

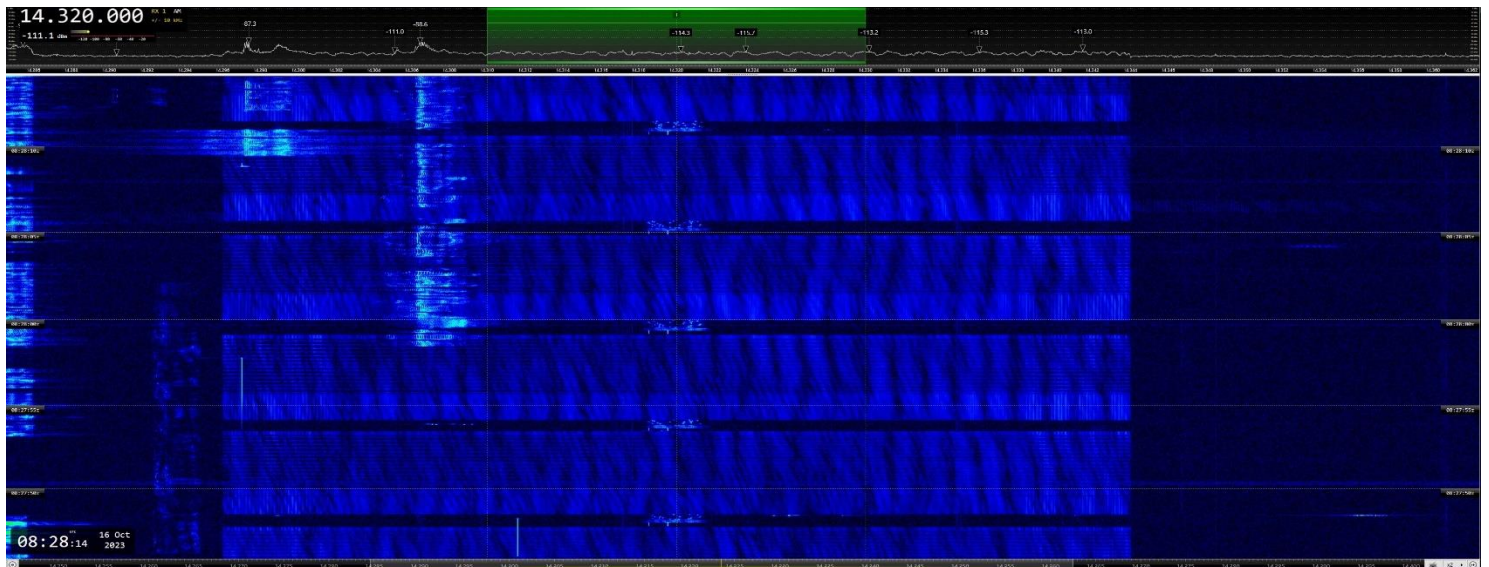
# IARU Monitoring System Region 1



Monthly Newsletter - October 2023

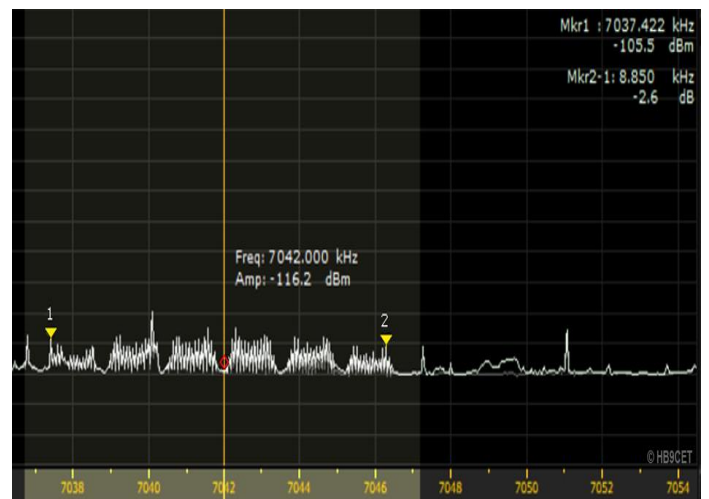
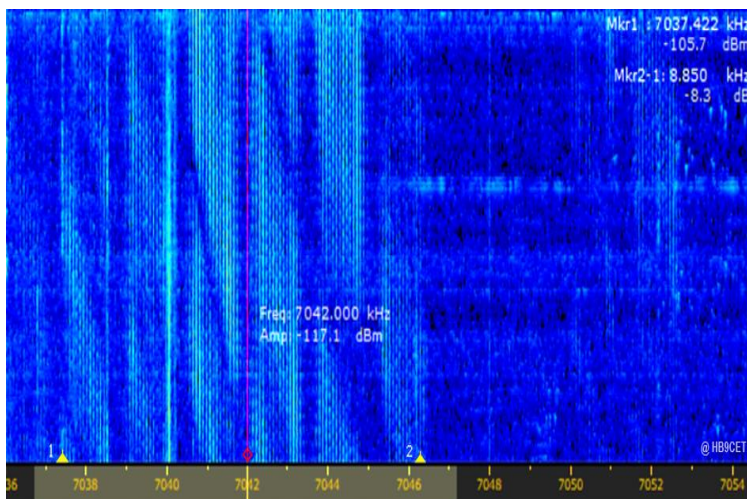
## News and info

During the month of October, we observed an unknown digital signal that we had never received before. It was transmitted on two occasions in the 20-meter band, on 14320 kHz CF, using different bandwidths. In the first instance, on October the 13<sup>th</sup>, it used a bandwidth of 12 kHz, and in the second (October the 16<sup>th</sup>. Screenshot below), 48 kHz. On both times, the transmission included the same short intro tones.



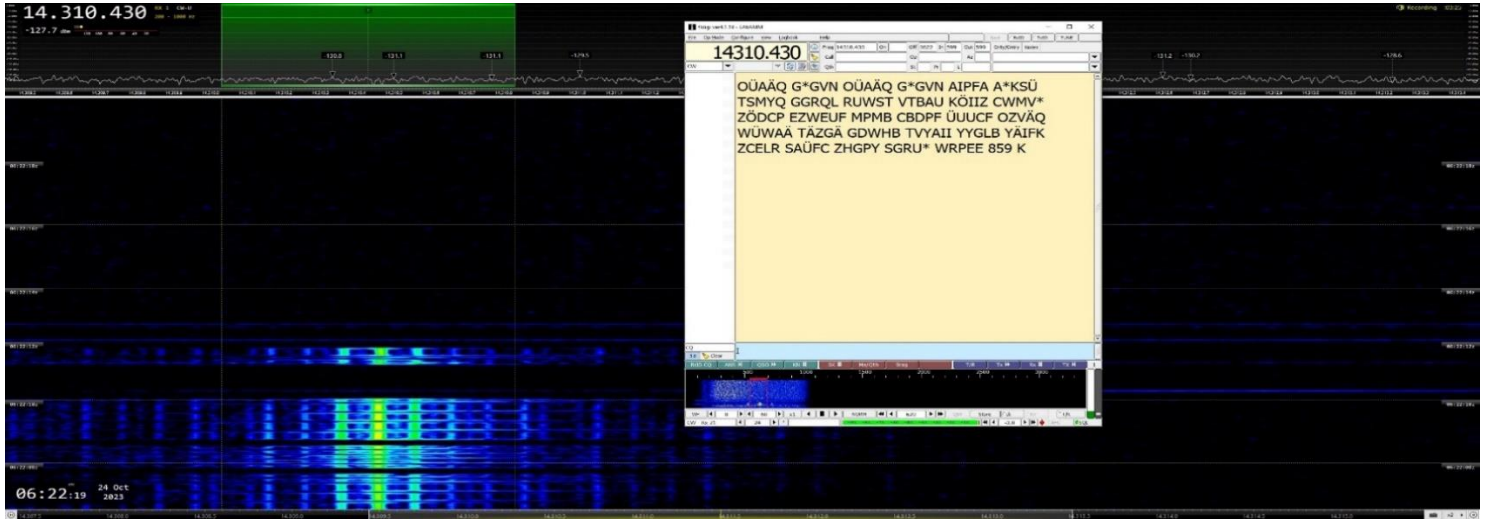
14320 kHz CF: XXX. Unknown digital signal with short into tones

We also received almost daily an unknown signal on 7042 kHz CF that could also be observed sometimes on 7168 kHz CF with a bandwidth of 10 kHz, most likely used as a jammer.



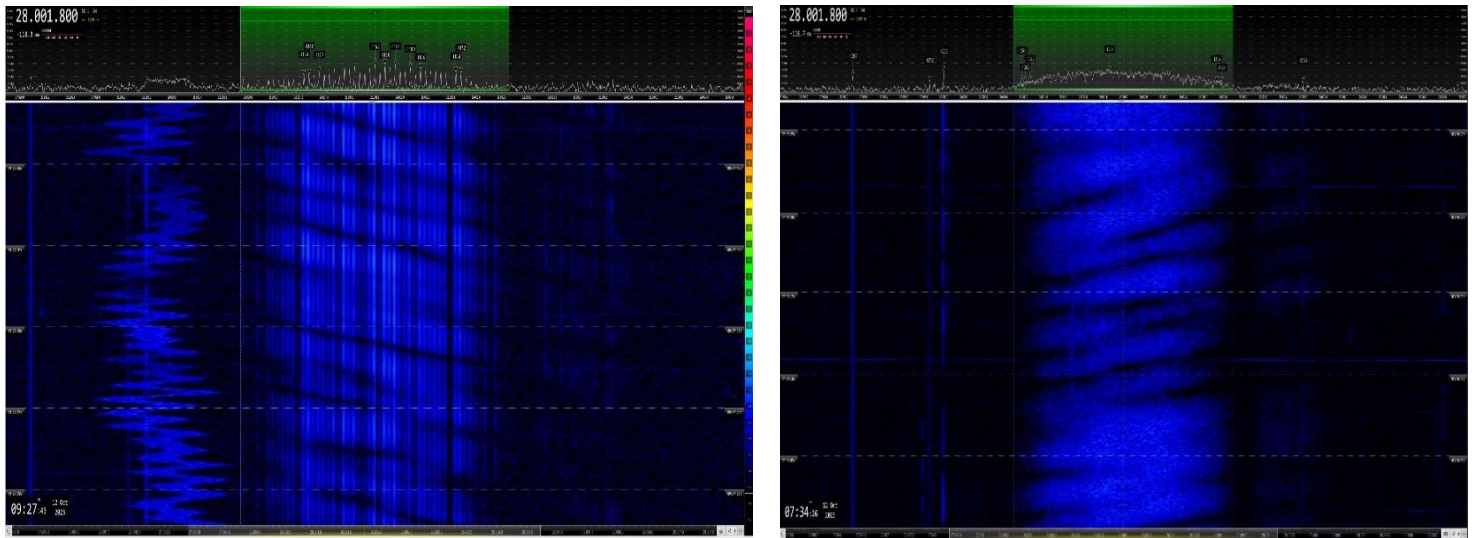
7042 kHz CF: XXX. BW ca 10K0E. Most probably, jammer (Screenshots by Peter, HB9CET)

We often received non-amateur CW (A1A) transmissions on 14310.43 kHz sending encrypted QTC consisting on several groups of 5 letters, using the Cyrillic CW alphabet. The transmissions were consistently unclear every time:



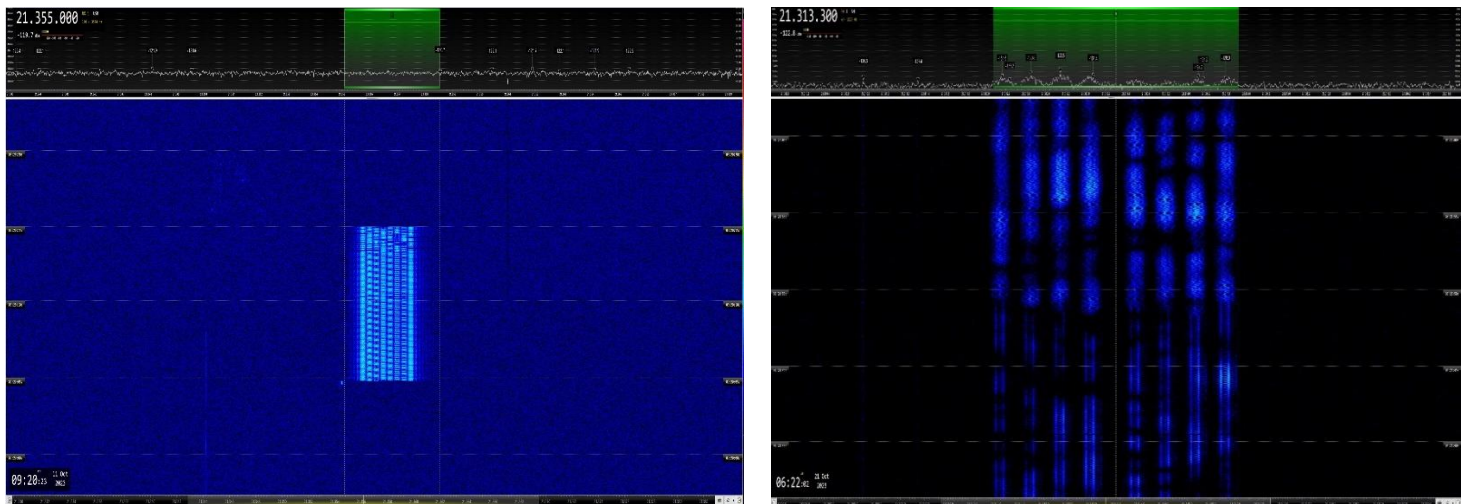
14310.43 kHz: Non amateur A1A (CW) comms. Encrypted QTC (grupus of 5 letters; Cyrillic CW alphabet used)

On the 10 meters band we observed a long lasting transmission of a RUS MIL system, T-230-1A, also known as “Mahovik”:



28001.8 kHz CF: RUS MIL T-230-1A, a.k.a „Mahovik“. PSK. BW = 1K20E. 1200 Bd. Right: Idle. Left: traffic.

