

# IARU Monitoring System Region 1



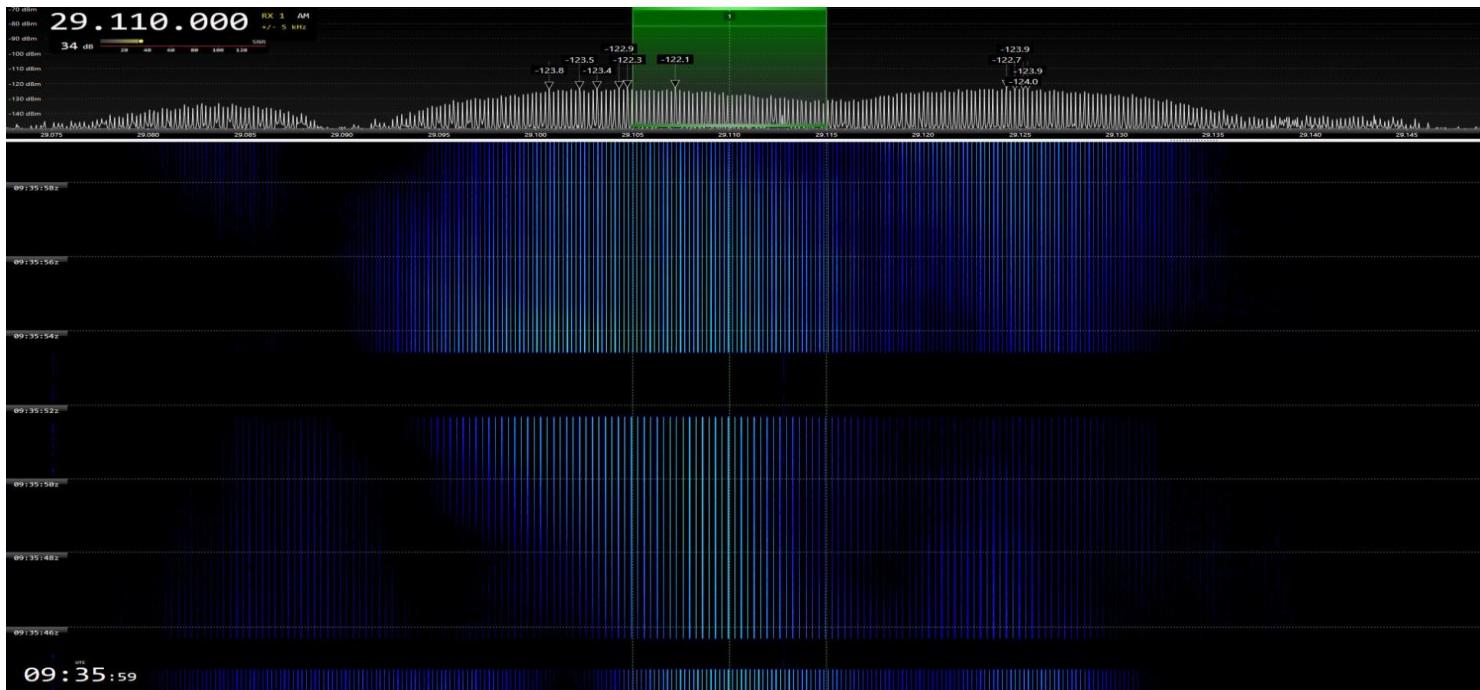
Monthly Newsletter - March 2023

## News and info

"Business as usual"?

It is sad, but that's how we could almost describe the intruder activity on the HF amateur bands during March, as it was very similar to what we have seen during the last months.

We note the large increase in the transmissions sent by the Iranian OTH (Over The Horizon) radar. Previously, this radar transmitted daily on 28860 kHz CF, and, sporadically, was also received on other frequencies in the 10m band. Now we receive three simultaneous daily transmissions from this radar: in addition to its usual 28860 kHz transmission (BW ca 45KOE; alternating 150 and 313 sps bursts), we also receive it daily on two more frequencies in this band (usually 28600 kHz CF and 29450 kHz CF, although sometimes these frequencies may vary). Since its bandwidth is about 45 kHz, we now have 135 kHz of the 10 band abused during long hours daily by its transmissions. On 28860 kHz CF, it sends bursts alternating 150 and 313 sps. On the two other frequencies, in addition to using this sweep rate, it can also be received transmitting bursts alternating 307 and 870 sps (but it can also be received alternating 150 and 313 sps bursts, as alternating 226 and 333 sps bursts).

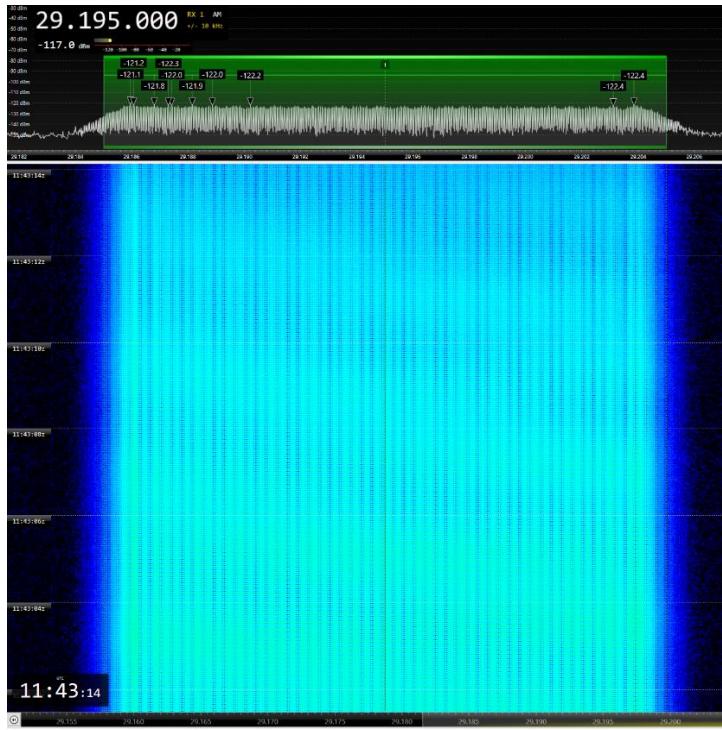


OTHR IRN. BW ca 45KOE. Alternating 150 and 313 sps bursts

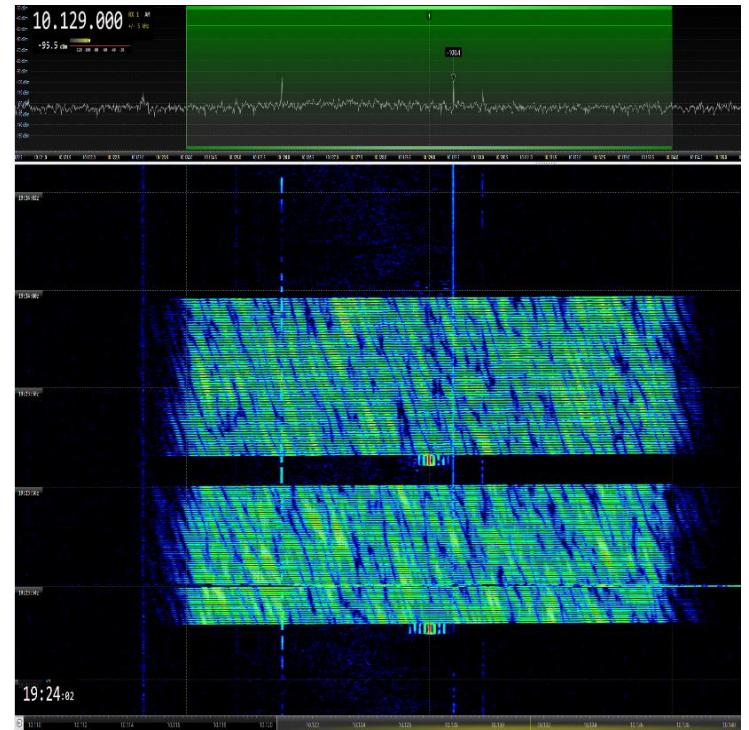
In the 10m band, in addition to the usual transmissions of this radar, there are those of the British OTHR Pluto, located in the United Kingdom's Sovereign Base Area in Cyprus (which also operates on 15 and 17 m. BW = 20KOE; 50 or 25 sps), together with a whole series of illegal transmissions sent by CBers (A3E, F3E, J3E), and by RUS taxi stations working in F3E (short traffic mode, which, according to the DARC (Germany) coordinator, Daniel, DL33RTL, are joined by some transmissions sent by the "Municipal Authority radio" of St. Petersburg (RUS), also in F3E (FM) mode, as indicated in the DARC report.

In other HF amateur radio bands, radars are also the most reported signals throughout the IARU Region 1. Among them, besides the British OTHR Pluto, we received many transmissions sent by the Russian OTH radar Contayner (BW = 12KOE; 40 sps), as well as by several Chinese OTH radars that send short bursts using different sweep rates (41.7, 50, 66.7 and 83.3 sps; BW = 10 kHz). During March we also received a Chinese radar that had not been reported in our bands for months lately, whose transmissions are continuous (BW = 10 KOE; 50 sps) and sometimes, long-lasting.

In the 30 m band we often received the AUS over the horizon radar JORN (Jindalee Operational Radar Network), using 10 kHz bandwidth, sending 7 sps bursts with a short intro tone

