



Monitoring Bericht Februar 2023

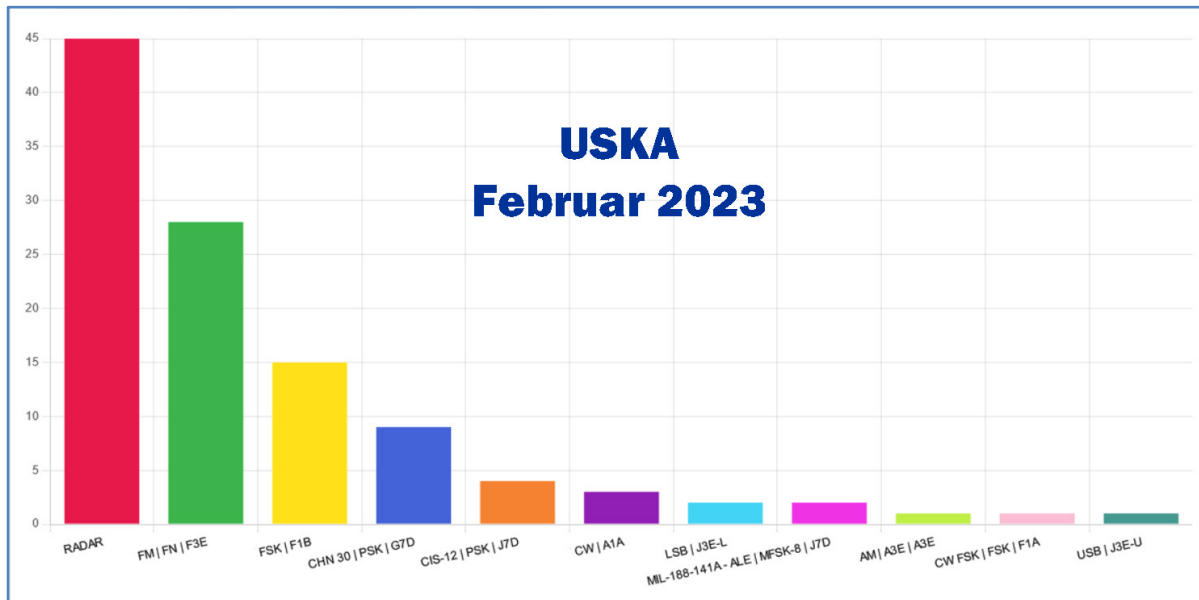
Die auffälligsten und ärgerlichsten Intruder waren und bleiben Überhorizont Radare (OTHR) verschiedenster Herkunft, (China, Iran, Russland und Zypern). Besonders lästig dann, wenn gleichzeitig mehrere Frequenzen nebeneinander belegt werden (Bild S.4). Häufig und auf verschiedenen Frequenzen fand man im 40m Band das als CHN 30 (aka PRC 30) bekannte Modem. Auf diversen Frequenzen konnte man regelmässig Taxifunk in russischer Sprache beobachten.

aktiv war; ebenfalls die früher täglich anzutreffenden CIS12 Signale, auch verschiedene CIS FSK Modi waren eher selten. Das kann natürlich den Ausbreitungsbedingungen zuzuschreiben sein. Oder es wurde bloss auf andere Frequenzbereiche umgestellt.

Westliche Signale wie STANAG4285, LINK 11 -CLEW und -SLEW waren im Februar hier nicht zu hören.

Subjektiv beurteilt hatte ich den Eindruck, dass das russische Contayner Radar eher seltener in den Amateurfunk Bändern

Radio Ethiopia auf 7110 kHz war noch der einzige regelmässig störenden Rundfunksender.



Das Balkendiagramm stellt die Anzahl gehörter Emissionen dar, jedoch nicht die Anzahl verschiedener Intruder. Wäre beispielsweise ein und derselbe Sender 30x beobachtet worden (auch auf verschiedenen Frequenzen) so zählt er systembedingt als 30 und nicht als ein einziger Intruder.

