

# IARU Monitoring System Region 1



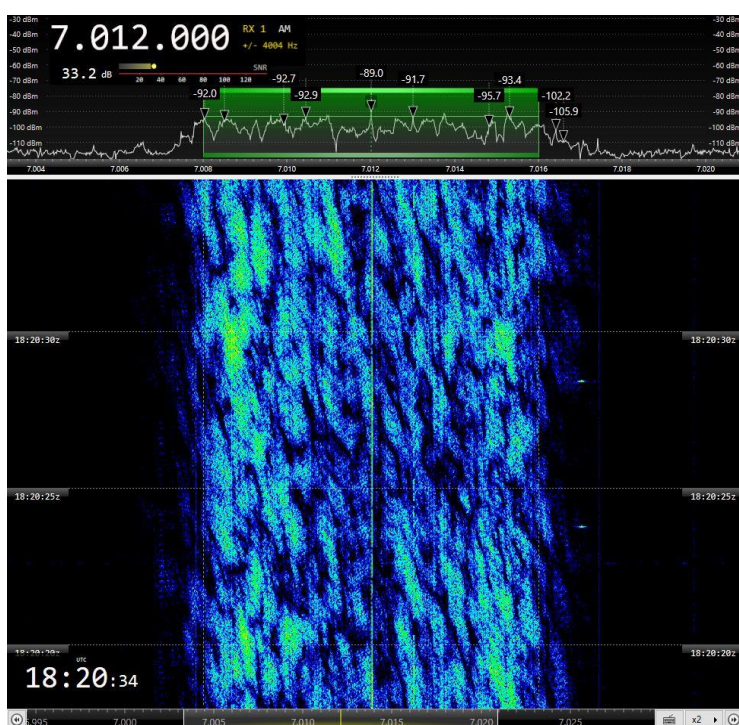
Monthly Newsletter - May 2022

## News and info

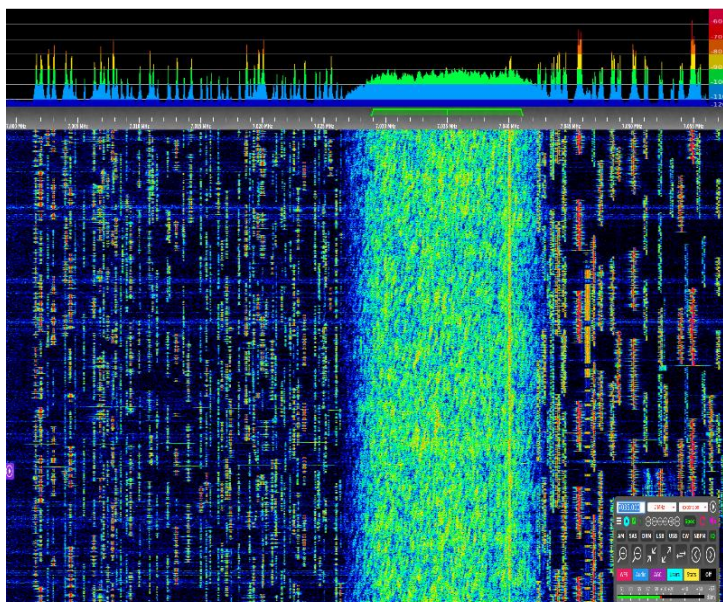
In May we observed almost the same trend as in previous months, and more specifically since the end of February 2022, in terms of emissions sent by intruders in the HF amateur radio bands.

Radars continue to be the most numerous and harmful intrusions in our bands. The OTR Contayner (RUS; BW = 12 kHz, 40 sps) tops the list of the most frequently received radars, followed by the Iranian OTHR radar, which broadcasts daily on 28.860 kHz (IRN; BW ca 45kHz; 150 and 313 sps bursts, alternating) and by the British OTH radar located at the Sovereign Base Area in Cyprus (G; BW = 20 kHz; 50 or 25 sps).

But also, coinciding the beginning of the war in Ukraine, these last months and also during May we have been receiving signals whose function we have not yet been able to identify. As these signals are unknown, we report them as "XXX". The most common one has a bandwidth of about 8 kHz, seems to consist of a central carrier and is most frequently found in the 20 and 40 m bands.



