



IARU Monitoring System Region 1

Monthly Newsletter 5 - May 2021

edited by Peter Jost, HB9CET and Gaspar Miró, EA6AMM

News and Info's

In addition to the well known, ubiquitous over the horizon radar systems, more CIS-12 (12 tones, BPSK or QPSK modulated, tone spacing 200Hz) emissions were detected in May. This is probably due to the propagation conditions, but could also be a consequence of the political situation?

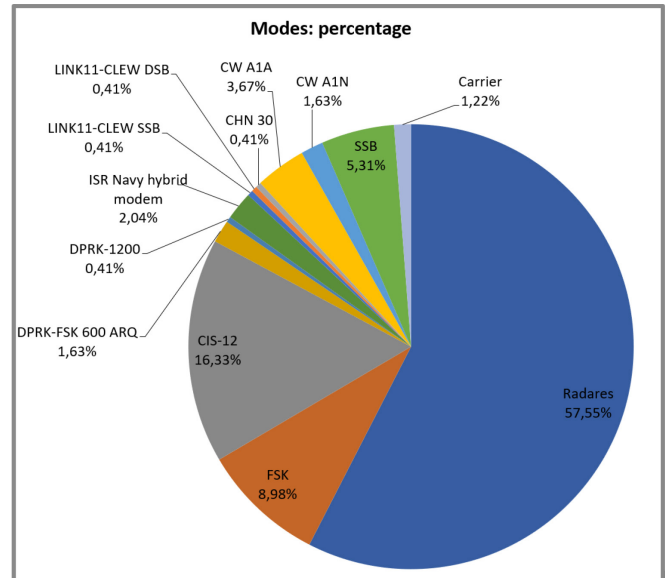
Repeatedly the burst emissions known as CHN30 (also PRC30) were detected in the 40m band on different frequencies, mostly very weak in our region but remote receivers in the Far East (Perseus or Kiwi SDR) brought the signals with S9. Various western military systems show up again, e.g. LINK11 CLEW or SLEW, MIL188-110x, STANAG 4285 etc.

For some time now, the OTHR, which is attributed to Iran, can be found again in the 10m band. In contrast to the past not only on 28860 kHz (CF) but also on other frequencies, e.g. 28650. Bandwidth is about 45 kHz, the sweep rate mostly alternates between 150 and 313 sps.

Since some time, on 14210 kHz (CF) an OTHR is observed, apparently a SuperDARN (Super Dual Auroral Radar Network) system. Thanks to the help of an attentive US ham, further investigations are underway to find out if and which system it is exactly.

Some procedures can almost only be analyzed and classified in detail with professional analysis software. However, some can already be recognized purely optically in the sonagram or spectrum, e.g. CIS12, LINK11 CLEW etc., of course without detailed parameters. Thanks to markers in the software of the rx (e.g. Perseus), bandwidth, spacing of individual tones, etc. can be measured, which further improves the detection of a signal.

Even OTH radars' can be determined with sufficient accuracy (bandwidth, sweep rate).



The graph of the observed signals (modes) was again provided by Gaspar, EA6AMM.

Thanks to Nestor 5B4AHZ and his colleagues, recently a Kiwi SDR was put into operation in Cyprus, which significantly expands our TDoA (Time Difference Of Arrival) bearing base and hopefully helps us to further improve accuracy.

Latest News: Just writing this News, Fawaz Sulaibeekh - A92AA just joined us as Coordinator of the Bahrain Amateur Radio Society - BARS. We welcome Fawaz to the monitoring team and wish him much success. ↩

Detailed reports of national coordinators

Abbreviations used (as per IARUMS definitions; please do not use "own, home brew" 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 mode unknown
SH = Shift (Hz) | **sps** = sweeps per second | **TDoA** = Time difference of arrival | **ui** = **unid** = unidentified
vd = various dates | **vt** = various times.

CF: Frequencies of digital signals are usually **Center Frequencies (CF)**, unless otherwise specified!

DARC; Credits to Monitors: DK2OM Wolf; DF5JL Tom; DL3RTL Daniel; DB3TA Alex; Kai Roos

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
1814.0 CF	vt	dly	05	RUS		USB LSB			14 tones - hyperbolic radio navigation system - BRAS-3/RS-10 - Kaliningrad - shared band
1897.5	ady	dly	05	D		PSK8A	2400	2400	1895.7 RF - Stanag-4285 - shared band
3506.5	1903	17	05	RUS		F1B	50	500	Novgorod
3510.0 RF	1700	dly	05	RUS		chirps		3k	mysterious chirps - 60 km east of Bryansk - shared band
3517.2	vt	vd	05	E		LSB			Spanish fishery - ship traffic - often
3527.0	2000	dly	05	RUS		F1B	50	200	Severomorsk - daily - shared band
3531.0	2100	21	05	RUS	REA4	NON			unclean carrier - RUS airforce Moscow. ident: full hour + 40 min - daily - legal
3555.0	2110	12	05	E		USB			Spanish fishery
3581.8	Ady	dly	05	TUR		PSK8A	2400	2400	Stanag-4285 - 600 bps long - Ankara - shared band!
3585.0	Ady	dly	05	TWN	HLL	F1C		800	WX-fax Taiwan - 120 rpm. IOC 576 - daily. all day - legal!
3622.5	Ady	dly	05	J	JMH	F1C		800	Tokyo Meteo - 120 rpm - IOC 576 - daily. all day - legal!
3756.8 RF	1800	dly	05	RUS		USB			RUS MIL - channel marker - 4 tones - Tuapse - East Black Sea (nw of Sochi) - night QRG
5350.0	2040	03	05	E		USB			Spanish fishery - splattering up
5361.8 RF	Ady	dly	05	DNK	OUA15	PSK8A	2400	2400	Stanag-4285 - 600 bps long - assigned to Danish Navy; primary user!
7022.0	1530	19	05	RUS		PSK2A	120	2600	CIS-12 - submode idle - Kaliningrad
7025.0	Vt	dly	05	INS		LSB USB			Indonesian pirates - daily
7025.0	2102	13	05	CHN		FMOP	65.8	10k	Chinese OTH radar - 7020 - 7030 kHz - 3.8 sec bursts
7039.0	1855	12	05	RUS	C	A1A			cluster beacon "C" - Moscow - "RIW"
7039.3	1854	03	05	RUS	K	A1A			Cluster beacon "K" Petropavlovsk Kamchatskiy - RUS Navy - Pacific fleet - "RCC"
7039.4	1854	03	05	RUS	M	A1A			Cluster beacon "M" - Magadan RUS Navy - "RTS" - daily
7050.0	2000	17	05	CHN		FMOP	66.67	10k	OTHR 3.8s bursts
7051.0	2129	17	05	CHN		FMOP	66.66	10k	Chinese OTH radar - 7046 - 7056 kHz - 3.8 sec bursts
7055.0	Vt	dly	05	UKR		J3E-L			music and Russian voices
7070.0	1822	20	05	UKR		JE3-L		2k9	voices, music. propaganda
7075.0	1547	24	05			A1A			groups of 16 dashes
7080.0	1718	31	05	CHN		FMOP	10	160k	Chinese wideband OTHR - 7000 - 7160 kHz
7103.0	1916	30	05	CHN		FMOP	66.67	10k	OTHR 3.8s bursts
7118.0	1925	19	05	CHN		FMOP	50	10k	OTHR 5.1s bursts
7118.0	2038	19	05	CHN		FMOP	66.67	10k	OTHR 3.8s bursts
7123.0	1958	26	05	CHN		FMOP	50	10k	OTHR 5.1s bursts
7127.0	2109	29	05	CHN		FMOP	67.3	10k	Chinese OTH radar - 7122 - 7132 kHz - 3.8 sec bursts
7128.0	2042	28	05	CHN		FMOP	50.5	10k	Chinese OTH radar - 7123 - 7133 kHz - 5.1 sec bursts
7129.0	2018	17	05	CHN		FMOP	66.67	10k	OTHR 3.8s bursts
7132.0	2122	26	05	CHN		FMOP	49.1	10k	Chinese OTH radar - 7132 and 7124 kHz - 10.2 sec bursts
7134.0	1750	dly	05	RUS		F1B	50	200	Vladivostok - daily
7137.0	1721	02	05	RUS	RDL	F1B	50	200	Kaliningrad - RUS navy

