



IARU Monitoring System Region 1 Monthly Newsletter 12 - December 2020

edited by Peter Jost, HB9CET and Gaspar Miró, EA6AMM

News and Info's

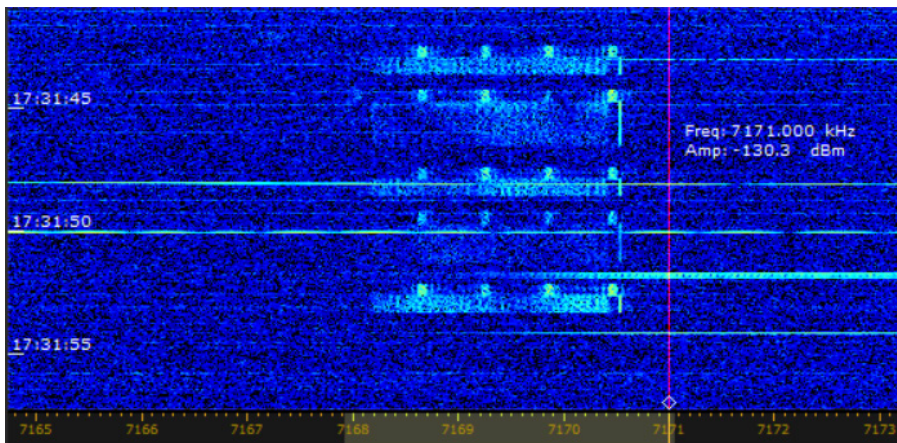
Intruder in December

The last month in 2020 also confirms what we had already observed day after day in the previous months, namely the countless massiv annoying "over-the-horizon-radars" (OTHR) on many bands, mainly on 20m and 40m, but increasingly also on 17m and 15m. Above all, the Russian OTHR "Contayner" as well as OTHR's from China affects amateur radio more and more, sometimes quite massively, at times 3 to 4 stations could be found in the same band. Gaspar, EA6AMM reports that around 66% of all his observations were OTHR. Significantly less to be found were numerous FSK emissions as well as the characteristic CIS12

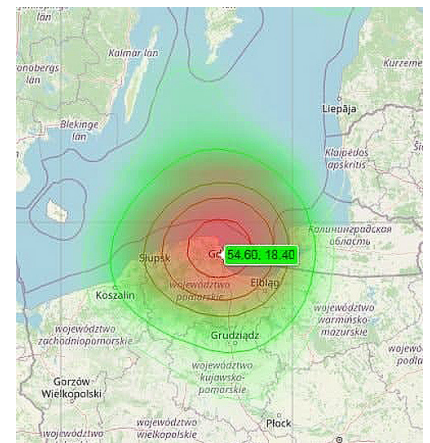
signals from CIS countries (CIS = Commonwealth of Independent States).

For some time now, a Broadcast station is active every day at 1100-1258 UTC at 7200 kHz, which has a massive impact of around 5 kHz on the lower side band of our 40m band. Several TDoA measurements indicate Taiwan.

Also the Broadcast station "Voice of Broad Masses" from Eritrea can be heard daily on 7140 kHz (VOBM1)), and increasingly also on 7180 kHz (VOBM2).



CHN30 (PRC30) signal at 7171.0 kHz LSB, PSK4 60Bd. Also found at 7110 kHz. Screenshot with Perseus SDR; © HB9CET, Peter



TDoA of ui digital signal at 7000 kHz USB © DK2OM, Wolf

Detailed reports of national coordinators

Abbreviations used (as per IARUMS definitions; please do not use "own, home brew" abbreviations) **aka** = also known as | **BC** = Broadcast | **BD** = Baud, (or also Burst duration) | **BRI** = Burst repetition interval | **BW** = Bandwidth | **ca** = approximate | **CF** = Center frequency | **CHN** = **PRC** = People's Republic of China | **DF** = Direction finding (radio location; see also TDoA) | **OTHR** = over the horizon radar | **FMCW** = frequency modulated continuous wave | **FMOP** = frequency modulated on pulse | **SH** = Shift (Hz) | **sps** = sweeps per second | **TDoA** = Time difference of arrival | **ui** = **unid** = unidentified | **vd** = various dates | **vt** = various times.

CF: Frequencies of digital signals are usually Center Frequencies unless otherwise specified!

DARC; Daniel, DL3RTL;		Credits to monitors: Wolf DK2OM, Alex DB3TA, Tom DF5JL							
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3500.0	2028 2005	16 23	12			A3E			CIS pirates - unstable carriers
3510.0	1700	dly	12	RUS		chirps		3k	mysterious chirps - 60 km east of Bryansk

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kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3517.0	2038	10	12	E		LSB			Spanish fishery - ship traffic - often
3756.0	1800	dly	12	RUS		USB			RUS MIL - channel marker - 4 tones - Tuapse - East Black Sea (nw of Sochi) - night QRG
6995.0	1650	1	12	RUS		FMOP	40	12k	OTHR
7000.0	2130	1	12	RUS		FMOP	40	12k	OTHR
7004.0	1815	17	12	?		FMOP	40	12k	OTHR (very weak signal)
7010.0	1832	17	12	CHN		FMCW	50	10k	OTHR 50sps, 5,1s bursts
7012.0	1555	20	12	RUS		FMOP	40	12k	OTHR
7012.0	1900	20	12	CHN		FMCW	50	10k	OTHR 50sps, 5,1s bursts
7013.0	2210	16	12	RUS		FMOP	40	12k	OTHR
7015.0	1215	10	12	RUS		FMOP	40	15 k ?	OTHR
7015.0	1750	19	12	CHN		FMOP		10k	Chinese OTH radar, 3.8s bursts
7021.0	1466	20	12	CHN		FMCW	41.67	10k	OTHR 41,67sps, 6,12s bursts
7022.0	1416	20	12	RUS		FMOP	40	12k	OTHR
7025.0	1630	01	12	CHN		FMOP	50	10k	Chinese OTH radar 5.2 sec bursts
7027.0	2138	24	12	CHN		FMOP	50	10k	Chinese OTH radar 10.3 sec bursts
7032.0	2118	16	12	RUS		FMOP	40	12k	OTHR
7033.0	2035	6	12	RUS		FMOP	40	12k	OTHR
7034.0	2210	15	12	RUS		FMOP	40	12k	OTHR
7039.0	1136	2	12	F	FDE2	A1A			VVV de FDE2 - French AF - Tours
7041.0	1742	16	12	CHN		FMOP	50	10k	Chinese OTH radar 5.1 sec bursts
7046.0	1938	17	12	CHN		FMCW	66.67	10k	OTHR 66,67sps, 3,8s bursts
7047.0	1100	6	12	RUS		PSK2		2600	CIS-12
7048.0	1530	6	12	RUS		LSB		2,4 k	CIS-12
7049.0	1535	11	12	RUS		FMOP	40	12k	OTHR
7054.0	2045	21	12	CHN		FMCW	66.67	10k	OTHR 66,67sps, 3,8s bursts
7054.0	1740	26	12	RUS		F1B		200	
7055.0	vt	dly	12	UKR		LSB			Music and Russian voices, russ. Propaganda
7055.0	0848	4	12			LSB		2,9 k	russ. Propaganda
7056.0	1340	12	12	CHN		FMCW	66.67	10k	OTHR 66,67sps, 3,8s bursts
7057.0	1625	01	12	RUS		FMOP	40	12k	OTH radar Contayner - nw of Saransk
7058.0	2046	16	12	RUS		FMOP	40	12k	OTHR (S9+30dB)
7059.0	2105	01	12	RUS		FMOP	40	12k	OTHR
7059.0	1805	02	12	RUS		FMOP	40	12k	OTHR
7059.0	2245	20	12	RUS		FMOP	40	12k	OTHR
7059.0	2150	28	12	RUS		FMOP	40	12k	OTHR
7059.0	1554	31	12	RUS		FMOP	40	12k	OTHR
7060.0	1915	02	12	RUS		FMOP	40	12k	OTHR
7060.0	1440	28	12	RUS		FMOP	40	12k	OTHR
7062.0	1918	12	12	RUS		FMOP	40	12k	OTH radar Contayner - nw of Saransk
7062.0	2201	16	12	RUS		FMOP	40	12k	OTHR
7062.0	1458	31	12	RUS		FMOP	40	12k	OTHR
7063.0	1845	02	12	RUS		FMOP	40	12k	OTHR
7064.0	1515	10	12	RUS		FMOP	40	12k	OTHR
7065.0	1338	28	12	RUS		FMOP	40	12k	OTHR
7066.0	2035	02	12	RUS		FMOP	40	12k	OTHR (S9 +40)
7070.0	1739	03	12	CHN		FMOP	50	10k	Chinese OTH radar 5.1 sec bursts
7085.0	1741	23	12	CHN		FMOP	50	10k	Chinese OTH radar 5.0 sec bursts - long lasting
7086.0	1515	10	12	RUS		FMOP	40	15 k	OTHR

