

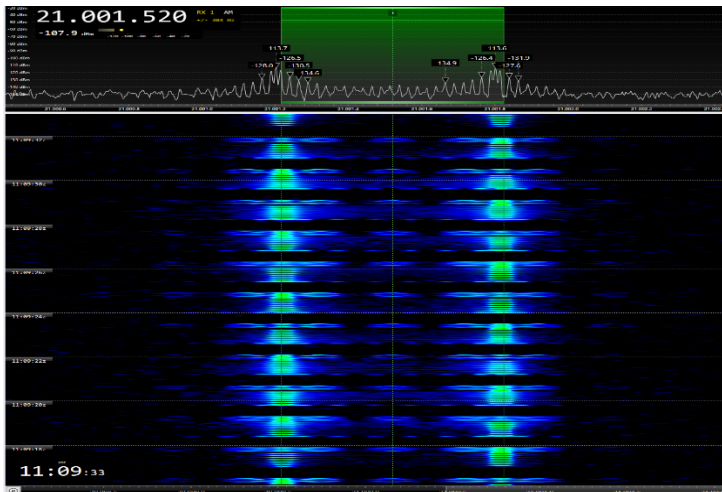


Monthly Newsletter - February 2023

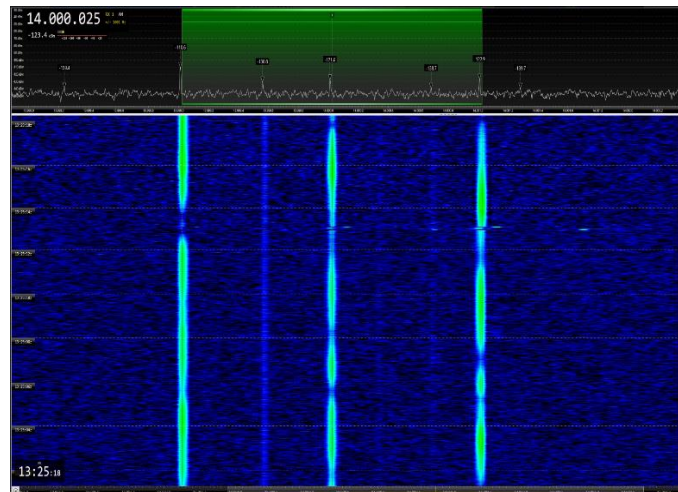
## News and info

On February we highlight the growing activity of the RUS taxi dispatch in the 10 m band, using F3E (FM) as transmission mode. Although these transmissions are usually short (several seconds), we have counted up to 23 different stations in this band. We also received in this band some transmissions from Brazilian CBers operating in AM (A3E) and SSB (J3E).

In this month we again received on several occasions a transmission in unknown mode, of BW = 600 Hz, on 21001.5 kHz CF, which we already discovered in June 2022 and which has ceased its activity since that same month. We also report the uninterrupted transmission, for about 36 hours, of an unknown signal in the 20 m band, specifically on 14000 kHz CF, with a width of 2 kHz., consisting on three carriers with 1 kHz spacing.

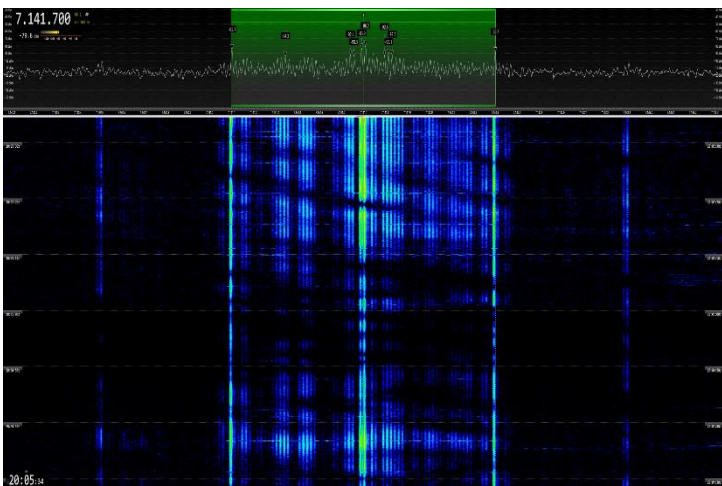


21001.5 kHz CF: XXX. BW = 600 Hz

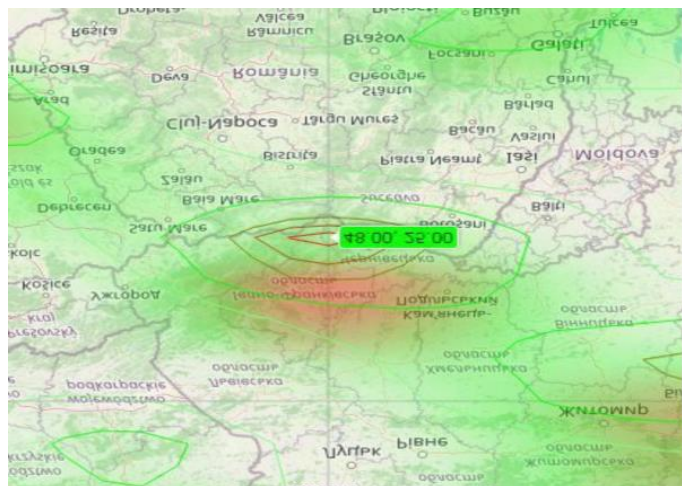


14000 kHz CF: XXX. BW = 2kHz.

