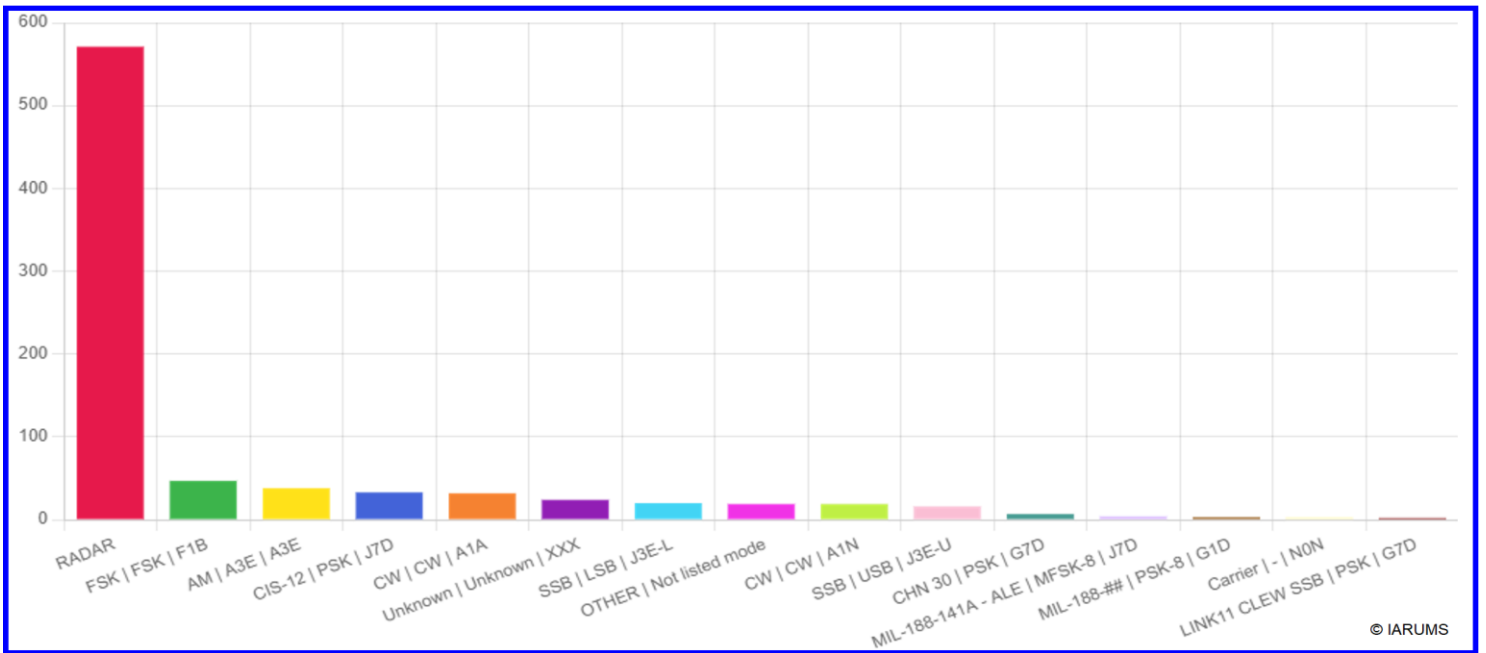


# IARU Monitoring System Region 1



Monthly Newsletter - December 2021

During December, radars were once again the most numerous and damaging intrusions on our HF ham bands, as shown in the statistical graph of observations reported in our database.

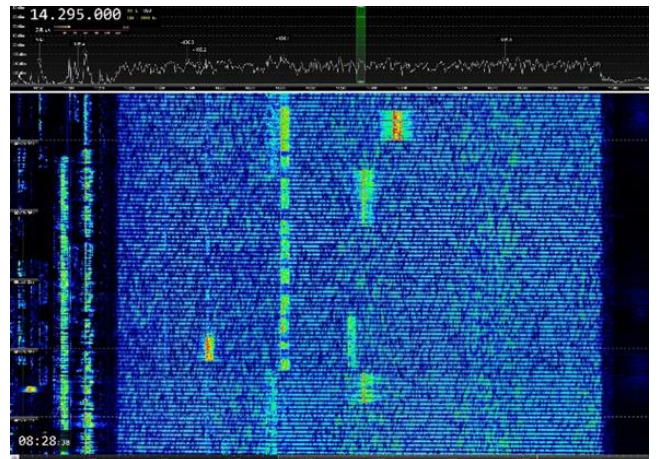


The Russian OTHR Contayner was received in several bands, with special incidence in 40 m., where up to 3 simultaneous transmissions of this radar were observed.

The British OTHR transmitting from RAF bases in Cyprus was also observed on several bands, with the highest incidence on the 15 meters band, using a sweep rate of 25 or 50 sps.

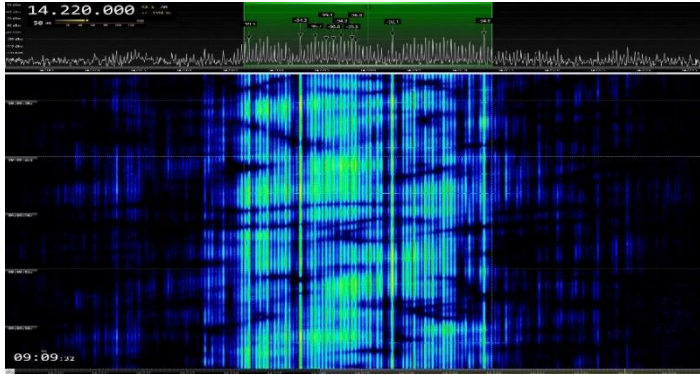
Several Chinese OTHRs were also received, such as the wideband OTHR (BW = 160 kHz 10 sps), and the nicknamed "Foghorn", transmitting short bursts with a 10 kHz bandwidth, and different sweeprates, the most usual being 50 sp and and 66.7 sps, but also received with 83.3 or 41.7 sps.

Due to the better propagation conditions on the high bands, the Iranian OTHR was received on quite a few occasions, not only on 28.860 kHz, the frequency on which it transmits daily, but also jumping across the whole 10 m. band.



CHN wideband OTHR (BW = 160 kHz. 10 ps)

As for the transmissions on digital modes, we were able to receive frequently, especially on the 20 m band, the systems used by the DPRK, the DPRK-600 ARQ and the DPRK-1200, as well as other typical signals such as CIS-12, various CIS - ## FSK transmissions, and others used by NATO such as the LINK-11 CLEW SSB, among others.



CIS- 12. Submode idle

We kept receiving daily the annoying transmissions of the broadcasting station Radio Ethiopia on 7.110 kHz AM. "Voice of the Broad Masses", broadcasting station from Eritrea, which we have not received for some time, was picked up several times at the end of the month on 7140.02 kHz.

On SSB, besides the disastrous effects of the sadly relentless UKR / RUS "radiowar" on 7055 kHz J3E-L (LSB), we note the numerous intrusions of Spanish fishermen operating on the 15 meters band, on 21.000 kHz USB.

On CW, apart from the long A1N transmissions consisting of continuous dashes on 7.075 kHz and adjacent frequencies, all of them within the 40m band segment dedicated to FT-8 mode transmissions, we daily noted, for many years now, the daily A1A transmission of QTC on 15 m - specifically on 21.438 kHz - by the Russian navy station "RCV", transmitting from Sevastopol.

## IARUMS R1 News

Peter Jost, HB9CET, due to health and age reasons, retired as IARU Monitoring System R1 Vice-Coordinator by the end of December 2021, remaining in IARUMS R1 as USKA (Switzerland) IARUMS Coordinator.

Peter, [awarded the IARUMS R1 Medal](#) in September 2021, acting IARUMS coordinator for a period until October 2020 and deputy coordinator for many years, has made a major contribution to the IARU MS Newsletters and has developed excellent professional presentation material on the IARUMS work.

We warmly thank Peter Jost, HB9CET, for his long commitment to IARUMS R1 and for his excellent work and contributions.



## Detailed reports of national coordinators

**Abbreviations used** (as per IARUMS definitions; please do not use "own, home brew" or other abbreviations)

**aka** = also known as | **BC** = Broadcast | **BD** = Baud, (or also Burst duration) | **BRI** = Burst repetition interval | **BW** = Bandwidth | **ca** = approximate | **CHN** = **PRC** = People's Republic of China | **CF** = Center frequency | **DF** = Direction finding (radio location; see also TDoA) | **FMCW** = frequency modulated continuous wave | **FMOP** = frequency modulated on pulse | **OTHR** = over the horizon radar | **Radar** = if exact mode unknown | **SH** = Shift (Hz) | **sps** = sweeps per second | **TDoA** = Time difference of arrival | **ui** = **unid** = unidentified.