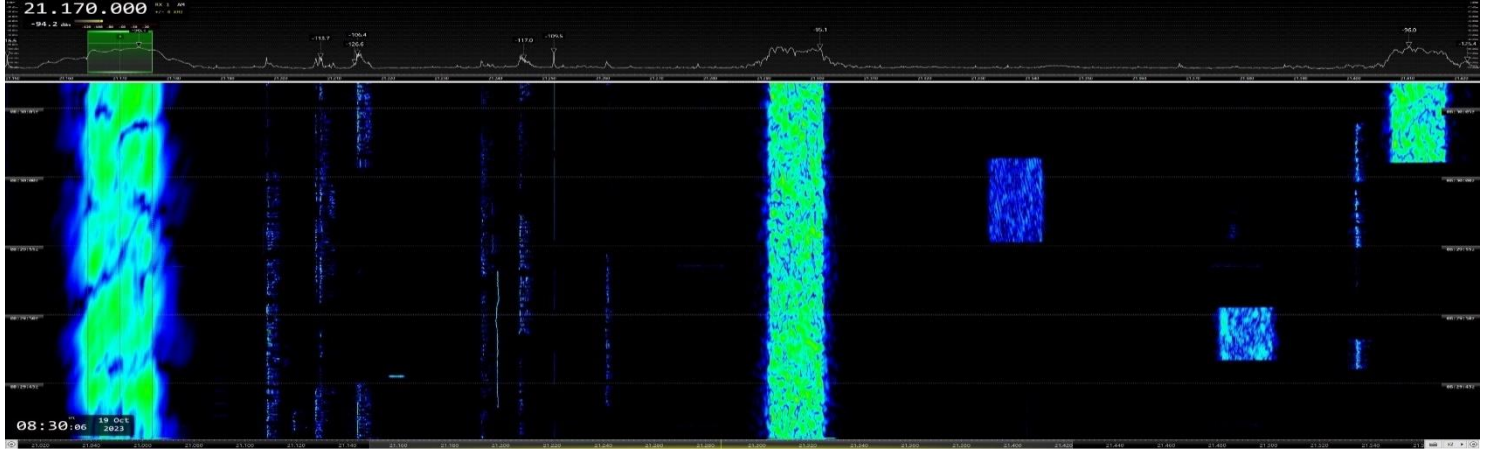
On 15 meters we received several CHN MIL transmissions:



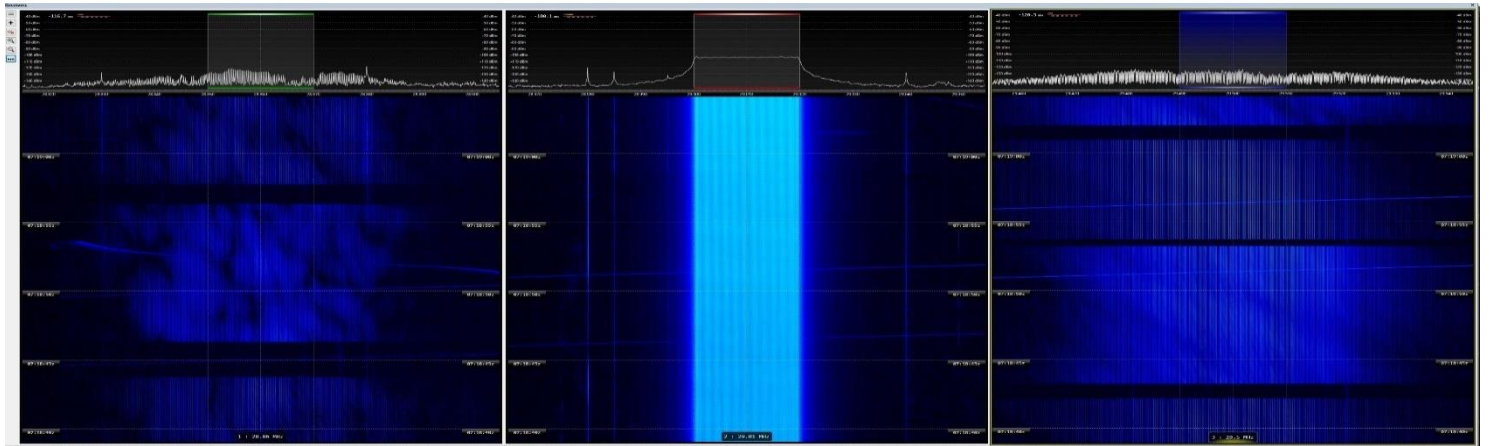
21355 kHz USB: MIL-188-141A ALE 2G. MFSK. BW = 1K75E. 125 Bd

21313.3 kHz CF: CHN 4+4. PSK. 8 x 75 Bd. BW = 2K40E

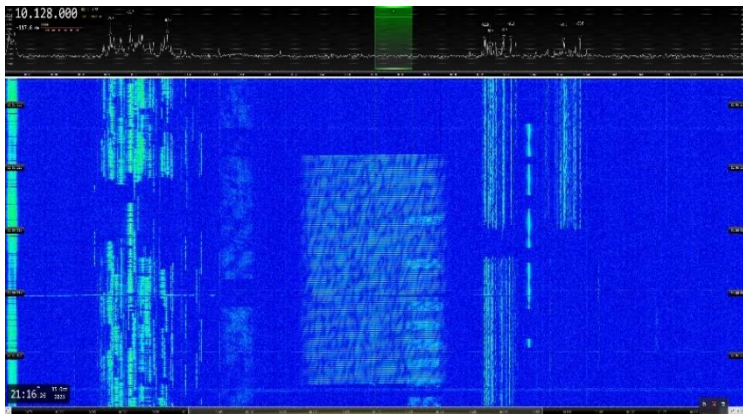
Regretably, these transmissions are only a few examples among all the unfortunately most usual intrusions we received during October, like different CIS-## FSK modes mostly on 40 and 20 m, CIS-12 transmissions in the same bands (J7D. BW = 2K70E. 12 x 120 bd), LINK-11 SLEW transmissions (G1D. BW = 2K40E. 2400 Bd) on 7089.8 kHz CF, DPRK FSK (SH = 600 H. 600 Bd) and PSK (BW = 1K20E) systems transmission on the 20 and 15 meters bands, the almost daily long-lasting transmissions on 18107 kHz CF of a CIS 36-50 (F1B and F1A. Sh = 200 Hz. Bd = 50=), lots of F3E (FM) short transmissions sent mostly by female operators speaking on a Slavic language (most likely, RUS Taxi) along with Cbers and pirates as well as fishing buoys on the 10 meters band, and also the most reported transmissions, sent by different Over The Horizon radars on all the HF amateur bands from 40 to 10 meters.



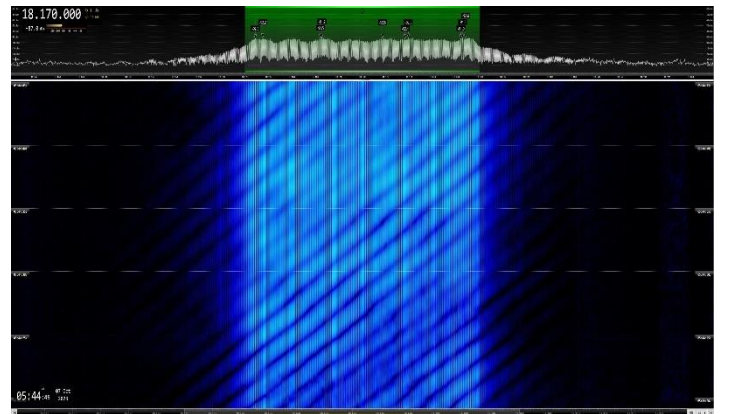
Over The Horizon radars in 15 meters. Right: RUS OTHR Contayner (BW = 12K0E. 40 sps) | Center: CHN OTHR (BW = 10K0E. 50 sps) | Right: 3 x CHN OTHR short bursts (BW = 10K0E. Most usual sps: 66.7 and 50, but also 41.7 and 83.3)



3 x OTHR simultaneous TX on the 10 m band. Left: OTHR IRN (BW 45K0E. Alternating 150 and 313 sps bursts | Center: OTHR G. UK SBA, Cyprus (BW = 20K0E. 25 sps) | Right: OTHR IRN. (BW = 45K0E. Alternating 307 and 870 sps bursts)



10128 kHz CF. OTHR JORN (AUS) bursts. (BW = 11K0E. 6.98 sps).



18170 kHz CF: OTHR G (UK SBA, Cyprus). BW = 20K0E.50 sps

- **Find other screenshots about the intrusions received during October at the end of this Newsletter** -

## Detailed reports of national coordinators

**Abbreviations used** (as per IARUMS definitions)

**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.

**DARC; Daniel, DL3RTL. Credit to monitors: DL2SCH, Jürgen; DL8LAQ, Norbert; F4FPR, Benjamin; DB4UP, Christoph; DE2TRF, Torsten; DL4YCD, Jürgen; DL5JP, John; DO1WPB, Willie; DF5JL, Tom; DK4NL, Manfred; DO2ITH, Michael; DB7JB, Karsten; DB3TA, Alex**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7000,0	vt	vd	10	RUS		PSK		2k7	CIS-12
7008,0	1928	23	10	RUS		FMOP	40	12k	OTHR Contayner
7011,0	1547	30	10	RUS		PSK		2k7	CIS-12 QRT 1615
7021,0	2055	02	10	RUS		FMOP	40	12k	OTHR Contayner
7055,0	2005	10	10	UKR		J3E-U		3k	RUS/UKR radio war
7058,0	2128	02	10	RUS		FMOP	40	12k	OTHR Contayner
7059,0	2152	30	10	RUS		FMOP	40	12k	OTHR Contayner
7063,0	1946	04	10	RUS		FMOP	40	12k	OTHR Contayner
7089,7	1623	18	10			PSK		2k4	LINK11 SLEW
7110,0	2200	02	10			J3E-L		3k	RUS/UKR radio war
7194,0	1900	04	10			F1B		500	CIS-81-81
7200,0	1455	28	10	BRM	Radio Myanmar	A3E		10k	Broadcast Station Radio Myanmar
14075,0	1800	07	10						unid on FT8 frequency
14148,0	1549	18	10	RUS		FMOP	40	12k	OTHR Contayner
14164,0	1818	26	10	RUS		FMOP	40	12k	OTHR Contayner
14180,0	1549	18	10	RUS		FMOP	40	12k	OTHR Contayner
14182,0	1710	09	10	UKR		J3E-U		3k	RUS/UKR radio war; TDoA West Ukraine
14185,0	1839	07	10	RUS		FMOP	40	12k	OTHR Contayner
14257,0	0807	03	10	RUS		FMOP	40	12k	OTHR Contayner
14292,0	0633	03	10			F1B		500	CIS-81-81
18107,0	ad	dly	10	RUS		F1B	50	200	CIS-36-50
21121,2	0900	03	10			J3E-U		2k7	intercom fisher or trucker language: moroccan arabic
21121,2	0759	25	10			J3E-U		2k7	intercom fisher or trucker language: moroccan arabic
21161,0	0633	03	10	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
21174,0	1431	15	10	RUS		FMOP	40	12k	OTHR Contayner
21175,0	1656	13	10	RUS		FMOP	40	12k	OTHR Contayner
21176,0	1559	07	10	RUS		FMOP	40	12k	OTHR Contayner
21215,0	1659	08	10	G		FMCW	50	20k	OTHR Pluto Cyprus
21219,0	0928	21	10	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
21310,0	1012	11	10	G		FMCW	50	20k	OTHR Pluto Cyprus
21325,0	1507	08	10	G		FMCW	25	20k	OTHR Pluto Cyprus
21333,0	1539	10	10	G		FMCW	50	20k	OTHR Pluto Cyprus
21347,0	0928	21	10	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
21355,0	0633	03	10	CHN		FMCW	50	10k	OTHR 5,1s bursts

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kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21355,0	1546	18	10	G		FMCW	50	20k	OTHR Pluto Cyprus
21384,0	0743	15	10	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
21393,0	1306	15	10	CHN		FMCW	41,67	10k	OTHR 6,1s bursts
21403,0	1712	06	10	RUS		FMOP	40	12k	OTHR Contayner
21408,0	1643	27	10	RUS		FMOP	40	12k	OTHR Contayner
21417,0	0908	15	10	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
21421,0	1040	15	10	RUS		FMOP	40	12k	OTHR Contayner
21436,0	0744	15	10	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
28000,0	1144	01	10	IRN			307/870	45k	Iranian OTHR 5,84/3,26s bursts
28000,0	1510	01	10	IRN			307/870	45k	Iranian OTHR 5,84/3,26s bursts
28010,2	1125	07	10			F1B	50	300	unident fishing buoy, weak signal
28105,0	1656	13	10	RUS		F3E		8k	RUS pirates
28250,0	1459	08	10	G		FMCW	25	20k	OTHR Pluto Cyprus
28265,0	vt	vd	10	RUS		F3E		8k	RUS pirates, suspect city authorities in St.Petersburg
28270,0	0842	29	10	G		FMCW	50	20k	OTHR Pluto Cyprus
28275,0	1043	10	10	RUS		F3E			RUS pirates
28275,0	0745	14	10	RUS		F3E		6k	RUS pirates
28370,0	0755	14	10	G		FMCW	50	20k	OTHR Pluto Cyprus
28560,0	0632	03	10	G		FMCW	50	20k	OTHR Pluto Cyprus
28860,0	vt	vd	10	IRN			150/313	45k	Iranian OTHR 9,98/7,19s bursts
29000,0	1240	14	10	G		FMCW	50	20k	OTHR Pluto Cyprus
29100,0	0641	29	10	G		FMCW	50	20k	OTHR Pluto Cyprus
29350,0	1311	21	10	IRN			150/313	45k	Iranian OTHR 9,98/7,19s bursts
29400,0	1308	21	10	IRN			150/313	45k	Iranian OTHR 9,98/7,19s bursts
29450,0	vt	vd	10	IRN				45k	Iranian OTHR
29480,0	1308	21	10	G		FMCW	50	20k	OTHR Pluto Cyprus
29500,0	1332	14	10	IRN			150/313	45k	Iranian OTHR 9,98/7,19s bursts

**IRTS; Michael, EI3GYB**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3717	1035	21	10	MM		USB			Japanese male voices chatting. Plenty of "dodo". Huge signals. Ship was probably not too far away from the Irish mainland.
7000	2020	17	10			PSK			Huge and persistent signal.
7050	2015	17	10	RUS/ UKR		LSB			Russian-Ukrainian radio war. Big signals.
7055	2220	28	10	RUS/ UKR		LSB			Russian-Ukrainian radio war. Daily all day long with huge signals.
7195	2205	28	10			RADAR			Radar from 7195 to 7225 kHz. Strong and persistent.
7200	1220	12	10	TWN		AM			National Unity Radio, Taipei. Medium signal. Getting stronger every day as we move into winter propagation.
14000	1358	2	10	CHN		AM			Mixing product of different frequencies from China Radio International. Daily with a weak to medium signal.
14191	1225	25	10	RUS		F1B			Russian navy, Kaliningrad. Medium signals,

**IRTS; Michael, EI3GYB**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
									almost daily.
14330	1220	25	10	CHN		RADAR			14330 to 14340 kHz. Chinese Foghorn. Strong and persistent.
14340	1250	24	10	CHN		RADAR			14340 to 14350 kHz. Chinese Foghorn. Medium to strong signal.
14345	1150	30	10	CHN		RADAR			14345 to 14355 kHz. Chinese Foghorn. Strong.
18154	1315	17	10	G		RADAR			Radar form 18154 to 18176 kHz. Huge and persistent. UK SBA, Cyprus.
21000	1210	9	10	E or MM		USB			Spanish fishermen chatting. Weak signals.
21142	1410	19	10	G		RADAR			Radar from 21142 to 21172 kHz. Huge and persistent signals. UK SBA, Cyprus.
21250	915	31	10	G		RADAR			Radar from 21250 to 21280 kHz. Medium and persistent signals. UK SBA, Cyprus.
21315	1310	27	10	G		RADAR			Radar from 21315 to 21335 kHz. UK SBA, Cyprus.
21415	1620	23	10	G		RADAR			Radar from 21415 to 21425 kHz. Weak but persistent. UK SBA, Cyprus.
21424	1215	25	10			F1B			Medium signal, persistent.
21438	1130	3	10	UKR		CW			Russian navy, Sevastopol. Daily with a medium to strong signal.
21450	1100	27	10	ALG		AM			RTA Algiers. Huge signal from 1100 to 1112z. Most likely broadcasting by accident on a wrong frequency until noticed by technicians who corrected the mistake.
24955	1210	31	10	G		RADAR			Radar from 24955 to 24975 kHz. Huge and persistent. UK SBA, Cyprus.
28330	845	27	10	G		RADAR			Radar from 28330 to 28360 kHz. Very strong and persistent. UK SBA, Cyprus.
28400	1025	16	10			FM			SE Asian fishermen. Strong.
28415	1310	4	10			AM			SE Asian fishermen. Weak signals, in and out.
28730	1305	22	10	RUS		FM			Russian taxi service. Strong, short messenges.
28750	1310	22	10	IRN		RADAR			Iranian radar from 28750 to 28850 kHz. Very strong.
28775	1155	16	10			FM			SE Asian fishermen. Medium signals, in and out.
28820	1355	13	10	IRN		RADAR			Radar from 28820 to 28890 kHz. Strong.
28835	1200	30	10	G		RADAR			Radar from 28835 to 28865 kHz. Strong and persistent. UK SBA, Cyprus.
28930	1300	27	10	G		RADAR			Radar from 28930 to 28960 kHz. Very strong. UK SBA, Cyprus.
28960	920	26	10			FM			SE Asian fishermen, in and out.
29100	1330	9	10			FM or AM			Strong carrier, slightly fading. Heard on 9th,16th,17th,20th,22nd,25th,26th,27th,28th and 31st. Signal was always audible for several hours until fade out later in the afternoon.
29200	1345	13	10	IRN		RADAR			29200 to 29600 kHz. Moving up and down the band with a big signal.
29225	850	27	10			FM			SE Asian fishermen. Very strong.
29304.5	1350	13	10			F1B			Medium signal, persistent.

