



IARU Monitoring System Region 1

Monthly Newsletter 7 - July 2021

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News and Info's

Beside the well known, partly daily encountered intruders, also newer or rather rarely heard signals were noticeable, e.g. the CHN30 burst signal from China which was repeatedly encountered on different frequencies in the 40m band. Western (NATO) military systems were more active in our bands, e.g. MIL188-110A, LINK11 -CLEW and-SLEW, STANAG 4285, STANAG 4481-FSK, MIL188-14A ALE etc. FSK-ARQ and PSK-ARQ emissions with typical 600Bd 600Hz or even 1200Hz have been conspicuous for some time, they are known as DPRK 600 and 1200 respectively and are attributed to North Korea. For many days a LINK11 CLEW was active on 7159.0 kHz (VFO) in DSB mode (double side band, 6 kHz wide), at times a heavy interference; already earlier this station

attracted attention several times. With the OTH radars predominantly the Russian Contayner as well as the British Pluto system from Cyprus was annoying. On 14301.9 kHz an OFDM60 could be found from time to time. Also some radio stations interfere regularly. First of all "RFI, Radio France International" on 7205 kHz which splatters down to 7186 kHz late in the evening from 2100-2200 UTC. "VOBM, Voice of Broad Masses" is regularly found on 7140 and 7180 kHz. "CRI, China Radio International" is often found on 14000 kHz (Intermodulation from 13855 and 13710 kHz). At 18080 kHz "Sound of Hope" from Taiwan (often jammed) is sometimes audible, if conditions permit. ↩

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 | **CHN = PRC** = People's Republic of China | **CF** = Center frequency
DF = Direction finding (radio location; see also TDoA) | **FMCW** = frequency modulated continuous wave
FMOP = frequency modulated on pulse | **OTHR** = over the horizon radar | **Radar** = if exact mode unknown
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 (CF)**, unless otherwise specified!

DARC; Credits to monitors: DK2OM Wolf, DF5JL Tom, DL3RTL Daniel, DE2TRF Torsten, DC7MA Christian, DL4MGD Michael, HB9HIL Fabian, Thomas Black, DL2SCH Jürgen, DB3TA Alex

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7000.0	1902	19	07	RUS		FMOP	58	48k	RUS Radar
7000.0	2006	19	07	RUS		FMOP	32.61	48k	Coast Radar
7006.0	1608	16	07	RUS		FMOP	40	12k	OTHR
7039.0	vt	dly	07	RUS	C	A1A			cluster beacon C - Moscow - "RIW"
7055.0	0618	10	07	UKR		J3E-L		2k9	propaganda. german language
7058.0	1948	20	07	UKR		J3E-L		2k9	propaganda
7060.0	1845	20	07	UKR		J3E-L		2k9	propaganda
7080.0	vt	vd	07	RUS		F1B	55	200	
7102.0	0953	05	07	RUS		F1B	65	220	Omsk
7119.0	1552	24	07	RUS		PSK2	120	2600	CIS-12
7123.0	2008	28	07	CHN		FMOP	66	10k	Chinese OTH radar - 7118 - 7128 kHz - 3.8 sec bursts
7140.0	1705	dly	07	ERI	VOBM	A3E/BC		9k	7140.021 kHz - voice of the broad masses - Eritrea
7180.0	1409	dly	07	ERI	VOBM	A3E		9k	7180.021 kHz - Radio Eritrea
7205.0	2125	27	07	F	RFI	A3E		34k	RFI splattering down to 7188 kHz
7197.0	0645	04	07			PSK		2k6	CIS-12

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kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
10123.0	1552	26	07	RUS		FMOP	40	12k	OTH radar Contayner - W of Saransk - 10117 - 10129 kHz
14000.0	1400	dly	07	CHN		A3E		9k	CRI - China Radio International - intermodulation from 13855 and 13710 kHz - 13855 x 2 - 13710 = 14000 kHz
14008.0	1425	08	07	RUS		F1B	50	250	
14070.0	1807	08	07			FMOP		12k	OTHR
14070.0	0445	09	07			FMOP	40	12k	OTHR
14070.0	0500	09	07			FMOP	40	12k	OTHR
14115.0	1812	16	07	CHN		FMOP	66.67	10k	OTHR 3.8s bursts
14122.5	1215	27	07			FMOP		15k	OTHR
14150.0	1343	09	07			FMOP		12k	OTHR
14177.0	1236	11	07			FMOP	40	12k	OTHR
14180.0	1955	26	07	RUS		FMOP	40	12k	OTH radar Contayner - W of Saransk - 14174 - 14186 kHz
14186.0	0858	30	07	RUS		F1B	50	500	Far East Russia
14187.0	0853	06	07	CHN		FMOP	65	10k	Chinese OTH radar - 14182 - 14192 kHz - 3.8 sec bursts
14187.0	1555	17	07			FMOP	40	12k	OTHR Contayner
14189.0	1006	20	07	RUS		FMOP	40	12k	OTH radar Contayner - W of Saransk - 14183 - 14195 kHz
14189.0	1546	14	07			FMOP	40	12k	OTHR
14200.0	1018	24	07	RUS		FMOP	40	12k	OTH radar Contayner - W of Saransk - 14194 - 14206 kHz
14280.0	1510	31	07	RUS		FMOP	40	12k	OTH radar Contayner - W of Saransk - 14274 - 14286 kHz
14288.0	1415	31	07			FMOP	40	12k	OTHR Contayner
14295.0	1815	16	07	CHN		FMOP	66.67	10k	OTHR 3.8s bursts
14317.0	1044	04	07			A1A		200	Groups of 5 lettres and figures in kuryllic language
14344.0	1356	11	07			FMOP	40	12k	OTHR
14345.0	1256	11	07			FMOP	40	12k	OTHR
14349.0	0909	10	07	CHN		FMOP	10	160k	Chinese wideband OTHR 14269 - 14429 kHz
14351.0	1832	16	07	CHN		FMOP	66.67	10k	OTHR 3.8s bursts
21121.0	vt	vd	07	E		USB			Spanish fishery
21169.0	0915	05	07	RUS		FMOP	40	12k	OTH radar Contayner - W of Saransk - 21163 - 21175 kHz
21171.0	1308	23	07	CYP		FMOP	50	20k	UK OTH radar Cyprus
21438.0	vt	dly	07	RUS	RCV	A1A			RUS Navy Sevastopol with QTCS RIP90 de RCV - daily active
28005.0	1730	22	07	E		LSB			Spanish Pirates
28015.9	0959	31	07			A1A			Fishing buoy
28020.3	1215	31	07			A1A			Fishing buoy
28045.0	1859	09	07	E		USB			Spanish pirates
28055.0	1626	04	07	F		A3E			French pirates
28275.1	1546	30	07			F1B	51	300	3 Enagal GPS fishing buoys - encrypted FSK - 170 deg.
28500.0	1455	28	07	IRN		AMOP	150 313	50k	Iranian radar - 28475 - 28525 kHz; 150 sps and 313 sps alternating
28860.0	1045	04	07	IRN		AMOP	150 / 313	46k	Iranian radar - 28837 - 28883 kHz; 150 sps and 313 sps alternating

