.	4		UiCW	A1A			5BL
SRAL	7120,0	1445-1900	dly	4	SOM	R. Hargeisa	A3E			
SRAL	7122,0	0915-1530/	*	4		UiPTR	F1B		250	Days: 12. 18. 19.
SRAL	7132,0	0710	29.	4		UiMUX	J7D	12x120	12x200	
SRAL	7142,0	0600-1117/	*	4	RUS	UiPTR	F1B		250	Kaliningrad, days: 11. 13. 19. 20. 24.
SRAL	7143,0	0645-0700	5. 16.	4		UiMUX	J7D	12x120	12x200	
SRAL	7153,0	1145	14.	4		UiPTR	F1B/N0N			
SRAL	7162,0	0530-1930	*	4	RUS	UiPTR	F1B		250	Days: 1. 2. 4. 5. 15. 18. 20. 23. 24. 28. 30.
SRAL	7171,5	1515-1908/	3.	4		UiPTR	F1B		250	
SRAL	7175,0	0240-0500	2. – 15.	4	ERI	VoBME 2	A3E			jammed by ETH, QSY 7170 – 7180 kHz
SRAL	7176,0	0630-1900	*	4	RUS	UiPTR	F1B		200	Kaliningrad, days: 2. 9. 10. 19.
SRAL	7178,0	1700-1800	22.	4		UiMUX	J7D	12x120	12x200	
SRAL	7181,62	1755-1930	29.	4		UiCarr	N0N			
SRAL	7190,0	1545	5.	4		UiPTR	F1B			
SRAL	7196,0	0500-0815	10. 15.	4		7H2X	A1A			5BL
SRAL	14 MHz	0530-1400	*	4	RUS	UiOTHR	FMCW			50Hz/10 kHz, 10 reports, days: 2. 9. 10. 19.
SRAL	14004,0	1250	6.	4		UiPTR	F1B		500	
SRAL	14014,0	1105-1135	12.	4		UiPTR	F1B		250	
SRAL	14016,0	1015-1102/	12	4		UiMUX	J7D	12x120	12x200	
SRAL	14026,0	0405-0715	24. 29.	4		UiMUX	J7D	12x120	12x200	
SRAL	14052,0	0915	2.	4		UiMUX	J7D	12x120	12x200	
SRAL	14112,0	1255	12.	4		UiPTR	F1B		250	
SRAL	14180,0	0515-1830	*	4		UiPTR	F1B		250	Days: 24.. 25. 26. Ship on Black Sea
SRAL	14192,0	1030-1135	12. 29.	4	RUS	UiPTR	F1B		200	Kaliningrad
SRAL	14221,0	0320-0430	*	4		UiPTR	F1B			Days: 4. 7. 15. 22. 23. 24. 28.
SRAL	14226,0	0930	20.	4	RUS	UiPTR	F1B		250	
SRAL	14253,0	0510-1500	*	4	RUS	UiPTR	F1B		250	Penza, days: 1. 2. 5. 8. 10. 12. 19. 27. 29.
SRAL	14255,0	0830-0945	2. 30.	4		UiMUX	J7D	12x120	12x200	
SRAL	14263,0	0900-1110/	5. 13.	4		UiPTR	F1B			
SRAL	14265,0	0650-0935	13.	4		UiMUX	J7D	12x120	12x200	
SRAL	14295,2	0245-1930	dly	4	TJK	R Tojikiston	A3E			3f 4765,07 kHz, Yangiyul TX
SRAL	14306,0	0625-0700	23.	4		UiMUX	J7D	12x120	12x200	
SRAL	18 MHz	0430-1200	*	4	CYP / TUR	UiOTHR	FMCW			50Hz / 20 kHz, days: 13. 17. 18. 19. 24. 25. 26. 10 reports
SRAL	18107,0	0535-	*	4	RUS	RDL	F1B		200	Days: 20. 25. 28. 29.

