



IARU Monitoring System Region 1

Monthly Newsletter 9 - September 2021

edited by Peter Jost, HB9CET and Gaspar Miró, EA6AMM

News and Info's

Except Radio Ethiopia at 7110 kHz in AM A3E September did not bring significantly new Intruders. Most of the heard signals are well known, partly since many long years; e.g. 18107 FSK, 21438 CW, various OTHR from RUS, CHN, UK base Cyprus and many more.

In the 40m band many FSK and CIS 12 stations from Russia were active. The radio war at 7055 kHz (and around) has been bothering us to an unbearable extent for a very long time and is still continuing, how much longer do we have to endure this?

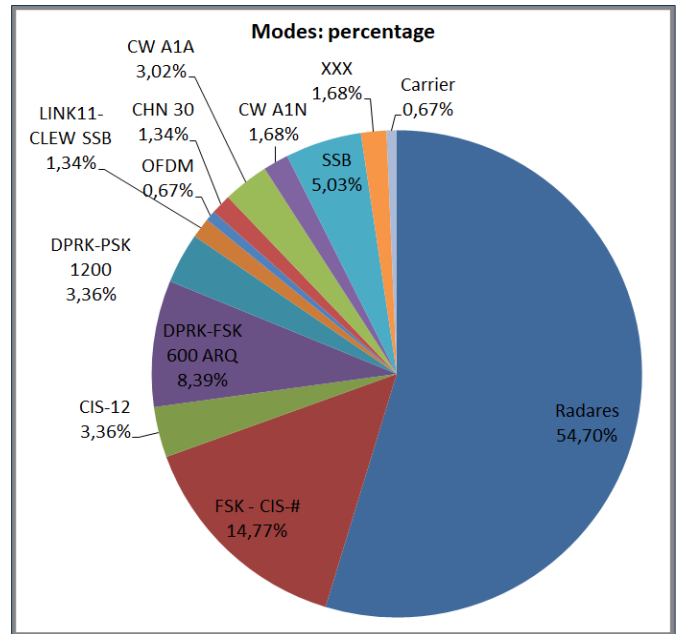
At 7095.0 kHz (CF) we noticed an FSK signal with 300 Bd 500 Hz shift, reported as Polish origin. If the conditions allowed, at 7137.0 kHz LSB a MIL-188-141A (ALE) was audible towards evening in Europe, reported as TWN NAVY.

A troublesome LINK11 CLEW SSB signal was frequently active on 7159.0 kHz USB (7160.8 CF), G7D; In August it worked in DSB mode (B7D) with 6 kHz bandwidth (7159.0 CF).

After 1900 UTC at 14000.0 USB (J3E-U), Brazilian fishermen were often audible.

In the 10m band sporadically we found the Iran OTH radar on various frequencies; mostly 150 / 313 sps alternating and jumping.

The DPRK-FSK 600 and 1200 Bd (also PSK) burst signals were found almost daily on 10, 14, 18 and 21 MHz on several frequencies and at various times.



Percentage of the most frequent intruders (©EA6AMM)

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 exact mode unknown
SH = Shift (Hz) | **sps** = sweeps per second | **TDoA** = Time difference of arrival | **ui** = **unid** = unidentified.

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

DARC; credits to monitors: DK2OM Wolf, DF5JL Tom, DG3KBQ Thorsten, DE2TRF Torsten, DL3RTL Daniel, DB3TA Alex

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
6996.0	1950	19	09	CHN		FMOP	10	160k	Chinese wideband OTHR
7035.0	0441	08	09	RUS		PSK	50	250	CIS 36-50
7036.0	1836	13	09	CHN		FMOP	67.6	10k	Chinese OTH radar - 3.8 sec bursts
7039.0	dly	vt	09	RUS	"C"	A1A			cluster beacon "C" - Moscow - "RIW"

DARC; credits to monitors: DK2OM Wolf, DF5JL Tom, DG3KBQ Thorsten, DE2TRF Torsten, DL3RTL Daniel, DB3TA Alex

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7039.4	ady	dly	09	RUS	"M"	A1A			Cluster beacon "M" - Magadan RUS Navy - "RTS" - daily
7039.6	1603	29	09			A1A		200	CW transmission "123 123 123..."
7043.0	1504	16	09	CHN		FMOP	10	160k	Chinese wideband OTHR
7045.0	1623	08	09	RUS		F1B	75	200	Sevastopol
7051.5	0653	12	09			PSK		2k6	LINK11 SLEW
7053.8	1138	12	09			PSK		3k3	CIS-12 on idle
7054.0	1900	18	09	RUS		F1B	50	185	Vladivostok
7055.0	1845	06	09	UKR		J3E-L		2k9	UKR/RUS radio war
7058.0	1805	06	09			FMOP	40	12k	OTHR Contayner
7060.0	1603	28	09	UKR		J3E-L		2k9	UKR/RUS radio war
7065.0	1810	12	09	UKR		J3E-L		2k9	UKR/RUS radio war
7080.0	1955	05	09	RUS		F1B		200	CIS 36-50 TDoA Kaliningrad
7088.0	2102	16	09	RUS		F1B		250	FSK Signal
7088.0	1652	19	09	RUS		F1B	75	250	RUS ship North Sea. N of Den Haag
7095.0	1625	22	09	CHN		FMOP	67.9	10k	Chinese OTH radar 3.8 sec bursts
7098.0	1637	20	09	CHN		FMOP	66.4	10k	Chinese OTH radar 3.8 sec bursts
7103.5	2020	17	09					2k8	music. voices
7105.7	0702	12	09	RUS		PSK		3k3	CIS-12. TDoA nr Kaliningrad
7107.0	2020	30	09	RUS		FMOP	40	12k	OTHR Contayner
7110.0	1752	06	09	ETH		A3E		9k	Radio Ethiopia
7113.0	2044	17	09	RUS		FMOP	40	12k	OTHR Contayner
7114.0	1906	13	09	RUS	RDL	F1B	50	200	ident on F1A "RDL" - Kaliningrad
7116.0	1953	03	09	RUS		FMOP	40	12k	OTH radar Contayner - w of Saransk
7119.0	1910	20	09	CHN		FMOP	67.6	10k	Chinese OTH radar 3.8 sec bursts
7127.0	0714	28	09			A1A		200	QTC-Traffic (MIL Station). Call "1YWE"
7128.0	1948	17	09	RUS		FMOP	40	12k	OTHR Contayner
7129.0	1945	17	09	RUS		FMOP	40	12k	OTH radar Contayner - W of Saransk
7133.0	2156	09	09	RUS		FMOP	40	12k	OTHR Contayner
7137.0	1602	16	09	RUS	RDL	F1B	50	200	CIS 36-50 RUS navy Kaliningrad
7138.0	1829	19	09	CHN		FMOP	67.6	10k	Chinese OTH radar 3.8 sec bursts
7139.0	1930	30	09	CHN		FMOP	66.4	10k	Chinese OTH radar 3.8 sec bursts
7140.0	1705	dly	09	ERI	VOBM	A3E/BC		9k	7140.021 kHz - voice of the broad masses - Eritrea
7150.0	1747	22	09	CHN		FMOP	61.3	10k	Chinese OTH radar 3.8 sec bursts
7150.4	1830	27	09					2k6	unid digital
7159.0	1242	24	09	NOR		PSK4	75	5850	LINK11-CLEW on DSB mode - ship - North Sea - w of Stavanger
7160.1	0720	29	09			PSK		2k31	LINK11 CLEW 7159.0. BW 2310 kHz. 1st CH +605 Hz. 16st CH 2915 kHz. CF 7160.155 kHz; RSQ 339
7163.0	1928	24	09	CHN		FMOP	66.67	10k	OTHR 3.8s bursts
7164.0	1818	24	09	CHN		FMOP	67.6	10k	Chinese OTH radar 3.8 sec bursts
7168.0	2026	22	09	RUS		FMOP	40	12k	OTHR Contayner
7171.0	2020	30	09	CHN		FMOP	66.67	10k	OTHR 7.6s bursts
7174.5	1653	12	09			F1B	75	250	FSK Signal
7175.0	1840	24	09	CHN		PSK4A	60	2400	PRC 30 tone modem - LSB mode - pilot tone 450 Hz
7180.0	1409	dly	09	ERI	VOBM	A3E		9k	7180.021 kHz - Radio Eritrea
7187.0	2032	10	09	RUS		FMOP	40	12k	OTHR Contayner
7194.0	1529	30	09	RUS		PSK2A	120	2600	CIS-12 - Moscow
10112.0	1757	01	09	RUS		FMOP	40	12k	OTH radar Contayner - w of Saransk
10150.0	1936	05	09	CHN		FMOP	51.2	10k	Chinese OTH radar - 5.1 sec bursts