IRTS; Michael, EI3GYB									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3760	1900	04	07			LSB			Deliberate QRM with strong tuning sounds targetting the WAB net. Stops at 1930z.
6975	2355	19	07			RADAR			Radar from 6975 to 7025 kHz. Huge and persistent signals.
7050	2345	19	07			RADAR			Radar from 7050 to 7063 kHz. Huge and persistent signals.
7055	1740	03	07	RUS/UKR		LSB			Russian-Ukrainian radio war. Agitprop. Daily all day long. Always strong signals.
7075	1745	23	07			PSK			Strong and persistent signal.
7089	0315	22	07			PSK			Link-11 Clew. Strong, persitent. Still audible on the 23rd at 2230z.
7100	2230	02	07	RUS/UKR		LSB			Russian-Ukrainian radio war. Russian propaganda, shouting and music.Huge signals. Endless chaos.
7104	0630	25	07	CUB					QRM from Cuba. Daily all evening, night and morning until fade out at around 0900z.Sound like a pulsing noise coming from an unstable transmitter.Could be harmonics coming from an unstable transmitter. Audible on multiple frequencies up to 8 MHz.Heard daily since second week of the month. Also on many other frequencies. Nicknamed "Caribbean Rum Runner". No reaction to an email sent to CO2KK Arni Coro from Radio Havana Cuba.
7105	0535	27	07			PSK			Link-11 Clew. Weak and intermittent.
7105	2350	19	07			RADAR			Radar from 7105 to 7117 kHz. Huge signals, persitent.
7105	0638	15	07			RADAR			Radar from 7105 to 7150 kHz.Strong, neverending.
7113	0630	25	07	CUB					7113 to 7119 kHz.Caribbean Rum Runner. See above!
7127	2145	02	07			RADAR			Radar from 7127 to 7140 kHz. Traveling up and down the band.
7128	0630	25	07	CUB					Caribbean Rum Runner- see above!
7138	0630	25	07	CUB					Caribbean Rum Runner- see above!
7147	0630	25	07	CUB					Caribbean Rum Runner- see above!
7153	0630	25	07	CUB					7153 to 7159 kHz. Caribbean Rum Runner- see abobe!
7154	0640	15	07			RADAR			Radar from 7154 to 7175 kHz. Strong.
7162	0530	27	07			PSK			Link-11 Clew. Very strong and persistent.
7171	0330	22	07			PSK			Link-11 Clew. Strong. persistent.
7182	0630	25	07	CUB					7176 to 7180 kHz. Caribbean Rum Runner- see above!
7182	0240	27	07			RADAR			Radar from 7182 to 7186 kHz. Very strong.
14000	0540	27	07			PSK			Weak to medium signal, intermittent.
14104	1240	27	07			RADAR			Radar from 14104 to 14135 kHz. Strong, intermittent.
14118	1010	02	07			RADAR			Radar from 14118 to 14135 kHz. Strong and persistent.

IRTS; Michael, EI3GYB									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14119	1540	20	07			RADAR			Radar from 14119 to 14135 kHz. Very strong, persistent.
14146	1130	06	07			RADAR			Radar from 14146 to 14158 kHz. Weak, in and out.
14164	1545	20	07			RADAR			Radar from 14164 to 14182 kHz. Very strong and persistent.
14175	1615	14	07			RADAR			Radar from 14175 to 14200 kHz. Monster signals, persistent. Makes this part of the spectrum unusable for anything.
14288	1815	16	07			RADAR			Radar from 14288 to 14302 kHz. Strong short bursts.
14300.5	0940	21	07			PSK			Medium signal, persistent.
14318	1210	20	07			RADAR			Radar from 14318 to 14341 kHz. Strong and persistent.
18155	1610	30	07			RADAR			Radar from 18155 to 18168 kHz. Strong and persistent.
21000	1630	08	07	E or MM		USB			Spanish fishermen chatting. Medium signals. Also heard on the 29th at 1545z with weak signals.
21168	1315	04	07			RADAR			Radar from 21168 to 21192 kHz. Huge and persistent signals.
21438	0915	13	07	UKR		CW			Russian Navy, Sevastopol.
28840	1615	04	07	IRN		RADAR			Radar from 28840 to 28900 kHz. Weakish signal, moving up and down the band.
145100	1335	03	07	IRL		FM			Male voices, mobile. Heading north from Limerick to Galway.No call signs. Sound like boy racers. Frequency drift, also on 145.102 MHz. Observed and reported by EI4KU, Stefan.

OeVSV; Christoph, OE1VMC									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7108	0001	17	07	RUS		RADAR		12K0E	Kontayner; Reported by OE3IDE
14070	1344	08	07	RUS		RADAR	40 sps	12K0E	Kontayner;
14190	0845	12	07	G		RADAR		20K0E	Likely Pluto II; Reported by OE3IDE

PZK; Marek, SP3AMO, Miro SP5GNI									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3692	vt	15	7			PSK		2K9	CIS-12 pilot 3693,3 S9
3768	0733	9	7			PSK		2K9	CIS-12 pilot 3769,3 S9 + 10dB
5363.5	1555	8	7			UI		2K9	S9 Stanag
7000.0	1625	19	7			RADAR			S9 sps 40 Hz OTHR
7055	0855	2	7			J3E-L		2K7	Music in Russian
7066.0	0935	7	7			A2A		20	RST 599 [QTC]
7088.6	0936	5	7			A1A		20wpm	09.38 UTC QRT
7101.8	0627	5	7			F1B	50	200	S 7
7140.5	0952	27	7			PSK		2K9	CIS-12 S9
7159	1150	31	7			PSK		6K0E	LINK11 CLEW DSB PSK B7D ?
7196.0	0610	4	7			PSK			S 7 [sps 40 Hz]
7196.1	0630	6	7			PSK		1K6	S 8 [5 x 120 Hz]
7196.8	0629	5	7			PSK		1K6	S 7 [5 x 120 Hz]

PZK; Marek, SP3AMO, Miro SP5GNI

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7197	2048	4	7	RUS		PSK		2K9	CIS-12 pilot 7198,3 S9 + 20dB
10133	1325	19	7	RUS		PSK		2K9	CIS-12 pilot 10134,3 S7
14008.0	0940	7	7			F1B		250	RSQ 575 [09.42 UTC QRT]
14070	vt	8	7			RADAR		8KOE	S7
14115	0805	30	7			UI		1K6	changing from 2 to many lines
14144	1917	23	7			RADAR		12KOE	S9 short burts
14147	2138	15	7			RADAR		8KOE	in bursts
14188	1343	2	7			RADAR		12KOE	S7
14190	0915	26	7			RADAR		16KOE	S9 continous
14210	1623	23	7			RADAR		8KOE	in bursts
14212	0916	26	7			RADAR		8KOE	in bursts
14257.9	1318	2	7			UI		600	carier with 2 strong lines +/-300 Hz
14298.5	0820	3	7			PSK		1K4	S8 ended 8:24
14345	1300	11	7			RADAR		12KOE	S8
14347	1242	26	7			RADAR		10KOE	in bursts
18067	0725	9	7			RADAR		18KOE	S9 partially in the band
18170	1324	23	7			RADAR		12KOE	S7 partially in the band
18173	1343	15	7			RADAR		12KOE	S9 partially in the band
21051	0924	26	7			RADAR		12KOE	S9
21185	1455	31	7			RADAR		10KOE	S7
21270	0850	2	7			RADAR		20KOE	S9
21280	1333	4	7			RADAR		20KOE	S6
21335	0920	26	7			RADAR		20KOE	S9 continous
21350	0802	9	7			RADAR		20KOE	S8
21390	0728	9	7			RADAR		20KOE	S9 7:30 finished
21401	1037	16	7			RADAR		8KOE	S8 max
21435	0900	15	7			RADAR		8KOE	S3-6
24896	1400	23	7			RADAR		8KOE	burst strong
28860	1215	19	7			RADAR		40KOE	S5-7
28860	1057	23	7			RADAR		40KOE	S4 very weak
29400	1248	26	7			RADAR		50KOE	S4 weak