**DARC;** credits to monitors: DF5JL Tom, DO1DSH Dennis, DB4UP Christoph, DO1LR Christian, DE2TRF Torsten, DL3RTL Daniel, DB3TA Alex

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7000	1538	21	12	RUS		FMOP	40	12k	OTHR Contayner
7012	1710	22	12	CHN		FMOP	66,67	10k	
7019	1605	22	12	RUS		FMOP	40	12k	OTHR Contayner
7020	1926	22	12	RUS		FMOP	40	12k	OTHR Contayner
7022	1729	22	12	CHN		FMOP	66,67	10k	
7024	1749	13	12	CHN		FMOP	66,67	10k	OTHR 3,8s bursts
7028	1704	13	12	CHN		FMOP	66,67	10k	OTHR 3,8s bursts
7035	1958	15	12	CHN		FMOP	66,67	10k	OTHR 3,8s bursts
7035	2014	15	12	RUS		FMOP	40	12k	OTHR Contayner
7042	1545	22	12	RUS		FMOP	40	12k	OTHR Contayner
7044	753	7	12	RUS		FMOP	40	12k	OTHR Contayner
7045	1538	21	12	RUS		FMOP	40	12k	OTHR Contayner
7045	800	24	12	UKR		J3E-L		2k9	
7046	1932	12	12	RUS		FMOP	40	12k	OTHR Contayner
7047	1556	30	12	RUS		FMOP	40	12k	OTHR Contayner
7050	835	5	12	UKR		J3E-L		2k9	UKR/RUS radio war
7050	1204	6	12	UKR		J3E-L		2k9	UKR/RUS radio war nr Wolodymyr-Wolynskij 50.90N 24.30E
7055	1040 vt*	3 vd*	12	UKR		J3E-L		2k9	UKR/RUS radio war *Also on 04, 12 and 16 / 12
7057	1714	8	12	RUS		FMOP	40	12k	OTHR Contayner
7060	1104 vt*	5 vd*	12	UKR		J3E-L		2k9	UKR/RUS radio war *Also on 19 and 23 /12
7062	1555	19	12	RUS		FMOP	40	12k	OTHR Contayner
7064	1645 vt*	2 vd*	12	RUS		FMOP	40	12k	OTHR Contayner *Also on 13 and 30 / 12
7065	2215	20	12	RUS		FMOP	40	12k	OTHR Contayner
7066	950	18	12	UKR		J3E-L		2k9	UKR/RUS radio war
7066	2003	22	12	RUS		FMOP	40	12k	OTHR Contayner
7087	1526	23	12	RUS		FMOP	40	12k	OTHR Contayner
7088,8	813	8	12	RUS		PSK		2k75	CIS-12
7091	1743	13	12	CHN		FMOP	66,67	10k	OTHR 3,8s bursts
7091	1948	15	12	CHN		FMOP	50	40k	OTHR wideband 5,1s bursts
7091	1956	15	12	CHN		FMOP	50	10k	OTHR 5,1s bursts
7091	1725	22	12	CHN		FMOP	66,67	10k	
7092	1718	17	12			FMOP	10	160k	OTHR wideband
7093	1725	22	12	CHN		FMOP	66,67	10k	
7094	2215	20	12	RUS		FMOP	40	12k	OTHR Contayner
7100	1738	27	12	RUS		FMOP	40	12k	OTHR Contayner
7107	1545 vt*	22 vd*	12	RUS		FMOP	40	12k	OTHR Contayner *Also on 23 / 12, 1558 UTC
7109,9	400	4	12			A3E			AM broadcast, probably Radio Ethiopia
7110	1636 vt*	3 vd*	12	ETH		A3E		9k	Radio Ethiopia *Often
7115	1620	27	12	CHN		FMOP	66,67	10k	
7116	1540	19	12	RUS		FMOP	40	12k	OTHR Contayner
7121	1603	22	12	RUS		FMOP	40	12k	OTHR Contayner



**DARC;** credits to monitors: DF5JL Tom, DO1DSH Dennis, DB4UP Christoph, DO1LR Christian, DE2TRF Torsten, DL3RTL Daniel, DB3TA Alex

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7125	1620	27	12	RUS		FMOP	40	12k	OTHR Contayner
7127	1709	17	12	RUS		FMOP	40	12k	OTHR Contayner
7128	1738	27	12	RUS		FMOP	40	12k	OTHR Contayner
7129	1705	13	12	CHN		FMOP	66,67	10k	OTHR 3,8s bursts
7131	1518	12	12	RUS		FMOP	40	12k	OTHR Contayner
7134	1957	15	12	CHN		FMOP	50	10k	OTHR 5,1s bursts
7140	1826	20	12	ERI	VoBM Eritrea	A3E			
7150	1514	12	12	RUS		FMOP	40	12k	OTHR Contayner
7160	1744 vt*	8 vd*	12	RUS		FMOP	40	12k	OTHR Contayner *Also on 19 / 12, 1537 UTC
7170	28	3	12	RUS		FMOP	40	12k	OTHR Contayner
7172	1939	12	12	CHN		FMOP	66,67	10k	
7173	2104	20	12	RUS		FMOP	40	12k	OTHR Contayner
7176	1540	19	12	RUS		FMOP	40	12k	OTHR Contayner
7182	1753	22	12	CHN		FMOP	66,67	10k	
7189	1825	20	12	RUS		FMOP	40	12k	OTHR Contayner
7193	805 vt*	7 vd*	12	RUS		F1B	50	200	Probably "RDL" RUS Navy Kaliningrad - techn. problems. *Also on 08/12, 0840 UTC
7197	1610 vt*	21 vd*	12	RUS		FMOP	40	12k	OTHR Contayner *Also on 23 / 12, 1512 UTC
14021	910	31	12	CHN		FMOP	50	10k	
14051	941	8	12	CHN		FMOP	66,67	10k	OTHR 3,8s bursts
14101	914	31	12	CHN		FMOP	66,67	10k	
14104	743 vt*	7 vd*	12	CHN		FMOP	66,67	10k	OTHR 3,8s bursts. *Also on 31 / 12, 0914 UTC
14105	918	3	12	CHN		FMOP	66,67	10k	OTHR 3,8s bursts
14168	930	3	12	RUS		FMOP	40	12k	OTHR Contayner
14174	911	31	12	CHN		FMOP	66,67	10k	
14175	1415 *vt	6 vd*	12					12k	OTHR *Also on 04 / 12, 1325 UTC
14184	1320	4	12	RUS		FMOP	40	12k	OTHR Contayner
14185	938	4	12	CHN		FMOP	66,67	10k	OTHR 3,8s bursts
14207	941	8	12	CHN		FMOP	66,67	10k	OTHR 3,8s bursts
14243	924	3	12	CHN		FMOP	66,67	10k	OTHR 3,8s bursts
14261	754	24	12	CHN		FMOP	66,67	10k	
14264	916	3	12	CHN		FMOP	66,67	10k	OTHR 3,8s bursts
14280	1015	1	12			F3E			Number Station
14322	936	31	12	CHN		FMOP	41,67	10k	
14328	937	31	12	CHN		FMOP	41,67	10k	
14333	845	4	12	CHN		FMOP	50	10k	OTHR 2,5s bursts
14335	922	3	12	CHN		FMOP	66,67	10k	OTHR 3,8s bursts
18086	1234	7	12	RUS		FMOP	40	12k	OTHR Contayner
21058	1049	4	12	RUS		FMOP	40	12k	OTHR Contayner
21130	759	1	12	CYP		FMCW		20k	UK OTHR Cyprus
21170	1042	4	12	RUS		FMOP	40	12k	OTHR Contayner
21180	828	19	12	CHN		FMOP	50	10k	OTHR 5,1s bursts

**DARC; credits to monitors: DF5JL Tom, DO1DSH Dennis, DB4UP Christoph, DO1LR Christian, DE2TRF Torsten, DL3RTL Daniel, DB3TA Alex**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21314	857	20	12						
21350	1335	4	12	CYP		FMCW		20k	UK OTHR Cyprus
21401	919	4	12	RUS		FMOP	40	12k	OTHR Contayner
21401	919	4	12	RUS		FMOP	40	12k	OTHR Contayner
21415	732	24	12	CHN		FMOP	41,67	10k	
21430	722	2	12	CYP		FMCW	25	16k	UK OTHR Cyprus
21432	930	18	12						
21438	902 vt*	3 vd*	12	RUS	RCV	A1A		200	RIP90 DE RCV - RUS Navy Sevastopol : RIP90 = collective callsign for Turkish regions and the Aegean Sea: Announcement of sea area closures due to Turkish artillery exercises. *Also on 18 / 12, 0940 UTC
21465	1110	4	12			FMOP	12,5	40k	OTHR, partially in 15m band

**IRTS; Michael, EI3GYB**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3752	1530	08	12	F		LSB			D-QRM by a French station. Nearly daily. Shouting of profanities. Replaying of QSOs. All sorts of noise- like Quran recitations, fire/ambulance sirens, music. Also heard on 3762 kHz. Heard for many months now. Audible from early afternoon until around 1830z.
7045	1940	10	12			RADAR			Radar from 7045 to 7075 kHz. Strong and persistent.
7055	1545	24	12			RADAR			Radar from 7055 to 7078 kHz. Very strong and persistent. Gone at 1615z.
7055	1940	10	12			RADAR			Russian "sunflower radar" from 7055 to 7098 kHz. Persistent. Medium strength.
7055	1320	21	12	RUS / UKR		LSB			Russian-Ukrainian radio war. Usual mixture of shouting of verbal abuse, patriotic music and rebroadcasting of radio station programmes. Very strong. Every day of the month. Ends after 2200z. daily.
7057	1630	25	12			PSK			Medium strenght signal.
7079	1600	23	12			RADAR			Radar from 7079 to 7116 kHz. Strong and persistent.
7080	0840	02	12	HOL or MM		USB			Group of Dutch fishermen. Very strong signals. Motor noise from several of the ships.
7100	0355	14	12	RUS or UKR		LSB			Non stop shouting of profanities in several languages. "Sieg Heil Rusky pederatse" "1-2-3 Russenschwein" "Slawa Ukraine" "Slawa Putin". Very strong huge signals. Still on at 0500z.