**IRTS; Michael, EI3GYB**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
29305	1350	13	10	RUS		FM			Taxi service, big signals.
29340	1305	4	10			FM			SE Asian fishermen. Medium signals, in and out.
29430	1100	18	10			RADAR			29430 to 29460 kHz. Strong and persistent.
29460	1315	22	10	IRN		RADAR			29460 to 29520 kHz. Very strong.
50115	1050	16	10	IRN		RADAR			50115 to 50135 kHz. Weak to medium signal. Audible until 1400z.

**PZK; SP3AMO, SP5GNI**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7000.0	vt	vd	10			PSK	120	2K50E	S99++
7010.0	1613	30	10			PSK	50	2K50E	
7017.5	1220	6	10			UI		3K0	Stanag? In bursts
7032.0	0530	8	10	RUS		J3E-U		3K0E	S9 songs military in Russian
7052.0	1724	9	10			F1B		250H	S99++
7057.0	2158	19	10			RADAR		20K0E	S9++
7063.0	0530	8	10			J3E-L		3K0E	S9 repeatable text in Russian
7112.0	0815	11	10			PSK	120	2K70E	S99++
14008.0	vt	vd	10			F1B		500H	
14026.0	1010	4	10			CIS		3K4E	S9
14042.0	1815	16	10			RADAR		14K0E	S7
14058.0	1255	12	10	CHN		RADAR		10K0E	3 sec burst foghorn and 14031.0
14105.6	0820	16	10			F1B		900	
14112.0	1815	16	10	CHN		RADAR		10K0E	3 sec burst foghorn
14150.0	1138	18	10			RADAR		12K0E	S7
14156.0	1735	20	10			RADAR		10K0E	5 sec burst
14173.0	0907	6	10			RADAR		10K0E	5 sec burst
14180.0	1108	18	10			RADAR		12K0E	S7
14185.0	1135	18	10			RADAR		20K0E	S7 switching to 14180.0
14219.0	1136	18	10			RADAR		8K0E	bursts
14298.5	1224	25	10			UI		2K0	S9
14320.0	0822	16	10			RADAR		48K	S8, something new, 8:28 ended
14328.0	1225	25	10	CHN		RADAR		10K0E	3 sec burst foghorn
14340.0	1240	27	10	CHN		RADAR		10K0E	3 sec burst foghorn + 14260.0
14343.0	1730	20	10	G		RADAR		20K0E	S9++
18107.0	vt	vd	10		RDL	F1B/A2A		200H	20 wpm
18164.0	1520	12	10	G		RADAR		10K0E	S9++ only part in the band
18167.0	1430	12	10	G		RADAR		10K0E	S9++
18170.0	vt	25	10	G		RADAR	50	20K0E	
21061.0	1540	12	10			RADAR		10K0E	5 sec burst and 21156.0
21088.0	0810	20	10	CHN		RADAR		10K0E	3 sec burst foghorn
21158.0	0950	2	10			RADAR		10K0E	5 sec burst
21168.0	1245	2	10			RADAR		14K0E	S8
21168.0	0910	20	10	CHN		RADAR		10K0E	3 sec burst foghorn + 21114.0
21175.0	1013	2	19			RADAR		14K0E	S8
21175.0	0910	4	10	G		RADAR		10K0E	strong

**PZK; SP3AMO, SP5GNI**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21190.0	0950	2	10	CHN		RADAR		10K0E	3 sec burst foghorn and 21328.0
21247.0	1125	16	10	CHN		RADAR		10K0E	3 sec burst foghorn
21300.0	1020	11	10	CHN		RADAR		20K0E	Foghorn continous S7
21308.0	0830	16	10	CHN		RADAR		10K0E	Foghorn continous S7
21330.0	1345	27	10	G		RADAR		20K0E	strong
21352.0	0913	30	10			RADAR	50	10K0E	
21372.0	0900	6	10	CHN		RADAR		10K0E	3 sec burst foghorn
21376.0	1027	2	10			RADAR		10K0E	5 sec burst
21379.0	0900	11	10	CHN		RADAR		10K0E	3 sec burst foghorn
21380.0	0855	25	10	CHN		RADAR		10K0E	3 sec burst foghorn +21361.0
21385.0	0810	25	10	CHN		RADAR		10K0E	3 sec burst foghorn
21388.0	0710	27	10			RADAR	40	12K0E	'07.11 UTC QRT
24946.0	0930	4	10	CHN		RADAR		10K0E	3 sec burst foghorn
28000.0	0750	2	10	IRN		RADAR		60K0E	half in the 10m band
28110.0	1403	12	10			RADAR		40K0E	S8 probably Cyprus
28125.0	0745	2	10	G		RADAR		20K0E	S9+10dB
28155.0	1150	6	10			F3E		6K0	In Russian, and 28135, 28165, 28175...
28270.0	0830	29	10	G		RADAR		20K0E	S9++
28416.0	0719	24	10			UI		10K0E	
28645.0	1145	6	10	CHN		RADAR		20K0E	Foghorn continous S7
28645.0	1000	8	10	G		RADAR		20K0E	strong
29100.0	0643	29	10			RADAR	50	20K0E	
29400.0	0915	30	10	IRN		RADAR	150/300	46K0E	
29480.0	1235	21	10	G		RADAR		20K0E	S9+30dB
29500.0	1235	21	10	IRN		RADAR		60K0E	S9
29500.0	0827	11	10	IRN		RADAR	150/300	46K0E	

**SRAL; Pekka, OH2BLU**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7 MHz	1815-0700	*	10	RUS		RADAR	40 sps	13k0E	*) Days: 9. 15. 19. 31. (WebSDR 27d)
7000.0	0500-1840	*	10	RUS		J7D	120	2k60E	*) Days: 1. - 4. 9. 16. 20.
7000.0	1350-1800	*	10			A3E			*) Days: 7. 10. 11. 12. 13. 25. 28. BC, weak modulation
7000.0	0645-0915	23	10	RUS	RLO	A1A		40H	xxx - msg
7009.0	1150-1400	*	10	RUS		J3E-u		3k10E	*) Days: 5. 7. 8. 11. 19. 28. 30. female & male vox "priom"
7011.0	1315-1530	*	10	RUS		J7D	120	2k60E	*) Days: 9. 16. 30.
7018.0	1300-1830	05 12	10	RUS		J7D	120	2k60E	
7020.0	0705-1300	23 26	10	RUS		F1B		250H	
7022.0	0750-1100/	20	10	RUS		F1B		250H	
7024.0	0820	25	10	RUS		A1A	20wpm	40H	5F
7029.3	1355	30	10	RUS		F1B		500H	



<b>SRAL; Pekka, OH2BLU</b>									
<b>kHz</b>	<b>UTC</b>	<b>DD</b>	<b>MM</b>	<b>ITU</b>	<b>IDENT</b>	<b>MODE</b>	<b>BD /sps</b>	<b>SH / BW</b>	<b>DETAILS</b>
7030.0	1330-1400	30	10	RUS		F1B		250H	
7032.0	0455-1630	01 - 31	10	RUS		J3E-u		3k50	Non-stop Russian anthem / mx, spur to 7000.0 & 7064.5 & 7101.7
7032.0	0000-2400	01 - 31	10	RUS		J3E-u		2k50	Brum, when no music
7038.1	1300-1800	*	10	RUS	DCCH	A1A	16wpm	40H	*) Days: 16. 17. 23. 24. 26. brum
7042.0	1430-1900	01 - 31	10			jam		7k50E	Same jam is used on broadcasts from Taiwan by CHN & KRE.
7044.0	1140-1400	*	10	RUS		F1B		250H	*) Days: 3. 5. 7. 29.
7054.0	1530-1800	*	10	RUS		F1B		250H	*) Days: 1. 2. 7. 8. 11. 14.
7059.0	1340-1405/	04	10	RUS		F1B		250H	
7066.0	0500-1830	*	10	RUS		F1B/ NON		200H	*) Days: 1. 6. 7. 8.
7072.0	1350-1550	19	10	RUS		J7D	120	2k60E	
7080.0	1700-1900	*	10	RUS	RDL	F1B/A		200H	*) Days: 1. 2. 11. 13. 20. 23. 26. 30. 31. 5F
7088.0	0805-1400	*	10	RUS		F1B		200H	*) Days: 11. 24.
7089.8	1430-1805	19 - 23	10	IW		G1D		2k70E	LINK
7110.0	1415-1805/	01 - 31	10	ETH	R. Ethiopia	A3E			Weak mod. Music on day 14.
7112.0	1420-1502/	23	10	RUS		J7D	120	2k60E	Carrier on 7110 kHz
7113.6	0720-0728/	25	10	RUS		A1A	20wpm	40H	5F, groups twice. Spur.+/- 660 Hz
7114.0	0500-0600	*	10	RUS		F1B/ NON		200H	*) Days: 13. 16. - 19. 22. - 27.
7115.7	0720-0730/	12	10	RUS		A1A		40H	5F, groups twice. Spur.+/- 660 Hz
7160.0	0615-0730	17 18	10	RUS	RBL88	A1A	15wpm	40H	5BL
7162.0	0800-1415/	13 30	10	RUS		F1B		250H	
7168.0	1530-1800	15 - 31	10			jam		7k50E	Same jam is used on broadcasts from Taiwan by CHN & KRE.
7186.0	1540-1830	04	10	RUS		J7D	120	2k60E	carrier on 7184.0 kHz
7194.0	1800-1815	04	10	RUS		F1B		500H	
7195.5	0710-1705/	27 28	10	RUS	U	A1A		50H	U and dash every 7 sec, chirpy
7196.0	0600-1330	*	10	RUS	S1LE etc	A1A		40H	*) Days: 1. 2. 5. 6. 12. 20. - 26. 30. 5BL
7200.0	1200-1500/	01 - 31	10	TWN	NUR	A3E		9k0	National unity radio to KRE. Frequency offset – 7 Hz
7200.0	1155-1500	*	10	KRE		jam		7k50E	*) Days: 16. 17. 24. 25.
10 MHz	1715-1730	31	10	G		RADAR	50sps	20k0	(WebSDR 7d)

**SRAL; Pekka, OH2BLU**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
10 MHz			10	RUS		RADAR	40sps	13k0E	(WebSDR 9d)
10124A	1500-1600	01 - 31	10	TWN	KTWR	xxx		5k0E	// 9900 kHz, chirpy spurious
10124A	1430-1500	29 - 31	10	TWN	KTWR	xxx		5k0E	// 9900 kHz, chirpy spurious
10134A	1200-1245	01 - 31	10	TWN	KTWR	xxx		5k0E	// 9910 kHz, chirpy spurious, also DRM (as on schedule)
14 MHz	0500-1815	*	10	RUS		RADAR	40sps	13k0E	*) Days: 4. 18. 23. 26. 31. (WebSDR 15d)
14 MHz	0945-1800	*	10	CHN		RADAR	50/67sps	10k0E	*) Days: 1. - 5. 7. - 12. 16. 18. 20. 22. 24. - 27. 31. 'foghorn'
14000.0	1357-1500/	*	10	CHN	RCI	A3E		9k0	TX intermod. // 13710 & 13855 kHz, *) days: 1. - 8. 24. - 27.
14001.0	0500-0615	05 06	10	RUS		JD	120	2k60E	
14005.4	1035-1535	09 11	10			jam		7k50E	
14026.0	0830-1440	*	10	RUS		J7D	120	2k60E	*) Days: 4. 10. 31.
14064A	0510-1325	*	10	RUS		J3E-u		3k20E	2f, *) days: 12. 15. 16. 18.
14192.0	0700-1650	05 - 31	10	RUS		F1B		200H	
14310.5	0615-1205	03 24	10	RUS	NDC8 etc	A1A	15wpm	40H	5BL
14336.0	0430-0600/	01 - 19	10	RUS		F1B		200H	
18 MHz	0500-1620	*	10	G		RADAR	50 sps	20k0	*) Days: 3. 4. 7. 9. 12. 25. (WebSDR 6d)
18 MHz	0500-1715	*	10	RUS		RADAR	40 sps	13k0E	*) Days: 9. 11. 12. 13. 17. 18. 19. 21. 22. 28. (WebSDR 20d)
18107.0	0815-1335	*	10	RUS		F1B		200H	*) Days: 6. 11. 12. 13. 16. 17. 19. 20. 21. 23. 24. 25. 28. 31.
21 MHz	0430-1700	*	10	G		RADAR	25/50sps	20k0	*) Days: 2. 4. 6. - 9. 11. 18. 19. 20.23. 25. 27. 30. 31. (WebSDR 12d)
21 MHz	0500-1730	*	10	RUS		RADAR	40 sps	13k0E	*) Days: 2. - 10. 12. 13. 15. - 19. 30. 31. (WebSDR 23d)
21 MHz	0600-1000	*	10	CHN		RADAR	50 sps	10k0	*) Days: 11. 16. 19. 23. (WebSDR 7d)
21 MHz	0440-1400	*	10	CHN		RADAR	50/67sps	10k0E	*) Days: 1. - 20. 22. - 27. 31. 'foghorn'
21095A	1300-1400/	*	10			jam		7k5E	*) Days: 2. 3. 4. 11.
21438.0	/0830-1600	01 - 31	10	RUS	RCV	A1A	24 wpm	40H	navip
24 MHz	1330	31	10	RUS		RADAR	40 sps	13k0E	(WebSDR 8d)
28 MHz	0500-1445	*	10	G		RADAR	12.5/25/50sps	20k0	*) Days: 3. - 9. 11. 12. 14. 17. 18. 19. 21. - 31. (WebSDR 27d)
28 MHz	0500-1700	*	10	IRN		RADAR	150/313	60k0E	*) Days: 5. 7. - 13. 15. - 20. 22. - 26. 28. - 31. (WebSDR 25d)
28 MHz	0500-1700	*	10	IRN		RADAR	310/870	120k0E	*) Days: 1. 2. 12. (WebSDR 3d)
28860.0	0530-1630	*	10	IRN		RADAR	150/313	60k0E	*) Days: 3. 9. 13. - 16. 18. 19. 25. 29. (WebSDR 16d)