DARC; Credits to Monitors: DK2OM Wolf; DF5JL Tom; DL3RTL Daniel; DB3TA Alex; Kai Roos

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7140.0	1705	dly	05	ERI	VOBM	A3E/BC		9k	7140.021 kHz - voice of the broad masses - Eritrea
7145.0	1851	10	05	CHN		PSK4A	60	2350	PRC 30 tone modem - LSB mode - pilot tone 450 Hz
7159.6 RF	1715	05	05			PSK		2k4	Link-11
7168.0	2132	28	05	CHN		FMOP	64.0	10k	Chinese OTH radar - 7163 - 7173 kHz - 3.8 sec bursts
7171.0	2051	13	05	CHN		PSK4A	60	2350	PRC 30 tone modem - LSB mode - pilot tone 450 Hz - daily
7176.0	1912	01	05	RUS		PSK2A	120	2600	CIS-12 - Vladivostok
7180.0	1409	dly	05	ERI	VOBM	A3E		9k	7180.021 kHz - Radio Eritrea
7184.0	1825	20	05	CHN		FMOP	66.67	10k	OTHR 3.8s bursts
7185.0	1933	19	05	CHN		FMOP	50	10k	OTHR 5.1s bursts
7187.0	2008	06	05	CHN		FMOP	50	10k	OTHR 5.1s bursts
7276.0	1025	01	05			PSK		2k6	CIS-12
10100.0	ady	dly	05	FEa		USB			10100.0 - 10150.0 - Far East - crowded of pirates
10100.8	ady	dly	05	D	DDK9	F1B	50	450	Baudot - German Weatherservice - legal!
10108.0	1512	30	05	CHN		FMOP	42.2	10k	Chinese OTH radar - 10103 - 10113 kHz - 6.0 sec bursts
10110.0	1710	31	05	CHN		FMOP	49.1	10k	Chinese OTH radar - 10105 - 10115 kHz - 5.1 sec bursts
10147.0	1518	30	05	AUS		FMOP	44322	10k	Australian OTH radar JORN bursts - intro tone - also 10124 and 10127 kHz
10150.0	2114 1623	03 15	05	RUS		FMOP	40	12k	OTH radar Contayner - w of Saransk - 10144 - 10156 kHz
14000.0	1400	daily	05	CHN		A3E		9k	China Radio International - intermodulation of 13855 and 13710 kHz: 13855 x 2 - 13710 = 14000 kHz
14000.0	2050	01	05	E		USB			Spanish fishery
14033.0	1305	23	05	CHN		FMOP	65.2	10k	Chinese OTH radar - 14028 - 14038 kHz - 3.8 sec bursts
14045.0	1702	22	05	CHN		FMOP	67.3	10k	Chinese OTH radar - 14040 - 14050 kHz - 3.8 sec bursts
14059.0	1435	20	05	CHN		FMOP	10	160k	Chinese wideband OTHR - 13979 - 14139 kHz
14060.0	0936	20	05	CHN		FMOP	67.9	10k	Chinese OTH radar - 14055 - 14065 kHz 3.8 sec bursts
14061.0	0856	04	05	RUS		PSK2A	120	2600	CIS-12 - Komsomolsk / Amur
14091.0	1304	25	05	RUS		FMOP	40	12k	OTH radar Contayner - W of Saransk - 14085 - 14097 kHz
14111.0	0905	07	05	CHN		FMOP	66.0	10k	Chinese OTH radar - 14106 - 14116 kHz 3.8 sec bursts
14115.0	1122	13	05	RUS		FMOP	40	12k	OTHR Contayner
14117.0	1346	13	05	RUS		FMOP	40	12k	OTHR Contayner
14120.0	1624	28	05	CHN		FMOP	50.0	10k	Chinese OTH radar - 14115 - 14125 kHz 5.1 sec bursts
14145.0	1736	07	05	RUS		FMOP	40	12k	OTH radar Contayner - W of Saransk 14139 - 14151 kHz
14152.0	1436	20	05	CHN		FMOP	50	10k	OTHR 5.1s bursts
14153.0	1438	20	05	CHN		FMOP	50.5	10k	Chinese OTH radar - 14148 - 14158 kHz 5.1 sec bursts
14182.0	0918	06	05	CHN		FMOP	49.7	10k	Chinese OTH radar - 14177 - 14187 kHz 5.1 sec bursts

DARC; Credits to Monitors: DK2OM Wolf; DF5JL Tom; DL3RTL Daniel; DB3TA Alex; Kai Roos

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14182.0	1318	10	05	RUS		FMOP	40	12k	OTH radar Contayner - W of Saransk 14176 - 14188 kHz
14204.0	0951	13	05	CHN		FMOP	66.1	10k	Chinese OTH radar - 14199 - 14209 kHz - 3.8 sec bursts
14205.0	0844	16	05	CHN		FMOP	67.3	10k	Chinese OTH radar - 14200 - 14210 kHz 3.8 sec bursts
14210.0	0850	14	05			FMOP		5k	Superdarn ionospheric research radar - 12 sec bursts - daily
14212.0	1206	Thurs day	05	UKR		NON + USB		2400	female voice with encrypted msgs - figures - "SZRU" = Foreign Intelligence Service of Ukraine in Rivne - every Thursday at 1206 utc - msgs at 1214 utc
14218.0	1432	16	05	CHN		FMOP	50.2	10k	Chinese OTH radar - 14213 - 14223 kHz - 5.1 sec bursts
14222.0	1308	13	05	CHN		FMOP	40.4	10k	Chinese OTH radar - 14217 - 14227 kHz - 6.1 sec bursts
14237.0	1337	19	05			J3E-U			music
14247.0	1027	03	05	CHN		FMOP	49.7	10k	Chinese OTH radar - 14242 - 14252 kHz 5.0 sec bursts
14247.0	0824	16	05	CHN		FMOP	41.7	10k	Chinese OTH radar - 14242 - 14252 kHz 6.0 sec bursts
14254.0	1457	24	05	CHN		FMOP	10	160k	Chinese wideband OTHR - 14174 - 14334 kHz
14262.0	1352	18	05	RUS		PSK2A	120	2600	CIS-12 - Alexandrovsk Sakhalinski
14262.0	0935	29	05	CHN		FMOP	51.1	10k	Chinese OTH radar - 14257 - 14267 kHz 5.1 sec bursts
14263.0	0906	26	05	CHN		FMOP	67.6	10k	Chinese OTH radar - 14258 - 14268 kHz 3.8 sec bursts
14264.0	0810	19	05	CHN		FMOP	68.6	10k	Chinese OTH radar - 14259 - 14269 kHz 3.8 sec bursts
14270.0	1820	20	05	CHN		FMOP	50	10k	OTHR 5.1s bursts
14271.0	1707	29	05	CHN		FMOP	68.2	10k	Chinese OTH radar - 14266 - 14276 kHz 3.8 sec bursts
14280.0	1014	wednesday	05	UKR		A3E			female voice with encrypted msgs - figures - "SZRU" = Foreign Intelligence Service of Ukraine in Rivne
14285.0	1100	21	05	CHN		FMOP	10	160k	Chinese wideband OTHR - 14205 - 14365 kHz
14294.0	1740	19	05	CHN		FMOP	50	10k	OTHR 5.1s bursts
14308.0	0913	15	05	CHN		FMOP	66.8	10k	Chinese OTH radar - 14303 - 14313 kHz 3.8 sec bursts
14308.0	0904	31	05	RUS		FMOP	40	12k	OTH radar Contayner - W of Saransk 14302 - 14314 kHz
14320.0	1347	06	05	CHN		FMOP	67.6	10k	Chinese OTH radar - 14315 - 14325 kHz 3.8 sec bursts
14326.0	1740	19	05	CHN		FMOP	50	10k	OTHR 5.1s bursts
14343.0	0856	26	05	CHN		FMOP	50.9	10k	Chinese OTH radar - 14338 - 14348 kHz 5.1 sec bursts
14386.0	2032	24	05	CHN		FMOP	10	160k	Chinese wideband OTHR - 14306 - 14466 kHz
18071.0	1430	04	05	CYP		FMOP	25	20k	UK OTHR Cyprus - 18061 - 18081 kHz
18080.0	0712	dly	05	TWN		A3E/BC			Sound of Hope - Taiwan and Chinese BC jammer - daily at 06 utc and later
18107.0	vt	vd	05	RUS	RDL	F1B	36/50	200	CIS-36-50 - Moscow - idle and traffic - often - Russian navy - shared band
20995.0	0840	22	05	CYP		FMOP	50	20k	UK OTHR Cyprus - 20985 - 21005 kHz