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kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7091.0	1700	20	12	CHN		FMCW	50	10k	OTHR 50sps, 5,1 s bursts
7097.0	1907	20	12	CHN		FMCW	50	10k	OTHR 50sps, 5,1s bursts
7098.0	1448	12	12	CHN		FMCW	66.67	10k	OTHR 66,67sps, 3,8s bursts
7100.0	1941	14	12	CHN		FMOP	67	10k	Chinese OTH radar - 7100 CF and 7105 CF - 7.8 sec bursts
7100.0	2005	29	12			FMOP	40	12k	OTHR
7103.0	1558	24	12	CHN		FMOP	50	10k	Chinese OTH radar 5.0 sec bursts
7105.0	2031	02	12	CHN		FMCW	50	10k	OTHR 50sps, 5,38s bursts
7105.0	1527	10	12	RUS		FMOP	40	12k	OTHR (1 minute only)
7105.0	1728	13	12	CHN		FMOP	50	10k	Chinese OTH radar - 7105 CF - 7114 CF 10.2 sec bursts
7105.0	2215	21	12	CHN		FMCW	66.67	10k	OTHR 66,67sps, 3,8s bursts
7105.0	1510	31	12	RUS		FMOP	40	12k	OTHR
7106.0	1933	06	12	RUS		FMOP	40	12k	OTH radar Contayner - nw of Saransk
7106.0	1920	17	12	RUS		FMOP	40	12k	OTHR
7107.0	1950	06	12	RUS		FMOP	40	12k	OTHR
7107.0	1700	10	12	CHN		FMCW	66.67	10k	OTHR 66,67sps, 3,8s bursts
7107.0	2244	18	12	CHN		FMCW	66.67	10k	OTHR 66,67sps, 3,8s bursts
7107.0	1549	31	12			FMCW	41.67	10k	OTHR 41,67sps, 6,12s bursts
7108.0	1709	10	12	RUS		FMOP	40	12k	OTHR
7109.0	1642	10	12	RUS		FMOP	40	12k	OTHR
7109.0	2155	12	12	RUS		FMOP	40	12k	OTHR
7110.0	1715	17	12	CHN		FMOP	50	10k	Chinese OTH radar - 6.2 sec bursts
7112.0	2225	15	12	CHN		FMCW	41.67	10k	OTHR 41,67sps, 6,12s bursts
7112.0	2200	16	12	RUS		FMOP	40	12k	OTHR
7114.0	2010	12	12	RUS		FMOP	40	12k	OTHR
7114.0	2141	17	12	CHN		FMOP	67	10k	Chinese OTH radar - 3.8 sec bursts - every 46 sec
7115.0	2055	12	12	RUS		FMOP	40	12k	OTHR
7116.0	1912	17	12	CHN		FMCW	50	10k	OTHR 50sps, 5,1s bursts
7118.0	1745	01	12	RUS		FMOP	40	12k	OTHR
7118.0	1450	13	12	RUS		FMOP	40	12k	OTHR
7118.0	1340	23	12	CHN		FMOP	50	10k	Chinese OTH radar - 6.2 sec bursts - long lasting
7121.0	1816	10	12	RUS		FMOP	40	12k	OTHR
7122.0	1819	6	12	CHN		FMOP	50	10k	Chinese OTH radar - 5.1 sec bursts
7124.0	1540	31	12	RUS		FMOP	40	12k	OTHR
7127.0	1826	21	12	CHN		FMCW	50	10k	OTHR 50sps, 5,1s bursts
7128.0	1905	20	12	CHN		FMCW	50	10k	OTHR 50sps, 5,1s bursts
7130.0	2150	12	12	RUS		FMOP	40	12k	OTHR
7130.0	1405	20	12	CHN		FMCW	66.67	10k	OTHR 66,67sps, 7,68s bursts
7131.0	1955	20	12	CHN		FMCW	50	10k	OTHR 50sps, 5,1s bursts
7133.0	2028	22	12	RUS		FMOP	40	12k	OTH radar Contayner - nw of Saransk
7133.0	1553	27	12	CHN		FMOP	50	10k	Chinese OTH radar - 5.1 sec bursts
7133.0	1925	28	12					10k	OTHR (? 41,67sps, 6,12s bursts ?)
7134.0	2215	15	12	CHN		FMCW	50	10k	OTHR 50sps, 5,11s bursts
7135.0	1408	20	12	CHN		FMCW	41.67	10k	OTHR 41,67sps, 6,12s bursts
7139.0	2020	16	12	CHN		FMCW	66.66	10k	OTHR 66,67sps, 3,8s bursts
7140.0	1830	10	12	RUS		FMOP	40	12k	OTHR
7140.0	1705	11	12	ERI	VoBM	A3E/BC		9k	7140.021 kHz - voice of the broad masses - Eritrea
7140.0	1805	17	12	CHN		FMCW	50	10k	OTHR 50sps, 5,1 s bursts

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kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7141.0	1426	20	12	CHN		FMCW	41.67	10k	OTHR 41,67sps, 6,12s bursts
7141.0	2105	21	12	RUS		FMOP	40	12k	OTHR
7142.0	2230	15	12	CHN		FMCW	41.67	10k	OTHR 41,67sps, 6,12s bursts
7143.0	2109	28	12	CHN		FMOP	67	10k	Chinese OTH radar - 3.8 sec bursts
7145.0	1834	02	12	RUS		FMOP	40	12k	OTHR
7147.0	2000	21	12	CHN		FMCW	50	10k	OTHR 50sps, 5,1s bursts
7150.0	1950	06	12	RUS		FMOP	40	12k	OTHR
7155.0	2207	23	12	CHN		FMOP	50	10k	Chinese OTH radar - 5.0 sec bursts
7159.0	2200	18	12	CHN		FMCW	50	10k	OTHR 50sps, 5,1s bursts
7167.0	1810	17	12	RUS		FMOP	40	12k	OTHR
7171.0	1826	17	12	RUS		FMOP	40	12k	OTHR
7172.0	1937	24	12	CHN		FMOP	50	10k	Chinese OTH radar - 5.1 sec bursts
7173.0	2203	18	12	CHN		FMCW	41.67	10k	OTHR 41,67sps, 6,12s bursts
7173.0	2045	21	12	CHN		FMCW	50	10k	OTHR 50sps, 5,1s bursts
7175.0	2220	15	12	CHN		FMCW	50	10k	OTHR 50sps, 5,11s bursts
7175.0	2210	16	12	CHN		FMCW	41.67	10k	OTHR 41,67 sps, 5,9s bursts
7175.0	2232	30	12	CHN		FMCW	50	10k	OTHR 50sps, 5,1s bursts
7176.0	2042	16	12	RUS		FMOP	40	12k	OTHR
7177.0	2252	19	12	CHN		FMCW	66.67	10k	OTHR 66,67sps, 3,8s bursts
7179.0	2048	2	12	RUS		FMOP	40	12k	OTHR
7180.0	1448	4	12	RUS		FMOP	40	12k	OTH radar Contayner - nw of Saransk
7180.0	1409	28	12	ERI	VoBM	A3E		9k	7180.021 kHz - Radio Eritrea
7182.0	2218	16	12	CHN		FMCW	41.67	10k	OTHR 41,67 sps, 5,9s bursts
7182.0	2056	20	12	CHN		FMCW	41.67	10k	OTHR 41,67sps, 6,12s bursts
7185.0	22202	09	12	CHN		FMOP	67	10k	Chinese OTH radar - 3.8 sec bursts
7185.0	1948	16	12	CHN		FMCW	41.67	10k	OTHR 41,67sps, 6,12s bursts
7186.0	1544	27	12	CHN		FMOP	50	10k	Chinese OTH radar - 5.1 sec bursts
7190.0	1800	dly	12	CHN		A3E		40k	China Radio International on 7210 kHz - with splatters on 7190 kHz - 7230 kHz - daily 1800 - 1900 utc
7190.0	1638	01	12						OTHR (very weak signal)
7191.0	1639	01	12	RUS		FMOP	40	12k	OTH radar Contayner - nw of Saransk
7192.0	1503	27	12	RUS		FMOP	40	12k	OTH radar Contayner - nw of Saransk
7193.0	1040	01	12	RUS	RDL	F1B		200	Kaliningrad - RUS navy - often
7200.0	1150	03	12	TWN	NUR	A3E		9k	7195.5 - 7204.5 kHz - BC transmission from Taiwan - carrier: 7199.997
10100.0	ady	dly	12	FEa		USB			10100.0 - 10150.0 - Far East - crowded of pirates
10131.0	1435	13	12	FEa?		USB			unid pirate net - Far East?
14000.0	1300	dly	12	PNG		USB			Fishermen - south east of Papua New Guinea (Coral Sea) - daily
14000.0	1400	1	12	CHN		A3E		9k	China Radio International - inter-modulation from 13855 and 13710 kHz - 13855 x 2 - 13710 = 14000 kHz
14155.0	1430	12	12				40	12k	OTHR (very weak signal)
14156.0	1429	12	12	RUS		FMOP	40	12k	OTH radar Contayner - nw of Saransk
14180.0	859	28	12	CHN		FMOP	50	10k	Chinese OTH radar - 5.1 sec bursts
14240.0	805	18	12			USB		3,4 k	CIS-12
14245.0	933	22	12	CHN		FMOP	50	10k	Chinese OTH radar - long lasting
14280.0	1014	2	12	UKR		A3E			female voice with encrypted msgs - figures
14302.0	2150	18	12			FMOP	40	12k	OTHR
14308.0	938	9	12	CHN		FMOP	50	10k	Chinese OTH radar - 5.1 sec bursts