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BAUD	SHIFT	REMARKS
		1530								30. Up to 5 min transmissions at time
SRAL	21001,5	0400-1600	*	4	RUS	UiPTR	F1B		150	Vocoder pilot, days: 8. 11. 13. – 17. 21. 23.
SRAL	21 MHz	0500-1900	*	4	CYP / TUR	UiOTHR	FMCW			50Hz / 20 kHz, days: 2. 5. 7. 8. 10. 11. 12. 13. 15. 19. 20. 21. 29. (25 reports)
SRAL	24 MHz	0610	6.	4	CYP / TUR	UiOTHR	FMCW			50Hz / 20 kHz
SRAL	28 MHz	0500-1530	*	4	IRN	UiOTHR	FMCW			307/870Hz / 60 kHz, days: 7. – 11. 15. 29. 13 reports
SRAL	28 MHz	0550-0935	*	4	RUS	Taxi disp.	F3E			Days: 13. 15. 16. 21. 7 reports

USKA – Switzerland – HB9CET (Peter)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH or BW	DETAILS
USKA	3527.0	2245	02	04			F1B	50	200	
USKA	3532.0	2243	02	04			B7D	75	6k00E	Link 11- CLEW (in DSB mode) often
USKA	3712.0	2247	02	04			B7D	75	6k00E	Link 11- CLEW (in DSB mode) often
USKA	7001.5	1004	27	04			J3E-L			Italian
USKA	7002.0	2317	27	04			J7D		2k6	CIS12 system idling
USKA	7007.0	2314	27	04			J7D		2k6	CIS12 system idling
USKA	7008.0	2158	26	04			F1B	75	250	CIS 36-50 often
USKA	7014.0	0742	26	04			F1B	40.5	250	CIS-81
USKA	7018.0	0726	29	04			N0N/A1			carrier and/or dots (Jammer)
USKA	7018.0	0727	29	04			J7D	12x120	2k6	PSK-2: CIS12 = AT3004D
USKA	7019.3	0742	29	04			N0N/A1			carrier and/or dots (Jammer)
USKA	7038.7	2125	07	04	UKR	D	A1A			Beacon D Sevastopol daily
USKA	7038.8	2124	07	04	RUS	P	A1A			Beacon P Kaliningrad daily
USKA	7038.9	2126	07	04	RUS	S	A1A			Beacon S Murmansk daily
USKA	7039.4	2339	07	04	RUS	M	A1A			Beacon M Magadan daily
USKA	7054.0	2201	26	04	RUS		F1B	50	200	daily
USKA	7070.0	2321	06	04		204	MFSK8	125	1750	MIL 188-141A daily
USKA	7070.0	0133	07	04		244	MFSK8	125	1750	MIL 188-141A daily
USKA	7070.0	0321	06	04		514	MFSK8	125	1750	MIL 188-141A daily
USKA	7070.0	0322	06	04		571	MFSK8	125	1750	MIL 188-141A daily
USKA	7070.0	2331	05	04		810203	MFSK8	125	1750	MIL 188-141A
USKA	7070.0	0057	07	04		820201	MFSK8	125	1750	MIL 188-141A
USKA	7079.9	0953	22	04			A1			dots only - Jammer !
USKA	7080.0	0810	26	04			F1B	50	200	
USKA	7089.8	1634	10	04			G1D	2400	2k6	PSK-8: Link 11- SLEW often
USKA	7096.0	0613	08	04			J7D		2k6	CIS12 system, idling
USKA	7105.0	2232	02	04	TWN		A3E			BC (2 stations) daily
USKA	7105.0	2232	02	04	CHN		A3E			BC (2 stations) daily
USKA	7114.0	2120	24	04			F1B	50	200	CIS 50-50
USKA	7120.0	1819	05	04	SOM		A3E			Radio Hargeisa daily
USKA	7162.0	1817	05	04			F1B	75	250	often
USKA	7162.0	2043	26	04			F1B	75	500	
USKA	7175.0	1631	10	04			A3E			BC, jammed often
USKA	7175.0	1631	10	04			Noise		10 kHz	Jammer often
USKA	7178.0	0128	17	04			J7D	12x120	2k6	PSK-2: CIS12 = AT3004D
USKA	7180.0	1614	13	04			A3E			BC, jammed often
USKA	7180.0	1614	13	04			Noise		10 kHz	Jammer often
USKA	14000.0	0842	24	04			J3E-U			Italian
USKA	14001.0	1828	05	04		397	MFSK8	125	1750	MIL 188-141A: to 397
USKA	14008.0	1211	10	04			F1B	50	250	CIS 36-50 often
USKA	14026.0	0116	17	04			J7D	12x120	2k6	PSK-2: CIS12 = AT3004D often
USKA	14171.0	0629	15	04			J7D	12x120	2k6	PSK-2: CIS12 = AT3004D
USKA	14180.0	0709	25	04			F1B	50	250	
USKA	14192.0	1024	15	04			F1B	50	200	CIS 50-50 often