<b>IRTS; Michael, EI3GYB</b>									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7110	1650	11	12	ETH		AM			Radio Ethiopia. Strong signals. Daily. Also in the mornings at 0430z with a big signal.
7130	1525	12	12			RADAR			Radar from 7130 to 7164 kHz. Persistent and strong.
7140	0350	14	12			RADAR			Radar from 7140 to 7170 kHz. Very strong and persistent.
7158	0600	23	12	CUB					Cuban rum runner. Getting weaker and weaker by the month. Probably a mixing product from a faulty radio transmitter. Also heard on 7118 kHz. Daily.
7162.5	1420	07	12						Link-11 Clew. Strong, persistent.
7170	1125	21	12						Link-11 Clew. Medium signal, persistent.
14060	0835	02	12			RADAR			Radar from 14060 to 14220 kHz. Strong. On and off.
14240	0842	02	12			RADAR			Radar from 14240 to 14420 kHz. Strong, on and off.
14297	1230	13	12			FSK			Big signal. On and off.
14000	1215	07	12	B		USB			Brazilian CBers. Several male voices heard between 1215 and 1300z.
21438	1305	30	12	UKR		CW			Russian Navy Sevastopol. Medium signal. Daily.

<b>OeVSV; Christoph, OE1VMC</b>									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21232.0	1215	08	12				J3E-L	2700	Pirates located in Asia
21195.0	1211	18	12		GCA	Pluto II	RADAR		QTH: SBA Cyprus
21383.5	1113	23	12		GCA	Pluto II	RADAR		QTH: SBA Cyprus
7110.0	0410	24	12		ETH		A3E		Radio Ethiopia
7140.0	0423	24	12		ERI		A3E		Radio Eritrea
7162.0	1644	29	12				RADAR	12K0E	
7110.0	1648	29	12		ETH		A3E		Radio Ethipia

<b>PZK (SP3AMO, SP5GNI)</b>									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
6994.0	2045	22	12			RADAR	40	12K0E	
6998.0	1900	16	12			RADAR	40	12K0E	
7000.0	1755	21	12			RADAR	40	12K0E	18.01 UTC QRT
7004.0	1620	28	12			RADAR	40	12K0E	16.31 UTC QRT
7014.0	0950	13	12			PSK		2K9	CIS-12 pilot 7015,3 S9
7045.0	1750	21	12			RADAR	40	12K0E	18.01 UTC QRT
7060.0	1630	29	12			RADAR	40	12K0E	

<b>PZK (SP3AMO, SP5GNI)</b>									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7063.0	1608	19	12			RADAR	40	12K0E	16.08 UTC QRT
7066.0	2215	20	12			RADAR	40	12K0E	22.40 UTC QRT
7085.0	1541	26	12			RADAR	40	12K0E	
7086.0	2115	16	12			RADAR	40	12K0E	
7088.0	1803	16	12			RADAR	40	12K0E	
7090.0	1930	15	12			RADAR	50	40K0E	Burst - 5/120s
7092.0	2212	20	12			RADAR	40	12K0E	22.55 UTC QRT
7100.0	2210	20	12			RADAR	66	10K0E	Bursts
7106.0	2116	16	12			RADAR	40	12K0E	
7107.0	1850	17	12			RADAR	40	12K0E	
7110.0	2033	30	12			RADAR		10K0E	S5 short bursts
7110.0	1950	02	12			RADAR	40	12K0E	
7112.0	1908	20	12			RADAR	66	10K0E	Bursts
7116.0	1820	14	12			RADAR	40	12K0E	
7116.0	1535	19	12			RADAR	40	12K0E	
7116.0	1540	26	12			RADAR	40	12K0E	
7118.0	1738	06	12			RADAR		14K0E	S8
7128.0	1801	16	12			RADAR	40	12K0E	
7133.0	1935	02	12			RADAR	40	12K0E	
7145.0	1757	12	12			RADAR	40	12K0E	
7155.0	1620	19	12			RADAR	40	12K0E	
7162.0	1625	29	12			RADAR	40	12K0E	
7173.0	1944	20	12			RADAR	40	12K0E	
7177.0	0640	13	12			F1B	120	2K70E	RSQ 595, 07.21 UTC QRT
7179.0	1801	21	12			RADAR	40	12K0E	
7182.0	1751	22	12			RADAR	66	10K0E	Bursts
7186.0	1810	12	12			RADAR	40	12K0E	
7189.0	1903	20	12			RADAR	40	12K0E	
7194.0	1631	28	12			RADAR	40	12K0E	
7198.5	1218	12	12			PSK		2K6	S9 like Stanag
14101.0	1030	07	12			RADAR		10K0E	S7 short bursts
14105.0	0805	30	12			RADAR	66	10K0E	Bursts
14110.4	1308	23	12			UI		1K6E	2, 6 or 14 spectral lines (vd, vt)
14118.0	0720	13	12			F1B	120	2K70E	RSQ 595
14125.0	0750	26	12			RADAR	50	10K0E	
14135.0	0810	30	12			RADAR	66	10K0E	Bursts
14140.0	1328	21	12			RADAR		10K0E	S8 also on 14183.0
14148.0	1340	30	12			RADAR		10K0E	S6 short bursts
14149.0	0942	01	12			RADAR		8K0E	S9 short burst
14160.0	0942	01	12			RADAR		8K0E	S9 short burst
14162.0	0930	19	12			RADAR	40	12K0E	
14164.0	1247	21	12			RADAR		10K0E	Burst
14194.0	1127	02	12			RADAR		8K0E	short burst
14200.0	0700	16	12			RADAR	50	12K0E	QRV 4 min
14258.0	0937	14	12			RADAR		10K0E	S5

<b>PZK (SP3AMO, SP5GNI)</b>									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14295.0	0945	19	12			RADAR	40	12K0E	
14295.0	0805	30	12			RADAR	66	10K0E	Bursts
14301.0	1000	01	12			RADAR		10K0E	1 sec. Bursts
18070.0	0945	22	12			RADAR		20K0E	S9 partially in the band (vd, vt)
18170.0	0935	14	12			RADAR		20K0E	S9+ partially in the band
21105.0	0645	12	12			RADAR	40	12K0E	
21125.0	0955	26	12			RADAR	50	20K0E	
21150.0	1020	12	12			RADAR	25	20K0E	
21172.0	1220	30	12			RADAR		10K0E	S5
21178.0	0840	19	12			RADAR	40	10K0E	Burst - 5/30 s
21184.0	1115	28	12			RADAR		10K0E	S7
21190.0	1318	27	12			RADAR		20K0E	S9
21258.0	1100	04	12			RADAR		10K0E	S5
21315.0	0920	20	12			RADAR	50	20K0E	Extremally strong S9+20dB
21330.0	0935	21	12			RADAR		20K0E	S9
21365.0	0823	21	12			RADAR	50	20K0E	RSQ 595, 09.11 UTC QRT
21370.0	0930	8	12			RADAR	25	20K0E	
21400.0	0815	26	12			RADAR	40	10K0E	Bursts
21437.5	0830	30	12	RUS		A1A		20wpm	QTC Navy RA
28155.0	0918	20	12			RADAR		60K0E	S5-8 also on other freq's in 10 m band
28600.0	0905	26	12	IRN		RADAR	150/300	46K0E	Dwa tony
28860.0	0924	01	12			RADAR		60K0E	S5-8 various dates and times
29530.0	1142	20	12			RADAR		60K0E	S5 also at 29060.0

<b>RSGB; Richard, G4DYA</b>									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3510.0	1612	16	12			J3E		2K70E	USB 'The Air Horn'
3756.0	1612 1623	16 20	12			J3E		1K70E	USB 'The Pip'
7003.0	1642	27	12	RUS		P0N	40	12K0E	Container pulse radar
7014.0	1318 0900	13 22	12			J7D		2K70E	USB 7012.0 / CIS-12
7032.0	0816	13	12			J7D		2K70E	USB 7030.0 / CIS-12
7033.0	0810	07	12			J7D		2K70E	USB 7031.0 / CIS-12
7041.0	0919 0843	16 20	12					2K90E	Unidentified digital signal. 6 tones at 500 Hz spacing.
7044.0	0809	07	12	RUS		P0N	40	12K0E	Container pulse radar
7054.0	1608	16	12			F1B	50	200	FSK
7061.0	0827	29	12					2K90E	Unidentified digital signal. 6 tones at 500 Hz spacing.
7062.0	0833	01	12			H3E		3K00E	USB (full carrier) Numbers station, female voice. Also heard 080830z, 150830z, 220830z, 290830z (i.e. 0830 every Wednesday).