REF; Francis, F5MIU

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14025	1020	18	07					3kHz	Data 16 subcarriers S7
14070	1730	08	07				20	20kHz	OTH Radar pulsed 50ms,S9+10dB
14190	1620	14	07				40	20kHz	OTH Radar pulsed 25ms,S9+20dB
21310	0746	10	07				50	20kHz	OTH Radar pulsed 20ms,S9
21340	0849	09	07				50	20kHz	OTH Radar pulsed 20ms,S9+10dB

RSGB; Richard, G4DYA

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3510.0	vt	vd	07			J3E		2K70E	USB "The Air Horn"
3583.0	1646	23	07			J3E			USB. Fishing boats. English lang., Irish accent
3756.0	vt	vd	07			J3E		1K70E	USB "The Pip"
5363.6	ady	08-11	07	DNK		G1D		2K40E	For info: Stanag 4285, Primary user
7000.0	1702 1859	17 19	07			P0N	32.55	45KOE	Unknown radar
7025.0	0842 1613	05 23	07			F1B		200	

RSGB; Richard, G4DYA									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7052.0	1859	31	07			F1B		225	
7057.0	2241	14	07	RUS		P0N		12K0E	Container radar
7066.0	ady	vd	07			F1A/ F1B/ NON		200	Mostly idling on 7065.9
7068.0	0846	27	07			J7D		2K70E	USB 7066.0 / CIS-12
7072.0	1615	23	07			F1B		200	
7074.390	vt	vd	07			A1N			Continuous dashes or groups of dashes. ±10Hz
7074.790	2016	27	07			A1N			Continuous dashes. ±10Hz
7074.990	vt	vd	07			A1N			Continuous dashes or groups of dashes. ±10Hz
7101.7	1751	09	07			F1B		850	
7102.0	0837	05	07			F1B		200	
7108.0	2242	14	07	RUS		P0N		12K0E	Container radar
7140.019	0250-0635, 1400-1835	08 23-24, 28	07	ERI	VoBM1	A3E			BC. Approx times – varies daily
7152.0	0926	06	07			J7D		2K70E	USB 7150.0 / CIS-12
7159.0	0702 0950	27 31	07			B7D		6K00E	ISB/DSB Link 11 CLEW.
7170.0	1617	23	07			F1B		200	
7180.020	0250-0635,1 400-1835	06 23-24	07	ERI	VoBM2	A3E			BC. Approx times – varies daily
7184.4	1854	31	07			G1D		2K35E	LSB 7186.0 / PRC-30
7197.0	vt	04-06	07			J7D		2K70E	USB 7195.0 / CIS-12
14001.5	1836	29	07			G1D		2K50E	ISR Navy modem with 4-tone preamble
14008.0	vt	vd	07			F1B		250	
14070.0	1732	08	07	RUS		P0N	40	12K0E	Container radar
14098.0	0753 0904	07 12	07			J7D		2K70E	USB 14096.0 / CIS-12
14100.0	vt	vd	07			NON			Plain carrier on IBP frequency
14150.0	1135 1912	18 31	07			F3N	0.1	30K0E	120-second FMCW bursts of 12 sweeps every 5 minutes
14186.0	0939	12	07			F1B		500	
14210.0	vt	vd	07			P0N	10	4K50E	Signal resembles SuperDARN
14257.9	1112	02	07			NON			Plain carrier
14298.5	0814	18	07					1K20E	Unidentified. Ceased at 0819z.
14301.9	0807	07	07			J7D		2K80E	USB 14300.0 / CIS-60
14303.0	1634	07	07	CHN		F3N	66.7	10K0E	FMCW radar bursts
18063.0	1042	18	07	RUS		P0N	40	12K0E	Container radar
18079.988	0614	03	07			A3E			BC
18159.0	0840	25	07	RUS		P0N	40	12K0E	Container radar
18160.0	0810	28	07	RUS		P0N	40	12K0E	Container radar
18170.0	0650	09	07	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus

RSGB; Richard, G4DYA									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21125.0	0756	22	07	G		F3N	25	20K0E	FMCW radar, RAF Akrotiri, Cyprus
21135.0	0752	06	07	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
21150.0	0755	08	07	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
21270.0	1002	17	07	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
21401.0	1054	16	07	RUS		P0N	40	12K0E	Container radar
21450.0	0813	23	07	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
28015.9	0959	10	07		NA	A1A			Fishing buoy
28039.9	1657 0957	08 10	07		EZ	A1A			Fishing buoy
28061.5	0708	03	07		AQ	A1A			Fishing buoy
28069.75	0958 0846	10 18	07		EZ	A1A			Fishing buoy
28079.9	1659 0957	08 10	07		EZ	A1A			Fishing buoy
28110.0	0958	10	07		FA	A1A			Fishing buoy
28111.5	0719	03	07		BN	A1A			Fishing buoy
28179.6	1705 1004	08 10	07		FA	A1A			Fishing buoy
28189.9	1702 1004	08 10	07		FA	A1A			Fishing buoy
28199.9	1707 1004	08 10	07		FA	A1A			Fishing buoy
28259.9	1711 1004	08 10	07		FA	A1A			Fishing buoy
28299.9	1714 1008	08 10	07		FA	A1A			Fishing buoy
28335.0	1010	10	07			F3E			FM CB
28360.7	1022	10	07		EZ	A1A			Fishing buoy
28409.7	1023	10	07		EZ	A1A			Fishing buoy
28419.8	1014	19	07		EZ	A1A			Fishing buoy
28650.0	0700	03	07	IRN		P0N	150/ 313	45K0E	Radar
28850.0	0631	03	07	IRN		P0N	150/ 313	45K0E	Radar
28950.0	0635	03	07	IRN		P0N	150/ 313	45K0E	Radar
29150.0	1048	16	07	IRN		P0N	150/ 313	45K0E	Radar
29300.0	1051	16	07	IRN		P0N	150/ 313	45K0E	Radar

RSK; Kamweti, 5Z4BV									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH/ BW	DETAILS
7000	1726	19	7	RUS		RADAR	20sps	60K0E	FMOP-OTHR Russian Contayner
7045	1245	vd	7			J3E-L		2k5	Vernacular QSO
7140	vt	vd	7	ERI		A3E		5kE	Voice of the Broad Masses #1 Eritrea
7150	vt	vd	7	KEN		MFSK	128	2k2	Call transmission
7184.5 CF	1345	28	7			PSK		2k4	PRC-30
7185	vt	7	7	KEN		J3E-L		2k5	Swahili/Vernacular QSO
14202	1352	28	7			PSK ?		5k0E	

RSK; Kamweti, 5Z4BV

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH/ BW	DETAILS
18165	1245	30	7	RUS		RADAR	40 sps	20k0E	FMOP-OTHR Russian Contayner
21185	vt	vd	7	RUS		RADAR	40 sps	20k0E	FMOP-OTHR Russian Contayner