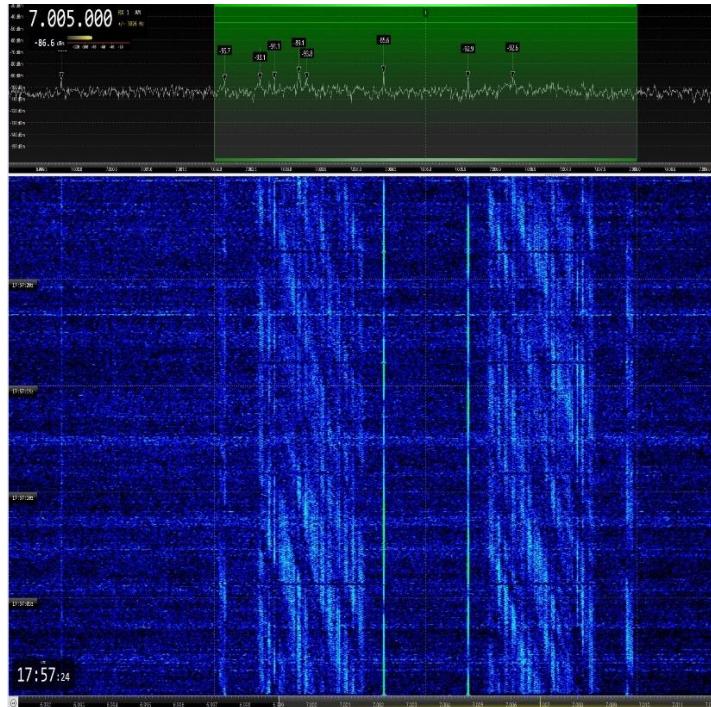


OTHR Pluto. G. BW = 20KOE. 50 sps. UK Sovereign Base Area, Cyprus

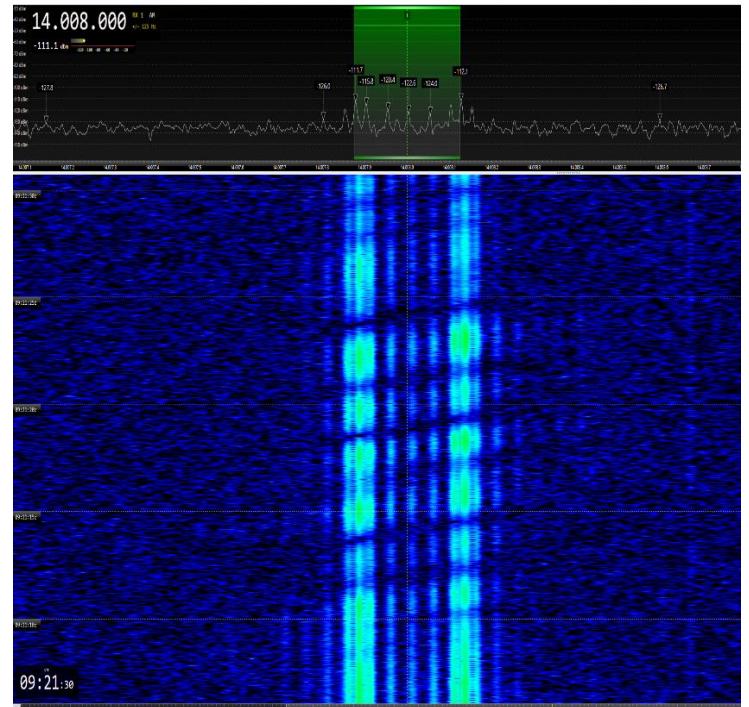


OTHR JORN. AUS. BW = 10KOE. 7 sps bursts with short intro tone

On the 40 and 20m bands, after the radars, the most reported signals are transmissions sent in various well-known MIL modes, such as CIS-12 (J7D. BW = 2K7OE. 12 x 120 Bd + pilot line), LINK-11 CLEW SSB (G7D. 2K40E, 75 Bd), several F1B (FSK ##CIS modes and others.



LINK 11 CLEW DSB. B7D. BW = 6KOE. 75 Bd.



CIS F1B. RUS. BW = 250 Hz. 50 bd

Together with these transmissions, we received "village radio" J3E transmissions on 40 and 15 m as well as Spanish fishers illegally operating in these bands, most usually heard on 21000 kHz using J3E-U.

in 40 m (7110 kHz CF, A3E) the broadcasting station "Ethiopia Radio" kept on sending its transmissions, as well as the station "Sound of Hope", operating from Taiwan (18080 kHz CF, A3E).

## 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: DL8LAQ, Norbert; DL2SCH, Jürgen; DA1YS, Ron; DB4UP, Christoph; DC1BC, Roland; F4FPR, Benjamin; DO3RMG, Markus; DL4RAN, Markus; DJ0CHE, Johannes; F8NZQ, Philippe; DH1BDU, Jochen; DH5ST, Ingo; DL4YWO, Wolfgang; DB3TA, Alex**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7025,8	2055	27	03	RUS		PSK		2k4	CIS-12
7058,0	2253	07	03	RUS		FMOP	40	12k	OTHR Contayner
7060,0	2025	07	03	RUS		FMOP	40	12k	OTHR Contayner
7065,0	2032	10	03	RUS		FMOP	40	12k	OTHR Contayner
7085,0	2055	27	03	RUS		FMOP	40	12k	OTHR Contayner
7105,0	2001	02	03	RUS		FMOP	40	12k	OTHR Typ Container RUS
7133,0	2118	30	03	RUS		FMOP	40	12k	OTHR Contayner
7138,0	1945	23	03	RUS		FMOP	40	12k	OTHR Contayner
7146,8	vt	vd	03	RUS		PSK		2k4	CIS-12
7160,8	0125	16	03			PSK		2k4	LINK11 CLEW SSB
7175,0	1838	24	03	RUS		FMOP	40	12k	OTHR Contayner
7187,0	2215	07	03	RUS		FMOP	40	12k	OTHR Contayner
7188,0	2054	07	03	RUS		FMOP	40	12k	OTHR Contayner
14108,0	0745	26	03	RUS		F1B	50	200	CIS-50-50
14131,0	1750	24	03	RUS		FMOP	40	12k	OTHR Contayner
14140,0	1740	11	03	RUS		FMOP	40	12k	OTHR Contayner
14153,0	1705	13	03	RUS		FMOP	40	12k	OTHR Contayner
14157,0	1905	07	03	RUS		FMOP	40	12k	OTHR Contayner
14161,0	1840	21	03	CHN		FMCW	41,67	10k	OTHR 6,1s bursts
14165,0	1740	11	03	RUS		FMOP	40	12k	OTHR Contayner
14166,0	1905	07	03	RUS		FMOP	40	12k	OTHR Contayner
14177,0	1603	12	03	CHN		FMCW	41,67	10k	OTHR 6,1s bursts
14189,0	1858	08	03	RUS		FMOP	40	12k	OTHR Contayner
14241,0	1050	03	03	RUS		PSK		2k4	CIS-12
14288,0	1603	12	03	CHN		FMCW	41,67	10k	OTHR 6,1s bursts
18107,0	0721	26	03	RUS		F1B	50	200	CIS-50-50
18170,0	1705	28	03	G		FMCW	25	20k	OTHR Pluto. UK SBA, Cyprus
21000,0	1559	22	03			J3E-U		ca.3k	suspect "spanish" speaking male voices in intercom, J3E-U, until ca.16:12UTC

**DARC; Daniel, DL3RTL. Credit to monitors: DL8LAQ, Norbert; DL2SCH, Jürgen; DA1YS, Ron; DB4UP, Christoph; DC1BC, Roland; F4FPR, Benjamin; DO3RMG, Markus; DL4RAN, Markus; DJ0CHE, Johannes; F8NZQ, Philippe; DH1BDU, Jochen; DH5ST, Ingo; DL4YWO, Wolfgang; DB3TA, Alex**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21104,0	1103	12	03	CHN		FMCW	41,67	10k	OTHR 6,1s bursts
21115,0	1232	26	03	CHN		FMCW	50	10k	OTHR 5,1s bursts
21132,0	0752	26	03	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
21159,0	1742	11	03	RUS		FMOP	40	12k	OTHR Contayner
21161,0	1800	10	03	RUS		FMOP	40	12k	OTHR Typ Container RUS
21176,0	1800	07	03	RUS		FMOP	40	12k	OTHR Typ Container RUS
21230,0	1702	22	03	G		FMCW	50	20k	OTHR Pluto. UK SBA, Cyprus
21308,0	0806	19	03				50	10k	OTHR
21323,0	1746	07	03	RUS		FMOP	40	12k	OTHR Typ Container RUS
21374,0	1605	11	03	RUS		FMOP	40	12k	OTHR Contayner
21391,0	1802	07	03	RUS		FMOP	40	12k	OTHR Typ Container RUS
21395,0	1435	20	03	G		FMCW	50	20k	OTHR Pluto. UK SBA, Cyprus
21411,0	1838	17	03	RUS		FMOP	40	12k	OTHR Contayner
21423,0	1602	12	03	RUS		FMOP	40	12k	OTHR Contayner
21430,0	0712	26	03	G		FMCW	50	20k	OTHR Pluto. UK SBA, Cyprus
21438,0	vt	vd	03	RUS		A1A			RUS Navy in Sevastopol
21450,0	1704	28	03	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
24942,0	1018	11	03					6k	unident
24960,0	1532	29	03	G		FMCW	50	20k	OTHR Pluto. UK SBA, Cyprus
28105,0	1450	04	03	RUS		F3E		6k	Municipal authority radio, St. Petersburg
28145,0	1105	05	03	RUS		F3E		6k	Municipal authority radio, St. Petersburg
28154,0	0757	11	03	G		FMCW	50	20k	OTHR Pluto. UK SBA, Cyprus
28155,0	1252	11	03	RUS		F3E		6k	Municipal authority radio, St. Petersburg
28215,0	1002	04	03	RUS		F3E		6k	Municipal authority radio, St. Petersburg
28265,0	1006	04	03	RUS		F3E		6k	Municipal authority radio, St. Petersburg
28285,0	1006	04	03	RUS		F3E		6k	Municipal authority radio, St. Petersburg
28310,0	1058	12	03	G		FMCW	50	20k	OTHR Pluto. UK SBA, Cyprus
28330,0	0934	04	03	G		FMCW	50	20k	OTHR Pluto. UK SBA, Cyprus
28370,0	1110	01	03	G		FMCW	50	20k	OTHR Pluto. UK SBA, Cyprus
28450,0	1424	11	03	IRN			150/313	50k	OTHR Typ Ghadir from Iran
28600,0	vt	vd	03	IRN			308/870	45k	OTHR Typ Ghadir from Iran
28655,0	1600	12	03	G		FMCW	25	20k	OTHR Pluto. UK SBA, Cyprus
28700,0	1225	25	03	IRN			307/870	45k	Iranian OTHR 5,81/3,26s bursts
28860,0	vt	vd	03	IRN			150/313	45k	Iranian OTHR 9,98/7,19s bursts
28890,0	1058	11	03	G		FMCW	50	20k	OTHR Pluto. UK SBA, Cyprus
28945,0	1015	11	03	G		FMCW	50	20k	OTHR Pluto. UK SBA, Cyprus
28960,0	1014	03	03	G		FMCW	50	20k	OTHR Pluto. UK SBA, Cyprus
29000,0	1100	12	03	IRN			307/870	45k	Iranian OTHR 5,81/3,26s bursts
29010,0	1050	26	03	G		FMCW	25	20k	OTHR Pluto. UK SBA, Cyprus
29185,0	0936	04	03	G		FMCW	50	20k	OTHR Pluto. UK SBA, Cyprus
29190,0	1150	15	03	G		FMCW	12,5		OTHR Pluto. UK SBA, Cyprus
29220,0	1024	18	03	G		FMCW	50	20k	OTHR Pluto. UK SBA, Cyprus
29400,0	1100	12	03	IRN			150/313	45k	Iranian OTHR 9,98/7,19s bursts
29450,0	0800	11	03	IRN			150/313	45k	Iranian OTHR 9,98/7,19s bursts
29450,0	1522	30	03	IRN			150/313	45k	OTHR Typ Ghadir from Iran
29500,0	0758	11	03	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	
3632	1910	23	3	UKR/ RUS		LSB			Russian- Ukrainian radio war. Patriotic music and propaganda slogans.	
3762	1715	6	3	F		LSB			French station engaged in DQRM.Shouting of profanities, replaying other stations. Nearly daily.	
7000	1510	12	3	E or MM		LSB			Spanish fishermen. Strong signals.	
7000	1520	12	3	INS		LSB			Village radio. Male voices chatting and singing. Weak signals.	
7001	1425	13	3	I		USB			Male voices chatting in Italian. Medium signal.	
7050	1710	12	3	RUS/ UKR		LSB			Russian-Ukrainian radio war. Big signals. Persistent.	
7050	2225	31	3			RADAR			Radar from 7050 to 7066 kHz. Strong and persistent.	
7055	1635	10	3	RUS/ UKR		LSB			Russian-Ukrainian radio war. Strong and persistent. Daily.	
7060	1715	12	3	RUS/ UKR		LSB			Russian-Ukrainian radio war. Loud and persistent.	
7098	1230	4	3			LSB			Pop music. Very strong signal.	
7148	1720	12	3			PSK			Strong and persistent signal.	
7186	2220	31	3			RADAR			Radar from 7185 to 7199 kHz. Strong and persistent.	
7186	1725	12	3	RUS/ UKR		LSB			Russian- Ukrainian radio war. Music and shouting of slogans. Strong and persistent.	
14000	2010	28	3	B		USB			Brazilian Cbers. Medium signals.	
14197.5	1205	20	3			FSK			North Korean embassy traffic.	
18125	1445	11	3			RADAR			Radar from 18125 to 18137 kHz. Medium signal.	
18141	1250	10	3	G		RADAR			UK SBA, Cyprus. Radar from 18141 to 18173 kHz. Strong and persistent. "Pluto". Also heard on the 14 <sup>th</sup> and 1535z.	
18157	1245	1	3	G		RADAR			UK SBA, Cyprus. Radar from 18157 to 18187 kHz. Medium signal. On and off. "Pluto"	
21000	1120	7	3	E or MM		USB			Spanish fishermen. Very strong.	
21292	950	10	3	CHN		RADAR			Chinese foghorn. Very strong and persistent.	
21323	1700	12	3	G		RADAR			UK SBA, Cyprus. Radar from 21323 to 21338 kHz. Weak but persistent. "Pluto"	
21380	1835	17	3	G		RADAR			UK SBA, Cyprus. Radar from 21380 to 21405 kHz. Strong and persistent. "Pluto"	
21387	1130	31	3						Encrypted traffic. Male voices. On and off. Medium signals. Ends around 1300z.	
21388	1140	29	3	G		RADAR			UK SBA, Cyprus. Radar from 21388 to 21410 kHz. Strong and persistent. "Pluto"	
21397	945	10	3	G		RADAR			UK SBA, Cyprus. Radar from 21397 to 21419 kHz. "Pluto"	
21400	1835	17	3	G		RADAR			UK SBA, Cyprus. Radar from 21400 to 21420 kHz. Medium signal. Persistent."Pluto"	
21418	1500	12	3	G		RADAR			UK SBA, Cyprus. Radar from 21418 to 21430 kHz.Medium and persistent signal.	

