International Amateur Radio Union

Region 1

Monitoring System

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Editor of the Newsletter

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The monthly newsletter for Region 1

December 2019

The 24 members of the IARUMS Region 1 Monitoring Team:

Acknowledgements

ARAT: 3V8CB – Ahmed ++ ARI: DH7SA – Salvatore ++ ARSK: 5Z4BV - Kamweti ++ DARC: DL3RTL – Daniel ++ EARS: A61M – Obaid ++ 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 ++ PZK: SP5GNI - Miro ++ RAL: OD5RI – Riri ++ REF: F5MIU – Francis ++ REP: CT4AN – Jose ++ ROARS: A41MA - Younis ++ RSGB: G4DYA - Richard ++ SARL: ZS6NS - James ++ SRAL: OH2BLU - Pekka ++ UBA: ON5NQ – Frank +++ URE: EA6AMM - Gaspar ++ USKA: HB9CET - Peter ++ VERON: PG1R - Ruud ++ LU1BCE – Carlos (Co-ordinator Region 2) ++ YB3PET – Titon (Co-ordinator Region 3) ++ DF8FE – (Webmaster supp.) ++ DL8AAM (ALE) ++ DJ7KG (BUOYS) ++ DF5SX (BC) ++ DARC (server support) ++ OD5TE (Hani) ++ VE6SH – Tim (IARU President) ++ 9K2RR – Faisal (EC-IARU-R1) ++ PTTs: BAKOM (Swiss) ++ OFCOM (UK) ++ Dutch AT ++ Austrian PTT

Part 1: News and Infos

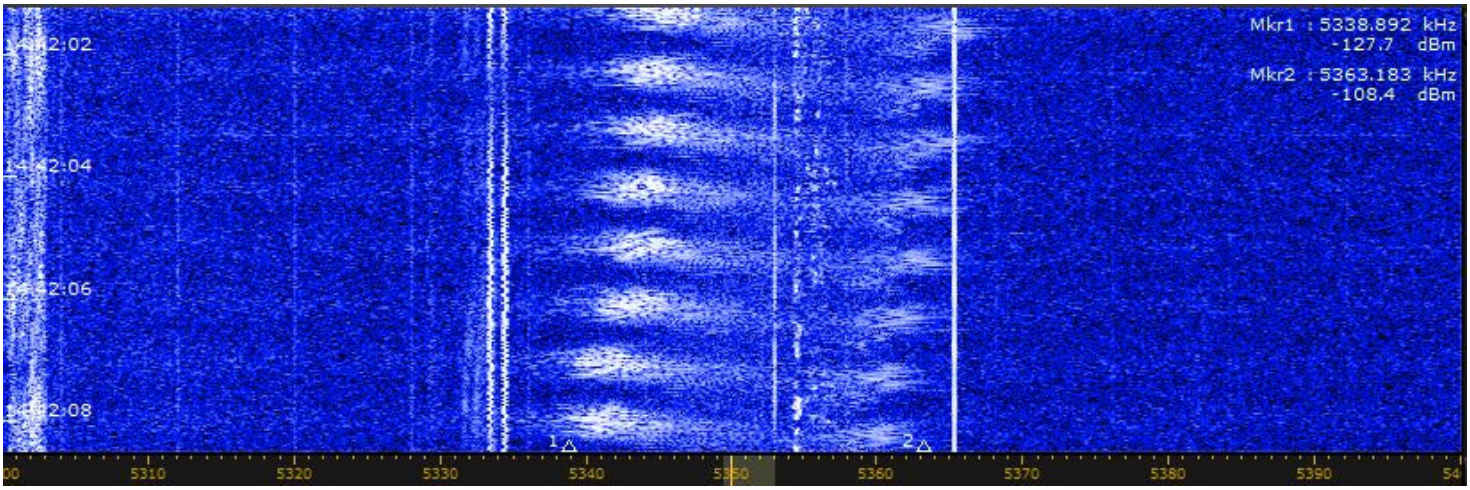
1. Changes in the Region 1 Monitoring Team in January 2020

OE3GSA, Gerd, and **S56ZDB,** Darko**,** left out team**.** Many thanks for your cooperation and membership dear Gerd and Darko.
DK2OM, Wolf, will no longer be the IARUMS Region 1 Coordinator. **The reason:**
His daily monitoring work was intentional hampered by a neighbouring LED lamp since April 2016.
Results: Many destroyed observations, measurements and recordings. Operating under such circumstances is an impossible and senseless mission.
Many "thanks" to "BNetzA" Eschborn for allowing this lamp and supporting the "kind" neighbour!
Wolf will stay in the background and help our team if necessary.
HB9CET, Peter, will be the successor of DK2OM on 1 Jan. 2020. Peter is an excellent observer and analyser.
Please send him your monthly reports for 2020, because he will publish the newsletters 2020.
After 6 years Wolf finished his leadership of the DARC Monitoring system. He had worked for this system 31 years.
DL3RTL, Daniel, will now be the leader of the DARC Monitoring System. Welcome to the Region 1 Monitoring Team dear Daniel!
The Monitoring Team of IARU Region 1 has 24 members on 01 January 2020.

Grateful words:
Many thanks to all our members and friends for the great cooperation during many years! Many thanks for the DARC homepage support and the excellent cooperation with IARU and IARU Region 1!
Many thanks to the German BNetzA Konstanz (especially Mr. Grim) for the excellent cooperation over 20 years. Many thanks to WAVECOM for the great support during many years!
My best wishes to HB9CET and EA6AMM. They will continue our common outstanding work!

2. Daily intentional disturbations by a neighbouring LED-lamp

Since April 2016 destroyed observations, measurements and recordings. The screenshot shows the situation on our narrow 5 MHz band – **S 9 + 10 dB**. Harmonics of this QRM are audible until 50 MHz.
Many "thanks" to the German "BNetzA Eschborn" for tolerating such madness.



5338 **5363**

3. Russian OTH radar Contayner no change

The Russian radar Contayner was daily active on 7 MHz often in the evenings. Sometimes we found 4 or 5 signals at the same time. We found Contayner on 10, 14 and 18 MH, too.

4. Russian F1B on 7193.0 kHz

The Russian F1B on 7193.0 kHz was still active in December. An official complaint by the German BNetzA Konstanz was not regarded. Parameters: F1B, 50 Bd, 200 Hz shift, ident "RDL", Russian navy Kaliningrad

5. 3510.0 kHz - Russian chirps stopped

The mysterious chirps on 3610.0 kHz (RF) from Smolensk were no longer audible.

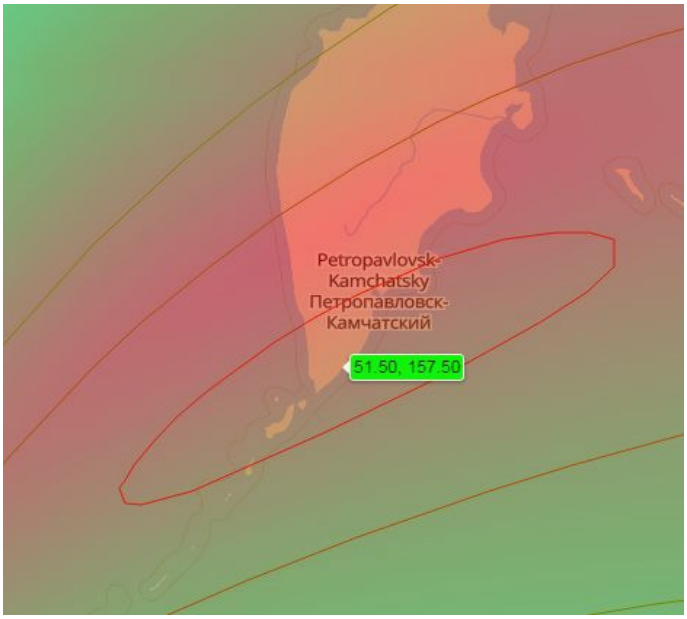
6. Russian cluster beacons on 80 m

The Russian cluster beacons were active again on 3593.7 – 3593.9 kHz. More infos below.
Please notice: 80 m is a shared band!

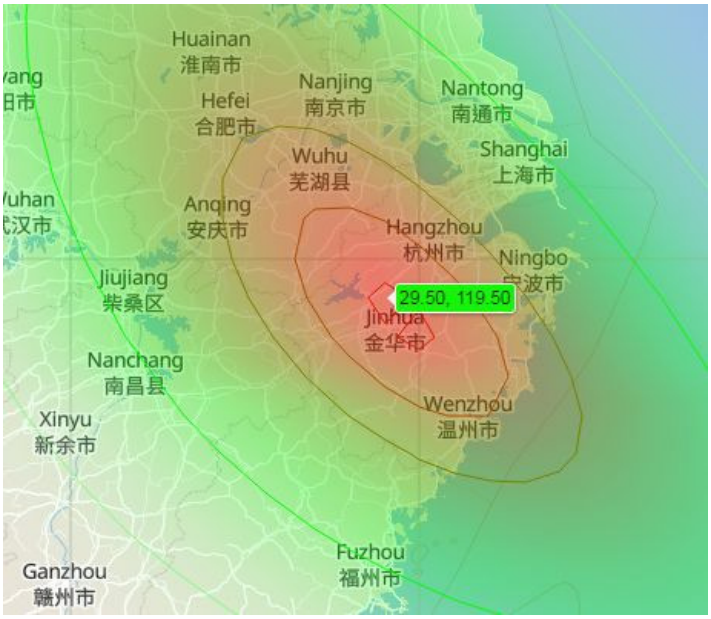
7. Pirate beacon on 80 m

DF5JL found a pirate beacon on 3579.70 kHz transmitting on A1A (CW).
Text of the loop: "happy new year de pirate beacon"

8. TDoA bearings



7119.0 - AT3004D – 17 Dec. – Petropavlovsk Kam.



7030 - 7190 Chinese wideband – OTH radar – 28 Dec.