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH or BW	DETAILS
USKA	14198.0	0613	17	04			FMCW	50	10k	OTHR
USKA	14211.0	0753	26	04			F1B	50	250	
USKA	14221.0	2201	22	04			F1B	50	200	CIS 50-50
USKA	14236.0	0854	23	04			OFDM60	35.6	3k0	spacing 45.5Hz; pilot at 3300Hz
USKA	14242.0	0828	16	04			J7D	12x120	2k6	PSK-2: CIS12 = AT3004D
USKA	14253.0	0731	29	04			F1B	75	250	
USKA	14261.0	0652	23	04			OFDM60	35.6	3k0	spacing 45.5Hz; pilot at 3300Hz
USKA	14261.0	0851	24	04			FMCW	50	10k	OTHR
USKA	14265.0	0814	13	04			J7D	12x120	2k6	PSK-2: CIS12 = AT3004D (legal)
USKA	14295.15	1849	25	04			N0N			long lasting carrier
USKA	14297.0	0713	25	04			FMCW	50	10k	OTHR
USKA	14298.0	0714	25	04			J7D	12x120	2k6	PSK-2: CIS12 = AT3004D
USKA	14306.0	0747	04	04			J7D	12x120	2k6	PSK-2: CIS12 = AT3004D
USKA	14306.0	0631	23	04			J7D		2k6	CIS12 system idling
USKA	14311.0	0636	23	04			OFDM60	35.6	3k0	spacing 45.5Hz; pilot at 3300Hz
USKA	14340.0	1821	05	04			J7D	12x120	2k6	PSK-2: CIS12 = AT3004D
USKA	14344.65	2137	07	04			PSK-8	2400	2k4	MIL188-100 Hybrid, burst daily
USKA	14346.0	2130	07	04			A1A			no ham content
USKA	18079.0	0931	23	04			FMCW	50 sps	20k	OTHR
USKA	18107.0	0633	15	04			F1B	50	200	CIS 36-50
USKA	18136.0	0739	04	04			F1B	75	200	
USKA	21001.5	0838	29	04			F1B	100	150	daily
USKA	21123.3	0826	29	04			PSK4	8x75	2k25	PRC 4+4 system often
USKA	21190.0	0806	16	04			FMCW	50 sps	20k	OTHR
USKA	21213.0	1649	10	04			FMCW	48 sps	10k	OTHR burst system
USKA	21270.0	1036	28	04			FMCW	50 sps	20k	OTHR
USKA	21300.0	0804	26	04			N0N			long lasting carrier
USKA	21330.0	0832	12	04			FMCW	50 sps	20k	OTHR
USKA	21350.0	1425	12	04			FMCW	50 sps	20k	OTHR
USKA	21363.3	1043	22	04			PSK4	8x75	2k25	PRC 4+4 system often
USKA	21400.0	1643	10	04			FMCW	50 sps	20k	OTHR
USKA	21400.0	0815	29	04			F1B	50	2000	2nd from 10700.0
USKA	21440.8	1001	22	04			MPSK	2400	2k6	unid Burst System often
USKA	21442.0	0823	13	04			J7D	12x120	2k6	PSK-2: CIS12 = AT3004D
USKA	21450.0	0924	20	04			FMCW	50 sps	20k	OTHR
USKA	28004.3	1839	30	04			A3E			Portugues or Brazilian
USKA	28005.0	1719	30	04			A3E			Portugues or Brazilian
USKA	28025.0	1727	30	04			A3E			Portugues or Brazilian
USKA	28029.8	1653	30	04		FA	N0N/A1A			Fishery buoy
USKA	28030.1	1654	30	04			F1B	51	~300	ENAGAL buoy? short bursts
USKA	28035.0	1722	30	04			A3E			Portugues (Brazilian?)
USKA	28036.3	1658	30	04			A3E			unid language
USKA	28045.0	1414	01	04			J3E-U			Portugues (Brazilian?)
USKA	28045.0	1458	12	04			J3E-U			unid language
USKA	28045.2	1411	01	04		PA	N0N/A1A			Fishery buoy
USKA	28046.0	1648	30	04			A3E			unid language
USKA	28047.0	1520	12	04			F1B	51	~300	ENAGAL buoy? short bursts
USKA	28049.5	1510	12	04			F1B	51	~300	ENAGAL buoy? short bursts
USKA	28050.0	1504	12	04		DD	N0N/A1A			Fishery buoy
USKA	28050.0	1327	30	04			F1B	51	~300	ENAGAL buoy? short bursts
USKA	28064.7	1845	30	04			A3E			unid language
USKA	28075.1	2053	30	04			A3E			Portugues (Brazilian?)
USKA	28100.8	1309	30	04			F1B	51	~300	ENAGAL buoy? short bursts
USKA	28102.0	1306	30	04			F1B	51	~300	ENAGAL buoy? short bursts
USKA	28102.16	1307	30	04			F1B	51	~300	ENAGAL buoy? short bursts
USKA	28103.0	1314	30	04			F1B	51	~300	ENAGAL buoy? short bursts
USKA	28103.1	1315	30	04			F1B	51	~300	ENAGAL buoy? short bursts
USKA	28104.0	1844	30	04			A3E			Portugues or Brazilian
USKA	28104.9	1715	30	04			A3E			Portugues or Brazilian
USKA	28115.3	1717	30	04			A3E			Portugues or Brazilian
USKA	28125.0	1436	12	04			FMCW	var sps	~50k	OTHR varying sweep rate
USKA	28134.8	1729	30	04			A3E			Portugues or Brazilian
USKA	28245.1	1759	30	04			A3E			Portugues or Brazilian
USKA	28275.0	1650	01	04			F1B	51	~300	ENAGAL buoy? short bursts BD 3", BRI ~10-15' daily
USKA	28275.0	1430	12	04		CM	N0N/A1A			Fishery buoy
USKA	28295.2	1756	30	04			A3E			Portugues or Brazilian