SRAL; Pekka, OH2BLU

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/BW	DETAILS
7 MHz	1610-1630	13	7	RUS		RADAR	40sps	13k0E	(WebSDR 8d) Kontainer
7 MHz	1100-1810	*	7	RUS		RADAR	10sps	10k0E	*) Days: 1. 9. 10. 15. 17. 20. 23. 24. 28.
7 MHz	1620-1630	8	7	CHN		RADAR	50/67sps	10k0E	"foghorn"
7000.0	1700-1830	19	7	RUS		RADAR	32.5	50k0E	Mordovian rep. (WebSDR 1600 - 0400)
7000.0	1645-1830	15	7	RUS		J7D	120	2k60E	
7001.0	0815-0845	8	7	RUS		F1B		200H	
7008.0	1245-1345	20 30	7	RUS		J7D	120	2k60E	
7008.0	0945-1015	3	7	RUS		J7D	120	2k60E	
7020.0	1010-1817/	16 29	7	RUS		F1B/ NON		250H	
7022.0	0530-1130	9 30	7	RUS		J7D	120	2k60E	
7025.0	0500-1445	*	7	RUS		F1A/B		200H	*) Days: 1. 2. 3. 5. 7. 8. 10. 23. 28. 31.
7031.0	1515-1745	19 20	7	RUS		R3E-u		3k0E	brum, Russian vox
7048.5	0825-1315	*	7	RUS		A1A	17	20H	*) Days: 8. 9. 26. 4F, 5BL
7054.0	1630-1810	1	7	RUS		F1B		200H	
7058.0	0940-1200	28	7	RUS		F1B/ NON		250H	
7061.0	1325-1530	30	7	RUS		J7D	120	2k60E	
7066.0	0500-1900	dly	7	RUS		NON/ F1B/A	15	200H	5BL
7068.0	0745-0830	*	7	RUS		J7D	120	2k60E	*) Days: 1. 6. 8.
7079.0	1320-1340	8	7	RUS		F1B		250H	
7088.0	0500-1715	*	7	RUS		F1B		200/ 250H	*) Days: 9. 12. - 15. 22. - 24.
7099.0	0615-1730	*	7	RUS	PAMT etc	A1A	14	20H	*) Days: 2. 5. 6. 7. 12. 14. 21. 22. 26. 28. 29. 5F, 5BL
7102.0	0530-1530	5	7	RUS		F1B		250H	
7111.0	0640-1330	28	7	RUS		F1B/ NON		250H	
7112.0	1200-1335	28 29	7	RUS		J7D	120	2k60E	
7116.0	0720-	10	7	RUS		A1A	17	20H	5F, groups twice

SRAL; Pekka, OH2BLU									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/BW	DETAILS
	0730	22							
7122.0	0630-1015	5 28	7	RUS		F1B		250H	
7128.0	1520-1540	14	7	RUS		J7D	120	2k60E	
7140.0	1400-1415	1	7	RUS		J7D	120	2k60E	
7140.0	0430-0530		7	ERI	VoBM	A3E		9k0	Not heard
7140.0	1540-1835/	*	7	ERI	VoBM	A3E		9k0	*) Days: 1. 8. 23. 24. 28. 31.
7152.0	0925-0935	6	7	RUS		J7D	120	2k60E	
7154.5	1530-1550	3	7	RUS		J7D	120	2k60E	
7157.0	0545-1800	*	7	RUS	VB	A1A		20H	*) Days: 4. 22. 27. beacon, VB 3x, 60 sec cycle
7159.0	0535-1800	*	7	IW		B7D		6k0E	LINK11 CLEW DSB/LSB
7160.0	0745	21	7	RUS		A1A	15	20H	
7162.0	0500-0510/	4	7	RUS		F1B		250H	
7167.0	0515-0555/	2	7	RUS		F1B		250H	
7169.0	0820-	2	7	RUS		F1B		250H	
7169.0	0530-1520	*	7	RUS	K7TO etc	A1A	18	20H	5F, *) Days: 1. 15. 22. 23. 25.
7170.0	0500-1705	*	7	RUS		F1B		200H	*) Days. 21. - 25.
7171.0	0730-0800	2 9	7	RUS		J7D	120	2k60E	
7179.0	1315-1610	1 2	7	RUS		J7D	120	2k60E	
7180.0	0430-0530		7	ERI		A3E		9k0	Not heard
7180.0	1630-1835/	*	7	ERI		A3E		9k0	*) Days: 1. 3. 6. 17. 22. 23. 24. 31.
7186.0	1200-1225/	27	7	RUS		J7D	120	2k60E	Carrier on 7184 kHz
7197.0	0500-1800	4 5 6	7	RUS		J7D	120	2k60E	
7200.0	0615-0630	7	7			J7D	120	2k60E	
10 MHz	0500-1345	6 25	7	CYP		RADAR	50sps	20k0	(WebSDR 3d)
10 MHz	1520-1800	*	7	RUS		RADAR	40sps	13k0E	*) Days: 6. 11. 14. 18. 20. 26. (WebSDR 6d) Kontainer
14 MHz	0345-1800	*	7	RUS		RADAR	40sps	13k0E	*) Days: 2. 8. 9. - 11. 14. 15. 18. - 21. 24. 25. 28. 31. (WebSDR 19d) Kontainer
14 MHz	1100-1810	*	7	RUS		RADAR	10sps	10k0E	*) Days: 1. 2. 3. 6. - 11. 14. 15. 19. 21. 24. 25. 28. 31.
14 MHz	0500-1800	*	7	CHN		RADAR	50/67sps	10k0E	*) Days: 1. 2. 9. 10. 12. 13. 15. 16. 17. 19. 20. 22. 25. 26. 'foghorn'

SRAL; Pekka, OH2BLU									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/BW	DETAILS
14 MHz	0700-1500	*	7	CHN		RADAR	10sps	160k0	*) Days: 1. 7. 15. 28.
14000.0	/1357-1457/	dly	7	CHN	CRI	A3E		9k0	TX intermod. 13710 & 13855 kHz
14008.0	0500-1005/	*	7	RUS		F1B/ NON		250H	*) Days: 7. 8. 14. 18. 19. 26. 29.
14108.0	0815-1235	*	7	RUS	S3CL etc	A1A		20H	*) Days. 4. 14. 15.
14118.0	1110-	18	7	RUS		A1A		20H	
14210.0	0500-1730	dly	7			RADAR	10sps	5k0E	SuperDARN
14221.0	0500-0600/	dly	7	KAZ		F1B		200H	
14258.0	0520-1500	2	7	RUS		F1B/ NON		200H	ERP > 400W
14292.0	0815-1110	20	7	RUS	2K0K	A1A		20H	ERP > 400W
18 MHz	0515-1400	*	7	CYP		RADAR	25/50sps	20k0	*) Days: 11. 13. 15. 19. 25. 30. (WebSDR 8d)
18 MHz	0540-1245	*	7	RUS		RADAR	40sps	13k0E	*) Days: 23. 27. 30. 31. (WebSDR 1d)
18080.0	0600-0800	*	7	TWN		A3E		9k0	*) Days: 7. 8. 10. 11. 17. 20. 23. 24. 28. jammed by CNR
21 MHz	0515-1420	*	7	CYP		RADAR	25/50sps	20k0	*) Days: 1. 2. 3. 4. 6. 8. 9.14. 23. 30. (WebSDR 14d)
21 MHz	0545-1245	*	7	RUS		RADAR	40	13k0E	*) Days: 7. 16. 30. 31.
21438.0	/0830-1600	*	7	RUS	RCV	A1A	20	20H	*) Days: 1. 2. 7. 8. 13. 14. 15. 17. - 21. 23. - 31.
28 MHz	0500-1800	*	7	IRN		RADAR	150/ 313	60k0E	*) Days: 2. 4. 5. 6. 7. 8. 9. 14. 21. 24. 25. 26.
28860.0	0500-1830	*	7	IRN		RADAR	150/ 313	60k0E	*) Days: 1. - 9. 12. - 28. 30. 31.
28 MHz	0500-1800	*	7	RUS	Taxi disp.	F3E		3k0E	*) Days: 5. 6. 7. 13. - 16. 20. 24. 27. 87 reports