<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>
7065.0	1603 1611	02 20	12	RUS		P0N	40	12K0E	Container pulse radar
7074.992	1411	01	12			A1N			Continuous dashes
7075.004	0809	15	12			A1N			Continuous dashes
7075.005	0849	03	12			A1N			Continuous dashes
7075.010	0843	12	12			A1N			Continuous dashes
7075.021	0838	18	12			A1N			Continuous dashes
7075.027	0900	29	12			A1N			Continuous dashes
7075.056	0832	22	12			A1N			Continuous dashes
7075.058	1029	17	12			A1N			Continuous dashes
7075.061	0804	31	12			A1N			Continuous dashes
7089.0	0810	08	12			J7D		2K70E	USB 7087.0 / CIS-12
7091.0	1836	02	12	RUS		P0N	40	12K0E	Container pulse radar
7098.0	0834 0806	02 31	12			F1B		250	FSK
7110.0	1419	01	12	ETH	R. Ethiopia	A3E			BC. Also heard 021600z, 161604z, 201613z, 271645z.
7140.02	1606 1615	16 20	12	ERI	VoBM	A3E			BC
7151.65	0816 0852	14 16	12			R7D		3K30	USB 7150.0 / CIS-12
7162.0	0949	08	12			F1B		250	FSK
7164.0	0807	29	12			J7D		2K70E	USB 7162.0 / CIS-12
7168.875	0831	29	12			N0N			Plain carrier. Probably 7169.0 idling F1B
7179.0	1513	02	12	RUS		P0N	40	12K0E	Container pulse radar
7185.0	2057	17	12	RUS		P0N	40	12K0E	Container pulse radar
7186.0	1356	22	12			J7D		2K70E	USB 7184.0 / CIS-12
7193.0	1408	01	12			F1B	50	200	FSK. Also F1A Morse. Also heard 151342z, 160855z, 171023z, 180900z.
7199.0	0801	07	12			F1B		250	FSK
7199.994	1047 1031	07 17	12			A3E			BC. 1030-1058z daily
14021.0	0828	31	12	CHN		F3N	50	10K0E	FMCW radar
14051.0	0952	08	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14051.0	0906	18	12	CHN		F3N	50	10K0E	FMCW radar bursts
14051.65	0808	13	12			R7D		3K30	USB 14050.0 / CIS-12
14052.0	0846	15	12	CHN		F3N	50	10K0E	FMCW radar bursts
14101.0	0828	07	12	CHN		F3N	66.7	10K0E	FMCW radar bursts. Also heard 150804z, 310832z.
14104.0	0832	31	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14105.0	0919	03	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14105.0	0849	15	12	RUS		P0N	40	12K0E	Container pulse radar
14113.0	0817	29	12	CHN		F3N	50	10K0E	FMCW radar bursts
14116.0	0838	06	12	CHN		F3N	50	10K0E	FMCW radar bursts
14118.0	0839	22	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14120.0	0839	22	12	CHN		F3N	50	10K0E	FMCW radar bursts
14133.0	0845	03	12	CHN		F3N	66.7	10K0E	FMCW radar bursts

<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>
14139.0	0819 0830	29 31	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14140.0	0902	12	12	CHN		F3N	62.5	10K0E	FMCW radar bursts
14146.0	0832	02	12	CHN		F3N	10	160KE	FMCW radar bursts
14155.0	0829	07	12	CHN		F3N	50	10K0E	FMCW
14164.0	0932	02	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14174.0	0847	31	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14180.0	0853	20	12	CHN		F3N	10	160KE	FMCW radar bursts
14184.0	0856 0839	06 15	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14185.0	0858	20	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14186.0	0859	20	12	CHN		F3N	50	10K0E	FMCW radar bursts
14189.0	0858	20	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14197.0	0842	15	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14200.0	0849	16	12	RUS		P0N	40	12K0E	Container pulse radar
14201.0	0902	18	12	CHN		F3N	10	160KE	FMCW radar bursts
14211.0	0816	15	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14218.0	0824	18	12			B7D		6K60	DSBSC / CIS-12
14220.0	0840	16	12	RUS		P0N	40	12K0E	Container pulse radar
14224.0	0904	18	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14246.0	0903	29	12	CHN		F3N	50	10K0E	FMCW radar bursts
14254.0	0846	13	12	CHN		F3N	50	10K0E	FMCW radar bursts
14258.0	0813	14	12	CHN		F3N	50	10K0E	FMCW radar
14260.0	0842	16	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14261.0	0856	03	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14264.0	0856	03	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14280.0	0807	06	12	CHN		F3N	50	10K0E	FMCW radar
14291.0	0900	06	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14291.0	0900	12	12	CHN		F3N	50	10K0E	FMCW radar bursts
14295.0	0837	15	12	CHN		F3N	62.5	10K0E	FMCW radar bursts
14296.0	0837	31	12	CHN		F3N	10	160KE	FMCW radar bursts
14298.0	0850	07	12	CHN		F3N	50	10K0E	FMCW radar bursts
14298.5	0842 0806	03 15	12					1K20E	Unidentified bursts
14300.0	0808	02	12			F1B		500	FSK
14300.0	0839	06	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14301.0	0801	15	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14306.0	0826	13	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14306.0	0835	31	12	CHN		F3N	41.7	10K0E	FMCW radar bursts
14308.0	0847 0846	03 06	12			F1B		500	FSK
14309.0	0810	06	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14322.0	0820	18	12	CHN		F3N	10	160KE	FMCW radar bursts
14324.0	0826	02	12	CHN		F3N	10	160KE	FMCW radar bursts
14324.0	0909	16	12	CHN		F3N	50	10K0E	FMCW radar bursts
14330.0	0857	06	12	CHN		F3N	50	10K0E	FMCW radar bursts

**RSGB; Richard, G4DYA**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14331.0	0806	07	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14331.0	0902	20	12	CHN		F3N	62.5	10K0E	FMCW radar bursts
14332.0	0838	12	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14335.0	0923	03	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14336.0	0838	12	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14338.0	0818	15	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14341.0	0824	29	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14342.0	0929	02	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14345.0	0838	13	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14346.0	0844	16	12	CHN		F3N	47.6	10K0E	FMCW radar bursts
14346.0	0815	29	12	CHN		F3N	66.7	10K0E	FMCW radar bursts
14348.0	0848	16	12	CHN		F3N	50	10K0E	FMCW radar bursts
14350.0	0847	18	12	CHN		F3N	10	160KE	FMCW radar bursts
14423.0	0822	18	12	CHN		F3N	10	160KE	FMCW radar bursts 14343-14503
18070.0	0825	02	12	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
18119.0	0834	06	12	CHN		F3N	50	10K0E	FMCW radar bursts
18170.0	0805	12	12	G		F3N	25	20K0E	FMCW radar, UK SBA, Cyprus
21104.0	0839	12	12	RUS		P0N	40	12K0E	Container pulse radar
21130.0	0845	06	12	G		F3N	25	20K0E	FMCW radar, UK SBA, Cyprus
21160.0	0845	15	12	CHN		F3N	10	160KE	FMCW radar bursts
21165.0	0841	29	12	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21180.0	0926	02	12	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21250.0	0836	06	12	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21310.0	0832	06	12	G		F3N	25	20K0E	FMCW radar, UK SBA, Cyprus
21315.0	0914	20	12	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21320.0	0925	22	12	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21370.0	0824	06	12	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21415.0	0853	03	12	G		F3N	25	20K0E	FMCW radar, UK SBA, Cyprus
21413.0	0837	16	12	RUS		P0N	40	12K0E	Container pulse radar
21438.0	0831	07	12	RUS	RCV	A1A			Morse. Also heard 120844z, 130848z, 180912z, 290854z
29350.0	0824	20	12	G		F3N	25	20K0E	FMCW radar, UK SBA, Cyprus

**RSK; Kamweti, 5Z4BW**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7000	vt	vd	12	KEN		PSK		2K5E	STANAG 4285
7025	vt	17	12	KEN		PSK		2K7E	STANAG 4285
7066	1315	17	12			J3E-U		2K5E	Sudanese-like vernacular QSO
7043	vt	vd	12	KEN		PSK		2K7E	STANAG 4285
7080	vt	vd	12	KEN		PSK		2K7E	STANAG 4285
7085	vt	vd	12	KEN		PSK		2K7E	STANAG 4285
7110	vt	vd	12	ETH		A3E		12kE	Radio Ethiopia National Service
7150	vt	vd	12	KEN		MFSK	128	2k2	2G ALE Call transmission
7172	vt	17	12			J3E-U		2k5	Vernacular/French/Kiswahili QSO

**RSK; Kamweti, 5Z4BW**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7179	1320	17	12			RADAR		15K0E	FMOP-OTHR Russian Contayner
7179	1318	17	12	KEN		PSK		2K7E	STANAG 4285
10101	0530	8	12			FSK	50	0k1E	Pinneberg RTTY
10101	0535	8	12	KEN		PSK		2k7E	STANAG 4285
14311,1	vt	vd	12			J3E-U		2K5E	Indian Ocean Unid voice QSO
21405	vt	vd	12			J3E-L		2K5E	Unid chanting voices with splatter

**SARL; Pekka, OH2BLU**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7 MHz	1430-0800	*	12	RUS		RADAR	40sps	13k0E	*) Days: 1. 4. 7. 10. 11. 14. 19. 20.- 23. 26. 27. 30. (WebSDR 31d)
7 MHz	0615-1600	*	12	RUS		RADAR	10sps	10k0E	*) Days: 2. 3. 6. 11. 19. 20. 21. 24.
7 MHz	0700-1900	*	12	CHN		RADAR	50/67sps	10k0E	*) Days: 1. 3. 13. 16. 17. 21. 'foghorn'
7 MHz	0800-1830	*	12	CHN		RADAR	10sps	160k0	*) Days: 2. 10. 20. 24. 25.
7006.5	1140-1150	12	12	RUS		F1A	18	250	5F
7010.0	0915-1330	08 22	12	RUS		J7D	120	2k60E	
7012.0	1245	20	12	RUS		F1B		200H	
7014.0	1015-1330	*	12	RUS		J7D	120	2k60E	*) Days: 13. 16. 20. 22.
7010.0	1015-1540/	*	12	RUS		J7D	120	2k60E	*) Days: 5. 9. 12.
7019.0	0840-1450/	*	12	RUS		F1A/B		200H	*) Days: 10. 21. 23.
7021.0	1320-1340/	31	12	RUS		F1B/ NON		500H	
7022.0	0745-1045	10	12	RUS		J7D	120	2k60E	
7027.0	1200-1210	07	12	RUS		F1B/ NON		250H	
7031.0	0630-1110	20	12	RUS		J3E-u		3k00E	
7032.0	0800-1300	13 14	12	RUS		J7D	120	2k60E	
7054.0	0900-1620	*	12	RUS		F1B		200H	*) Days: 8. 10. 11. 13. 15.
7062.0	0830-0836/	22	12	RUS	464	R3E-u		3k00E	
7093.0	1415-1505/	21	12	RUS		F1B		250H	
7098.0	0830-0845/	2	12	RUS		F1B		250H	
7099.0	0830-1110	19 26	12	RUS		F1B		250H	
7100.0	1000-1425	03	12	RUS		A1A		40H	20 Hz dotter
7110.0	0300-	01 -	12	ETH	R. Ethiopia	A3E		9k0	