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH or BW	DETAILS
USKA	28305.0	1755	30	04			A3E			Portugues or Brazilian
USKA	28365.0	0844	12	04			FMCW	var sps	~50k	OTHR varying sweep rate
USKA	28368.0	1143	10	04			FMCW	var sps	~50k	OTHR varying sweep rate
USKA	28370.0	0801	11	04			FMCW	var sps	~50k	OTHR varying sweep rate 307 + 870
USKA	28680.0	0839	16	04			FMCW	var sps	~50k	OTHR varying sweep rate
USKA	28690.0	0913	28	04			FMCW	50 sps	20k	OTHR
USKA	28705.0	0758	03	04			FMCW	var sps	~50k	OTHR varying sweep rate
USKA	28775.0	0845	12	04			FMCW	var sps	~50k	OTHR varying sweep rate
USKA	28895.0	0846	12	04			FMCW	var sps	~50k	OTHR varying sweep rate
USKA	29115.0	0848	12	04			FMCW	var sps	> 50k	OTHR varying sweep rate 307, 870 sweeps/s
USKA	29250.0	1648	01	04			F1B	81.9	140	Datawell buoy daily
USKA	29335.0	0854	12	04			FMCW	var sps	>50k	OTHR varying sweep rate
USKA	29355.0	0848	12	04			FMCW	var sps	>50k	OTHR varying sweep rate
USKA	29375.3	0706	15	04		ER	NON/A1A			Fishery buoy
USKA	29387.5	0657	15	04			F1B	81.9	140	Datawell buoy daily
USKA	29450.0	1433	12	04			F1B	81.9	140	Datawell buoy daily
USKA	29525.0	1456	12	04			F1B	81.9	140	Datawell buoy daily
USKA	29560.0	0949	28	04			FMCW	50 sps	20k	OTHR
USKA	29655.0	0837	16	04			FMCW	25 sps	20k	OTHR