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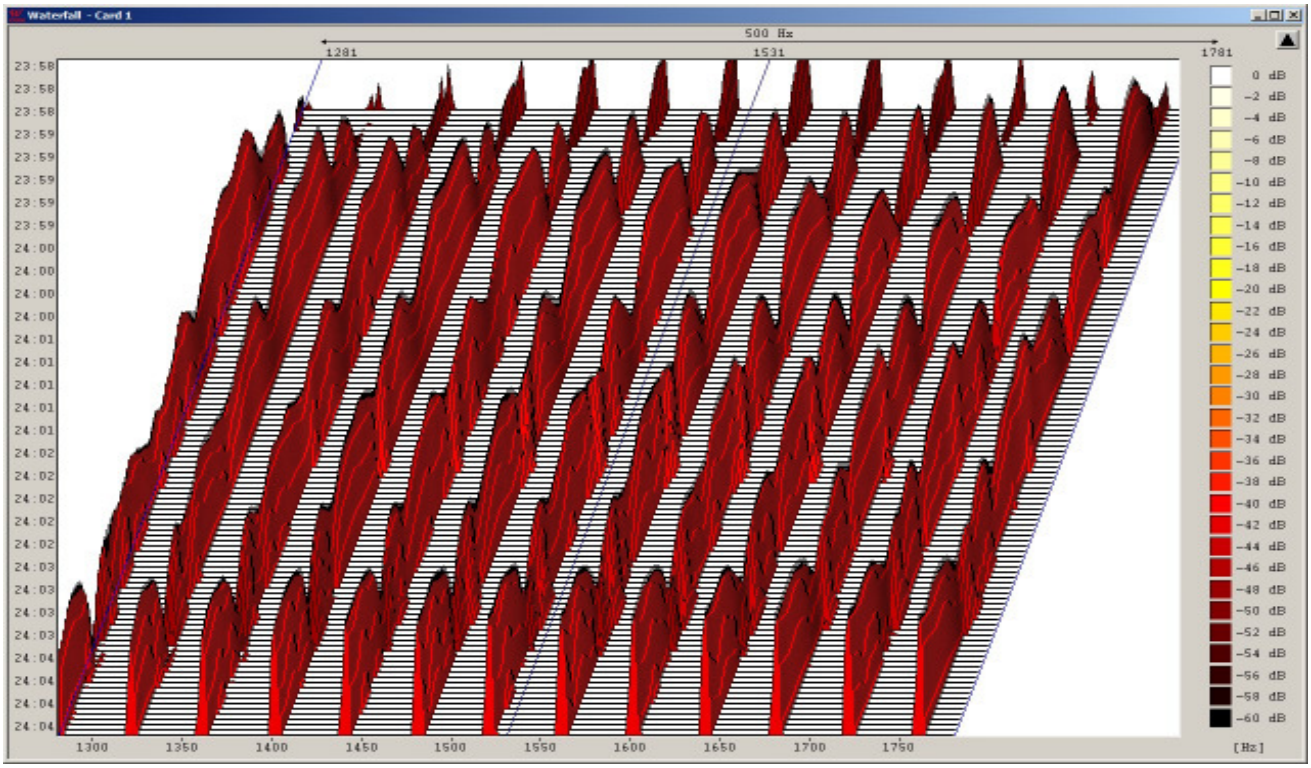
9. Russian OTH radar Contayner on 7132 kHz with fading - Waterfall with Wavecom W-Code



10. Miscellaneous news:

5350.0 kHz – USB – illegal Spanish fishery traffic, splattering up - daily
7000.0 kHz – USB – illegal Spanish or Moroccan fishery traffic, often
7000.0 kHz – USB – Indonesian pirates
7051.0 kHz – F1B – 50 Bd, 200 Hz shift, ident “RDL”, RUS navy Kaliningrad, daily 2000 UTC
14295.0 kHz – harmonic from Radio Tajik on 4765 kHz (no change)

11. Homepage IARU Region 1 http://www.iaru-r1.org/

Homepage IARUMS Region 1 http://www.iarums-r1.org
Homepage IARUMS Region 2 http://www.iarums-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 Coordinators

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 ••• **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 ••• **DF** = direction finder **AMOP** = amplitude modulation on pulse

DARC – 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	**1,8 – 50 MHz**	**vt**	**dly**	**12**	**D**		**QRM**			**1.8 - 50 MHz strong intentional QRM by a neighbouring LED lamp - since April 2016 - "many thanks" to German "BNetzA" Eschborn**
DK2OM	1814,0	vt	vd	12	RUS		USB LSB			14 tones – hyperbolic radio navigation system – BRAS-3/RS-10 – Kaliningrad
DK2OM	1855,0	vt	dly	12	I	IQP	USB			San Benedetto Radio, weather reports - daily
DK2OM	1925,0	vt	dly	12	I	IPL	USB			Livorno Radio, weather reports - daily
DK2OM	3500,1	1817	09	12	CIS		A3E			CIS pirates – unstable carrier
DK2OM	3503,0	1818	09	12	RUS		PSK2A	120	2600	AT3004D - Sevastopol
DK2OM	3503,5	vt	dly	12	G	no ITU	FSK8	125	1750	ALE – British MIL Tascomm – shared band - legal!
DK2OM	3510,0 RF	ady	dly	12	RUS		chirps		3k	mysterious chirps – northwest of Smolensk – no longer
DK2OM	3511,0	1954	09	12	RUS		PSK2A	120	2600	AT3004D – no DF
DK2OM	3522,0	1623	04	12	RUS		F1B	75	250	Moscow – shared band!
DK2OM	3525,0 center	---	--	12	F		PSK8A	2400	2400	LINK11-SLEW on both sidebands (6300 Hz wide) – area of Marseille – legal!
DK2OM	3527,0	1800	dly	12	RUS		F1B	50	200	Severomorsk – daily – shared band
DK2OM	3527,0	1832	28	12	RUS		PSK2A	120	2600	AT3004D – Smolensk – shared band
DK2OM	3531,0	---	--	12	RUS	REA4	N0N			unclean carrier - RUS airforce Moscow, ident: full hour + 40 min - daily
DK2OM	3532,0 RF	1728	17	12	F		PSK4	75	2300	LINK11-CLEW – area of Brest
DK2OM	3536,0	1605	02	12	HOL		USB			male Dutch persons
DK2OM	**3550,0**	**0630**	**dly**	**12**	**F**		**A3E**			**French amateurs not respecting bandplans – every morning**
DK2OM	3553,8	ady	dly	12	TUR		PSK8A	2400	2400	Stanag4285 – 600 bps long -TUR MIL - Ankara – daily, all day - legal operation
DK2OM	3556,0	2138	26	12	RUS		PSK2A	120	2600	AT3004D - Severomorsk
DK2OM	3579,5	1604	31	12	RUS		F1B	81	250	area of Velikiye Luki – shared band
DK2OM	**3579,7**	**1000**	**31**	**12**			**A1A**			**"happy new year de pirate beacon" - loop**

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	3580,0	2138	02	12	RUS		F1B	75	250	Smolensk - shared band!
DK2OM	3581,8	ady	dly	12	TUR		PSK8A	2400	2400	Stanag-4285 – 600 bps long – Ankara – shared band!
DK2OM	3585,0	ady	dly	12	TWN	HLL	F1C		800	WX-fax Taiwan - 120 rpm, IOC 576 - daily, all day - legal!
DK2OM	3586,0	vt	dly	12	HOL		PSK2A	40	40	Amsterdam - daily
DK2OM	3591,0	1415	20	12	J		PSK4	75	5800	LINK11-CLEW on both sidebands (5800 Hz wide) – ship south of Myazaki – shared band!
DK2OM	3592,0	vt	vd	12	G		PSK8A	2400	2400	Stanag-4285 – 600 bps long - area of Falmouth – shared band
DK2OM	3593,7	2230	13	12	RUS	D	A1A			Cluster beacon – Sevastopol RUS Navy – "RCV"
DK2OM	3593,8	2230	13	12	RUS	P	A1A			Cluster beacon – Kaliningrad RUS Navy – "RMP"
DK2OM	3593,9	2230	13	12	RUS	S	A1A			3593.865 – (spurious emissions) Cluster beacon – Severomorsk RUS Navy – „RIT"
DK2OM	3595,0	1840	02	12	RUS		F1B	75	250	area of Ryazan - shared band!
DK2OM	3622,5	ady	dly	12	J	JMH	F1C		800	Tokyo Meteo – 120 rpm – IOC 576 – daily, all day - legal!
DK2OM	3632,8	2004	03	12	ISR		PSK4 PSK8	75 2400	2400 2400	hybrid modem – ISR Navy – PSK4 parallel and PSK8 serial – shared band!
DK2OM	3640,0 RF	vt	17	12	G		FSK8	125	1750	ALE – British MIL Tascomm – shared band!
DK2OM	3741,6	2008	03	12	ISR		PSK4 PSK8	75 2400	2400 2400	hybrid modem – ISR Navy – PSK4 parallel and PSK8 serial – shared band!
DK2OM	3744,5	1730	22	12	ISR		PSK4 PSK8	75 2400	2400 2400	hybrid modem – ISR Navy – PSK4 parallel and PSK8 serial – shared band!
DK2OM	3753,8	1745	15	12	TUR		PSK8A	2400	2400	LINK11-SLEW – west of Izmir – shared band
DK2OM	3756,0	1800	dly	12	RUS		USB			RUS MIL – channel marker – Tuapse – East Black Sea (nw of Sochi) – night QRG
DK2OM	3792,0	1840	01	12	RUS		F1B	50	200	Kaliningrad - shared band!
DK2OM	5350,0	---	--	12	RUS		FMOP		50k	Russian coastal radar "Sunflower" – 43 sps – 5350 – 5400 kHz - Makhachkala
DK2OM	**5350,0**	**vt**	**dly**	**12**	**E**		**USB**		**2400**	**5350.0 – 5352.4 kHz – Spanish fishery – daily like telephone – base station nw of Malaga with ships north of Algeria**
DK2OM	**5352,8**	**1835**	**02**	**12**	**UKR**		**N0N**			**5352.766 kHz – carrier with spurious emissions – QTH Lanivka southwest of Kyiv – daily**
DK2OM	5360,0	1405	06	12	RUS		F1B	75	250	area of Tambov - primary user!
DK2OM	**5360,0**	**1140**	**28**	**12**	**E**		**USB**			**Spanish fishery**
DK2OM	5360,5	1408	02	12	RUS	RDL	F1B	50	200	Severomorsk – often - primary user
DK2OM	5361,8 RF	---	--	12	DNK	OUA15	PSK8A	2400	2400	Stanag-4285 – 600 bps long – assigned to Danish Navy – ne of Aalborg - primary user!
DK2OM	5362,0	0857	30	12	RUS		PSK2A	120	2600	AT3004D
DK2OM	6900,0	2044	19	12	CHN		FMOP		160k	Chinese wideband OTH radar – 10 sps – 6900 – 7060 kHz – 50 sec blocks
DK2OM	6904,0	1809	12	12	CHN		FMOP		160k	Chinese wideband OTH radar – 10 and 20 sps – 6904 – 7064 kHz – blocks of 50 sec
DK2OM	6952,0	1650	15	12	CHN		FMOP		160k	Chinese wideband OTH radar –