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	Ident	Mode	Bd/sps	SH/BW	Details
7055.0	1955	26	07			J3E-L			UKR / RUS radiowar
7066.0	0736	26	07			F1B		200H	
7101.7	1758	09	07			F1B	75	850H	STANAG 4481 FSK 850 Hz
7159.0	0556	27	07			B7D		6K0E	
7197.0	0728	06	07			J7D		2K70E	Submode Idle
13997.0	0635 vt*	12 vd*	07	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 15/07, 0710 UTC
13997.0	0710	15	07	RUS		RADAR	40	12K0E	OTHR Contayner
13999.0	0639	16	07	RUS		RADAR	40	12K0E	OTHR Contayner
14001.5	0624 vt	22 vd	07			OTHER	2400	2K40E	ISR Navy hybrid modem
14008.0	0808 vt*	07 vd*	07	RUS		F1B	50	250H	*Often
14061.5	2031	12	07			J7D	120	2K70E	
14066.0	0657	17	07	RUS		RADAR	40	12K0E	OTHR Contayner

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	Ident	Mode	Bd/sps	SH/BW	Details
14070.0	1400 vt*	08 vd*	07	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 09/07, 0655 UTC
14074.0	0826	01	07	RUS		F1B		250H	
14091.0	0620	28	07	RUS		RADAR	40	12K0E	OTHR Contayner
14098.0	0745	07	07	RUS		J7D	120	2K70E	CIS-12. Long-lasting. *Also on 08/07, 12/07 and 15/07
14098.4	0633 vt*	08 vd*	07			F1B	600	600H	DPRK-FSK 600 ARQ *Often
14098.4	0633 vt*	08 vd*	07			XXX		1K20E	DPRK 1200 *Often
14099.0	0715	26	07	RUS		RADAR	40	12K0E	OTHR Contayner
14103.5	0635 vt*	08 vd*	07			F1B	600	600H	DPRK-FSK 600 ARQ. *Often
14103.4	0647 vt*	15 vd*	07			XXX		1K20E	DPRK 1200. *Often
14108.0	0812 vt*	02 vd*	07	RUS	CXTD - J4T9 - 6WNL - 4BKX - FV8N	A1A			Encrypted QTC. Numbers and letters. *Often
14109.0	1117	14	07	RUS		RADAR	40	12K0E	OTHR Contayner
14112.0	0937	13	07			J7D	120	2K70E	
14113.0	0556	15	07	RUS		RADAR	40	12K0E	OTHR Contayner
14113.5	0739	01	07			F1B	600	1K20E	DPRK 1200 ARQ
14118.0	0709	17	07			J7D	120	2K70E	
14120.1	0724	15	07			A1A			Non amateur CW traffic: numbers and letters
14122.0	1230	15	07	RUS		RADAR	40	12K0E	OTHR Contayner
14123.0	1222	27	07	RUS		RADAR	40	12K0E	OTHR Contayner
14128.0	0756	07	07	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14140.0	0926	02	07	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14146.0	0907	02	07	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14147.5	0727	13	07			W7D		2K80E	CIS-60
14149.0	0834	09	07	RUS		RADAR	40	12K0E	OTHR Contayner
14149.0	0807	14	07			W7D		2K80E	CIS-60
14157.0	2019 vt*	07 vd*	07	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 09/07, 13:37 UTC
14169.0	0739	26	07			F1B	50	200H	
14171.0	0720	06	07			J7D		2K70E	Submode Idle. Just QRT
14179.0	1953	26	07	RUS		RADAR	40	12K0E	OTHR Contayner
14188.0	1552 vt*	02 vd*	07	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 21/07, 08:50 UTC
14189.0	0708	26	07	RUS		RADAR	40	12K0E	OTHR Contayner
14191.0	0708	15	07	RUS		RADAR	40	12K0E	OTHR Contayner
14198.5	0635	28	07			F1B	600	600H	DPRK-FSK 600 ARQ
14198.5	0638 vt*	16 vd*	07			XXX		1K20E	DPRK 1200. *Often
14204.0	0903	02	07	CHN		RADAR	50	10K0E	OTHR
14210.0	0732 vt*	01 vd*	07			RADAR		CA4K50E	SuperDARN – like radar. *Daily
14221.0	2033	12	07	KAZ		F1B	50	200H	
14239.0	0739	02	07	CHN		RADAR	50	10K0E	Short bursts. Foghorn
14240.0	0759	07	07	CHN		RADAR	50	10K0E	Short burst. Foghorn
14242.0	0758	10	07			J7D	120	2K70E	CIS-12