Veron 1 – Netherlands – PA2GRU (Dick)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
VERON	3699,5	19.43	28	4		UiPtr	F1B		200	Idling
VERON	7030,0	17.11	8	4		UiPTR	F1B			Ptr
VERON	7038,7	21.17	27	4	UKR	D	A1A			Beacon Sevastopol
VERON	7038,7	17.10	8	4	UKR	D	A1A			D-beacon (also at: 24/4 16.40 utc)
VERON	7038,8	14.45	6	4	RUS	P	A1A			P-beacon
VERON	7038,9	21.17	27	4	RUS	S	A1A			Beacon Severomorsk
VERON	7039,0	16.35	8	4	RUS	C	A1A			C-beacon
VERON	7040,4	20.08	9	4	RUS	P	A1A			P-beacon
VERON	7054,0	05.43	12	4	RUS	UiPtr	F1B	50	200	revs, ptr. Stops at 07.00 utc.
VERON	7054,0	22.21	27	4	RUS	UiPtr	F1B		200	
VERON	7054,0	17.24	28	4	RUS	UiPtr	F1B		200	
VERON	7054,0	17.13	8	4	CIS	UiPTR	F1B			Ptr
VERON	7054,0	18.47	8	4	RUS	REA4	F1B		200	Ptr/Revs
VERON	7056,5	14.58	27	4	RUS	UiMux	FSK8		2k	
VERON	7056,5	09.20	28	4	RUS	UiMux	FSK8		2k	
VERON	7105,0	22.46	27	4	CHN/ TWN	UiBC	A3E			Chinese px; S4-5
VERON	7120,0	18.29	28	4	SOM	R.Hargaysa	A3E			Arabic speech; S9
VERON	7161,9	11.47	28	4			A1A			Mysterious dotter; continuous; S9+40!
VERON	7162,0	17.14	8	4		UiPTR	F1B			Ptr
VERON	7169,0	17.25	28	4		UiMux	FSK8		2k3	
VERON	10124,2	16.37	24	4		UiPTR	F1B			Fast Revs
VERON	14008,0	12.38	10	4	CIS	UiPTR	F1B			Carrier/Revs/Ptr (also at 24/4 11.21 utc)
VERON	14014,0	11.09	12	4		UiPTR	F1B			Ptr
VERON	14026,00	07.05	24	4	RUS		J7D	120	2600	Carrier on 14027,3 kHz
VERON	14041,0	08.31	1	4	Maroc	UiILL	J3e-U			Marrocan fishery
VERON	14112,0	12.40	9	4		UiPTR	F1B			Ptr
VERON	14135,0	14.32	27	4						Frequency Hopper
VERON	14165,0	08.27	25	4			OTHR	FMCW		radar, wide 10 KHZ
VERON	14176,0	15.01	28	4						Frequency Hopper
VERON	14180,0	08.29	25	4		UiPtr	F1B			Ptr
VERON	14192,0	14.55	10	4	RUS	UiPtr	F1B	50	200	revs, ptr
VERON	14195,0	08.53	12	4			OTHR	FMCW		radar, wide 10 KHZ
VERON	14255,0	09.41	2	4		UiMUX	PSK			12 MPSK

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
VERON	14260,0	10.46	25	4		OTHR	FMCW			radar, wide 10 KHZ
VERON	14285,0	08.30	25	4		OTHR	FMCW			radar, wide 10 KHZ
VERON	18075,0	09.12	14	4		OTHR	FMCW			radar, wide 10 KHZ
VERON	18080,0	08.33	23	4		OTHR	FMCW			radar, wide 10 KHZ
VERON	18107,0	vt	vd	4		UiPTR	F1B			Revs/Ptr
VERON	18107,0	09.56	9	4	RUS	RDL	F1A			RDL 65673 03711 k
VERON	18107,0	08.41	15	4	RUS	RGT77	F1A			XXX RGT77 42501 00936 GWAuLOWYJ
VERON	18107,0	08.56	15	4	RUS	RDL	F1A			XXX RDL 38667 69266 DEREWaNNYJ
VERON	21001,5	13.40	15	4	RUS		F1B			ptr
VERON	21001,5	10.02	30	4		UiPtr	F1B		150	Yaktha, St. Petersburg
VERON	21330,0	11.05	21	4	E	UiILL	J3e-U			Spanish, male voices, fishery
VERON	21438,0	08.38	12	4	RUS	RCV	A1A			bulletin
VERON	21438,0	13.22	15	4	RUS	RCV	A1A			RKZ DE RCV 834 157 15 1526 834 =
VERON	21438,0	13.22	15	4	RUS	RCV	A1A			PROGNOZ POGODY (etc)
VERON	28630,0	13.49	7	4						Frequency Hopper
VERON	28700,0	13.54	7	4		UiMux			80k	Multitone system; 16 tones

The monitoring team of IARU Region 1

Many thanks for your interest!

credits:

Wavecom Elektronik – Buelach – Switzerland

SSB-Electronic – Iserlohn – Germany

BAZ – Special Antennas – Bad Bergzabern - Germany

FTS – Funktechnik Seipelt – Hoppegarten - Germany

German PTT (BNetzA = Federal Network Agency)

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