We also received a Tactical Data Link (BW = 1K20E9), with KiwiSDR TdoA indicating the area of SW UKR:

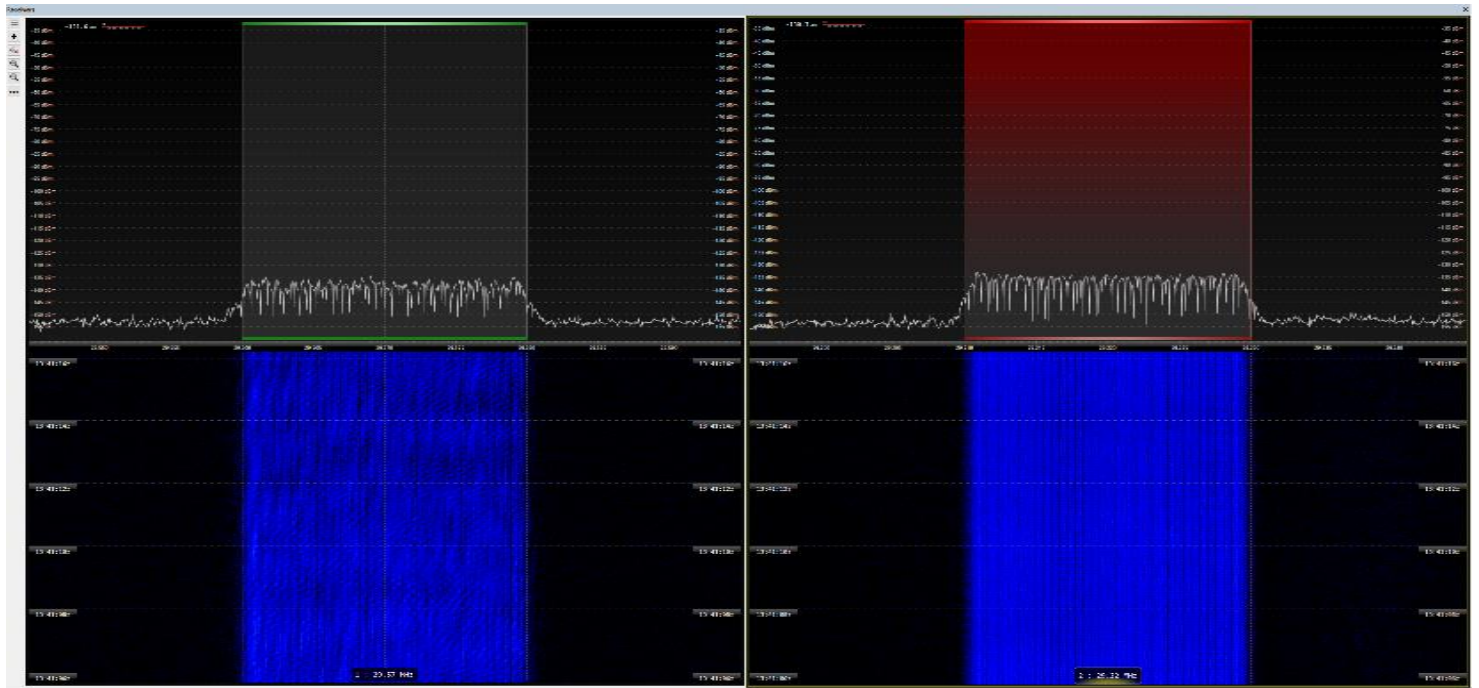


7141.7 kHz CF: Tactical Data link BW = 1K20E



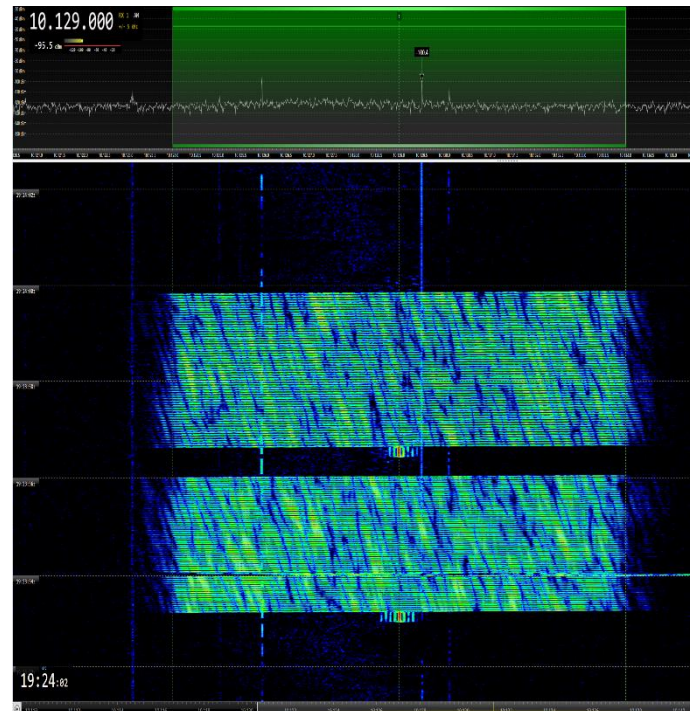
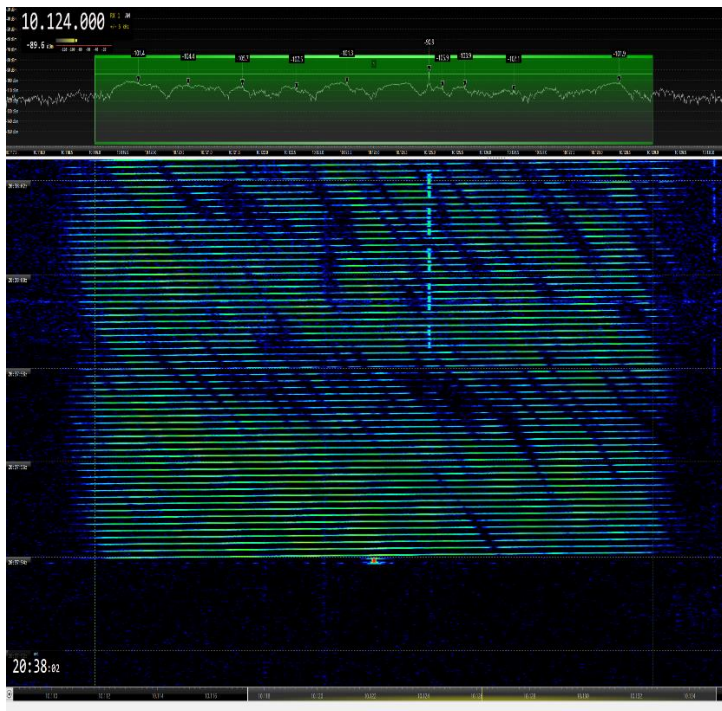
TdoA to the 7141.7 kHz CF Tactical Data link (TNX DK20M)

With the increasing of the MUF, we have noticed that the radars are transmitting in higher bands than usual. For example, the British OTHR located in the UK Sovereign Base Area of Cyprus, currently operates with much higher frequency than usual on the 10 m band, even performing 2 simultaneous transmissions on this band in several times.