7012 kHz CF: XXX. BW ca 8 kHz. With central carrier

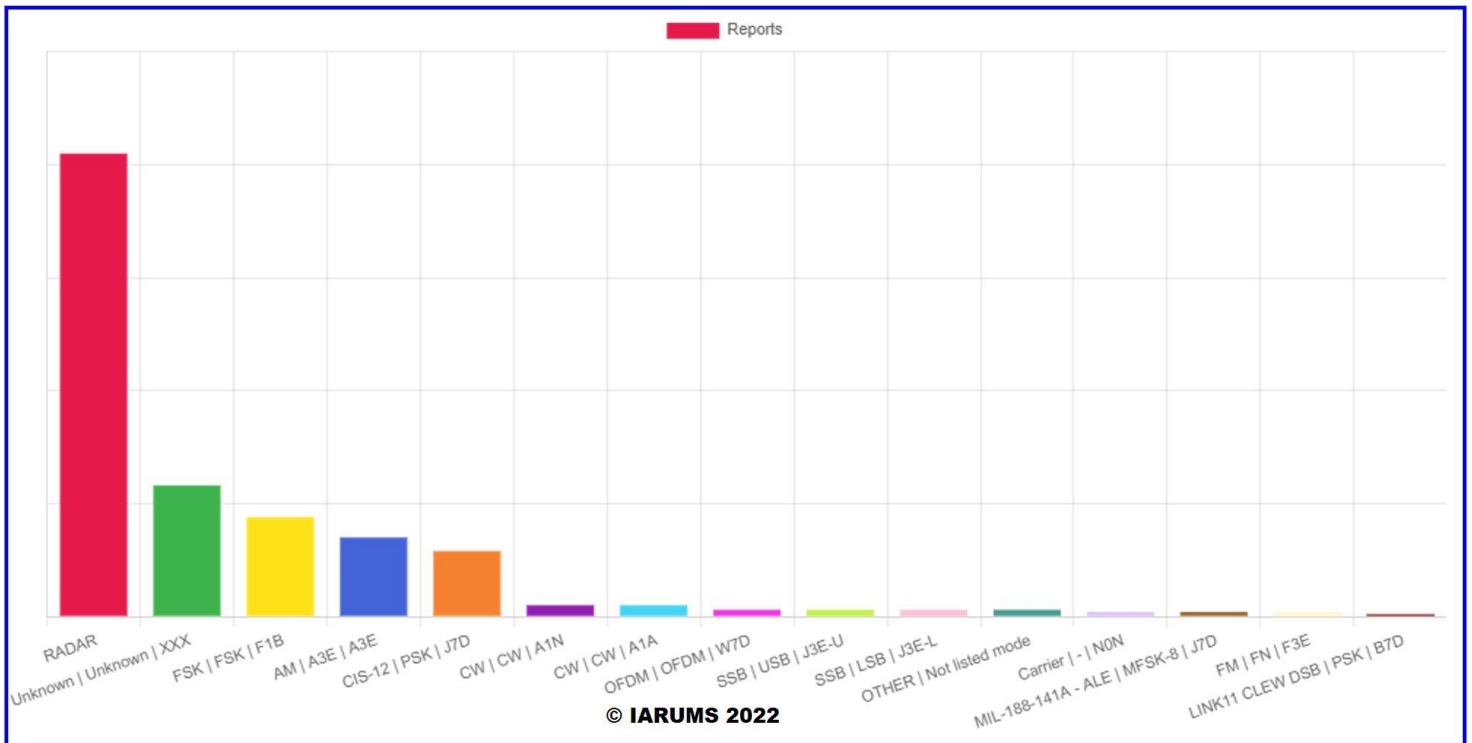


7035 kHz CF: XXX. BW ca 12 kHz. ( KiwiSDR / Richard G4DYA / RSGB)

Another example of this type of signal whose precise function we do not know yet is one that has been received several times on 40 m, with a bandwidth of about 12 kHz.

Within what we unfortunately consider to be more common signals, numerous emissions were received in various CIS - FSK modes on different frequencies, mostly in the 40 and 20 m bands. We were also able to receive several CIS-12 transmissions (BW = 2.7 kHz; 12 x 120 Bd + pilot line), as well as DPRK-FSK 600 ARQ (SH = 600 Hz; Bd = 600) and DPRK\_PSK 1200 ARQ (BW = 1.2 kHz; 1200 Bd), most of the time received on the 20 m band, and a LINK-11 DSB in 7159 kHz, among other well-known MIL modes.

Broadcasting stations continue to cause damage to the amateur radio HF bands. An example of such broadcasts is Ethiopia Radio on 7110 kHz AM (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** = unidentified.

**DARC; Daniel DL3RTL. Credit to monitors: DF5JL, Tom; DH1QK, Klaus; DL6WAB, Jürgen; DL4HG, Olaf; DL8LAQ, Norbert; DL2SCH, Jürgen; DB3TA, Alex**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
6999,8	1714	18	05	RUS		PSK		2k4	CIS-12
6999,8	1908	23	05	RUS		PSK		2k4	CIS-12
7001,8	1714	18	05			PSK		2k8	STANAG-4285
7007,8	1843	18	05	RUS		PSK		2k4	CIS-12
7009,8	2000	15	05	RUS		PSK		2k4	CIS-12 on idle
7010,0	1702	08	05			PSK		3k	unid
7012,0	1826	18	05			PSK		3k	unid
7020,0	1724	04	05					8k	unid
7021,0	1904	18	05			PSK		3k	unid
7023,0	0546	08	05					7k	unid
7025,8	1535	01	05	RUS		PSK		2k4	CIS-12
7025,8	1615	02	05	RUS		PSK		2k4	CIS-12
7025,8	1646	04	05	RUS		PSK		2k4	CIS-12
7032,0	1650	12	05			PSK		3k	unid
7053,5	1903	22	05					3k	unid

**DARC; Daniel DL3RTL. Credit to monitors: DF5JL, Tom; DH1QK, Klaus; DL6WAB, Jürgen; DL4HG, Olaf; DL8LAQ, Norbert; DL2SCH, Jürgen; DB3TA, Alex**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7064,0	2025	04	05	RUS		FMOP	40	12k	OTHR Contayner
7064,0	2031	29	05	RUS		FMOP	40	12k	OTHR Contayner
10150,0	1710	08	05				81,4	42k	OTHR wideband, 5,96s bursts
10151,0	1830	01	05	AUS		FMCW	19,8/20,9/22,1	10k	OTHR JORN 3,2/3,05/2,9 s bursts
14004,0	1925	04	05			PSK		3k	unid
14012,4	0725	15	05			PSK		2k5	unid
14059,8	0735	15	05	RUS		PSK		2k4	CIS-12 on idle
14059,8	1502	16	05	RUS		PSK		2k4	CIS-12
14059,8	1918	17	05	RUS		PSK		2k4	CIS-12
14059,8	1722	18	05	RUS		PSK		2k4	CIS-12
14108,0	1742	18	05	RUS		FMOP	40	12k	OTHR Contayner
14124,0	1838	16	05	RUS		FMOP	40	12k	OTHR Contayner
14140,0	1902	04	05	RUS		FMOP	40	12k	OTHR Contayner
14144,0	2032	28	05	RUS		FMOP	40	12k	OTHR Contayner
14152,0	0840	29	05	RUS		FMOP	40	12k	OTHR Contayner
14153,0	1733	02	05	RUS		FMOP	40	12k	OTHR Contayner
14156,0	1120	22	05	RUS		FMOP	40	12k	OTHR Contayner
14160,0	1008	15	05	RUS		FMOP	40	12k	OTHR Contayner
14181,0	2113	13	05	RUS		FMOP	40	12k	OTHR Contayner
14184,0	1145	22	05	RUS		FMOP	40	12k	OTHR Contayner
14187,0	0710	15	05	RUS		FMOP	40	12k	OTHR Contayner
14187,0	2032	28	05	RUS		FMOP	40	12k	OTHR Contayner
14188,0	0836	27	05	RUS		FMOP	40	12k	OTHR Contayner
14189,0	1732	02	05	RUS		FMOP	40	12k	OTHR Contayner
14189,0	1534	29	05	RUS		FMOP	40	12k	OTHR Contayner
14190,0	1718	08	05	RUS		FMOP	40	12k	OTHR Contayner
14194,0	1008	15	05	RUS		FMOP	40	12k	OTHR Contayner
14195,0	1155	22	05	RUS		FMOP	40	12k	OTHR Contayner
14201,0	1148	26	05	RUS		FMOP	40	12k	OTHR Contayner
14208,0	1838	16	05	CHN			66,67	10k	OTHR 3,8s bursts
14209,0	1122	22	05	RUS		FMOP	40	12k	OTHR Contayner
14223,0	1504	16	05	CHN			66,67	10k	OTHR 3,8s bursts
14226,0	1537	16	05	CHN			66,67	10k	OTHR 3,8s bursts
14266,0	1539	16	05	CHN			66,67	10k	OTHR 3,8s bursts
14290,0	1819	19	05	CHN			50	10k	OTHR 5,1s bursts
14298,0	1020	15	05	RUS		FMOP	40	12k	OTHR Contayner
14305,0	1020	15	05	RUS		FMOP	40	12k	OTHR Contayner
14305,0	1819	19	05	CHN			50	10k	OTHR 5,1s bursts
14327,0	0540	08	05	RUS		FMOP	40	12k	OTHR Contayner
14343,0	1938	02	05	CHN			50	10k	OTHR 5,1s bursts
18069,0	2025	02	05					8k	unid
18107,0	1715	04	05			F1B	50	200	FSK-Traffic
18130,0	0802	01	05	RUS		FMOP	40	12k	OTHR Contayner
18150,0	0848	15	05	CHN			66,67	10k	OTHR 3,8s bursts
18170,0	0536	08	05	CYP		FMCW	50	20k	OTHR Pluto Cyprus
18170,0	1232	27	05	CYP		FMCW	50	20k	OTHR Pluto Cyprus