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kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14313.0	1218	28	12	RUS		FMOP	40	12k	OTHR
18065.0	1110	12	12				?	12k	OTHR (9 kHz in the 30m band)
18070.0	1400	10	12	RUS		FMOP	50	20 k	OTHR
18080.0	750	dly	12	TWN		A3E/BC			Sound of Hope - Taiwan and Chinese BC jammer - daily at 06 utc and later
18170.0	1010	12	12	CYP		FMOP	25	20k	UK OTH radar Cyprus
18170.0	930	16	12	CYP		FMCW	50	20k	UK OTH radar Cyprus
21000.0	935	8	12	E		USB			Spanish fishery - like telephone - daily, various times - Canary Islands
21115.0	1018	22	12	CYP		FMOP	50	20k	UK OTH radar Cyprus
21165.0	1136	3	12	RUS		FMOP	40	12k	OTH radar Contayner - nw of Saransk
21351.0	1146	3	12	CYP		FMOP	50	20k	UK OTH radar Cyprus
21378.0	1137	3	12	RUS		FMOP	40	12k	OTH radar Contayner - nw of Saransk
28005.0	vt	vd	12	RUS		F3E			RUS taxi - base station - female voice daily - all day
28860.0	1000	8	12	IRN		AMOP	150	45k	Iranian radar - 28837 - 28883 kHz - 150 and 313 sps alternating - North Iran

IRTS; Michael, EI3GYB									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3762	1645	15	12	F		LSB			D-QRM against a group of French hams. Shouting of sexual obscenities in French. Also heard last month.
6990	1430	26	12			RADAR			6990 to 7002 kHz. Very strong and persistent.
7000	1345	28	12	INS		LSB			Indonesian fishermen. Nearly daily with strong signals in the afternoon.
7026	1840	10	12			RADAR			7026 to 7041 kHz Medium strength.
7028	1500	01	12			RADAR			7028 to 7041 kHz. Strong and persistent.
7032	2240	17	12			RADAR			7032 to 7046 kHz. Strong, persistent.
7048	1440	28	12			RADAR			7048 to 7082 kHz. Very strong and persistent." Wipes the band clean".
7050	1000	11	12	RUS/ UKR		LSB			Russian-Ukrainian radio war. Nearly daily. Loop with slogans like "Putin huilo" or "Ruski swina".
7055	1145	16	12	RUS/ UKR		LSB			Daily radio war. Plenty of slogans. Total chaos all day long.
7058	1845	02	12			RADAR			7058 to 7072 kHz. Strong and persistent.
7096	1815	06	12			RADAR			7096 to 7120 kHz. Strong and persistent.
7100	1850	13	12			RADAR			7100 to 7123 kHz. Strong and persistent.
7100	1755	29	12			RADAR			7100 to 7122 kHz. Strong and persistent.
7102	1530	11	12			RADAR			7102 to 7114 kHz. Medium signal. Persistent.
7110	1830	10	12			RADAR			7110 to 7152 kHz. Huge signals, persistent. No traffic possible.
7118	1955	04	12			RADAR			7118 to 7130 kHz. Weak in the background. Persistent.
7122.9	1330	29	12			F1B			Persistent, loud.
7123	1340	22	12			F1B			Persistent, medium signal.
7140	1655	15	12	ERI		AM			Radio Eritrea. Daily with a weak signal.
7140	1750	06	12			RADAR			7140 - 7164 kHz. Very strong and persistent. No Ham traffic possible.
7162	1330	17	12			RADAR			7162 to 7165 kHz. Weak.
7168	1440	26	12			RADAR			7168 - 7182 kHz. Medium signal. persistent.

IRTS; Michael, EI3GYB

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7200	1100	Daily	12	TJK		AM			Unity Radio via Dushanbe relay station. Very strong from 100 to 1259 UTC.
18148	1120	03	12			RADAR			18148 - 18183 kHz. Big signal, persistent.
18148	1150	16	12			RADAR			18148 - 18182 kHz. Big signal, persistent.
18150	1115	01	12			RADAR			18150 - 18193 kHz. Huge persistent signals.

MRASZ; Laci, HA7PL

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3510.0	1721	17	12			A1A			slow chirp
3546.0	1714	17	12			F1B		200	also hrd on 19
3555.0	1548	19	12			F1B		250	
3559.0	1549	19	12			F1B		250	
3581.5	1619	10	12			PSK8A			also hrd on 27
3598.0	1701	20	12			PSK2			AT3004D
3595.5	1710	17	12			PSK2A			AT3004D
3607.0	1318	09	12			F1B		250	
3616.0	1820	10	12			USB			QRM
7008.0	1603	20	12			RADAR			6996 – 7020 kHz
7046.0	1025	06	12			PSK2A			AT3004D
7055.0	0937	04	12			LSB			music + chaos + many days
7063.0	1617	10	12			RADAR			7050 - 7076
7100.0	1618	10	12			RADAR			7090 – 7110 kHz
7154.0	1008	12	12			F1B		200	
7190.5	1302	08	12			F1B		200	also hrd on 09
14150.0	1227	09	12			RADAR			14140 – 14160 kHz
18170.0	0904	04	12			RADAR			18160 - 18180 kHz

PZK; Marek, SP3AMO + Miro, SP5GNI

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
1899	1620	21	12			UI		2K5	
3750	vt	vd	12	RUS		PSK		2K9	CIS-12 pilot 3751.3 S9+
5363.6	vt	7	12			UI		3K0	S7 Stanag?
7001.0	1110	16	12			FSK			[CW] sweep sweep / Beep Beep, 1110 UTC QRT
7033	2044	7	12			RADAR		12K0E	S9
7050	0820	7	12	UKR		LSB		2k7	Russian-Ukrainian war S6-S9
7055	vt	7	12	UKR		LSB		2k7	Russian-Ukrainian war S9+
7058	1140	22	12	RUS		PSK		2K9	CIS-12 pilot 7059,3 S9 +10
7056.2	1523	29	12			RADAR		16K0E	S9+10dB [sps 40Hz, 7050,0 - 7066,0 kHz]
7128	0925	15	12			UI		3K3	S9
7121.7	1050	29	12			F1B/A2A	50	200	S7 [xxx xxx RDL]
7129.1	0913	15	12		UI	F1B		200	S5 [0921 UTC QRT]
7127.5	0942	15	12		UI	PSK		1K0	S5 sps 40 Hz
7166.5	0620	30	12		UI	PSK		1K2	S6 3x120 Hz
7182	1140	10	12	RUS		PSK		2k9	CIS-12 pilot 7183,3 S7