British OTHR. UK SBA, Cyprus. BW = 20K0E. 50 sps. Two simultaneous TX on the 10 m band: 29570 kHz and 29 220 kHz CF.

We also detected some JORN OTHR (AUS) transmissions (BW = 10K0E. 7 sps. Short bursts with short intro tone), operating in the 30 m band (shared band; secondary allocation).



AUS OTHR JORN. Short bursts(variable duration) with short intro tone BW = 10K0E. 7 sps.

For the rest of the sadly usual signals we receive in the HF amateur bands – OTHR from RUS, CHN, IRN; broadcasting stations on 4 and 17 m; different MIL modes on several bands), unfortunately there are no changes: they are all daily causing damage to our bands.

## 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.

<b>DARC; Daniel, DL3RTL. Credit to monitors: DL2SCH, Jürgen; DF5JL, Tom; F4FPR, Benjamin; DJ6TF, Thomas; DO700, Marco; DO3RMG, Markus; DB4UP, Christoph; DB3TA, Alex</b>									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7013,0	1756	27	02	RUS		FMOP	40	12k	OTHR Contayner
7089,0	2040	22	02	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
7125,0	1757	27	02	RUS		FMOP	40	12k	OTHR Contayner
7177,0	2040	22	02	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
7180,0	2247	25	02	RUS		FMOP	40	12k	OTHR Contayner
7187,0	1828	21	02	RUS		FMOP	40	12k	OTHR Contayner
14067,0	0903	05	02	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
14115,0	1816	17	02	RUS		FMOP	40	12k	OTHR Contayner
14146,0	1728	22	02	RUS		FMOP	40	12k	OTHR Contayner
14154,0	1728	22	02	RUS		FMOP	40	12k	OTHR Contayner
14161,0	1630	28	02	RUS		FMOP	40	12k	OTHR Contayner
14185,0	1612	20	02	RUS		FMOP	40	12k	OTHR Contayner
14314,0	1436	19	02	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
14316,0	1400	25	02	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
14319,0	1238	05	02	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
14330,0	1435	19	02	CHN		FMCW	50	10k	OTHR 5,1s bursts
14336,0	0925	05	02	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
18070,0	0830	25	02	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
18125,0	0916	25	02	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
21058,0	1105	25	02	CHN		FMCW	50	10k	OTHR 5,1s bursts
21097,0	1035	26	02	CHN		FMCW	41,67	10k	OTHR 6,1s bursts
21126,0	0837	25	02	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
21129,0	0950	18	02	CHN		FMCW	41,67	10k	OTHR 6,1s bursts
21166,0	0900	06	02	RUS		FMOP	40	12k	OTHR Contayner
21173,0	1052	19	02	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
21174,0	0756	26	02	RUS		FMOP	40	12k	OTHR Contayner
21175,0	1213	18	02	RUS		FMOP	40	12k	OTHR Contayner
21182,0	1102	05	02	RUS		FMOP	40	12k	OTHR Contayner
21183,0	0825	25	02	RUS		FMOP	40	12k	OTHR Contayner
21190,0	1323	17	02	RUS		FMOP	40	12k	OTHR Contayner
21250,0	1226	26	02	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
21275,0	1244	26	02	CHN		FMCW	41,67	10k	OTHR 6,1s bursts
21278,0	0959	04	02	CHN		FMCW	50	10k	suspect OTHR from China, Typ unident, bursts length 5 sec repeat ca. every 40 sec
21294,0	1105	25	02	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
21296,0	0827	25	02	CHN		FMCW	66,67	10k	OTHR 3,8s bursts

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kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21300,0	0811	19	02	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
21307,0	0840	12	02	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
21310,0	1005	19	02	CHN		FMCW	50	10k	OTHR 5,1s bursts
21319,0	0939	04	02	CHN		FMCW	50	10k	suspect OTHR from China, Typ unident, bursts length 3.8 sec. repeat ca.every 50 sec.
21323,0	1005	19	02	CHN		FMCW	41,67	10k	OTHR 12,2s bursts
21326,0	0845	25	02	CHN		FMCW	41,67	10k	OTHR 6,1s bursts
21335,0	0856	05	02	CHN		FMCW	41,67	10k	OTHR 6,1s bursts
21337,0	0840	12	02	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
21350,0	1434	24	02	CYP		FMCW	50	20k	OTHR Typ Pluto Cyprus
21363,0	0806	19	02	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
21383,0	1226	26	02	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
21385,0	0827	25	02	CYP		FMCW	50	20k	OTHR Pluto Cyprus
21390,0	0900	04	02	CYP		FMCW	50	20k	OTHR Typ Pluto Cyprus
21405,0	1443	04	02	CYP		FMCW	50	20k	OTHR Typ Pluto Cyprus
21409,0	1518	04	02	RUS		FMOP	40	12k	OTHR Typ Contayner
21411,0	1005	04	02	CHN		FMCW	40	10k	suspect OTHR from China, Typ unident, bursts length 5 sec. repeat ca.every 40-50 sec.
21419,0	0840	12	02	CHN		FMCW	41,67	10k	OTHR 6,1s bursts
21423,0	1106	25	02	RUS		FMOP	40	12k	OTHR Contayner
21424,0	1613	20	02	RUS		FMOP	40	12k	OTHR Contayner
21425,0	1530	25	02	CYP		FMCW	25	20k	OTHR Pluto Cyprus
21427,0	1323	17	02	RUS		FMOP	40	12k	OTHR Contayner
21438,0	0840	05	02	RUS		A1A			RUS NVY Sevastopol; RIP-90
21438,0	0826	25	02	RUS		A1A			RUS NVY Sevastopol; RGX94 / RIP90 / RBE86
21438,0	0845	25	02	CHN		FMCW	41,67	10k	OTHR 6,1s bursts
28135,0	1047	12	02	RUS		F3E		6k	Russian Taxi
28145,0	1201	04	02	RUS		F3E		6k	Russian Taxi
28165,0	1037	12	02	RUS		F3E		6k	Russian Taxi
28175,0	1104	12	02	RUS		F3E		6k	Russian Taxi
28215,0	1037	12	02	RUS		F3E		6k	Russian Taxi
28215,0	1104	12	02	RUS		F3E		6k	Russian Taxi
28265,0	1042	12	02	RUS		F3E		6k	Russian Taxi
28305,0	1202	04	02	RUS		F3E		6k	Russian Taxi
28315,0	0831	10	02	CYP		FMCW	50	20k	OTHR Pluto Cyprus
28325,0	1046	18	02	CYP		FMCW	50	20k	OTHR Pluto Cyprus
28600,0	0957	18	02	IRN		AMCW	307/868	ca.60k	OTHR Typ Ghadir from Iran
28635,0	1105	24	02	CYP		FMCW	50	20k	OTHR Typ Pluto Cyprus
28810,0	1307	19	02	CYP		FMCW	50	20k	OTHR Typ Pluto Cyprus
28860,0	1122	03	02	IRN			150/313	45k	Iranian OTHR 9,98/7,19s bursts
28860,0	1152	24	02	CYP		FMCW	50	20k	OTHR Typ Pluto Cyprus
28890,0	1019	04	02	CYP		FMCW	25	20k	OTHR Typ Pluto Cyprus