**IRTS; Michael, EI3GYB**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
									"Pluto"
21438	1240	1	3	Ukraine		CW			Russian navy Sevastopol. Daily all day long. Medium to strong signals.
28000	1600	1	3	IRN		RADAR			Radar from 28000 to 30000 kHz. Moving up and down the band or staying in sections across the band. Daily all hours of daylight. Medium to strong signals.
28260	1525	14	3	RUS		FM			Russian taxi service. Female voice. Medium signal.
28285	1450	11	3	RUS		FM			Russian taxi service. Female voice. Strong signal.
28410	1530	14	3	TJK		AM			Radio Free Asia, Dushanbe. Third harmonic of 9470 kHz. Strong.
28600	1000	10	3	G		RADAR			UK SBA, Cyprus. Radar from 28600 to 28620 kHz. Very strong and persistent. "Pluto"
28759	1000	8	3	G		RADAR			UK SBA, Cyprus. Radar from 28759 to 28780 kHz. Very strong and persistent. "Pluto"
29015	1250	1	3	RUS		FM			Russian taxi service. Female voice. Medium signal.

**OeVSV; Christoph, OE1VMC**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
28600	1658	18	03	IRN		RADAR		45KOE	
28700	0726	26	03	IRN		RADAR		45KOE	
29450	0953	26	03	IRN		RADAR		45KOE	

**PZK; SP3AMO, SP5GN1**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7026.0	2050	25	03			CIS-12		2K7	S8+
7059.0	2017	15	03			Radar	40	12KOE	
7060.0	2050	07	03			RADAR		12KOE	S9+
7110.0	1443	22	03			UI		2KOE	S7
7147.0	vt	vd	03			CIS-12		2K7	S8 pilot 7148.3
7192.0	0645	21	03			PSK	120	2K70E	
14008.0	0918	22	03			RTTY		250	S9+
14008.0	0738	09	03			F1B		250H	
14098.0	11620	16	03			PSK	40/100	2K70E	
14161.0	1835	27	03			RADAR		10KOE	S8
14199.0	1300	31	03			RADAR		15KOE	
14310.0	1250	04	03			RADAR		10KOE	3 sec. Bursts
18107.0	vt	vd	03		RDL	F1B/A1A		200H	20 wpw
18141.0	1235	04	03			RADAR		10KOE	3 sec. Bursts
18161.0	1300	10	03			Radar	40	12KOE	
21000.0	0735	16	03	E		J3E-U		2K70E	
21049.0	1122	10	03			RADAR		8KOE	bursts also 21155.0
21105.0	1022	26	03			RADAR		10KOE	S9 5 sec. Burst

**PZK; SP3AMO, SP5GNI**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21128.0	1825	09	03			RADAR		10KOE	S5
21144.0	1225	23	03			RADAR		10KOE	short bursts and 21341.0
21169.0	0748	02	03			Radar	40	12KOE	
21185.0	1123	18	03			Radar	40	10KOE	Bursts
21186.0	0854	31	03			Radar	50	10KOE	Bursts
21222.0	0845	09	03			RADAR		10KOE	short bursts
21298.0	1120	21	03			RADAR		10KOE	bursts also 21330.0
21305.0	1628	16	03			Radar	50	10KOE	Bursts
21317.0	1045	23	03			RADAR		10KOE	S9+
21323.0	0858	28	03			RADAR	50	10KOE	S6 continous
21334.0	0919	15	03			Radar	50	10KOE	Bursts
21336.0	0905	05	03			Radar	40	10KOE	Bursts
21341.0	0855	14	03			Radar	66	10KOE	Bursts
21347.0	0835	13	03			Radar	66	10KOE	Bursts
21353.0	0825	30	03			Radar	50	10KOE	Bursts
21356.0	0856	31	03			Radar	66	10KOE	Bursts
21395.0	vt	20	03			RADAR		20KOE	S9+
21419.0	0830	30	03			Radar	66	10KOE	Bursts
21420.0	1025	05	03			RADAR		10KOE	bursts also 21420.0, 21285.0
21430.0	0920	15	03			Radar	66	10KOE	Bursts
21438.0	0939	28	03		A1A		20 wpm	579	
21440.0	1205	25	03			RADAR		10KOE	short bursts
21450.0	0923	15	03			Radar	50	10KOE	Bursts
24890.0	0856	14	03			Radar	40	12KOE	
28100.0	0739	16	03			Radar	300/870	46KOE	
28105.0	1155	21	03			F3E		6K0	In Russian (radio taxi) also 28165.0
28110.0	0840	09	03			RADAR		60KOE	
28110.0	1613	08	03			Radar	300/870	46KOE	
28145.0	0913	28	03			F3E		6K0	In Russian (radio taxi)
28204.4	1358	23	03			A3E		6KOE	In Spanish
28245.0	0835	09	03			A3E		6KOE	In Spanish also 15:57 20.03
28300.0	1352	26	03			RADAR		10KOE	long burst
28600.0	vt	vd	03			Radar	300/870	46KOE	
28700.0	vt	vd	03			Radar	300/870	46KOE	
28743.0	1615	08	03			Radar	40	12KOE	
28825.0	1632	16	03			Radar	50	20KOE	
28860.0	vt	vd	03			Radar	150/300	46KOE	
29000.0	vt	vd	03			Radar	300/870	46KOE	
29060.0	1345	31	03			RADAR		40KOE	S6 continous
29185.0	vt	18	03			RADAR		20KOE	S9+
29340.0	0911	05	03			Radar	150/300	46KOE	
29400.0	vt	vd	03			Radar	150/300	46KOE	
29525.0	1240	31	03			RADAR		20KOE	S6 continous

REF; Francis, F5MIU									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
28785	0850	2	03			fmcw	40	20kHz	OTH Radar pulsed 25ms, S8
28850	0852	2	03			fmcw	Multiple	100kHz	OTH Radar pulsed multiple rate, S9+20dB
18155	0902	2	03			fmcw	40	20kHz	OTH Radar pulsed 25ms, S8
21175	0900	4	03			fmcw	40	20kHz	OTH Radar pulsed 25ms, S9
29000	0856	6	03			fmcw	Multiple	100kHz	OTH Radar pulsed multiple rate, S8
28860	0830	7	03			fmcw	Multiple	100kHz	OTH Radar pulsed multiple rate, S6
29000	0916	08	03			fmcw	Multiple	150kHz	OTH Radar pulsed multiple rate, S8
29050	0920	08	03			fmcw	Multiple	100kHz	OTH Radar pulsed multiple rate, S8
28860	0843	9	03			fmcw	Multiple	60kHz	OTH Radar pulsed multiple rate, S9
24900	0846	9	03			fmcw	40	20kHz	OTH Radar pulsed 25ms, S8
21155	0855	9	03			fmcw	40	20kHz	OTH Radar pulsed 25ms, S9
21200	0902	9	03			fmcw	40	20kHz	OTH Radar pulsed 25ms, S9+ shifted from 21155
21415	0847	10	03			fmcw	40	20kHz	OTH Radar pulsed 25ms, S8
24890	0842	12	03			fmcw	40	20kHz	OTH Radar pulsed 25ms, S9+10dB
28490	0915	12	03			fmcw	50	20kHz	OTH Radar pulsed 20ms, S9+
28950	0844	14	03			fmcw	Multiple	100kHz	OTH Radar pulsed multiple rate, S9
28380	0846	21	03			fmcw	50	20kHz	OTH Radar pulsed 20ms, S9+
28860	0855	21	03			fmcw	Multiple	100kHz	OTH Radar pulsed multiple rate, S9
21230	1657	22	03			fmcw	50	20kHz	OTH Radar pulsed 20ms, S8
14115	1659	22	03			fmcw	40	20kHz	OTH Radar pulsed 25ms, S8
21323	0750	28	03			fmcw	50	10kHz	OTH Radar pulsed 20ms, S9
14195	0739	30	03			fmcw	50	10kHz	OTH Radar pulsed 20ms, S5
21283	0746	31	03			fmcw	50	10kHz	OTH Radar pulsed 20ms, S9