PZK; Marek, SP3AMO + Miro, SP5GNI

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7184	1146	28	12	RUS		PSK		2k9	CIS-12 pilot 7059,3 S9
7200	vt	vd	12			AM		6k	Radio pretty strong S9 (probably far East language)
14140	1132	26	12	CHN		RADAR		10K0E	In short burst
14186	1400	25	12	CHN		RADAR		10K0E	In short burst
14192	0902	15	12	CHN		RADAR		10K0E	In burst, visible also on 14187
14230	1047	28	12	CHN		RADAR		10K0E	In short burst
14272	1141	28	12	CHN		RADAR		10K0E	In short burst
14300	0830	7	12	CHN		RADAR		10K0E	In burst, visible also on 14289 and 14316
14325	1027	7	12			RADAR		30K0E	Extremally strong S9+25dB
14335	1140	26	12	CHN		RADAR		10K0E	In short burst
18119	0858	15	12			RADAR		12K0E	S6
18168	1145 1055	8 16	12			RADAR		12K	Center 18172 out of the band, but occupying 18166-68 of 17 m band
18168	1055	16	12			RADAR		12K	Center 18168, occupying 18161-78 of of 17 m band
18168	1126	28	12			RADAR		20K0E	Occupying 18160-68 of of 17 m band, S9 +10
21115	1023	22	12			RADAR		20K0E	1024 UTC disapeared
28600	912	24	12			RADAR		60K0E	Changable patterns on the waterfall

RSGB; Richard, G4DYA

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3510.0	1736 1512	11 21	12			J3E		2K70E	USB "The Air Horn"
3540.0	vt	vd	12			F1A		200	Mostly idle on 3539.9
3756.0	vt	vd	12			J3E		1K70E	USB "The Pip"
7010.0	0842	12	12			J7D		2K70E	USB 7008.0 / CIS-12
7032.0	1500	01	12	RUS		RADAR		14K0E	Container OTH radar
7039.83	1139 1015	02 03	12	F	FDE2	A1A	13		
7047.0	1038	06	12			J7D		2K70E	USB 7045.0 / CIS-12
7049.0	1703	11	12	RUS		RADAR		14K0E	Container OTH radar
7050.0	1714	07	12			RADAR	50	10K0E	FMCW radar bursts
7059.0	1746	02	12	RUS		RADAR		14K0E	Container OTH radar
7074.38	1051	04	12			A1N			Continuous dashes
7074.39	1012	06	12			A1N			Continuous groups of dashes
7074.77	1053	01	12			A1N			Continuous dashes
7074.78	1006	30	12			A1N			Continuous dashes
7074.79	1214 0912	05 13	12			A1N			Continuous groups of dashes
7074.98	vt	vd	12			A1N			Continuous dashes
7074.99	vt	vd	12			A1N			Continuous groups of dashes
7075.00	1116 1049	17 19	12			A1N			Continuous groups of dashes
7098.0	1443	12	12			RADAR	66.7	10K0E	FMCW radar bursts
7112.0	0858	07	12					2K70E	Unknown multi-tone signal, possibly idle mode CIS-12

RSGB; Richard, G4DYA									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7112.0	1513	15	12	RUS		RADAR		14K0E	Container OTH radar
7118.0	1452	13	12	RUS		RADAR		14K0E	Container OTH radar
7122.0	vt	vd	12	RUS	RDL	F1B	50	200	
7128.0	1356	15	12			J7D		2K70E	USB 7126.0 / CIS-12. Ceased at 1357z
7129.0	1610	16	12	RUS		RADAR		14K0E	Container OTH radar
7140.020	vt	vd	12	ERI	VoBM1	A3E			BC
7150.0	2044	06	12	RUS		RADAR		14K0E	Container OTH radar
7162.0	1236	27	12			F1B		250	Ceased at 1239z.
7177.0	1511	27	12			F1B	50	200	Ceased at 1513z.
7180.020	1443	31	12	ERI	VoBM2	A3E			BC
7192.0	1509	27	12	RUS		RADAR		14K0E	Container OTH radar
7193.0	vt	vd	12	RUS	RDL	F1B		200	F1A ident
7198.0	1608	16	12			J7D		2K70E	USB 7196.0 / CIS-12
7199.995	1058-1258	dly	12			A3E		9K00E	BC
14041.0	0842	07	12			RADAR	41.6	10K0E	FMCW radar bursts
14050.0	0915	11	09			RADAR	50	10K0E	FMCW radar bursts
14050.0	0842	16	12			B7D		6K60	ISB / CIS-12
14060.0	1247	15	12	RUS		RADAR		14K0E	Container OTH radar
14089.0	0845	07	12			RADAR	41.6	10K0E	FMCW radar bursts
14110.0	1020	06	12	RUS		RADAR		14K0E	Container OTH radar, Ceased at 1027z.
14112.0	0928	20	12			RADAR	66.7	10K0E	FMCW radar bursts
14114.0	0832	10	12			RADAR	41.7	10K0E	FMCW radar bursts
14119.0	0838	12	12			RADAR	66.7	10K0E	FMCW radar bursts
14125.0	0839	16	12			RADAR	41.7	10K0E	FMCW radar bursts
14149.0	0909	16	12			RADAR	66.7	10K0E	FMCW radar bursts
14154.0	0844	09	12			RADAR	50	10K0E	FMCW radar bursts
14230.0	0837	09	12			RADAR	41.7	10K0E	FMCW radar bursts
14235.0	0847	09	12			RADAR	41.7	10K0E	FMCW radar bursts
14250.0	0906	16	12			RADAR	66.7	10K0E	FMCW radar bursts
14278.0	0836	10	12			RADAR	66.7	10K0E	FMCW radar bursts
14280.0	1007	02 09 16 23	12			H3E		3K50E	USB numbers station, Russian language, same time every Wednesday for several minutes. Audio starts 1010 UTC. RR 5.152?
14283.0	0843	21	12			RADAR	50	10K0E	FMCW radar bursts
14289.0	0833	07	12			RADAR	50	10K0E	FMCW radar bursts
14299.0	0833	07	12			RADAR	66.7	10K0E	FMCW radar bursts
14300.0	0838	07	12			RADAR	50	10K0E	FMCW radar bursts
14304.0	0849	09	12			RADAR	66.7	10K0E	FMCW radar bursts
14306.0	0834	12	12			RADAR	66.7	10K0E	FMCW radar bursts
14314.0	0835	16	12			RADAR	50	10K0E	FMCW radar bursts
14315.0	0834	07	12			RADAR	66.7	10K0E	FMCW radar bursts
14316.0	0951	11	12			RADAR	50	10K0E	FMCW radar bursts
14324.0	0835	16	12			RADAR	50	10K0E	FMCW radar bursts
14342.0	0912	11	12			RADAR	66.7	10K0E	FMCW radar bursts

RSGB; Richard, G4DYA

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14351.0	0930	08	12			RADAR	50	10K0E	FMCW radar bursts
18170.0	1106	01	12	RUS		RADAR		14K0E	Container OTH radar
18170.0	0832	16	12			RADAR	50	20K0E	OTH radar
18171.0	1106	17	12	RUS		RADAR		14K0E	Container OTH radar
18173.0	0830	12	12	RUS		RADAR		14K0E	Container OTH radar
21164.0	1214	03	12	RUS		RADAR		14K0E	Container OTH radar
21175.0	1055	22	12	RUS		RADAR		14K0E	Container OTH radar
21376.0	1214	03	12	RUS		RADAR		14K0E	Container OTH radar
21420.0	1032	06	12			RADAR	25	20K0E	FMCW radar
21438.0	vt	vd	12	RUS	RCV	A1A	~20		
24930.0	0906	11	12			RADAR	25	20K0E	FMCW radar

SRAL; Pekka, OH2BLU

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/BW	DETAILS
10 MHz	-1258/	18	12	RUS		RADAR	40sps	13k0E	(WebSDR 3d) Kontainer
10123.0	0815-0920	22	12	RUS		J7D	120	2k60E	
14 MHz	0530-1000	*	12	CHN		RADAR	50/67sps	10k0E	*) Days: 2. 3. 6. 7. 9. 10. - 13. 16. 17. 18. 22. 25. 28. 30. "Foghorn"
14 MHz	0600-1000	*	12	CHN		RADAR	50sps	10k0E	*) Days: 2. 4. 7. 11. 13. 14. 19. 22.
14 MHz	0600-1330	*	12	RUS		RADAR	40sps	13k0E	*) Days: 2. 3. 7. 11. 15. 18. 19. (WebSDR 12d) Kontainer
14221.0	0430-0600	*	12	KAZ		F1B		200H	*) Days: 2. 13. 14.
14320.0	0915	26	12	CHN	CRI	A3E		9k0	// 14370 kHz
18 MHz	0630-1030	*	12	CYP		RADAR	50sps	20k0	*) Days: 2. 5. 12. 16. 20. 28. (WebSDR 10d)
18 MHz	0800-1230	*	12	RUS		RADAR	40sps	13k0E	*) Days: 1. 12. 14. (WebSDR 4d) Kontainer
21 MHz	0600-1215	*	12	CYP		RADAR	50sps	20k0	*) Days: 3. - 6. 9. 16. 31. (WebSDR 16d)
21438.0	/0830-1000	*	12	RUS	RCV	A1A	20 wpm	20H	*) Days: 1. 2. 3. 6. 7. 9. 10. 11. 13. - 22. 26. 28.
28600.0	0915	22	12	IRN		RADAR	*	60k0E	*) 307 & 870sps
28860.0	0700-0930	*	12	IRN		RADAR	*	60k0E	*) 150 & 313sps, days: 1. 2. 3. 5. 10. 22.