DARC; credits to monitors: DK2OM Wolf, DF5JL Tom, DG3KBQ Thorsten, DE2TRF Torsten, DL3RTL Daniel, DB3TA Alex

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14000.0	2028	22	09	B		USB			Brazilian fishermen - daily 2000 utc - traffic starts with "oiiii" = "hello"
14000.0	1400	01	09	CHN		A3E		9k	China Radio International - intermodulation from 13855 and 13710 kHz - 13855 x 2 - 13710 = 14000 kHz
14008.0	vt	vd	09	RUS		F1B	50	250	Moscow - very often
14009.0	0920	06	09	CHN		FMOP	67.9	10k	Chinese OTH radar - 3.8 sec bursts
14026.0	1628	20	09	RUS		PSK2A	120	2600	CIS-12 - Moscow
14030.0	0959	06	09	CHN		FMOP	67.0	10k	Chinese OTH radar - 3.8 sec bursts
14098.5	0738	22	09	KRE		FSK		600	North Korean Diplo FSK / ARQ
14108.0	vt	vd	09	RUS		A1A			RUS MIL - often
14122.0	0837	10	09	CHN		FMOP	66.67	10k	OTHR 3.8s bursts
14126.0	0854	27	09	CHN		FMOP	66.66	10k	Chinese OTH radar - 3.8 sec bursts
14127.0	0954	10	09	CHN		FMOP	10	160k	Chinese wideband OTHR
14132.0	0848	10	09	CHN		FMOP	66.67	10k	OTHR 3.8s bursts
14158.0	0851	19	09	CHN		FMOP	66.66	10k	Chinese OTH radar 7.6 sec bursts
14158.0	1246	01	09	RUS		FMOP	40	12k	OTHR Contayner
14183.0	1313	23	09	RUS		FMOP	40	12k	OTH radar Contayner - W of Saransk
14198.0	0928	11	09	CHN		FMOP	67.6	10k	Chinese OTH radar - 3.8 sec bursts
14205.0	1023	11	09	CHN		FMOP	10	160k	Chinese wideband OTHR
14210.0	ady	dly	09			FMOP		5k	Superdarn ionospheric research radar - 12 sec bursts - daily
14221.0	2019	16	09	KAZ		F1B	50	200	Kazakhstan - west of Almaty - mostly idling - daily
14226.0	0923	12	09	CHN		FMOP	67.3	10k	Chinese OTH radar - 3.8 sec bursts
14231.0	0835	10	09	CHN		FMOP	66.67	10k	OTHR 3.8s bursts
14232.0	0959	10	09	CHN		FMOP	67.9	10k	Chinese OTH radar - 3.8 sec bursts
14235.0	0812	26	09	CHN		FMOP	66.67	10k	OTHR 3.8s bursts
14236.0	1850	27	09	RUS		FMOP	40	12k	OTH radar Contayner - W of Saransk
14252.0	1021	19	09	CHN		FMOP	68.2	10k	Chinese OTH radar 7.6 sec bursts
14264.0	1040	17	09	CHN		FMOP	10	160k	Chinese wideband OTHR
14265.0	0833	16	09					10k	OTHR
14269.0	0919	29	09	CHN		FMOP	50	10k	Chinese OTH radar long lasting - NE of Zhengzhou
14270.0	0835	10	09	CHN		FMOP	50	10k	OTHR continuous
14276.0	1453	08	09	CHN		FMOP	67.9	10k	Chinese OTH radar - 3.8 sec bursts
14301.9	0928	22	09	RUS		OFDM	40	2670	RF 14300.0 - OFDM 60 - SW of Moscow
14304.0	1116	25	09	CHN		FMOP	10	160k	Chinese wideband OTHR
14304.0	0836	10	09	CHN		FMOP	66.67	10k	OTHR 3.8s bursts
14311.0	0928	26	09	CHN		FMOP	69.6	10k	Chinese OTH radar - 3.8 sec bursts
14312.0	0926	21	09	CHN		FMOP	66.66	10k	Chinese OTH radar - 3.8 sec bursts
14316.0	1253	30	09	CHN		FMOP	64.6	10k	Chinese OTH radar - 3.8 sec bursts
14318.0	1552	09	09	RUS		FMOP	40	12k	OTH radar Contayner - W of Saransk
14322.0	1400	25	09	CHN		FMOP	10	160k	Chinese wideband OTHR
14341.0	1029	19	09	CHN		FMOP	68.2	10k	Chinese OTH radar 7.6 sec bursts
18080.0	0710	21	09	TWN		A3E/BC			Sound of Hope - Taiwan and Chinese BC jammer - daily at 06 utc and later
18107.0	1040	03	09	RUS	RDL	F1B	36/50	200	CIS-36-50 - Moscow - idle and traffic - often - Russian NAVY
18179.0	0656	28	09			FMOP	40	12k	OTHR
21000.0	1205	07	09	Waf		USB			unid pirate net - 220 deg. from DL - Westafrica
21114.0	0925	15	09	CHN		FMOP	48.8	10k	Chinese OTH radar - 5.4 sec bursts

DARC; credits to monitors: DK2OM Wolf, DF5JL Tom, DG3KBQ Thorsten, DE2TRF Torsten, DL3RTL Daniel, DB3TA Alex

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21330.0	0916	30	09	CHN		FMOP	67.0	10k	Chinese OTH radar - 3.8 sec bursts
21338.0	0838	04	09	CHN		FMOP	10	160k	Chinese wideband OTHR - long lasting
21395.0	0904	30	09	CHN		FMOP	41.8	10k	Chinese OTH radar - 6.1 sec bursts
21402.0	0924	30	09	CHN		FMOP	41.8	10k	Chinese OTH radar - 6.1 sec bursts
21408.0	0901	30	09	CHN		FMOP	41.8	10k	Chinese OTH radar - 6.1 sec bursts
21428.0	0921	30	09	CHN		FMOP	41.8	10k	Chinese OTH radar - 6.1 sec bursts
21435.0	0844	09	09	CHN		FMOP	42	10k	Chinese OTH radar - 5.1 sec bursts
21438.0	vt	dly	09	RUS	RCV	A1A			RCV - RUS Navy Sevastopol with QTCs RIP90 de RCV - daily active
28112.0	1103	28	09	IRN		AMOP	150 313	46k	Iranian radar - 150 and 313 alternating
28200.0	1021	27	09	IRN		AMOP	150 313	46k	Iranian radar - 150 and 313 alternating
28202.0	1116	28	09	IRN		AMOP	150 313	46k	Iranian radar - 150 and 313 alternating
28450.0	0915	26	09	IRN		AMOP	150 313		Iranian radar - 150 and 313 alternating - broken signals
28530.0	0937	27	09	IRN		AMOP	150 313	46k	Iranian radar - 150 and 313 alternating
28860.0	0900	15	09	IRN		AMOP	150 313	46k	Iranian radar - 150 sps and 313 sps alternating - North Iran - daily
29210.0	0929	27	09	IRN		AMOP	150 313	46k	Iranian radar - 150 and 313 alternating

IRTS; Michael, EI3GYB

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3718	1105	19	09	E or MM		USB			Spanish fishermen. Very strong signals. Loud motor noise from both ships. Just in case you wondered-they have not gone away!
3756	1630	16	09	F		LSB			DQRM against a French group of Hams. Replaying of QSOs, shouting of obscenities. Also heard on other frequencies on other days targetting the same group-just like in the months before.F.ex. 27/9 at 1555z on 3762 kHz.
7040	0135	09	09			RADAR			Radar from 7040 to 7072 kHz.Huge and persistent signals.
7055	1750	05	09	UKR/ RUS		LSB			Russian-Ukrainian radio war. Agitprop, shouting, music. Obscenities like "1-2-3 Russenschwein. 1-2-3-noch ein Schwein."Daily, all day long until about 2200z.
7080.5	1800	05	09			F1B			Medium signal, persitent.
7099	2130	13	09			RADAR			Radar from 7099 to 7124 kHz. Strong and persistent.
7110	1601	05	09	ETH		AM			Radio Ethiopia, heard daily as of 1601z since the beginning of the month. Always a strong signal until sign off at various times until 2030z.
7110	1815	06	09			FSK			1815 to 1915z. Very strong.
7113	0130	09	09	CUB					Noise QRM, probably mixing products from another transmitter. 7113 to 7120 kHz.7155 to 7162 kHz.Daily all evening, night and early morning until fade out at around 0930z.
7138.5	2030	15	09			FSK			Strong and persistent. Still on 16/9 at 2200z.
7140	1755	05	09	ERI		AM			Radio Eritrea. Strong signal. Heard very often.
7162.5	1250	21	09			PSK			Link-11 Clew. Very strong and persistent. Still on 29/9 at 2200z. Gone by midnight.
7165	1245	03	09			RADAR			Radar from 7165 to 7178 kHz. Medium