**DARC; Daniel DL3RTL. Credit to monitors: DF5JL, Tom; DH1QK, Klaus; DL6WAB, Jürgen; DL4HG, Olaf; DL8LAQ, Norbert; DL2SCH, Jürgen; DB3TA, Alex**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21107,0	1534	01	05	RUS		FMOP	40	12k	OTHR Contayner
21128,0	1905	18	05	RUS		FMOP	40	12k	OTHR Contayner
21176,0	1010	15	05	RUS		FMOP	40	12k	OTHR Contayner
21195,0	1342	01	05	CYP		FMCW	50	20k	OTHR Pluto Cyprus
21309,0	1450	24	05	RUS		FMOP	40	12k	OTHR Contayner
21313,0	1345	01	05	CHN			50	10k	OTHR 5,1s bursts
21317,0	1719	08	05	RUS		FMOP	40	12k	OTHR Contayner
21389,0	1342	01	05	RUS		FMOP	40	12k	OTHR Contayner
21403,0	1029	01	05	CHN			66,67	10k	OTHR 3,8s bursts
21412,0	1146	26	05	CYP		FMCW	50	20k	OTHR Pluto Cyprus
21418,0	1030	01	05	CHN			10	160k	Chinese wideband OTHR
21426,0	1011	15	05	CHN			66,67	10k	OTHR 3,8s bursts
21429,0	0720	15	05	CHN			50	10k	OTHR 5,1s bursts
21445,0	1541	16	05	CHN			41,67	10k	OTHR 6,1s bursts
28040,0	0920	07	05	IRN				45k	Iranian OTHR
28041,0	1015	01	05	IRN			307/87 0	45k	Iranian OTHR
28071,2	0820	15	05						unid multi carrier 40Hz spacing
28200,0	1155	08	05	IRN			307/87 0	45k	Iranian OTHR
28200,0	1155	08	05	IRN			307/87 0	45k	Iranian OTHR
28200,0	0712	15	05	IRN			307/87 0	45k	Iranian OTHR 5,81/3,26s bursts
28240,0	1630	08	05	IRN			150/31 3	45k	Iranian OTHR
28350,0	0717	15	05	IRN			150/31 3	45k	Iranian OTHR
28600,0	1058	29	05	IRN			307/87 0	45k	Iranian OTHR 5,81/3,26s bursts
28775,0	1500	16	05	CYP		FMCW	50	20k	OTHR Pluto Cyprus
28860,0	0850	01	05	IRN			150/31 3	45k	Iranian OTHR
28860,0	1155	08	05	IRN			150/31 3	45k	Iranian OTHR
28860,0	0731	15	05	IRN			150/31 3	45k	Iranian OTHR
28860,0	1718	18	05	IRN			150/31 3	45k	Iranian OTHR
28860,0	1216	22	05	IRN			150/31 3	45k	Iranian OTHR
28860,0	1030	26	05	IRN			150/31 3	45k	Iranian OTHR
28860,0	1128	29	05	IRN			150/31 3	45k	Iranian OTHR
29000,0	1220	08	05	IRN			150/31 3	45k	Iranian OTHR
29350,0	1218	08	05	IRN			150/31 3	45k	Iranian OTHR

**DARC; Daniel DL3RTL.** Credit to monitors: **DF5JL, Tom; DH1QK, Klaus; DL6WAB, Jürgen; DL4HG, Olaf; DL8LAQ, Norbert; DL2SCH, Jürgen; DB3TA, Alex**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
29500,0	1200	08	05	IRN			150/31 3	45k	Iranian OTHR
29730,0	1213	08	05	IRN			150/31 3	45k	Iranian OTHR
29766,0	0808	15	05	CHN			50	10k	OTHR 1,4s bursts
29800,0	0809	15	05	IRN			150/31 3	45k	Iranian OTHR
29812,0	1026	01	05	IRN			150/31 3	45k	Iranian OTHR

**IRTS; Michael, EI3GYB**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3657	2225	23	5	RUS / UKR		LSB			Russian-Ukrainian radio war. Playing of the Ukrainian national anthem. Anti-Russian slogans. Ends at 2315z.
3700	2105	11	5	RUS / UKR		LSB			Patriotic music. Shouting of slogans. "Putin khuilo"
7050	1830	17	5	RUS / UKR		LSB			Russian and Ukrainians trading insults. Strong signals, endless show.
7055	1800	16	5	RUS / UKR		LSB			Russian-Ukrainian radio war. Main frequency. Daily. All day long. Very strong signals.
7060	2140	27	5	RUS / UKR		LSB			Russian-Ukrainian radio war. Huge signals, persistent.
7098	1815	16	5	RUS / UKR		LSB			Shouting of anti Russian propaganda "Russenschwein"- also in German. Moves on to 7100 kHz at 1820z. Moves to 7095 kHz at 1845z. Moves to 7100 kHz at 1900z.Rebroadcasting of Ukrainian national radio. Stays on that frequency until s/off at 2315z.
7103.5	2140	14	5			F1B			Strong and persistent. Still on 16.5. at 1900z.
7110	1710	22	5	ETH		AM			Radio Ethiopia, nearly daily with a weak signal.
7119	2145	14	5	RUS / UKR		LSB			Shouting of insults: "Russki katsapi" "Goworit Radio Stansija fascista ruski" " Putina khyila" Very strong signal. Endless stream of insults by the same male voice. Stops only at 2315z.
7163.5	1410	17	5			PSK			Link-11 Clew. Very strong and persistent.
7200	1445	25	5	BRM		AM			Radio Myanmar. Very weak until s/off at 1458z.
14000	1430	11	5	CHN		AM			Mixing product from China Radio International. Weak. Heard on several days.