URE; Gaspar, EA6AMM

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
6994	1949	16	12			RADAR	40	12K0E	OTHR Contayner. Splatter to 7003 kHz
6995	1648 vt*	01 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 21/12, 1543 UTC
6997	1840	18	12			RADAR	40	12K0E	OTHR Contayner
7012	1556	20	12			RADAR	40	12K0E	OTHR Contayner
7013	2232	16	12			RADAR	40	12K0E	OTHR Contayner
7015	1546	21	12			RADAR	50	10K0E	Short bursts. "Foghorn"
7015	1519	31	12			RADAR	40	12K0E	OTHR Contayner
7028	1801	01	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7032	1735 vt*	03 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 10/12, 1856 UTC. 16/12, 2145 UTC
7033	2002 vt*	07 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 15/12, 2151 UTC
7036	2227	11	12			RADAR	40	12K0E	OTHR Contayner
7039.84	1638 vt*	02 vd*	12		FDE2	A1A			"VVV DE FDE2", long -lasting. *Also on 03/12, 0836 UTC
7046	1939	17	12			RADR	66.66	10K0E	Short bursts. "Foghorn"
7047	1447	06	12			J7D	120	2K60E	CIS-12
7050	1834	07	12			RADAR	50	10K0E	Short bursts. "Foghorn"
7051	1627	02	12			RADAR	40	12K0E	OTHR Contayner. 2 simultaneous TX on 40m: 7051 + 7116 kHz
7055	0714 vt	08 vd	12	12		J3E-L			Speech, music, loops, insults, propaganda,UKR/RUS "radiowar". Often
7057	1645 vt*	01 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 05/12, 2119 UTC
7058	1734	01	12			RADAR	40	12K0E	OTHR Contayner. 2 simultaneous TX on 40m: 7058 + 7117 kHz
7058	0641	04	12			XXX + J3E-U		ca 3K20E	Unknown digital signal + USB, RUS lang, male voices
7058	1612 vt*	06 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 17/12, 1821 UTC. 29/12, 1526 UTC
7059	1747 vt*	02 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 31/12, 1555 UTC
7060	2043 vt*	01 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 22/12, 1804 UTC. 28/12, 1443 UTC
7062	0830	02 vd*	12			J3E-U		ca 7K0E	USB + carrier. Numbers st. "S06s" aka "Russian lady", RUS lang, female voice. Every Wednesday
7062	1801 vt*	10 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 31/12, 1457 UTC
7062	2203	16	12			RADAR	40	12K0E	OTHR Contayner. 2 simultaneous TX on 40m: 7062 + 7122 kHz
7063	1854 vt*	02 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 22/12, 1611 UTC.
7064	1513	10	12			RADAR	40	12K0E	OTHR Contayner. 2 simultaneous TX on 40m: 7064 + 7086 kHz
7066	2037	02	12			RADAR	40	12K0E	OTHR Contayner
7072	0834	17	12			J7D	120	2K60E	CIS-12
7074.39	0825 vt*	03 vd*	12			A1N			Series of 16 dashes. *Also on 06/12, 0738 UTC
7074.39	0757 vt*	04 vd*	12			A1N			Continuous dashes. *Also on 05/12, 0830 UTC
7074.8	0800 vt	01 vd	12			A1N			Continuous dashes / Series of 16 dashes
7075	1402 vt	02 vd	12			A1N			Series of 16 dashes. Often
7075	0714 vt	08 vd	12			A1A A1N			Series of 5 dashes / Series of 16 dashes / Continuous dashes. Often
7076	0855	22	12			A1N			Continuous dashes
7081	1706	31	12			RADAR	40	12K0E	OTHR Contayner

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7085	1539	08	12			RADAR	40	12K0E	OTHR Contayner. 2 simultaneous TX on 40m: 7085 + 7138 kHz
7085	1927	26	12			RADAR	40	12K0E	OTHR Contayner
7086	1513 vt*	10 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 18/12, 1841 UTC
7088	1624	03	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
7091	1635	19	12			RADAR	40	12K0E	OTHR Contayner
7094	1600	10	12			RADAR	50	10K0E	Short bursts. "Foghorn"
7097	1507	07	12			RADAR	40	12K0E	OTHR Contayner. 2 simultaneous TX on 40m: 7097 + 7138 kHz
7097	1538	07	12			RADAR	40	12K0E	OTHR Contayner. 2 simultaneous TX on 40m: 7097 + 7129 kHz
7097	1857	25	12			RADAR	40	12K0E	OTHR Contayner
7098	1616	17	12			RADAR	50	10K0E	Short bursts. "Foghorn"
7105	2030	02	12			RADAR	50	10K0E	Short bursts. "Foghorn"
7105	1527	10	12			RADAR	40	12K0E	OTHR Contayner. 2 simultaneous TX on 40m: 7105 + 7086 khz
7106	1921	17	12			RADAR	40	12K0E	OTHR Contayner
7107	1949 vt*	01 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 27/12, 1545 UTC
7109	1629	10	12			RADAR	40	12K0E	OTHR Contayner
7111	1758 vt*	25 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 29/12, 1709 UTC
7112	1629	27	12			RADAR	40	12K0E	OTHR Contayner
7113	1905	01	12			RADAR	40	12K0E	OTHR Contayner. 2 simultaneous TX on 40m: 7113 + 7058 kHz
7114	2010	09	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
7114	1715	27	12			RADAR	40	12K0E	OTHR Contayner
7116	1627	02	12			RADAR	40	12K0E	OTHR Contayner. 2 simultaneous TX on 40m: 7116 + 7051 kHz
7116	1855	11	12			RADAR	50	10K0E	Short bursts. "Foghorn"
7116	1935	17	12			RADAR	40	12K0E	OTHR Contayner
7116	0732	31	12			J7D	120	2K60E	CIS-12
7117	1734	01	12			RADAR	40	12K0E	OTHR Contayner. 2 simultaneous TX on 40m: 7117 + 7058 kHz
7119	2045	01	12			RADAR	10K0E	41.6	Short bursts. "Foghorn"
7121	1823	10	12			RADAR	40	12K0E	OTHR Contayner. 2 simultaneous TX on 40m: 7121 + 7140 kHz
7122	0811 vt	08 vd	12			F1B	50	200H	Oftan
7122	1853	09	12			RADAR	40	12K0E	OTHR Contayner. 2 simultaneous TX on 40m: 7122 + 7132 kHz
7122	2200	16	12			RADAR	40	12K0E	OTHR Contayner
7123	1557	22	12			RADAR	40	12K0E	OTHR Contayner
7124	1705 vt*	01 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 31/12, 1537 UTC
7126	1729	24	12			RADAR	40	12K0E	OTHR Contayner
7127	1834	01	12			RADAR	40	12K0E	OTHR Contayner
7129	1538	07	12			RADAR	40	12K0E	OTHR Contayner. 2 simultaneous TX on 40M: 7129 + 7097 kHz