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										10 sps – 6952 – 7112 kHz – long lasting
DK2OM	6987,0	1536	01	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – west of Saransk – 6987 - 6999 splattering up
DK2OM	6994,0	1740	07	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – area of Penza – 6988 – 7000 kHz – with splatters 6979 – 7005 kHz
DK2OM	6995,0	1612	05	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – west of Saransk – 6989 – 7001 kHz
DK2OM	6995,0	0940	28	12	CHN		FMOP		10k	Chinese OTH radar – 6990 – 7000 kHz - 83 sps – 1.5 sec bursts – area of Wenzhou
DK2OM	6997,0	1710	28	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – nw of Saransk – 6991 – 7003 kHz
DK2OM	7000,0	vt	18	12	INS		LSB USB			Indonesian pirates - singing and playing music - daily
DK2OM	7000,0	1610	02	12	FEa		USB			Far East pirates
DK2OM	**7000,0**	**0830**	**10**	**12**	**E**		**USB**			**Spanish fishery**
DK2OM	7000,0	0955	10	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – 6994 - 7006
DK2OM	7000,0	2130	31	12	CHN		FMOP		10k	Chinese OTH radar – 6995 – 7005 kHz - 83 sps – area of Guiyang - long lasting
DK2OM	7001,0	1450	06	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – west of Saransk – 6995 - 14007
DK2OM	7001,0	1358	08	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – ne of Saransk – 6995 – 7007 kHz
DK2OM	7001,0	1510	25	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – nw of Saransk – 6995 - 7007
DK2OM	7005,0	1716	18	12	INS		LSB			Indonesian pirates
DK2OM	7005,0	1818	dly	12	RUS		FMOP		90k	coastal radar „Sunflower“ – 43 sps – 6915 – 7005 kHz with spurious – east of Vladivostok
DK2OM	7010,0	vt	dly	12	INS		LSB			Indonesian pirates
DK2OM	7010,0	1922	05	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – west of Saransk – 7004 – 7016 kHz
DK2OM	7015,0	vt	dly	12	INS		LSB			Indonesian pirates – male and female voices
DK2OM	7015,0	1407	28	12	RUS		F1B	50	200	Arkhangelsk
DK2OM	7018,0	vt	19	12	KOR		FMOP		32k	Codar like ocean surface radar 2.6 sps – 7018 – 7050 kHz – Jeju Island
DK2OM	7025,0	vt	dly	12	INS		LSB			Indonesian pirates singing
DK2OM	7030,0	1354	05	12	RUS		F1B	75	250	very unclean - west of Moscow
DK2OM	7030,0	2206	13	12	CHN		FMOP		160k	Chinese wideband OTH radar – 10 sps – 7030 – 7190 kHz – blocks of 50 sec
DK2OM	7030,0	1026	28	12	CHN		FMOP		160k	Chinese wideband OTH radar – 10 sps – 7030 – 7190 kHz - Jinhua – East China
DK2OM	7032,0	1430	14	12	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	7034,0	vt	13	12	CHN		PSK4A	60	2350	PRC 30 tone modem - LSB mode - pilot tone 450 Hz
DK2OM	7035,0	vt	dly	12	INS		LSB			Indonesian pirates singing
DK2OM	7039,2	---	--	12	RUS	„F“	A1A			Cluster beacon „F“ - Vladivostok RUS Navy - **“RJS”**
DK2OM	7039,3	---	--	12	RUS	„K“	A1A			Cluster beacon “K” Petropavlovsk Kamchatskiy - RUS Navy - Pacific fleet - **“RCC”**

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	7039,4	1825	10	12	RUS	„M“	A1A			Cluster beacon „M“ – Magadan RUS Navy – **„RTS“ - daily**
DK2OM	7050,0	1824	06	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – west of Saransk – 7044 - 7056
DK2OM	7051,0	1743	20	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – nw of Saransk – 7045 – 7057 kHz
DK2OM	7051,0	2000	dly	12	RUS	RDL	F1B	50	200	Kaliningrad – RUS navy – daily at 2000 utc
DK2OM	7054,0	vt	dly	12	UKR		USB		2400	picture propaganda transmissions
DK2OM	7055,0	vt	dly	12	UKR		LSB			music and Russian voices
DK2OM	7061,0	2224	17	12	CHN		FMOP		10k	Chinese OTH radar – 7056 – 7066 kHz - 50 sps – 5 sec bursts
DK2OM	7062,0	1922	05	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – west of Saransk – 7056 – 7068 kHz
DK2OM	7064,0	1719	12	12	RUS		FMOP		12k x 5	OTH radar Contayner - 40 sps – 7064 – 7109 – 7147 - 7170 – 7190 kHz
DK2OM	7064,0	2127	20	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – nw of Saransk – 7058 – 7070 kHz
DK2OM	7066,0	1358	08	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – ne of Saransk – 7060 – 7072 kHz
DK2OM	7071,0	2220	04	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – west of Saransk – 7065 – 7077 kHz – together with 7172 kHz
DK2OM	7079,0	1508	12	12	RUS		PSK2A	120	2600	AT3004D – test transmission RUS ship south of Taiwan
DK2OM	7084,0	1815	12	12	CHN		FMOP		10k	Chinese OTH radar – 7079 – 7089 kHz - 50 sps – 5 sec bursts
DK2OM	7088,0	1625	19	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – west of Saransk – 7082 – 7094 kHz
DK2OM	7088,8	1415	18	12	S	SL0FRO	A1A			7088.820 kHz - cw-trainee, Sweden - SL0FRO – often - just for info!
DK2OM	7089,0	1414	18	12	RUS		PSK2A	12	2600	AT3004D – no DF
DK2OM	7089,8	---	--	12	TUR		PSK8	2400	2400	Link11 - SLEW – aircraft ? west of Izmir
DK2OM	7090,0	vt	25	12	KOR		FMOP		32k	Codar like ocean surface radar 2.6 sps – 7090 – 7122 kHz – Jeju Island
DK2OM	7090,0	1945	30	12	KOR		FMOP		32k	Codar like ocean surface radar 2.6 sps – 7090 – 7122 kHz – Jeju Island
DK2OM	7093,0	1840	20	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – nw of Saransk – 7087 – 7099 kHz
DK2OM	7094,0	2159	26	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – nw of Saransk – 7088 - 7100
DK2OM	7095,0	1529	30	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – nw of Saransk – 7089 – 7101 kHz
DK2OM	7096,0	1440	16	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – 7090 – 7102 kHz
DK2OM	7100,0	1400	16	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – 7094 – 7106 kHz
DK2OM	7100,0	1743	20	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – nw of Saransk – 7094 – 7106 kHz
DK2OM	7102,0	vt	05	12	KOR		FMOP		32k	Codar like ocean surface radar 2.6 sps – 7102 – 7134 kHz
DK2OM	7114,0	1936	10	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps –

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										7108 – 7120 kHz
DK2OM	7116,0	1409	10	12	RUS		F1B	75	200	
DK2OM	7119,0	1430	17	12	RUS		PSK2A	120	2600	AT3004D – Petropavlovsk Kamchatsky
DK2OM	7119,0	1957	28	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – nw of Saransk – 7113 – 7125 kHz
DK2OM	7122,0	1349	19	12	RUS	RDL	F1B	50	200	Severomorsk - often
DK2OM	7124,0	2217	17	12	CHN		FMOP		10k	Chinese OTH radar – 7119 – 7129 kHz - 50 sps – 5 sec bursts
DK2OM	7125,0	1816	14	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – nw of Saransk – 7119 – 7131 kHz
DK2OM	7128,0	2018	19	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – west of Saransk – 7122 – 7134 kHz
DK2OM	7129,0	1449	31	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – nw of Saransk – 7123 – 7135 kHz – long lasting
DK2OM	7132,0	1408	26	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – nw of Saransk – 7126 - 7138
DK2OM	7137,0	vt	dly	12	TWN		FSK8 LSB	125	1750	ALE, MIL-188-141A, “FBABA” “FWKMB” “FXIBY” “FCPSL” “FHKHD” “FVIKE” “FHVWY” “FCUGP” “FDRRK” “FWIML” ”FBQCY” ”FCEAX” Taiwanese navy
DK2OM	7137,0	1419	10	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – west of Saransk – 7131 – 7143 kHz
DK2OM	**7140,0**	**1730**	**dly**	**12**	**ERI**		**A3E**		**9k**	**7140.021 kHz - Radio Eritrea**
DK2OM	7141,0	1822	13	12	CHN		FMOP		10k	Chinese OTH radar – 7136 – 7146 kHz - 66.66 sps – 1.9 sec bursts – „foghorn“
DK2OM	7149,0	1932	19	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – west of Saransk – 7143 – 7155 kHz
DK2OM	7150,0	1400	16	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – 7144 – 7156 kHz
DK2OM	7150,0	1448	21	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – 7144 – 7156 kHz
DK2OM	7152,0	0900	06	12	RUS		PSK2A	120	2600	AT3004D - Kaliningrad
DK2OM	7153,0	1427	11	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – nw of Saransk – 7147 - 7159
DK2OM	7156,0	vt	09	12	KOR		FMOP		32k	Codar like ocean surface radar 2.6 sps – 7156 – 7188 kHz – Jeju Island - often
DK2OM	7159,0	0850	02	12	G		PSK4	75	5800	LINK11-CLEW on both sidebands (5800 Hz wide) – ship north of Scotland – 07.12. west of Vigo / Spain
DK2OM	7160,0	1440	16	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – 7154 – 7166 kHz
DK2OM	7162,0	1400	01	12	RUS		FMOP		24k	OTH radar Contayner - 40 sps – west of Saransk – 7140 – 14180 with splatters
DK2OM	7162,0	1408	30	12	RUS	RDL	F1B	75	250	very unclean – Kaliningrad – RUS navy
DK2OM	7165,0	1347	05	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – west of Saransk – 7159 – 7171 kHz
DK2OM	7170,0	2222	17	12	CHN		FMOP		10k	Chinese OTH radar – 7165 – 7175 kHz - 50 sps – 5 sec bursts
DK2OM	7170.0	1448	21	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – 7164 – 7176 kHz