RSK; Kamweti, 5Z4BV									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3696	1013	24	3	??		FMOP	40 sps	3k0E	FMOP-OTHR
5360	vt	vd	3	??		PSK		50k0E	CIS-12
7005	1440	24	3	??		J3E-L		2K5E	Phone voice 'chanting'
7025	vt	vd	3	KEN		PSK		2k7E	STANAG 4285
7050	vt	vd	3	UGA		J3E-U		2k5E	Kiswahili probably paramilitary QSOs
7050	vt	vd	3	UGA		J3E-L		2k5E	Kiswahili probably paramilitary QSOs
7050	0957	31	3	??		FMOP	40 sps	20k0E	FMOP-OTHR
7090	1545	24	3	??		PSK			portrayed a high baud rate
7110	vt	vd	3	ETH		AM		22k0E	Radio Ethiopia National Service
7113	1542	24	3	??		FMOP	40 sps	10k0E	FMOP-OTHR
7140	vt	vd	3	ERI		AM		20K0e	Voice of the Broad Masses 1
7150	vt	vd	3	KEN		MFSK	128	2k2	2G ALE
7164,9	1609	24	3	??		J3E-U		2k5E	Possibly Indian Ocean Indo-Asian vernacular QSO
10126	1430	20	3	??		FMOP	5 sps	5k0E	FMOP-OTHR
10126	1428	20	3	??		??		2k0E	strange harmonics with phone, and shifting CW
14241,5	1254	20	3	??		FMCW		5K0E	OTHR-like with 5 seconds burst
14283	1634	20	3	RUS		FMOP	40sps	5k0E	FMOP-OTHR Kontayner

**RSK; Kamweti, 5Z4BV**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21212	1007	31	3	??		J3E-U		2k5E	Unidentified indo-like QSO
21395	1301	20	3	RUS		FMOP	40 sps	22k0E	OTHR Russian 'kontayner'
28860	1312	30	3	??		PSK		60k0E	CIS-12

**RSGB; Richard, G4DYA**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3756.0	1952	01	03			J3E		2K20E	USB 'The Pip'. Daily. Also heard 272233z
7022.0	0743	15	03			J7D		2K70E	USB 7020.0 / CIS-12
7024.0	2001	01	03			F1B		200	FSK
7026.0	2047	27	03			J7D		2K70E	USB 7024.0 / CIS-12
7036.0	1805	08	03			F1B	50	500	FSK
7056.0	2223	31	03	RUS		PON	40	14K0E	Container pulse radar
7060.0	2142	07	03	RUS		PON	40	14K0E	Container pulse radar
7064.0	2221	16	03	RUS		PON	40	14K0E	Container pulse radar
7075.00	0731	15	03			A1N			Continuous groups of 16 dashes. Also heard 171819z
7075.01	0910	05	03			A1N			Continuous groups of 16 dashes. Also heard 200721z
7075.02	0806	11	03			A1N			Continuous groups of 16 dashes. Also heard 180813z
7080.0	1959	01	03			F1B		200	FSK. Also heard 171822z, 211903z
7086.0	2222	16	03	RUS		PON	40	14K0E	Container pulse radar
7093.0	1958	01	03	RUS		PON	40	14K0E	Container pulse radar
7137.0	2228	16	03			F1B	50	250	FSK
7147.0	1824	17	03			J7D		2K70E	USB 7145.0 / CIS-12. Also heard 211906z
7159.0	0701	21	03			J7D		2K40E	USB 7159.0 / Link 11 CLEW. Also heard 230656z
7187.0	2128	03	03	RUS		PON	40	14K0E	Container pulse radar
7188.0	2143	07	03	RUS		PON	40	14K0E	Container pulse radar
10153.0	2123	27	03			F3N		11K0E	FMCW radar bursts 20.3 / 21.5 / 22.6 / 23.7 / 24.8 sps
14194.0	0935	07	03	RUS		PON	40	14K0E	Container pulse radar
14198.5	0705	23	03			F1D		1K20E	FSK bursts 600 Hz shift
14253.0	1436	03	03			F1B		250	FSK. Also heard 200703z, 270644z
14350.0	1446	07	03	CHN		F3N	66.7	10K0E	FMCW radar bursts
18107.0	1611	01	03	RUS		F1B	50	200	FSK. Also heard 031723z, 050923z, 070820z, 101330z, 110822z, 150929x, 180727z, 210734z, 231232z, 280725z, 290721z, 300754z, 310724z
18157.0	0703	23	03	RUS		PON	40	14K0E	Container pulse radar
18158.0	0959	05	03	CHN		F3N	66.7	10K0E	FMCW radar bursts
18162.0	1328	10	03	RUS		PON	40	14K0E	Container pulse radar
18174.0	0954	05	03	RUS		PON	40	14K0E	Container pulse radar. Also heard 200809z
21090.0	0652	27	03	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21113.0	1040	09	03	CHN		F3N	66.7	10K0E	FMCW radar bursts
21144.0	1229	23	03	CHN		F3N	66.7	10K0E	FMCW radar bursts
21155.0	0717	22	03	CHN		F3N	66.7	10K0E	FMCW radar bursts
21161.0	1809	17	03	RUS		PON	40	14K0E	Container pulse radar

**RSGB; Richard, G4DYA**

<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>
21173.0	0811	07	03	CHN		F3N	66.7	10KOE	FMCW radar bursts
21183.0	1615	05	03	RUS		PON	40	14KOE	Container pulse radar
21186.0	0739	31	03	CHN		F3N	47.6	10KOE	FMCW radar bursts
21205.0	0715	29	03	CHN		F3N	50	10KOE	FMCW radar
21211.0	0738	31	03	CHN		F3N	50	10KOE	FMCW radar bursts
21222.0	0916	09	03	CHN		F3N	50	10KOE	FMCW radar bursts
21232.0	0714	29	03	CHN		F3N	66.7	10KOE	FMCW radar bursts
21242.0	0723	31	03	CHN		F3N	66.7	10KOE	FMCW radar bursts
21274.0	0811	20	03	CHN		F3N	50	10KOE	FMCW radar bursts
21283.0	0715	31	03	CHN		F3N	50	10KOE	FMCW radar
21285.0	0920	05	03	CHN		F3N	66.7	10KOE	FMCW radar bursts
21288.0	0751	08	03	CHN		F3N	66.7	10KOE	FMCW radar bursts
21293.0	0807	18	03	CHN		F3N	66.7	10KOE	FMCW radar bursts
21303.0	0813	07	03	CHN		F3N	66.7	10KOE	FMCW radar bursts
21308.0	0739	29	03	CHN		F3N	66.7	10KOE	FMCW radar bursts
21310.0	0738	29	03	CHN		F3N	50	10KOE	FMCW radar bursts
21315.0	0747	22	03	CHN		F3N	50	10KOE	FMCW radar
21317.0	0712	23	03	RUS		PON	40	14KOE	Container pulse radar
21323.0	0723	28	03	CHN		F3N	50	10KOE	FMCW radar
21333.0	0713	21	03	CHN		F3N	66.7	10KOE	FMCW radar bursts
21336.0	0904	05	03	CHN		F3N	41.7	10KOE	FMCW radar bursts
21341.0	1231	23	03	CHN		F3N	66.7	10KOE	FMCW radar bursts
21348.0	0740	18	03	CHN		F3N		10KOE	FMCW radar bursts alternating 62.5 / 66.7 sps
21361.0	0726	20	03	CHN		F3N	41.7	10KOE	FMCW radar bursts
21365.0	0758	11	03	CHN		F3N	66.7	10KOE	FMCW radar bursts
21374.0	0748	08	03	CHN		F3N	50	10KOE	FMCW radar bursts
21375.0	1344	14	03	G		F3N	50	20KOE	FMCW radar, UK SBA, Cyprus
21381.0	0809	18	03	CHN		F3N	66.7	10KOE	FMCW radar bursts
21385.0	0748	08	03	CHN		F3N	41.7	10KOE	FMCW radar bursts
21387.0	0719	31	03	CHN		F3N	50	10KOE	FMCW radar bursts
21390.0	0956	05	03	CHN		F3N	66.7	10KOE	FMCW radar bursts
21390.0	0745	22	03	G		F3N	50	20KOE	FMCW radar, UK SBA, Cyprus
21392.0	0718	20	03	CHN		F3N	50	10KOE	FMCW radar bursts
21393.0	0711	29	03	CHN		F3N	50	10KOE	FMCW radar bursts
21403.0	0720	31	03	CHN		F3N	66.7	10KOE	FMCW radar bursts
21413.0	1449	07	03	CHN		F3N	41.7	10KOE	FMCW radar bursts
21417.0	0700	23	03	CHN		F3N	66.7	10KOE	FMCW radar bursts
21421.0	0800	11	03	CHN		F3N	66.7	10KOE	FMCW radar bursts
21422.0	1039	07	03	CHN		F3N	41.7	10KOE	FMCW radar bursts
21429.0	0815	20	03	CHN		F3N	41.7	10KOE	FMCW radar bursts
21433.0	0711	29	03	CHN		F3N	66.7	10KOE	FMCW radar bursts
24894.0	0745	08	03	RUS		PON	40	14KOE	Container pulse radar
28155.0	0755	11	03	G		F3N	50	20KOE	FMCW radar, UK SBA, Cyprus
28350.0	1406	08	03	G		F3N	50	20KOE	FMCW radar, UK SBA, Cyprus
28370.0	0811	11	03	G		F3N	50	20KOE	FMCW radar, UK SBA, Cyprus
28600.0	0856	05	03	IRN		PON		45KOE	Pulse radar 307.1 / 869.5 pps. Also heard

**RSGB; Richard, G4DYA**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
									141337z
28700.0	1224	23	03	IRN		PON		45KOE	Pulse radar 307.1 / 869.5 pps. Also heard 291440z
28860.0	1429	03	03	IRN		PON		45KOE	Pulse radar 150.2 / 313.0 pps. Also heard 050900z, 070838z, 090911z, 141339z, 291441z, 300752z
28930.0	1509	08	03	G		F3N	50	20KOE	FMCW radar, UK SBA, Cyprus
29000.0	1431	03	03	IRN		PON		45KOE	Pulse radar 307.1 / 869.5 pps. Also heard 070840z, 081359z, 101323z, 110752z
29190.0	1356	08	03	G		F3N	25	20KOE	FMCW radar, UK SBA, Cyprus
29350.0	0858	05	03	IRN		PON		45KOE	Pulse radar 150.2 / 313.0 pps
29400.0	0842	07	03	IRN		PON		45KOE	Pulse radar 150.2 / 313.0 pps. Also heard 101325z
29450.0	1452	07	03	IRN		PON		45KOE	Pulse radar 150.2 / 313.0 pps. Also heard 090913z, 110753z, 231226z, 291442z
29575.0	1342	14	03	G		F3N	50	20KOE	FMCW radar, UK SBA, Cyprus
29610.0	0804	01	03	G		F3N	50	20KOE	FMCW radar, UK SBA, Cyprus
29630.0	0713	31	03	G		F3N	12.5	40KOE	FMCW radar, UK SBA, Cyprus