IRTS; Michael, EI3GYB									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14151	1620	8	5			RADAR			Radar from 14151 to 14186 kHz. Strong and persistent.
14155	1230	29	5	RUS / UKR		USB			Ukrainian propaganda. Endless playing of the song "Bayraktar". Huge signal
14158	1310	26	5	RUS / UKR		USB			Female voice in Russian. Anti Russian propaganda. Very strong and persistent.
14160	1155	26	5	RUS / UKR		USB			Female voice- same as above. Propaganda in English. "Get rid of Putin before it is too late!"
14162	2230	26	5			RADAR			Radar from 14162 to 14183 kHz. Strong and persistent.
14185	1155	4	5			RADAR			Radar from 14185 to 14202 kHz. Huge and persistent.
14185	1210	8	5			RADAR			Radar from 14185 to 14200 kHz. Huge and persistent.
14195	1200	26	5			RADAR			Radar from 14195 to 14210 kHz. Strong and persistent.
14220	2035	20	5			F1B			Strong and persistent.
14280	2220	23	5			RADAR			Radar from 14280 to 14313 kHz. Huge and persistent.
14297.5	1225	9	5			PSK			North Korean embassy traffic. On and off. Heard also on 31st at 1240z. Very strong signals on both occasions.
14318	1220	9	5	CHN		RADAR			Chinese foghorn. On and off, medium signal.
14320	1200	3	5			RADAR			Radar from 14320 to 14340 kHz. Strong and persistent.
18156	1555	6	5			RTTY			Strong. On and off.
21126	1615	27	5			RADAR			Radar from 21126 to 21138 kHz. Medium signal, persistent.
21165	1405	24	5			RADAR			Radar from 21165 to 21180 kHz. Medium signal, persistent.
21178	1215	9	5			RADAR			Radar from 21178 to 21200 kHz. Strong and persistent.
21226	1200	4	5			PSK			Huge signal, on and off.
21300	1400	24	5			RADAR			Radar from 21300 to 21315 kHz. Medium signal, persistent.
21438	1330	6	5	UKR / RUS		CW			Russian navy, Sevastopol. Daily.
28150	1110	12	5	IRN		RADAR			Iranian radar, AM mode. Very strong.
28300	1710	24	5	IRN		RADAR			Radar from 28300 to 29300 kHz. Medium signal, persistent. Moving up and down the band. Still audible at 1930z.
28840	1115	18	5	IRN		RADAR			Radar from 28840 to 29280 kHz. AM mode. Medium signal, persistent.
29230	1130	18	5	IRN		RADAR			Radar from 29230 to 29280 kHz. AM mode. Weak signals.

<b>PZK; SP3AMO, SP5GNI</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>
5358.0	2005	16	05			RADAR		10K0E	S9+20dB
5366.0	2005	16	05			J3E-U		2k7	In Italian and English
7026.0	1646	01	05			PSK	120	2k70E	vt vt
7026.0	1615	11	05			UI		8k0E	RSQ 595+
7041.5	0600	02	05			UI		2k0E	
7054.0	2200	28	05			RADAR		12K0E	S9+12dB
7162.0	1055	05	05			UI		8k0E	RSQ 595+ 1059 UTC QRT
7169.0	1300	22	05			PSK		2K9	CIS-12 S9+16dB
10120.0	0638	05	05			UI		8k0E	
14008.0	0820	19	05			F1B		200H	
14018.5	0642	05	05			UI		2k0E	
14024.5	1315	11	05			UI		8K0E	S9 1317 ended
14033.0	1138	05	05			RADAR		12K0E	S9+20dB
14060.0	1850	18	05			PSK		2K9	CIS-12 S9
14090.0	1220	10	05	G		RADAR		20K0E	S9+10dB
14091.0	1105	26	05			PSK		2K9	CIS S9+6dB
14109.0	0910	31	05			UI		1K6	S6 14 spectral lines
14118.0	1608	11	05			RADAR	40	14k0E	
14128.0	0920	06	05			RADAR		10K0E	S7
14131.0	1848	18	05			RADAR		10K0E	S7
14153.0	1642	01	05			RADAR		8K0E	S9 Burst
14153.0	1735	02	05			RADAR		14K0E	S9
14154.0	1350	23	05			RADAR		40K0E	S5
14160.0	0540	20	05			F1B		250H	
14190.0	1025	05	05	G		RADAR		20K0E	S9+10dB
14191.0	0950	12	05			RADAR	40	12K0E	
14194.0	0915	05	05	G		RADAR		20K0E	S9+10dB
14195.0	1230	04	05			RADAR		20K0E	S9 continous
14200.0	1350	23	05			RADAR		10K0E	S7 Bursts
14201.0	0720	11	05			RADAR		10K0E	S8 bursts
14201.0	1123	26	05			RADAR		16K0E	S9
14199.5	0640	05	05			UI		1k50E	
14292.0	0920	05	05			F1B		500	S9+20dB
14307.0	1642	05	05			RADAR		8K0E	S9 Burst also at 14264.0
18069.0	1945	02	05			UI		8k0E	
18080.0	0600	12	05			A3E			RS 23 vd vt
18093.0	0643	04	05			RADAR	50	10k0E	
18107.0	0650	04	05		RDL	F1B/A2A	50	200H	QTC – 22wpm, vt vd
18161.0	1355	23	05			RADAR		10K0E	S7 Bursts
18165.0	0908	05	05	G		RADAR		30K0E	S9+26dB!
21135.0	0905	31	05			RADAR		10K0E	S7
21158.0	1012	19	05	G		RADAR		20K0E	vd vt
21173.0	1340	23	05			RADAR		10K0E	S6
21174.0	0930	14	05			RADAR	40	10k0E	
21195.0	1338	01	05	G		RADAR		20K0E	S9+10dB
21243.0	0735	11	05			RADAR		10K0E	S7 bursts alternating with 21970.0

**PZK; SP3AMO, SP5GNI**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21327.0	1310	24	05			RADAR		10K0E	S7 burst
21350.0	0800	06	05			RADAR		10K0E	S5 bursts
21353.0	0930	12	05			RADAR	66	10k0E	
21355.0	0826	19	05			RADAR	50	20K0E	
21357.0	1025	08	05			RADAR		10K0E	S5 bursts alternating with 21306.0 21412.0
21370.0	1725	02	05	G		RADAR		20K0E	S9+10dB
21389.0	1340	01	05			RADAR		10K0E	S5
21405.0	0800	05	05			RADAR		10K0E	S7 bursts alternating with 21375.0
28040.0	1732	03	05	IRN		RADAR	300/87 0	46k0E	
28170.0	0810	23	05	IRN		RADAR		80K0E	S9
28200.0	0915	12	05	IRN		RADAR	150/30 0	46k0E	vt
28250.0	1048	15	05	IRN		RADAR	150/30 0	46k0E	
28295.0	1052	24	05	IRN		RADAR		80K0E	S8 also observed at 28500.0, 28860.0
28860.0	0545	02	05	IRN		RADAR	150/30 0	46k0E	vd vt
29025.0	0812	23	05			F3E		8K0E	In Russian (radio taxi?)
29150.0	0800	06	05	IRN		RADAR		60K0E	S9
29480.0	0920	12	05	IRN		RADAR	150/30 0	46k0E	
29550.0	1155	20	05	IRN		RADAR		100K0E	S9
29610.0	0930	03	05	IRN		RADAR		60K0E	S7 moved to 29550.0