Peter Jost, HB9CET

Abbreviations:

aka = also known as | BC = Broadcast | BD = Baud, or also Burst duration | BRI = Burst repetition interval | BW = Bandwidth | ca = approximate | 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 | PRC = CHN People's Republic of China | RF = Radio frequency = VFO | SH = Shift (Hz) | sps = sweeps per second | TDoA Time difference of arrival | ui = unid = unidentified | x or xxx is used for unknown/not classified.

Digital transmissions: Frequency mostly center frequency (CF); otherwise indicated (LSB or USB).

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
7000.0 USB	2247	02	02			unid		ca 3kHz	Burst signal; Hybrid ser/par + FSK Intro 40Bd ca 300Hz
7000.0	2131	25	02			OTHR	48 sps	10kOE	OTHR; bursts



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kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
7010.0	2214	08	02			J3E-U		ca 2k4	USB; maybe portuguese/brazilian
7014.0	1025	07	02	RUS		F1B	75 Bd	250H	FSK
7030.0	1046	16	02			F1B		250H	often
7050.0 LSB	0913	03	02			J3E-L		ca 3k0E	RUS-UKR Radio War almost daily
7054.0	1821 1745	06 22	02			F1B	50 Bd	200H	FSK, daily since very long time
7055.0 LSB	0955	24	02			J3E-L		ca 3k0E	RUS-UKR Radio War almost daily
7089.0	0949	15	02			J7D	12x120 Bd	2k60E	CIS12
7092.0	2020	27	02			FMCW	66.66 sps	10k0E	OTHR; Bursts
7110.0	1642	25	02	ETH		A3E		ca 9k0E	BC: almost daily
7111.0 LSB	2024	20	02			PSK4	30x60 Bd	2k50E	CHN30 (PRC30); Burst system; Pre- amble 4x PSK4 60Bd, spacing 600Hz; Pilot tone at 450Hz; *) Bild Seite 4
7134.0	2147 2021	08 17	02	RUS		F1B	50	250H	FSK, weak, fading
7134.0	1955	20	02			F1A		250H	CW-FSK
7141.0 LSB	2253 2028 2027	02 17 27	02			PSK4	30x60 Bd	2k50E	CHN30 (PRC30); Burst system; Pre- amble 4x PSK4 60Bd, spacing 600Hz; Pilot tone at 450Hz
7150.0 USB	2205	22	02		2428	J7D MFSK8	125	1750	ALE MIL 188-141A, To: 9981
7150.0 USB	2227 2105	22 27	02		9044	J7D MFSK8	125	1750	ALE MIL 188-141A, To: 959
7155.0 LSB	2011	17	02			PSK4	30x60 Bd	2k50E	CHN30 (PRC30); Burst system; Pre- amble 4x PSK4 60Bd, spacing 600Hz; Pilot tone at 450Hz
7171.0 LSB	2025	17	02			PSK4	30x60 Bd	2k50E	CHN30 (PRC30); Burst system; Pre- amble 4x PSK4 60Bd, spacing 600Hz; Pilot tone at 450Hz
7176.0	2157	06	02			FMCW	66.66 sps	10k0E	OTHR; Bursts
7193.0	0913	08	02	RUS		F1B	50 Bd	250H	FSK
7193.0	0945	14	02	RUS	RDL	F1A	50	250H	CW-FSK, stopped 1310z
14006.0	0847	17	02			J7D	12x120 Bd	2k70E	CIS12; *) Bild Seite 4 often
14026.0	0924 0914	15 24	02			J7D	12x120 Bd	2k70E	CIS12; BPSK often
14067.0	0907	05	02			FMCW	66.66 sps	10k0E	OTHR; Bursts
14150.0	1733	22	02			FMOP	40 sps	20k0E	OTHR
14169.0	0914	15	02			F1B	50 Bd	200H	FSK, fading
14201.7	0921	02	02			PSK	16x 75Bd	ca 2k20E	CHN16 (aka PRC 16)
14221.0	1311	22	02			F1B	50 Bd	200H	FSK; weak, fading
14334.33	0914	05				F1B	50 Bd	250H	
18079.0	0949	28	02			FMCW	66.66 sps	10k0E	OTHR, bursts
18165.0	0905	03	02			FMOP	40 sps	12k0E	OTHR; continuous: Contayner
18170.0	0943	02	02	G		FMCW	25 sps	20k0E	OTHR; UK base Cyprus
18172.0	0838	03	02			FMOP	40 sps	12k0E	OTHR; Contayner; partially in 17m band
21156.0	0852	02	02			FMCW	50 sps	10k0E	OTHR; long lasting
21158.0	1518	03	02			FMOP	40 sps	12k0E	OTHR; Contayner *) Bild Seite 4
21175.0	0924	20	02			FMOP	40 sps	12k0E	OTHR; Contayner
21182.0	0852	02	02			FMCW	62sps	10k0E	OTHR; bursts
21185.0	1518	03	02			FMOP	40 sps	12k0E	OTHR; Contayner *) Bild Seite 4