**SRAL; Pekka, OH2BLU**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
28960.0	0500-1630	*	10	IRN		RADAR	150/313	60k0E	*) Days: 1. 2. 3. 12. (WebSDR 3d)
28 MHz	0500-1300	*	10	RUS	Taxi disp.	F3E		3k0E	*) Days: 2. 3. 5. 6. 9. 11. 12. 13. 16. - 31. 140 reports

**URE; Gaspar, EA6AMM**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
6992.0	21:36	15	10	RUS		RADAR	40	12K0E	OTHR Contayner. Splatter to 7004 kHz
6994.0	20:23	06	10	RUS		RADAR	40	12K0E	OTHR Contayner. Splatter to 7004 kHz
7000.0	08:01 vt+	01 vd*	10	RUS		J7D	120	2K70E	CIS-12. *Also on 03,04, 16, 17, 18 and 19/02; vt
7008.5	06:40	20	10			J7D	120	2K70E	CIS-12
7012.0	18:39	11	10			XXX		CA2K0E	XXX. Unid multitone continuous signal. BW ca 2K0E
7028.0	21:10	26	10	USA		RADAR	40	12K0E	OTHR Contayner. *Also on 7088 kHz CF and 7100 kHz CF. 3 simultaneous TX on 40m
7032.0	07:14 vt*	19 vd*	10			J3E-U		3K3E	J3E-U. Music loop. RUS anthem. *Also on 26/10, 0550 UTC
7036.0	19:15	17	10			F1B	100	250H	
7042.0	18:27 vt*	18 vd*	10			XXX		CA10K0E	XXX. Jammer *Very often. 16 reports
7042.0	18:47	11	10		169	J7D	125	1K75E	7042 kHz USB: MIL-188-141A ALE
7054.0	18:46	11	10			F1B	50	200H	
7054.0	18:29	18	10	RUS		F1B	50	200H	
7056.2	07:40	30	10			NON			Carrier
7065.9	18:00	01	10			NON			Carrier
7066.0	20:27	04	10	RUS		RADAR	40	12K0E	OTHR Contayner
7080.0	18:01 vt*	01 vd*	10	RUS		F1B	50	200H	*Often. 12 reports.
7085.0	06:04	15	10	RUS		RADAR	40	12K0E	OTHR Contayner
7088.0	21:10	26	10	RUS		RADAR	40	12K0E	OTHR Contayner
7089.8	20:14 vt*	12 vd*	10			G1D	2400	2K40E	LINK 11 SLEW. *Often. Also on 15,16,17,18, 19 & 20/10; vt
7100.0	21:22	01	10			J3E-L		2K80E	Audio loops. Propaganda. Male voice. Slavic language. (UKR/RUS radiowar style)
7100.0	21:10	26	10	RUS		RADAR	40	12K0E	OTHR Contayner
7111.0	20:17	20	10			G7D	60	2K40E	7111 kHz LSB: CHN-30
7126.7	07:18	05	10			A1A	10		CW loop. "T 0 E"
7135.0	06:25	29	10			A3E		10K0E	BC. Music and speech. Strong, -60 dBm. QRT: 0630 UTC
7135.0	06:30	29	10			NON			Carrier
7136.9	20:17	12	10			NON			Carrier. Most probably from 7137 kHz CF F1B RUS system
7141.0	20:21	20	10			G7D	60	2K40E	7141 kHz LSB: CHN-30
7168.5	21:28 vt*	15 vd*	10			XXX		9K0E	XXX. Jammer. Same as on 7042 kHz CF *Also on 17, 20, 26 & 28/10; vt
7171.0 LSB	20:17 vt*	05 vd*	10			G7D	60	2K50E	CHN 30 *Also on 18/10, 1833 UTC
7194.0	20:28	04	10	RUS		F1B	75	500H	
10124.0	21:46	18	10	AUS		RADAR	6.9	11K0E	OTHR JORN busts; with short intro tone

**URE; Gaspar, EA6AMM**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
10128.0	21:21	15	10	AUS		RADAR	6.9	11K0E	OTHR JORN bursts. With short initial tone
10150.0	21:18	26	10	AUS		RADAR	6.9	11K0E	OTHR bursts; with short intro tone
10152.0	21:18	15	10			RADAR	6.9	11K0E	OTHR JORN bursts. With short intro tone
14000.0 USB	10:26	11	10			J7D	125	1K75E	MIL-188-141A ALE
14000.0 USB	06:27	25	10			OTHER	2400	2K40E	ISR navy hybrid modem
14001.8	20:00	11	10			XXX		2K40E	
14001.8	09:13	12	10			XXX		CA2K40E	
14001.8	06:13	20	10			G1D	2400	2K40E	MIL-188-110A
14002.0	11:39	18	10	GUM		F1B	50	850H	
14005.0	07:45	04	10			XXX		CA10K0E	Unidentified bursts. Jammer
14005.0 USB	15:40	06	10		116	J7D	125	1K75E	14005 kHz USB: MIL-188-141A-ALE
14005.0	15:40	06	10			J3E-U			J3E-U. Non amateur comms. Female voice, Asian language between MIL-188-181A ALE TXs
14005.0	13:55	07	10			XXX		280H	Unknown bursts. BW 280 Hz. A3E system
14005.0 USB	16:02	12	10			W7D	44.44	2K40E	CHN OFDM 39
14005.5	10:30	11	10			XXX		CA3K0E	Unidentified bursts
14006.2	07:50	30	10			F1B	600	600H	DPRK-FSK 600 ARQ
14007.0	10:33	02	10			XXX		CA7K0E	Unidentified burst
14008.0	07:47 vt*	01 vd*	10	RUS		F1B	50	500H	*Very often. 18 reports
14027.6	11:41	29	10			W7D	44.44	2K40E	CHN OFDM 39. 39 x 44.44 bd + pilot line
14030.0 USB	17:45	19	10			XXX		2K40E	(CF: 14031.8 kHz). Unidentified digital bursts. Long-lasting
14031.0	10:06 vt*	03 vd*	10			J7D	120	2K70E	CIS-12 *Also on 19/10, 0841 UTC
14035.0	18:52	16	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
14039.5	14:03	01	10			G7D	75	2K40E	14039.5 kHz USB: CHN 4+4
14051.0	11:57	14	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
14053.0	07:23	09	10			F1B		500H	
14061.3	19:04	11	10			G7D	75	2K40E	CHN 4+4
14070.0	06:45	09	10			J7D	120	2K70E	CIS-12. With pilot line on 14068 kHz
14082.0	08:29	29	10			XXX		CA10K0E	XXX. Unidentified short bursts. Disturbing FT-4
14089.5	13:32	14	10			F1B	600	600H	DPRK-FSK 600 ARQ
14091.0	07:29	05	10			W7D	30	2K80E	CIS-60
14091.0	09:28	13	10			J7D	120	2K70E	CIS-12
14093.0	16:21	08	10			J7D	125	1K75E	14093 kHz USB: MIL-188-141A ALE
14094.5	08:11	21	10			XXX		500H	Unidentified digital bursts. Overdriven
14098.5	07:37 vt*	02 vd*	10			F1B	600	600H	DPRK-FSK 600 ARQ *Very often. 16 reports
14100.0	08:56	14	10			A3E			A3E. BC. Asian language (seems CHN)
14109.0	07:28	09	10			F1B		200H	
14111.3	06:37	06	10			A1N	20		Continuous dots
14112.0	18:36	16	10	CHN		RADAR	50	10K0E	OTHR short bursts
14113.3	06:48	29	10			F1B	600	600H	DPRK-FSK 600 ARQ

**URE; Gaspar, EA6AMM**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
	vt*	vd*							*Often. 12 reports
14116.0	16:12	08	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
14117.0	17:49	19	10	RUS		RADAR	40	12K0E	OTHR Contayner
14118.0	14:52	29	10			J3E-U		3K0E	J3E-U. Music and speech. Like broadcasting. Male speaker. Slavic language. About Palestine and Israel. Long-lasting
14122.0 USB	07:14	18	10			J7D	125	1K75E	MIL-188-141A ALE
14125.0	18:24	18	10	RUS		RADAR	40	12K0E	OTHR Contayner
14128.0	18:56	17	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
14130.0	13:45	01	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
14141.0	10:55	11	10			F1B	75	200H	
14142.0	07:48	21	10			J3E-U		3K0E	J3E-U. Speech and music. Male voice. Slavic language. Religious content. Long-lasting
14148.0*	06:10	18	10	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 14204 kHz CF. 2 simultaneous TX on 20m.
14148.0*	15:56	18	10	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 14180 kHz CF (long-lasting). 2 simultaneous TX on 20m
14152.6	16:22	04	10			W7D	44.44	2K40E	CHN OFDM 39. 39 x 44.44 bd + pilot line
14158.0*	11:48	18	10	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 14180 kHz CF. 2 simultaneous TX on 20m
14160.0	17:10	07	10	CHN		RADAR	50	10K0E	OTHR short bursts
14162.0	19:12	11	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
14163.0	20:09	05	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
14169.0	07:33 vt*	02 vd*	10			F1B	50	200H	*Also on 16/10, 0756 UTC
14169.4	08:25	30	10			XXX		2K60E	Unidentified continuous signal. Long-lasting
14180.0	07:26	18	10	RUS		RADAR	40	12K0E	OTHR Contayner
14182.0	15:58	08	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
14185.0	18:35	07	10	RUS		RADAR	40	12K0E	OTHR Contayner
14192.0	11:07 vt*	11 vd*	10	RUS		F1B	50	200H	*Daily since 11/10
14196.0	17:52	07	10			XXX	33	CA140H	Unknown signal. Idling
14198.5	06:07 vt*	04 vd*	10			F1D	600	600H	DPRK-FSK 600 ARQ *Often. 12 reports
14198.5	06:05 vt*	07 vd*	10			G1D		1K20E	DPRK-PSK 1200 ARQ *Also on 24/10, 0616 UTC
14202.0	18:15	01	10	CHN		RADAR	50	10K0E	OTHR short bursts
14204.0	06:11	18	10	RUS		RADAR	40	12K0E	OTHR Contayner
14204.0	18:42	18	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
14222.0	07:09	30	10			J7D	120	2K70E	CIS-12
14225.0 USB	18:05	17	10		310	J7D	125	1K75E	MIL-188-141A ALE
14227.0	17:03	16	10	CHN		F1B	50	10K0E	OTHR short bursts
14228.5	12:32	16	10			F1B	600	600H	DPRK-FSK 600 ARQ
14232.0	15:04	15	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
14234.5	06:33	06	10			F1B	60	600H	DPRK-FSK 600 ARQ
14235.0	14:02	18	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
14237.0	19:36	03	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
14240.0	07:56	30	10			F1B	75	250H	

**URE; Gaspar, EA6AMM**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14246.0	19:37	03	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
14247.0 USB	17:59	13	10			J7D	125	1K750E	MIL-188-141A ALE
14247.0	11:38	14	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
14250.0	16:00	08	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
14250.0	16:38	18	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
14251.0	16:01	08	10	CHN		RADAR	50	10K0E	OTHR short bursts
14256.0	18:44	18	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
14261.0	07:38	06	10			W7D	30	2K80E	OFDM. CIS-60
14261.0 USB	12:20	18	10			XXX		2K40E	Unidentified digital bursts (CF QRG: 14262.8 kHz)
14268.0	07:42	30	10			J7D	120	2K70E	CIS-12
14269.0	15:11	02	10	CHN		RADAR	50	10K0E	OTHR short bursts
14276.0	12:03	30	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
14278.0	06:57	17	10			F1B	67	200H	
14291.0	11:56	14	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
14291.8	19:38	03	10	RUS		N0N			Carrier (F1B RUS system 14292 kHz CF )
14292.0	08:45 vt*	03 vd*	10	RUS		F1B	100	500H	*Also on 04/10, 0548 UTC
14293.0 USB	14:13	07	10		BN2 AN1	J7D	125	1K75E	CHN MIL-188-141A ALE 2G
14295.0	14:48	02	10	CHN		RADAR	50	10K0E	OTHR short bursts
14295.0 USB	14:00	16	10			J7D	125	1K75E	MIL-188-141A ALE
14296.0	13:58	01	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
14297.0	14:22	05	10	CHN		RADAR	50	10K0E	OTHR short bursts
14297.0	18:35	16	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
14298.0	14:32	20	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
14298.5	07:37 vt*	02 vd*	10			F1D	600	600H	DPRK-FSK 600 ARQ *Often. 10 reports
14298.5	08:11 vt*	06 vd*	10			G1D		1K20E	DPRK-PSK 1200 ARQ *Also on 07, 17, 24 & 26/10; vt
14299.0	16:52	07	10	CHN		RADAR	50	10K0E	OTHR short bursts
14299.0	11:55	14	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
14302.0	17:53	01	10	CHN		RADAR	50	10K0E	OTHR short bursts
14307.0	15:59	06	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
14307.0	15:56	19	10	CHN		RADAR	50	10K0E	OTHR short bursts
14310.4	09:40 vt*	03 vd*	10		6S1U NNGI 9JZF ZMOW N9D WU8T NDC8 ...	A1A			Non amateur CW traffic. Unclean. Encrypted QTC, groups of 5 letters. Cyrillic CW characters used. "RK" *Also on 14, 22, 24, 25, 27, 28 & 29/10; vt
14314.0	15:04	20	10	CHN		RADAR	50	10K0E	OTHR short bursts
14315.0 USB	16:01	06	10			J7D	125	1K75E	MIL-188-141A-ALE
14318.5	08:06 vt*	04 vd*	10			F1B	600	600H	DPRK-FSK 600 ARQ *Also on 27/10, 0634 UTC
14320.0	13:48	05	10	CHN		RADAR	66.7	10K0E	OTHR short bursts