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7129	1533	28	12			RADAR	40	12K0E	OTHR Contayner
7130	1543	16	12			RADAR	40	12K0E	OTHR Contayner
7131	1614	17	12			RADAR	40	12K0E	OTHR Contayner
7131	1959	20	12			RADAR	50	10K0E	Short bursts. "Foghorn"
7132	1817 vt*	09 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 22/12, 1923 UTC
7135	1638	09	12			RADAR	40	12K0E	OTHR Contayner
7137	1934	09	12			RADAR	40	12K0E	OTHR Contayner. 2 systems side by side: 7123 + 7137 kHz
7137	2014	16	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
7137	1923	22	12			RADAR	40	12K0E	OTHR Contayner
7138	1505	07	12			RADAR	40	12K0E	OTHR Contayner
7138	1539	08	12			RADAR	40	12K0E	OTHR Contayner. 2 simultaneous TX on 40m: 7138 + 7085 kHz
7140	1823	10	12			RADAR	40	12K0E	OTHR Contayner. 2 simultaneous TX on 40m: 7140 + 7121 kHz
7140.02	1555 vt	22 vd	12			A3E			BC. "VoBM 1". Often
7141	2107	21	12			RADAR	40	12K0E	OTHR Contayner
7145	1832	02	12			RADAR	40	12K0E	OTHR Contayner
7148	2038	16	12			RADAR	66.66 / 50 sps	10K0E	Short bursts. BD ca 8.5 sec. BW = 10K0E. 66.66 & 50 sps (first half of burst = 66.66 sps; 2nd Half, = 50 sps). "Foghorn"
7149	1826	07	12			RADAR	40	12K0E	OTHR Contayner
7150	1616	06	12			RADAR	40	12K0E	OTHR Contayner
7155	1446	28	12			RADAR	40	12K0E	OTHR Contayner. 2 simultaneous TX on 40m: 7155 + 7060 kHz
7156	1643	19	12			RADAR	40	12K0E	OTHR Contayner
7157	1604	10	12			RADAR	40	12K0E	OTHR Contayner. 2 simultaneous TX on 40m: 7157 + 7105 kHz
7160	1810	25	12			RADAR	40	12K0E	OTHR Contayner
7160.75	0829	03	12			G7D	75	2K31E	LINK-11 CLEW
7165	1543	10	12			RADAR	40	12K0E	OTHR Contayner
7165.96	0940	24	12			NON			Carrier. Long - lasting
7166	1404 vt*	29 vd*	12			J7D	120	2K60E	CIS-12. Long-lasting. *Also on 30/12
7167	1600 vt*	08 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 17/12, 1804 UTC
7167	1911	10	12			RADAR	40	12K0E	OTHR Contayner. 2 simultaneous TX on 40m: 7167 + 7032 kHz
7167.3	2030	16	12			XXX		ca 3K0E	Unknown signal
7168	2109	05	12			RADAR	40	12K0E	OTHR Contayner
7171	1826	17	12			RADAR	40	12K0E	OTHR Contayner
7176	2043 vt*	16 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 21/12, 1639 UTC
7179	2045	02	12			RADAR	40	12K0E	OTHR Contayner. 2 simultaneous TX on 40m: 7179 + 7066 kHz
7179	1641	08	12			RADAR	40	12K0E	OTHR Contayner
7180.02	1540	28	12			A3E			BC "VoBM" 2.
7182	2219	16	12			RADAR	41.6	10K0E	Short bursts. "Foghorn"

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7183	1612	17	12			RADAR	40	12K0E	OTHR Contayner
7185	1948	16	12			RADAR	41.6	10K0E	Short bursts. "Foghorn"
7186	1608	25	12			RADAR	40	12K0E	OTHR Contayner
7189	1924	21	12			RADAR	40	12K0E	OTHR Contayner
7190	1646	01	12			RADAR	40	12K0E	OTHR Contayner
7191	1713 vt*	26 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 28/12, 1722 UTC
7192	1635 vt*	09 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 25/12, 1540 UTC
7193	0913 vt	04 vd	12			F1B	50	200H	Often
7194	0809	19	12			J7D	120	2K60E	CIS-12
7197	2014	09	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
7198	1554	16	12			J7D		2K60E	CIS-12. Idling
7198	0825	20	12			J3E-L			Music
10150	1031	28	12			RADAR	50	20K0E	OTHR
13997	0828	26	12			RADAR	40	12K0E	OTHR Contayner
14024	0715	09	12			RADAR	50	10K0E	OTHR
14041	0723	18	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
14045.15/ 14046.3	0747 vt	10 vd	12			XXX		ca 2K0E	Unknown signal. Drifting. Broken system? Often
14049	0743	04	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
14050	0849	11	12			RADAR	50	10K0E	Short bursts. "Foghorn"
14050	0808	31	12			XXX		ca 7K0E	Probably CIS-12 DSB idling
14060	1307	15	12			RADAR	40	12K0E	OTHR Contayner
14091	0747 vt*	04 vd*	12			J7D	120	2K60E	CIS-12. Idling. *Also on 14/12, 0928 UTC, traffic.
14091	0748	15	12			RADAR	40	12K0E	OTHR Contayner
14101	1120	06	12			RADAR	40	12K0E	OTHR Contayner
14103.5	0848	18	12			F1B	600	600H	DPRK-FSK 600 ARQ
14110	1430 vt*	03 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 06/12, 1012 UTC
14112	0928	20	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
14122	1308	04	12			RADAR	40	12K0E	OTHR Contayner
14122	0824	18	12			RADAR	41.6	10K0E	Short bursts. "Foghorn"
14133	0850	06	12			RADAR	41.6	10K0E	Short bursts. "Foghorn"
14137	0725	18	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
14137	0819	24	12			RADAR	50	10K0E	Short bursts. "Foghorn"
14148	1518	19	12			RADAR	40	12K0E	OTHR Contayner
14153	0814	19	12			RADAR	40	12K0E	OTHR Contayner
14153	0928	19	12			RADAR	41.6	10K0E	Short bursts. "Foghorn"
14156	1357	02	12			RADAR	40	12K0E	OTHR Contayner
14157	1356	22	12			RADAR	40	12K0E	OTHR Contayner
14158	0819	21	12			RADAR	40	12K0E	OTHR Contayner
14160	1435	06	12			RADAR	40	12K0E	OTHR Contayner
14160	0743	31	12			F1B	50	250H	
14161	1431	02	12			RADAR	40	12K0E	OTHR Contayner

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14162	0947	15	12			RADAR	40	12K0E	OTHR Contayner
14180	0713	28	12			RADAR	50	10K0E	Short bursts. "Foghorn"
14182	0747	27	12			RADAR	50	10K0E	OTHR
14185	0928	26	12			RADAR	50	10K0E	OTHR
14186	0711	09	12			F1B		500H	
14188	0831	15	12			RADAR	40	12K0E	OTHR Contayner
14193	0807	30	12			RADAR	40	12K0E	OTHR Contayner
14194	0655	04	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
14194	0737	28	12			RADAR	40	12K0E	OTHR Contayner
14197.6	0733 vt*	01 vd*	12			F1B		900H	*Also on 04/12, 0753 UTC
14200	0814	05	12			RADAR	41.6	10K0E	Short bursts. "Foghorn"
14200	0836	14	12			RADAR	40	120E	OTHR Contayner
14208	0815	14	12			RADAR	50	10K0E	OTHR
14210	0724	13	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
14210	0734	21	12			RADAR	50	20K0E	Short bursts. "Foghorn"
14218	0727	15	12			NON			Carrier. S9+. Long - lasting
14220	0746	15	12			J7D		2K60E	CIS-12. Idling
14223	0903	17	12			RADAR	41.6	10K0E	Short bursts. "Foghorn"
14236	0737	15	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
14242	0718	18	12			J7D	120	2K60E	CIS-12
14245	0821	09	12			RADAR	50	10K0E	Short bursts. "Foghorn"
14245	0727	18	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
14245	0858	22	12			RADAR	50	10K0E	OTHR
14246	0721	13	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
14251	0819	14	12			RADAR	50	10K0E	Short bursts. "Foghorn"
14252	0754	12	12			RADAR	50	10K0E	OTHR
14257	0829	24	12			RADAR	41.6	10K0E	OTHR Contayner
14258	0815	01	12			F1B		500H	
14258	0916 vt*	01 vd*	12			RADAR	50	10K0E	OTHR. *Also on 09/12, 0707 UTC
14258	0808 vt*	03 vd*	12			RADAR	66.66	10K0E	Short bursts. "Foghorn". *Also on 14/12, 0821 UTC
14263	0738	04	12			RADAR	50	10K0E	OTHR
14266	0752	24	12			RADAR	50	10K0E	Short bursts. "Foghorn"
14270	0827	24	12			RADAR	41.6	10K0E	Short bursts. "Foghorn"
14278	0720	10	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
14280	1007	09 vd*	12			A3E		ca 7K0E	Numbers st. "S06s" aka "Russian lady", RUS lang, female voice. *Every Wednesday
14282	0958	11	12			RADAR	40	12K0E	OTHR Conatayner
14283	0732	18	12			RADAR	50	10K0E	Short bursts. "Foghorn"
14286	0726	13	12			RADAR	5	10K0E	Short bursts. "Foghorn"
14289	0826	30	12			RADAR	50	10K0E	Short bursts. "Foghorn"
14292	0731	18	12			RADAR	50	10K0E	Short bursts. "Foghorn"
14292	0753	30	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
14293	0810	28	12			RADAR	50	10K0E	Short bursts. "Foghorn"