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kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
28900,0	1122	03	02	IRN			307/870	45k	Iranian OTHR 5,81/3,26s bursts
29050,0	0845	26	02	IRN			150/313	45k	Iranian OTHR 9,98/7,19s bursts
29090,0	1010	04	02	CYP		FMCW	25	20k	OTHR Typ Pluto Cyprus
29275,0	1430	04	02	CYP		FMCW	50	20k	OTHR Typ Pluto Cyprus
29350,0	1401	19	02	IRN		AMCW	150/313	ca.50k	OTHR Typ Ghadir from Iran
29450,0	1112	25	02	IRN			150/313	45k	Iranian OTHR 9,98/7,19s bursts
29500,0	0721	05	02	IRN			150/313	45k	Iranian OTHR 9,98/7,19s bursts
29595,0	0825	05	02	CYP		FMCW	50	20k	OTHR Pluto Cyprus
29615,0	1145	23	02	CYP		FMCW	50	20k	OTHR Pluto Cyprus
29615,0	1157	23	02	CYP		FMCW	50	20k	OTHR Pluto Cyprus

**IRTS; Michael, EI3GYB**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3612	1240	1	2	F		USB			Group of French fishermen. Medium signals with motor noise coming from each ship.
7000	1430	19	2	INS		LSB			Group of men chatting and singing. Half a dozen or more operators. Ends at 1640.
7050	1500	5	2	RUS /UK R		LSB			Russian- Ukrainian radio war. Daily all day long. Medium signal.
7055	1600	19	2	RUS /UK R		LSB			Russian-Ukrainian radio war. Strong signal. Daily.
7060	1505	23	2	RUS /UK R		LSB			Russian- Ukrainian radio war. Strong and persistent.
7159.5	2015	12	2			PSK			Link-11 Clew. Weak signal.
7170	1835	21	2			RADAR			Radar from 7170 to 7203 kHz. Huge and persistent.
14306	1320	7	2	CHN		RADAR			Chines Foghorn. Medium to strong signal. On and off. Ends at 1400z.
18147	1320	1	2	British base on Cyprus		RADAR			Radar from 18147 to 18182 kHz. Very strong and persistent.
21000	1045	17	2	E or MM		USB			Spanish fishermen. Daily all day. Weak to strong signals. They use it like a telephone exchange.. Heard many days.
21157	1255	1	2	Briti		RADAR			Radar from 21157 to 21183 kHz Very

<b>IRTS; Michael, EI3GYB</b>									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
				sh base on Cypr us					strong and persistent.
21165	1050	17	2	Briti sh base on Cypr us		RADAR			Radar from 21165 to 21182 kHz. Medium signal. Persistent. Also heard on the 18th at 1610z.
21400	1450	5	2	Briti sh base on Cypr us		RADAR			Radar from 21400 to 21413 kHz. Medium and persistent signal.
21411	1700	16	2	Briti sh base on Cypr us		RADAR			Radar 21411 to 21424 kHz. Medium signal, on and off.
21438	1250	1	2	UKR		CW			Russian navy Sevastopol. Daily with a medium to strong signal.
28000	1300	1	2	IRN		RADAR			Radar in AM mode daily somewhere between 28000 and 30000 MHz. Most of the time with a strong signal moving up and down the band for hours. A very serious and constant source of QRM!
28388	1420	5	2	Briti sh base on Cypr us		RADAR			Radar from 28388 to 28425 kHz. Huge and persistent.
28550	1435	8	2	IRN		RADAR			Radar from 28550 to 28650 kHz in AM mode. Strong and persistent.
28975	1410	5	2	IRN		RADAR			Radar from 28975 to 29100 kHz. Strong and persistent.
28985	1455	23	2	RUS		FM			Russian taxi service. Strong with the usual female voice.
29172	1030	17	2			FM			Huge and persistent carrier. Still on 3 hours later.