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14320.0	08:55	13	10			XXX		12K0E	Unknown digital signal with short digital preamble
14320.0	08:13	16	10			XXX		48K0E	Unknown digital signal with short digital preamble (same signal as on 13/10 at 0813 UTC, but different BW)
14328.0	16:24 vt*	16 vd*	10	CHN		RADAR	41.7	10K0E	OTHR short bursts *Also on 17/10, 1857 UTC
14328.8	16:50	14	10			XXX		2K40E	Unknown digital bursts. (14327 kHz USB)
14330.0	14:50	02	10	CHN		RADAR		10K0E	OTHR short bursts
14330.0	14:28 vt*	03 vd*	10	CHN		RADAR	66.7	10K0E	OTHR short bursts *Also on 18/10, 1405 UTC
14330.0	17:11	07	10	CHN		RADAR	50	10K0E	OTHR short bursts
14333.0	14:59 vt*	01 vd*	10		8KHX KPJ5 OGC1 TUZW ZUTI TM1Z ...	A1A			Non amateur CW comms. Encrypted, groups of 5 letters. Cyrillic CW characters used. *Also on 02, 03, 04, 04, 05, 06, 07, 08, 01 & 12/10; vt
14333.6	20:23	04	10			F1B	50	200H	
14334.0	08:12	30	10			XXX		200H	XXX. Unidentified dots
14335.0	13:13 vt*	01 vd*	10	CHN		RADAR	66.7	10K0E	OTHR short bursts *Also on 14/10, 1154 UTC
14336.0	18:13	01	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
14336.0*	21:17 vt**	01 vd**	10			F1B	50	200H	* During 03 & 04/10, on 14336.6 kHz CF **Very often. 16 reports
14337.0 USB	17:17 vt*	07 vd*	10		194 174	J7D	125	1K75E	MIL-188-141-A ALE 2G *Also on 10/13, 1703 UTC
14337.8	12:43	16	10			F1B	75	115	
14339.5 USB	15:30	01	10			G7D	75	2K40E	CHN 4+4
14340.0	16:11	19	10	CHN		RADAR	50	10K0E	OTHR short bursts
14342.0	17:57	13	10	CHN		RADAR	50	10K0E	OTHR short bursts
14344.0	14:08 vt*	01 vd*	10		BN2 AN1	J7D	125	1K75E	CHN MIL-188-141A -ALE 2G *Also on 05/10, 1335 UTC and 14/10, 1406 UTC
14344.0 USB	13:41	05	10			J7D	120	2K70E	CIS-12
14344.0	16:07	12	10	CHN		RADAR	66.7	10K0E	OTHR short burst
14346.0 USB	15:04	12	10			J7D	125	1K750E	MIL-188-141A ALE
14346.0	17:53	13	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
14349.0	17:12	07	10	CHN		RADAR	50	10K0E	OTHR short bursts
14349.0	17:56	13	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
14354.0	14:38	05	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
14357.0	18:14	11	10	RUS		RADAR	40	12K0E	OTHR Contayner. Splatter to 14343 kHz
18060.0	12:53	28	10	RUS		RADAR	40	12K0E	OTHR Contayner. Splatter to 18072 kHz
18063.0	15:22 vt*	12 vd*	10	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 17/10, 1801 UTC
18068.0	13:14	17	10	RUS		RADAR	40	12K0E	OTHR Contayner
18070.0	07:40	18	10	RUS		RADAR	40	12K0E	OTHR Contayner
18107.0	07:48	01	10	RUS	RDL	F1B	50	200H	*Almost daily

**URE; Gaspar, EA6AMM**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
	vt*	vd*							
18109.0	14:58	17	10	RUS		RADAR	40	12K0E	OTHR Contayner
18129.0	07:23	02	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
18131.3	13:43	20	10			XXX		1K20E	XXX. 2 carriers. Spacement: 1K20E. Long-lasting
18135.0	12:28	30	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
18145.0	06:19	04	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
18159.0	14:16	06	10	RUS		RADAR	40	12K0E	OTHR Contayner
18166.0	06:13	22	10	RUS		RADAR	40	12K0E	OTHR Contayner
18167.0	14:35	12	10	RUS		RADAR	40	12K0E	OTHR Contayner
18169.0	14:08	07	10	RUS		RADAR	40	12K0E	OTHR Contayner
18170.0	05:45 vt*	07 vd*	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus *Also on 25/10, 0632 UTC
18170.0	16:41	19	10	RUS		RADAR	40	12K0E	OTHR Contayner
18171.0	06:44	20	10	RUS		RADAR	40	12K0E	OTHR Contayner
18172.0	17:15 vt*	17 vd*	10	RUS		RADAR	40	12K0E	OTHR Contayner *Also on 21/10, 0818 UTC
20990.0	06:24	06	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus. Splatter to 21005 kHz
21000.0	14:33	29 vt*	10 vd*			XXX		1K0E	XXX. 3 Carriers. Spacement: 500 Hz. Long-lasting *Also on 30/10, 0720 UTC
21008.5	15:28	12	10			F1B	600	600H	DPRK-FSK 600 ARQ *Also on 16/10, 0732 UTC
21018.5	08:23	09	10			F1B	600	600H	DPRK-FSK 600 ARQ *Also on 11/10, 0655 UTC & 16/10, 0730 UTC
21026.7	06:07	29	10			XXX		CA2K80E	Unidentified digital bursts
21035.0	08:52	03	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21035.0	07:15	06	10	CHN		RADAR	50	10K0E	OTHR short bursts
21042.0	06:13	17	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21048.5	08:04 vt*	14 vd*	10			F1B	600	600H	DPRK-FSK 600 ARQ *Also on 16/10, 0800 UTC
21054.0	10:22	18	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21069.8	07:16	30	10			XXX		2K40E	Unidentified digital bursts
21085.0	15:03	29	10	RUS		RADAR	40	12K0E	OTHR Contayner
21098.5	07:18 vt*	04 vd*	10			F1B	600	600H	DPRK-PSK 600 ARQ *Also on 12/10, 0805 UTC
21103.5	14:41 vt*	12 vd*	10			F1B	600	600H	DPRK-FSK 600 ARQ *Also on 13/10, 0806 UTC & 16/10, 1335 UTC
21108.5	15:34	12	10			F1B	600	600H	DPRK-FSK 600 ARQ
21113.0	07:21	04	10			F1B	50	200H	F1B. SH = 200 Hz
21118.5	07:40	12	10			F1B	600	600H	DPRK-FSK 600 ARQ
21118.5	07:41 vt*	16 vd*	10			F1B	600	600H	DPRK-FSK 600 ARQ *Also on 17/10, 0709 UTC
21127.0	08:36	30	10	RUS		RADAR	40	12K0E	OTHR Contayner
21128.0	06:45	20	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
21130.0	12:57	04	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
21130.0	06:13	17	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21132.0	10:21	18	10	CHN		RADAR	66.7	10K0E	OTHR short bursts



**URE; Gaspar, EA6AMM**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21145.0 USB	08:38 vt*	02 vd*	10	MRC		J7D	125	1K75E	MIL-188-141A-ALE *Also on 03, 12, 18, 19 & 21/10; vt
21149.3	05:52	24	10			F1B	600	600H	DPRK-FSK 600 ARQ
21152.0	06:10	13	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21152.0	06:48	17	10			XXX		CA4K0E	Unidentified bursts. Also RX on October the 15th, @ abt. same UTC
21152.0	06:18	22	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21155.0	16:57	07	10	RUS		RADAR	40	12K0E	OTHR Contayner
21155.0	06:17	27	10	CHN		RADAR	62.5	10K0E	OTHR short bursts
21158.0	05:48	07	10	CHN		RADAR	50	10K0E	OTHR
21159.0	16:18	04	10	RUS		RADAR	40	12K0E	OTHR Contayner
21161.0	16:39	15	10	RUS		RADAR	40	12K0E	OTHR Contayner
21162.0	08:09	13	10	CHN		RADAR	41.7	10K0E	OTHR short burst
21168.0	07:08	12	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21169.0	05:34	26	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21170.0	08:50	19	10	RUS		RADAR	40	12K0E	OTHR Container. 2 systems side by side: 21170 kHz CF + 21186 kHz CF
21171.0	08:23	02	10	RUS		RADAR	40	12K0E	OTHR Contayner
21171.0	06:54	13	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21173.0	08:51 vt*	03 vd*	10	RUS		RADAR	40	12K0E	OTHR Contayner *also on 06/10, 0651 UTC & 15/10, 1211 UTC
21173.0*	06:51	06	10	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 21188 kHz CF. 2 simultaneous TX on 15m
21173.0	12:11	15	10	RUS		RADAR	40	12K0E	OTHR Contayner
21174.0	15:17	15	10	RUS		RADAR	40	12K0E	OTHR Contayner
21174.0	08:00	30	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
21175.0	07:13 vt*	06 vd*	10	RUS		RADAR	40	12K0E	OTHR Contayner *Also on 13/10, 1653 UTC
21176.0	07:55 vt*	05 vd*	10	RUS		RADAR	40	12K0E	OTHR Contayner *Also on 08, 11 & 13/10; vt
21180.0	07:12	18	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
21181.0	06:17	13	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21182.0	09:37	30	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21184.0	11:04	15	10			F1B		200H	
21184.0	06:19	18	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
21185.0	15:21	03	10	RUS		RADAR	40	12K0E	OTHR Contayner
21185.0	06:19	18	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
21186.0	08:50	19	10	RUS		RADAR	40	12K0E	OTHR Contayner
21188.0	06:52	06	10	RUS		RADAR	40	12K0E	OTHR contayner
21189.0	11:41	14	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
21194.0	06:13	25	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21203.0	06:10	11	10	CHN		RADAR	50	10K0E	OTHR short bursts
21203.0	05:43	26	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
21207.0	08:19	09	10			F1B		500H	F1B short bursts
21210.0	08:41	02	10	CHN		RADAR	48	10K0E	OTHR short bursts
21218.5	07:34	16	10			F1B	600	600H	DPRK-FSK 600 ARQ
21225.0 USB	07:07	18	10			XXX		CA2K60E	Unidentified digital bursts

**URE; Gaspar, EA6AMM**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21226.7	08:08	09	10			G1D	2400	2K40E	MIL-188-110A
21226.7	08:53	30	10			XXX		2K40E	Unidentified digital bursts
21229.0	07:10	18	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21232.0	08:27	14	10	CHN		RADAR	50	10K0E	OTHR short bursts
21234.0	08:42	02	10	CHN		RADAR	48	10K0E	OTHR short bursts
21244.0	06:21	18	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21248.5	05:05	24	10			F1B	600	600H	DPRK-FSK 600 ARQ
21256.4	08:48	30	10			XXX		2K40E	Unidentified digital bursts
21257.0	06:33	22	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
21266.0	06:10	25	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
21270.0	08:28	19	10	RUS		RADAR	40	12K0E	OTHR Contayner
21286.0	08:43	30	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21287.0	06:22	06	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21296.0	06:22	04	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21296.0	08:20	19	10	CHN		RADAR	50	10K0E	OTHR. Long-lasting
21297.0	07:49	14	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21300.0 USB	08:07	24	10			J7D	125	1K75E	MIL-188-141A ALE
21303.0	06:58	11	10	CHN		RADAR	50	10K0E	OTHR short bursts
21305.0	06:55	06	10	CHN		RADAR	50	10K0E	OTHR short bursts
21308.0	07:35	16	10	CHN		RADAR	50	10K0E	OTHR
21310.0	09:31	11	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
21313.3	06:10	21	10			G7D	75	2K40E	CHN 4+4
21315.0	06:40	25	10	CHN		RADAR	50	10K0E	OTHR short bursts
21316.0	07:03	19	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21324.0	05:38	26	10	CHN		RADAR	50	10K0E	OTHR short bursts
21325.0	15:56	08	10	G		RADAR	25	50	OTHR. UK SBA, Cyprus
21327.0	07:50	01	10	CHN		RADAR	50	10K0E	OTHR short bursts
21328.0	08:44	02	10	CHN		RADAR	48	10K0E	OTHR short bursts
21328.0	08:46 vt*	02 vd*	10	CHN		RADAR	66.7	10K0E	OTHR short bursts *Also on 03/10, 0951 UTC
21329.0	06:31	09	10	CHN		RADAR	50	10K0E	OTHR short bursts
21330.0	10:15	18	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
21333.0	05:54	07	10	CHN		RADAR	50	10K0E	OTHR short bursts
21337.0	06:22	18	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21337.0	08:27	19	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
21338.0	07:02	08	10	CHN		RADAR	50	10K0E	OTHR short bursts
21342.0	08:50	14	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21343.0	07:24	30	10	RUS		RADAR	40	12K0E	OTHR Contayner
21345.0	07:04	24	10			G1D	2400	2K40E	MIL-188-110A
21346.6	08:58	30	10			XXX		2K40E	Unidentified digital bursts
21347.0	08:20	21	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21348.0	12:14	15	10	CHN		RADAR	50	10K0E	OTHR short bursts
21349.0	06:22	11	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21350.0	07:35 vt*	04 vd*	10			J3E-U			J3E-U. Non amateur comms. Male voice. Slavic language. Sending groups of 5 letters in RUS alphabet code. *Also on 05/10, 0735 UTC

**URE; Gaspar, EA6AMM**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21350.0	07:07	17	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21352.0	06:47	13	10	CHN		RADAR	50	10K0E	OTHR short bursts
21354.0	07:2	0	10	CHN		RADAR	50	10K0E	OTHR short bursts
21354.0	08:34	30	10	CHN		RADAR	50	10K0E	OTHR. Long-lasting
21355.0	08:5		10	CHN		RADAR	50	10K0E	
21355.0 USB	09:21	11	10		150ESP04 150NLD01	J7D	125	1K75E	MIL-188-141A ALE
21355.0	15:58	18	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
21358.0	06:14	17	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21358.0	08:10	24	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
21365.0	05:53 vt*	04 vd*	10	CHN		RADAR	66.7	10K0E	OTHR short bursts *also on 12/10, 0745 UTC
21368.0	05:39	26	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21369.0	05:58	15	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21372.0	12:16	15	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21375.0	08:11	13	10	CHN		RADAR	50	10K0E	OTHR short burst
21377.0	08:29	14	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
21378.0	05:45	24	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21379.0	08:55 vt*	03 vd*	10	CHN		RADAR	50	10K0E	OTHR short bursts *Also on 11/10, 0612 UTC
21380.0	07:52	19	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21383.0	09:10	11	10	CHN		RADAR	50	10K0E	OTHR. Long-lasting
21384.0	10:36 vt*	15 vd*	10	CHN		RADAR	66.7	10K0E	OTHR short bursts *also on 30/10, 0723 UTC
21385.0	12:54	06	10	CHN		RADAR	50	10K0E	OTHR short bursts
21385.0	10:18	18	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
21389.0*	06:40	27	10	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 21410 kHz CF. 2 <i>simultaneous TX on 15m</i>
21390.0	08:25	02	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
21390.0	17:01	11	10	RUS		RADAR	40	12K0E	OTHR Contayner
21390.0	05:55	28	10	CHN		RADAR	50	10K0E	OTHR
21393.0	12:17	15	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
21395.0 USB	08:57 vt*	03 vd*	10		BN3 AN1	J7D	125	1K75E	CHN MIL-188-141A-ALE 2G + robust *Also on 15/10, 1033 UTC & 24/10, 0533 UTC
21398.0	06:59	07	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21398.0	07:37 vt*	07 vd*	10	CHN		RADAR	66.7	10K0E	OTHR short bursts *Also on 26/10, 0541 UTC
21398.0	07:10	17	10	CHN		RADAR	50	10K0E	OTHR. Long-lasting
21400.0	08:56	03	10	RUS		RADAR	66.7	10K0E	OTHR short bursts
21401.5 USB	07:08	04	10			G7D	75	2K40E	CHN 4+4
21402.0	06:52	13	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21405.0	17:21	13	10	RUS		RADAR	40	12K0E	OTHR Contayner
21406.0	06:33	09	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21410.0	06:30	27	10	RUS		RADAR	40	12K0E	OTHR Contayner
21412.0	06:13	15	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21412.0	09:36	30	10	CHN		RADAR	50	10K0E	OTHR short bursts
21413.0 USB	07:57	14	10			XXX		3K0E	Unid entifiedsignal. Group of carriers. Spacement = 200 Hz. CF QRG: 21414.9 kHz