IRTS; Michael, EI3GYB

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
									signal.
7170	1620	16	09			RADAR			Radar from 7170 to 7184 kHz on and off. Medium signal.
7186	2030	07	09			RADAR			Radar from 7186 to 7200 kHz. Strong and persistent.
7205	2110	06	09	F		AM			Radio France Internationale on 7205 kHz, spluttering down to 7195 kHz. Daily.
14000	1357	12	09	CHN		AM			Radio China International with mixing products. Medium signal. Daily audible all afternoon.
14000	2030	26	09	B		USB			Brazilian Cbers, daily. Strong signals. Sometimes motor noise from lorries audible.
14132	1700	13	09			RADAR			Radar from 14132 to 14145 kHz. Medium signal, persistent.
14152	1900	30	09			RADAR			Radar from 14152 to 14164 kHz. Strong and persistent.
14175	2115	06	09			RADAR			Radar from 14175 to 14188 kHz. Medium signal, persistent.
14182	1610	06	09			RADAR			Radar from 14182 to 14195 kHz. Medium signal. On and off.
14250	1145	17	09			RADAR			Radar from 14250 to 14360 kHz. Medium signal, persistent in the background.
14298	1235	27	09			FSK			North Korean embassy traffic. Strong and persistent.
14341	0920	07	09			PSK			Very strong and persistent. Ends at 1050z.
14347.5	0950	07	09			PSK			Weak, in and out. Ends at 1055z.
18135	1300	13	09			RADAR			Radar from 18135 to 18210 kHz. Medium signal. Persistent.
18160	0830	04	09			RADAR			Radr from 18160 to 18200 kHz. Very strong and persistent.
21377.5	1550	30	09			USB			Encrypted traffic between two males. Ends at 1600z.

OeVSV; Christoph, OE1VMC

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7168.0	2048	22	09			RADAR	40	20K0E	

PZK; (SP3AMO, SP5GNI)

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
5363.6	vt	vd	09			PSK		2K6	S9 Stanag
7019.5	0550	12	09			F1B	50	250	RSQ 595
7020.0	0500	13	09			PSK		2K5	RSQ 595
7020.0	0935	14	09			F1B	50	250	
7035.0	0425	08	09			F1B	50	250	RSQ 595
7087.8	vt	vd	09			F1B	50	250	
7087.8	0820	23	09			F1B	75	250	RSQ 445
7087.8	0455	27	09			F1B	75	250	RSQ 445
7110.0	1700	07	09			A3E			RS 57
7111	0928	01	09			FSK		200	S9
7126.0	0500	27	09		SNYD	A1A			RST 589 [20 wpm]
7126.5	1050	13	09	RUS	MIL	J3E-U/A1A			Female voice and CW in background [10.53 UTC QRT]
7126.5	1230	13	09			A1A			sec QRV 12.47 ,
7126.5	0640	14	09	RUS	MIL	J3E-U /A1A			Female voice and CW in background

PZK; (SP3AMO, SP5GNI)									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7130	1955	17	09			RADAR		20KOE	S9 +20 dB
7150.0	0557	16	09			PSK		800	RSQ 575
7166	1316	2	09			RADAR		8KOE	S5 in bursts
7180	1920	17	09			RADAR		20KOE	S9 +20 dB
7186.8	0512	20	09			PSK			
7194	2100	07	09			PSK		2K9	CIS-12 pilot 7195,3 S9
7198	0925	01	09			PSK		2K9	CIS-12 pilot 7199,3 S8
10105.0	1620	05	09			RADAR		10KOE	sps 40
10131	2100	07	09			FSK		250	S9
14000	1415	03	09			AM		8KOE	Radio in English S8
14050	0900	15	09			FSK		250	S9 +10
14051	0923	01	09			RADAR		10KOE	S7 in bursts
14052.0	0910	17	09			RADAR		16KOE	sps 40 Hz [FT + SDR]
14099	0924	01	09			RADAR		10KOE	S7 in bursts
14107	1115	01	09			RADAR		8KOE	S5 in bursts
14112	1118	13	09			RADAR		10KOE	S7 in 5 sec bursts
14118	1239	02	09			RADAR		10KOE	S9 in bursts
14123.5	1830	09	09			RADAR		12KOE	sps 40
14131.0	1330	09	09			RADAR		16KOE	sps 40
14140.0	0552	08	09			RADAR		16KOE	sps 40
14147.0	0635	09	09			RADAR		16KOE	sps 40 [06.58 UTC QRT]
14157	1309	21	09			RADAR		10KOE	S7 in 3 sec bursts
14175.0	0630	09	09			RADAR		16kOE	sps 40
14191	0825	06	09			RADAR		12KOE	S8 in bursts
14195	0850	06	09			RADAR		10KOE	S5 continous
14195	0807	12	09			RADAR		10KOE	S5 in 5 sec bursts
14199.3	1032	07	09			UI		300	S9
14213	0859	15	09			RADAR		25KOE	S9 +10 ended 9:00
14223	0820	06	09			RADAR		10KOE	S6 in 3 sec bursts
14241	0820	06	09			RADAR		10KOE	S6 in 3 sec bursts
14241.3	1111	13	09			PSK			RS 53
14250	0900	18	09			RADAR		10KOE	S6 10sec burst
14270	0900	22	09			RADAR		10KOE	S5 continous
14301	1205	06	09			RADAR		10KOE	S5 in 5 sec bursts
14302	0843	22	09			PSK		2K9	CIS-12 pilot 14303,3 S8
14303	0820	06	09			RADAR		10KOE	S5 in 3 sec bursts
14308	0845	27	09			RADAR		10KOE	S8 short bursts every 30 seconds
14317	1625	09	09			RADAR		14KOE	S6 continous
14317.5	0822	06	09			UI		1K8	Many spectral lines
14320.0	0655	05	09			FMOP		16KOE	sps 40
14321.0	0520	08	09			FMOP		16KOE	sps 40
14323	1340	13	09			RADAR		10KOE	S7 in 5 sec bursts
14340	1400	22	09			RADAR		160KOE	S6 a few sweconds bursts
14342	1030	07	09			FSK		250	S9 +10
14348	1030	07	09			PSK		2K9	CIS-12 pilot 14349,3 S6
18080	0755	03	09			A3E		8KOE	Radio in (probably) Chinese S7
18080.0	0630	06	09	CHN		A3E			RS 56
21190	1034	07	09			RADAR		10KOE	S5 in 2 sec bursts
21200	1010	14	09			RADAR		10KOE	S5 in 3 sec bursts
21438	0834	06	09			A1A			S6 mixed text
28860	0905	15	09			RADAR		60KOE	S8
29000	0855	24	09			RADAR		60KOE	S6

REF; Francis, F5MIU

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
6999	1554	20	09			USB		4k	Unditent BC station in Italian very long political messages S7
6999	1656	21	09			USB		4k	Unditent BC station in Italian S3
10110	1624	5	09			FMCW	40	10k	OTH Radar pulsed 25ms, S8
14050	0740	29	09			FMCW			Swipping cw signal from 13980 to 14130 every 3sec S7
14080	1653	10	09			FMCW	40	10k	OTH Radar pulsed 25ms, S8
14144	1657	23	09			FMCW	40	12k	OTH Radar pulsed 25ms, S6
14150	1659	7	09			FMCW	40	15k	OTH Radar pulsed 25ms, S8
14270	0749	10	09			FMCW	50	10k	OTH Radar pulsed 20ms, S8
14290	1620	5	09			FMCW	20	10k	OTH Radar pulsed 50ms, S9
14300	0747	24	09			FMCW	50	10k	OTH Radar pulsed 20ms, S8
14315	1600	9	09			FMCW	40	20k	OTH Radar pulsed 25ms, S9+10
14330	1616	5	09			FMCW	40	30k	OTH Radar pulsed 25ms, S9+10dB
21160	0745	6	09			FMCW	40	15k	OTH Radar pulsed 25ms, S9+10 dB
28065	1644	21	09			FMCW	?	60k	OTH Radar multiple sps S5