<b>SARL; 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>
	0700	31							
7110.0	1300-1803/	01 - 31	12	ETH	R. Ethiopia	A3E		9k0	Mostly 1500 – 1600 off air
7113.0	0620-0700	05	12	RUS		J7D	120	2k60E	
7127.0	0850-0905/	28	12			F1B/ N0N		250H	
7140.0	0300-0630	*	12	ERI	VoBME	A3E		9k0	*) Days: 1. 2. 3. 7. .8. 11. 13. - 16. 23. -26. 30. 31. +20Hz offset
7140.0	1400-1845/	*	12	ERI	VoBME	A3E		9k0	*) Days: 1. 2. 3. 7. .8. 11. 13. - 16. 23. -26. 30. 31. +20Hz offset
7142.0	1015-1030	08	12	RUS		F1B		250H	
7152.0	0825-0835	16	12	RUS		J7D	120	2k60E	
7159.0	1145-1310	09 19	12	IW		G7D		6k40E	Days: 09. usb, 19. dsb. LINK, ship
7159.0	0900-1000/	23	12	RUS		F1B		200H	
7162.0	0915-0930	08	12	RUS		F1B		250H	
7162.0	0630-0730	10	12	RUS		A1A		20H	5BL
7164.0	0615-1400	*	12	RUS		J7D	120	2k60E	*) Days: 5. 26. 29.
7168.0	0850	30	12	RUS	GBZ6	F1A		200H	
7169.0	0920-0930	08	12	RUS		J7D	120	2k60E	
7169.0	0610-1515	21 29	12	RUS		F1B		250H	
7171.0	1030-1045	21	12	RUS		J7D	120	2k60E	
7179.0	0634-1245	13 22	12	RUS		J7D	120	2k60E	
7183.5	0730	13	12	RUS		F1B		500H	
7186.0	1245-1405/	22	12	RUS		J7D	120	2k60E	
7187.5	1015	18	12	RUS		J7D	120	2k60E	
7188.0	1200-1210	19	12	RUS		F1B		250H	
7193.0	0745-1430	*	12	RUS		F1A/B		200H	*) Days: 1. 3. 5. - 11. 14. - 20.
7199.0	0725-0915/	07	12	RUS		F1B		250H	
7200.0	1020-1100/	01 - 31	12	TWN	RTI	A3E		9k0	Radio Taiwan International, to 1030 N0N
10 MHz	*	*	12	CYP		RADAR	50sps	20k0	*) not heard (WebSDR 9d)
10 MHz	0500-0620	07	12	RUS		RADAR	40sps	13k0E	(WebSDR 5d)
14 MHz	0600-1400	*	12	RUS		RADAR	40sps	13k0E	*) Days: 4. 15. 21. 24. (WebSDR 16d)
14 MHz	0630-1100	*	12	RUS		RADAR	10sps	10k0E	*) Days: 1. 3. 4. 12. 13. 19. 22. 25. 28.



**SARL; Pekka, OH2BLU**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14 MHz	0600-0940	*	12	CHN		RADAR	50/67sps	10k0E	*) Days: 3. 4. 5. 7. 10. 13. 14. 18. 19. 23. 24. 29. 30. 'foghorn'
14 MHz	0620-0945	*	12	CHN		RADAR	10sps	160k0	*) Days: 2. 3. 5. 6. 18. 26. 31. c. 1 min burst
14052.0	0800-0835/	13	12	RUS		J7D	120	2k60E	
14221.0	0555-0600/	31	12	KAZ		F1B		200H	
18 MHz	0545-1300	*	12	CYP		RADAR	25/50sps	20k0	*) Days: 2. 9. 17. 25. 30.(WebSDR 11d)
18 MHz	0950-1000	05	12	RUS		RADAR	40sps	13k0E	(WebSDR 2d)
21 MHz	0700-1215	*	12	CYP		RADAR	25/50sps	20k0	*) Days: 1. 3. 19. 20. 21. 24. 26. 28. 30. (WebSDR 20d)
21 MHz	0830-1300	*	12	RUS		RADAR	40sps	13k0E	*) ays. 4. 16. 28. 30. (WebSDR 6d)
21438.0	/0830-1300	*	12	RUS	RCV	A1A	20	20H	*) Days: 2. 3. 4. 5. 10. - 31.
28 MHz	0700-1130	*	12	IRN		RADAR	150/ 313	60k0E	*) Days: 19. 20. 21. 28. alternating fq
28860.0	0600-1130	*	12	IRN		RADAR	150/ 313	60k0E	*) Days: 1. 17. 19. 20. 22. - 26. 28. 29. 30.
28 MHz	*	*	12	RUS	Taxi disp.	F3E		3k0E	*) No reports

**URE; Gaspar, EA6AMM**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
6955.0	16:46	16	12	CHN		RADAR	10	160K0E	Wideband OTHR
6959.0	21:40	16	12	CHN		RADAR	10	160K0E	Wideband OTHR
6968.0	18:28	20	12	CHN		RADAR	10	160K0E	Wideband OTHR
6972.0	17:53	20	12	CHN		RADAR	10	160K0E	Wideband OTHR
6985.0	18:35	16	12	CHN		RADAR	10	160K0E	Wideband OTRH
6986.0	19:05	16	12	CHN		RADAR	10	160K0E	Wideband OTHR
6994.0	20:55	22	12	RUS		RADAR	40	12K0E	OTHR Contayner. Splatter to 7003 kHz LSB
7000.0	19:02 vt*	16 vd*	12	RUS		RADAR	40	12K0E	OTHR Contayner *Also on 22/12, 2139 UTC
7000.0	15:37	21	12	RUS		RADAR	40	12K0E	OTHR Contayner. Also on 7045 kHz CF
7005.0	20:04	08	12	RUS		RADAR	40	12K0E	OTHR Contayner
7011.7	08:00	08	12			J7D		1K75E	7011.7 kHz CF
7012.0	13:42 vt*	13 vd*	12			F1B	75	200H	FSK. SH = 200 Hz *Also on 20/12, 1244 UTC
7020.0	19:22	22	12	RUS		RADAR	40	12K0E	OTHR Contayner
7022.0	07:33	10	12			J7D		2K70E	CIS-12. Submode Idle
7024.0	16:40	13	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
7025.0	20:31	07	12	RUS		RADAR	40	12K0E	OTHR Contayner
7028.0	15:31	24	12	RUS		RADAR	40	12K0E	OTHR Contayner
7032.0	08:20	13	12			J7D		2K70E	CIS-12. Submode Idle
7035.0	20:52	15	12	RUS		RADAR	40	12K0E	OTHR Contayner
7037.0	22:18	15	12	CHN		RADAR	40	12K0E	OTHR Contayner
7041.0	16:47	15	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"