USKA - Bandwacht

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kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS	
21192.0	0924	13	02			FMCW	50 sps	10kOE	OTHR; bursts	
21204.0	0847	03	02			FMCW	50 sps	10kOE	OTHR; bursts	
21210.0	0847	02	02			FMCW	40 sps	10kOE	OTHR; continuous	
21244.0	1111	10	02			FMCW	42sps	10kOE	OTHR; bursts	
21346.0	0853	03	02			FMCW	48sps	10kOE	OTHR; bursts	
21424.0	0850	03	02			FMOP	40 sps	10kOE	OTHR; continuous !	
21424.0	0847	23	02			F1B	50 sps	400H	FSK, weak; 2 nd of 10712.0 kHz	
21433.0	0856	21	02			OTHR	66.66 sps	10kOE	OTHR; bursts	
21438.0	0930 0934	03 26	02	RUS	RCV	A1A		10H	Area of Sevastopol; since many years	daily
28065.0	1417 1410	09 22	02			F3E		ca 9kOE	short traffic only; Taxi	daily
28115.0	0855	17	02			F3E			short traffic only; Taxi	
28130.0	0945	15	02	G		FMCW	50 sps	20kOE	OTHR; UK base Cyprus	
28135.0	0939	12	02			F3E			short traffic only; Taxi	
28155.0	1002 1415	07 09	02			F3E		ca 9kOE	short traffic only; Taxi	often
28165.0	1003 1416	07 09	02			F3E		ca 9kOE	short traffic only; Taxi	often
28195.0	1512	22	02			F3E			short traffic only; Taxi	
28215.0	1034	07	02			F3E			short traffic only; Taxi	
28265.0	1029	07	02			F3E			short traffic only; Taxi	
28275.0	1229	05	02			F3E			short traffic only; Taxi	
28285.0	1244	22	02			F3E			short traffic only; Taxi	
28295.0	1012	23	02			F3E			short traffic only; Taxi	
28345.0	1057	14	02	G		FMCW	50 sps	20kOE	OTHR; UK base Cyprus	
28350.0	0902	21	02	G		FMCW	50 sps	20kOE	OTHR; UK base Cyprus	
28375.0	0929	24	02	G		FMCW	50 sps	20kOE	OTHR; UK base Cyprus	
28595.0	0937	24	02			F3E			short traffic only; Taxi	
28600.0	0845 0836	08 20	02	IRN			307 + 870 sps	ca 45k	OTHR; Bursts; long lasting sweep rate alternating	
28600.0	1415	22	02	G		FMCW	50 sps	20kOE	OTHR; UK base Cyprus	
28630.0	0946	28	02	G		FMCW	50 sps	20kOE	OTHR; UK base Cyprus	
28640.0	1321	22	02	G		FMCW	50 sps	20kOE	OTHR; UK base Cyprus	
28735.0	1229	22	02			F3E			short traffic only; Taxi	
28745.0	1245	22	02			F3E			short traffic only; Taxi	
28840.0	0947	16	02	G		FMCW	50 sps	20kOE	OTHR; UK base Cyprus	
28860.0	0941	25	02	IRN			150 + 313 sps	ca 50k	OTHR; Bursts; long lasting sweep rate alternating	almost daily
28890.0	0939	15	02	G		FMCW	50 sps	20kOE	OTHR; UK base Cyprus	
28900.0	0858	03	02	IRN			307 + 870 sps	ca 45k	OTHR; Bursts; long lasting, sweep rate alternating	
28985.0	1121	27	02			F3E			short traffic only; female voice; Taxi	
28935.0	1255	14	02			F3E			short traffic only; female voice; Taxi	
28970.0	1104	27	02	G		FMCW	50 sps	20kOE	OTHR; UK base Cyprus	
29000.0	0901	14	02	G		FMCW	50 sps	20kOE	OTHR; UK base Cyprus	
29000.0	0953	21	02	IRN			307 + 870 sps	ca 45k	OTHR; Bursts; long lasting sweep rate alternating	
29015.0	0924	08	02	G		FMCW	50 sps	20kOE	OTHR; UK base Cyprus	
29015.0	0936 1145	16 18	02			F3E			short traffic only; female voice; Taxi	
29095.0	1302	22	02	G		FMCW	50 sps	20kOE	OTHR; UK base Cyprus	