**REF; Francis, F5MIU**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
28050	0757	2	05			fmcw	25	60kHz	OTH Radar pulsed at different rates, S9
28040	1558	2	05			fmcw	25	60kHz	OTH Radar pulsed at different rates, S9 till on QRG !
21450	0804	3	05			fmcw	50	20kHz	OTH Radar pulsed 20ms, S8
50500	0834	5	05			?		<500kHz	OTH Radar pulsed 35ms, S4
14170	1642	8	05			fmcw	40	40kHz	OTH Radar pulsed 25ms, S9+30dB !
10145	1650	8	05			fmcw	40	60kHz	OTH Radar S8 QRM on DK0WCY solar beacon
21430	1659	11	05			fmcw	40	15kHz	OTH Radar pulsed 25ms (mixed rates), S9+10dB
14185	0720	12	05			fmcw	40	20kHz	OTH Radar pulsed 25ms (mixed rates), S9+10dB
21160	1627	15	05			fmcw	40	25kHz	OTH Radar pulsed 25ms (mixed rates), S9+10dB
21160	0803	21	05			fmcw	40	25kHz	OTH Radar pulsed 25ms (mixed rates), S9+10dB
21305	0826	23	05			fmcw	50	20kHz	OTH Radar pulsed 20ms (mixed tones), S9
14180	1719	23	05			fmcw		20kHz	OTH Radar pulsed 25ms (Synchron with



**REF; Francis, F5MIU**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
									below), S9
14290	1719	23	05			fmcw		20kHz	OTH Radar pulsed 25ms (Synchron with above), S9+40
18169	0748	25	05			fmcw	40	15kHz	OTH Radar pulsed 25ms (mixed rates), S9+10dB
18068	1719	25	05			fmcw	50	30kHz	OTH Radar pulsed 20ms S9+15
14180	0759	27	05			fmcw	40	25kHz	OTH Radar pulsed 25ms (mixed rates), S9
14040	0757		05			fmcw		25kHz	OTH Radar pulsed 25ms (mixed rates), S9+10
14190	1712	31	05			fmcw	40	25kHz	OTH Radar pulsed 25ms (mixed rates), S9
3500-3800	1715	31	05						Wide qrm pulsing 17 / 34ms All over the band S9 (local ?)

**RSGB; Richard, G4DYA**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3510.0	1852	01	05			J3E		2K70E	USB 'The Air Horn'. Daily.
3580.0	1730	12	05			F3N	10.0	5K00E	Unidentified; 2 mins every 5 mins
3590.0	1830	06	05			F3N	0.1	5K00E	Unidentified; 2 mins every 5 mins
3756.0	1852	01	05			J3E		1K70E	USB 'The Pip'. Daily.
5358.0	2007	16	05					8K00E	Unidentified
7000.0	1737	18	05			J7D		2K70E	USB 6998.0 / CIS-12
7001.8	1740	18	05					2K40E	Unidentified
7007.0	1932	14	05					14K0E	Unidentified
7010.0	1536	25	05	RUS		P0N	40	12K0E	Container pulse radar
7012.0	1827	18	05					4K00E	Unidentified bursts
7019.0	1808	06	05			N0N			Plain carrier. Also heard 121725z.
7026.0	1726	01	05			J7D		2K70E	USB 7024.0 / CIS-12. Also heard 021739z, 031658z, 041642z, 061759z
7030.0	1758	06	05					12K0E	Unidentified
7032.0	1650	12	05					5K00E	Unidentified bursts
7033.0	2315	14	05					14K0E	Unidentified
7035.0	1906	14	05					14K0E	Unidentified
7075.000	1717	12	05			A1N			Continuous groups of 16 dashes
7075.002	0736	06	05			A1N			Continuous groups of 16 dashes
7075.006	1907	13	05			A1N			Continuous dashes
7075.065	1946	14	05			A1N			Continuous dashes
7080.0	1729	01	05			F1B		200	FSK. Also heard 021740z, 031700z
7102.0	1546	13	05			F1B		200	FSK. Also heard 140744z, 152121z, 161924z
7110.0	1728	01	05	ETH	R. Ethiopia	A3E			BC. Also heard 021741z, 031702z, 041645z, 121659z, 181742z, 231659z
7114.0	1703	03	05			F1B		200	FSK
7137.0	1743	02	05			F1B		200	FSK
7140.02	1815	01	05	ERI	VoBM	A3E			BC. Also heard 021743z, 031704z, 061804z, 231700z