**SRAL; Pekka, OH2BLU**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7 MHz	1900-0430	*	3	RUS		RADAR	40sps	13kOE	*) Days: 18. 31. (WebSDR 29d)
7001.0	0600-1930	02 03	3			N0n		10H	
7005.95	1310-1550/	28	3	RUS		F1B		170H	
7006.5	1300-1350	01	3	RUS		F1B		250H	
7023.0	1115-1430	15	3	RUS		J7D	120	2k60E	
7024.0	1415-1930	01	3	RUS		F1B		200H	
7026.0	0500-1800	*	3	RUS		J7D	120	2k60E	*) Days: 9. 25. 26. 30.
7032.0	0445-0600	*	3	RUS		J3E-u		3k50	*) Days: 6. 13. 17. 22. 24. 27. - 31. Non-stop Russian anthem / mx
7037.0	0610-1715	29 30	3	RUS		J7D	120	2k60E	
7048.0	0500-1500	*	3	RUS		A1A		60H	5BL, mainly key failure
7054.0	1330-1910	*	3	RUS		F1B		200H	*) Days: 1. - 5. 8. - 10. 27. -29.
7057.5	0600-1545	*	3	RUS	8G3Q etc	A1A	17-24 wpm	40H	*) Days: 7. 13. 14. 18. 20. 21. 23. 26. 28. - 31. 5BL
7074.0	0900-1650/	20	3	RUS		F1B		250H	
7080.0	1715-1930	*	3	RUS		F1B/A		200H	*) Days: 2. 3. 5. 8. 21. 22. 5F
7099.0	1340-1400	07	3	RUS		A1A	20 wpm	40H	5BL
7110.0	1600-1810/	01 - 31	3	ETH	R. Ethiopia	A3E		9k0	

**SRAL; Pekka, OH2BLU**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7137.0	2230-0500	18 19	3	RUS		F1B/ NON		250H	
7147.0	1245-0645	*	3	RUS		J7D	120	2k60E	*) Days: 6. 7. 10. - 14. 17. - 19. 21. -23. 27. - 31.
7159.0	0445-1815	*	3			G7D		2k30E	*) Days: 13. -16. 21. - 26. usb, ship
7162.0	0715-1320	*	3	RUS		F1B		250H	*) Days: 6. 7. 16. 25. 30.
7170.5	1750-1810	06 30	3	RUS	CF9C etc	A1A		40H	
7192.0	0615-1500	*	3	RUS		J7D	120	2k60E	*) Days: 3. 7. 14. 15. 16. 20. 21. 23. 28.
7196.0	0900-1230	*	3	RUS	AT5K etc	A1A		40H	*) Days: 1. 2. 6. 22. 31.
10 MHz			3	G		RADAR	50sps	20k0	(WebSDR 3d)
10 MHz	1715-1730	02	3	RUS		RADAR	40sps	13k0E	(WebSDR 5d)
10127 A	1415-1600/	01 - 31	3	GUM	TWR	A3E?		4k0E	Spurious from 9900 kHz
10137 A	1150-1230	*	3	GUM	TWR	A3E?		4k0E	*) Days: 3. 6. - 10. 12. 15. 16. 17. 20. 24. 28. 29. Spurious from 9910 kHz, also DRM reported
14 MHz	0630-1930	*	3	RUS		RADAR	40sps	13k0E	*) Days: 3. 12. 13. 14. 20. 21. 22. 25. 30. (WebSDR 21d)
14 MHz	1145-1800	*	3	CHN		RADAR	50/67sp s	10k0E	*) Days: 1. - 8. 11. 14. - 22. 27. 28. 30. 'foghorn'
14000.0	1300-1500/	27 - 31	3	CHN	RCI	A3E		9k0	TX intermod. // 13710 & 13855 kHz
14008.0	0830-1155	*	3	RUS		F1B		250H	*) Days: 8. 9. 11. 12. 16. 20. 26. 28.
14169.0	0830-0930/	15	3	RUS		F1B		200H	
14221.0	2215-0600/	*	3	KAZ		F1B		200H	*) Days: 8. 9. 11. - 14. 17. - 19. 22. 26. - 31.
14253.0	0600-1630	*	3	RUS		F1B		250H	*) Days: 3. 6. 10. 13. 17. 20. 27. 30. (ERP > 400 W)
14294.0	0635-1105	16 17	3	RUS		J7D	120	2k60E	
18 MHz			3	G		RADAR	25/50sp s	20k0	(WebSDR 1d)
18 MHz	0545-1800	*	3	RUS		RADAR	40 sps	13k0E	*) Days: 1. 5. 6. 8. 9. 10. 15. 18. 19. 20. 22. 23. (WebSDR 23d)
21 MHz	0500-1515	*	3	G		RADAR	25/50sp s	20k0	*) Days: 1. 3. 8. 9. 10. 14. 20. - 22. 26. 29. 30. (WebSDR 19d)
21 MHz	0530-1800	*	3	RUS		RADAR	40 sps	13k0E	*) Days: 2. 4. - 9. 11. 12. 13. 16. 17. 19. 20. 23. 30. (WebSDR 16d)
21 MHz	0400-1530	01 - 31	3	CHN		RADAR	50/67sp s	10k0E	'foghorn'
21 MHz	0615-1000	*	3	CHN		RADAR	50 sps	10k0E	*) Days: 19. 22. 28. - 31.
21438.0	/0830-1600	01 - 31	3	RUS	RCV	A1A	20 wpm	40H	navip
21450.0	1230-1300	27 - 31	3			A3E		9k0	
28 MHz	0530-1630	*	3	G		RADAR	25/50sp s	20k0	*) Days: 2. 4. 5. 10. 11. 13. 14. 17. 18. 21. 22. 26. - 31. (WebSDR 26)

**SRAL; Pekka, OH2BLU**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
28 MHz	0600-1430	26 - 31	3	G		RADAR	12.5 sps	40k0	
28 MHz	0500-1630	*	3	IRN		RADAR	150/313	60k0E	*) Days: 1. - 14. 16. - 23. 26. - 29. (WebSDR 25d)
28 MHz	0500-1700	01 - 31	3	IRN		RADAR	310/870	120k0E	(WebSDR 30d)
28860.0	0545-1630	*	3	IRN		RADAR	150/313	60k0E	*) Days: 1. - 9. 13. 14. 16. - 23. 28. - 31. (WebSDR 27d)
28 MHz	0630-1430	*	3	RUS	Taxi disp.	F3E		3k0E	*) Days: 7. 8. 10. 12. 13. 16. 17. 18. 23. 26. 27. 29. 43 reports

**URE; Gaspar, EA6AMM**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
6992.0	19:49	18	03	RUS		RADAR	40	12K0E	OTHR Contayner. Splatter to 7002 kHz
6994.0	22:08	12	03	RUS		RADAR	40	12K0E	OTHR Contayner. Splatter to 7005 kHz
7005.0	17:56	13	03			B7D		6K0E	LINK 11 CLEW DSB
7007.0 *	23:32	13	03	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 7088 kHz CF. 2 simultaneous TX on 40m.
7008.0	23:18	12	03	RUS		RADAR	40	12K0E	OTHR Contayner
7024.0	17:03	01	03	RUS		F1B	75	200	
7026.0	23:13	06	03			J7D	120	2K70E	MIL-188-141A-ALE
7027.5	18:51	18	03			XXX		CA20K0E	XXX. BW ca 20K0E. Drifting fast and a lot.
7036.0	17:50 vt*	13 vd*	03	RUS		F1B	50	500H	*Also on 15, 18 and 19-03; vt
7057.0	10:27	16	03			J7D	120	2K70E	
7058.0	21:01	13	03	RUS		RADAR	40	12K0E	OTHR Contayner
7058.5	18:51	12	03			XXX	20K0E		XXX. BW, variable, to 20K0E. Drifting.
7060.0	20:55	07	03	RUS		RADAR	40	12K0E	OTHR Contayner
7062.0	19:29	18	03	CHN		RADAR	66.7	10K0E	Short bursts
7065.0	20:36	10	03	RUS		RADAR	40	12K0E	OTHR Contayner
7066.0	22:15	12	03	RUS		RADAR	40	12K0E	OTHR Contayner
7068.4	19:10	18	03			XXX		2K80E	XXX. BW = 2K80E. Long-lasting. STANAG 4285???
7075.02	18:50 vt*	05 vd*	03			A1N			Series of 16 dashes. *Very often
7080.0	20:18	01	03	RUS		F1B	50	200	Almost daily
7085.0	22:43	11	03	RUS		RADAR	40	12K0E	OTHR Contayner
7087.0	22:17	17	03	RUS		RADAR	40	12K0E	OTHR Contayner
7087.0 *	21:17	19	03	RUS		RADAR	40	12K0E	OTR Contayner. *Also on 7188 kHz CF. 2 simultaneous TX on 40 m.
7088.0 *	23:33	13	03	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 7007 kHz CF. 2 simultaneous TX on 40 m.
7090.0 *	21:53 vt*	14 vd*	03	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 15/03, 2158 UTC
7090.0 *	21:47	19	03	RUS		RADAR	40	12K0E	OTHR Contayner. *2 simultaneous TX on 40m: 7186 kHz CF
7093.0	20:17	01	03	RUS		RADAR	40	12K0E	OTHR Contayner
7093.6	20:54	17	03			J7D			MIL-188-141A-ALE
7094.0 *	22:31	18	03	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 7173 kHz CF. 2 simultaneous TX on 40 m
7097.0	22:09	11	03	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 7191 kHz CF. 2