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21414.0	16:28	16	10	RUS		RADAR	40	12K0E	OTHR Contayner
21414.0*	18:28	16	10	RUS		RADAR	40	12K0E	OTHR Contayner. *2 systems side by side: 21410 kHz CF + 21418 kHz CF
21414.0	06:28	20	10	CHN		RADAR		10K0E	OTHR short bursts
21417.0	06:44	08	10	CHN		RADAR	50	10K0E	OTHR short bursts
21418.0	07:52	01	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21421.0	10:40	15	10	RUS		RADAR	40	12K0E	OTHR Contayner
21423.0	07:37	07	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21424.0	06:42	04	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21425.0	07:01	18	10	RUS		RADAR	40	12K0E	OTHR Contayner
21428.0	14:00	18	10	RUS		RADAR	40	12K0E	OTHR Contayner
21434.0	06:49	07	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21435.0	12:19	15	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21436.0	06:54	15	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21437.0	07:08	17	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
21438.0	08:35 vt*	01 vd*	10		RCV	A1A			RUS navy QTC *Often. 15 reports
21440.0	06:30	06	10	CHN		RADAR	50	10K0E	OTHR short bursts
21442.0	09:56	14	10	RUS		RADAR	40	12K0E	OTHR Contayner
21442.0	07:54	19	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
21446.0	06:23	18	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
21448.5	05:35	24	10			F1B	600	600H	DPRK-FSK 600 ARQ
21449.0	07:10	24	10	CHN		RADAR	66.7	10K0E	OTHR short bursts
24892.0	06:01	24	10	CHN		RADAR	41.7	10K0E	OTHR short bursts
24894.0	07:19	18	10	CHN		RADAR	50	10K0E	OTHR short bursts
24895.0	12:53	19	10	RUS		RADAR	40	12K0E	OTHR Contayner. Splatter to 24995 kHz
24948.0	06:39 vt*	12 vd*	10	CHN		RADAR	41.7	10K0E	OTHR short bursts *Also on 20/10, 0630 UTC
24952.0	06:35	09	10	CHN		RADAR	50	10K0E	OTHR short bursts
24960.0	07:05	19	10	CHN		RADAR	50	10K0E	OTHR short bursts
24962.0	07:28	30	10	CHN		RADAR	50	10K0E	OTHR short bursts
24963.0	06:31	24	10	CHN		RADAR	50	10K0E	OTHR short bursts
24964.0	06:48	08	10	CHN		RADAR	50	10K0E	OTHR short bursts
24967.0	06:36	09	10	CHN		RADAR	50	10K0E	OTHR short bursts
24973.0	06:31 vt*	20 vd*	10	CHN		RADAR	50	10K0E	OTHR short bursts *Also on 25/10, 0615 UTC
28000.0	08:05	01	10	IRN		RADAR	307	45K0E	OTHR. Alternating 307 and 870 sps bursts. *Also on 28960 kHz CF and 29500 kHz CF. 3 simultaneous TX on 10m
28000.0	07:29	02	10	IRN		RADAR	307 870	45K0E	OTHR. Alternating 307 and 870 sps bursts
28001.8	07:37	12	10			PSK	1200	1K20E	RUS MIL T-230-1A, a.k.a „Mahovik“. Long-lasting
28030.0	07:58	29	10			F1B		300H	Fishing buoy
28035.0	10:53	15	10			F1B			Non amateur comms. Female voice. Slavic language. Short traffic
28074.0	07:00	27	10			J3E-U		3K0E	J3E-U. Unid st. Music and speech (BC relaying, Slavic language). Disturbing FT-8
28082.0	08:01	29	10			F1B		CA300H	Fishing buoy
28115.0	06:57	28	10			F3E			Non amateur comms. Female voice. Slavic

<b>URE; Gaspar, EA6AMM</b>									
<b>kHz</b>	<b>UTC</b>	<b>DD</b>	<b>MM</b>	<b>ITU</b>	<b>IDENT</b>	<b>MODE</b>	<b>BD /sps</b>	<b>SH / BW</b>	<b>DETAILS</b>
									language. Short traffic
28125.0	07:51	02	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
28125.0	09:33	07	10			F3E			Non amateur comms. Female voice. Slavic language. Short traffic
28130.0	06:41	12	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
28135.0	09:55 vt*	03 vt*	10			F3E			Non amateur comms. Female and male voices. Slavic language. Short traffic. *Often
28145.0	06:58 vt*	28 vd*	10			F3E			Non amateur comms. Female voice. Slavic language. Short traffic. *Often
28150.0	06:17	17	10	G		RADAR	25	20K0E	OTHR. UK SBA, Cyprus
28155.0	08:04 vt*	01 vd*	10			F3E			Non amateur comms. Female voice. Slavic language. Short traffic. *Often
28175.0	08:44	14	10			F3E			Non amateur comms. Female voice. Slavic language. Short traffic
28180.0	05:59	28	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
28195.0	09:30 vt*	07 vd*	10			F3E			Non amateur comms. Female voice. Slavic language. Short traffic. *Often
28195.0	06:58 vt*	28 vd*	10			F3E			Non amateur comms. Female voice. Slavic language. Short traffic. *Often
28210.0	17:02 vt*	07 vd*	10			F3E			Non amateur comms. Female voice. Slavic language. Short traffic. *Often
28215.0	08:13 vt*	01 vd*	10			F3E			Non amateur comms. Female and male voices. Slavic language. Short traffic. *Often
28225.0	13:41 vt*	03 vd*	10			F3E			Non amateur comms. Female voice. Slavic language. Short traffic. *Often
28225.0	09:26 vt*	07 vd*	10			F3E			Non amateur comms. Female voice. Slavic language. Short traffic. *Often
28250.0	06:05	27	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
28265.0	08:09 vt*	01 vd*	10			F3E			Non amateur comms. Female voice. Slavic language. Short traffic. Often
28270.0	08:06	29	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
28275.0	13:49 vt*	03 vd*	10			F3E			Non amateur comms. Female voice. Slavic language. Short traffic. *Often
28285.0	08:10 vt*	01 vd*	10			F3E			Non amateur comms. Female voice. Slavic language. Short traffic. *Often
28295.0	08:10 vt*	01 vd*	10			F3E			Non amateur comms. Female voice. Slavic language. Short traffic. *Often
28300.0	14:19	17	10	IRN		RADAR	150-313	45K0E	OTHR. Alternating 150 and 313 sps bursts
28325.0	07:10	15	10	G		RADAR	25	20K0E	OTHR. UK SBA, Cyprus
28350.0	07:20 vt*	13 vd*	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus *Also on 19/10, 0759 UTC
28360.0	06:17	15	10	G		RADAR	50	20K0W	OTHR. UK SBA, Cyprus
28360.0	07:38	17	10	G		RADAR	25	20K0E	OTHR. UK SBA, Cyprus
28365.0	06:53	17	10	G		RADAR	25	20K0E	OTHR. UK SBA, Cyprus
28370.0	08:07	14	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
28410.0	07:53	24	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
28595.0	07:05	08	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
28645.0	09:50	08	10	G		RADAR	25	20K0E	OTHR. UK SBA, Cyprus
28690.0	14:08	17	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
28705.0	07:17	09	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
28750.0	07:51	28	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
28850.0	06:15	11	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
28850.0	06:17	25	10	IRN		RADAR	150-313	45K0E	OTHR. Alternating 150 and 313 sps bursts
28855.0	11:59	30	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
28860.0	09:04 vt*	03 vd*	10	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts *Often. 13 reports
28900.0	09:01	30	10	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts
28950.0	15:12	15	10	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts
28960.0	07:56 vt*	01 vd*	10	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts *Also on 02/10, 0803 UTC & 03/10, 1003 UTC
29000.0	09:14	07	10	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts *Also on 16/10, 0808 UTC & 21/10, 1220 UTC
29010.0	06:42	07	10	G		RADAR	25	20K0E	OTHR. UK SBA, Cyprus
29030.0	07:40	24	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
29050.0	15:13	15	10	IRN		RADAR	150-313	45K0E	OTHR. Alternating 150 and 313 sps bursts
29100.0 USB	07:25 vt*	17 vd*	10			XXX		CA4K0E	Group of carriers. Spacement abt 50 Hz. Strong. Long-lasting. *Daily since beginning October
29100.0	06:13	29	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
29155.0	07:14	17	10	G		RADAR	25	20K0E	OTHR. UK SBA, Cyprus
29265.0	14:24	30	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
29310.0	07:00	11	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
29345.0	06:18	11	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
29350.0	06:23	22	10	IRN		RADAR	150-313	45K0E	OTHR. Alternating 150 and 313 sps bursts
29400.0	06:34	24	10	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts
29450.0	07:12 vt*	07 vd*	10	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts *Also on 08, 11, 15, 17, 19 & 21/10; vt
29470.0	12:46	06	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
29480.0	11:32	21	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
29490.0	06:09	27	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
29500.0*	07:57	01	10	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts. *Also on 28960 kHz CF. 2 simultaneous TX on 10m
29500.0	14:53	02	10	IRN		RADAR	307-870	45K0E	OTHR. Alternating 307 and 870 sps bursts
29500.0	06:01 vt*	04 vd*	10	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts *Often. 13 reports
29550.0	07:42 vt*	06 vd*	10	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts *Also on 07/10, 0600 UTC
29550.0	06:56	12	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
29595.0	06:19	25	10	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
29600.0	05:57	04	10	IRN		RADAR	150	45K0E	OTHR. Alternating 150 and 313 sps bursts. *Also on 28860 kHz CF. 2 simultaneous TX on 10m
29650.0	07:02	11	10	IRN		RADAR	150-313	45K0E	OTHR. Alternating 150 and 313 sps bursts
29688.0	07:27	19	10			F1B	50	500H	Harmonic of the F1B system SH = 250 Hz on 14844 kHz CF

<b>USKA; Peter, HB9CET</b>									
<b>kHz</b>	<b>UTC</b>	<b>DD</b>	<b>MM</b>	<b>ITU</b>	<b>IDENT</b>	<b>MODE</b>	<b>BD /sps</b>	<b>SH / BW</b>	<b>DETAILS</b>
7000.0	0819	04	10			J7D	12x 120 Bd	2k70E	CIS12 often
7004.7	1643	31	10			G1D PSK8	2400 Bd	ca 2k5	short bursts; 1800 Hz unid often single tone modem MIL 188-xxx
7011.0	1410	30	10			J7D	12x 120 Bd	2k70E	CIS12
7042.0	2130 1537	22 30	10			X		ca 9k0E	unid signal, almost daily most likely jammer
7044.0	1150	15	10			F1B	50 Bd	250H	FSK often
7050.0 <b>LSB</b>	1400	03	10			J3E-L		ca 3k0E	RUS-UKR Radio War almost daily Music, Voice
7052.0	2221	16	10			FMOP	40 sps	12k0E	OTHR; Contayner
7061.0	2201	15	10			FMOP	40 sps	12k0E	OTHR; Contayner
7080.0	1719	31	10			F1B	50 Bd	200H	FSK
7085.0	2243	14	10			FMOP	40 sps	12k0E	OTHR; Contayner
7089.8	2231	14	10			G1D PSK8	2400 Bd	2k40E	LINK11 SLEW often (7088.0 USB)
7105.0	2214	16	10			FMOP	40 sps	12k0E	OTHR; Contayner
7112.0	1421	23	10			J7D	12x 120 Bd	2k70E	CIS12; carrier at 7110.0 kHz; often
7119.0	1206 1733	15 31	10			J7D	12x 120 Bd	2k70E	CIS12; weak, fading often
7155.0 <b>LSB</b>	2230 1536	16 23	10			PSK-4	30x 60 Bd	2k50E	CHN30 (PRC30); Burst system; Pre-amble 4x PSK4 60Bd, spacing 600Hz; Pilot tone at 450Hz very weak
7169.0	2221 1613	14 31	10			X		ca 9k0E	unid signal, most likely jammer often
7196.0	2245	14	10			FMOP	40 sps	12K0E	OTHR; Contayner
7198.0	1058	22	10			G1D PSK-8	2400 Bd	2k70E	Stanag 4285, short bursts only
7200.0	1211	15	10			A3E		ca 9k0E	BC: National Unity Radio daily QRT /QSY end October
14000.0	1446 1418	03 27	10		CRI	A3E		ca 9k0E	China Radio International. often Intermodulation of 13855 + 13710 kHz
14008.0	0956	12	10			F1B	50 Bd	500H	FSK almost daily
14052.0	1024	31	10			J7D PSK-2	12x 120 Bd	2k70E	CIS12; idling only
14109.0	1411	27	10			FMCW	41 sps	10k0E	OTHR; bursts; weak
14192.0	0901	12	10			F1B	50 Bd	200H	FSK; daily
14298.55	0738 0842	02 24	10			ARQ FSK	600 Bd	600H	DPRK ARQ FSK often
14298.55	0845	24	10			ARQ PSK	X	1200H	DPRK ARQ PSK often
14299.0	1415	27	10			FMCW	41 sps	10k0E	OTHR; bursts; weak
14320.0	0822	16	10			X	X	48k0E	unid wideband signal (bursts)
14328.0	1139	25	10			FMCW	66.66 sps	10k0E	OTHR; Bursts often
14330.0	1432	03	10			FMCW	66.66 sps	10k0E	OTHR; Bursts often
14333.0	0918	04	10			A1A		ca 12H	CW, groups of 5, no ham content
14339.8	0940	19	10			OFDM 60 W7D	30 Bd (ev)	2k80E	PSK-4; tone spacing 44.4Hz, + pilot- tone