<b>RSGB; Richard, G4DYA</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>
7159.0	2107	15	05			B7D		6K00E	DSB / Link 11 CLEW
10110.0	1902	16	05					20K0E	Unidentified
10151.0	1828	01	05			F3N		10K0E	FMCW radar. 19.0, 19.8, 20.9, 22.1, 23.0 sps
14006.16	1719	23	05					1K20E	Unidentified bursts
14008.0	1550	05	05			F1B		250	FSK. Also heard 150734z, 190944z
14010.9	1001	16	05					2K00E	Unidentified bursts
14018.0	1033	09	05					4K00E	Unidentified bursts
14027.0	1336	04	05					8K00E	Unidentified
14034.4	1547	05	05					3K00E	Unidentified
14037.0	0642	26	05					8K00E	Unidentified
14060.0	2119	15	05			J7D		2K70E	USB 14058.0 / CIS-12. Also heard 161858z, 181733z
14090.9	0735	26	05			J7D		2K80E	USB 14089.0 / CIS-60
14091.0	1000	06	05	RUS		P0N	40	12K0E	Container pulse radar. Also heard 101235z
14108.0	1752	18	05	RUS		P0N	40	12K0E	Container pulse radar
14116.0	0741	14	05			F1B		250	FSK
14140.0	2130	24	05	RUS		P0N	40	12K0E	Container pulse radar
14160.0	0738	14	05			F1B		250	FSK
14186.0	1721	23	05	RUS		P0N	40	12K0E	Container pulse radar
14193.0	1024	16	05	RUS		P0N	40	12K0E	Container pulse radar
14198.0	1026	19	05	RUS		P0N	40	12K0E	Container pulse radar
14198.5	0805	02	05			F1D		1K20E	Unidentified FSK bursts. 600 Hz shift. Also heard 030804z, 060814z
14221.0	2118	15	05			F1B		200	FSK. Also heard 242132z
14243.0	1550	13	05	CHN		F3N	50	10K0E	FMCW radar bursts
14284.0	0735	07	05	CHN		F3N	66.7	10K0E	FMCW radar bursts
14292.0	1653	23	05	RUS		P0N	40	12K0E	Container pulse radar
14298.5	0733	07	05					1K20E	Unidentified bursts. Also heard 101235z
14312.0	0815	16	05	CHN		F3N	66.7	10K0E	FMCW radar bursts
14322.0	1900	16	05	CHN		F3N	50	10K0E	FMCW radar bursts
18065.0	1026	16	05	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus. Also heard 251533z
18067.0	0709	09	05			F3N	50	10K0E	FMCW radar
18067.0	0711	16	05	CHN		F3N	66.7	10K0E	FMCW radar bursts
18069.0	0711	05	05	RUS		P0N	40	12K0E	Container pulse radar
18070.0	0820	15	05	CHN		F3N	66.7	10K0E	FMCW radar bursts
18093.0	0716	04	05			F3N	50	10K0E	FMCW radar. Also heard 160709z
18107.0	0804	02	05	RUS		F1B		200	FSK. Also heard 030748z, 040725z, 050713z
18122.0	1807	18	05	CHN		F3N	41.7	10K0E	FMCW radar bursts
18150.0	0902	15	05	CHN		F3N	62.5	10K0E	FMCW radar bursts
18170.0	0721	25	05	RUS		P0N	40	12K0E	Container pulse radar
18170.0	1258	27	05	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
18175.0	0812	05	05	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus. Also heard 200737z

**RSGB; Richard, G4DYA**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21000.0	0957	16	05	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21126.0	0812	16	05	CHN		F3N	41.7	10K0E	FMCW radar bursts
21158.0	1013	19	05	RUS		P0N	40	12K0E	Container pulse radar
21159.0	2113	15	05	RUS		P0N	40	12K0E	Container pulse radar. Also heard 210858z
21174.0	1031	24	05	RUS		P0N	40	12K0E	Container pulse radar
21175.0	0639	26	05	RUS		P0N	40	12K0E	Container pulse radar
21176.0	0712	04	05	RUS		P0N	40	12K0E	Container pulse radar. Also heard 151014z
21190.0	1233	09	05	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21205.0	0718	25	05	RUS		P0N	40	12K0E	Container pulse radar
21270.0	0745	03	05	G		F3N	25	20K0E	FMCW radar, UK SBA, Cyprus
21309.0	1032	24	05	RUS		P0N	40	12K0E	Container pulse radar
21315.0	0732	15	05	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21316.0	0859	16	05	CHN		F3N	41.7	10K0E	FMCW radar bursts
21327.0	0737	04	05	CHN		F3N	66.7	10K0E	FMCW radar bursts
21365.0	0900	15	05	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21382.0	0807	16	05	CHN		F3N	41.7	10K0E	FMCW radar bursts
21390.0	0907	06	05	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21395.0	0915	16	05	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21407.0	1033	03	05	RUS		P0N	40	12K0E	Container pulse radar
21408.0	1746	18	05	RUS		P0N	40	12K0E	Container pulse radar
21410.0	0705	26	05	RUS		P0N	40	12K0E	Container pulse radar
21421.0	1333	04	05	RUS		P0N	40	12K0E	Container pulse radar
21424.0	1034	03	05	RUS		P0N	40	12K0E	Container pulse radar
21426.0	1014	19	05	RUS		P0N	40	12K0E	Container pulse radar
21438.0	0839	04	05	RUS	RCV	A1A			Morse. Also heard 060908z, 070835z, 150904z, 190850z
21450.0	0752	03	05	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21450.0	0919	09	05	G		F3N	12.5	40K0E	FMCW radar, UK SBA, Cyprus
21455.0	1037	03	05			A3E		15K0E	BC (LSB spreading below 21450)
28040.0	1805	02	05	IRN		P0N		45K0E	Pulse radar. 307.1 / 869.5 pps
28200.0	1741	12	05	IRN		P0N		45K0E	Pulse radar. 307.1 / 869.5 pps. Also heard 150734z
28860.0	0734	20	05	IRN		P0N		45K0E	Pulse radar. 307.1 / 869.5 pps
29150.0	1531	25	05	IRN		P0N		45K0E	Pulse radar. 150.2 / 313.0 pps

**SRAL; Pekka, OH2BLU**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7 MHz	1530-0510	05 25	5	RUS		RADAR	40sps	13k0E	(WebSDR 24d)
7 MHz	0700-1800	*	5	RUS		RADAR	10sps	10k0E	*) Days: 1. 11. 12. 13. 18. 21. 22. 25. 27. - 30.
7 MHz	0500-1830	*	5	RUS		PSK		8k0E	*) Days: 5. - 19. 23. 24. 26. 27. 30. 31. mainly 7006 – 7077 kHz
7000.0	0000-2400	*	5	RUS		J7D	120	2k60E	*) Days: 8. 10. 12. - 15.