DARC; Credits to Monitors: DK2OM Wolf; DF5JL Tom; DL3RTL Daniel; DB3TA Alex; Kai Roos

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21000.0	908	13	05	E		USB			Spanish fishery - like telephone - daily. various times - Canary Islands
21090.0	1429	05	05	CYP		FMOP	50	20k	UK OTHR Cyprus - 21080 - 21100 kHz
21150.0	1415	06	05	CYP		FMCW	50	20k	OTHR Pluto Cyprus
21191.0	1310	17	05	CYP		FMOP	50	20k	UK OTHR Cyprus - 21181 - 21201 kHz
21280.0	0840	13	05	CYP		FMCW	50	20k	OTHR Pluto Cyprus
21295.0	0801	23	05	CYP		FMCW	50	20k	OTHR Pluto Cyprus
21318.0	0913	26	05	CHN		FMOP	50.3	10k	Chinese OTH radar - 21313 - 21323 kHz 5.1 sec bursts
21373.0	0939	28	05	CHN		FMOP	65.8	10k	Chinese OTH radar - 21368 - 21378 kHz 3.8 sec bursts
21438.0	vt	dly	05	RUS	RCV	A1A			RCV - RUS Navy Sevastopol with QTCs RIP90 de RCV - daily active
28000.0	1346	23	05	G		F3E			British CBers
28000.0	2140	25	05	I		USB			Italian CBers
28005.0	2125	24	05	I		F3E			Italian CBers
28150.0	1940	14	05	E		USB			Spanish CBers
28502.0	1049	17	05	IRN		AMOP	150 313	46k	Iranian radar, 28479 - 28525 kHz; 150 sps and 313 sps alternating
28750.0	1346	18	05	IRN		AMOP	150 313	46k	Iranian radar, 28837 - 28883 kHz; 150 sps and 313 sps alternating - daily
28860.0	1910	13	05	IRN		AMOP	150 313	46k	Iranian radar, 28837 - 28883 kHz - 150 sps and 313 sps alternating - North Iran

IRTS; Michael, EI3GYB

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7055	1220	06	05	UKR/ RUS		LSB			Ukrainian-Russian radio war. Loud. Daily. Usual propagandea slogans like "Putin khuylu"
7083.5	1415	26	05			PSK			Strong and persistent.
7140	1715	03	05	ERI		AM			Radio Eritrea. Medium signal. Occasional heard.
7180	1720	03	05	ERI		AM			Radio Eritrea. Very weak signal. Heard a few times.
14000	1450	04	05	CHN		AM			China Radio International, mixing product. Medium signal.
14135	1540	16	05			RADAR			Radar from 14135 to 14148 kHz. Huge signal. On and off.
14160	1510	24	05			RADAR			Radar from 14160 to 14330 kHz. Strong. On and off. Covering most of the 20 metre band phone section.
14168	1145	21	05			PSK			Strong signal. Persistent.
14170	1400	08	05			RADAR			Radar from 14170 to 14330 kHz. Medium signal. Intermittent. Covering a huge part of the 20 metre band.
14177	0935	07	05			RADAR			Radar from 14177 to 14194 kHz. Very strong. Persistent.
14180	0910	27	05			RADAR			Radar from 14180 to 14192 kHz. Persistent. Medium signal.
14180	1220	11	05			RADAR			Radar from 14180 to 14195 kHz. Strong. On and off.
14182	1145	21	05			RADAR			Radar from 14182 to 14196 kHz. Persistent. Strong.
14185	1140	27	05			RADAR			Radar from 14185 to 14212 kHz. Very strong, persistent.

IRTS; Michael, EI3GYB

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14190	1350	26	05			RADAR			Radar from 14190 to 14262 kHz. Strong. On and off.
14225	1240	03	05			RADAR			Radar from 14225 to 14380 kHz. Medium strength. Up and down the band. Goes on for a full hour.
14260	1145	21	05			RADAR			Radar from 14260 to 14400 kHz. Medium signal. On and off.
14297	1405	17	05			PSK			Strong signal. Persistent.
14294.5	0920	08	05			PSK			Strong and persistent.
14305	0855	27	05			USB			Somebody transmits the sound of howling wolves to disturb a SOTA activation. The DQRM only stops when the SOTA activation is finished after 15 minutes.
14320	1530	16	05			RADAR			Radar from 14320 to 14333 kHz. Huge signal. On and off.
14342	1430	08	05			PSK			Medium strength signal. Persistent.
18152	1140	20	05			RADAR			Radar from 18152 to 18176 kHz. Huge signal. Persistent.
28165	1600	16	05	F		AM			Two French CBers having a chat. Strong signals.
28442	1515	24	05			PSK			Very strong signal. 59plus.
28830	1340	23	05	IRN		RADAR			Radar from 28830 to 28890 kHz. Medium signal, in and out.

OeVSV; Christoph, OE1VMC

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14008.0	0946	9	05			F1B		250	2 min. data, carrier until 09:50 UTC
7005.0	2140	24	05	RUS	RGT77	A1A	14		EJÜGN HBJUF EJÜGN HBJUF EJÜGN DBJAF CÖAUF ÖRZYU QTYH WTPÄÄ = k, QRT 21:44 UTC
144.800	1325	28	05			XXX			Pulsed Radar-like signal on APRS freq.

PZK; Marek, SP3AMO + Miro, SP5GNI

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3527.0	2225	8	5			F1B	50	200	S 7
3547.8	1724	1	5	RUS	RDL	F1B/A2A/ NON	50	200	CW mixed text, 2054 UTC carrier still present
3548.8	1625	4	5	RUS	RDL	F1B/A2A	50	200	S 5
3750.9	0320	19	5		UI	NON			100 Hz
5355	0733	17	5	RUS		PSK		2K9	CIS-12 pilot 5356,3 S9
5363.5	vt	vd	5			PSK8A		2K4	S9 Stanag
7003.0	1848	21	5			NON			Scan
7032.2	0327	19	5			NON			Beep 100 Hz
7056.3	0450	1	5	RUS	UI	FSK/J3E-U			S 8 - sps 100Hz,
7056.3	0555	3	5		UI	FSK		100	S 5/7
7060	1114	20	5	RUS		PSK		2k9	CIS-12 pilot 7061.3 S8
7090.0	0702	17	5		UI	A1A			9 wpm
7111.7	1022	1	5			PSK			sps 40 Hz, 1025 UTC QRT
7140.0	0325	19	5			A3A			S 0+
7178.8	1608	22	5			F1B	50	200	S 7
10133.0	0940	21	5	RUS		PSK		2k9	CIS-12 pilot 10134.3
10134.5	0719	5	5			UI		2KOE	S9
14098	0754	vd	vt	RUS		PSK		2k9	CIS-12 pilot 14099.3 S6/7