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	Ident	Mode	Bd/sps	SH/BW	Details
14253.0	1828	09	07			J7D		2K70E	CIS-12. Submode Idle
14257.9	0810	02	07			NON			Most probably from 14258 KhZ F1B 500 Hz system
14271.0	0722	10	07	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14279.0	1424	31	07	RUS		RADAR	40	12K0E	OTHR Contayner
14287.0	0909	02	07	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14291.0	0807	02	07	CHN		RADAR	50	10K0E	Short bursts. Foghorn
14298.4	1231 vt*	23 vd*	07			F1B	600	600H	DPRK-FSK 600 ARQ *Often
14298.5	0804 vt*	03 vd*	07			XXX		1K20E	DPRK 1200. *Often
14301.0	0702	03	07	CHN		RADAR	50	10K0E	Short bursts. Foghorn. *Also on 07/07, 08:00 UTC
14301.9	0900 vt*	07 vd*	07			W7D		2K80E	CIS-60. *Also on 21/07, 08:30 UTC
14305.0	1612	27	07	CHN		RADAR	50	10K0E	Short bursts. Foghorn
14323.0	1607	02	07	CHN		RADAR	50	10K0E	Short bursts. Foghorn
14339.0	0911	02	07	CHN		RADAR	61.9	10K0E	Short bursts. Foghorn
14340.0	1625	30	07	CHN		RADAR	10	160K0E	Wideband OTHR
14345.0	1604	02	07	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
18080.0	0741	02	07			A3E			A3E. BC Sound of Hope
18098.0	1111	03	07			F1B	600	600H	DPRK-FSK 600 ARQ
18149.4	1212	22	07			F1B	600	600H	DPRK-FSK 600 ARQ
18164.0	1616	30	07	RUS		RADAR	40	12K0E	OTHR Contayner
18168.0	0652	27	07	RUS		RADAR	40	12K0E	OTHR Contayner
18170.0	0659 vt*	09 vd*	07	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus. *Also on 23/07, 13:25 UTC.
18175.0	0642	16	07	G		RADAR	25	40K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21000.0	0923	02	07			J3E-U			Spanish fishers
21051.0	0918	26	07	RUS		RADAR	40	12K0E	OTHR Contayner
21055.0	0823	26	07	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21060.0	1201 vt*	03 vd*	07			J3E-L			Words repeated like chants. Male voice. UI lang. *Often
21115.0	0730	15	07	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21121.0	0745	15	07			J3E-U			Spanish fishers
21135.0	0807	06	07	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus (QRT: 1006 UTC)
21150.0	0806	10	07	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21170.0	0712	15	07	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus. *Also on 23/07, 13:22 UTC
21185.0	1621 vt*	30 vd*	07			RADAR	40	12K0E	OTHR Contayner. *Often
21190.0	1220	22	07	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21270.0	0907	17	07	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21310.0	0750	10	07	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	Ident	Mode	Bd/sps	SH/BW	Details
21335.0	0911	26	07	G		RADAR	50	20K0E	OTHR Pluto. UK sovereign Base Area of Akrotiri, Cyprus
21350.0	0805	09	07	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21389.0	0725	09	07	RUS		RADAR	40	12K0E	OTHR Contayner
21438.0	0832 vt*	09 vd*	07	RUS	RCV	A1A			"RCV" QTC. *Often
28015.9	1634	09	07		NA	A1A			Fishing buoy
28020.3	1711	06	07		MTI	A1A			Fishing buoy
28021.2	1551	07	07		CL	A1A			Fishing buoy
28025.3	1549	09	07		LAU	A1A			Fishing buoy
28036.5	1647	06	07		BQ	A1A			Fishing buoy
28039.9	1545	07	07		CF	A1A			Fishing buoy
28049.0	1643	06	07			F1B		CA300H	Fishing buoy
28051.5	1649	06	07		AH	A1A			Fishing buoy
28055.2	0735	07	07		COM	A1A			Fishing buoy
28065.1	1708	06	07			F1B		CA300H	Fishing buoy
28085.0	1645	06	07			F1B		CA300H	Fishing buoy
28104.3	0742	07	07		EE	A1A			Fishing buoy
28111.4	1605	09	07		BN	A1A			Fishing buoy
28119.8	1559	07	07		EB	A1A			Fishing buoy
28121.5	1554	07	07		BN	A1A			Fishing buoy
28134.9	0731	08	07		DK	A1A			Fishing buoy
28139.7	1743	06	07		AC	A1A			Fishing buoy
28141.4	1556	07	07		DO	A1A			Fishing buoy
28153.8	1717	06	07		FO	A1A			Fishing buoy
28161.6	0732	07	07		A	A1A			Fishing buoy
28179.6	0707	08	07		FN	A1A			Fishing buoy
28181.7	0750	07	07		LU	A1A			Fishing buoy
28189.5	0828	07	07		AY	A1A			Fishing buoy
28189.6	0833	07	07		FA	A1A			Fishing buoy
28189.8	0830	07	07		X	A1A			Fishing buoy
28209.4	0752	07	07		DP	A1A			Fishing buoy
28209.4	0753	07	07		FE	A1A			Fishing buoy
28241.3	0746	08	07		CT	A1A			Fishing buoy
28249.8	1659	06	07		AC	A1A			Fishing buoy
28275.0	1723	06	07			F1B		CA300H	Fishing buoy
28284.8	1639	07	07		CA	A1A		CA	Fishing buoy
28285.0	1655	09	07		EI	A1A			Fishing buoy
28286.7	0730	07	07		BQ	A1A			Fishing buoy
28292.0	0815	07	07		LC	A1A			Fishing buoy
28299.3	0841	07	07		FK	A1A			Fishing buoy
28299.3	0851	07	07		FR	A1A			Fishing buoy
28321.4	0844	07	07		DF	A1A			Fishing buoy
28330.0	0819	07	07		MOR	A1A			Fishing buoy
28359.6	1800	06	07		FK	A1A			Fishing buoy
28366.4	0846	07	07		BQ	A1N			Fishing buoy
28395.5	1701	09	07		MRT	A1A			Fishing buoy
28409.9	0856	07	07		IRT	A1A			Fishing buoy
28421.5	0858	07	07		CL	A1A			Fishing buoy
28439.9	0854	07	07		EH	A1A			Fishing buoy
28550.0	1009	13	07	IRN		RADAR	150 313	CA45K0E	OTHR. 150 and 313 sps alternating. QSY every 4 minutes

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	Ident	Mode	Bd/sps	SH/BW	Details
28670.0	0711	09	07	IRN		RADAR	150 313	CA45K0E	OTHR. 150 and 313 sps, alternating. QSY every 4 minutes
28860.0	0730 vt*	01 vd*	07	IRN		RADAR	150 313	CA45K0E	OTHR. 150 and 313 sps, alternating. *Almost daily
29040.0	0755	02	07	IRN		RADAR	150 313	CA45K0E	OTHR, 150 and 313 sps, alternating. QSY every 4 minutes

USKA; Peter, HB9CET									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
7000.0	2141	19	07			FMOP	ca 33 sps	ca 45k0E	OTHR; partially in 40m band
7000.0	1001	26	07			A1A		ca 10H	encrypted, numbers only
7025.0	1617	23	07			F1B		200H	
7048.5	1314	26	07			A1A		ca 10H	encrypted, letters and figures
7054.0	1615	20	07			F1B	50 Bd	200H	weak, fading (strong via rx in JA)
7057.0	2248	13	07			FMOP	40 sps	12k0E	OTHR; Contayner
7058.0	1031	28	07			F1B		250H	
7060.0	0908	28	07			J7D	12x120 Bd	2k70E	CIS12; idling; submode idling
7065.9	2046 2204	26 30	07			N0N		ca 10H	long lasting carrier often
7066.0	2101	26	07			F1A		200H	sometimes also F1B often
7068.0	1411	15	07			J7D	12x120 Bd	2k70E	CIS12; idling; QRT 1414z often
7072.0	1503	23	07			F1B	75 Bd	200H	some fading
7074.0	1645	23	07			J7D	12x120 Bd	2k70E	CIS12; submode idling
7088.0	2229	23	07			F1B	75 Bd	250H	often
7088.0	2210	31	07			F1B	75 Bd	200H	
7101.0	2142	13	07			FMOP	40 sps	12k0E	OTHR; Contayner
7101.7	1724	09	07			F1B	75 Bd	850H	STANAG 4481-FSK
7108.0	2240	15	07			FMOP	40 sps	12k0E	OTHR; Contayner
7108.0 LSB	vt	20	07			G1D PSK-8	1800 Bd	1k80E	PSK-8 single tone Signal, not analysed extremely weak
7111.0 LSB	1155 2151	06 30	07	CHN		G7D PSK-4	30x60 Bd	ca 2k50E	CHN30 (PRC30); Burst system; tone spacing 75 Hz; Preamble 4x PSK4 60Bd, spacing 600Hz; Pilot tone at 450Hz often
7128.0	1351	27	07			J7D	12x120 Bd	2k70E	CIS12; submode idling
7140.0	1549	23	07	ERI	VOBM 1	A3E		ca 9k0E	BC: Voice of broad Masses 1 often
7140.5	1124	27	07			J7D	12x120 Bd	2k70E	CIS12; submode idling
7154.0	2211	29	07			F1B		200H	weak, (S1-2) fading; strong via JA
7154.0 LSB	0936	30	07	CHN		G7D PSK-4	30x60 Bd	ca 2k50E	CHN30 (PRC30); Burst system; tone spacing 75 Hz; Preamble 4x PSK4 60Bd, spacing 600Hz; Pilot tone at 450Hz
7157.0 USB	0935	18	07			G1D PSK-8	1800 Bd	ca 2k0E	ca 7158.7 CF; very weak, fading often
7159.0 LSB	2257	24	07			G7D DQPSK	75 Bd	ca 2k50E	LINK11 CLEW SSB mode; 16 tones
7159.0	0612 1202	27 31	07			G7D DQPSK	75 Bd	ca 6k0E	LINK11 CLEW DSB mode; 2x 16 tones
7160.0	0746	01	07	RUS		J7D	12x120 Bd	2k70E	CIS12; submode idle
7169.0	1541	23	07			A1A		ca 10J	CW, encrypted, numbers only
7169.0	0743	26	07			F1B		200H	