<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>
7008.0	0810-1805	28	5	RUS		F1B		250H	
7010.0	0520-1200	*	5	RUS		J7D	120	2k60E	*) Days: 8. 19. 20.
7018.0	0515-1545	16 18	5	RUS		J7D	120	2k60E	
7019.0	0330-1830	*	5	RUS	RAL	A1A/ NON	14 wpm	40H	*) Days: 6. - 9. 13. 27. 5BL
7022.0	0925-1500	13 19	5	RUS		J7D	120	2k60E	
7025.0	0500-1600	*	5	RUS		F1A/B	28 wpm	200H	*) Days: 6. 7. 8. 10. 30. 31. 5F
7026.0	0000-2400	*	5	RUS		J7D	120	2k60E	*) Days: 1. - 8.
7031.0	0515-1730/	*	5	RUS		J3E-u		3k0E	*) Days: 16. - 19. brum, fem vox
7048.0	0500-1030	04 05	5	RUS		A1A	20 wpm	40H	
7054.0	1710-1815	01 02	5	RUS		F1B		200H	
7057.5	0500-0945	*	5	RUS	1X9L etc	A1A	18 wpm	40H	*) Days: 1. - 5. 5BL
7060.0	0830-1820	20 21	5	RUS		J7D	120	2k60E	
7102.0	0500-1900	*	5	RUS		F1B		200H	*) Days: 13. 14. 15.
7110.0	1600-1810/	01 - 31	5	ETH	R. Ethiopia	A3E		9k0	
7110.4	1700-1900	*	5		RSS	A1A	22 wpm	20H	*) Days: 3. - 7. 9. 12. 18. 29. news in English (Google news)
7124.5	0830-1330/	*	5	RUS		J7D	120	2k60E	*) Days: 1. - 3.
7138.0	0530-0645	30 31	5	RUS		F1B		250H	
7140.0	1530-1840/	*	5	ERI	VoBME	A3E		9k0	*) Days: 1. - 4. 6. 8. 10. 16. 23. 24. 25. 29. +20Hz offset
7158.0	0715-0729/	04	5	RUS		A1A		40H	5F, groups twice
7160.0	1410-1450/	26	5	RUS		J7D	120	2k60E	
7200.0	1200-1500/	01 - 30	5	TWN		A3E		9k0	National Unity Radio to Korea
10 MHz			5	G		RADAR	50sps	20k0	(WebSDR 3d)
10 MHz	1620-1745	28 30	5	RUS		RADAR	40sps	13k0E	(WebSDR 15d)
10 MHz	0810-1410	06 26	5	RUS		PSK		8k0E	Carrier noted 10005 – 10007 kHz
14 MHz	2140-1740	*	5	RUS		RADAR	40sps	13k0E	*) Days: 1. - 4. 6. - 10. 12. 13. 15. 17. 18. 20. - 31. (WebSDR 26d)
14 MHz	0500-1715	*	5	RUS		RADAR	10sps	10k0E	*) Days: 1. 2. 6. 9. 10. 11.12. 16. 18. 21. 23. 25. 27. - 30

SRAL; Pekka, OH2BLU									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14 MHz	0500-1730	*	5	RUS		PSK		8k0E	*) Days: 5. 7. 9. 13. 16. 19. 21. 27. 28. 31. mainly 14034 – 14107 kHz
14 MHz	0800-1830	*	5	CHN		RADAR	50/67s ps	10k0E	*) Days: 2. 5. - 9. 12. - 16. 21. 24. 26. 27. 30. 'foghorn'
14000.0	1357-1457/	01 - 31	5	CHN	CRI	A3E		9k0	Tx intermodulation, //13710 & 13855 kHz
14002.0	1145	12	5	RUS		F1B		1k0	
14004.0	0830-0900	10	5	RUS		F1B		500H	
14008.0	0515-1020	*	5	RUS		F1B/NON		250H	*) Days: 3. 8. 13. 16. 19. 25.
14060.0	0600-1800	15 - 18	5	RUS		J7D	120	2k60E	
14108.0	0810-1205	*	5	RUS	VTAH etc	A1A		40H	*) Days: 11. 12. 16. 22. 5BL
14118.0	0805	06	5	RUS		A1A		40H	
14169.0	0755-0758/	17	5	RUS		F1B		200H	
14171.0	0745-0757/	*	5	RUS		J7D	120	2k60E	
14220.0	1030-1130	03 07	5	RUS		J7D	120	2k60E	
14221.0	0330-0600/	01 - 31	5	KAZ		F1B		200H	On day 11. - 0750/
14317.0	1015-1210	15 16	5	RUS	TCIY etc	A1A	15 wpm	40H	5BL (ERP > 400 W)
18 MHz	0600-1730	*	5	G		RADAR	25/50s ps	20k0	*) Days: 4. 5. 8. 9. 14. 16.19. 20. 25. - 28. (WebSDR 13d)
18 MHz	0645-1500	*	5	RUS		RADAR	40sps	13k0E	*) days: 1. 5. 18. 20. 22. (WebSDR 17d)
21 MHz	0600-1715	*	5	G		RADAR	25/50s ps	20k0	*) Days: 1. 2. 5. 6. 7. 9. 10. 11. 13. 15. 18. 20 21. 23 – 27. (WebSDR 18d)
21 MHz	0615-1730	*	5	RUS		RADAR	40sps	13k0E	*) Days: 5. 16. 25. 27. 31. (WebSDR 11d)
21 MHz	0600-1230	*	5	CHN		RADAR	50/67s ps	10k0E	*) Days: 4. 5. 6. 8. - 13. 16. 18. 'foghorn'
21438.0	/0830-1600	01 - 31	5	RUS	RCV	A1A	20 wpm	40H	
28 MHz	0500-1415	*	5	IRN		RADAR	150/313	60k0E	*) Days: 1. - 10. 12. 16. 18. 19. 20. 23. 24. 25. 27. 29. alternating fq (WebSDR 22d)
28 MHz	0600-1545	*	5	IRN		RADAR	310/870	120k0E	*) 1. 2. 3. 6. 7. 12. 13.16. 18. 28.(WebSDR 16d)
28860.0	0445-1545	*	5	IRN		RADAR	150/313	60k0E	*) Days: 1. - 8. 11. - 16. 18. - 31. (WebSDR 29d)
28 MHz	0930-1040	16	5	RUS	Taxi disp.	F3E		3k0E	8 reports

**USKA; Peter, HB9CET**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7000.0	2224	19	05			J7D	12x120 Bd	2k70E	CIS12: partialy in 40m band
7001.8	1813	18	05			G1D PSK8	2400	2k70E	1800Hz single tone modem, often
7005.0	1525	04	05			XXX		ca 8k0E	unid signal; most likely Jammer
7010.0	1210	25	05			J7D	12x120 Bd	2k70E	CIS12; xPSK, stopped 1215z
7010.0	1645	15	05			J3E-L		ca 2k10E	LSB, unid language
7011.0 USB		25	05			W7D OFDM 60	30 Bd	2k80E	OFDM 60; tone spacing 44.4Hz
7012.0	0845	16	05			XXX		ca 8k0E	unid signal; most likely Jammer
7014.5	1752	17	05			XXX		ca 3k0E	unid signal (bursts)
7015.0	1342	05	05			XXX		ca 8k0E	unid signal
7026.0	2212	01	05			J7D	12x120 Bd	2k70E	CIS12: long lasting daily
7050.0 LSB	1639	15	05			J3E-L		ca 3k0E	RUS-UKR Radio War almost daily
7060.0 LSB	1213 1638	02 15	05			J3E-L		ca 3k0E	RUS-UKR Radio War; Music often
7060.0	2231	19	05			J7D	12x120 Bd	2k70E	CIS12: idling only often
7080.0	1903	04	05		RDL	F1B		200H	FSK
7080.0	1907	04	05		RDL	F1A		200H	CW-FSK
7102.0	1642	15	05			F1B		200H	FSK
7110.0	1718	04	05	ETH		A3E		ca 9k0E	BC: Radio Ethiopia daily
7138.0	0736 2244	31	05		RDL	F1B	50 Bd	250H	FSK; long lasting; ID in F1A almost daily
7140.0	1722	04	05	ERI	VOBM1	A3E		ca 9k0E	BC: Voice of the broad masses 1 daily
7159.0	2258	31	05			XXX		ca 500H	unid signal
7200.0	1443	03	05			A3E		ca 9k0E	BC; most likely Taiwan often partially in 40m band
14000.0	1408 1453	02 19	05		CRI	A3E			China Radio International. intermodulation from 13855 + 13710 kHzoften
14008.0	1359 0817	05 18	05			F1B	50 Bd	250H	FSK often
14024.0	1329	31	05			XXX		ca 5k0E	unid signal
14060.0	1419	17	05			J7D	12x120 Bd	2k70E	CIS12
14089.0	1356	25	05			FMOP	40 sps	12k0E	OTHR; Contayner
14091.0	0907	26	05			W7D OFDM 60		2k80E	OFDM 60; tone spacing 44.4Hz
14112.0	1209	20	05			J7D	12x120 Bd	2k70E	CIS12
14149.0	1429	17	05			FMOP	40 sps	12k0E	OTHR; Contayner
14186.0	1454	04	05			FMOP	40 sps	12k0E	OTHR; Contayner
14189.0	1239	21	05			FMOP	40 sps	12k0E	OTHR; Contayner