RSGB; Richard, G4DYA

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
3510.0	vt	vd	09			J3E		2K70E	USB 'The Air Horn'
3756.0	vt	vd	09			J3E		1K70E	USB 'The Pip'
5362.0	1538	30	09			J7D		2K70E	USB 5360.0 / CIS-12. For info: primary user
5363.6	ady	vd	09	DNK		G1D		2K40E	For info: Stanag 4285, primary user
7017.0	1551	21	09			J7D		2K70E	USB 7015.0 / CIS-12
7044.0	1704	09	09			F1B		250	FSK
7045.0	1617	08	09			F1B		200	FSK
7046.0	1718 1552	13 21	09			F1B		200	FSK
7057.55	0759	20	09			F1B		200	FSK
7074.985	0653	19	09			A1N			Continuous dashes
7074.995	0638	22	09			A1N			Continuous dashes
7075.000	0620	10	09			A1N			Continuous dashes
7075.012	0742	29	09			A1N			Continuous dashes
7075.024	1003	24	09			A1N			Continuous dashes
7075.029	0858	25	09			A1N			Continuous dashes
7075.032	0741	09	09			A1N			Continuous dashes
7075.065	0801	26	09			A1N			Continuous dashes
7080.0	vt	vd	09			F1B	50	200	FSK
7088.0	vt	vd	09			F1B		250	FSK
7088.0	0803	26	09			F1B		200	FSK
7091.0	2237	08	09	RUS		PON	40	12K0E	Container radar
7093.0	1927	30	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
7106.0	0731	12	09			J7D		2K70E	USB 7104.0 / CIS-12. QRT 0807z
7110.0	1600-1800	04-29	09	ETH	Radio Ethiopia	A3E		9K00E	Approx. times - varies daily
7114.0	1640	13	09			F1B		200	FSK
7115.0	2057	03	09	RUS		PON	40	12K0E	Container radar
7137.0	1751 1608	12 15	09			F1B		200	FSK
7140.02	vt	vd	09	ERI	VoBM1	A3E			BC
7149.5	0709	16	09			R7D		3K30	USB 7147.5 / CIS-12
7157.0	vt	02-22	09	CUB				5K00E	Jammer

RSGB; Richard, G4DYA

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7159.0	vt	16-28	09			J7D		2K40E	USB 7159.0 / Link 11 CLEW
7192.0	1624	25	09			F1B		250	FSK
7194.0	1550	30	09			J7D		2K70E	USB 7192.0 / CIS-12
7196.0	1524	30	09			J7D		2K70E	USB 7194.0 / CIS-12
7198.0	0746	29	09			J7D		2K70E	USB 7196.0 / CIS-12
10111.0	1730	01	09	RUS		P0N	40	12K0E	Container radar
14016.0	1841	10	09			F1B		500	FSK
14050.0	0837	15	09			F1B		250	FSK
14054.0	0755	13	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14068.0	0839	10	09			F1B		500	FSK
14118.0	0747	13	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14122.0	0837	10	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14141.0	0855	25	09			F1B		200	FSK
14159.0	0749	27	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14160.0	0838 0658	14 17	09			F1B		250	FSK
14177.0	0739	29	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14181.0	1134	30	09	CHN		F3N	50	10K0E	'Foghorn' FMCW radar bursts
14185.0	0836	14	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14187.0	1345	08	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14190.0	0938	27	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14210.0	vt	vd	09			P0N	10	4K50E	Signal resembles SuperDARN
14231.0	0831	10	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14235.0	0817	26	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14222.0	0747	27	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14240.0	0842 0656	14 17	09			F1B		250	FSK
14248.0	0759	13	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14261.0	0850	14	09	CHN		F3N	50	10K0E	FMCW radar
14265.0	0704	15	09	CHN		F3N	50	10K0E	FMCW radar
14266.0	0802	13	09			F1B		250	FSK
14268.0	0736	29	09	CHN		F3N	50	10K0E	FMCW radar
14270.0	0801 0709	10 22	09	CHN		F3N	50	10K0E	FMCW radar
14274.0	1130	30	09	CHN		F3N	50	10K0E	'Foghorn' FMCW radar bursts
14291.0	1132	30	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14296.0	1234	30	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14298.5	0816	29	09			F1-		600	Unidentified FSK bursts
14298.5	0823	30	09					1K30E	Unidentified bursts
14304.0	0835	10	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14308.0	0753	27	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14315.0	1236	30	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14323.0	1347	08	09	CHN		F3N	50	10K0E	'Foghorn' FMCW radar bursts
14325.0	1123	30	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14328.0	0745	05	09	RUS		P0N	40	12K0E	Container radar
14330.0	0842 0751	26 27	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14331.0	1631	08	09	RUS		P0N	40	12K0E	Container radar
14335.0	1125	30	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
14342.0	0946	07	09			F1B		250	FSK. RR 5.152 ?
14345.0	0850	13	09	CHN		F3N	50	10K0E	'Foghorn' FMCW radar bursts
14353.0	1127	30	09	CHN		F3N	41.7	10K0E	'Foghorn' FMCW radar bursts

RSGB; Richard, G4DYA

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
18080.0	vt	vd	09			A3E			BC
18107.0	vt	vd	09	RUS	RDL	F1B		200	FSK
18135.0	0907	29	09	CHN		F3N	10	160KE	FMCW radar
18156.0	1238	30	09	CHN		F3N	66.7	10K0E	'Foghorn' FMCW radar bursts
18165.0	0722	06	09	RUS		P0N	40	12K0E	Container radar
18170.0	0745	27	09	CHN		F3N	41.7	10K0E	'Foghorn' FMCW radar bursts
21438.0	vt	vd	09	RUS	RCV	A1A			Morse

RSK; Kamweti, 5Z4BV

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH/ BW	DETAILS
3695	1753	07	09	RUS		RADAR	40sps	15K0E	FMOP-OTHR Russian Contayner
7003	0631	14	09	KEN		PSK		2k5	STANAG 4285
7008	0553	14	09			J3E-L		2k5	Kiswahili msg net
7030	0608	14	09			J3E-L		2k5	Vernacular QSO eastern Africa
7035	0605	14	09			FSK		2k4E	DPRK-FKSK
7035	1425	14	09			J3E-L		2k5	Vernacular QSO central Africa
7046	1035	08	09			J3E-L		2k5	Vernacular/Arabic QSO
7055	1031	08	09			J3E-U		2k5	Vernacular/Arabic msg net
7060	0308	30	09			PSK		2k4E	STANAG 4285
7080	0945	07	09	KEN		PSK		2k7E	STANAG 4285
7080	0914	07	09			A1A		200H	CW "A" repeated
7100	vt	vd	09	KEN		PSK		2k5	STANAG 4285
7110	vt	vd	09	ETH		A3E		12kE	Ethiopia Broadcasting Corporation
7140	vt	vd	09	ERI		A3E		5kE	Voice of the Broad Masses #1 Eritrea
7150	vt	vd	09	KEN		MFSK	128	2k2	2G ALE Call transmission
7160	0428	30	09			J3E-U		2k5	Kiswahili msg net
14180	1803	07	09	RUS		RADAR	40sps	15K0E	FMOP-OTHR Russian Contayner
14190	vt	30	09	RUS		RADAR	40sps	2K0E	FMOP-OTHR Russian Contayner
14198	vt	28	09			FSK		2k4E	DPRK-FKSK, grouped in 5 50-100 Hz
14200	1505	08	09			PSK		200H	37.5 pulses p.m. with occ intermittent PSK or FSK
14242	0905	07	09			Radar		3k0E	
14198	vt	vd	09			FSK		200H	DPRK-FSK grouped in 5
21161	vt	30	09			J3E-L		2K5E	Garbled voice repeating "R1DA2"
21295	0440	30	09			J3E-L		2K5E	Garbled voice
21375	vt	vd	09			OTHR		500H	OTHR sweeps
28225	0653	14	09			A3E		2K4E	Asian languag QSO

SRAL; Pekka, OH2BLU

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/BW	DETAILS
7 MHz	1745-0300	6	26	9	RUS	RADAR	40sps	13k0E	(WebSDR 24d) Kontainer
7 MHz	0515-1800	*	9	9	RUS	RADAR	10sps	10k0E	*) Days: 2. 5. 8. 13. 15. 17. 18. 20. 26. 28. 29.
7 MHz	1610	19	9	9	CHN	RADAR	50/67sps	10k0E	'foghorn'
7 MHz	1615-1630	*	9	9	CHN	RADAR	10sps	160k0	*) Days: 18. 19. 21.
7000.0	0745-0840	21	9	9	RUS	J7D	120	2k60E	
7006.5	1250	21	9	9	RUS	F1B		500H	
7016.0	0715-1330	*	9	9	RUS	F1B/ N0N		200/250H	*) Days: 1. 4. 10. 19.