**URE; Gaspar, EA6AMM**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
*									simultaneous TX on 40m
7097.0	18:44	12	03			J3E-L			Music. Long-lasting
7110.0	17:45	13	03			J3E-L			Music
7118.0	21:15	06	03	CHN		RADAR	50	10KOE	Short bursts
7120.0	19:22	19	03			J3E-L		2K80E	Music
7125.0	19:28	03	03	RUS		RADAR	40	12KOE	OTHR Contayner
7133.0	21:23	05	03	RUS		RADAR	40	12KOE	OTHR Contayner
7137.0	22:12	06	03	RUS		F1B	50	200	Almost daily
7147.0	17:33	17	03			J7D	120	2K70E	
7147.0	17:38	18	03			J7D	120	2K70E	
7157.0	18:57	17	03			F1B	50	200H	
7159.0	18:44	13	03			G7D			LINK 11-CLEW SSB
7162.0 *	22:31	12	03	RUS		RADAR	40	12KOE	OTHR Contayner. *Also on 7066 kHz CF. 2 simultaneous TX on 40 m.
7166.0	21:46	06	03	CHN		RADAR	66.7	10KOE	Short bursts
7171.0 *	21:54	08	03	RUS		RADAR	40	12KOE	OTHR Contayner. *Also on 7189 kHz CF. 2 simultaneous TX on 40 m.
7173.0 *	22:32	18	03	RUS		RADAR	40	12KOE	OTHR Contayner. *Also on 7094 kHz CF
7176.0	22:01	18	03	CHN		RADAR	66.7	10KOE	Short bursts
7186.0	00:55	12	03	RUS		RADAR	40	12KOE	OTHR Contayner
7186.0 *	21:46	19	03	RUS		RADAR	40	12KOE	OTHR Contayner. *Also on 7090 kHz CF. 2 simultaneous TX on 40 m.
7188.0	20:54	07	03	RUS		RADAR	40	12KOE	OTHR Contayner
7188.0 *	21:18	19	03	RUS		RADAR	40	12KOE	OTHR Contayner. *Also on 7087 kHz CF. 2 simultaneous TX on 40 m.
7189.0 *	21:55	08	03	RUS		RADAR	40	12KOE	OTHR Contayner. *Also on 7171 kHz CF. 2 simultaneous TX on 40 m
7191.0 *	22:03	11	03	RUS		RADAR	40	12KOE	OTHR Contayner. *2 simultaneous TX on 40 m.
7198.5	19:41	18	03	TUR		J7D			MIL-188-141A-ALE. Turkish Defence net
7205.0	21:36 vt*	07 vd*	03	F	RFI	A3E		10KOE	BC: RFI. Splatter to 7196 kHz LSB. *Often
10124.0	21:59	03	03	AUS		RADAR	7	CA10KOE	OTHR JORN. Short bursts, with short intro tone. Very often
10126.0	21:55	12	03	AUS		RADAR	7	10KOE	AUS OTHR JORN. BW = 10KOE. 7 sps. Bursts = 17 sec, with short intro tone
10127.0	18:44	05	03	RUS		RADAR	40	12KOE	OTHR Contayner
10129.0	19:26	05	03			RADAR	18.51	10KOE	OTHR JORN. Short bursts, with short intro tone.
10150.0	20:32	10	03	AUS		RADAR	7	10KOE	OTHR JORN. Short bursts, with short intro tone.
10155.0	22:38	08	03	G		RADAR	25	20KOE	UK SBA, Cyprus
13997.0	18:48	17	03	RUS		RADAR	40	12KOE	OTHR Contayner
14000.5	21:12	14	03			XXX		CA600H	XXX. BW ca 600 Hz. Multitone signal
14007.9	07:34	08	03	RUS		NON			Carrier from F1B sys @ 14008 kHz CF
14008.0	07:29 vt*	08 vd*	03	RUS		F1B	50	250	*Also on 16 and 20/03. Vt.
14053.0	17:51	10	03	CHN		RADAR	41.7	10KOE	Short bursts
14113.0	21:17	14	03	RUS		RADAR	40	12KOE	OTHR Contayner
14140.0	17:41	11	03	RUS		RADAR	40	12KOE	OTHR Contayner. Also on 14165 kHz CF. 2

**URE; Gaspar, EA6AMM**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
									simultaneous TX on 20 m.
14161.0	20:50	07	03	RUS		RADAR	40	24KOE	OTHR Contayner
14165.0	17:42	11	03	RUS		RADAR	40	12KOE	OTHR Contayner. Also on 14140 kHz CF. 2 simultaneous TX on 20 m.
14169.0	19:57	19	03	RUS		RADAR	40	12KOE	OTHR Contayner
14176.0	08:20	20	03		J3E-U				Music (USA anthem)
14178.0	09:22	13	03	RUS		RADAR	40	12KOE	OTHR Contayner
14184.0	18:37	13	03	CHN		RADAR	50	10KOE	CHN OTHR Short bursts
14187.0	17:49	10	03	CHN		RADAR	41.7	10KOE	Short bursts
14198.5	07:00	08	03			F1B	600	600	DPRK FSK 600 ARQ
14210.0	21:58	11	03	CHN		RADAR	41.7	10KOE	Short bursts
14221.0	22:00 Vt*	11 vd*	03	KAZ		F1B	50	200	*Very often
14224.0	21:55	13	03	RUS		RADAR	40	12KOE	OTHR Contayner
14226.7	20:39	14	03			J7D			MIL-188-141A-ALE
14230.0	08:37	20	03	RUS		RADAR	40	12KOE	OTHR Contayner
14253.0	15:45	10	03	RUS		F1B	75	250	Also on 20/03, 08:00 UTC
14255.0 *	09:24	13	03	RUS		RADAR	40	12KOE	OTHR Contayner. *Also on 14178 kHz CF. 2 simultaneous TX on 20 m.
14291.0	10:50	16	03			A1A			Unid St. Encrypted QTC?? Cyrillic characters used
14300.0	17:47	11	03	CHN		RADAR	50	10KOE	Short bursts
14310.0	14:55	09	03	CHN		RADAR	66.7	10KOE	Short bursts
14338.0	17:34	18	03	CHN		RADAR	41.7	10KOE	Short bursts
18107.0	10:12 vt*	02 vd*	03	RUS	RDL	F1B	50	200	F1B and F1A. *Almost daily
18162.0	13:11	10	03	RUS		RADAR	40	12KOE	OTHR Contayner
18168.0	10:05	20	03	RUS		RADAR	40	12KOE	OTHR Contayner
18172.0	14:19 vt*	14 vd*	03	RUS		RADAR	40	12KOE	OTHR Contayner. *Also on 18/03, 13:51 UTC
18173.0	12:55	19	03	RUS		RADAR	40	12KOE	OTHR Contayner
18173.0	08:35	20	03	RUS		RADAR	40	12KOE	OTHR Contayner
18175.0	11:34	05	03	RUS		RADAR	40	12KOE	OTHR Contayner. Splatter to 18167 kHz USB
21001.5	11:43 vt*	02 vd*	03			XXX		600H	XXX. BW = 600 Hz. *Often; Btween around 12:00 UTC and around 16:00 UTC
21010.0	11:36	16	03	CHN		RADAR	50	10KOE	Short bursts
21025.0	11:22	12	03	CHN		RADAR	41.7	10KOE	Short bursts
21037.0	11:10	05	03	CHN		RADAR	66.7	10KOE	Short bursts
21104.0	10:57	12	03	CHN		RADAR	41.7	10KOE	Short bursts
21110.0	12:52	09	03	G		RADAR	50	20KOE	UK SBA, Cyprus
21115.0	11:42	16	03	CHN		RADAR	41.7	10KOE	Short bursts
21125.0	09:21	04	03	CHN		RADAR	50	10KOE	Short bursts
21130.0	07:04	08	03	CHN		RADAR	66.7	10KOE	Short bursts
21152.0	10:40	13	03	RUS		RADAR	40	12KOE	OTHR Contayner. Also on 21172 kHz CF. 2 simultaneous TX on 15 m.
21160.0	17:40	11	03	RUS		RADAR	40	12KOE	OTHR Contayner
21161.0	17:42	10	03	RUS		RADAR	40	12KOE	OTHR Contayner
21161.0	18:45	17	03	RUS		RADAR	40	12KOE	OTHR Contayner
21162.0	10:19	13	03	RUS		RADAR	40	12KOE	OTHR Contayner. 2 systems side by side

**URE; Gaspar, EA6AMM**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
									with 21167 kHz CF
21167.0	10:19	13	03	RUS		RADAR	40	12KOE	OTHR Contayner. Two systems sideby side with 21162 kHz CF
21168.0	09:22	04	03	CHN		RADAR	66.7	10KOE	CHN OTHR short bursts
21172.0	12:02	05	03	RUS		RADAR	40	12KOE	OTHR Contayner
21172.0	09:35	07	03	CHN		RADAR	66.7	10KOE	Short bursts
21173.0	12:21	10	03	RUS		RADAR	40	12KOE	OTHR Contayner
21174.0	12:04	04	03	RUS		RADAR	40	12KOE	OTHR Contayner
21179.0	10:57	05	03	RUS		RADAR	40	12KOE	OTHR Contayner
21190.0	10:48	04	03	RUS		RADAR	40	12KOE	OTHR Contayner
21234.0	09:25	06	03	CHN		RADAR	66.7	10KOE	Short bursts
21235.0	09:08	15	03	CHN		RADAR	66.7	10KOE	Short bursts
21275.0	09:23	06	03	CHN		RADAR	66.7	10KOE	Short bursts
21276.0	11:47	18	03	CHN		RADAR	41.7	10KOE	Short bursts
21284.0	11:39	16	03	CHN		RADAR	41.7	10KOE	Short bursts
21285.0	11:06	18	03	CHN		RADAR	50	10KOE	Short bursts
21288.0	07:56	08	03	CHN		RADAR	66.7	10KOE	Short bursts
21293.0	09:27	06	03	CHN		RADAR	66.7	10KOE	Short bursts
21293.0	13:17	07	03	CHN		RADAR	66.7	10KOE	Short bursts
21307.0	07:05	08	03	CHN		RADAR	50	10KOE	Short bursts
21308.0	08:08	19	03	CHN		RADAR	50	10KOE	OTHR; continuous
21310.0	10:59	12	03	G		RADAR	50	20KOE	UK SBA, Cyprus
21328.0	09:18	04	03	CHN		RADAR	41.7	10KOE	Short bursts
21329.0	08:59	15	03	CHN		RADAR	41.7	10KOE	Short bursts
21330.0	09:28	11	03	CHN		RADAR	66.7	10KOE	Short bursts
21334.0	08:58	15	03	CHN		RADAR	50	10KOE	Short bursts
21336.0	09:08	20	03	CHN		RADAR	50	10KOE	Short bursts
21340.0	09:36	07	03	CHN		RADAR	50	10KOE	Short bursts
21341.0	07:53	08	03	CHN		RADAR		10KOE	Short bursts
21341.0	08:28	14	03	CHN		RADAR	66.7	10KOE	Short bursts
21346.0	09:55	06	03	CHN		RADAR	66.7	10KOE	Short bursts
21352.0	09:01	15	03	CHN		RADAR	66.7	10KOE	Short bursts
21358.0	07:06	08	03	CHN		RADAR	66.7	10KOE	Short bursts
21365.0	09:52	11	03	CHN		RADAR	66.7	10KOE	Short bursts
21370.0	08:29	20	03	CHN		RADAR	50	10KOE	Short bursts
21372.0	07:32	14	03	CHN		RADAR	50	10KOE	Short bursts
21374.0	09:24	06	03	RUS		RADAR	40	12KOE	OTHR Contayner
21374.0	07:44	08	03	CHN		RADAR	50	10KOE	Short bursts
21375.0	11:53	14	03	G		RADAR	50	20KOE	UK SBA, Cyprus
21385.0	07:46	08	03	CHN		RADAR	41.7	10KOE	Short bursts
21390.0	11:00	05	03	CHN		RADAR	66.7	10KOE	Short bursts
21395.0	15:30	20	03	G		RADAR	50	20KOE	UK SBA, Cyprus
21403.0	16:36	11	03	RUS		RADAR	40	12KOE	OTHR Contayner
21409.0	17:07	10	03	RUS		RADAR	40	12KOE	OTHR Contayner
21410.0	09:59	13	03	CHN		RADAR	41.7	10KOE	Short bursts
21415.0	07:34	14	03	CHN		RADAR	66.7	10KOE	Short bursts
21417.0	09:15	13	03	RUS		RADAR	41.7	12KOE	OTHR Contayner