<b>PZK; SP3AMO, SP5GNI</b>									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7089.0	1430	14	02			CIS		2K7	S9+
7179.0	1547	10	02			RADAR		8KOE	

**PZK; SP3AMO, SP5GNI**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14026.0	1010	03	02			CIS-12		2K7	S8 pilot 14027.3
14284.0	1048	02	02			RADAR	66	10K0E	Bursts
14319.0	1235	05	02			RADAR	66	10K0E	Bursts
18072.0	1033	03	02	G		RADAR		12K0E	S9+20dB
18074.0	1002	19	02			RADAR		10E0K	in bursts
18079.0	1018	28	02			RADAR		10K0E	S6 bursts
18165.0	1540	10	02			RADAR		12K0E	burst strong
21000.0	1118	23	02			J2E-U		2K7	S6 non-amateur in Spanish
21156.0	1050	02	02			RADAR	50	10K0E	
21165.0	1110	14	02			RADAR		8K0E	bursts
21170.0	1128	22	02			RADAR		14K0E	S9
21174.0	0845	26	02			RADAR	40	12K0E	
21175.0	1253	03	02			RADAR		12K0E	S7
21320.0	0953	10	02			RADAR		12K0E	bursts
21330.0	1010	04	02			RADAR	50	20K0E	
21338.0	0848	09	02			RADAR	40	10K0E	Bursts
21346.0	1015	28	02			RADAR		10K0E	3 sec. bursts
21355.0	1000	03	02			RADAR		10K0E	bursts
21390.0	1120	13	02			RADAR	50	20K0E	
21403.0	1130	22	02			RADAR		10K0E	in bursts also 21318.0
21419.0	1115	23	02			RADAR		15K0E	S8
21425.0	1528	10	02			RADAR		12K0E	S7
21425.0	1505	16	02			RADAR		20K0E	S9
21433.0	0855	21	02			RADAR	66	10K0E	Bursts
24967.0	0848	10	02			RADAR		10K0E	3 sec. Bursts
28350.0	vt	vd	02			RADAR		20K0E	S9+20dB
28600.0	vt	vd	02	IRN		RADAR	300/87 0	46K0E	
28630.0	1012	28	02	G		RADAR		20K0E	S9
28790.0	1366	06	02			RADAR	50	20K0E	
28860.0	vt	vd	02	IRN		RADAR	150/30 0	46K0E	
28890.0	1025	04	02			RADAR	25	20K0E	
28950.0	0956	07	02			RADAR	150/30 0	46K0E	
29000.0	1228	19	02			RADAR	150/30 0	46K0E	
29000.0	0912	21	02			RADAR	300/87 0	46K0E	
29015.0	0925	08	02			RADAR	50	20K0E	
29030.0	1500	16	02			RADAR		20K0E	S6
29095.0	1125	22	02			RADAR		20K0E	S9
29230.0	0850	09	02			RADAR	50	20K0E	
29300.0	0854	09	02			RADAR	300/87 0	46K0E	
29320.0	0926	08	02			RADAR	50	20K0E	
29325.0	1245	05	02			RADAR	50	20K0E	
29500.0	vt	vd	02	IRN		RADAR		60K0E	

**PZK; SP3AMO, SP5GNI**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
29550.0	1445	14	02			RADAR		20K0E	S9+10dB just finished
29609.0	0955	07	02			F1B		400H	
29615.0	1100	23	02			RADAR		20K0E	S9
29650.0	1121	13	02			RADAR	50	20K0E	

**RSGB; Richard, G4DYA**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3756.0	1728	13	02			J3E		1K70E	USB 'The Pip'. Daily. Also heard 272037z
7032.0	0912	07	02			J7D		2K70E	USB 7030.0 / CIS-12
7075.01	0850	04	02			A1N			Continuous groups of 16 dashes. Also heard 110905z, 140808z, 220814z
7089.0	1715	13	02			J7D		2K70E	USB 7087.0 / CIS-12
7092.0	2033	26	02	RUS		P0N	40	14K0E	Container pulse radar
7110.0	1754	28	02	ETH	R. Ethiopia	A3E			AM broadcasting
7193.0	0822	01	02			F1B		250	FSK. Also heard 040848z, 080924z, 280945z
14258.0	0807	06	02			F1B		500	FSK
14308.0	0818	10	02			F1B		500	FSK. Also heard 130809z, 220811z
18076.0	0824	22	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
18077.0	0908	25	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
18079.0	0943	28	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
18085.0	0833	01	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
18125.0	0902	25	02			F3N	40	10K0E	FMCW radar bursts
18128.0	0809	22	02	CHN		F3N	41.7	10K0E	FMCW radar bursts
18146.0	1114	14	02	CHN		F3N	50	10K0E	FMCW radar bursts
18150.0	0952	28	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
18161.0	0817	13	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
18168.0	1335	01	02	RUS		P0N	40	14K0E	Container pulse radar
18170.0	0819	13	02	RUS		P0N	40	14K0E	Container pulse radar
21106.0	0938	01	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
21126.0	0830	02	02	CHN		F3N	50	10K0E	FMCW radar bursts. Also heard 060825z
21153.0	0815	10	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
21156.0	0847	02	02	CHN		F3N	50	10K0E	FMCW
21158.0	1340	28	02	RUS		P0N	40	14K0E	Container pulse radar
21166.0	0804	06	02	RUS		P0N	40	14K0E	Container pulse radar
21170.0	1336	01	02	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21172.0	0813	01	02	RUS		P0N	40	14K0E	Container pulse radar. Also heard 200852z
21174.0	0830	26	02	RUS		P0N	40	14K0E	Container pulse radar
21182.0	1039	10	02	CHN		F3N	62.5	10K0E	FMCW radar bursts
21189.0	0826	21	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
21192.0	0905	13	02	CHN		F3N	50	10K0E	FMCW
21193.0	1007	06	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
21206.0	0913	09	02	CHN		F3N	50	10K0E	FMCW radar bursts