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	7172,0	1515	04	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – west of Saransk – 7166 – 7178 kHz
DK2OM	7179,0	1957	28	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – nw of Saransk – 7173 – 7185 kHz
DK2OM	**7180,0**	**1729**	**dly**	**12**	**ERI**		**A3E**		**9k**	**7180.021 kHz - Radio Eritrea**
DK2OM	7186,0	2207	06	12	CHN		FMOP		10k	Chinese OTH radar „foghorn“ – 7181 – 7191 kHz - 66.66 sps – 3.8 sec bursts
DK2OM	7189,0	1525	20	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – nw of Saransk – 7183 – 7195 kHz
DK2OM	**7190,0**	**1848**	**05**	**12**	**CHN**	**CRI**	**A3E/BC**		**40k**	**China Radio International on 7210 kHz with splatters 7190 – 7230 kHz**
DK2OM	7190,0	1625	19	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – west of Saransk – 7184 – 7196 kHz
DK2OM	7192,0	1758	13	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – nw of Saransk – 7186 – 7198 kHz
DK2OM	7193,0	1400	01	12	RUS	RDL	F1B	50	200	Kaliningrad – RUS navy - often
DK2OM	7195,0	1813	08	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – ne of Saransk – 7189 – 7201 kHz many splatters
DK2OM	7197,0	vt	dly	12	TUR		FSK8	125	1750	ALE, „353013“ „334018“ „314013“ - Turkish Sivil Avunma – Turkish Civil Defense
DK2OM	7197,0	0950	23	12	CHN		FMOP		10k	Chinese OTH radar – 7192 – 7202 kHz - 66.66 sps – 3.8 sec bursts – „foghorn“
DK2OM	7198,0	1100	17	12	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	7200,0	1355	17	12	E		USB			Spanish fishery
DK2OM	7200,0	1518	24	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – nw of Saransk – 7194 - 7206 kHz
DK2OM	7201,0	1045	04	12	RUS		PSK2A	120	2600	AT3004D – 7199.7 – 7202.3 kHz - Moscow
DK2OM	10100,8	ady	dly	12	D	DDK9	F1B	50	450	Baudot - German Weatherservice – legal! – disturbed by Russian OTH radar Contayner on 26 Oct. at 1723 utc and later (also 27.10.)
DK2OM	10114,8	0640	dly	12	RUS		F1B	100	1000	CIS14 – Moscow
DK2OM	10124,0	1425	27	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – nw of Saransk – 10118 - 10130 kHz
DK2OM	10132,0	vt	vd	12	F		USB			French amateurs not respecting bandplans
DK2OM	10136,0	0858	11	12	RUS		F1B	50	200	
DK2OM	10137,0	1405	27	12	RUS		unid		1200	unid broken signal from Samara disturbing FT8
DK2OM	**10144,0**	**ady**	**dly**	**12**	**D**	**DK0WCY**	**A1A**			**10144.000 kHz - DK0WCY – German aurora beacon – just for info!**
DK2OM	10148,0	1046	09	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – ne of Saransk – 10142 - 10154 kHz – long lasting
DK2OM	10148,0	1525	23	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – nw of Saransk – 10142 - 10154 kHz
DK2OM	10149,0	1406	18	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – ne of Saransk – 10143 - 10155 kHz – long lasting
DK2OM	10150,0	1440	27	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – nw of Saransk – 10144 - 10156

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										kHz
DK2OM	13995,0	1016	06	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – west of Saransk – 13989 - 14001
DK2OM	**14000,0**	**vt**	**dly**	**12**	**PNG**		**USB**			**fishermen - south east of Papua New Guinea (Coral Sea) - daily**
DK2OM	**14000,0**	**vt**	**vd**	**12**	**B**		**USB**			**Brazilian pirates – Rio with North Brazil**
DK2OM	14000,0	0909	24	12			USB			pirates in French voice – sw of DL
DK2OM	14130,0	0911	10	12	CHN		FMOP		160k	Chinese wideband OTH radar – 20 sps – 14130 – 14290 kHz
DK2OM	14182,0	1130	02	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – west of Saransk – 14176 - 14188
DK2OM	**14212,0**	**1206**	**vd**	**12**	**UKR**		**A3E**			**female voice with encrypted msgs – figures – "SZRU" = Foreign Intelligence Service of Ukraine in Rivne – every Thursday at 1206 utc – msgs at 1214 utc**
DK2OM	14214,0	0850	26	12	CHN		FMOP		10k	Chinese OTH radar – 14209 – 14219 kHz - 50 sps – long lasting
DK2OM	14221,0	---	--	12	KAZ		F1B	50	200	Kazakhstan – west of Almaty - mostly idling - every evening
DK2OM	**14295,2**	**ady**	**dly**	**12**	**TJK**		**A3E/BC**		**9k**	**14295.128 kHz -3x from Radio Tajik on 4765 kHz – daily, all day**
DK2OM	14305,0	1125	30	12			FMOP		40k	OTHR – 40 sps – 14285 - 14325
DK2OM	14335,0	1142	09	12	RUS		FMOP		12k	OTH radar Contayner - 40 sps – ne of Saransk – 14329 - 14341 kHz
DK2OM	14348,5	vt	dly	12	THA	HS0ZEA	A1A			HS0ZEA beacon – 14348.488 kHz - every 5 minutes – daily - just for info!
DK2OM	**18080,0**	**0750**	**vd**	**12**	**TWN**		**A3E/BC**			**Sound of Hope – Taiwan and Chinese BC jammer – daily at 06 utc and later**
DK2OM	18107,0	---	--	12	RUS	RDL	F1B	36/50	200	CIS-36-50 - Moscow – idle and traffic – often - Russian navy
DK2OM	18150,0	---	--	12	RUS		F1B	100	1000	harmonic from 9075 (100 Bd, 500 Hz) - Kaliningrad
DK2OM	**21000,0**	**---**	**--**	**12**	**B**		**USB**			**Brazilian pirates – Rio de Janeiro with North Brazil – very often**
DK2OM	21438,0	---	--	12	RUS	RCV	A1A			RIP90 de RCV - RUS Navy Sevastopol - daily
DK2OM	21446,0	---	--	12	THA	HS0ZEA	A1A			HS0ZEA beacon – every 5 minutes - just for info!
DK2OM	**28000,0**	**vt**	**vd**	**12**	**CIS**		**F3E**			**28000 – 29700 numerous CIS taxi nets – no change**
DK2OM	28000,0	---	--	12	IRN		AMOP		45k	Iranian radar - 27980 – 28025 kHz – 307 sps – 870 sps alternating
DK2OM	28860,0	---	--	12	IRN		AM pulse		45k	Iranian radar - 28837 – 28883 kHz – 150 sps – 313 sps alternating – North Iran - daily

IRTS – Ireland – EI3GYB (Michael)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	DETAILS
IRTS	3550	0710	22	12	F		AM	French Hams violating the band plan on a daily basis.
IRTS	3590	0705	22	12	F		AM	French Hams still violating the band plan on a daily basis.
IRTS	3756	1640	26	12	RUS		USB	The Pip. Strong signals as from early in the afternoon.
IRTS	3784	1625	26	12	UKR /RUS		USB	A female voice with endless rows of numbers in Russian.
IRTS	3784	1627	26	12	UKR /RUS		USB	A male voice seems to answer the female voice from above with another litany of numbers in Russian. This station is much weaker than the female operator's station. Communication ends at 1635z. Probably contacts between Donbass civil war area operators and military personal in Russia.
IRTS	5345	2140 to 2158	05	12	RUS or UKR		USB	Male voices in Russian. Splattering onto 5346.5 kHz/US-EI SSB spot frequency.
IRTS	5346	2050	06	12			USB	English-French mix, male voices. Probably Caribbean pirates. Covering US/EI SSB spot frequency of 5346.5 kHz.
IRTS	5346	0350	14	12	MM?		USB	2 Chinese speaking males. Strong signals. Stops 0425z. Covers EI/US SSB spot frequency of 5346.5 kHz. Also on 30th at 1836z.
IRTS	5346	0400	22	12			USB	2 Chinese speaking male voices chatting. Covering the US/EI SSB spot frequency of 5346.5 kHz. Same as on 14th and 30th? Also heard again at 1835z on the 31st.
IRTS	5350	0015	04	12	MRC or MM		USB	2 Moroccan Medium strength siganl. Splattering into WARC-15 band.
IRTS	5350	2200	05	12	E or MM		USB	2 Spanish fishermen. Medium strength signal. Splattering into WARC-15.Also on the 30th at 1255z.
IRTS	5350	2050	19	12	MRC or MM		USB	2 Moroccan fishermen. Very loud. splattering up to WARC-15
IRTS	5377	1750 to 1803z	03	12	E or MM		USB	Spanish fishermen. Very loud and strong signals. UK allocation. Back again 2005z.
IRTS	5400	2124 to 2145z	02	12			USB	Male voice handing out phonetic letters. English with a strong French accent. Roger beep all the time. Caribbean pirates? UK/EI CW spot frequency.
IRTS	5398.5	1425	25	12	IRL		LSB	An Irish station runs a QSO with a UK station in LSB and is transmitting outside of the Irish spot frequency of 5398.5 kHz/USB.QSO ends at 1445z.
IRTS	5403.5	1530	17	12	F		USB	A French Ham calls CQ. No 5 MHz allocation in France.
IRTS	6950	1930	15	12	IRN		AMOP	Radar from 6950 to 7004 kHz.
IRTS	6992	0215	24	12	IRN		AMOP	Radar from 6992 to 7008 kHz. Huge signals.
IRTS	6994	1820	07	12	IRN		AMOP	Radar, 6994 to 7010 KHz. Persistent. Huge signals. Band unusable.
IRTS	7005	1825	05	12	RUS		FMOP	Huge radar. Contayner OTHR. 7005 to 7015 kHz. Band destroyed.
IRTS	7005	0540	31	12			FMOP	Radar from 7005 to 7017 kHz. Very strong. All frequencies unusable.
IRTS	7055	1240	09	12	UKR or RUS		LSB	Ukrainian-Russian radio war. Agitprop. Nearly every day all day with huge signal strength, even around midday.
IRTS	7055	1530	30	12	RUS/ UKR		LSB	Ukrainian-Russian radio war. Loud music, extremely bad audio. Splattering all over the place from 7015 to 7088 kHz. Never heard that

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	DETAILS
								distorted before.
IRTS	7056	1805	05	12	RUS		FMOP	Huge radar. Contayner OTHR. 7056 to 7068 kHz. Band not usable.
IRTS	7056	1825	07	12	RUS		FMOP	Radar, 7056 to 7076 kHz. Huge signals, persistent. Band not usable.
IRTS	7057	1650	12	12	RUS		FMOP	Radar from 7057 to 7071 kHz. Monster signals as usual. Spectrum not usable.
IRTS	7110	1815	14	12	RUS		FMOP	Radar from 7110 to 7135 kHz. Monster signals. Band destroyed.
IRTS	7118	0025	26	12			FMOP	Radar from 7118 to 7131 kHz. Big signals.
IRTS	7123	1645	12	12	RUS		FMOP	Radar from 7098 to 7123 kHz. Very strong. Band “kaputt”.
IRTS	7143	1930	19	12			FMOP	Radar from 7143 to 7157 kHz. Big signals.
IRTS	7144	1840	11	12	RUS		FMOP	Radar from 7144 to 7162 kHz. Huge signals. Band unusable.
IRTS	7151	2104	02	12	RUS		FMOP	Radar from 7151 to 7161 kHz. Very strong.
IRTS	7159	1330	01	12			Digital	Link-11 Clew. Huge signal. Still on 03/12/19 at 1335z.
IRTS	7175	1925	13	12	RUS		FMOP	Radar from 7175 to 7204 kHz. Huge signals. Putin’s military playing with their toys. Band in a disastrous state.
IRTS	7177	1405	27	12			FMOP	Radar from 7177 to 7200 kHz. Huge signals. All frequencies unusable.
IRTS	7180	1425	12	12	RUS		FMOP	Radar from 7180 – 7200 kHz. Powerful signals. Band not usable.
IRTS	7182	1750	17	12			FMOP	Radar from 7182 to 7192 kHz. Medium strength signal.
IRTS	7190	1830	07	12	RUS		FMOP	Radar from 7190 to 7205 kHz. Medium strength. Persistent.
IRTS	7194	1345	03	12			F1B	Strong digital signal.
IRTS	7194	0845	10	12			Digital	Link-11 Clew.
IRTS	10140	1150	08	12			FMOP	Radar from 10140 to 10154 kHz. Strong signals. Band unusable.
IRTS	14330	1754	09	12			FMOP	Radar from 14330 to 14342 kHz. Strong.