SRAL; Pekka, OH2BLU									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/BW	DETAILS
7020.0	0600-1015	*	9	RUS		F1B/ NON		200/250H	*) Days: 3. 4. 10. 12. 14. 23.
7024.0	1105	19	9	RUS		A1A		20H	BL, F
7030.0	1420-1530/	1	9	RUS		F1B		250H	
7031.0	0710-1345	19 20	9	RUS		R3E-u		3k0E	brum, Russian vox
7035.0	0515-0605/	8	9	RUS		F1B		250H	
7044.0	1300-1500	*	9	RUS		F1B		250H	*) Days: 8. 9. 23.
7045.0	1530-1630	8	9	RUS		F1B	15	200H	
7049.0	0700-0840/	2	9	RUS		F1B/ NON		200H	
7056.0	0710-1530	25	9	RUS		R3E-u		3k0E	brum, Russian vox
7072.0	1010-1100	8	9	RUS		J7D	120	2k60E	
7088.0	0515-1730	*	9	RUS		F1B		250H	*) Days: 16. - 20.
7099.0	0815	8	9	RUS	ZGV8	A1A	14	20H	5BL
7100.5	1230-1315	23	9	RUS		J7D	120	2k60E	
7110.0	0430-0800	*	9	ETH	R. Ethiopia	A3E		9k0	*) Days: 7. - 27. 30.
7110.0	1300-1930	*	9	ETH	R. Ethiopia	A3E		9k0	*) Days: 4. - 30.
7114.0	0515-1830	13 17	9	RUS		F1B		200H	
7122.0	1200-1222/	10	9	RUS		F1B		250H	
7127.0	0620-1550	*	9	RUS	WSVY etc	A1A	18	20H	*) Days: 7. 8. 11. - 14. 17. 19. 21. 30. 5F
7140.0	0430-0530	*	9	ERI	VoBM	A3E		9k0	*) Days: 3. 16. 26.
7140.0	1430-1835/	*	9	ERI	VoBM	A3E		9k0	*) Days: 2. 5. - 12. 14. 16. - 19. 21. 23. 25.
7149.5	0515-0930	16	9	RUS		J7D	120	2k60E	
7154.5	1330-1410/	6	9	RUS		J7D	120	2k60E	
7159.0	0515-1800	19 29	9	IW		G7D		3k0E	LINK, usb, ship
7162.0	1345-1417/	1	9	RUS		F1B		250H	
7174.5	0730-1755/	*	9	RUS		F1B/ NON		250H	*) Days: 11. 12. 25.
7176.1	1320-1429/	25	9	RUS		J7D	120	2k60E	
7180.0	0430-0530		9	ERI		A3E		9k0	Not heard
7180.0	1700-1835/		9	ERI		A3E		9k0	Not heard

SRAL; Pekka, OH2BLU									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/BW	DETAILS
7187.0	0850	10	9	RUS	LAIO	A1A		20H	Q- & Z- code
7187.5	1355-1515/	7	9	RUS		J7D	120	2k60E	
7192.0	1600-1637/	25	9	RUS		F1B		250H	
7194.0	1530-1615/	7	9	RUS		J7D	120	2k60E	
7198.0	0845-0930	1	9	RUS		J7D	120	2k60E	
10 MHz			9	CYP		RADAR	50sps	20k0	(WebSDR 2d)
10 MHz	1445-1800	1 5	9	RUS		RADAR	40sps	13k0E	(WebSDR 4d) Kontainer
14 MHz	0445-2000	*	9	RUS		RADAR	40sps	13k0E	*) Days: 2. - 5. 7. 9. 10. 15. - 18. 23. (WebSDR 20d) Kontainer
14 MHz	0815-1215	*	9	RUS		RADAR	10sps	10k0E	*) Days: 5. 6. 7. 9. 10. 16.
14 MHz	0515-1645	*	9	CHN		RADAR	50/67sps	10k0E	*) Days: 1. 2. 6. 8. 10. 13. 17. 19. 21. 'foghorn'
14 MHz	1145-1230	*	9	CHN		RADAR	10sps	160k0	*) Days: 2. 7. 11. 25. c. 1 min burst
14 MHz	0510-1000	*	9	CHN		RADAR	50sps	10k0E	*) Days: 16. 19. 22. 29. '
14000.0	/1357-1457/	dly	9	CHN	CRI	A3E		9k0	TX intermod. 13710 & 13855 kHz
14002.0	0500-1800	*	9	GUM		F1B		850H	*) Days: 5. - 17.
14050.0	0920-0945	15	9	RUS		F1B		250H	
14133.0	0540-1310	8	9	RUS		F1B		250H	
14210.0	0500-1500	dly	9			RADAR	10sps	5k0E	SuperDARN
14221.0	0430-0600/	dly	9	KAZ		F1B		200H	
14240.0	0640-0715/	17	9	RUS		F1B		250H	
14261.0	1140	21	9	RUS		J7D	120	2k60E	
14266.0	0730-0810	13	9	RUS		F1B		250H	
18 MHz	0515-1620/	3 4	9	CYP		RADAR	25/50sps	20k0	(WebSDR 2d)
18 MHz	0915-0940	10	9	RUS		RADAR	40sps	13k0E	(WebSDR 1d)
18 MHz	0830-1010/	29	9	CHN		RADAR	10sps	160k0	Non stop transmission
18080.0	0600-0800/	*	9	TWN		A3E		9k0	*) Days: 2. 4. 5. 7. 8. 9. 11. 14. 15. 16. 23. - 26. 30. jammed by CNR
21 MHz	0515-0730	1 2	9	CYP		RADAR	25/50sps	20k0	(WebSDR 0d)
21438.0	/0830-1300	*	9	RUS	RCV	A1A	20	20H	*) Days: 1. 3. 6. 8. 11. 16. 24. 26. 30.
28 MHz	0830	26	9	IRN		RADAR	150/ 313	60k0E	
28860.0	0700-0830	26	9	IRN		RADAR	150/ 313	60k0E	

SRAL; Pekka, OH2BLU

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/BW	DETAILS
28 MHz			9	RUS	Taxi disp.	F3E		3k0E	No reports