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14294	0814	04	12			RADAR	50	10K0E	OTHR
14296	0826	14	12			RADAR	50	10K0E	Short bursts. "Foghorn"
14297	0808	04	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
14298	0825	01	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
14300	0848	03	12			F1B	50	500H	
14301.9	0805	03	12			W7D		2K80E	OFDM.
14304	0721	09	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
14305	0821	01	12			RADAR	41.6	10K0E	Short bursts. "Foghorn"
14308	0905 vt*	09 vd*	12			RADAR	66.66	10K0E	Short bursts. "Foghorn". *Also on 14/12, 0825 UTC
14313	1219	28	12			RADAR	40	12K0E	OTHR Contayner
14314	0802	21	12			RADAR	41.6	10K0E	Short bursts. "Foghorn"
14316	0944	11	12			RADAR	50	10K0E	Short bursts. "Foghorn"
14317	0729	18	12			RADAR	50	10K0E	Short bursts. "Foghorn"
14320	0819	20	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
14320	0812	24	12			RADAR	50	10K0E	Short bursts. "Foghorn"
14320.9	0722	30	12			XXX		180H	XXX 2 tones alternating (FSK?) long-lasting
14322	0820	20	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
14325	0817	21	12			RADAR	50	10K0E	Short bursts. "Foghorn"
14330	0726	08	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
14331	0715	28	12			RADAR	50	10K0E	OTHR
14331	0715	28	12			RADAR	41.6	10K0E	Short bursts. "Foghorn"
14335	0827	01	12			RADAR	66.66	10K0E	Short bursts. "Foghorn".
14337	0746	21	12			RADAR	66.66	10K0E	Short bursts. "Foghorn". *Also on 22/12, 0905 UTC
14339	0814	21	12			RADAR	50	10K0E	Short bursts. "Foghorn"
14341	0828 vt*	01 vd*	12			RADAR	66.66	10K0E	Short bursts. "Foghorn". *Also on 09/12, 0910 UTC. 21/12, 0725 UTC.
14342	0856	11	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
14342	0909	20	12			RADAR	50	10K0E	Short bursts. BD ca 10 sec, every 5 sec. "Foghorn"
14343	0921	04	12			RADAR	50	10K0E	Short bursts. "Foghorn"
14344	0952	17	12			RADAR	50	10K0E	Short bursts. "Foghorn"
14345	0820	20	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
14350	0907	22	12			RADAR	66.66	10K0E	Short bursts. "Foghorn"
14351	0931	08	12			RADAR	50	10K0E	Short bursts. "Foghorn"
14355	1320	07	12			RADAR	40	12K0E	OTHR Contayner
14370	0826	04	12			RADAR	50	20K0E	OTHR Pluto. Splatter to 14340 kHz
18064	0848	17	12			RADAR	40	12K0E	OTHR Contayner
18066	0842	20	12			RADAR	83.3	10K0E	Short bursts. BD = 1.5 sec. Every 5 sec. 0850 UTC, every 15 sec. "Foghorn"
18070	0757 vt*	28 vd*	12			RADAR	50	20K0E	OTHR Pluto. *Also on 30/12, 0734 UTC
18090	0731 vt*	13 vd*	12			RADAR	50	20K0E	OTHR Pluto. *Also on 28/12, 0743 UTC
18112	0902	01	12			RADAR	40	12K0E	OTHR Contayner
18119	0829	15	12			RADAR	40	12K0E	OTHR Contayner

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
18146	0859	08	12			RADAR	50	10K0E	Short bursts. "Foghorn"
18150	0733 vt	08 vd	12			F1B	100	1K0E	Often. <i>Shared band.</i>
18150	0739	21	12			RADAR	41.6	10K0E	Short bursts. "Foghorn"
18159	0841	04	12			RADAR	40	12K0E	OTHR Contayner
18164	0943	21	12			RADAR	40	12K0E	OTHR Contayner
18165	1214	28	12			RADAR	40	12K0E	OTHR Contayner
18170	1049	23	12			RADAR	25	20K0E	OTHR Pluto
18171	1120	21	12			RADAR	40	12K0E	OTHR Contayner
18172	0857 vd*	12 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 17/12, 0958 UTC
21000	0951	13	12			RADAR	25	4K0E	Long - lasting
21045	0812	03	12			RADAR	41.66	10K0E	Short bursts. "Foghorn"
21088	0737	30	12			RADAR	40	12K0E	OTHR Contayner
21107	0839 vt*	04 vd*	12			XXX		1K20E	DPRK 1200. *Also on 09/12, 0846 UTC
21115	1015	22	12			RADAR	50	20K0E	OTHR Pluto
21120	0908	17	12			RADAR	50	20K0E	OTHR Pluto
21151.8	1042	15	12			XXX		1K20E	DPRK 1200
21151.8	0840	17	12			XXX		ca 4K0E	Group of carriers. Long - lasting
21158	1044	21	12			RADAR	40	12K0E	OTHR Contayner
21174	0925	26	12			RADAR	40	12K0E	OTHR Contayner
21175	1056 vt*	22 vd*	12			RADAR	40	12K0E	OTHR Contayner. *Also on 30/12, 0937 UTC
21210	1214	05	12			RADAR	25	20K0E	OTHR Pluto
21210	0754	31	12			RADAR	50	20K0E	OTHR Pluto
21250	0800	03	12			RADAR	50	20K0E	OTHR Pluto
21348	1209	10	12			RADAR	40	12K0E	OTHR Contayner
21355	0903	06	12			RADAR	50	20K0E	OTHR Pluto
21390	0954	26	12			RADAR	25	20K0E	OTHR Pluto
21395	0942	30	12			RADAR	40	12K0E	OTHR Contayner
21407	0936	25	12			RADAR	40	12K0E	OTHR Contayner
21420	1044	06	12			RADAR	25	20K0E	OTHR Pluto
21438	0911 vt	01 vd	12		RCV	A1A	19		"RCV" QTCs. Almost daily
21438	0849	08	12			NON			Carrier. S9+. Long-lasting
21448.5	0807	05	12			F1B	600	600H	DPRK-FSK 600 ARQ
21454	1050	22	12			RADAR	40	12K0E	OTHR Contayner

USKA; Peter, HB9CET									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
6995.0	1649	01	12			FMOP	40 sps	12k0E	OTHR; Contayner; partially in 40m band
7004.0	1809	17	12			FMOP	40 sps	12k0E	OTHR; Contayner
7012.0	1554	20	12			FMOP	40 sps	12k0E	OTHR; Contayner
7021.0	1534	20	12			FMOP	41 sps	10k0E	OTHR; Burstsystm
7032.0	1503 2301	01 10	12			FMOP	40 sps	12k0E	OTHR; Contayner often