MRASZ – Hungary - HA7PL (Laci)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
MRASZ	3500,0	1743	25	12			USB			unidentified
MRASZ	3510,0	2149	09	12	RUS		UNID		3000	chirps
MRASZ	3522,0	1635	03	12			F1B		250	
MRASZ	3522,0	1813	28	12			PSK2			AT3004D
MRASZ	3523,0	1811	06	12			A1A			"KUWYV ZLINA TEVBH"
MRASZ	3524,0	1746	25	12			F1B		250	
MRASZ	3527,0	2033	02	12			F1B		200	
MRASZ	3527,0	1512	30	12			PSK2			AT3004D
MRASZ	3547,0	2048	05	12			F1B		200	
MRASZ	3547,3	1943	19	12			A1A			"573T6 573T6 69134 69134"
MRASZ	3550,0	1504	03	12			PSK2			AT3004D
MRASZ	3568,0	1748	23	12			F1B		250	
MRASZ	3580,0	1950	02	12			F1B		250	
MRASZ	3580,0	1450	03	12			F1B		250	
MRASZ	3580,0	1502	03	12			F1B		250	
MRASZ	3581,8	1458	06	12	TUR		PSK8A	2400	2400	Stanag-4285
MRASZ	3581,8	2140	09	12	TUR		PSK8A	2400	2400	Stanag-4285
MRASZ	3581,9	1750	25	12			F1B		250	
MRASZ	3588,0	1816	25	12			PSK2			AT3004D
MRASZ	3597,0	1754	14	12			PSK2			AT3004D
MRASZ	3601,0	0840	25	12			OTHR			3598 -3603 kHz
MRASZ	3603,0	1751	25	12			OTHR			3600 -3606 kHz
MRASZ	3606,0	1747	14	12			F1B		250	
MRASZ	3616,5	1753	25	12			PSK2			AT3004D

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
MRASZ	3631,0	1451	03	12			PSK2			AT3004D
MRASZ	3640,0	2034	02	12			F1B		250	
MRASZ	3657,0	1914	16	12			A1A			slow V string
MRASZ	3657,0	1754	25	12			A1A			slow V string
MRASZ	3657,0	1515	30	12			A1A			slow V string
MRASZ	3667,7	1607	01	12			A1A			quick V string
MRASZ	3668,0	1537	06	12			F1B		200	
MRASZ	3690,7	0849	25	12			F1B		300	
MRASZ	3706,0	1702	04	12			PSK2			AT3004D
MRASZ	3725,0	1516	30	12			LSB			music + singing
MRASZ	3762,0	1811	25	12			A1A			"R1Q 56" "OK QRU K"
MRASZ	3772,0	1457	06	12			PSK2			AT3004D
MRASZ	3773,0	1810	25	12			A1A			"BK QRU K"
MRASZ	3792,0	1950	01	12			F1B		200	
MRASZ	3792,0	1924	16	12			F1B		200	
MRASZ	3799,0	1951	19	12			PSK2			AT3004D
MRASZ	7000,0	1740	25	12			OTHR			6991-7009 kHz
MRASZ	7008,0	1230	05	12			F1B		250	
MRASZ	7008,0	1949	05	12			OTHR			7000 -7016 kHz
MRASZ	7012,0	1659	04	12			OTHR			7000 -7024 kHz
MRASZ	7013,0	1305	29	12			F1B		200	
MRASZ	7014,1	1304	29	12			F1B		200	
MRASZ	7028,4	1041	13	12			A1A			dashes, deliberate disturbance
MRASZ	7036,0	1954	14	12			F1B		250	
MRASZ	7039,0	1935	16	12			OTHR			7030 -7048 kHz
MRASZ	7051,0	2030	09	12			F1B		200	
MRASZ	7055,0	0815	25	12			LSB			propaganda + music
MRASZ	7055,0	1225	29	12			LSB			chaos
MRASZ	7055,0	1518	30	12			LSB			chaos
MRASZ	7063,0	2031	09	12			OTHR			7056 -7070 kHz
MRASZ	7093,0	1518	30	12			OTHR			7084 -7102 kHz
MRASZ	7124,0	1955	14	12			OTHR			7110 -7138 kHz
MRASZ	7130,0	2032	09	12			OTHR			7100 -7160 kHz
MRASZ	7140,0	1456	03	12	ERI		A3E			BC R. Eritrea
MRASZ	7140,0	1538	06	12	ERI		A3E			BC R. Eritrea
MRASZ	7140,0	1725	14	12	ERI		A3E			BC R. Eritrea
MRASZ	7158,0	1039	22	12			F1B		250	
MRASZ	7160,0	1929	16	12			OTHR			7153 -7168 kHz
MRASZ	7180,0	1539	06	12	ERI		A3E			BC R. Eritrea
MRASZ	7180,0	1725	14	12	ERI		A3E			BC R. Eritrea
MRASZ	7190,0	1641	03	12			OTHR			7180 -7200 kHz
MRASZ	7193,0	1022	15	12	RUS		F1B		200	RUS Navy
MRASZ	7193,0	1023	15	12			A1A			"ETETETETET" disturbance
MRASZ	7198,0	1040	22	12			PSK2			AT3004D
MRASZ	10123,0	1008	13	12			F1B		200	

PZK – Polish group

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
PZK										**December 2019**
SP3AMO	1854,0	0715	19	12			A1A			Beacon OKM1/ OK0EV [S6] 100W GP
SP3AMO	1888,0	2107	12	12			J3E_U			Meteo news
SP3AMO	1897,0	2208	1	12			UI		1k6	
SP3AMO	1897,0	1611	2	12			UI		1k6	
SP3AMO	1897,0	2140	2	12			UI		1k6	
SP3AMO	1897,0	0800	3	12			UI		1k6	At 10.00 not transmitting
SP3AMO	1897,0	vt	vd	12			UI		1k6	S9
SP3AMO	1897,0	1640	9	12			PSK		1k6	[S9] German Navy. Returned after a long absence. Heard all day. Very strong at night. Frequency unusable for any traffic. (Michael's EI3GYB note)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
SP3AMO	1897,0	0815	10	12			PSK		1k6	
SP5GNI	3525	1313	6	12			MFSK		2k7	Pilot 3526,3 and 12 tones below (with modulated ampltudes)
SP3AMO	3526,5	vt	vd	12		MIL	F2B	100	200	[S9]
SP3AMO	3526,7	2137	1	12			PSK		500	10 lines - 1 3 1 3 1 [S9]
SP3AMO	3526,7	2140	1	12			N0N			[S9]
SP3AMO	3527,0	2034	29	12			F2B	100	200	[S9]
SP3AMO	3527,0	1602	30	12			F2B	100	200	[S9] - FSK, PSK - changable mode
SP3AMO	3527,0	2010	30	12			F2B	50	200	[S9]
SP3AMO	3533,4	1014	19	12			UI			Frequency scan? Sounds like squip / sqweep
SP3AMO	3534,5	1004	5	12			UI			Like scanning or FAX
SP5GNI	3551,3	1249	3	12			MFSK		3k	Pilot and multi-tone modulatin down to 3548,3
SP5GNI	3565,0	1246	3	12			FSK		500	3 lines
SP3AMO	3569,8	2142	1	12			PSK		200	4 linie [S8]
SP5GNI	3574	1000	16	12			UI		3k	3574 the highest peak, but 6 more occasinaly visible. Every 10 second short all-lines transmission
SP3AMO	3581,5	1844	30	12			PSK		1k6	[S9]
SP3AMO	3581,7	2144	1	12			UI		1k6	
SP3AMO	3582,0	vt	vd	12			PSK		1k6	
SP5GNI	3583,3	1526	12	12			MFSK		3k	3583,3 pilot, the rest 3 kHz down S9+10 (Stanag?)
SP3AMO	3589,8	1657	19	12			PSK		1k2	Lines every 50 Hz [S9] 1658 UTC lines every 120 Hz (70BD/8 Hz ???)
SP5GNI	3600,4	1259	3	12			MFSK			Pilot 3600,4 + wider peak 3599,8 + occasinally one more peak higher
SP5GNI	3607,3	1526	12	12			MFSK		2,7	3607,3 pilot, the rest 2,7 kHz down (probably correlated with 3583,3 transmission but weaker)
SP5GNI	3632,3	930	17	12			MFSK		2k7	2632,3 pilot and 12 tomes (Stanag?)
SP3AMO	3656,3	0954	21	12			PSK		1k2	[S9] - lines every 50 Hz
SP3AMO	3673,0	0930	6	12			J3E_U			In English
SP3AMO	3673,3	0923	6	12			PSK			
SP3AMO	3673,7	1020	19	12			PSK		1k6	
SP5GNI	3697	1555	5	12			MFSK		1k2	About 10 tones between 3697-3698,16
SP3AMO	3697,1	2053	4	12			FSK		900	Lines distance 100 Hz
SP5GNI	3705	857	5	12			PSK		3k	Stanag?
SP3AMO	3705,0	1024	5	12			FSK			Different modes
SP3AMO	3706,5	1809	4	12			FSK		1k2	Linie co co 50 Hz na szerokości 1200 Hz [S9]
SQ9DHS	3715,0	1025	20	12			J3E_L			Music
SP3AMO	3718,6	2146	1	12			F2B		500	
SP3AMO	3719,0	1920	19	12			F2B			Nie zdążyłem go namierzyć - skończył nadawać
SP3AMO	3719,1	0708	21	12			PSK		1k2	[S9] - linie co 50 Hz
SP3AMO	3720,0	0720	23	12			PSK		1k2	6 linii po 120 Hz, skończył o 7.24 UTC
SP5GNI	3724	1322	5	12			FSK		250	
SP5GNI	3731	vt	vd	12			A3J			In Russian, Ukrainian and Beyalrussian - a lot of vulgarism and propaganda
SP5GNI	3735	1135	19	12			FSK		500	
SP3AMO	3735,5	2129	20	12		MIL	F2B	100	200	[S9]
SP5GNI	3743,0	vt	vd	11						Pilot 3742,95 + wider peak 3742,6-3742,85 + occasinally peak at 3752,05 kHz
SP5GNI	3743	1534	5	12			MFSK		6k	Carrier 3743 and 2 sideband 3kHz each - tansmited in packets
SP5GNI	3744,5	vt	12	12			UI		2,5k	Repeatable transmissions packets 9 s long
SP5GNI	3751,3	930	17	12			PSK		3K	2751,3 pilot (Stanag?)
SP3AMO	3756,5	2456	1	12			UI	30	10	Beep 0,5s pause 1 s
SP5GNI	5352,95	vt	vd	12			UI			Pilot amplitude modulated with short burst 600 Hz wide, waek
SP5GNI	5360,5	vt	vd	12			FSK		200	
SP3AMO	7000,0	1805	5	12			UI		20k	OTHR [Signal 20 kHz from 7000 to 7020 kHz] [S9+10/20 dB]
SP3AMO	7000,0	2140	7	12			UI		20k	OTHR [Signal 20 kHz from 7000 to 7020 kHz] [S9+10/20 dB]
SP3AMO	7007,7	0706	19	12			PSK		1k6	[S5] linie co 50 Hz
SP5GNI	7015	vt	vd	12			FSK		200	