PZK; Marek, SP3AMO + Miro, SP5GNI

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14112	1654	21	5			RADAR		8KOE	S8
14129.5	0522	14	5			RADAR			S 3 [0527 UTC QRT]
14144	0650	10	5			F1B		500	S9+
14152	2140	22	5			RADAR		10KOE	S7
14178	0917	6	5			RADAR		12KOE	Continous S9+
14184	1000	26	5			RADAR		12KOE	S7
14184	0847	27	5			RADAR		16KOE	S9
14196	0646	10	5			RADAR		8KOE	Bursts from time to time
14200	0640	10	5			RADAR		8KOE	Burst one only
14218	0740	1	5			RADAR		18KOE	Continous S9+10dB, 0743 ended
14252	0746	1	5			RADAR		40KOE	S5
14253	0830	3	5			F1B		250	S9
14270	1846	20	5			RADAR		10KOE	Short bursts S7
14298	0630	17	5	RUS		PSK		2k9	CIS-12 pilot 14299.3 S6
18067	0850	27	5			RADAR		18KOE	S9 partially in the band
18080	0708	5	5			A3E		6KOE	S7 Radio in unkown language
18151	0820	25	5			RADAR		12KOE	S8
18158	0759	10	5			RADAR		8KOE	Burst S9
18165	0700	10	5			RADAR		20KOE	S8
28175	0807	9	5			A3E		5KOE	Talks in Russian S7 (taxi?)
28235	0705	10	5			A3E		5KOE	Transmissions in Russian S4
28275	0807	9	5			A3E		5KOE	Transmissions in Russian S7
28295	0807	9	5			A3E		5KOE	Short transmsion female voice S6
28860	0651	31	5			RADAR		40KOE	S4
29130	0800	9	5			A3E		5K0	Weak transmissions S5, also on 29170 and 29185
29400	0700	5	5			RADAR		80KOE	S7
29590	0815	13	5			RADAR		40KOE	S5
29860	0815	13	5			RADAR		40KOE	S6

REF; Francis, F5MIU

kHz	UTC	DD	MM	ITU	IDENT	MODE	Bd/sps	Sh /Bw	DETAILS
21125	0739	5	5			FMCW	25 sps	20kHz	OTH Radar pulsed 40ms,S7
21170	0747	18	5			FMCW	50 sps	20kHz	OTH Radar pulsed 20ms,S5
14220	0804	21	5			FMCW	40 sps	20kHz	OTH Radar pulsed 25ms,S9
14185	0802	27	5			FMCW	40 sps	20kHz	OTH Radar pulsed 25ms,S7
14160	0755	29	5			FMCW	40 sps	20kHz	OTH Radar pulsed 25ms,S7
21155	0745	31	5			FMCW	40 sps	20kHz	OTH Radar pulsed 25ms,S4

RSGB; Richard, G4DYA

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3510.0	vt	vd	05			J3E		2K70E	USB 'The Air Horn'
3756.0	vt	vd	05			J3E		1K70E	USB 'The Pip'
3777.0	0839 0738	09 10	05			F3N	0.1	30KOE	FMCW sweeps 3762-3792 kHz, for 2 minutes out of every 10.
5363.6	ady	dly	05	DNK		G1D		2K40E	For info: Stanag 4285, Primary user.
7001.7	1929	21	05			G1D		2K40E	Link 11 SLEW
7001.8	0929	27	05			J7D		2K40E	USB 7000.0 / Link 11 CLEW
7008.0	1443	07	05			F1B		250	FSK
7034.4	0742	10	05			N0N			Plain carrier
7039.0	1843	14	05		C	A1A			Letter beacon
7057.0	1311	18	05			J7D		2K70E	USB 7055.0 / CIS-12
7060.0	1116	20	05			J7D		2K70E	USB 7058.0 / CIS-12

RSGB; Richard, G4DYA									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7065.9	1302 1813	18 29	05			N0N			Probably 7066.0, idling F1B
7074.790	vt	vd	05			A1N			Continuous dashes or groups of dashes. ±10 Hz
7074.990	vt	vd	05			A1N			Continuous dashes or groups of dashes. ±10 Hz
7078.0	1002	06	05			J7D		2K70E	USB 7076.0 / CIS-12
7080.0	1700- 2100	01- 05	05			F1B	50	200	1700-2100 UTC, on air for short periods ~50% of time
7112.0	1322	15	05			J7D		2K70E	USB 7110.0 / CIS-12
7114.0	1719	03	05			F1B	50	200	FSK
7137.0	1719	02	05			F1B	50	200	FSK
7140.019	0250- 0635, 1400- 1835	vd	05	ERI	VoBM1	A3E			BC. Approx times – varies daily
7159.0	1805 2015	06 07	05			J7D		2K40E	USB / Link 11 CLEW
7179.0	1412	20	05			F1B		200	FSK
7180.020	0250- 0635, 1400- 1835	vd	05	ERI	VoBM2	A3E			BC. Approx times – varies daily
10110.0	1439	07	05	RUS		P0N	40	14K0E	Container radar
13999.8	1729	25	05			J3E		2K50E	Unidentified lang., male voice
14008.0	0746	10	05			F1B		250	FSK
14098.0	vt	vd	05			J7D		2K70E	USB 14096.0 / CIS-12
14098.0	1658	04	05	RUS		P0N	40	14K0E	Container radar
14116.0	1000	16	05			F1B		250	FSK
14122.0	1021	13	05	RUS		P0N	40	14K0E	Container radar
14151.0	1316	04	05	RUS		P0N	40	14K0E	Container radar
14155.0	0836	12	05	RUS		P0N	40	14K0E	Container radar
14169.0	1125 0811	20 24	05			F1B	50	200	FSK
14177.0	0732	10	05			F1B		500	FSK
14179.0	0814	18	05	RUS		P0N	40	14K0E	Container radar
14184.0	1358	12	05	RUS		P0N	40	14K0E	Container radar
14188.0	0905	07	05	RUS		P0N	40	14K0E	Container radar
14301.0	1311	01	05	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14302.0	1321	16	05	CHN		F3N	50	10K0E	'Foghorn' FMCW radar bursts
14303.0	1311	01	05	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14337.0	1138	10	05	RUS		P0N	40	14K0E	Container radar
18070.0	1429	04	05	G		F3N	25	20K0E	FMCW radar, RAF Akrotiri, Cyprus
18085.0	1317	20	05	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
18090.0	1115	06	05	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
18107.0	0825	05	05	RUS	RDL	F1B	50	200	Ident in F1A. Permitted by RR 5.154
18151.0	0808	25	05	RUS		P0N	40	14K0E	Container radar
18157.0	1113	20	05	RUS		P0N	40	14K0E	Container radar
18161.0	1021	04	05	CHN		F3N	50	10K0E	'Foghorn' FMCW radar bursts
18171.0	0939	28	05	RUS		P0N	40	14K0E	Container radar
18174.0	0858	18	05	RUS		P0N	40	14K0E	Container radar
18179.0	1016	05	05	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
21125.0	0724	12	05	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus

RSGB; Richard, G4DYA

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21130.0	1408	01	05	G		F3N	25	20K0E	FMCW radar, RAF Akrotiri, Cyprus
21150.0	0753	29	05	G		F3N	25	20K0E	FMCW radar, RAF Akrotiri, Cyprus
21280.0	0816	13	05	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
21295.0	0806	23	05	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
21390.0	0905	28	05	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
21423.0	0823	24	05	RUS		P0N	40	14K0E	Container radar
28023.0	0913	19	05			F3N	0.43	50K0E	Unknown
28350.0	0731	25	05	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
28765.0	0735	11	05				101.94	100KE	Unknown
	0733	13					97.22		
	0955	17					97.22		
	0815	26					97.22		