URE; Gaspar, EA6AMM

kHz	UTC	DD	MM	ITU	Ident	Mode	Bd/sps	SH/BW	Details
7045.0	1643	08	09			F1B		200H	
7055.0	1701 vt*	08 vd*	09			J3E-L			UKR/RUS "radiowar" *Almost daily
7058.0	1755	06	09	RUS		RADAR	40	12K0E	OTHR Contayner
7074.8	0613	11	09			A1N			Continuous dashes
7075.0	0629 vt*	08 vd*	09			A1N			Continuous dashes *Often
7080.0	1750 vt*	07 vd*	09	RUS		F1B	50	200H	*Very often
7098.0	1628	20	09	CHN		RADAR		10K0E	Short bursts. "Foghorn"
7108.5	1900	06	09			F1B	200	200H	PACTOR, encrypted. Continuous and long - lasting
7110.0	1731 vt*	06 vd*	09	ETH		A3E			BC. Radio Ethiopia. *Daily since 06/09
7111.5	1844	06	09			F1B	200	200H	PACTOR, encrypted. Continuous and long - lasting.
7133.0	2157	09	09	RUS		RADAR	40	12K0E	OTHR Contayner
7137.0	1754 vt*	12 vd*	09	RUS	RDL	F1B	50	200H	*Often
7140.0	1743 vt*	07 vd*	09	ERI	VoBM1	A3E			AM. BC. "VoBM1" *Often
7146.0	1658	15	09			J3E-L			Spanish music. Civil war right wing hymns and military marches
7153.0	1649	10	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
7155.0	1939	11	09	RUS		RADAR	40	12K0E	OTHR Contayner
7157.0	0557 vt*	06 vd*	09	CUB		XXX		CA5K0E	Jammer *Often
7160.8	1837 Vt*	23 vd*	09			G7D		2K40E	LINK-11 CLEW SSB. RF: 7159 kHz. *Often
7174.5	1747	12	09			F1B	75	250H	
7184.4	1745 vt*	09 vd*	09			G7D	60	2K40E	7186 kHz LSB. CHN 30 aka PRC 30 *Often
7194.0	1540	30	09			J7D	120	2K70E	CIS-12
14000.0	1405 vt*	08 vd*	09		CRI	A3E			BC. "CRI" intermodulation *Often
14000.2	1239	11	09			XXX		CA2K60E	XXX. Digital bursts.
14005.0	1011	03	09	RUS		RADAR	40	12K0E	OTHR Contayner
14006.0	1038	16	09			J7D		2K70E	CIS-12. Submode Idle
14011.0	0617	02	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14024.0	0541	06	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14025.0	0623	03	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14026.0	1434	20	09			J7D	120	2K70E	CIS-12 *Also on 25/09, 0741 UTC
14031.0	0838	16	09			J7D		2K70E	CIS-12. Submode Idle
14046.0	0825	23	09	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14050.0	0829	15	09	RUS		F1B	50	250H	FSK. SH = 250 Hz. Bd = 50
14051.0	0749	01	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14055.0	0538	06	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14059.0	0653	17	09	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14061.0	0808	01	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	Ident	Mode	Bd/sps	SH/BW	Details
14061.0	0915	17	09	RUS		RADAR	40	12K0E	OTHR Contayner
14098.5	0735 vt*	10 vd*	09			F1B	600	600H	DPRK-FSK 600 ARQ *Often
14098.5	0735	22	09			XXX		1K20E	DPRK-PSK 1200 ARQ *Also on 24/09, 0740 UTC
14099.0	1654	09	09	RUS		RADAR	40	12K0E	OTHR Contayner
14100.0	0755 vt*	01 vd*	09			NON			*Also on 03/09, 1013 UTC
14103.5	0736	10	09			F1B	600	600H	DPRK-FSK 600 ARQ
14105.0	1725	10	09	RUS		RADAR	40	12K0E	OTHR Contayner
14108.0	1635	10	09	RUS		RADAR	40	12K0E	OTHR Contayner
14109.0	1510 vt*	08 vd*	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn" *Also on 20/09, 0829 UTC
14109.0	1635	09	09	RUS		RADAR	40	12K0E	OTHR Contayner
14112.0	0710	10	09	RUS		RADAR	40	12K0E	OTHR Contayner
14113.0	0648	17	09	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14113.5	1347	02	09			F1B	600	600H	DPRK-FSK 600 ARQ
14117.0	0724	29	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14118.0	0611	13	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14119.0	1032	10	09	RUS		RADAR	40	12K0E	OTHR Contayner
14123.0	1719	09	09	RUS		RADAR	40	12K0E	OTHR Contayner
14127.0	0816	01	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14132.0	1554	11	09	RUS		RADAR	40	12K0E	OTHR Contayner
14133.0	1421	08	09			F1B	75	205H	FSK. SH = 250 Hz
14134.0	1636	09	09	RUS		RADAR	40	12K0E	OTHR Contayner
14135.0	0753	07	09			J7D		2K70E	CIS-12 Submode Idle
14140.0	1222	09	09	RUS		RADAR	40	12K0E	OTHR Contayner
14141.0	0839	25	09	RUS		F1B	75	200H	
14142.0	1546	15	09	RUS		RADAR	40	12K0E	OTHR Contayner
14143.0	1652	23	09	RUS		RADAR	40	12K0E	OTHR Contayner
14146.0	1713	09	09	RUS		RADAR	40	12K0E	OTHR Contayner
14148.0	2048	06	09	RUS		RADAR	40	12K0E	OTHR Contayner
14149.0	1740	07	09	RUS		RADAR	40	12K0E	OTHR Contayner
14152.0	0717	15	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14153.0	1410	08	09	RUS		RADAR	40	12K0E	OTHR Contayner
14153.5	0832	16	09			F1B	600	600H	DPRK-FSK 600 ARQ
14157.0	1646	03	09	RUS		RADAR	40	12K0E	OTHR Contayner
14158.0	0614	03	09	RUS		RADAR	40	12K0E	OTHR Contayner
14160.0	0635	17	09			F1B	50	250H	
14162.0	1001	02	09			J7D	120	2K70E	CIS-12
14164.0	1641	20	09	RUS		RADAR	40	12K0E	OTHR Contayner
14169.0	0617	10	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14169.0	0830	20	09			F1B	50	200H	FSK. SH = 200 Hz
14171.0	0921	07	09	CHN		RADAR	50	10K0E	OTHR
14181.0	1135	30	09	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14185.0	0819	23	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14186.0	0615	03	09	RUS		RADAR	40	12K0E	OTHR Contayner
14187.0	1340	08	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14188.0	1840 vt*	03 vd*	09	RUS		RADAR	40	12K0E	OTHR Contayner *Also on 09/09, 1307 UTC
14189.0	1428	23	09	RUS		RADAR	40	12K0E	OTHR Contayner
14190.0	0756	23	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14193.0	0646	17	09	RUS		RADAR	40	12K0E	OTHR Contayner

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	Ident	Mode	Bd/sps	SH/BW	Details
14198.5	0636 vt*	02 vd*	09			F1B	600	600H	DPRK-FSK 600 ARQ.
14198.5	0807 vt*	08 vd*	09			XXX		1K20E	DPRK 1200
14199.0	0823	15	09	CHN		RADAR	50	12K0E	Short bursts. "Foghorn"
14204.0	0549	06	09	RUS		RADAR	40	12K0E	OTHR Contayner
14210.0	0758 vt*	01 vd*	09			RADAR		4K50E	SuperDARN-like radar. *Almost daily
14212.0	1213 vt*	09 vd*	09			A3E		CA7K50E	Numbers station "S06s", aka "Russian lady". Female voice. RUS lang. *Also on 16/09, 1215 UTC
14212.0	0814	15	09	RUS		RADAR	40	12K0E	OTHR Contayner
14219.0	0755	07	09	RUS		RADAR	40	12K0E	OTHR Contayner
14221.0	0558 vt*	02 vd*	09			F1B	50	200H	*Also on 15/09, 0544 UTC and 16/09, 2017 UTC
14227.0	1802	18	09	RUS		RADAR	47.5	10K0E	Short bursts. "Foghorn"
14230.0	0726	10	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14231.0	0908	10	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14231.0	1209	20	09	RUS		RADAR	40	12K0E	OTHR Contayner
14240.0	0658	17	09			F1B	50	250H	
14242.0	0827	20	09			J7D	120	2K70E	CIS-12
14249.0	0702	17	09	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14250.0	0710 vt*	18 vd*	09	CHN		RADAR	50	10K0E	OTHR. Long-lasting. *Also on 29/09, 0609 UTC
14256.0	0820	23	09	CHN		RADAR	62.5 66.7	10K0E	Short bursts. "Foghorn". 62.5 and 66.7 sps, alternating
14258.0	0752	01	09	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14261.0	0902	21	09			J7D	120	2K70E	CIS-12. With carrier at 14259 kHz
14261.0	0744	24	09	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14263.0	0726	17	09	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14263.0	0840	17	09	CHN		RADAR	10	160K0E	Wideband OTHR
14265.0	0745	16	09	CHN		RADAR	50	10K0E	OTHR
14266.0	0601	13	09			F1B	75	250H	
14268.0	0718	29	09	CHN		RADAR	50	10K0E	OTHR
14270.0	0649 vt*	10 vd*	09	CHN		RADAR	50	10K0E	OTHR *Also on 22/09. 0706 UTC
14276.0	1454	08	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14283.0	0623	06	09	CHN		RADAR	50	10K0E	OTHR
14283.0	0805	17	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14285.0	0806	17	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14285.0	1501	25	09	CHN		RADAR	10	160K0E	Wideband OTHR
14288.0	0618	06	09	CHN		RADAR	20	10K0E	OTHR sweeps
14291.0	0611 vt*	29 vd*	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn" *Also on 30/09, 1122 UTC
14294.0	1316	08	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14297.0	1449	25	09	CHN		RADAR	10	160K0E	Wideband OTHR
14298.5	0806 vt*	01 vd*	09			XXX		1K20E	DPRK-PSK 1200 ARQ *Often
14298.5	0812 vt*	07 vd*	09			F1B	600	600H	DPRK-FSK 600 ARQ *Often
14300.0	0910	10	09	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14300.0	0742	24	09	CHN		RADAR	50	10K0E	OTHR
14301.9	0721	22	09			W7D		2K80E	CIS-60