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
SP5GNI	7032,2	1000	17	12			UI		2k3	7032,2 pilot in the middle, 7031 lowest, 7033,3 higes tone
SP5GNI	7038,5	905	5	12			MFSK			Strong lines 7038,5 and 7040,1; a few weak line in-between
SP5GNI	7040,1	1010	17	12			MFSK		1k6	Pilot and a few weaker tones down to 7038,5
SP3AMO	7050,7	2217	1	12			F2B		200	
SP3AMO	7052,0	1750	5	12			UI		20k	OTHR [Signal 20 kHz from 7050 to 7070 kHz] [S7]
SP3AMO	7052,0	0735	6	12			UI		20k	OTHR [Signal 20 kHz from 7050 to 7070 kHz] [S7]
SP3AMO	7057,0	2135	20	12			UI		12k	[S9] - 7057,0 - 7069,0 kHz (OTHR)
SP3AMO	7085,7	0707	19	12			PSK		1k6	[S8] 8 lines 100 Hz wide
SP5GNI	7089,6	1306	3	12			FSK			7089,6 continous and 7090,6 like a 1 sec. clock, a few line more visible
SP5GNI	7110	1018	17	12			FSK		250	
SP5GNI	7122	1325	6	12			FSK		200	
SP3AMO	7125,0	1452	26	12		MIL	UI		12k	OTHR [S9+20dB] - 1455 UTC QRT
SP3AMO	7134,5	2120	28	12		MIL	UI		12k	OTHR [S9]
SP5GNI	7140	1534	12	12			A1			Carrier
SP5GNI	7152,5	1007	11	12			MFSK		3k	like STANAG, not continous
SP5GNI	7159,5	910	5	12			UI			strange (see **ExpertSDR2_SunSDR2_Date_5_12_2019_Time_9_10.jpg**)
SP3AMO	7160,0	2058	4	12			UI		20k	OTHR [Signal 20 kHz from 7060 to 7080 kHz] [S7]
SP3AMO	7160,0	2133	20	12			UI		12k	OTHR [Signal 20 kHz from 7060 to 7080 kHz] [S9]
SP5GNI	7161,3	1100	23	12			MFSK		3k	7161,3 pilot, 12 tones below, S9
SP5GNI	7167	1140	31	12			PSK		10k	OTHR? - about 5 sec
SP5GNI	7179,3	1015	16	12			MFSK		3k	7179,3 pilot, like STANAG, S9 + 10
SP3AMO	7180,0	1620	19	12			UI		12k	OTHR [S4] 7195 kHz [S9] QSB 1625 UTC QRT
SP5GNI	7185	1143	31	12			PSK		10k	OTHR? - about 5 sec
SP5GNI	7188,2	vt	12	12			UI		16k	OTHR symetrical but a little weaker transmission on 7109 kHz
SP3AMO	7192,0	0936	4	12		MIL	F2B	100	200	[S9]
SP3AMO	7192,8	1125	20	12		MIL	F2B	100	200	[S2] o 1135 UTC skończył
SP5GNI	7193	vt	vd	12			FSK		200	RTTY (in brakes "x" on A1A)
SP3AMO	7193,0	0942	4	12		MIL	F2B/A2A	100	200	[S9] RDL
SP5GNI	10107	1335	6	12			UI		2k5	short bursts - diiferent kinds of modulation
SP5GNI	10139,7	1209	19	12			MFSK		300	
SP5GNI	10140,15	vt	vd	12			MFSK			A few lines between 10239,95-10140,25, not strong
SP5GNI	10148,8	1210	19	12			UI		500	Short bursts, strong
SP5GNI	14097,15	vt	vd	12			MFSK		200	2-4 lines
SP5GNI	14110,4	vt	vd	12			FSK		240	Transmissions with short breaks
SP5GNI	14188,7	1225	19	12			UI		2k	Like OTHR, shortly, very strong
SP5GNI	14199,4	vt	vd	12			MFSK		400	
SP5GNI	14199,4	vt	vd	12			MFSK		300	5 tones. Occasionally additional 6 tones 4 kHz wide
SP5GNI	14199,55	vt	vd	12			MFSK		300	14199,55 pilot and 4 tones below
SP3AMO	21051,5	2143	20	12			N0N			[S1]
SP3AMO	21113,0	2221	1	12			UI			4 lines
SP3AMO	21113,0	2141	20	12			N0N			[S1]
SP3AMO	21173,0	2140	20	12			N0N			[S1]
SP3AMO	21277,7	1813	21	12			UI			Crackling not like from a switching power supply
SP5GNI	28225,2	1228	20	12			MFSK		2k8	4 strong tones 180 distance and and about 10 weak tones
SP5GNI	28399	1310	19	12			MFSK		400	Pilot and 3 tones below, weak

REF – France – F5MIU (Francis)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	Baud	Sh /Bw	DETAILS
R.E.F.										**Decembre 2019**
F5MIU	14180	0850	2	12					20kHz	OTH Radar pulsed 25ms,S5
F5MIU	7065	1641	8	12					20kHz	OTH Radar pulsed 25ms,S7
F5MIU	7000	1644	8	12					20kHz	OTH Radar pulsed 25ms,S3
F5MIU	14250	0854	10	12					150kHz !	OTH Radar pulsed 50ms,S3
F5MIU	7190	1704	12	12					15kHz	OTH Radar pulsed 25ms,S8
F5MIU	7105	1704	12	12					15kHz	OTH Radar pulsed 25ms,S7
F5MIU	18160	0845	15	12					20kHz	OTH Radar pulsed 20ms,S8
F5MIU	14100	0905	15	12					200kHz!	OTH Radar pulsed 100ms,S3
F5MIU	14255	0850	25	12					12kHz	OTH Radar pulsed 20ms,S8
F5MIU	14313	0902	26	12					12kHz	OTH Radar pulsed 20ms,S5

REP – Portugal – CT4AN (Jose Francisco)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAIL
REP	3550	07.30	14	12	E		J3E-U			Fishery
REP	3582	dly	dly	12	TUR		PSK8			NATO Stanag4285
REP	7025	20.38	18	12	B		J3E-U			Fishery
REP	7035	09.05	01	12			J3E-L			Unid lang
REP	7039	dly	dly	12	RUS	M	A1A			Beacon MAGADAN
REP	*7068*	*18.30*	*20*	*12*	*RUS*		*FMOP*			*OTH *** new*
REP	*7115*	*18.12*	*19*	*12*	*CHN*		*FMOP*			*OTH *** new*
REP	7115	08.58	04	12	RUS		FSK	300	500	FSK
REP	7125	08.15	04	12	RUS		FSK			CIS 36-50
REP	7140	dly	dly	12	ETH		8k00 A3EGN			BC Eritrea, daily
REP	7180	dly	dly	12	ERI		9k00 A3EGN			Radio Eritrea
REP	*7191*	*18.00*	*18*	*12*	*RUS*		*FMOP*			*OTH *** new*
REP	10130	07.08	04	12	MRC		J3E-U			Fishery
REP	10130	10.16	12	12			MFKS8			Unid MFSK
REP	14140	17.31	02	12	CHN		FMOP	10	100k	OTH
REP	14145	16.00	02	12	E		J3E-L			Fishery
REP	14145	16.50	10	12	CHN		FMOP	10	100k	OTH
REP	14155	15.10	13	12	E		J3E-L			Fishery
REP	14190	09.30	01	12	RUS		F1B	50	200	Navy
REP	14195	08.00	01	12	RUS		FSK	50	200	Navy
REP	14195	09.10	16	12	RUS		F1B	50	200	CIS50 Russian Navy
REP	14230	08.54	10	12	CHN		FMOP		10k	OTH
REP	14265	08.59	10	12	RUS	T206	F1B	75	200	Mil modem
REP	14265	17.05	19	12	RUS	T206	F1B	75	200	Mil
REP	14325	09.12	20	12	E		J3E-U			Fishery
REP	18065	12.00	15	12	CYP		FMCW	50	20k	OTH
REP	18080	07.10	11	12	TWN		9k00 A3EGN			Radio Sounds of Hope (jamming)
REP	18090	11.13	14	12	CYP		FMCW		20k	OTH
REP	18105	13.22	14	12	CYP		FMCW	50	20k	OTH
REP	18105	11.00	11	12	CYP		FMCW	50	20k	OTH
REP	21185	11.02	03	12	MRC		J3E-U			Fishery. Strong QSB
REP	21435	08.09	04	12	RUS		A1A			Navy operations
REP	28500	dly	dly	12	RUS		F3E			Taxis dispatcher
REP	28725	dly	dly	12	RUS		F3E			Taxis dispatchers
REP	28755	dly	dly	12	RUS		F3E			Taxis female dispatcher