RSK; Kamweti, 5Z4BV

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH/ BW	DETAILS
7025	0828	10	05			J3E-U		2k7	Kiswahili/ vernacular QSO
7035	0831	10	05			J3E-U		2k7	Digital pulses
7040	vt	25	05			J3E-U		2k7	Kiswahili/ vernacular QSO
7058	vt	25	05			J3E-U		2k7	Kiswahili/ vernacular QSO
7060	0452	26	05	KEN		8PSK		2k4	STANAG 4285
7070	vt	vd	05	KEN		J3E-U		2k5	Kiswahili/Vernacular QSO
7100	vt	vd	05	KEN		8PSK		2k4	STANAG 4285
7108	vt	25	05			J3E-U		2k5	Kiswahili/ vernacular QSO
7109	1530	27	05			J3E-U		2k5	Sino-Chinese QSO
7140	vt	vd	05	ERI	VOBM 1	A3E		6kE	Voice of the Broad Masses of Eritrea 1: Commercial broadcast station
7150	vt	vd	05	KEN		MFSK	128	2k2	Call transmission
7155	vt	vd	05			J3E-U		2k5	Kiswahili/ vernacular QSO
7159	vt	31	05	KEN		8PSK		2k4	STANAG 4285
7172	1120	22	05			J3E-U		2k5	French/ vernacular QSO
7180	vt	vd	05	ERI	VOBM 2	A3E		6kE	Voice of the Broad Masses of Eritrea 2. Commercial broadcast station
7185	vt	26	05			J3E-U		2k5	French/ vernacular QSO
7188.5 CF	0530	vd	05	KEN		8PSK		2k4	STANAG 4285
7200.0 CF	vt	vd				A3E		5k0E	Unid AM American documentary 'rebroadcast'
14150	vt	vd	05	CHN		RADAR	50 sps	10K0E	Short burst 'Foghorn'
14320	vt	vd	05	CHN		RADAR	50 sps	10K0E	Short burst 'Foghorn'

SRAL; Pekka, OH2BLU

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/BW	DETAILS
7 MHz			5	RUS		RADAR	40sps	13k0E	(WebSDR 23d) Kontainer
7 MHz	0720-1630	*	5	RUS		RADAR	10sps	10k0E	*) Days: 4. 5. 6. 7. 8. 19. 20. 21. 23.
7 MHz	1340-1800	*	5	CHN		RADAR	50/67sps	10k0E	*) Days: 1. 7. 10. 27. 'foghorn'

SRAL; Pekka, OH2BLU									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/BW	DETAILS
7006.5	0800-1415	18	5	RUS		F1B		500H	
7007.0	1330-1400	2	5	RUS		J7D	120	2k60E	
7008.0	0730-1430	7 11	5	RUS		F1B		200/250H	
7016.0	0925-1305	12	5	RUS		F1B		200H	
7022.0	0930-1755	19	5	RUS		J7D	120	2k60E	
7025.0	0530-0900	*	5	RUS		F1A/B		200H	*) Days: 6. 8. 28. - 31.
7031.0	0430-1730	*	5	RUS		J3E-u		3k0E	*) Days: 16. - 20. see 7056 & 7126 kHz, Russian vox
7039.0	0430-1730	dly	5	RUS	C	A1A		20H	Beacon, from day 26. faster keying
7054.0	1515-1830	*	5	RUS		F1B		200H	*) Days: 7. 22. - 24.
7056.0	0430-1730	*	5	RUS		J3E-u		3k0E	*) Days: 1. - 5. see 7031 & 7126 kHz, brum & Russian vox
7057.5	0515-1415	*	5	RUS	FU63 etc	A1A	20	20H	5F, 5BL
7060.0	1100-1155	20	5	RUS		J7D	120	2k60E	
7066.0	0515-1710	*	5	RUS		NON/ F1B		200H	*) Days: 18. 27. - 31.
7072.0	0730-1000	28	5	RUS		J7D	120	2k60E	
7078.0	1000-1030	6	5	RUS		J7D	120	2k60E	
7099.0	0515-1820	*	5	RUS	V1K6 etc	A1A	17	20H	*) Days: 4. - 10. 12. 13. 16. 25. 30. 31. 5BL, Z-codes
7113.0	1020	1	5	RUS		J7D	120	2k60E	
7114.0	0415-1830	3 5	5	RUS		F1B		200H	
7116.3	0520	5	5	RUS		A1A	16	20H	5F
7117.0	0725	*	5	RUS		A1A	20	20H	*) Days: 8. 22. 23. 5F groups twice
7126.0	0430-1730	*	5	RUS		J3E-u		3k0E	*) Days: 11. - 15. see 7031 & 7056 kHz, Russian vox
7136.0	1730-1800	5	5	RUS		F1B		200H	
7140.0	0430-0530	*	5	ERI	VoBM	A3E		9k0	*) Days: 1. - 26. 28.
7140.0	1430-1835	*	5	ERI	VoBM	A3E		9k0	*) Days: 1. - 26. 28.
7158.0	0930-1130	20	5	RUS		F1B/ NON		250H	
7160.0	0700-0715	19	5	RUS	RBL88	A1A	20	20H	
7169.0	0930-1400	11 21	5	RUS		F1B		200/250H	
7171.0	0900-0930	11	5	RUS		J7D	120	2k60E	

SRAL; Pekka, OH2BLU									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/BW	DETAILS
7172.0	0800-1310	28 31	5	RUS		A1A	10	20H	5BL
7179.0	0515-1900	*	5	RUS		F1B		200H	*) Days: 20. 21. 22. 28.
7180.0	0430-0530	*	5	ERI		A3E		9k0	*) Days: 1. - 17. 21. 22. 25.
7180.0	1430-1835	*	5	ERI		A3E		9k0	*) Days: 1. - 17. 21. 22. 25.
7186.0	1130-1200	14	5	RUS		J7D	120	2k60E	
7196.0	1015-1030	11	5	RUS		F1B		200H	
7196.0	0645-0700	5	5	RUS		A1A	20	20H	5BL
7198.0	0900-1010	18	5	RUS		J7D	120	2k60E	
10 MHz	0640-0650	6	5	CYP		RADAR	50sps	20k0	(WebSDR 4d)
10 MHz	0500-1700	*	5	RUS		RADAR	40sps	13k0E	*) Days: 6. 7. 23. (WebSDR 7d) Kontainer
14 MHz	0300-1800	*	5	RUS		RADAR	40sps	13k0E	*) Days: 4. 6. 7. 10. 12. 13. 17. - 23. 25. - 31. (WebSDR 20d) Kontainer
14 MHz	0500-1400	*	5	RUS		RADAR	10sps	10k0E	*) Days: 7. 17. 18. 19. 22. 23. 25. 27. 29. 30.
14 MHz	0430-1830	dly	5	CHN		RADAR	50/67sps	10k0E	'foghorn'
14 MHz	0800-1800	*	5	CHN		RADAR	10sps	160k0	*) Days: 6. 8. 16. 17. 21. 23. 25. 26.
14000.0	1400-1500	dly	5	CHN	CRI	A3E		9k0	intermod. 13710 & 13855 kHz
14008.0	0830-1505	*	5	RUS		F1B/ NON		250H	*) Days: 5. 12. 13. 31.
14061.0	0500-1445	*	5	RUS		J7D	120	2k60E	*) Days: 1. 12. 13. 14.
14108.0	0725-0945	*	5	RUS	M97J etc	A1A		20H	*) Days. 18. 23. 27.
14210.0	0430-1800	dly	5			RADAR	10sps	5k0E	
14221.0	0430-0600	dly	5	KAZ		F1B		200H	
18 MHz	0515-1230	*	5	CYP		RADAR	25/50sps	20k0	*) Days: 6. 16. 20. 21. 22. 27. (WebSDR 3d)
18080.0	0600-0800	*	5	TWN		A3E		9k0	*) Days: 9. 13. 16. 17. 21. - 26. 29. 30.
21 MHz	0530-1215	*	5	CYP		RADAR	25/50sps	20k0	*) Days: 11. 12. 13. 18. 19. 22. 23. 25. 28. (WebSDR 11d)
21438.0	0830-1550	dly	5	RUS	RCV	A1A	20	20H	
28 MHz	0500-1800	*	5	IRN		RADAR	320 sps	60k0E	*) Days: 13. 20. 21. 26. 31.
28860.0	0500-1830	*	5	IRN		RADAR	*	60k0E	*) 150 & 313sps, *) Days: 9. 19. 20. - 26. 29. 30. 31.
28 MHz	0500-1830	*	5	RUS	Taxi disp.	F3E		3k0E	*) Days: 19. 21. 25. 26. 29. 30. 31. 119 reports