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kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
7170.0	2212 1522	22 23	07			F1B	75 Bd	200H	CIS often
7171.0 LSB	1159	06	07	CHN		G7D PSK-4	30x60 Bd	ca 2k50E	CHN30 (PRC30); Burst system; tone spacing 75 Hz; Preamble 4x PSK4 60Bd, spacing 600Hz; Pilot tone at 450Hz often
7176.0	2046 2133	18 19	07	RUS		J7D	12x120 Bd	2k70E	CIS12 often
7180.0	1552	23	07	ERI	VOBM2	A3E		ca. 9k0E	BC: Voice of broad Masses 2, often
7186.0 LSB	1711	31	07	CHN		G7D PSK-4	30x60 Bd	ca 2k50E	CHN30 (PRC30); Burst system; tone spacing 75 Hz; Preamble 4x PSK4 60Bd, spacing 600Hz; Pilot tone at 450Hz
7186.0	1153	27	07			J7D	12x120 Bd	2k70E	CIS12; BPSK or QPSK, with carrier at 7184 kHz; pilot at 3300Hz
7197.0	1058	06	07			J7D	12x120 Bd	2k70E	CIS12; BPSK or QPSK, pilot at 3300Hz submode idle; long lasting
7205.0	2155 2130	19 29	07		RFI	A3E		*ca 12k	BC; *)splattering down to 7186 kHz RFI in French; daily!
14000.0	1410 1453 1437	14 23 28	07	CHN?	CRI?	A3E		ca 9k0E	BC: China Radio International - inter-modulation of 13855 and 13710 kHz: 13855 x 2 -13710 = 14000 kHz
14001.5	0714 0712	20 26	07		ISR?	G1D PSK8	2400	ca 2k50E	MIL188-110A mod (Hybrid); Preamble 4 (6) tones, PSK4 75Bd 450Hz spacing (as per DK2OM: ISR NAVY)
14008.0	1434 0912	08 29	07	RUS		F1B	50 Bd	250H	often
14070.0	1432	08	07			FMOP	40 sps	12k0E	OTHR; Contayner
14074.0	0750	01	07			F1B		250H	
14098.0	1527 1519	07 15	07			J7D	12x120 Bd	2k70E	CIS12; BPSK or QPSK often
14098.5	1416 1344	13 26	07			F1B/ARQ	600 Bd	600H	DPRK 600/600: ARQ system
14099.0	0722	26	07			FMOP	40 sps	12k0E	OTHR; Contayner
14100.0	1321	27	07			unid		ca 2k70	unid digital signal
14108.0	0944 0814	13 26	07			A1A		ca 10H	CW, encrypted often
14112.0	0941	13	07			J7D	12x120 Bd	2k70E	CIS12; BPSK or QPSK
14118.0	0754	17	07			FMOP	40 sps	12k0E	OTHR; Contayner often
14123.0	1222	27	07			FMOP	40 sps	12k0E	OTHR; Contayner
14146.0	2126	29	07			FMOP	40 sps	12k0E	OTHR; Contayner
14161.0	0856	29	07			FMOP	40 sps	12k0E	OTHR; Contayner
14189.0	0712	26	07			FMOP	40 sps	12k0E	OTHR; Contayner often
14204.0	0908	03	07			FMOP	40 sps	12k0E	OTHR; Contayner
14210.0	1013	26	07			Radar	10 sps	ca 4k50E	SuperDarn Radar?, long lasting
14221.0	2100	09	07			F1B		200H	long lasting; almost daily
14237.0	1442	07	07			OTHR	10 sps	160k0E	Wideband OTHR
14279.0	1634	31	07			FMOP	40 sps	12k0E	OTHR; Contayner; long lasting
14298.5	1240 1244	22 30	07			ARQ	600 Bd 1200Bd	600H 1200H	DPRK: ARQ system FSK and PSK mode
14301.9	0937	21	07			OFDM60	30Bd	2k90E	with pilottone, tone spacing 44.1Hz
18148.0	0903	28	07			FMOP	50 sps	10k0E	OTHR; Bursts
18164.0	1307	30	07			FMOP	40 sps	12k0E	OTHR; Contayner
18166.5	1649	29	07			A3E		ca 9k0E	BC; unid language, sounds Arabic
18172.0	1013	28	07			FMOP	40 sps	12k0E	OTHR; Contayner; partially in 17m band
21055.0	0836	26	07			FMCW	50 sps	ca 20k0E	OTHR; (most probably UK-base Cyprus)