**USKA; Peter, HB9CET**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
							29.6Bd)		
18107.0	0851	12	10		RDL	F1B	36+50Bd	200H	CIS36-50 almost daily
21170.0	0953	19	10			FMOP	40 sps	12K0E	OTHR; Contayner
21173.0	1216	15	10			FMOP	40 sps	12K0E	OTHR; Contayner
21178.0	0941	04	10			FMOP	40 sps	12K0E	OTHR; Contayner
21185.0	1528	03	10			FMOP	40 sps	12K0E	OTHR; Contayner
21308.0	0931	16	10			FMCW	50 sps	10k0E	OTHR; continuos
21330.0	1400	27	10	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
21354.0	0853	30	10			FMCW	50 sps	10k0E	OTHR; continuos
21355.0	1424	03	10			FMCW	50 sps	10k0E	OTHR; continuos
21372.0	1219	15	10			FMCW	66.66 sps	10k0E	OTHR; Bursts
21383.0	0934	11	10			FMCW	50 sps	10k0E	OTHR; bursts
21390.0	0828	02	10	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
21393.0	1221	15	10			FMCW	41 sps	10k0E	OTHR; short bursts
21435.0	1226	15	10			FMCW	66.66 sps	10k0E	OTHR; Bursts
21438.0	0829	02	10	RUS	RCV	A1A		10H	Area of Sevastopol; since years daily
28030.1	0912	30	10			F1B	51 Bd	300H	GPS Fishing buoy, short bursts
28065.0	1503	28	10			F3E			Taxi
28100.008	1143	29	10			F1B	51 Bd	300H	GPS Fishing buoy, short bursts
28100.135	0853	27	10			F1B	51 Bd	300H	GPS Fishing buoy, short bursts
28100.185	1136	29	10			F1B	51 Bd	300H	GPS Fishing buoy, short bursts
28101.3	1523	31	10			A1A			CW Fishing Buoy
28101.918	0907	30	10			F1B	51 Bd	300H	GPS Fishing buoy, short bursts
28105.0	0939	16	10			F3E			Taxi often
28115.0	0935	16	10			F3E			Taxi often
28125.0	0946	16	10			F3E			Taxi often
28130.0	1012	27	10	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
28135.0	1426	03	10			F3E			Taxi often
28145.0	0841	02	10			F3E			Taxi often
28155.0	0821	02	10			F3E			Taxi often
28165.0	1123	22	10			F3E			Taxi
28195.0	1216	25	10			F3E			Taxi
28215.0	1254	25	10			F3E			Taxi
28245.0	1200	25	10			F3E			Taxi often
28265.0	1303	15	10			F3E			Taxi often
28275.0	0936	27	10			F3E			Taxi often
28340.0	1351	27	10	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
28615.0	0941	16	10			F3E			Taxi often
28650.0	1446	30	10	IRN		OTHR	150+ 313 sps	ca 45k0	OTHR; Bursts: sweep rate alternating
28715.0	1209	25	10			F3E			Taxi often
28860.0	1232	15	10	IRN			150 + 313 sps	ca 45k	OTHR; Bursts; long lasting, sweep rate alternating almost daily
28915.0	1214	25	10			F3E			Taxi often
28960.0	1004	19	10	IRN			150 + 313 sps	ca 45k	OTHR; Bursts; long lasting, sweep rate alternating often



**USKA; Peter, HB9CET**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
28985.0	1222	25	10			F3E			Taxi often
29000.0	0819	24	10	IRN			307 + 870 sps	ca 45k	OTHR; Bursts; long lasting, sweep rate alternating often
29015.0	1219	25	10			F3E			Taxi often
29250.0	1254	15	10			F3E			Taxi often
29265.0	1427	30	10	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
29295.0	1013	31	10	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
29325.0	1253	15	10			F3E			Taxi often
29350.0	1305	15	10	IRN		OTHR	150+ 313 sps	ca 45k0	OTHR; Bursts: sweep rate alternating often
29449.680	1347 0939	17 30	10			F1B	81.9 Bd	ca 140Hz	FSK; maybe Datawell buoy
29450.0	1244 1009	15 19	10	IRN		OTHR	150+ 313 sps	ca 45k0	OTHR; Bursts: sweep rate alternating often
29500.0	1250 0822	15 24	10	IRN		OTHR	150+ 313 sps	ca 45k0	OTHR; Bursts: sweep rate alternating often
29505.0	1455	28	10			F3E			Taxi often
29550.0	1245 1443	15 30	10	IRN		OTHR	150+ 313 sps	ca 45k0	OTHR; Bursts: sweep rate alternating often
29600.0	1431	30	10	IRN		OTHR	150+ 313 sps	ca 45k0	OTHR; Bursts: sweep rate alternating
29650.0	1438	30	10	IRN		OTHR	150+ 313 sps	ca 45k0	OTHR; Bursts: sweep rate alternating

**VERON; Ruud, PG1R. Credits to observers Dick PA0GRU, Arie PA3CNK**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3510.0	1755	27	10	RUS		A1A			UiCW; Plain Russian Weather messages from Nowrossijsk; for info, shared band
3548.0	1750	27	10	RUS	RDL	F1A			RDL 25341 11311; for info, shared band
3548.0	1757	27	10	RUS		F1B			Revs/UiPtr; for info, shared band
3608.0	2028	31	10	RUS		F1B			Revs/UiPtr; for info, shared band
3750.0	1750	27	10	RUS		F1B			UiPtr; for info, shared band
7016.0	1010	26	10	RUS		F1B		250H	Printer; S9
7042.0	1949	28	10			XXX		3K50E	CF; presumably jammer
7050.0	1707	20	10	UKR/RUS		J3E-L		2K70E	UKR-RUS radiowar; slogans; S9++
7055.0	1710	20	10	UKR/RUS		J3E-L		2K70E	UKR-RUS radiowar; music; slogans; 2TX same frequency; S9
7055.0	1944	28	10	UKR/RUS		J3E-L		2K70E	UKR-RUS radiowar; slogans; 2 TX same freq.; S7
7057.0	2049	01	10	UKR/RUS				2K70E	UKR-RUS radiowar; shouting slogans; S9
7065.9	2050	01	10			NON			Persistent carrier
7080.0	2051	30	10	RUS		F1B		200H	Printer; S8
7090.0	2035	27	10			NON		1K2E	CF; group 5 carriers, spaced 300Hz; S7
7098.7	1722	20	10			G1D		2K40E	CF; bursts; LINK-11 SLEW
7114.0	2053	30	10			F1B		200H	Printer; S6
7168.0	2054	30	10			XXX	80	8K0E	CF; Wobbler; presumably jammer
10127.0	1212	29	10	RUS		F1B			Revs/UiPtr; for info, sec allocation amateur

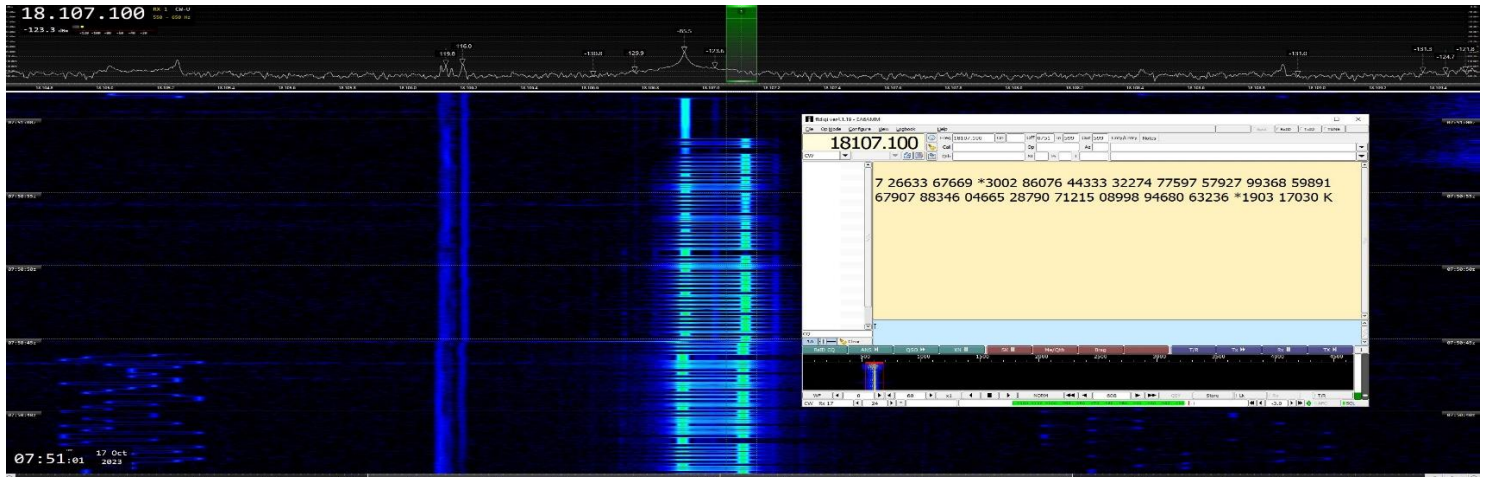
**VERON; Ruud, PG1R. Credits to observers Dick PA0GRU, Arie PA3CNK**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14025.0	1006	04	10	RUS		RADAR		12K0E	OTHR Contayner; TDoA 57N 23E
14192.0	1038	23	10	RUS		F1B		200H	Printer; also on 24/10/2023 0908UTC, 14/10/2023 1432UTC, 28/10/2023 1447UTC
14192.0	1040	30	10			NON			Carrier
14197.8	1715	20	10			NON		1000H	CF; 2 persistent carriers; S6-7
21410.0	0635	27	10	RUS		RADAR	40	12K0E	CF; OTHR Contayner
21436.0	2050	31	10	RUS		F1A			Revs/UiPtr
28705.0	0710	09	10	G		RADAR	50	20K0E	CF; UK AB Cyprus

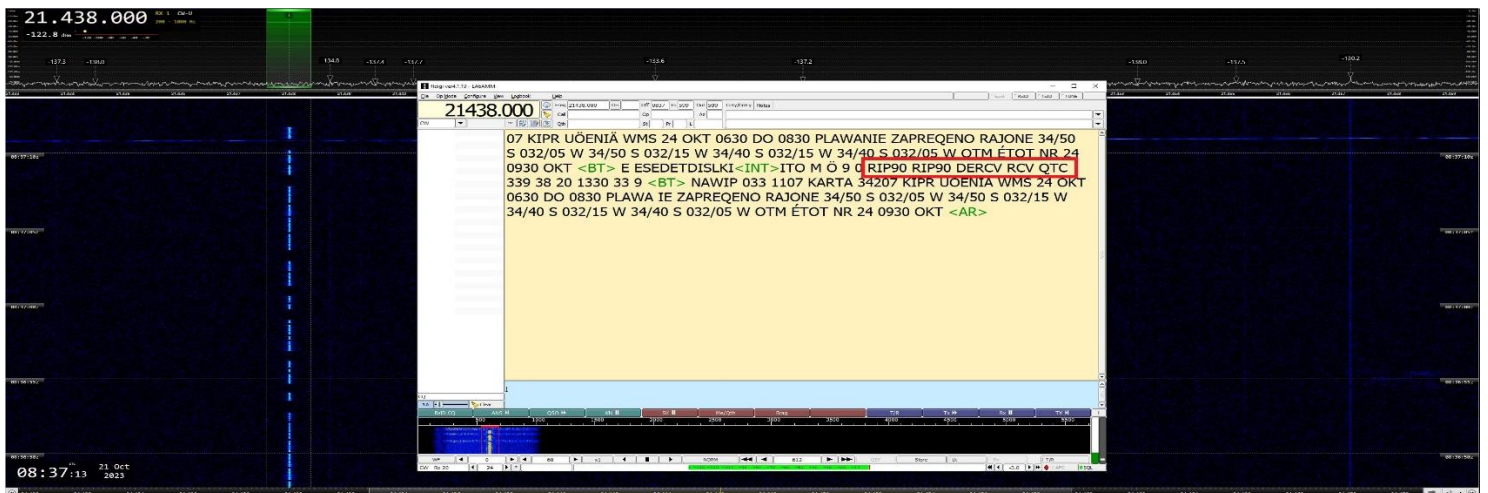
Contact: Gaspar Miró, EA6AMM, [iarums@iaru-r1.org](mailto:iarums@iaru-r1.org)

IARUMS R1 Coordinators: <https://www.iaru-r1.org/spectrum/monitoring-system/iarums-region-1-coordinators/>

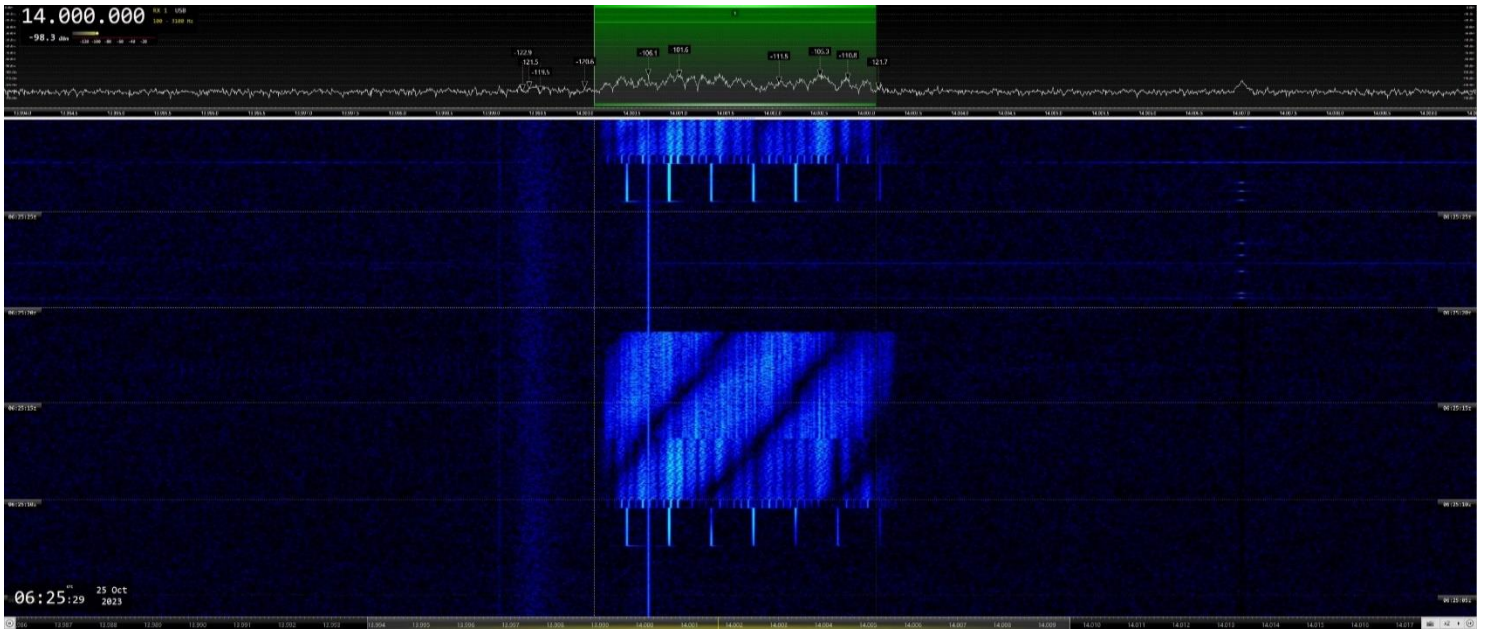
Visit our website: <https://www.iaru-r1.org/about-us/committees-and-working-groups/iarums/>