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	IDENT	MODE	Bd / SPS	SH / BW	DETAILS
7001.76	0620	27	05			G7D		2K40E	LINK11 CLEW SSB
7031	2117	26	05	CHN		RADAR	41,7	10K0E	Short bursts. "Foghorn"
7055	0,24 vt	05 vd	05			J3E-L			UKR / RUS "radiowar". Often
7074.8	1850 vt	01 vd	05			A1N			16 dashes loop or continuous dashes. Often
7075	1846 vt	12 vd	05			A1N			16 dashes loop or continuous dashes. Often
7080	1857	01	05	RUS		F1B	50	200H	
7080	1903	05	05	RUS		F1B	50	200H	
7111 LSB	1842	10	05			G7D			PRC-30
7123	2118	26	05	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
7131	2119	26	05	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
7140.02	1732 vt	14 vd	05	ERI	VoBM1	AM			BC. "Voice of Broad Masses 1". Often
7158	1741	13	05			F1B		250H	
7160.75	1906	05	05			G7D			LINK11 CLEW SSB
7180.02	1734 vt	14 vd	05	ERI	VoBM2	AM			BC. "Voice of Broad Masses 2". Often
7182	2125	26	05	CHN		RADAR	41,7	10K0E	Short bursts. "Foghorn"
7183	2117	26	05	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
13997	1122	21	05	RUS		RADAR	40	12K0E	OTHR Contayner
13999.8	1620	25	05			J3E-U			Non amateur comms. Male voices. Unid language
14001.5	0627 vt	17 vd*	05			XXX	2400	2K40E	ISR Navy hybrid modem. *Also on 18, 19, 20, 21 and 24 May. Long-lasting
14007.8	1012	22	05	RUS		NON			Carrier from F1B RUS sys 14008 kHz CF
14008	0738 vt	05 vd*	05	RUS		F1B	50	250H	*Also on 04, 07, 10, 22, 23, 24, 31 May. Long-lasting
14026	0733 vt*	10 vd*	05			J7D	120	2K70E	CIS-12. *Also on 31/05, 1040 UTC
14039	1248	31	05	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14045	1648	22	05	CHN		RADAR	66,7	10K0E	Short bursts. "Foghorn"
14049	1354	23	05	CHN		RADAR	66,7	10K0E	Short bursts. "Foghorn"
14059	0601	11	05	RUS		RADAR	40	12K0E	OTHR Contayner
14061	0711 vt	01 vd*	05			J7D	120	2K70E	CIS-12. *Also on 04, 05, 10 and 11 May
14091	0559	18	05	RUS		RADAR	40	12K0E	OTHR Contayner
14098	0650 vt	01 vd*	05			J7D	120	2K70E	CIS-12. *Almost daily
14098.5	0724	24	05			F1B	600	600H	DPRK-FSK 600 ARQ
14099	1125	31	05	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14103	0632	19	05	RUS		RADAR	40	12K0E	OTHR Contayner
14108	0610	31	05	RUS	VZ3I TKVT	A1A			CW encrypted QTCs
14110	0710	21	05	RUS		RADAR	40	12K0E	OTHR Contayner
14114	1844 vt	19 vd*	05	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 26 / 05, 0705 UTC
14115	0701	08	05	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14116	1646	23	05	RUS		RADAR	40	12K0E	OTHR Contayner.
14116	1327	31	05	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14122	0612	21	05	RUS		RADAR	40	12K0E	OTHR Contayner.

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	IDENT	MODE	Bd / SPS	SH / BW	DETAILS
14125	1349	23	05	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14127	1221	01	05			J3E-U			Music, speech. Female voice, RUS lang. Like BC relaying. Long-lasting
14135.4	0639 vt*	02 vd*	05			J7D	120	2K70E	CIS-12*Also on 11/05, 0606 UTC
14140	0905	19	05	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14144	0656	10	05			F1B	75	500H	
14148	1330	08	05			J3E-U			UI people talking. Male voices. Spanish language. By Jul, 6W1QL
14148.5	0631	06	05			F1B	600	600H	DPRK-FSK 600 ARQ
14151	1424 vt*	04 vd*	05	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 26/05, 1123 UTC
14158	0750	29	05	RUS		RADAR	40	12K0E	OTHR Contayner
14162	1142	31	05	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14164	0732	17	05	CHN		RADAR	41,7	10K0E	Short bursts. "Foghorn"
14169	0559	21	05			F1B	50	200H	*Also on 24/04, 0802 UTC
14171	0600 vt*	18 vd*	05			J7D		2K70E	Idling. *Also on 19/05 and 25/05
14177	0724	10	05			F1B	75	500H	
14179	0809 vt*	18 vd*	05	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 26/05, 1317 UTC
14181	0711	24	05	RUS		RADAR	40	12K0E	OTHR Contayner
14187	1644	23	05	RUS		RADAR	40	12K0E	OTHR Contayner
14188	0638	22	05	RUS		RADAR	40	12K0E	OTHR Contayner
14189	0913	21	05	CHN		RADAR	66,7	10K0E	Short bursts. "Foghorn"
14189	0720	29	05	RUS		RADAR	40	12K0E	OTHR Contayner
14195	0730	17	05	CHN		RADAR	41,7	10K0E	Short bursts. "Foghorn"
14197	0631	19	05	RUS		RADAR	40	12K0E	OTHR Contayner
14210	0646 vt*	01 vd*	05			RADAR		4K50E	SuperDARN (Super Dual Auroral Radar Network). *Almost daily.
14212	0705	25	05	RUS		RADAR	40	12K0E	OTHR Contayner
14214	1219	01	05	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14215	1010	22	05	RUS		RADAR	40	12K0E	OTHR Contayner
14218	0557	21	05	RUS		RADAR	40	12K0E	OTHR Contayner
14221	0556 vt	04 vd*	05			F1B	50	200H	Also on 05, 07, 12, 22 and 31 May
14224	0858	21	05	CHN		RADAR	10	160K0E	Wideband OTHR
14225	1334	31	05	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14226	0615	17	05			J7D	120	2K70E	CIS-12
14231	1326	31	05	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14232	1330	31	05	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14237	1842	22	05	CHN		RADAR	66,7	10K0E	Short bursts. "Foghorn"
14246	0713	23	05	CHN		RADAR	50	10K0E	OTHR
14253	1838	12	05			J7D	120	2K70E	CIS-12
14255	1316	31	05	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14257	1327	26	05	CHN		RADAR	10	160K0E	Wideband OTHR
14257.9	0626	25	05			NON			Long-lasting
14258	0932	21	05			F1B	50	500H	*Also on 25/05, 0708 UTC
14260	1405	23	05	CHN		RADAR	10	160K0E	Wideband OTHR
14260	1317	31	05	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14262	0603 vt*	17 vd*	05			J7D	120	2K70E	CIS-12. *Also on 18/05, 0622 UTC
14267	1136	31	05	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"