**RSGB; Richard, G4DYA**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21208.0	0907	13	02	CHN		F3N	50	10K0E	FMCW
21244.0	1041	10	02	CHN		F3N	41.7	10K0E	FMCW radar bursts
21249.0	0908	07	02	CHN		F3N	50	10K0E	FMCW radar bursts
21299.0	0806	22	02	CHN		F3N	41.7	10K0E	FMCW radar bursts
21302.0	0908	13	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
21310.0	0817	10	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
21316.0	0852	11	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
21319.0	0811	04	02	CHN		F3N	50	10K0E	FMCW radar bursts
21321.0	1009	06	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
21335.0	1005	06	02	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21339.0	0825	02	02	CHN		F3N	47.6	10K0E	FMCW radar bursts
21341.0	0809	04	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
21362.0	0733	04	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
21367.0	0828	21	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
21377.0	0813	10	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
21379.0	0822	02	02	CHN		F3N	50	10K0E	FMCW radar bursts
21380.0	0813	04	02	CHN		F3N	41.7	10K0E	FMCW radar bursts
21382.0	1043	10	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
21390.0	0859	04	02	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21399.0	0852	02	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
21401.0	0803	06	02	CHN		F3N	50	10K0E	FMCW radar bursts
21412.0	0804	22	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
21416.0	0835	01	02	CHN		F3N	47.6	10K0E	FMCW radar bursts
21424.0	0823	09	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
21424.0	0834	21	02			F1B	50	400	FSK. 2nd harmonic 10712.0 kHz
21425.0	0754	02	02	CHN		F3N	50	10K0E	FMCW radar bursts
21427.0	0837	01	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
21428.0	0910	07	02	CHN		F3N	66.7	10K0E	FMCW radar bursts
21433.0	0934	01	02	CHN		F3N	66.7	10K0E	FMCW radar bursts. Also heard 210830z
21438.0	0839	21	02	RUS		A1A			Morse
28350.0	0823	21	02	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
28550.0	0806	04	02	IRN		P0N		45K0E	Pulse radar 150.2 / 313.0 pps
28600.0	0814	07	02	IRN		P0N		45K0E	Pulse radar 307.1 / 869.5 pps. Also heard 080927z, 200827z, 210820z, 280938z
28630.0	0948	28	02	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
28655.0	0819	09	02	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
28860.0	0821	04	02	IRN		P0N		45K0E	Pulse radar 150.2 / 313.0 pps. Also heard 060759z, 110847z, 200830z, 210846z, 220800z, 280939z
28775.0	0800	14	02	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
28915.0	0817	07	02	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
29015.0	0928	08	02	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
29290.0	0758	14	02	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
29300.0	0816	09	02	IRN		P0N		45K0E	Pulse radar 307.1 / 869.5 pps
29320.0	0930	08	02	G		F3N	25	20K0E	FMCW radar, UK SBA, Cyprus

**RSGB; Richard, G4DYA**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
29350.0	0835	10	02	IRN		P0N		45K0E	Pulse radar 150.2 / 313.0 pps. Also heard 281344z
29400.0	1037	10	02	IRN		P0N		45K0E	Pulse radar 150.2 / 313.0 pps. Also heard 250800z
29450.0	0845	11	02	IRN		P0N		45K0E	Pulse radar 150.2 / 313.0 pps. Also heard 200842z
29500.0	0800	06	02	IRN		P0N		45K0E	Pulse radar 150.2 / 313.0 pps. Also heard 070815z, 080931z, 130813z, 220816z
29620.0	0901	11	02	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus

**SRAL; Pekka, OH2BLU**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7 MHz	1715-0340	*	2	RUS		RADAR	40sps	13k0E	*)Days: 3. 5. 7. 16. 17. (WebSDR 22d)
7 MHz	1530-1930	*	2	CHN		RADAR	50/67sps	10k0E	*) Days: 3. 7. 9. 16. 'foghorn'
7000.0	1630-1633/	10	2			RADAR	48 sps	10k0E	
7008.0	0845-0930/	27	2	RUS		F1B		250H	
7010.0	0600-1520	*	2	RUS		J7D	120	2k60E	*) Days: 3. 16. 17. 23.
7014.0	1130-1140	07	2	RUS		F1B		250H	
7032.0	0530-0945	*	2	RUS		J3E-u		3k50	*) Days: 14. 15. 24. Non-stop Russian anthem
7054.0	1130-1830	01 - 21	2	RUS		F1B		200H	
7066.0	0715-0730/	09	2	RUS	F83H	A1A		200H	
7089.0	1300-0600	*	2	RUS		J7D	120	2k60E	*) Days: 13. 14. 27.
7099.0	1340-1400	07	2	RUS		A1A	20 wpm	40H	5BL
7101.0	1410-1445	14	2	RUS		A1A		40H	5BL
7101.0	0715-0915	09 22	2	RUS		F1B		200H	
7103.0	0800-0845	09	2	RUS		J7D	120	2k60E	
7110.0	1600-1810/	01 - 23	2	ETH	R. Ethiopia	A3E		9k0	
7112.0	0730-0815/	10	2	RUS		J7D	120	2k60E	
7122.0	1245-1340/	20	2	RUS		F1B		250H	
7141.7	0555-1930	12 - 14	2			XXX		1k20E	Carriers 17.4 Hz spacing
7159.0	0745-	02	2	RUS		F1B		200H	

SRAL; Pekka, OH2BLU									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
	1315	15							
7160.0	0740	15	2	RUS	RBL88	A1A		40H	
7161.0	1345-1400	02	2	RUS	999	A1A	6 wpm	40H	
7164.0	1800-1815	13	2	RUS		F1B/NON		500H	
7193.0	0600-1500	*	2	RUS	RDL	F1A/B/NON		250H	*) Days: 1. 4. - 8. 10. 11. 13. - 15. 18. - 20. 28.
7196.5	1400	27	2	CHN		G7D		2k30E	CHN 30
7198.0	1545	21	2	RUS		J7D	120	2k60E	
7200.0	1825-1900	03	2	RUS		F1B		1k0	
10 MHz			2	G		RADAR	50sps	20k0	(WebSDR 2d)
10 MHz			2	RUS		RADAR	40sps	13k0E	(WebSDR 2d)
10127 A	1415-1600/	01 - 28	2	GU M	TWR	A3E?		4k0E	Spurious from 9900 kHz
10134 A	1130-1230	*	2	GU M	TWR	DRM		6k0E	*) Days: 3. 6. 11. Spurious from 9910 kHz
10137 A	1130-1245/	*	2	GU M	TWR	A3E?		4k0E	*) Days: 3. 8. 10. 15. 19. 22. 23. 27. 28. Spurious from 9910 kHz
14 MHz	0600-1800	*	2	RUS		RADAR	40sps	13k0E	*) Days: 1. 3. 6. 8. 19. 20. (WebSDR 14d)
14 MHz	0930-1445	*	2	CHN		RADAR	50/67sps	10k0E	*) Days: 2. 3. 5. 7. - 11. 16. - 19. 22. 23. 'foghorn'
14026.0	0840-1135/	*	2	RUS		J7D	120	2k60E	*) Days: 3. 15. 24.
14102.0	0800-0825	07	2	RUS		J7D	120	2k60E	
14169.0	0830-0930/	15	2	RUS		F1B		200H	
14221.0	0530-0600/	*	2	KAZ		F1B		200H	*) Days: 14. - 17. 19.
14221.0	0530-1430	22	2	KAZ		F1B		200H	
14258.0	0825-0831/	13	2	RUS		F1B		500H	
14308.0	0750-0910/	13 22	2	RUS		F1B		500H	
18 MHz			2	G		RADAR	25/50sps	20k0	(WebSDR 3d)
18 MHz	0745-1500	*	2	RUS		RADAR	40 sps	13k0E	*) Days: 1. 3. 5. 6. 10. - 16. 18. 20. - 23. 28. (WebSDR 23d)
21 MHz	0545-1530	*	2	G		RADAR	25/50sps	20k0	*) Days: 1. - 4. 6. - 10. 13. 25. 28. (WebSDR 18d)
21 MHz	0550-1630	*	2	RUS		RADAR	40 sps	13k0E	*) Days: 1. 3. - 6. 9. 10. 12. 16. - 18. 20. 21. 22. 26. - 28. (WebSDR 17d)
21 MHz	0630-1145	*	2	CHN		RADAR	50/67sps	10k0E	*) Days: 1. - 4. 6. 7. 9. - 16. 19. - 21. 23. 'foghorn'
21438.0	/0830-1600	01 - 28	2	RUS	RCV	A1A	20 wpm	40H	navip