RSGB – United Kingdom – G4DYA (Richard)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/BW	DETAILS
RSGB	3510.0	vt	dly	12	RUS		J3E			USB repetitive chirp sound.
RSGB	7003.0	1601	16	12	RUS		P0N		14K0E	Container OTH radar. 40 sps.
RSGB	7015.0	0913 0903	30 31	12			F1B		200	
RSGB	7032.0	1425	14	12			J7D			USB 7030.0 / CIS-12
RSGB	7038.496 7038.500 7038.504	ady	dly	12	CZE	OK0EU	A1A			For info: QRP propagation beacons. CW idents offset at +40 Hz.
RSGB	7051.0	2001 2121 2140 2219 2051 2314	02 03 04 09 17 19	12			F1B		200	
RSGB	7055.0	1245	30	12			A3E		30K0E	Techno music. Ceased at 1251.
RSGB	7061.0	1456	31	21	RUS		P0N		14K0E	Container OTH radar. 40 sps.
RSGB	7063.0	2221	09	12	RUS		P0N		14K0E	Container OTH radar. 40 sps.
RSGB	7071.0	2144	04	12	RUS		P0N		14K0E	Container OTH radar. 40 sps.
RSGB	7096.0	1623	16	12	RUS		P0N		14K0E	Container OTH radar. 40 sps.
RSGB	7109.0	1852	12	12	RUS		P0N		14K0E	Container OTH radar. 40 sps.
RSGB	7110.0	2222	09	12	RUS		P0N		14K0E	Container OTH radar. 40 sps.
RSGB	7122.0	0837 0925 1603 1109 0835 1150	02 06 09 12 20 22	12	RUS	RDL	F1A/F1B	50	200	
RSGB	7129.0	1456	31	12	RUS		P0N		14K0E	Container OTH radar. 40 sps.
RSGB	7131.0	1417	26	12	RUS		P0N		14K0E	Container OTH radar. 40 sps.
RSGB	7140.02	vt	09, 11, 15, 16	12	ERI	VoBM1	A3E			BC
RSGB	7159.0	vt	03-06	12			B7D		6K00E	ISB / Link 11 CLEW
RSGB	7159.0	vt	07-08	12			J7D		2K40E	USB / Link 11 CLEW
RSGB	7159.06	0947	01	12			B7D		6K00E	ISB / Link 11 CLEW
RSGB	7160.0	1604	16	12	RUS		P0N		14K0E	Container OTH radar. 40 sps.
RSGB	7162.0	1328	30	12			F1B		250	
RSGB	7170.0	1557	21	12	RUS		P0N		14K0E	Container OTH radar. 40 sps.
RSGB	7171.0	2142	04	12	RUS		P0N		14K0E	Container OTH radar. 40 sps.
RSGB	7180.02	vt	09, 11, 14, 16	12	ERI	VoBM2	A3E			BC
RSGB	7188.0	1855	12	12	RUS		P0N		14K0E	Container OTH radar. 40 sps.
RSGB	7193.0	vt	01, 03-11, 14, 19, 20, 23	12	RUS	RDL	F1A/F1B	50	200	
RSGB	7200.0	1510	24	12	RUS		P0N		14K0E	Container OTH radar. 40 sps.
RSGB	7201.0	0939	14	12	RUS		J7D		2K70E	USB 7199.0 / CIS-12
RSGB	10100.8	ady	dly	12	D	DDK9	F1B	50	450	For info: Primary user: WX broadcast
RSGB	14181.0	0834	02	12	RUS		P0N		14K0E	Container OTH radar. 40 sps.
RSGB	14159.0	1125	04	12	RUS		P0N		14K0E	Container OTH radar. 40 sps.

RSK – Kenya – 5Z4BV (Kamweti)

not available

SRAL – Finland – OH2BLU (Pekka)

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BAUD	SHIFT	REMARKS
SRAL	6999.96	1745-1825/	15	12	RUS	UiPTR	F1B		250	
SRAL	7000.0	1120	17	12	RUS	UiPTR	F1B		200	
SRAL	7000.0	1005	18	12	RUS	RIT	A1A			5F
SRAL	7001.0	1110-1130	4	12		UIMUXX	PSK2	120	2600	
SRAL	7008.0	1300-1330	5	12	RUS	UiPTR	F1B		200	
SRAL	7008.0	0625-0900	19	12	RUS	UiMUX	PSK2	120	2600	
SRAL	7012.0	1100-1130	1	12	RUS	UiMUX	PSK2	120	2600	
SRAL	7012.0	0945-1345	*	12	RUS	UiPTR	F1B		250	
SRAL	7015.0	0640-1945	*	12	RUS	UiPTR	F1B		200	Days: 29. - 31.
SRAL	7021.0	1315-1330	5	12	BLR	UiPTR	F1B		500	
SRAL	7030.0	1430-1510/	5	12	RUS	UiPTR	F1B		250	
SRAL	7057.5	'0840	18	12		S6SH	F1A		250	
SRAL	7079.0	0840-1230	17	12		UiMUX	PSK2	120	2600	
SRAL	7086.0	'0735	19	12	RUS	UiMUX	PSK2	120	2600	
SRAL	7088.0	0615-1430	13	12	ship	UiPTR	F1B		200	East Mediterranian Sea
SRAL	7112.0	0830-0850/	14	12		UiMUX	PSK2	120	2600	
SRAL	7116.0	1400-1430	10	12	RUS	UiPTR	F1B		200	
SRAL	7122.0	0845-1800	*	12	RUS	UiPTR	F1B		200	Days: 2. 6. 10. 11. 12. 16. 17. 21.
SRAL	7127.0	0745-1000	24	12	RUS	UiPTR	F1B/ N0N		250	
SRAL	7129.0	0845-0900	10	12	RUS	UiMUX	PSK2	120	2600	
SRAL	7134.0	-1215/	9	12		UiPTR	F1B		250	
SRAL	7140,0	0530-0700	dly	12	ERI	VoBME	A3E			
SRAL	7140,0	1400-1835/	dly	12	ERI	VoBME	A3E			
SRAL	7142.0	0920-1015	3	12		UiPTR	F1B		250	
SRAL	7144.0	0745-0800	24	12	RUS	UiMUX	PSK2	120	2600	
SRAL	7152.0	1120-1240/	6	12	RUS	UiMUX	PSK2	120	2600	
SRAL	7157.2	1300-1330	24	12	POL?	UiBC	A3A			X-mas MX
SRAL	7158.0	0630-0755/	23	12	RUS	UiPTR	F1B		250	
SRAL	7159.0	1400-1430	12	12	RUS	UiPTR	F1B		200	
SRAL	7159.0	0630-0900	*	12	ship	UiMUX	DQPSK			LINK11 dsb/usb, days: 4. 7. 8 . Atlantic Ocean
SRAL	7162.0	1330-1430	30	12	RUS	UiPTR	F1B		250	
SRAL	7169.0	1030-1111/	5	12	RUS	UiPTR	F1B		200	
SRAL	7171.0	'0650	20	12		UiMUX	PSK2	120	2600	
SRAL	7178.0	1015-1115	16	12	RUS	UiMUX	PSK2	120	2600	

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BAUD	SHIFT	REMARKS
SRAL	7178.5	0700-0715	16	12	RUS	UiCW	A1A			MR 5F
SRAL	7180.0	0530-0700	*	12	ERI	VoBME	A3E			Days: 1. - 25. 30. 31.
SRAL	7180.0	1400-1835/	*	12	ERI	VoBME	A3E			Days: 1. - 25. 30. 31.
SRAL	7192.0	1000-1020	4	12	RUS	UiPTR	F1B		250	
SRAL	7193.0	0700-1445/	*	12	RUS	RDL	F1A/B N0N		200	Days: 1. 3. 4. 5. 6. 10. - 15. 18. 19. 20. 21. 23. MR 5F
SRAL	7194.0	0730-0850	4	12	RUS	UiMUX	PSK2	120	2600	
SRAL	7198.0	1025-1155	*	12	RUS	UiMUX	PSK2	120	2600	Days: 11. 17. 25.
SRAL	7199.0	1115-1245/	4	12	BLR	UiPTR	F1B		250	
SRAL	7201.0	0715-1240/	*	12	RUS	UiMUX	PSK2	120	2600	Days: 4. 14. 25.
SRAL	7 MHz	/1350-0800/	*	12	RUS	Kontainer	FMCW			40Hz/ 13kHz, days: 1. 2. 3. 5. 6. 7. 8. 9. 10. 12. 14. 15. 16. 17. 24. 25. 27. (WebSDR 19d)
SRAL	7 MHz	1300-1315	5 14	12	CHN	UiOTHR	FMCW			10Hz/ 170kHz
SRAL	7 MHz	0600-1500	*	12	CHN	UiOTHR	FMCW			10Hz/ 10kHz, days: 5. 14. 17. 18. 25. 28. 30.
SRAL	7 MHz	1200	11	12	CHN	UiOTHR	FMCW			66Hz/ 15kHz
SRAL	10 MHz	0630-0700	10	12	CYP	UiOTHR	FMCW			25/50Hz/ 20kHz, (WebSDR 14d)
SRAL	10 MHz	0615-1520	24	12	RUS	Kontainer	FMCW			40Hz/ 13kHz, (WebSDR 2d)
SRAL	14 MHz	'0830	15	12	CHN	UiOTHR	FMCW			20Hz/ 10kHz
SRAL	14 MHz	0615-1045	*	12	CHN	UiOTHR	FMCW			67Hz/ 10kHz, days: 2. 4. 18. 20. 17. foghorn
SRAL	14 MHz	0730-1330	2 4	12	RUS	Kontainer	FMCW			40Hz/ 15kHz, (WebSDR 6d)
SRAL	18 MHz	0700-1030	*	12	CYP	UiOTHR	FMCW			25/50Hz/20kHz, days: 18. 20. 21. 22. (WebSDR 22d)
SRAL	18080.0			12	TWN	Sound of Hope	A3E			CHN jam by BC, not heard
SRAL	21 MHz			12	CYP	UiOTHR	FMCW			25/50Hz/20kHz, (WebSDR 7d)
SRAL	21438.0	/0830-	15	12	RUS	RCV	A1A			
SRAL	24 MHz			12		UiOTHR	FMCW			(WebSDR 0d)
SRAL	28 MHz			12	IRN	UiOTHR	FMCW			307 & 870Hz / 60 kHz.
SRAL	28860.0			12	IRN	UiOTHR	FMCW			150 & 313Hz / 60 kHz.
SRAL	28 MHz			12	RUS	Taxi disp.	F3E			no reports

URE – Spain – EA6AMM (Gaspar)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
URE	7000*	VT	VD	12	RUS		FMOP		12k	OTH Radar Contayner. *From 1 to even 4 simultaneous transmissions along the 20 m band, VT, VD*. Vídeo example: https://www.youtube.com/watch?v=N-mhDhncTUQ
URE	7000	07:03	02	12			FMOP		40k	OTH Radar
URE	7000	18:00	08	12	RUS		FMOP		12K	OTH Radar Contayner. 40 sps
URE	7010	18:04	05	12	RUS		FMOP		12k	OTH Radar Contayner. 40 sps.
URE	7055	07:15	02	12	RUS/UKR		J3E-L			Music, speech
URE	7062	18:05	05	12	RUS		FMOP		10k	OTH Radar Contayner. 40 sps.Also on 9/12
URE	7066	18	08	12	RUS		FMOP		12k	OTH Radar Contayner. 40 sps.
URE	7159	08:35	03	12			PSK4	75	5800	LINK-11 CLEW DSB. VT, VD.