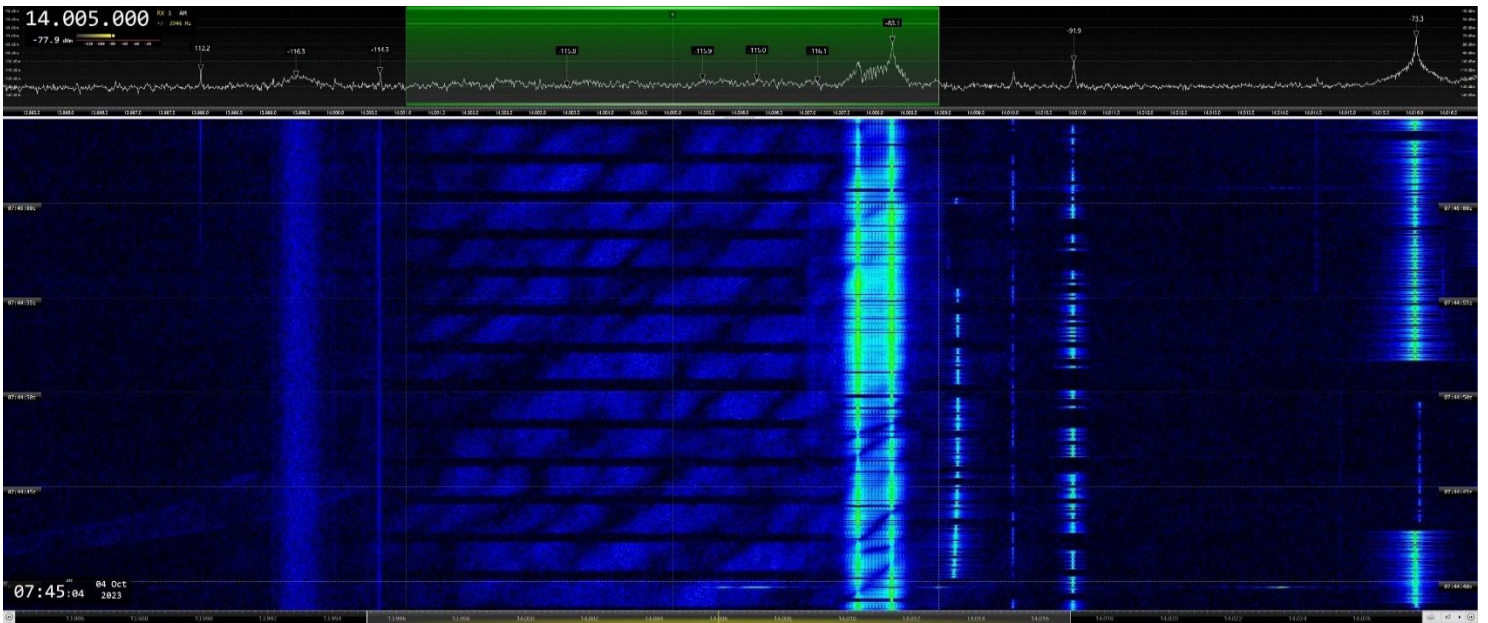
18107 kHz CF: CIS 36-50. RUS. F1B and F1A. Shift = 200 Hz. 50 Bd.ID = „RDL“. F1A (FSK Telegraphy) transcription.



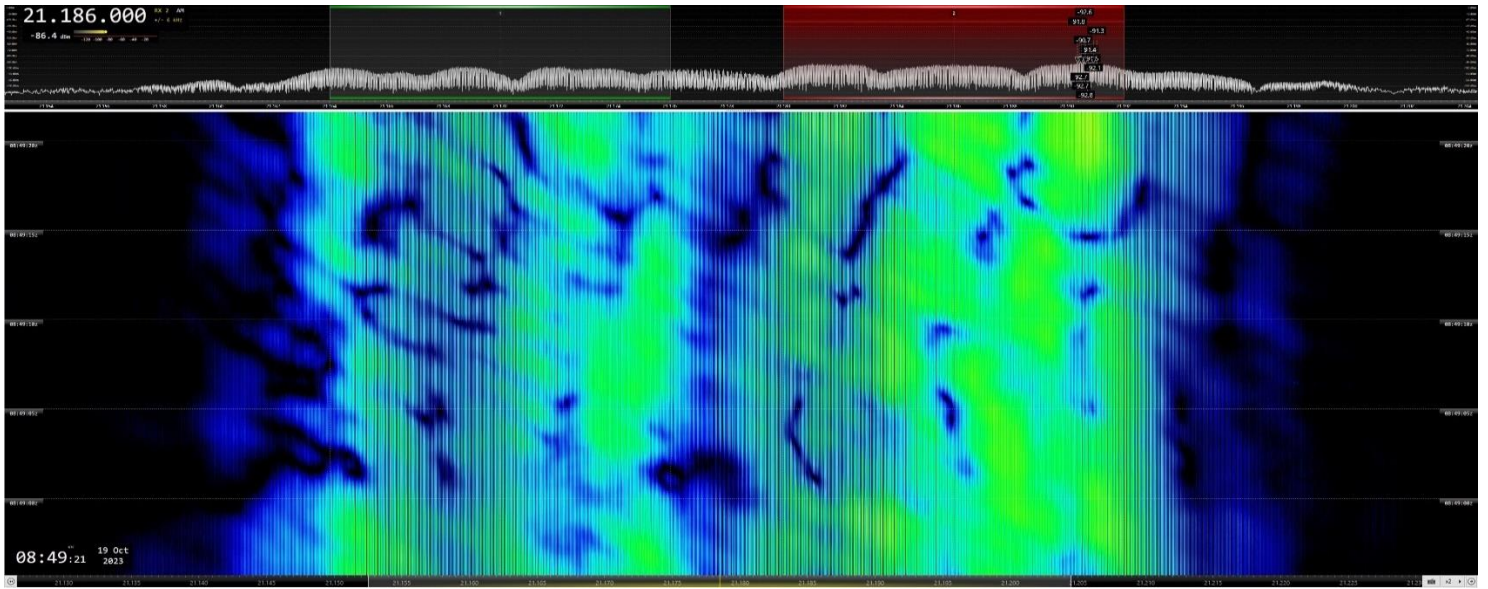
21438 kHz. A1A (CW). RUS navy QTC. ID: „RCV“. Almost daily since many years



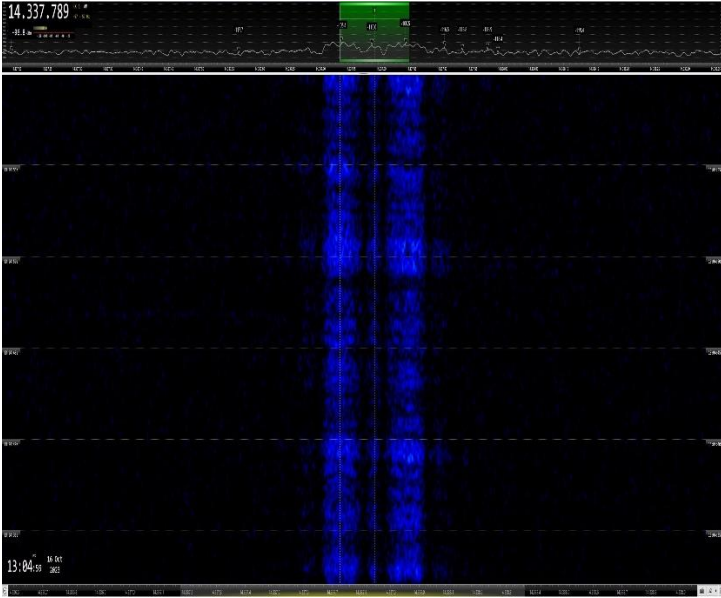
14001.8 kHz CF: ISR navy hybrid modem. BW = 2K40E. 2400 Bd



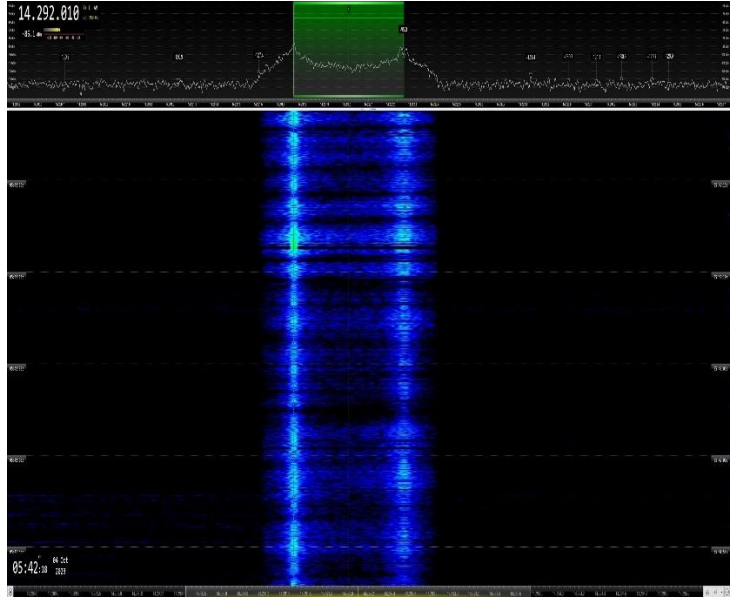
14005 kHz CF: XXX. Unidentified bursts. Jammer. BW ca 8K0E. On 14008 kHz CF, RUS F1B system. Shift = 500 Hz. 50 Bd



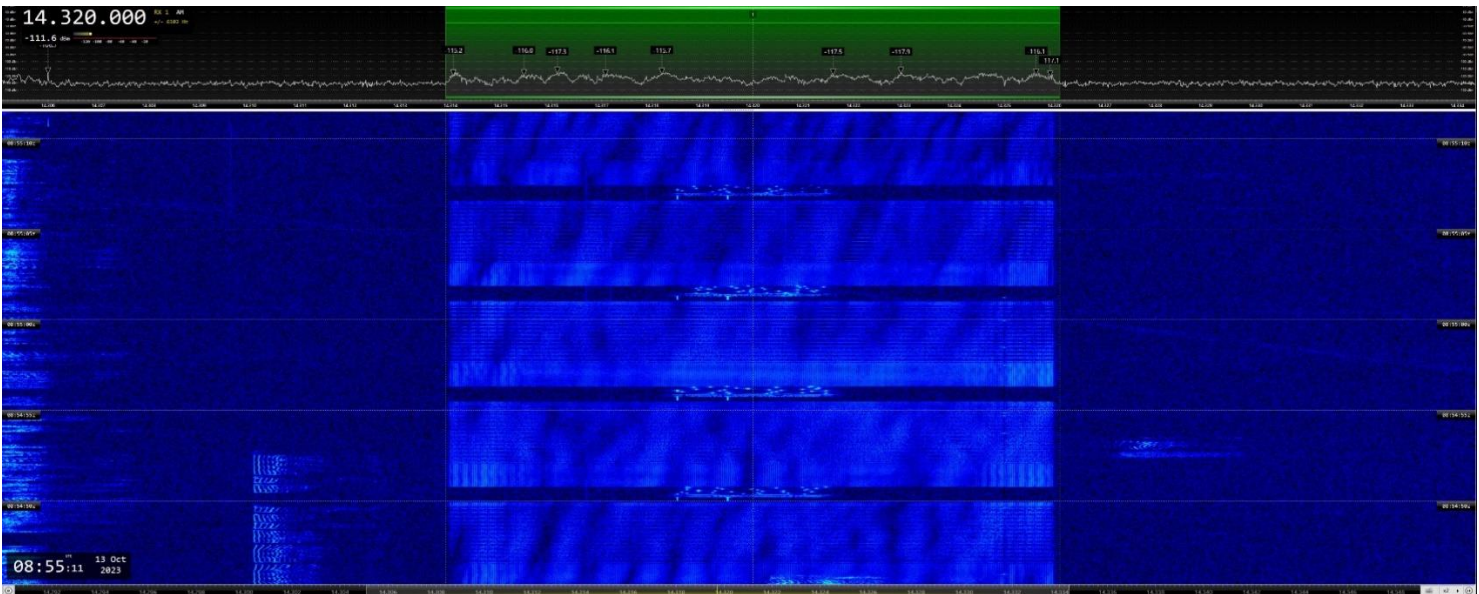
21170 kHz CF and 21186 kHz CF. OTHR Contayner. RUS. FMOP. BW = 12K0E. 40 sps. 2 systems side by side



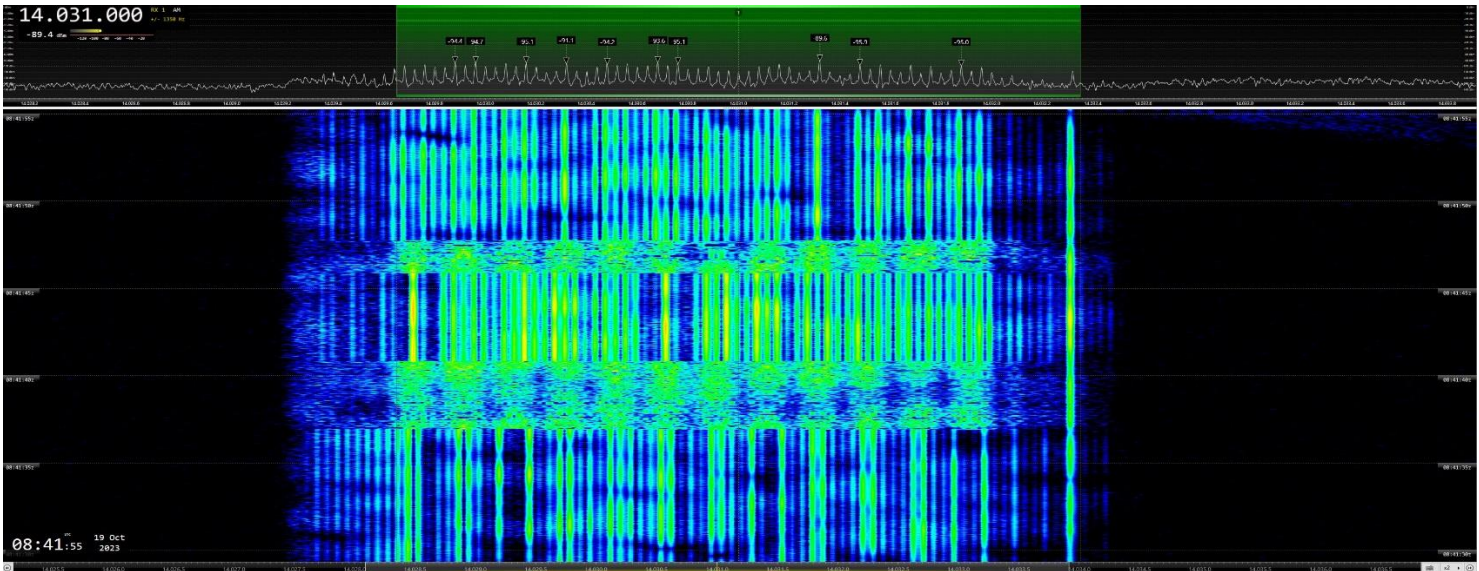
14337.8 kHz CF: F1B (FSK). Shift = 115 Hz. 75 Bd



14292 kHz CF: F1B (FSK). Shift = 500 hz. 100 bd. RUS



14320 kHz CF. XXX. Unidentified digital signal with short intro tones. BW = 12K0E (on October the 13th; screenshot) and 48K0E (on October the 16th; Screenshot on first page)



14031 kHz CF: CIS-12. J7D. BW = 2K70E. 12 x 120 bd + pilot tone