<b>SRAL; Pekka, OH2BLU</b>									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
28 MHz	0545-1500	*	2	G		RADAR	25/50s ps	20k0	*) Days: 3. - 11. 13. - 24. 27. 28. (WebSDR 26)
28 MHz	0600-1300	*	2	IRN		RADAR	150/313	60k0E	*) Days: 4. - 7. 10. - 23. 27. (WebSDR 15d)
28 MHz	0600-1530	*	2	IRN		RADAR	310/870	120k0E	*)Days: 1. - 9. 18. - 23. 28. (WebSDR 22d)
28860.0	0600-1600	*	2	IRN		RADAR	150/313	60k0E	*) Days: 1. - 13. 17. - 24. 27. 28.(WebSDR 25d)
28 MHz	0600-1600	*	2	RUS	Taxi disp.	F3E		3k0E	*) Days: 1. - 23. 27. 259 reports

<b>USKA Peter, HB9CET</b>									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
7000.0 USB	2247	02	02			unid		ca 3kHz	Burst signal; Hybrid ser/par + FSK Intro 40Bd ca 300Hz
7000.0	2131	25	02			OTHR	48 sps	10k0E	OTHR; bursts
7010.0	2214	08	02			J3E-U		ca 2k4	USB; portuguese/brazilian
7014.0	1025	07	02	RUS		F1B	75 Bd	250H	FSK
7030.0	1046	16	02			F1B		250H	often
7050.0 LSB	0913	03	02			J3E-L		ca 3k0E	Radio War almost daily
7054.0	1821 1745	06 22	02			F1B	50 Bd	200H	FSK, daily since very long time
7055.0 LSB	0955	24	02			J3E-L		ca 3k0E	Radio War almost daily
7089.0	0949	15	02			J7D	120 Bd	2k60E	CIS12; 12x120 Bd PSK
7092.0	2020	27	02			FMCW	66.66 sps	10k0E	OTHR; Bursts
7110.0	1642	25	02	ETH		A3E		ca 9k0E	BC: Radio Ethiopia almost daily
7111.0 LSB	2024	20	02			PSK4	30x 60 Bd	2k50E	CHN30 (PRC30); Burst system Preamble tone spacing 600Hz Pilot tone at 450Hz
7134.0	2147 2021	08 17	02	RUS		F1B	50 Bd	250H	FSK, weak
7134.0	1955	20	02			F1A		250H	CW-FSK
7141.0 LSB	2253 2028 2027	02 17 27	02			PSK4	30x 60 Bd	2k50E	CHN30 (PRC30); Burst system Preamble tone spacing 600H Pilot tone at 450Hz almost daily
7150.0 USB	2205	22	02		2428	J7D MFSK8	125	1750	ALE MIL 188-141A, To: 9981
7150.0 USB	2227 2105	22 27	02		9044	J7D MFSK8	125	1750	ALE MIL 188-141A
7155.0 LSB	2011	17	02			PSK4	30x 60 Bd	2k50E	CHN30 (PRC30); Burst system Preamble tone spacing 600Hz Pilot tone at 450Hz
7171.0 LSB	2025	17	02			PSK4	30x 60 Bd	2k50E	CHN30 (PRC30); Burst system Preamble tone spacing 600Hz Pilot tone at 450Hz
7176.0	2157	06	02			FMCW	66.66 sps	10k0E	OTHR; Bursts
7193.0	0913	08	02	RUS		F1B	50 Bd	250H	FSK
7193.0	0945	14	02	RUS	RDL	F1A		250H	CW-FSK, stopped 1310z
14006.0	0847	17	02			J7D	120 Bd	2k70E	CIS12; 12x120 Bd PSK; often
14026.0	0924	15	02			J7D	120 Bd	2k70E	CIS12; 12x120 Bd, PSK often
14067.0	0907	05	02			FMCW	66.66 sps	10k0E	OTHR; Bursts
14150.0	1733	22	02			FMOP	40 sps	20k0E	OTHR