<b>URE; Gaspar, EA6AMM</b>									
<b>kHz</b>	<b>UTC</b>	<b>DD</b>	<b>MM</b>	<b>ITU</b>	<b>IDENT</b>	<b>MODE</b>	<b>BD /sps</b>	<b>SH / BW</b>	<b>DETAILS</b>
7045.0	15:38	21	12	RUS		RADAR	40	12K0E	OTHR Contayner
7050.0	07:12 vt*	06 vd*	12			J3E-L			UKR/RUS "radiowar" *Often
7054.0	16:37 vt*	13 vd*	12			F1B	50	200H	*Also on 16/12, 1638 UTC
7055.0	06:24 vt*	08 vd*	12			J3E-L			UKR / RUS "radiowar" *Very often
7060.0	09:24	09	12			J3E-L			UKR/RUS "radiowar"
7060.0	17:23	21	12	RUS		RADAR	40	12K0E	OTHR Contayner
7061.0	08:36	29	12			XXX		CA2K70E	XXX. BW ca 2K70E. 6 CH, 500 HZ spacing
7062.0	18:58	10	12	RUS		RADAR	40	12K0E	OTHR Contayner. Also on 7085 kHz CF
7064.0	16:38	13	12	RUS		RADAR	40	12K0E	OTHR Contayner
7065.0	15:06	20	12	RUS		RADAR	40	12K0E	OTHR Contayner
7066.0	19:53	21	12	RUS		RADAR	40	12K0E	OTHR Contayner
7075.0	07:16 vt*	08 vd*	12			A1N			Continuous dashes *Often
7085.0	18:59	10	12	RUS		RADAR	40	12K0E	OTHR Contayner
7086.0	21:39	16	12	RUS		RADAR	40	12K0E	OTHR Contayner
7087.0	18:29	16	12	RUS		RADAR	40	12K0E	OTHR Contayner
7087.0	15:31	23	12	RUS		RADAR	40	12K0E	OTHR Contayner. Also on 7197 kHz CF
7089.0	07:25	23	12			J7D	120	2K70E	CIS-12
7091.0	17:52	13	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
7093.5	15:03	21	12			XXX		400H	XXX. 9 channels. Spacing = 50 Hz
7095.0	16:46	24	12	RUS		RADAR	40	12K0E	OTHR Contayner. Also on 7126 kHz CF
7098.0	16:50 vt*	13 vd*	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn" *Also on 20/12, 1857 UTC
7100.0	18:33	16	12	CHN		RADAR	10	160K0E	Wideband OTHR
7100.0	17:38	27	12	RUS		RADAR	40	12K0E	OTHR Contayner
7103.6	19:33	16	12			J7D	125	1K75E	
7107.0	21:36	16	12	RUS		RADAR	40	12K0E	OTHR Contayner
7107.0	16:01	23	12	RUS		RADAR	40	12K0E	OTHR Contayner. Also on 7087 kHz CF
7108.0	18:53	20	12	RUS		RADAR	40	12K0E	OTHR Contayner
7109.0	20:17 vt*	09 vd*	12	RUS		RADAR	40	12K0E	OTHR Contayner *Also on 14/12, 2107 UTC
7110.0	17:17 vt*	06 vd*	12	ETH		A3E			BC. Ethiopia radio *Very often
7111.0	20:01	10	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
7111.0	19:12	16	12	CHN		G7D	60	2K35E	7111 LSB. PRC-30 aka CHN-30
7112.0	19:28	20	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
7115.0	16:06	27	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
7116.0	19:07	14	12	RUS		RADAR	40	12K0E	OTHR Contayner
7118.0	17:37	06	12	RUS		RADAR	40	12K0E	OTHR Contayner
7118.0	20:30	07	12	RUS		RADAR	40	12K0E	OTHR Contayner. Also on 7025 kHz CF
7118.0	19:29	16	12			J7D	120	2K70E	CIS-12
7126.0	16:47 vt*	24 vd*	12	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 27/12, 1603 UTC
7140.0	17:33 vt*	11 vd*	12	ERI		A3E			BC. "VoBM1" *Often

<b>URE; Gaspar, EA6AMM</b>									
<b>kHz</b>	<b>UTC</b>	<b>DD</b>	<b>MM</b>	<b>ITU</b>	<b>IDENT</b>	<b>MODE</b>	<b>BD /sps</b>	<b>SH / BW</b>	<b>DETAILS</b>
7152.0	21:53	07	12	RUS		RADAR	40	12K0E	OTHR Contayner
7152.0	07:50	14	12			J7D		2K70E	CIS_12. Submode Idle. With carrier on 7150 kHz
7154.0	18:46	20	12	RUS		RADAR	40	12K0E	OTHR Contayner
7159.0	18:34 vt*	06 vd*	12			G7D	2400	2K40E	LINK-11 CLEW SSB *Also on 07/12, 1722 UTC
7160.0	17:54	08	12	RUS		RADAR	40	12K0E	OTHR Contayner
7165.0	20:12	21	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
7167.0	15:08	20	12	RUS		RADAR	40	12K0E	OTHR Contayner
7173.0	19:30 vt*	20 vd*	12	RUS		RADAR	40	12K0E	OTHR Contayner *Also on 20/12, 2126 UTC
7177.8	07:20	13	12			XXX		CA2K0E	XXX. Continuous digital signal.
7179.0	18:01	21	12	RUS		RADAR	40	12K0E	OTHR Contayner
7180.0	15:44	16	12	RUS		RADAR	40	12K0E	OTHR Contayner
7181.0	16:46	20	12	RUS		RADAR	40	12K0E	OTHR Contayner
7182.0	17:56	22	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
7188.0	18:09	07	12	RUS		RADAR	40	12K0E	OTHR Contayner
7189.0	18:16	20	12	RUS		RADAR	40	12K0E	OTHR Contayner
7192.0	17:17 vt*	06 vd*	12	RUS		RADAR	40	12K0E	OTHR Contayner *Also on 08/12, 1856 UTC
7193.0	09:29 vt*	09 vd*	12	RUS		F1B	50	200H	*Also on 10/12, 0824 UTC
7194.0	15:32	09	12	RUS		RADAR	40	12K0E	OTHR Contayner
7197.0	15:47	21	12	RUS		RADAR	40	12K0E	OTHR Contayner. 3 simultaneous TX on 40 m: 7197 kHz CF+ 7045 kHz CF + 7000 kHz CF)
7197.0	15:11	23	12	RUS		RADAR	40	12K0E	OTHR Contayner
7198.0	16:47	20	12			J7D		2K70E	CIS-12
7199.0	08:11	07	12			F1B	75	250H	FSK. SH = 250 Hz. Bd = 75
RUS	22:22	27	12			RADAR	40	12K0E	OTHR Contayner
10101.4	09:46	26	12			J3E-U			Non amateur traffic. UI stations. Male voices. UI language
10109.0	13:39	13	12	RUS		RADAR	40	12K0E	OTHR Contayner
10147.0	06:15	07	12	RUS		RADAR	40	12K0E	OTHR Contayner
13985.0	08:29	13	12	G		RADAR	50	20K0E	OTHR Pluto. UK SBA, Cyprus. Splatter to 14005 kHz
14001.5	07:37	27	12			G1D	2400	2400	ISR Navy hybrid modem. Bursts
14003.5	07:42	28	12			PSK		1K20E	DPRK-1200
14004.0	08:27	23	12			F1B	50	500H	
14011.0	16:20	13	12			J3E-U			Non-amateur traffic. Male voices. Arabic language
14011.7	09:02	13	12			XXX		CA3K0E	XXX: Same bursts as on 14151.7 kHz CF.
14021.0	08:01	31	12	CHN		RADAR	50	10K0E	OTHR
14023.0	09:03	11	12			RADAR	41.3	70K0E	Radar. BW = 70K0E. 41.3 sps. QRT: 0904 UTC
14026.0	07:24	20	12			J7D		2K70E	CIS-12
14045.0	08:55	15	12	CHN		RADAR	62.5	10K0E	Short bursts. "Foghorn"
14045.5	08:49	08	12			XXX		CA2K0E	Broken system. Drifting. Often around 14045.5 kHz

<b>URE; Gaspar, EA6AMM</b>									
<b>kHz</b>	<b>UTC</b>	<b>DD</b>	<b>MM</b>	<b>ITU</b>	<b>IDENT</b>	<b>MODE</b>	<b>BD /sps</b>	<b>SH / BW</b>	<b>DETAILS</b>
14045.9	07:38	06	12			XXX		CA2K0E	Broken system. Drifting. Often around 14045.5 kHz
14046.7	07:35	22	12			XXX		2K50E	Broken system. Drifting. Often around 14045.5 kHz
14047.0	09:18	16	12	CHN		RADAR	10	160K0E	Wideband OTHR
14052.0	07:31	13	12			J7D	120	2K70E	CIS-12. With carrier at 14050 kHz
14052.0	08:46	15	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14089.5	07:33	07	12			F1B	600	600H	DPRK-FSK 600 ARQ
14091.0	09:12	14	12			J7D	120	2K70E	CIS-12
14098.0	08:34	13	12			J7D	120	2K70E	CIS-12. Very weak
14098.5	07:32 vt*	06 vd*	12			F1B	600	600H	DPRK-FSK 600 ARQ *Often
14098.5	13:38 vt*	13 vd*	12			PSK		1K20E	DPRK-1200 *Often
14101.0	08:21 vt*	07 vd*	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn" *Also on 15 and 31/12
14103.0	09:30	08	12	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
14104.0	07:35 vt*	07 vd*	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn" *Also on 31/12, 0819 UTC
14105.0	09:01	09	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14105.0	08:45	15	12	RUS		RADAR	40	12K0E	OTHR Contayner
14106.0	08:13	30	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14107.0	09:39	23	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14108.0	08:32	25	12	CHN		RADAR	20	20K0E	OTHR bursts. BD: 90 sec. BRI: 7 min
14111.0	08:52	11	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14113.0	08:03	29	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14116.0	08:36	06	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14118.0	07:22	13	12			J7D	120	2K70E	CIS-12. Overdriven
14118.0	08:40	22	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14118.0	14:23	24	12	RUS		RADAR	40	12K0E	OTHR Contayner
14120.0	08:36	22	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14125.0	12:57	05	12			J3E-U			BC-like TX or BC relaying. Russian language. Male voice. Religious content. Long-lasting
14125.0	09:15	28	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14126.0	08:45	26	12	CHN		RADAR	50	10K0E	OTHR
14127.0	12:30	21	12			J3E-U		3K0E	Broadcast-like TX, or BC relaying. Russian language. Long-lasting
14130.0	07:34	29	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14136.0	08:14	30	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14139.0	08:05	29	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14140.0	08:20	31	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14151.7	08:54	13	12			XXX		CA3K0E	XXX. Unknown bursts. BW ca 3K0E.
14155.0	08:29	07	12	CHN		RADAR	50	10K0E	OTHR
14161.0	07:33	21	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14166.0	09:02	09	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14169.0	06:54	15	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14172.0	06:26	08	12	RUS		RADAR	40	12K0E	OTHR Contayner. Also on 14204 kHz CF
14173.0	07:13	23	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"