URE; Gaspar, EA6AMM

kHz	UTC	DD	MM	ITU	Ident	Mode	Bd/sps	SH/BW	Details
14304.0	0657	13	09	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14307.0	0548	06	09	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14309.0	0750	23	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14311.0	0702 *vt*	15 vd*	09	CHN		RADAR	50	10K0E	Short bursts. "Foghorn" *Also on 25/09, 0751 UTC
14313.0	0918 vt*	10 vd*	09	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn *Also on 15/09, 0747 UTC
14315.0	0651 vt*	17 vd*	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn" *Also on 18/09, 0712 UTC
14316.0	0754	23	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14317.0	0619	03	09	CHN		RADAR	50	10K0E	Short bursts. Foghorn
14317.0	1623	09	09	RUS		RADAR	40	12K0E	OTHR Contayner
14318.0	0807	17	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14320.0	0749	25	09	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14321.0	0757	01	09	CHN		RADAR	50	10K0E	Short bursts. Foghorn
14321.0	0935	18	09	CHN		RADAR	62.5	10K0E	Short bursts. "Foghorn"
14323.0	1335	08	09	CHN		RADAR	50	10K0E	Short bursts. Foghorn
14326.9	0934	09	09			W7D		2K80E	CIS-60
14328.0	0800	01	09			F1B		200H	QRT 0600 UTC
14328.0	0634	03	09	RUS		RADAR	40	12K0E	OTHR Contayner
14330.0	0807	18	09	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
14331.0	1627	08	09	RUS		RADAR	40	12K0E	OTHR Contayner
14331.0	0805	18	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14333.0	1444	11	09	RUS		RADAR	40	12K0E	OTHR Conatynr
14335.0	0850	25	09	CHN		RADAR	83.3	10K0E	Short bursts. "Foghorn"
14336.0	1137	30	09	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
14337.0	1425	02	09	CHN		RADAR	10	160K0E	Wideband OTHR
14337.0	1313	08	09	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
14337.0	0936	10	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14338.0	0802	08	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14339.0	1206	18	09	CHN		RADAR	10	190K0E	Wideband OTHR
14340.0	1344	22	09	CHN		RADAR	10	160K0E	Wideband OTHR
14341.0	1439	08	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14342.0	0800	07	09			F1B	75	250H	
14344.0	0910	07	09			J7D	120	2K70E	CIS-12
14346.0	1402	08	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14346.0	1306	20	09	CHN		RADAR	10	160K0E	Wideband OTHR
14347.0	0558	06	09	RUS		RADAR	40	12K0E	OTHR Contayner
14352.0	0800	24	09	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14387.0	1431	22	09	CHN		RADAR	10	160K0E	Wideband OTHR
14400.0	0937	07	09	CHN		RADAR	10	160K0E	Wideband OTHR. BW = 160K0E. 10 sps
18080.0	0620 vt*	10 vd*	09			A3E			BC. "Sound of Hope" *Often
18107.0	1014 vt*	03 vd*	09	RUS	RDL	F1B F1A	50	200H	*Almost daily
18120.0	0750	24	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
18149.4	1042	16	09			F1B	600	600H	DPRK-FSK 600 ARQ
18150.0	0623	29	09	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
18152.0	0648	30	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
18160.0	0647	02	09	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
18167.0	0603	06	09	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
21028.0	1044	18	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
21172.0	0745	23	09	RUS		RADAR	40	12K0E	OTHR Contayner

URE; Gaspar, EA6AMM

kHz	UTC	DD	MM	ITU	Ident	Mode	Bd/sps	SH/BW	Details
21174.0	0901	17	09	RUS		RADAR	40	12K0E	OTHR Contayner
21176.0	0724	15	09	CHN		RADAR		10K0E	Short bursts. "Foghorn"
21321.0	0929	16	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
21352.0	0636	30	09	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
21354.0	0631	30	09	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
21366.0	0634	30	09	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
21372.0	0638	30	09	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
21384.0	0651	30	09	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
21400.0	0907	16	09	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
21402.0	0632	30	09	CHN		RADAR	41.7	10K0E	Short bursts. "Foghorn"
21438.0	0844 vt*	07 vd*	09	RUS	RCV	A1A			"RCV" QTC *Often
21448.4	1006	02	09			F1B	600	600H	DPRK-FSK 600 ARQ
28860.0	0908	24	09	IRN		RADAR	150	45K0E	OTHR, 150 and 313 sps, alternating

USKA; Peter, HB9CET

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
7044.0	1411	08	09			F1B		250H	
7045.0	1419	08	09			F1B		200H	long lasting; at 2107 still activ!
7049.0	0757	02	09			F1B		200H	long lasting; strong fading
7080.0	2006	12	09			F1B	50	200H	often
7088.0	0440	18	09			F1B	75	250H	often
7095.0	1310	17	09			F1B		500H	sounds strange
7108.0 LSB	2001	12	09	CHN		G7D PSK-4	30x60	ca 2k50E	CHN30 (PRC30); Burst system; tone spacing 75 Hz; Preamble 4x PSK4 60Bd, spacing 600Hz; Pilot tone at 450Hz
7110.0	0425	18	09	ETH		A3E		ca 9k0E	BC: unid language; Radio Ethiopia
7114.0	2210	14	09			F1B		200H	
7137.0	2237	06	09			FMOP	40 sps	12k0E	OTHR; Contayner; up to -50dBm!
7137.0	2015	12	09		RDL	F1B		200H	
7164.0	1427	08	09			J7D	12x120	2k70E	CIS12; BPSK or QPSK; pilot at 3300Hz
7179.0	2137	07	09			Radar	50 sps	10k0E	OTHR; bursts
7186.0 LSB	1606 1552	13 16	09	CHN		G7D PSK-4	30x60	ca 2k50E	CHN30 (PRC30); Burst system; tone spacing 75 Hz; Preamble 4x PSK4 60Bd, spacing 600Hz; Pilot tone at 450Hz
7186.0	0440	18	09			J7D	12x120	2k70E	CIS12; idling only; pilot at 3300Hz
7198.0	0937	01	09			J7D	12x120	2k70E	CIS12; BPSK or QPSK; pilot at 3300Hz
14050.0	0816	15	09			F1B		250H	
14166.0	0824	13	09			F1B		250H	
14212.0	0825	15	09			FMOP	40 sps	12k0E	OTHR; Contayner
14240.0	0857	14	09			F1B		250H	
14242.0	0907	20	09			J7D	12x120	2k70E	CIS12; BPSK or QPSK
14261.0	0855	14	09			Radar	50 sps	10k0E	OTHR
14261.0	1131	21	09			J7D	12x120	2k70E	CIS12; some interruptions, followed by female voice in Russian. Additional carrier at 14259.0 kHz
14301.9	0744	22	09			OFDM60		2k90E	with pilottone
14343.0	0712	14	09			F1B		500H	
18080.0	0712	14	09			A3E		ca 9k0E	BC: Sound of Hope often
18107.0	0830	13	09			F1B	36 + 50	200H	CIS 36-50 often
18107.0	0837	13	09			F1A		200H	CIS 36-50; FSK-CW
21438.0	0847	13	09		RCV	A1A		10H	TDoA: Area of Sevastopol daily

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

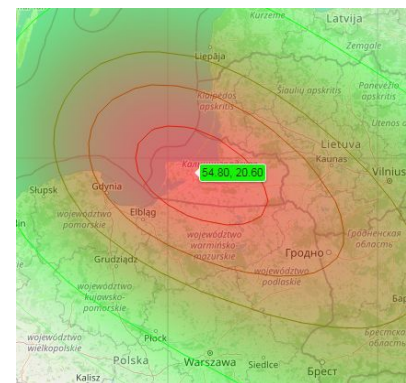
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7039.0	1104	29	09			A1A			UiCW; Strings 123
7055.0	1950	03	09	UKR/ RUS		A3E		9K0E	Music loop; very strong, S9+20db; on the back ground J3E-L signal, but much weaker.
7065.0	2009	11	09	UKR/ RUS		J3E		2K7E	Political comments
7080.0	1751	06	09	RUS		F1B		200	UiPrinter
7110.0	1734	11	09	ETH		A3E			BC.
7157.0	1942	11	09			Radar	40	24K	OTHR; 2 Contayners simultaneous on close QRGs?
14014.0	1119	29	09			F1B			UiPtr; Revs
14140.0	0915	25	09			F1B		200	UiPtr
14199.0	1100	29	09	CIS		F1B			UiPtr; Revs
14260.0	0750	30	09			NON			Carrier
14342.0	1034	07	09			F1B			UiPtr; Fast Revs
18107.0	0953	06	09	CIS		F1A			UiCW; XXX followed by F1B Revs/Ptr
18107.0	1000	06	09	RUS	RDL	F1A			RDL 98294 40068 K (allowed)
21246.0	1428	29	09			F1B			UiPtr; Revs
21436.0	0940	29	09	CIS		F1B			UiPtr; Revs