**USKA; Peter, HB9CET**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14195.0	1537	10	05			J3E-U		ca 3k0	Music, vocals, sounds Russian
14198.4	1310	02	05			PSK-ARQ	1200	1200	DPRK ARQ system often
14221.0	2210 2239	01 31	05			F1B	50 Bd	200H	FSK often
14270.0	1221	28	05			XXX		ca 5 kHz	unid signal, most likely Jammer
14295.0	1400	04	05			FMCW	66.66 sps	10k0E	OTHR; Bursts
14327.0	0713	19	05			W7D OFDM 60		2k80E	OFDM 60; tone spacing 44.4Hz
18070.0	1505	04	05	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
18080.0	0653 0749	03 31	05			A3E			BC: Sound of Hope, Taiwan daily
18107.0	0852	02	05			F1B	50 Bd	200H	CIS; often
21120.0	1304	20	05			XXX		ca 2k50E	unid signal; most likely Jammer
21173.0	0934	22	05			FMOP	40 sps	12k0E	OTHR; Contayner
21270.0	0747	03	05	G		FMCW	25 sps	20k0E	OTHR; UK base Cyprus
21270.0	1116	18	05	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
21340.0	0744	03	05	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
21355.0	0921	26	05			FMOP	40 sps	12k0E	OTHR; Contayner
21395.0	0921	16	05	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
21438.0	0846	02	05	RUS	RCV	A1A		10H	Area of Sevastopol daily
21450.0	0751	03	05	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus; partially in 15m band
28042.0	1037 0937	01 02	05	IRN		?	307 + 870 sps	ca 45k	OTHR, Bursts; long lasting, sweep rate alternating
28170.0	0701	23	05	IRN		?	150 + 313 sps	ca 45k	OTHR, Bursts; long lasting, sweep rate alternating
28200.0	0757	15	05	IRN		?	307 + 870 sps	ca 45k	OTHR, Bursts; long lasting, sweep rate alternating
28248.0	0857	02	05	IRN		?	150 + 313 sps	ca 45k	OTHR, Bursts; long lasting, sweep rate alternating
28545.0	0828	03	05	IRN		?	150 + 313 sps	ca 45k	OTHR, Bursts; swee prate alternating
28860.0	0851	02	05	IRN		?	150 + 313 sps	ca 45k	OTHR, Bursts; long lasting, sweep rate alternating almost daily
29645.0	0821	03	05	IRN		?	150 + 313 sps	ca 45k	OTHR, Bursts; sweeprate alternating partially in 10m band

**VERON; Ruud, PG1R**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3797.0	2033	30	05	RUS		F1B			UiPtr; Revs; (shared band)
7036.0	1927	14	05			XXX		16k0E	Unknown mode; looks like white noise; wide band jammer?
7039.5	1100	26	05	RUS		F1B			UiPtr; Idling
7055.0	1725	14	05	UKR /RU S		J3E-L			Songs; UKR/RUS radiowar

<b>VERON; Ruud, PG1R</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>
10108.0	1343	06	05	RUS		F1B			Revs/UiPtr; (amateur secondary)
14008.0	1033	01	05	RUS		F1B			Carrier/Revs/UiPtr
14008.0	0747	03	05	RUS		NON			UiCar
14008.0	1021	18	05	RUS		F1B			Carrier/Revs/UiPtr
14018.0	1035	09	05			XXX		4k0E	Unknown mode; jammer?
14050.0	1032	16	05			A1A			Strong Carrier
14108.0	1030	06	05	RUS	PTV2	A1A			PTV2 Calls to: X6P2 M5MV ZOXX ALKS GOBW
14108.0	0945	20	05	RUS	PACT	A1A			PACT Calls to: PHQ7 5NZO
14108.0	0925	23	05	RUS	T25X	A1A			WKPK de T25X QTC 700 52 23 1250 700 = 553 = MMMMM 5BL
14108.0	1015	27	05	RUS	TKWL	A1A			L9SL de TKWLQTC 284 49 27 1306 283 = 247 = MMMMM 5BL
14108.0	1030	27	05	RUS	TKWL	A1A			TKWL Cals to: LADN S5FM MWBN THYN A89F
14116.0	0934	03	05	RUS		F1B			Revs/UiPtr
14188.0	0836	27	05		Radar			10k0E	OTHR
14220.0	0504	30	05			FiB			UiPtr; idle
14221.0	0740	11	05			F1B			UiPtr; idle
14298.0	0637	25	05				5	600H	Pulses
21156.0	0618	10	05	G		RADAR	50	20k0E	OTHR Cyprus
21437.0	1127	16	05	RUS		F1B			UiPtr; Revs
21438.0	0946	14	05	RUS	RCV	A1A			RIP90 de RCV QTC 427 49 7 1346 427 = Nawip 033 557 Karta 32225
21438.0	1109	19	05	RUS	RCV	A1A			RIP90 de RCV QTC 497 87 19 1218 497 = Nawip 032 615 Karty 33240
21438.0	1210	23	05	RUS	RCV	A1A			RGX94 de RCV QTC 933 66 7 0906 933 = Nawip 940 552 Karty 31033 30399
21438.0	0849	27	05	RUS	RIP	A1A			5F RIP90 de RIP k
28200.0	1043	06	05	IRN	Radar		307/87 0		Ghadir OTHR
28300.0	0911	12	05	IRN	Radar		150/31 3		OTHR

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