<b>URE; Gaspar, EA6AMM</b>									
<b>kHz</b>	<b>UTC</b>	<b>DD</b>	<b>MM</b>	<b>ITU</b>	<b>IDENT</b>	<b>MODE</b>	<b>BD /sps</b>	<b>SH / BW</b>	<b>DETAILS</b>
14175.0	09:19	14	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14180.0	08:58	15	12	RUS		RADAR	40	12K0E	OTHR Contayner
14181.0	09:04	09	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14186.0	07:16	10	12	RUS		RADAR	40	12K0E	OTHR Contayner. Also on 14213 kHz CF.
14189.0	07:11	10	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14189.0	07:29	16	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14197.0	08:48	15	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14197.0	09:03	15	12	RUS		RADAR	40	12K0E	OTHR Contayner.
14198.5	06:37 vt*	08 vd*	12			F1B	600	600H	DPRK-FSK 600 ARQ *Often
14198.5	07:36 vt*	10 vd*	12			PSK		1K20E	DPRK-1200 *Often
14199.0	07:35	29	12	RUS		RADAR	40	12K0E	OTHR Contayner
14200.0	08:50	16	12	RUS		RADAR	40	12K0E	OTHR Contayner
14204.0	06:27	08	12	RUS		RADAR	40	12K0E	OTHR Contayner
14211.0	08:21	15	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14212.0	07:08	10	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14213.0	08:50	22	12	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
14220.0	07:55	10	12	CHN		RADAR	10	160K0E	Wideband OTHR
14220.0	08:43	16	12	RUS		RADAR	40	12K0E	OTHR Contayner
14220.0	09:04	28	12			J7D		2K70E	CIS-12
14220.5	07:28	27	12			F1B	600	600H	DPRK-FSK 600 ARQ
14228.0	07:34	15	12	CHN		RADAR	10	160K0E	Wideband OTHR
14235.0	09:12	07	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14238.0	09:11	07	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14251.0	07:06 vt*	13 vd*	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn" *Also on 29/12, 0736 UTC
14254.0	08:46	13	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14256.0	09:04	09	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14258.0	08:05	14	12	CHN		RADAR	50	10K0E	OTHR
14259.0	09:36	23	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14260.0	07:47 vt*	07 vd*	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn" *Also on 16/12, 0849 UTC
14261.0	08:22	15	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14263.0	07:53	14	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14270.0	09:21	21	12	RUS		RADAR	40	12K0E	OTHR Contayner
14272.0	06:48	20	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14275.0	08:26	08	12	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
14278.0	08:14	10	12	CHN		RADAR	10	160K0E	Wideband OTHR
14280.0	07:57	06	12	CHN		RADAR	50	10K0E	OTHR
14282.0	07:19	10	12	CHN		RADAR	10	160K0E	Wideband OTHR
14290.0	09:04	12	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14293.0	07:35	15	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14294.0	08:34	15	12	CHN		RADAR	62	10K0E	Short bursts. "Foghorn"
14295.0	08:18	31	12	CHN		RADAR	10	160K0E	Wideband OTHR
14297.0	07:55 vt*	08 vd*	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn" *Also on 14/12, 0812 UTC



<b>URE; Gaspar, EA6AMM</b>									
<b>kHz</b>	<b>UTC</b>	<b>DD</b>	<b>MM</b>	<b>ITU</b>	<b>IDENT</b>	<b>MODE</b>	<b>BD /sps</b>	<b>SH / BW</b>	<b>DETAILS</b>
14298.0	07:07	10	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14298.0	10:21	25	12	CHN		RADAR	10	160K0E	Wideband OTHR
14298.5	08:01 vt*	13 vd*	12			F1B	600	600H	DPRK-FSK 600 ARQ. *Often
14298.5	08:05 vt*	14 vd*	12			PSK		1K20E	DPRK-1200 *Often
14300.0	08:38 vt*	06 vd*	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn" *Also on 08/12, 0650 UTC
14301.0	07:32	15	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14301.0	10:34	25	12	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
14303.0	07:03	29	12	CHN		RADAR	6.7	10K0E	Short bursts. "Foghorn"
14305.0	08:51	26	12	CHN		RADAR	41.7	10K0E	Short bursts.
14306.0	07:14	13	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14308.0	07:24	16	12	CHN		RADAR	83.3	10K0E	Short bursts. "Foghorn"
14308.0	07:19	23	12			F1B	50	500H	FSK. SH = 500 Hz. Bd = 50
14309.0	08:07	06	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14310.0	07:42	07	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14315.0	08:30	25	12	CHN		RADAR	10	160K0E	CHN Wideband OTHR
14318.0	06:46	08	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14322.0	11:32 vt*	21 vd*	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn" *Also on 30/12, 0832 UTC
14323.0	08:42	29	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14324.0	08:56	16	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14326.0	08:30	16	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14328.0	07:40 vt*	08 vd*	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn" *Also on 28/12, 0938 UTC
14330.0	07:42	14	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14331.0	08:06	07	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14331.0	06:42 vt*	23 vd*	12	CHN		RADAR	62.5	10K0E	Short bursts. "Foghorn" *Also on 28/12, 0916 UTC
14332.0	08:15 vt*	10 vd*	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn" *Also on 12/12, 0832 UTC
14335.0	07:25	13	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14336.0	08:35	12	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14338.0	06:17	07	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14338.0	08:24	15	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14339.0	09:20	07	12	CHN		RADAR	41.7	10K0E	OTHR
14339.0	07:12	23	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14339.0	09:11	27	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14340.0	08:30	30	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14341.0	08:19	29	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14342.0	08:42	08	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14343.0	08:08	14	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14345.0	08:42	13	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14346.0	09:16	14	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14346.0	08:45	16	12	CHN		RADAR	47.6	10K0E	Short bursts. "Foghorn"
14346.0	08:08	29	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14351.0	09:14	14	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"

<b>URE; Gaspar, EA6AMM</b>									
<b>kHz</b>	<b>UTC</b>	<b>DD</b>	<b>MM</b>	<b>ITU</b>	<b>IDENT</b>	<b>MODE</b>	<b>BD /sps</b>	<b>SH / BW</b>	<b>DETAILS</b>
14352.0	09:18	14	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14359.0	07:23	06	12	RUS		RADAR	40	12K0E	OTHR Contayner. Splatter to 14346 kHz
14376.0	07:35	15	12	CHN		RADAR	10	160K0E	Wideband OTHR
14423.0	08:50	26	12	CHN		RADAR	10	160K0E	Wideband OTHR
18065.0	08:50	11	12	G		RADAR	50	20K0E	OTHR Pluto. UK SBA, Cyprus
18116.0	07:30	29	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
18119.0	08:40	06	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
18132.0	07:28	15	12	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
18137.0	09:28	27	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
18140.0	09:00	23	12	CHN		RADAR	62.5	10K0E	Short bursts. "Foghorn"
18144.0	09:06	14	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
18148.0	07:20	06	12	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
18150.0	07:48	15	12	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
18155.0	06:58	15	12	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
18161.0	13:57	29	12	RUS		RADAR	40	12K0E	OTHR Contayner
18170.0	13:06 vt*	09 vd*	12	G		RADAR	50	20K0E	OTHR Pluto. UK SBA, Cyprus *Also on 14/12, 0921 UTC and 15/12, 0726 UTC
18174.0	07:35	21	12	RUS		RADAR	40	12K0E	OTHR Contayner. Splatter to 18160 kHz USB
18176.0	09:35	07	12	G		RADAR	50	20K0E	OTHR Pluto. UK SBA, Cyprus
18183.0	08:07	16	12	CHN		RADAR	83.3	10K0E	Short bursts. "Foghorn"
21000.0	09:23	07	12			NON			Long-lasting. -85 dBm QSB
21000.0	09:25	28	12			J3E-U			Spanish fishers
21104.0	08:43	12	12	RUS		RADAR	40	12K0E	OTHR Contayner
21109.0	08:35	27	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
21130.0	08:45	06	12	G		RADAR	25	20K0E	OTHR Pluto. UK SBA, Cyprus
21135.0	08:34	27	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
21137.0	08:07	20	12	CHN		RADAR	47.7	10K0E	Short bursts. "Foghorn"
21155.0	12:57	25	12	RUS		RADAR	40	12K0E	OTHR Contayner
21158.0	12:30	27	12	RUS		RADAR	40	12K0E	OTHR Contayner
21159.0	08:07	15	12	CHN		RADAR	10	160K0E	Wideband OTHR
21159.0	08:38	25	12	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
21160.0	12:56	24	12	RUS		RADAR	40	12K0E	OTHR Contayner
21165.0	08:45	29	12	G		RADAR	50	20K0E	OTHR Pluto. UK SBA, Cyprus
21170.0	07:55	15	12	G		RADAR	50	20K0E	OTHR Pluto. UK SBA, Cyprus
21186.0	09:15	27	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
21200.0	08:31	27	12	G		RADAR	50	20K0E	OTHR Pluto. UK SBA, Cyprus
21201.0	08:35	10	12	RUS		RADAR	40	12K0E	OTHR Contayner. Also on 21409 kHz CF
21226.0	08:59	14	12	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
21250.0	08:42	06	12	G		RADAR	25	20K0E	OTHR Pluto. UK SBA, Cyprus
21252.0	08:32	27	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
21272.0	09:09	30	12	RUS		RADAR	40	12K0E	OTHR Contayner
21310.0	08:31	06	12	G		RADAR	25	20K0E	OTHR Pluto. UK SBA, Cyprus
21310.0	07:39	29	12	G		RADAR	50	20K0E	OTHR Pluto. UK SBA, Cyprus
21320.0	09:14	30	12	G		RADAR	50	20K0E	OTHR Pluto. UK SBA, Cyprus