**URE; Gaspar, EA6AMM**

<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>
21421.0	09:31	11	03	CHN		RADAR	66.7	10KOE	Short bursts
21423.0	15:48	07	03	RUS		RADAR	40	12KOE	OTHR Contayner
21423.0	09:05	20	03	CHN		RADAR	667	10KOE	Short bursts
21425.0	14:56	12	03	RUS		RADAR	40	12KOE	OTHR Contayner
21426.0	09:16	04	03	RUS		RADAR	40	12KOE	OTHR Contayner
21435.0	08:17	19	03	CHN		RADAR	47.7	10KOE	Short bursts
21438.0	13:44 vt*	02 vd*	03	RUS	RCV	A1A			RUS navy "RCV" QTC. *Daily
21440.0	09:29	06	03	CHN		RADAR	41.7	10KOE	Short bursts
21460.0	09:16	13	03	CHN		RADAR	66.7	10KOE	Short bursts
24884.0 *	11:15	13	03	RUS		RADAR	40	12KOE	OTHR Contayner. *Also on 24901 kHz CF. 2 simultaneous TX on 15 m.
24885.0	08:41	14	03	RUS		RADAR	40	12KOE	OTHR Contayner. Partally inside the 12 m band
24899.0	12:20	16	03	RUS		RADAR	40	12KOE	OTHR Contayner
24901.0 *	11:16	13	03	RUS		RADAR	40	12KOE	OTHR Contayner. *Also on 24884 kHz CF. 2 simultaneous TX on 15 m.
28135.0	10:00	06	03	RUS	F3E				Short TX
28330.0	09:28	04	03	G		RADAR	50	20KOE	UK SBA, Cyprus
28330.0	11:30	05	03		J3E-U				Music
28350.0	14:36	08	03	G		RADAR	50	20KOE	UK SBA, Cyprus
28370.0	11:38	01	03	G		RADAR	50	20KOE	UK SBA, Cyprus
28395.0	07:10	08	03	G		RADAR	50	20KOE	UK SBA, Cyprus
24884.0	13:18	09	03	RUS		RADAR	40	12KOE	Splatter inside the 12 m band
28400.0	07:38	14	03	IRN		RADAR	150 313	45KOE	Alternating 150 and 313 sps bursts
28490.0	09:12	13	03	G		RADAR	50	20KOE	UK SBA, Cyprus
28600.0 **	10:46 vt*	04 vd*	03	IRN		RADAR	150 313	45KOE	Alternating 150 and 313 sps bursts. *Very often. **3 Very often, 3 simultaneous TX with 28860 kHz CF kHz CF and 29000 kHz CF
28600.0 **	11:03 vt*	05 vd*	03	IRN		RADAR	307 870	45KOE	Alternating 317 and 807 sps bursts. *Very often **3 Very often, 3 simultaneous TX with 28860 kHz CF kHz CF and 29000 kHz CF
28640.0	11:47	11	03	G		RADAR	50	20KOE	UK SBA, Cyprus
28780.0	13:52	14	03	G		RADAR	50	20KOE	UK SBA, Cyprus
28825.0	10:28	11	03	G		RADAR	50	20KOE	UK SBA, Cyprus
28860.0 **	11:39 vt*	01 vd*	03	IRN		RADAR	150	45KOE	Alternating 150 and 313 bursts. * Daily. **Very often, 3 simultaneous TX with 28600 kHz CF and 28450 kHz CF
28880.0	09:33	11	03	G		RADAR	50	20KOE	UK SBA, Cyprus
28890.0	11:10	11	03	G		RADAR	50	20KOE	UK SBA, Cyprus
29000.0 **	10:07 vt*	02 vd*	03	IRN		RADAR	307 870	45KOE	Alternating 307 and 870 sps short bursts. *Very often. **3 Very often, 3 simultaneous TX with 28860 kHz CF kHz CF and 28600 kHz CF
29000.0 **	09:40 vt* **	06 vd* **	03	IRN		RADAR	307	45KOE	Alternating 307 and 870 sps bursts. *Very often. ** Very often, 3 simultaneous TX with 28860 kHz CF kHz CF and 28600 kHz CF

**URE; Gaspar, EA6AMM**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
29000.0	10:04	17	03	IRN		RADAR	150	45KOE	Alternating 150 and 313 sps bursts
29030.0	10:30	11	03	G		RADAR	50	20KOE	UK SBA, Cyprus
29050.0	07:15	08	03	IRN		RADAR	150	45KOE	Alternating 150 and 313 sps bursts
29090.0	11:12 vt*	02 vd*	03	G		RADAR	50	20KOE	UK SBA, Cyprus. *Also on 07/03, 13:14 UTC
29095.0	10:31	11	03	G		RADAR	50	20KOE	UK SBA, Cyprus
29110.0	15:17	02	03	G		RADAR	50	20KOE	UK SBA, Cyprus
29185.0	09:25 vt*	04 vd*	03	G		RADAR	50	20KOE	UK SBA, Cyprus. *Also on 18/03, 10:29 UTC
29195.0	11:41	01	03	G		RADAR	50	20KOE	UK SBA, Cyprus
29300.0	13:42	02	03	G		RADAR	50	20KOE	UK SBA, Cyprus
29350.0	11:07 vt*	05 vd*	03	IRN		RADAR	150	45KOE	Alternating 150 and 313 sps bursts. *Also on 06 and 14/03. Vt
29400.0 **	10:39 vt*	04 vt*	03	IRN		RADAR	150	45KOE	OTHR IRN. Alternating 150 and 313 sps bursts. Jumping back and fwd to 29500 kHz CF *Often. ** Often, 3 simultaneous TX with 28860 kHz CF kHz CF, 28600 kHz CF, or 28900 kHz CF
29450.0 **	12:07 vt*	04 vd*	03	IRN		RADAR	150	45KOE	Alternating 150 and 313 sps bursts. Jumping back and fwd to 29500 kHz CF *Often ** Often, 3 simultaneous TX with 28860 kHz CF kHz CF, 28600 kHz CF, 29000 kHz CF or 28900 kHz CF
29500.0 **	14:40 vt*	08 vd*	03	IRN		RADAR	150	45KOE	IRN OTHR. 150 and 313 sps bursts. * Often ** Often, 3 simultaneous TX with 28860 kHz CF kHz CF, 28600 kHz CF, or 28900 kHz CF
29575.0	13:13	14	03	G		RADAR	50	20KOE	UK SBA, Cyprus
29625.0	10:06	02	03	G		RADAR	50	20KOE	UK SBA, Cyprus

**USKA Peter, HB9CET**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
7018.0	2321	14	03			FMOP	40 sps	12k0E	OTHR; Contayner
7018.0	0958	30	03			J7D	12x120 Bd	2k70E	CIS-12
7024.0	1728	01	03			F1B	75 Bd	200H	FSK
7026.0	1549 1209	27 30	03			J7D	12x120 Bd	2k70E	CIS-12 often
7030.0	1214	30	03			F1B	75 Bd	250H	FSK
7036.0	2221	15	03			F1B	50 Bd	500H	FSK
7037.0	1224	30	03			J7D	12x120 Bd	2k60E	CIS-12
7050.0 LSB	1722	02	03			J3E-L		ca 3k0E	RUS-UKR Radio War daily
7054.0	1728	03	03			F1B	50 Bd	200H	FSK, daily since very long time
7054.0	1201	30	03			J7D	12x120 Bd	2k70E	CIS-12; BPSK; idling

**USKA Peter, HB9CET**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
7055.0 LSB	1720 0814	02 22	03			J3E-L		ca 3k0E	RUS-UKR Radio War; Music daily
7058.0	2231	30	03			FMOP	40 sps	12k0E	OTHR; Contayner
7059.0	2120	29	03			FMOP	40 sps	12k0E	OTHR; Contayner
7060.0	2141	07	03			FMOP	40 sps	12k0E	OTHR; Contayner, strong
7080.0	1739 1736	01 27	03			F1B	50 Bd	200H	FSK
7089.0	2235	30	03			FMOP	40 sps	12k0E	OTHR; Contayner
7100.0	1716	02	03			J3E-L		ca 2k7	Music
7110.0	1734 1712	01 14	03	ETH		A3E		ca 9k0E	BC: Radio Ethiopia almost daily
7111.0 LSB	1718	29	03			PSK-4	30x 60 Bd	2k50E	CHN30; Burst system; Preamble; pilot tone at 450Hz
7119.0	1729	27	03			J7D	12x120 Bd	2k70E	CIS-12; weak, fading TDoA: Vladivostok often
7124.0	2003	08	03			FMOP	40 sps	12k0E	OTHR; Contayner
7134.0	1713 1742	02 03	03	RUS		F1B	50	200H	FSK; weak, fading
7137.0	2322 2325	13 14	03	RUS		F1B	50 Bd	200H	FSK often
7141.0 LSB	1941 2114	02 29	03			PSK-4	30x 60 Bd	2k50E	CHN30; Burst system; Preamble; pilot tone at 450Hz often
7147.0	0851	28	03			J7D	12x120 Bd	2k70E	CIS-12
7147.0	0853	31	03			J7D		2k70E	CIS-12, 13 tones only
7150.0 USB	2356	02	03		2428	J7D MFSK8	125	1750	ALE MIL 188-141A
7150.0 USB	0002	03	03		393 232	J7D MFSK8	125	1750	ALE MIL 188-141A
7155.0 LSB	2231 1744	15 27	03			PSK-4	30x 60 Bd	2k50E	CHN30; Burst system; Preamble; pilot tone at 450Hz
7159.0	2346	13	03			B7D DQPSK	75 Bd	ca 6k0E	LINK11 CLEW DSB mode often
7159.0 USB	1958	13	03			G7D DQPSK	75 Bd	ca 2k40E	LINK11 CLEW SSB mode, 16 tones, spacing 110Hz often
7162.0	1231	30	03			F1B	75 Bd	250H	FSK
7171.0 LSB	2007 1742	08 27	03			PSK-4	30x 60 Bd	2k50E	CHN30; Burst system; Preamble; pilot tone at 450Hz
7188.0	2147	07	03			FMOP	40 sps	12k0E	OTHR; Contayner, strong -60dBm
7198.0 LSB	1652	02	03			PSK-4	30x 60 Bd	2k50E	CHN30; Burst system; Preamble; pilot tone at 450Hz often
14000.0	1401	27	03		CRI	A3E			China Radio International. inter-modulation of 13855 + 13710 kHz
14008.0	1016	30	03			F1B	50 Bd	250H	FSK; often
14179.0	1003	24	03			FMCW	66.66 sps	10k0E	OTHR, short bursts
14230.0	0847	20	03			FMOP	40 sps	12k0E	OTHR; continuos: Contayner
14253.0	0729	20	03			F1B	75 Bd	250H	FSK
14306.0	1744	15	03			FMCW	66.66 sps	10k0E	OTHR; Bursts
18070.0	0821	22	03	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
18107.0	1024 1132	01 30	03			F1B	36+50 Bd	200H	CIS36-50 almost daily
18173.0	0855	20	03			FMOP	40 sps	12k0E	OTHR; Contayner; partially in 17m band