URE; Gaspar, EA6AMM

kHz	UTC	DD	MM	ITU	IDENT	MODE	Bd / SPS	SH / BW	DETAILS
14269	0714	07	05	CHN		RADAR	50	10K0E	Short burts. "Foghorn" 50 & 66.7 sps alternating
14270	1343	26	05	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14279	1359 vt	23 vd*	05	CHN		RADAR	20	10K0E	OTHR sweeps. BD = 90 sec. BRI = 9 min. *Also on 24 and 25 May. Long-lasting
14287	0915	21	05	CHN		RADAR	10	160K0E	Wideband OTHR
14291	0531	19	05	CHN		RADAR	47,6	10K0E	Short bursts. "Foghorn"
14291	0912	19	05	CHN		RADAR	41,7	10K0E	Short bursts. "Foghorn"
14292	0523	07	05	CHN		RADAR	20	10K0E	OTHR sweeps. BD = 90 sec. BRI = 9 min
14294	1808	19 vt*	05 vd*	CHN		RADAR	50	10K0E	Short bursts. "Foghorn" *Also on 31/05, 1257 UTC
14298	0602 vt*	17 vd*	05			J7D	120	2K70E	CIS-12. *Also on 18/05, 0602 UTC
14298.5	0712	06	05			F1B	600	600H	DPRK-FSK 600, ARQ
14298.5	0739	06	05			XXX	600	1K20E	DPRK-1200
14299	1346	26	05	CHN		RADAR	10	160K0E	Wideband OTHR
14302	0837	23	05	RUS		RADAR	40	12K0E	OTHR Contayner
14304	0653	07	05	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14305	1555	26	05	CHN		RADAR	10	160K0E	Wideband OTHR
14307	0737	01	05	RUS		RADAR	40	12K0E	OTHR Contayner
14313	0,74	30	05	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14315	1838	10	05	CHN		RADAR	66,7	10K0E	Short bursts. "Foghorn"
14325	0649	08	05	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14326	1807	19	05	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14327	1400	2617	05			W7D		2K80E	OFDM. CIS-60
14327	1306	31	05	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14334	0602 vt*	10 vd*	05			J7D	120	2K70E	CIS-12. *Also on 18/05, 0620 UTC
14334	1244	31	05	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14340	0622	08	05			J7D		2K70E	CIS-12. Idling
14340	1129	31	05	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14343.5	0651	08	05			J7D	120	2K70E	CIS-12
14348.5	0710	06	05			F1B	600	600H	DPRK-FSK 600 ARQ
14349	1639	31	05	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14378	1717	26	05	CHN		RADAR	10	160K0E	Wideband OTHR
14386	1915	24	05	CHN		RADAR	10	160K0E	Wideband OTHR
18070	1426	04	05	G		RADAR	25	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
18075	0625	18	05	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
18080	0646	07	05			AM			BC. "Sound of Hope". Often
18151	0814	25	05	RUS		RADAR	40	12K0E	OTHR Contayner
18155	1022	25	05	RUS		RADAR	40	20K0E	OTHR Contayner
18165	0628	10	05	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
18170	1016 vt	05 vd*	05	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus. *Also on 17 + 27 May
18170	0619	26	05	RUS		RADAR	40	12K0E	OTHR Contayner
20995	0659	22	05	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21000	0703	06	05			J3E-U			Spanish fishery. Often

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	IDENT	MODE	Bd / SPS	SH / BW	DETAILS
21001.5	1634	25	05			FSK	100	200H	ARQ System
21030	0913	25	05	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21048	0822	18	05	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
21125	0734 vt*	06 vd*	05	G		RADAR	25	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus. *Also on 12/05, 0722 UTC
21130	0631 vt*	12 vd*	05	G		RADAR	25	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus, *Also on 18/05, 0607 UTC
21132	0726	24	05	RUS		RADAR	40	12K0E	OTHR Contayner
21150	0753	29	05	G		RADAR	25	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21159	0634	31	05	RUS		RADAR	40	12K0E	OTHR Contayner
21170	0653	12	05	G		RADAR	25	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21190	1340	17	05	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21210	1229	01	05			RADAR	40	20K0E	
21230	0639	23	05	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21228	0621	31	05	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
21250	0958 vt*	23 vd*	05	G		RADAR	50	20K0E	OTHR Pluto. Sovereign Base Area of Akrotiri, Cyprus. *Also on 29/05, 1138 UTC
21256	1117	26	05	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
21265	0705	06	05	G		RADAR	25	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21270	1011	25	05	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21290	0705	17	05	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21295	0759	23	05	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21296	0631	24	05	CHN		RADAR	66,7	10K0E	Short bursts. "Foghorn"
21307	1116	26	05	CHN		RADAR	66,7	10K0E	Short bursts. "Foghorn"
21310	0558	11	05	G		RADAR	25	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21362	1122	26	05	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
21383	0855	21	05	RUS		RADAR	40	12K0E	OTHR Contayner
21388	0655	24	05	CHN		RADAR	50	10K0E	OTHR
21390	0923	25	05	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21400	0639	06	05	G		RADAR	25	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21410	0653	18	05	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21423	0825	24	05	RUS		RADAR	40	12K0E	OTHR Contayner
21424	0625	31	05	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
21438	0912	05	05	RUS	RCV	CW			"RCV" QTC
21450	1350	17	05	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
28305	1046	31	05			B7D		6K0E	LINK 11 CLEW DSB
28860	0720 vt	25 vd*	05	IRN		RADAR	150 313	ca 45K0E	*Also on 26, 27 and 31 May