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

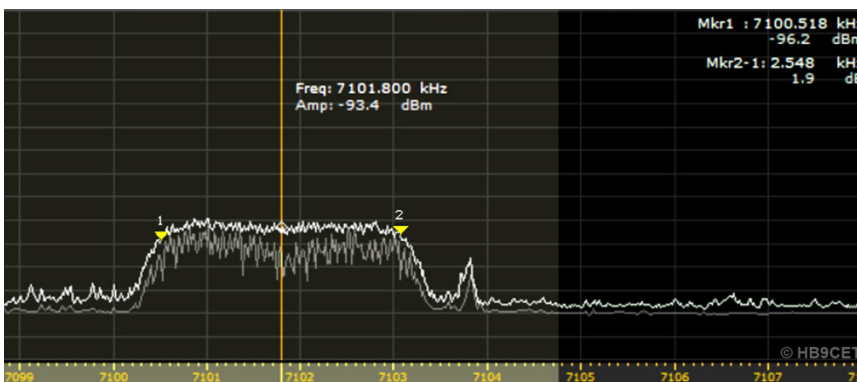
Some screemshots



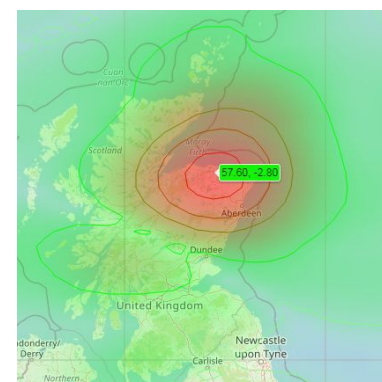
FSK (F1B) at 7114.0 kHz (CF)



TDoA: Area of Kaliningrad (@DK2OM)

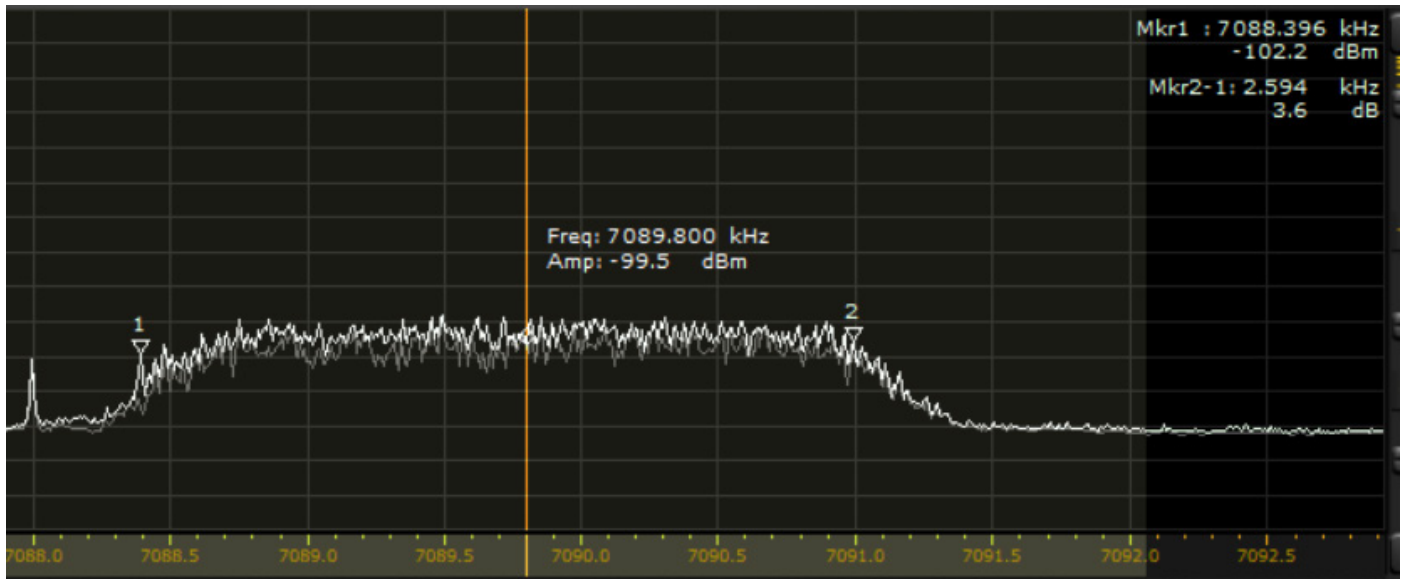


STANAG 4285 (G1D) at 7101.8 kHz (CF)

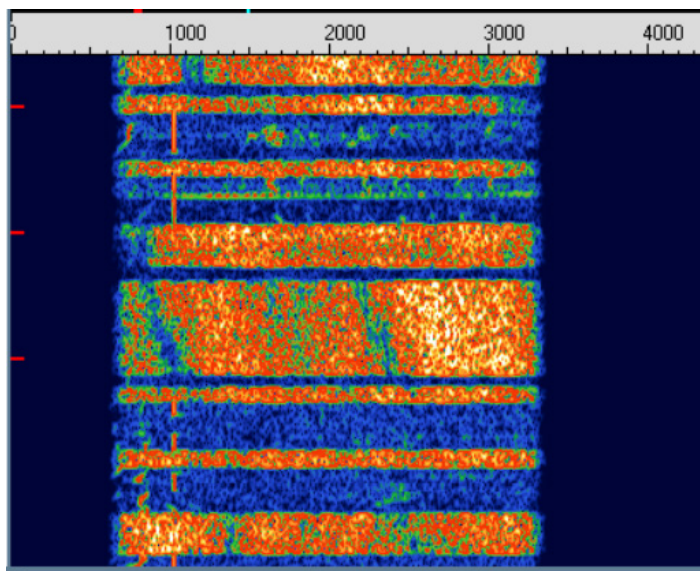


TDoA: Area of NE Scotland (@DK2OM)

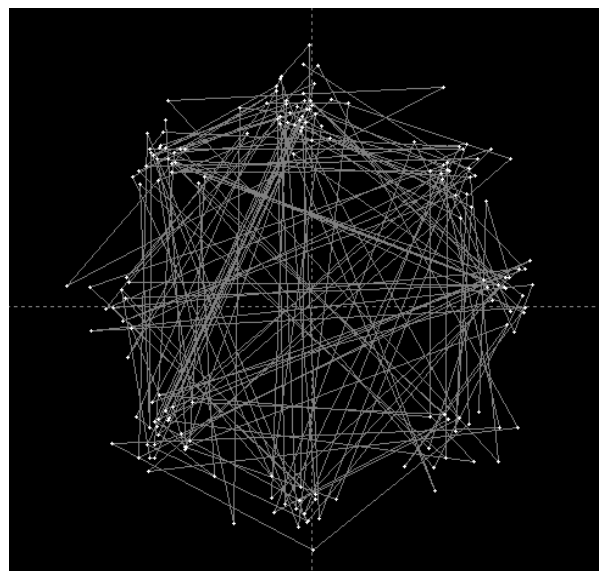
LINK 11 SLEW



Spectrum of a LINK 11 SLEW at 7089.8 kHz (CF), Screenshot with Perseus SDR (©HB9CET)

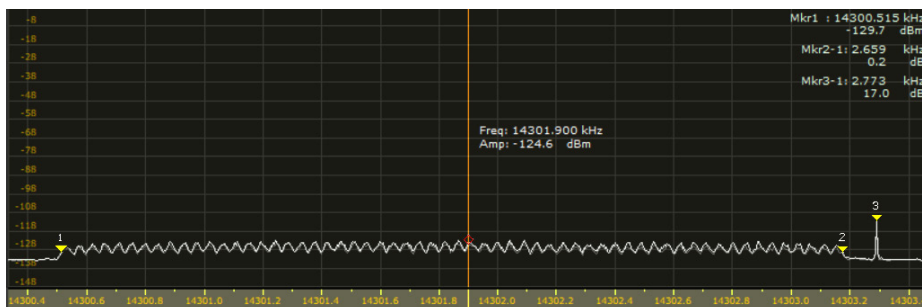


Sonogram with Spectran Software (freeware)

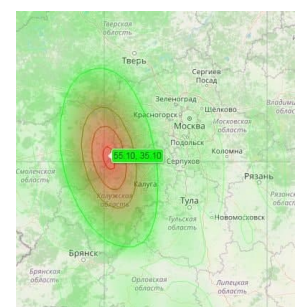


Phase plane

The LINK11 SLEW (Single Tone Link Eleven Waveform) is a NATO Standard for tactical data exchange. It uses a 8-phase PSK modulated 1800Hz single tone (PSK8). The symbol rate is 2400Bd. Since many years it was often found in the 40m band on various frequencies.



OFDM 60 at 14301.9 kHz (CF) August 2021



TDoA Area of SW Moscow

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