USKA Peter, HB9CET									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
14169.0	0914	15	02			F1B	50 Bd	200H	FSK, fading
14201.7	0921	02	02			PSK	16x75Bd	ca 2k20E	CHN16 (aka PRC 16)
14221.0	1311	22	02			F1B	50 Bd	200H	FSK; weak
14334.33	0914 0922	05 09				F1B	50 Bd	250H	FSK
18079.0	0949	28	02			FMCW	66.66 sps	10k0E	OTHR; Bursts
18165.0	0905	03	02			FMOP	40 sps	12k0E	OTHR; continuos: Contayner
18170.0	0924	20	02	G		FMCW	25 sps	20k0E	OTHR; UK base Cyprus, partially in 17m band
18172.0	0838	03	02			FMOP	40 sps	12k0E	OTHR; Contayner, partially in 17m band
21156.0	0852	02	02			FMCW	50 sps	10k0E	OTHR; long lasting
21158.0	1518	28	02			FMOP	40 sps	12k0E	OTHR; continuos: Contayner
21175.0	0924	20	02			FMOP	40 sps	12k0E	OTHR; Contayner
21182.0	0852	02	02			FMCW	62sps	10k0E	OTHR; bursts
21185.0	1526	28	02			FMOP	40 sps	12k0E	OTHR; continuos: Contayner
21192.0	0924	13	02			FMCW	50 sps	10k0E	OTHR; bursts
21204.0	0847	03	02			FMCW	50 sps	10k0E	OTHR; bursts
21210.0	0847	02	02			FMCW	40 sps	10k0E	OTHR; continuos
21244.0	1111	10	02			FMCW	42 sps	10k0E	OTHR; bursts
21346.0	0853	03	02			FMCW	48 sps	10k0E	OTHR; bursts
21424.0	0850	03	02			FMOP	40 sps	10k0E	OTHR; continuos
21424.0	0847	23	02			F1B	50 sps	400H	FSK, <sup>2</sup> nd of 10712.0 kHz
21433.0	0856	21	02			OTHR	66.66 sps	10k0E	OTHR; bursts
21438.0	0930 0934	03 26	02	RUS	RCV	A1A		10H	Area of Sevastopol; since many years daily
28065.0	1417 1410	09 22	02			F3E		ca 9k0E	short traffic only; Taxi <span style="float:right">daily</span>
28115.0	0855	17	02			F3E			short traffic only; Taxi
28130.0	0945	15	02	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
28135.0	0939	12	02			F3E			short traffic only; Taxi
28155.0	1002 1415	07 09	02			F3E		ca 9k0E	short traffic only; Taxi
28165.0	1003 1416	07 09	02			F3E		ca 9k0E	short traffic only; Taxi <span style="float:right">often</span>
28195.0	1512	22	02			F3E			short traffic only; Taxi
28215.0	1034	07	02			F3E			short traffic only; Taxi
28265.0	1029	07	02			F3E			short traffic only; Taxi
28275.0	1229	05	02			F3E			short traffic only; Taxi
28285.0	1244	22	02			F3E			short traffic only; Taxi
28295.0	1012	23	02			F3E			short traffic only; Taxi
28345.0	1057	14	02	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
28350.0	0902	21	02	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
28375.0	0929	24	02	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
28595.0	0937	24	02			F3E			short traffic only; Taxi
28600.0	0845 0836	08 20	02	IRN			307 + 870 sps	ca 45k	OTHR; Bursts; sweeprate alternating <span style="float:right">almost daily</span>
28600.0	1415	22	02	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
28630.0	0946	28	02	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
28640.0	1321	22	02	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
28735.0	1229	22	02			F3E			short traffic only; Taxi
28745.0	1245	22	02			F3E			short traffic only; Taxi
28840.0	0947	16	02	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
28860.0	0941	25	02	IRN			150 + 313 sps	ca 50k	OTHR; Bursts; sweeprate alternating <span style="float:right">almost daily</span>

<b>USKA Peter, HB9CET</b>									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
28890.0	0939	15	02	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
28900.0	0858	03	02	IRN			307 + 870 sps	ca 45k	OTHR; Bursts; long lasting sweepate alternating
28935.0	1255	14	02			F3E			short traffic only; Taxi
28970.0	1104	27	02	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
28985.0	1121	27	02			F3E			short traffic only; Taxi
29000.0	0901	14	02	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
29000.0	0953	21	02	IRN			307 + 870 sps	ca 45k	OTHR; Bursts; long lasting sweepate alternating
29015.0	0924	08	02	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
29015.0	0936 1145	16 18	02			F3E			short traffic only; Taxi
29095.0	1302	22	02	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
29130.0	0946	15	02	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
29145.0	1317	22	02			F3E			short traffic only; Taxi
29265.0	1443	25	02			F3E			short traffic only; Taxi
29300.0	1229	09	02			OTHR	307 + 870 sps	45k0	OTHR; Bursts, sweepate alternating
29320.0	0933	08	02	G		FMCW	25 sps	20k0E	OTHR; UK base Cyprus
29325.0	1057	27	02			F3E			short traffic only; Taxi
29400.0	0940 0946	12 26	02	IRN		OTHR	150+ 313 sps	45k0	OTHR; Bursts, sweepate alternating
29500.0	1015 0917	07 24	02	IRN		OTHR	150+ 313 sps	45k0	OTHR; Bursts, sweepate alternating
29595.0	0941	05	02	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
29615.0	0849 0905	08 23	02	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
29675.0	1332	22	02			F3E			short traffic only; Taxi

<b>VERON; Ruud, PG1R</b>									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7045.0	1534	05	02	UKR /RU S		J3E-L			UKR-RUS radiowar; comments & music
7050.0	1549	04	02	UKR /RU S		J3E-L			UKR-RUS radiowar; comments & slogans
7050.0	1532	05	02	UKR /RU S		J3E-L			UKR-RUS radiowar; 2 TX on same frequency
7054.0	1802	05	02	RUS		F1B		200H	UiPtr
7054.0	1738	22	02	RUS		F1B		200H	UiPtr
7055.0	1550	04	02	UKR /RU S		J3E-L			UKR-RUS radiowar; comments & slogans
7058.0	1800	05	02	UKR /RU S		J3E-L			UKR-RUS radiowar; slogans endless tape
7060.0	1551	04	02	UKR /RU S		J3E-L			UKR-RUS radiowar; comments

**VERON; Ruud, PG1R**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7060.0	1753	04	02			J3E-L			Music
7089.0	1852	13	02	RUS		J7D		2K80E	CIS-12
14169.0	0851	15	02			F1B		200H	UiPtr
14197.8	1558	23	02			F1B		1K0E	UiPtr; idle
28860.0	0842	21	02	IRN		RADAR	150/31 3	45K0E	OTHR; alternating sps

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

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