USKA; Peter, HB9CET

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
5361.8 USB	1558	01	05	DNK		G1D PSK8	2400 Bd	2k70E	STANAG 4285: legal (primary user)!
7000.0 USB	0540	27	05			G7D	75 Bd	ca 2k50E	LINK11 CLEW, SSB mode
7001.8	1727	21	05			G1D PSK8	2400 Bd	ca 2k60E	LINK11 SLEW; single tone 1800Hz modulated
7007.0	1857	25	05			FMOP		10k0E	OTHR, not analysed
7008.0	0839	26	05			J7D	12x120 Bd	2k70E	CIS12; BPSK or QPSK
7022.0	1530	19	05			J7D	12x120 Bd	2k70E	CIS12; BPSK or QPSK; Submode idling
7025.0 VFO USB	1446	19	05			G1D PSK8	2400	ca 2k70E	probably MIL-188-141B? 7026.8 CF
7027.0	0859	20	05			J7D	12x120 Bd	2k70E	CIS12; weak, fading
7031.0	2218	26	05			FMOP	41 sps	10k0E	OTHR; bursts
7054.0	1538	25	05			F1B		200H	weak, fading
7068.0	0903	20	05			J7D	12x120 Bd	2k70E	CIS12; alternately traffic and submode idling; unclean signal; strong!
7111.0 LSB	1617	01	05	CHN		G7D PSK-4	30x60 Bd	ca 2k50E	CHN30 (PRC30); Burst system; tone spacing 75 Hz; Preamble 4x PSK4 60Bd, spacing 600Hz; Pilot tone at 450Hz
7113.0	1629	04	05	RUS		J7D	12x120 Bd	2k70E	CIS12; BPSK or QPSK
7122.0 LSB	1554	20	05	CHN		G7D PSK-4	30x60 Bd	ca 2k50E	CHN30 (PRC30); Burst system; tone spacing 75 Hz; Preamble 4x PSK4 60Bd, spacing 600Hz; Pilot tone at 450Hz
7140.0	1551 1625	01 15	05	ERI	VOBM 1	A3E		ca 9k0E	BC: Voice of the broad Masses 1 almost daily
7140.0	1613 1642	01 29	05			Radar	10 sps	160k0E	Wideband OTHR (strong via JA)
7145.0 LSB	2044	25	05	CHN		G7D PSK-4	30x60 Bd	ca 2k50E	CHN30 (PRC30); Burst system; tone spacing 75 Hz; Preamble 4x PSK4 60Bd, spacing 600Hz; Pilot tone at 450Hz
7159.0 USB	0907	06	05			G7D	75 Bd	ca 2k50E	LINK11 CLEW in SSB mode often
7171.0 LSB	1649	13	05	CHN		G7D PSK-4	30x60 Bd	ca 2k50E	CHN30 (PRC30); Burst system; tone spacing 75 Hz; Preamble 4x PSK4 60Bd, spacing 600Hz; Pilot tone at 450Hz
7176.0	1611	01	05			J7D	12x120 Bd	2k70E	CIS12; BPSK or QPSK, pilot at 3300Hz submode idle
7179.0	1733	21	05			F1B		200H	often
7180.0	1554 1626	01 15	05	ERI	VOBM2	A3E		ca. 9k0E	BC: Voice of the broad Masses 2, often
7183.0	2213	26	05			FMOP	47 sps	10k0E	OTHR; bursts
13397.0	0954	06	05			FMOP	40 sps	12k0E	OTHR; Contayner; partially in 20m band (up to 14003)
13999.8	1832	25	05			J3E-U		ca 2k10E	unid language, sounds like French maybe fishery?
14000.0	1455 1446	12 24	05	CHN	CRI	A3E		ca 9k0E	BC: China Radio International - inter-modulation of 13855 and 13710 kHz: 13855 x 2 -13710 = 14000 kHz
14001.8	0934	21	05		ISR?	G1D PSK8	2400	ca 2k50E	MIL188-110A mod (Hybrid); Preamble 4 tones, PSK4 75Bd 450Hz spacing
14008.0	1454 0949	12 20	05	RUS		F1B	50 Bd	250H	often
14091.0	1258	25	05			FMOP	40 sps	12k0E	OTHR; Contayner

USKA; Peter, HB9CET

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
14098.0	1012	04				J7D	12x120 Bd	2k70E	CIS12; BPSK or QPSK; strong via JA
	1501	12	05						
	1308	14							
14113.45	1459	24	05			F1B/ARQ	600 Bd	600H	ARQ system
14124.0	1449	24	05			FMxx		10k0E	OTHR
14137.0	1955	25	05			FMOP	40 sps	12k0E	OTHR; Contayner
14151.0	1328	04	05			FMOP	40 sps	12k0E	OTHR; Contayner
14178.0	0919	06	05			FMOP	40 sps	12k0E	OTHR; Contayner
14179.0	0828	18	05			FMOP	40 sps	12k0E	OTHR; Contayner; weak, fading
14184.0	1355	12	05			FMOP	40 sps	12k0E	OTHR; Contayner
14189.0	1634	19	05			FMOP	40 sps	12k0E	OTHR; Contayner
14190.0	1008	28	05			FMOP	40 sps	12k0E	OTHR; Contayner
14210.0	0841	26	05			Radar		ca 5k0E	suspected SuperDARN Radar often
14221.0	2000	25				F1B		200H	long lasting
	2207	26	05						
14250.0	1519	24	05			Radar	10 sps	160k0E	Wideband OTHR
14253.0	1514	13	05			J7D	12x120 Bd	2k70E	CIS12; BPSK or QPSK, pilottone
14284.0	1753	04	05			FMOP	50 sps	10k0E	OTHR; Bursts
14292.0	1650	07	05			Radar		10k0E	OTHR; unid
14295.0	1204	18	05			J7D	12x120 Bd	2k70E	CIS12; BPSK or QPSK, pilottone
14296.0	1408	06	05			FMOP	66.66 sps	10k0E	OTHR; Bursts "Foghorn"
14300.0	1332	19	05			FMOP	66.66 sps	10k0E	OTHR; Bursts BD 3.8s: "Foghorn"
14317.0	1308	19	05			FMOP	66.66 sps	10k0E	OTHR; Bursts "Foghorn"
14319.0	1401	06	05			FMOP	66.66 sps	10k0E	OTHR; Bursts "Foghorn"
14335.0	1352	06	05			Radar	10 sps	160k0E	Wideband OTHR; long lasting
18090.0	1124	06	05			FMCW	50 sps	ca 20k0E	OTHR (UK-base Cyprus ?)
18171.0	1308	25				FMOP	40 sps	12k0E	OTHR; Contayner; partially in 17m band
	0943	28	05						
21000.0	1319	19				J3E-U		ca 2k40E	Spanish language, probably fishery: often
	0934	20	05						
	1435	26							
21260.0	0827	29	05			FMCW	50 sps	ca 20k0E	OTHR (UK-base Cyprus)
21372.0	1001	28	05			FMOP	66.66 sps	10k0E	OTHR; Bursts "Foghorn"
21390.0	0919	28	05			FMCW	50 sps	ca 20k0E	OTHR (UK-base Cyprus)
21438.0	1004	24	05		RCV	A1A		10H	TDoA: Area of Sevastopol daily
28860.0	1441	13				?	150 sps + 313 sps	ca 45k	OTHR, Bursts; long lasting, sweep rate alternating almost daily
	0835	20	05	IRN					
	1634	25							

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
7055.0	1425	09	05	UKR/RUS		J3E-L		2k7E	Political slogans/insults; almost daily.
7055.0	1825	10	05			J3E-L			Endless tape political issue
10108.0	1345	13	05	CIS		F1B			UiPtr; Revs/Ptr
10108.0	1356	13	05	RUS	RDL	F1A			UUU RDL 97536 86887 K
14008.0	1255	03	05	CIS		F1B			Carrier/Revs/Ptr
14008.0	1446	12	05	RUS		F1B		250H	UiPtr
14008.0	1347	24	05	RUS		F1B		250H	Ptr; Unclean signal; S5-8
14089.0	1025	17	05			RADAR			OTHR
14108.0	0907	06	05	CIS	QUV9	A1A			QUV9 Calls to: 3TiX G6GW NCYF C45M KR4T
14108.0	0919	06	05	CIS	QUVG	A1A			3T1X de QUV9 QRV

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
14108.0	0923	06	05	CIS	QUV9	A1A			3T1X de QUV9 R 220 K
14108.0	1012	12	05	CIS	1BKX	A1A			5BL ending 288 K
14108.0	1006	15	05	CIS	3NZE	A1A			PDHQ de 3NZE QTC 575 43 15 1250 575 = 821 = MMMMM 5BL
14111.5	0932	24	05			F1B			UiPtr; Revs
14148.0	1502	21	05	RUS		RADAR			55 N 41 E TD0A
14188.0	0849	07	05	RUS		RADAR			TD0A 52 N 52 E
14259.0	1049	03	05	RUS		RADAR			TD0A 49 N 55 E OTHR
14330.0	0914	10	05	RUS		RADAR			TD0A 54 N 48 E qrt 09.17
21436.0	0900	06	05			F1B			UiPtr; Revs
21438.0	0935	24	05	RUS	RCV	A1A			Proc;s
21438.0	0935	24	05	CIS	569E	A1A			XXX 569E 80908 43878 99370 ZUBROchKAF 2952 K
21438.0	0945	24	05	RUS	RCV	A1A			RBE86 de RCV QTC 580 46 5 0832 580 = NAWIP 038

Many thanks to all our valued helpers.

Contacts: Gaspar Miró, EA6AMM, ea6amm@iaru-r1.org
Peter Jost, HB9CET, hb9cet@iaru-r1.org

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

Spectrum and Sonagram of an OTHR, FMCW, 50 sps, BW 20 kHz (with Perseus SDR)