**USKA Peter, HB9CET**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
21000.0	1441 1005	27 30	03			J3E-U		ca 2k70E	Spanish, Fishermen almost daily
21155.0	0900	22	03			OTHR	66.66 sps	10k0E	OTHR; short bursts
21291.0	0915	30	03			FMCW	42 sps	10k0E	OTHR; bursts
21312.0	1001	31	03			OTHR	66.66 sps	10k0E	OTHR; short bursts
21314.0	0926	30	03			FMCW	50 sps	10k0E	OTHR; bursts
21317.0	1008	23	03			FMOP	40 sps	12k0E	OTHR; continuos: Contayner
21323.0	0834	28	03			FMCW	50 sps	10k0E	OTHR; continuos, long lasting
21399.0	0937	30	03			FMCW	50 sps	10k0E	OTHR; bursts
21438.0	0949 1303	07 30	03	RUS	RCV	A1A		10H	Area of Sevastopol; daily since many years
28595.0	0749	20	03			F3E			short traffic only; Taxi
28615.0	0746	20	03			F3E			short traffic only; Taxi
28700.0	1406 0954	27 30	03	IRN		OTHR	307 + 870 sps	ca 45k	Bursts: long lasting, often sweeprate alternating
28705.0	0845	22	03			OTHR	307 + 870 sps	ca 45k	Bursts: long lasting, sweeprate alternating
28860.0	1034 0815	01 20	03	IRN		OTHR	150 + 313 sps	ca 50k	Bursts: long lasting, almost daily sweeprate alternating
29000.0	0954	08	03	IRN		OTHR	307 + 870 sps	ca 45k	Bursts: long lasting, sweeprate alternating
29060.0	1321	31	03			OTHR	12.5sps	40k0	
29445.0	1129	30	03	IRN		OTHR	150+ 313 sps	ca 45k	Bursts: sweeprate alternating
29450.0	0743	20	03	IRN		OTHR	150+ 313 sps	ca 45k	Bursts: sweeprate alternating
29500.0	1125	30	03	IRN		OTHR	150+ 313 sps	ca 45k	Bursts:sweeprate alternating

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

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
3608.0	2126	25	03			F1B		200H	UiPtr; idle (shared band)
3659.0	1915		03	RUS		F1B			Revs/UiPtr; several days (shared band)
3675.0	1920		03	RUS		F1B			UiPTR; several days (shared band)
3710.0	2102	25	03			F1B		200H	UiPtr (shared band)
3793.0	1950	22	03	RUS		F1B			UiPtr (shared band)
3794.0	0755	22	03	RUS		F1B			Revs/UiPtr (shared band)
3797.0	2010	14	03	RUS		A1A			UiCW; Wether messages in Russian language (shared band)
7026.0	2053	27	03	RUS		J7D		2K80E	CIS-12; Multi-PSK; long lasting
7080.0	2009	14	03	RUS		F1B			Revs
7080.0	1740	15	03	RUS		F1B		200H	Printer; Russian navy
7147.0	1819	17	03	RUS		J7D		2K80E	CIS-12; Multi-PSK; long lasting
14008.0	1118	15	03	RUS		F1B		200H	UiPtr
14253.0	0835	20	03			F1B		200H	UiPtr
14274.0	1455	25	03			F1B		250H	UiPtr; idle
18107.0	1220	10	03	RUS	RDL	F1B		200H	
18170.0	1416	14	03	RUS		RADAR	40	12k0E	CF; OTHR Contayner; partly in 17M amateur band.

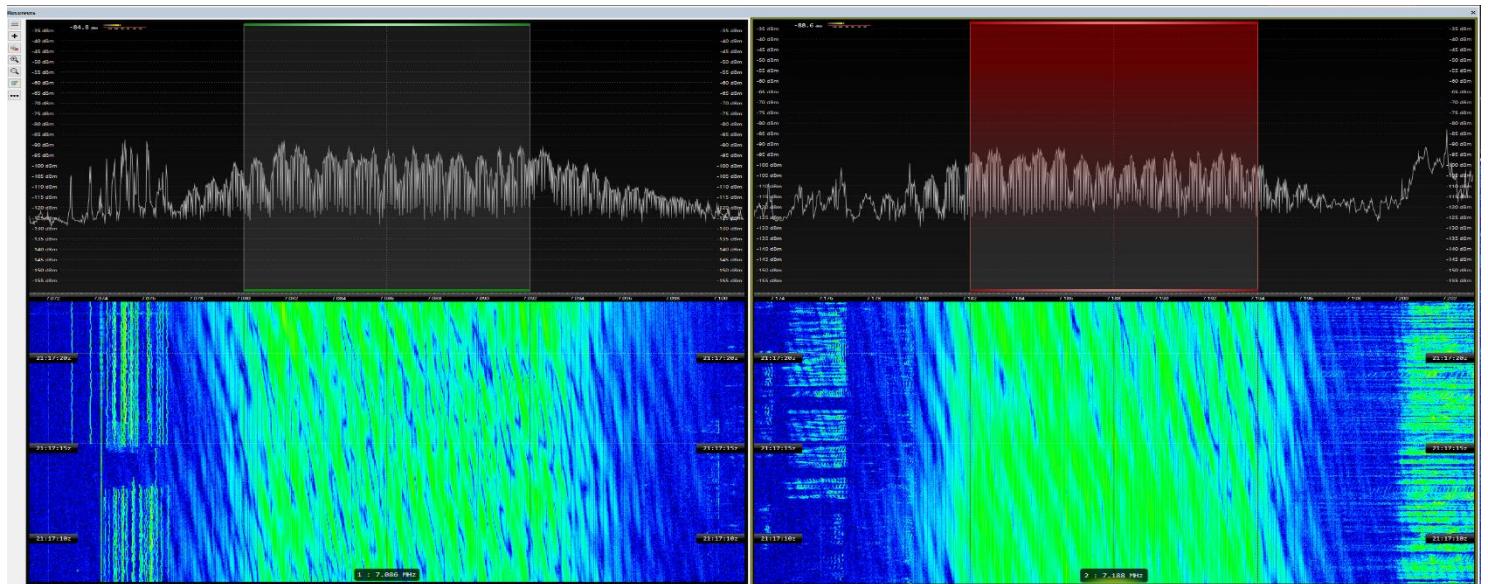
**VERON; Ruud, PG1R. Credits to observers Dick PA0GRU, Arie PA3CNK.**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21180.0	1532	05	03			RADAR			OTHR
21270.0	0949	29	03			RADAR		20KOE	Most likely UK base Cyprus
21438.0	0954	01	03	RUS	RCV	A1A			RIP90 de RCV QTC 5L
21438.0	1400	20	03	RUS	RCV	A1A			RIP90 QTC 408 37 25 1419 408 = NAWIP 032260 Karty -32215
21438.0	0951	29	03	RUS	RCV	A1A			RIP90 de RCV QTC 313 etc.; MIL traffic
28145.0	0957	06	03	RUS		F3E			Taxi service
28370.0	0755	29	03	RUS		F1B			Revs/UiPtr

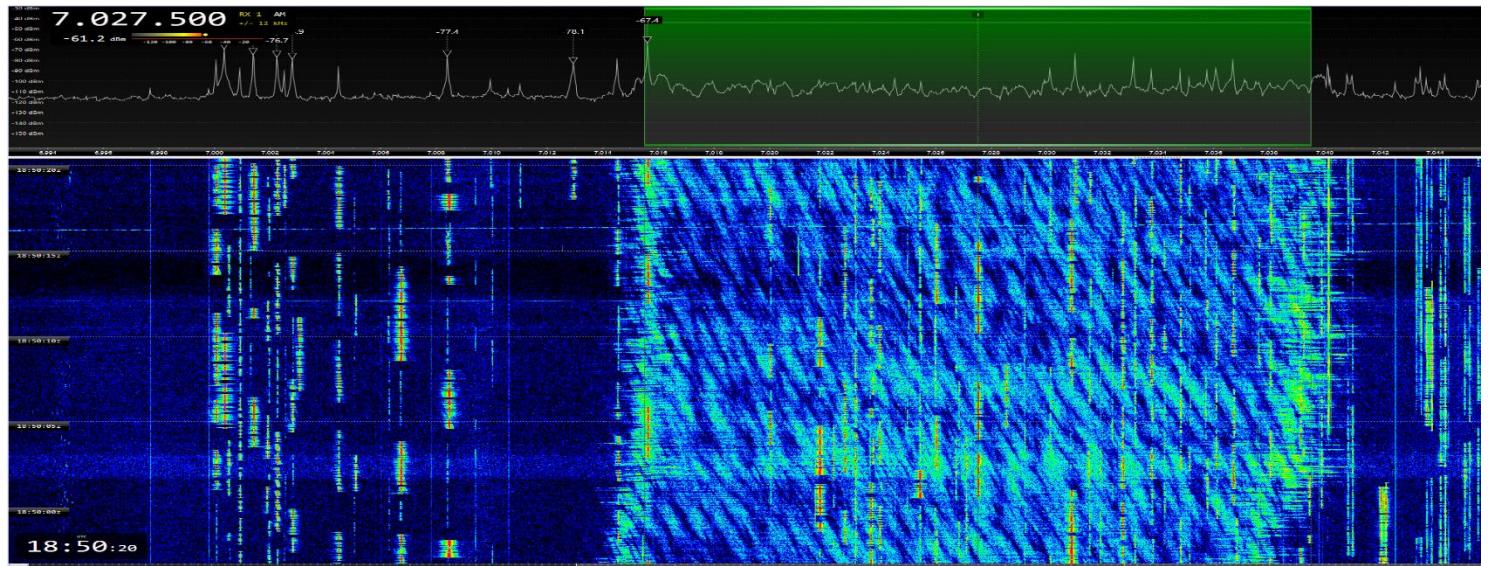
Contact: Gaspar Miró, EA6AMM, [ea6amm@iaru-r1.org](mailto:ea6amm@iaru-r1.org)

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OTH radar Contayner. RUS. BW = 12KOE. 40 sps. Two simultaneous transmissions on 40m.



40m band. XXX. BW ca 25 kHz, variable. Drifting fast. Received several times during March, simultaneously on several EU KiwiSDR