USKA; Peter, HB9CET

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
7038.0	2318	17	12			FMOP	40 sps	12k0E	OTHR; Contayner
7039.2	1732	16	12		F	A1A		10H	Cluster Beacon "F": Vladivostok daily via SDR rx JA, weak in HB
7039.827	1041	02	12	F	FDE2	A1A			Endless loop, "vuv de fde2 ar"; reported as French Airforce (?)
7042.0	1734	16	12			FMOP	50 sps	10k0E	OTHR
7047.0	1027	06	12			J7D	12x120 Bd	2k70E	CIS12; BPSK or QPSK
7049.0	1552	11	12			FMOP	40 sps	12k0E	OTHR; Contayner
7050.0	1241	16	12			J3E-L		2k70E	Russian-Ukraininen Radio war
7054.0	1648	25	12			F1B		200H	
7055.0	1530 1257 0912	03 16 30	12			J3E-L		2k70E	Russian-Ukraininen Radio war daily
7058.0	1758 1821	01 17	12			FMOP	40 sps	12k0E	OTHR; Contayner
7059.0	2152	28	12			FMOP	40 sps	12k0E	OTHR; Contayner; strong -60dBm
7062.0	0831	30	12			J3E-U			Russian; Number station often
7063.0	1605	22	12			FMOP	40 sps	12k0E	OTHR; Contayner
7072.0	0918	17	12			J7D	12x120 Bd	2k70E	CIS12; BPSK or QPSK
7097.0	1507	07	12			FMOP	40 sps	12k0E	OTHR; Contayner
7100.0	2139	29	12			FMOP	40 sps	12k0E	OTHR; Contayner
7105.0	1610	10	12			FMOP	40 sps	12k0E	OTHR; Contayner
7106.0	1611	27	12			FMOP	40 sps	12k0E	OTHR; Contayner
7108.0	2320	18	12			FMOP	40 sps	12k0E	OTHR; Contayner
7110.0 LSB	1656	25	12			PSK-4	30x60Bd	ca 2k50E	CHN30 (PRC30); Burst system; tone spacing 75 Hz; Preamble 4x PSK4 60Bd, spacing 600Hz; Pilot tone at 450Hz
7112.0	1633	27	12			FMOP	40 sps	12k0E	OTHR; Contayner
7119.0	1700	25	12			J7D	12x120 Bd	2k70E	CIS12; BPSK or QPSK
7122.0	0807 1536 0828	02 20 28	12			F1B	50	200H	almost daily
7122.0	2336	04	12			FMOP	40 sps	12k0E	OTHR; Contayner
7123.0	1559	22	12			FMOP	40 sps	12k0E	OTHR; Contayner
7124.0	2239 1524	06 15	12			FMOP	40 sps	12k0E	OTHR; Contayner
7128.0	2311	06	12			FMOP	40 sps	12k0E	OTHR; Contayner
7129.0	1534	07	12			FMxx	50 sps	10k0E	OTHR
7129.0	1550	16	12			FMxx	50 sps	10k0E	OTHR
7130.0	1816	01	12			FMOP	66.66 sps	10k0E	OTHR; Foghorn
7138.0	1508	07	12			FMOP	40 sps	12k0E	OTHR; Contayner
7140.0	1634	12	12	ERI	VOBM 1	A3E		ca 9k0E	BC: Voice of the broad Masses 1 daily
7151.0	2313	06	12			FMOP	40 sps	12k0E	OTHR; Contayner
7157.0	1602	10	12			FMOP	40 sps	12k0E	OTHR; Contayner
7159.0	1607	19	12			FMOP	40 sps	12k0E	OTHR; Contayner
7162.0	1311	12				MPSK		2k60E	CIS12: idling, only 12 tones + pilot at 3300Hz
7166.0	0822 0830	29 30	12			J7D	12x120 Bd	2k70E	CIS12; BPSK or QPSK
7167.0	1805	17	12			FMOP	40 sps	12k0E	OTHR; Contayner
7168.0	1517	04	12			FMOP	40 sps	12k0E	OTHR; Contayner
7171.0 LSB	1727 1636	10 25	12			PSK-4	30x60Bd	ca 2k50E	CHN30 (PRC30); Burst system; tone spacing 75 Hz; Preamble 4x PSK4 60Bd, spacing 600Hz; Pilot tone at 450Hz

USKA; Peter, HB9CET									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
7171.0	1643	18	12			FMCW	48 sps	10k0E	OTHR
7175.0	2234	30	12			FMxx	50 sps	10k0E	OTHR; Bursts; modulation not analyzed
7179.0	0839	29	12			F1B		200H	often
7180.0	0633	28	12			N0N		10H	long lasting carrier
7180.021	1413 1641	28 30	12	ERI	VOBM 2	A3E		ca 9k0E	BC: Voice of the broad Masses; weak
7188.0	0645	28				F1B		250H	
7191.0	1643 2253	01 28	12			FMOP	40 sps	12k0E	OTHR; Contayner often
7193.0	1431 0801	01 14	12		RDL	F1A		200H	FSK CW; numbers often
7193.0	0929 1113	08 14	12		RDL	F1B	50	200H	daily
7196.0	1635	18	12			FMOP	40 sps	12k0E	OTHR; Contayner
7197.0	0631	28	12	TUR	various	MFSK8	125 Bd	1750	ALE, MIL 188-141A; TUR Emergency Network legal? daily
7198.0	1554	12	12			J7D	12x120Bd	2k70E	CIS12; BPSK
7199.996	1243 1214	03 30	12			A3E		9k00	BC: National Unity Radio; daily
14011.0	1131	12	12			F1B		250H	
14026.0	1305	18	12			J7D	12x120Bd	2k70E	CIS12; BPSK
14028.0	0815	14				FMxx	50	10k0E	OTHR
14091.0	0903	14	12			J7D	12x120 Bd	2k70E	CIS12 BPSK or QPSK
14101.0	1120	06	12			FMOP	40 sps	12k0E	OTHR; Contayner
14110.0	1434	03	12			FMOP	40 sps	12k0E	OTHR; Contayner
14155.0	1431	12	12			FMOP	40 sps	12k0E	OTHR; Contayner
14223.0	0907	17	12			FMxx		10k0E	OTHR
14234.0	0855	14	12			FMxx	48	10k0E	OTHT
14245.0	0824	09	12			FMxx	47 sps	20k0E	OTHR
14251.0	0827	14				FMxx	41	10k0E	OTHR
14280.0	1011	09	12			A3E		ca 9k00E	Number station; female voice; russian
14308.0	0834	14	12			FMOP	66.66 sps	ca 10k0E	OTHR, Foghorn
14316.0	0851	07	12			FMOP	66.66 sps	ca 10k0E	OTHR, Foghorn
14317.0	0839	14	12			FMOP	66.66 sps	ca 10k0E	OTHR, Foghorn
14321.0	0853	07	12			FMCW	50 sps	ca 10k0E	OTHR
14328.0	0843	28	12			FMCW	50 sps	ca 10k0E	OTHR
14331.0	0828	28	12			FMCW	48 sps	ca 10k0E	OTHR
14340.0	0834	09	12			FMxx	66.66 sps	ca 10k0E	OTHR; Foghorn
14341.0	0813	02	12			FMOP	42 sps	ca. 10k0E	OTHR
18081.0	0831	02	12			FMCW	50	ca 20k0E	OTHR
18108.56	0757	09				F1B	600 Bd	600H	FSK ARQ
18164.0	0943	21	12			FMOP	40 sps	12k0E	OTHR; Contayner
18165.0	1321	30	12			FMCW	25 sps	20k0	OTHR; most probably UK base Cyprus
21120.0	0912	17	12			FMCW	50 sps	20k0E	OTHR; most probably UK base Cyprus
21160.0	0908	14	12			FMOP	40	40k0E	OTHR; Contayner
21335.0	0836	30	12			FMxx		30k0E	OTHR
21421.0	1034	06	12			FMCW	25 sps	20k0E	OTHR; most probably UK base Cyprus
21438.0	0846	29	12		RCV	A1A		10H	TDoA: Area of Sevastopol daily
28860.0	0827	02	12	IRN		xxx	150 + 313 sps	ca 45k	OTHR, Bursts; long lasting, sweep rate alternating almost daily

VERON; Ruud, PG1R; Credits to observers: Dick PA0GRU, Joeke PA0VDV, Kees PA2CHM, Arie PA3CNK, Rene PA3EQO									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3576.0	2013	21	12		ECE1	A1A			QLN QSA? QRK QXS AR
3624.0	2005	21	12		3YJA	A1A			Calls to: A4TO LZG2 QNAX 2RB3
7055.0	1348	13	12			J3E-L			UKR/RUS radiowar; war sounds
7055.0	1516	27	12			J3E-L			UKR/RUS radiowar; comments & music; S9+
7081.0	1526	27	12			A1N			Continues dashes; S4 QSB
7089.0	1542	10	12			RADAR			OTHR qrt 15.45 utc
7122.0	1055	03	12			F1B			Revs/Ptr
7140.0	1518	27	12	ERI	VOBM	A3E			Weak modulation; S2
7170.0	1627	08	12	RUS		RADAR		10KOE	OTHR TD0A Rus
7192.0	1512	27	12			RADAR		20KOE	OTHR; CF
14106.0	1445	03	12			RADAR		10KOE	OTHR
14327.0	1052	07	12	RUS		RADAR		20KOE	OTHR 53N 44E
21438.0	1050	04	12		ONG4	A1A			XXX ONG4 43028 VAROWOSK 0599 6859 K

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