<b>URE; Gaspar, EA6AMM</b>									
<b>kHz</b>	<b>UTC</b>	<b>DD</b>	<b>MM</b>	<b>ITU</b>	<b>IDENT</b>	<b>MODE</b>	<b>BD /sps</b>	<b>SH / BW</b>	<b>DETAILS</b>
21329.0	09:06	27	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
21330.0	09:38	21	12	G		RADAR	50	20K0E	OTHR Pluto. UK SBA, Cyprus
21338.0	08:35	15	12	RUS		RADAR	40	12K0E	OTHR Contayner.
21340.0	09:32	28	12	G		RADAR	50	20K0E	OTHR Pluto. UK SBA, Cyprus . 0935 UTC, changed from 50 sps to 25 sps
21365.0	08:12	21	12	G		RADAR	50	20K0E	OTHR Pluto. UK SBA, Cyprus
21370.0	09:27 vt*	08 vd*	12	G		RADAR	25	20K0E	OTHR Pluto. UK SBA, Cyprus *Also on 27/12, 1156 UTC
21378.0	09:08	27	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
21381.0	09:17	27	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn". 66.7 and 62.5 sps, alternating
21395.0	09:06	31	12	G		RADAR	50	20K0E	OTHR Pluto. UK SBA, Cyprus
21396.0	08:46	27	12	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
21400.0	06:31	20	12	RUS		RADAR	40	12K0E	OTHR Contayner
21404.0	08:02	16	12	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
21405.0	12:02 vt*	28 vd*	12	G		RADAR	50	20K0E	OTHR Pluto. UK SBA, Cyprus *Also on 31/12, 1020 UTC
21407.0	07:43	20	12	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
21408.0	10:49	27	12	RUS		RADAR	40	12K0E	OTHR Contayner
21409.0	08:20	10	12	RUS		RADAR	40	12K0E	OTHR Contayner
21415.0	07:39	22	12	CHN		RADAR	66.6	10K0E	Short bursts. "Foghorn"
21419.0	08:13	23	12	CHN		RADAR	83.3	10K0E	Short bursts. "Foghorn"
21420.0	08:12	15	12			RADAR	20	40K0E	OTHR
21423.0	08:34	16	12	RUS		RADAR	40	12K0E	OTHR Contayner
21430.0	09:28	25	12	G		RADAR	25	20K0E	OTHR Pluto. UK SBA, Cyprus
21438.0	08:40 vt*	06 vd*	12	RUS	RCV	A1A			"RCV" QTC *Almost daily
21448.5	09:03	31	12			F1B	600	600H	DPRK-FSK 600 ARQ
24932.0	07:37	28	12	RUS		RADAR	40	12K0E	OTHR Contayner
24962.0	07:56	28	12	RUS		RADAR	40	12K0E	OTHR Contayner
28250.0	07:59	28	12	IRN		RADAR	150	45K0E	OTHR, 150 and 313 sps, alternating
28300.0	09:13	26	12	IRN		RADAR	150	45K0E	OTHR. 150 and 313 sps, alternating. Jumping every 4 min
28860.0	10:45 vt*	01 vd*	12	IRN		RADAR	150	45K0E	150 and 313 sps, alternating *Often
28860.0	08:41 vt*	14 vd*	12			A3E			BC. Harmonic of 14430 kHz CF BC st in Taiwan. CHN language. *Also on 1612, 0859 UTC
28910.0	12:38	20	12	G		RADAR	25	20K0E	OTHR Pluto. UK SBA, Cyprus
29300.0	08:06	28	12	IRN		RADAR	150	45K0E	OTHR. 150 and 313 sps, alternating. Jumping every 4 min
29370.0	12:25	21	12	IRN		RADAR	150	45K0E	OTHR. 150 and 313 sps, alternating. Jumping every 4 min
29450.0	09:10	26	12	IRN		RADAR	150	45K0E	OTHR. 150 and 313 sps, alternating. Jumping every 4 min
29700.0	12:27	21	12	IRN		RADAR	150	45K0E	OTHR. 150 and 313 sps, alternating. Jumping every 4 min

<b>USKA: Peter, HB9CET</b>									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
3500.0	2256	16	12			J3E-U		ca 3k0E	USB; Italian language, probably Anti-Covid agitation; stopped at 2300z
7000.0	1739	01	12			N0N		10H	Long lasting carrier
7010.0	1643	03	12			OTHR	50 sps	10k0E	OTHR, bursts
7010.0	1014	08	12			J7D	12 x 120 Bd	2k70E	CIS12; stopped 1016z
7021.0	1208	01	12			J7D	12 x 120 Bd	2k70E	CIS12; idling only
7025.8	1801	17	12			G1D PSK-8	2400 Bd	ca 2k40E	most probably MIL 188-110B
7038.0	2008	06	12			OTHR	10 sps	160k0E	Wideband OTHR
7050.0	1105	01	12			J3E-L		ca. 3k0E	LSB; RUS-UKR Radio War daily
7054.0	1639	15	12			F1B	50 Bd	200H	TDoA: Vladivostok; almost daily
7055.0	1104	01	12			J3E-L		ca. 3k0E	LSB; RUS-UKR Radio War daily
7110.0	1643 1608	15 31	12	ETH		A3E		ca 9k0E	BC: Radio Ethiopia daily
7118.0	2254	16	12			J7D		2k70E	CIS12; idling only
7120.0	1604	01	31			FMOP	40 sps	12k0E	OTHR; Contayner
7128.0	1637	03	12			FMOP	66.66 sps	10k0E	OTHR; short Bursts
7140.0	1619	01	12	ERI	VOBM 1	A3E		ca 9k0E	BC: Voice of the broad Masses 1 almost daily
7153.0	2141	20	12			F1B		200H	
7160.0	1601	01	12			FMOP	40 sps	12k0E	OTHR; Contayner
7173.0	2135	20	12			FMOP	40 sps	12k0E	OTHR; Contayner
7193.0	0955	01	12		RDL	F1B F1A	50 Bd	200H	FSK followed by FSK-CW emission TDoA: Kaliningrad often
7194.0	1621	01	12			FMOP	40 sps	12k0E	OTHR; Contayner
7200.0	1055	01	12			A3E		ca 9k0E	BC; not identified, Lower sideband in 40m band
14098.5	1330	28	12			F1B/ARQ	600 Bd	600H	DPRK 600/600 ARQ system often
21438.0	0947	01	12		RCV	A1A		10H	TDoA: Area of Sevastopol daily
28860.0	1052	01	12	IRN		OTHR	150 + 313 sps	ca 45k	OTHR, Bursts; long lasting, sweep rate alternating often

<b>VERON: Ruud PG1R, Credits to observers Dick PA0GRU, Joeke PA0VDV, Kees PA2CHM, Arie PA3CNK, Rene PA3EQO</b>									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3527.0	2015	30	12	RUS		F1B			UiPtr; Revs
3548.0	1816	11	12	RUS	RDL	F1A			XXX RDL; Mix Figs and Letter groups
7054.1	1309	11	12			F1B		200H	Printer; idling.
7055.0	1404	28	12	UKR		J3E-L			UKR/RUS radiowar; comments S7-9; TDoA: West UKR.
7055.0	1404	28	12			J3E-L			2nd TX same freq but weaker S5; no TDoA possible.
7068.0	1543	30	12	RUS		RADAR	40	12K0E	OTHR Contayner.
7110.0	1735	22	12	ETH		A3E			BC; weak S3 just over local noise floor.
7110.05	1750	30	12	ETH		A3E			Music; S5.
7185.0	1352	22	12			J7D		2K70E	CIS-12.
14255.0	0850	14	12			RADAR			OTHR

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

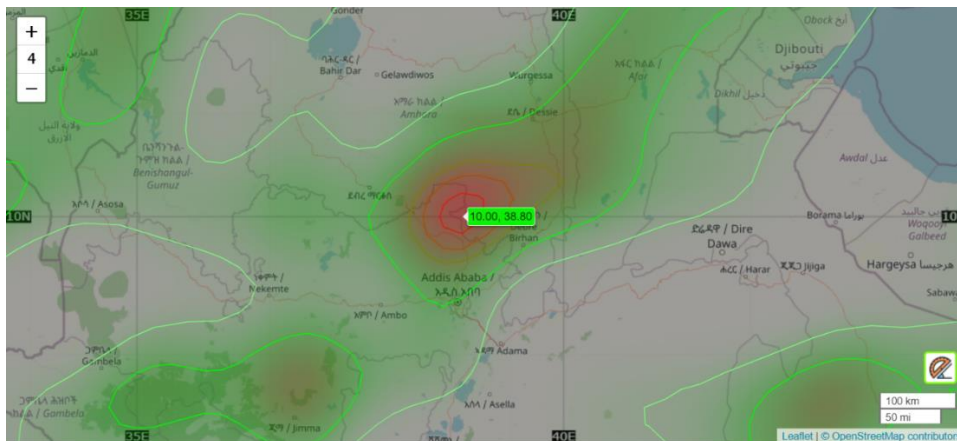
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21436.0	1118	12	12	RUS		F1B			UiPtr; Revs

Contact: Gaspar Miró, EA6AMM, ea6amm@iaru-r1.org

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



“RCV” QTC. 21348 kHz CW (A1A)



Broadcasting station Radio Ethiopia TDoA radiolocation. 7110 kHz AM (A3E)

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