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
URE	7193	08:39	03	12			F1B		200	
URE	14090.7	11:03	04	12			PSK2A	120	2600	AT3004-D
URE	10114.8	07:18	02	12			F1B		250	Moscow
URE	10148	14:20	18	12	RUS		FMOP		12k	OTH Radar Contayner
URE	14130	08:05	04	12			FMOP		10k	OTH Radar bursts
URE	14130 USB	08:50	10	12	CHN		FMOP		160 k	Chinese wideband OTH RAdar. Bursts. Hopping
URE	14159	11:08	04	12	RUS		FMOP		12 k	OTH Radar Contayner. 4o sps
URE	14182	07:52	02	12	RUS		FMOP		12k	OTH Radar Container. 40 sps
URE	14177	08:05	04	12			FMOP		10k	OTH Radar bursts
URE	14186	07:05	2	12			F1B		500	
URE	14160	08:24	14	12	CHN		FMOP		160k	CHN OTH Radar wideband, 160 kHz, 20 sps, transmissions = 50 sec

USKA – Switzerland – HB9CET (Peter)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
USKA	6982.0	2144	12	12			FMOP	10 sps	160k	OTHR, wideband; long lasting Partially in 40m band
USKA	6999.8	1736	13	12			G1D PSK8	2400	2k7	MIL 188-141B App. C BW1 Partially in 40m band
USKA	7000.0	0226	22	12			FMOP	40 sps	ca 12k	OTHR; Contayner 29B6 Partially in 40m band
USKA	7009.0	2328	05	12			FMOP	40 sps	ca 12k	OTHR; Contayner 29B
USKA	7010.0	1506	12	12			J7D	12x120	2k7	PSK-2; CIS12 aka AT3004D
USKA	7015.0	1923	12	12			FMOP	10 sps	ca 12k	OTHR, wideband 160 kHz!
USKA	7015.0	1715	29	12			F1B	50	200	CIS 50-50
USKA	7031.0	2318	**09**	12			FMOP	40 sps	ca 12k	OTHR; Contayner 29B6
USKA	7049.0	1836	06	12			FMOP	40 sps	ca 12k	OTHR; Contayner 29B6
USKA	7051.0	0241	22	12			F1B	50	200	often
USKA	7054.0	1600	13	12			F1B	50	200	often
USKA	7055.0	1326		12			J3E-L		ca 2k7	Political statements, sounds russian
USKA	7057.0	1704	06	12			FMOP	40 sps	ca 12k	OTHR; Contayner 29B6
USKA	7061.0	2201	06	12			FMOP	40 sps	ca 12k	OTHR; Contayner 29B6 often
USKA	7063.0	2311	**09**	12			FMOP	40 sps	ca 12k	OTHR; Contayner 29B6
USKA	7063.0	1927 2336	12 21	12			FMOP	40 sps	ca 12k	OTHR; long lasting often
USKA	7079.0	1429	12	12			J7D	12x120	2k7	PSK-2; CIS12 aka AT3004D often
USKA	7088.0	1607	13	12			F1B	75	200	
USKA	7089.0	1409	18	12			FMOP	40 sps	ca 12k	OTHR; Contayner 29B6
USKA	7096.0	1634	01	12			FMOP	40 sps	ca 12k	OTHR; Contayner 29B6
USKA	7100.0	2331 1855	16 20	12			FMOP	40 sps	ca 14k	OTHR; long lasting with gap in the center
USKA	7108.0	1931	12	12			FMOP	40 sps	ca 12k	OTHR; Contayner 29B6
USKA	7109.0	1701	06	12			FMOP	40 sps	ca 12k	OTHR; Contayner 29B6
USKA	7112.0	1319	13	12			J7D	12x120	2k7	PSK-2; CIS12 aka AT3004D
USKA	7114.0	2314	**09**	12			FMOP	40 sps	ca 12k	OTHR; Contayner 29B6
USKA	7118.0	1434	12	12			FMOP	40 sps	ca 12k	OTHR; Contayner 29B6
USKA	7121.0	1941	06	12			FMOP	40 sps	ca 12k	OTHR; Contayner 29B6
USKA	7122.0	0941	09	12		RDL	F1A		200	ID RDL, then figures in groups.
USKA	7122.0	0943	09	12		RDL	F1B	50	200	CIS
USKA	7140.0	1726	10	12	ERI	VOBM	A3E		~ 9k	BC often
USKA	7152.0	0906	06	12			J7D	12x120	2k7	PSK-2; CIS12 aka AT3004D
USKA	7152.0	2211	**10**	12			FMOP	40 sps	ca 12k	OTHR; Contayner 29B6
USKA	7154.0	2317	**09**	12			FMOP	40 sps	ca 12k	OTHR; Contayner 29B6
USKA	7159.0	1116	01	12			B7D	14x75	6K00E	DQPSK: LINK 11 CLEW DSB daily
USKA	7159.0	1440	12	12			F1B	75	200	often

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
USKA	7160.0	2341	16	12			FMOP	40 sps	ca 14k	OTHR; long lasting
USKA	7163.4	1701	29	12			XXX	X	ca 3k	unidentified digital signal
USKA	7166.0	2343	20	12			FMOP	40 sps	ca 14k	OTHR; Contayner 29B6, long lasting
USKA	7170.0	1649	21	12			FMOP	40 sps	ca 14k	OTHR; Contayner 29B6, long lasting
USKA	7182.0	2244	**10**	12			FMOP	41 sps	ca 10k	OTHR; Burst's, BD ca 5s
USKA	7187.0	1526	20	12			FMOP	40 sps	ca 12k	OTHR; Contayner 29B6
USKA	7188.0	1935	12	12			FMOP	40 sps	ca 12k	OTHR; Contayner 29B6
USKA	7192.0	1014	04	12			F1B	75	250	
USKA	7193.0	1203	01	12	RUS	RDL	F1B	50	200	almost daily
USKA	7195.0	2116	08	12			FMOP	40 sps	ca 12k	OTHR; Contayner 29B6
USKA	7197.0	2246	07	12	TUR	various	MFSK8	125	1750	ALE, MIL 188-141A; Network
USKA	14048.0	0907	02	12			FMOP	50 sps	10k	OTHR; Bursts
USKA	14105.0	0931	02	12			FMOP	40 sps	12k	OTHR; Contayner 29B6, long lasting
USKA	14181.0	0909	02	12			FMOP	40 sps	12k	OTHR; Contayner 29B6, long lasting
USKA	14315.0	0919	02	12			FMOP	41 sps	10k	OTHR; (24ms) Bursts
USKA	14320.0	0908	06	12			FMOP	50 sps	10k	OTHR; Bursts
USKA	18175.0	1123	14	12			FMCW	25 sps	20k	OTHR, partially in 17m band

Veron – Netherlands – PG1R (Ruud)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SHIFT	DETAILS
VERON	3522,0	1840	17	12		UiPTR	F1B		Ptr
VERON	3527,0	2022	19	12		UiPTR	F1B		Ptr
VERON	3548,0	1842	17	12	CIS	UiPTR	F1B		Revs/Ptr
VERON	3548,0	1905	17	12	RUS	RDL	F1A		RDL 20727 86130 K
VERON	3582,0	1843	17	12		UiPTR	F1B		Ptr
VERON	3653,0	1547	09	12	CIS	UiPTR	F1B		Revs/Ptr also 21/12 21.12 UTC
VERON	3657,0	2114	21	12	CIS	V	A1A		V-beacon
VERON	3792,0	1628	01	12	CIS	UiPTR	F1B		Revs/Ptr
VERON	6994,0	1951	07	12	RUS	UiRadar	FMOP	12k	OTHR; 40sps;S7; splatters up 7004kHz
VERON	6998,0	1438	13	12	RUS	UiRadar	FMOP	12k	OTHR Contayner; 40sps
VERON	7004,0	1900	08	12		OTHR	FMOP		radar long period
VERON	7005,0	1901	05	12	RUS	OTHR	FMOP		55.20N 35.20E
VERON	7011,0	1015	24	12	RUS	UiPtr	F1B	250	ptr
VERON	7015,0	1004	02	12	RUS	RIT	A1A		RLO de RIT QTC 110 34 2 1257 110 = Radio Prognoz 02129 5F
VERON	7015,0	1002	04	12	RUS	RIT	A1A		RLO de RIT QTC 117 34 4 1258 117 = Radio Prognoz 04129 5F
VERON	7015,0	1540	09	12	RUS	RIT	A1A		RLO de RIT QTC 829 53 9 1833 829 = Prognoz Pogody
VERON	7021,0	1325	05	12		Ui	F1B		Unindentified signal; broad spectrum; lots of garbage
VERON	7044,0	1440	13	12	RUS	UiRadar	FMOP	12k	OTHR Contayner; 40sps
VERON	7051,0	2134	07	12	RUS	UiPtr	F1B	200	Printer idling; S5 QSB
VERON	7051,0	2025	14	12	RUS	UiPtr	F1B	200	Printer; S7; splatters
VERON	7064,0	1815	12	12	CHN	UiRadar	FMOP	160k	OTHR; 10sps; S4
VERON	7064,0	1725	12	12	RUS	UiRadar	FMOP	12k	OTHR Contayner; 40sps; S6
VERON	7100,0	2022	16	12	RUS	UiRadar	FMOP	12k	OTHR Contayner; 40sps; S9
VERON	7109,0	1725	12	12	RUS	UiRadar	FMOP	12k	OTHR Contayner; 40sps; S8
VERON	7110,0	1031	17	12	RUS	UiPtr	F1B	250	56N 33E
VERON	7122,0	1315	20	12		UiPTR	F1B		Ptr
VERON	7140,0	1438	12	12	ERI	Carrier	NON		R.Eritrea?; QSB S4-7
VERON	7147,0	1725	12	12	RUS	UiRadar	FMOP	12k	OTHR Contayner; 40sps; S9
VERON	7160,0	2022	16	12	RUS	UiRadar	FMOP	12k	OTHR Contayner; 40sps; S9+; splatters
VERON	7170,0	1725	12	12	RUS	UiRadar	FMOP	12k	OTHR Contayner; 40sps; S9+

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SHIFT	DETAILS
VERON	7180,0	1436	12	12	ERI	Carrier	NON		R.Eritrea?; QSB S5-7
VERON	7190,0	1725	12	12	RUS	UiRadar	FMOP	12k	OTHR Contayner; 40sps; S9
VERON	7191,0	1920	13	12	RUS	OTHR	FMOP		radar 55 N 42E
VERON	7191,0	1755	13	12	RUS	UiRadar	FMOP	12k	OTHR Contayner; 40sps; S9+; splatters
VERON	7193,0	1250	20	12	CIS	UiPTR	F1B		Revs/Ptr
VERON	7193,0	1028	03	12	CIS	UiPTR	F1B		Revs/Ptr
VERON	7193,0	1055	03	12	RUS	RDL	F1A		RDL 77771 65141 K
VERON	10123,0	1014	13	12		UiPTR	F1B		Fast Revs Off air 10.15 UTC
VERON	14160,0	1219	04	12	RUS	OTHR	FMOP		radar TD0A
VERON	14180,0	1151	02	12		OTHR	FMOP		radar
VERON	14187,0	1035	19	12		OTHR	FMOP		radar
VERON	14350,0	1201	02	12		OTHR	FMOP		radar
VERON	21438,0	1005	13	12	RUS	RCV	A1A		RIP90 de RCV QTC 473 43 4 1432 473 = Nawarea 032
VERON	21438,0	1023	16	12	RUS	RCV	A1A		RGX94 de RCV QTC 942 34 5 1356 942 = Nawip 030
VERON	21438,0	1028	16	12	RUS	RCV	A1A		RIP90 de RCV QTC 354 91 4 1850 354 = Nawarea 032

The monitoring team of IARU Region 1

credits:

Wavecom Elektronik – Buelach – Switzerland

German BNetzA Konstanz

All our members, friends and contributors worldwide!

Many thanks for your interest!

Happy New Year from DK2OM and HB9CET!

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