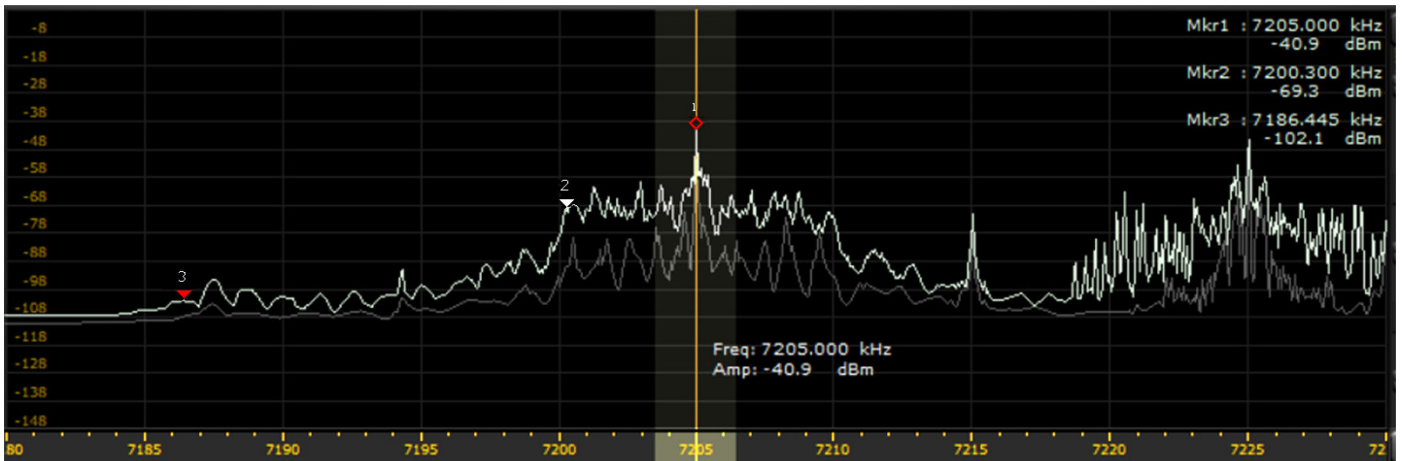
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kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
21185.0	1047	30	07			FMOP	40 sps	12k0E	OTHR; Contayner
21190.0	1220	22	07			FMCW	50 sps	ca 20k0E	OTHR; (most probably UK-base Cyprus)
21190.0	0925	29	07			FMCW	25 sps	ca 20k0E	OTHR; (most probably UK-base Cyprus)
21270.0	0903	02	07			FMCW	50 sps	ca 20k0E	OTHR (most probably UK-base Cyprus)
21380.0	1016	02	07			FMCW	50 sps	ca 20k0E	OTHR (most probably UK-base Cyprus)
21395.0	1035	30	07			FMCW	50 sps	ca 20k0E	OTHR (most probably UK-base Cyprus)
21438.0	0851 1242	08 28	07		RCV	A1A		10H	TDoA: Area of Sevastopol daily
28004.96	1436	13	07			A1A		10H	Fishing buoy
28015.96	1424	13	07		II	A1A		10H	Fishing buoy
28025.26	1909	09	07		LAU	A1A		10H	Fishing buoy
28025.26	1428	13	07		LAU	A1A		10H	Fishing buoy
28036.53	0824	02	07		CY	A1A		10H	Fishing buoy
28139.649	1649	09	07		AC	A1A		10H	Fishing buoy
28161.571	1219	09	07		A	A1A		10H	Fishing buoy
28214.79	1522	08	07			A3E		ca 2k10E	probably Fishing
28275.0	1017	08	07			F3E			Female voice; only short sequences, RUS Taxi?
28275.0	1539	30	07			F1B	51	ca 300H	short FSK bursts (4s), probably ENAGAL Fishing buoy
28291.89	1920	09	07		LC	A1A		10H	Fishing buoy
28329.95	1938	09	07		MOR	A1A		10H	Fishing buoy
28366.41	1953	09	07		HL	A1A		10H	Fishing buoy
28395.51	1942	09	07		MTE	A1A		10H	Fishing buoy
28409.943	1549	06	07		IRT	A1A		10H	Fishing buoy
28501.0	1447	28	07	IRN		?	150 + 313 sps	ca 45k	OTHR, Bursts; long lasting, sweep rate alternating
28860.0	1010	08	07	IRN		?	150 + 313 sps	ca 45k	OTHR, Bursts; long lasting, sweep rate alternating almost daily

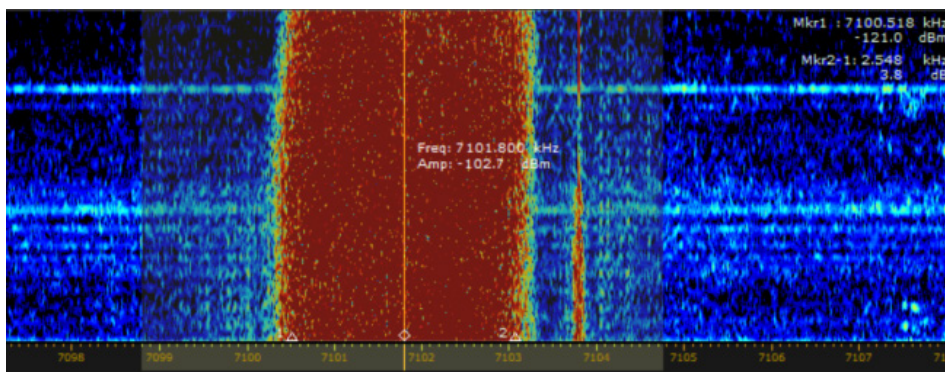
VERON: Ruud PG1R, Credits to observers Dick PA0GRU, Joeke PA0VDV, Kees PA2CHM, Arie PA3CNK, Rene PA3EQO

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3608.0	2043	18	07			F1B		250H	UiPrinter
7055.0	1031	18	07	UKR/RUS		J3E-L			No calls; comments; "radiowar"
7066.0	1044	10	07			F1B		250H	UiPtr
7088.0	2142	13	07			F1B		250H	UiPtr
7169.95	2018	24	07			F1B		200H	UiPrinter
10108.0	1010	15	07	CIS		F1B			Revs/UiPtr
10130.0	1000	06	07	CIS		F1B			Revs/UiPtr
10145.0	1010	02	07	CIS		F1B			Revs/UiPtr
14008.0	0957	08	07	CIS		F1B			Carrier/Revs/UiPtr
14008.0	1006	15	07	CIS		F1B			Carrier/Revs/UiPtr
14008.0	0926	25	07			F1B			
14108.0	1021	06	07		UiCW	A1A			5BL ending 429 K
14108.0	1035	08	07	CIS	BKIC	A1A			Calls to D7Xg NEK8 Y3PM C4P2
14108.0	1016	13	07	CIS	JT1F	A1A			GJYT de JT1F QTC 659 48 13 1310 659 = 095 = MMMMM 5BL
14307.0	0958	06	07			F1B			Revs/UiPtr
21436.0	1033	02	07			F1B			Revs/UiPtr
21436.0	0916	23	07			F1B			Revs/UiPtr

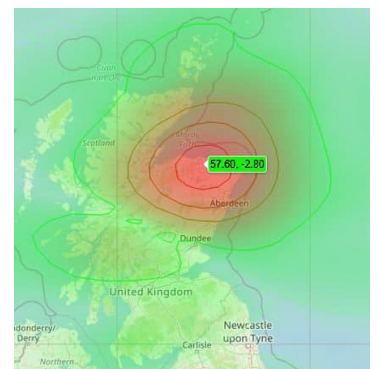
Some Screenshots:



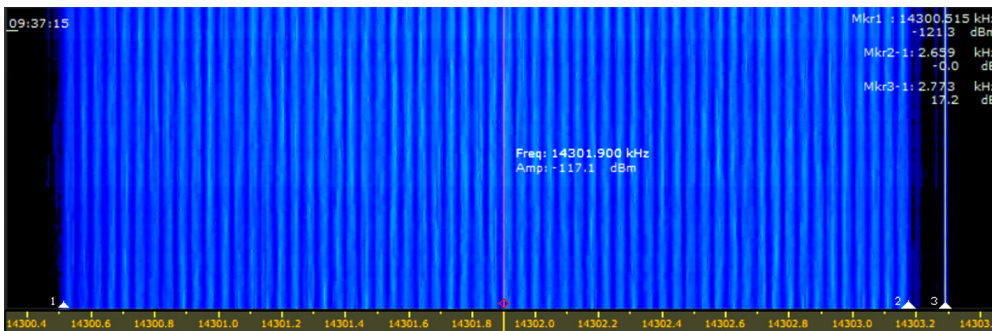
BC: RFI, Radio France International, splattering down to ca 7186 kHz; Every evening between 2100 - 2200 UTC



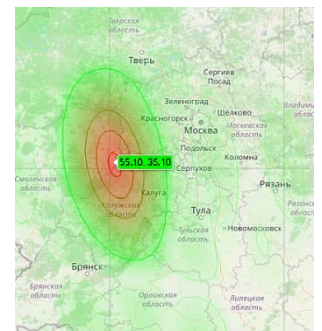
7101.8 kHz: STANAG 4285, PSK8 2400Bd BW 2400Hz



TDoA, NE of Scotland (© DK2OM)



14301.9 kHz: OFDM 60 with Pilottone



TDoA, SW of Moscow (© DK2OM)

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