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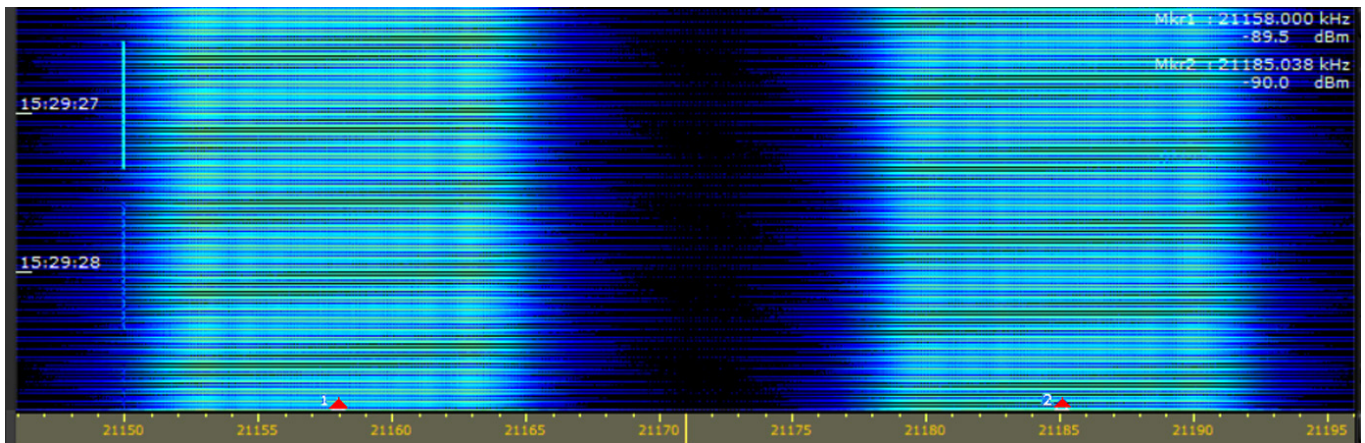
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
29130.0	0946	15	02	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
29145.0	1317	22	02			F3E			short traffic only; female voice; Taxi
29265.0	1443	25	02			F3E			short traffic only; female voice; Taxi
29300.0	1229	09	02			OTHR	307 + 870 sps	45k0	OTHR; sweep rate alternating
29320.0	0933	08	02	G		FMCW	25 sps	20k0E	OTHR; UK base Cyprus
29325.0	1057	27	02			F3E			short traffic only; female voice; Taxi
29400.0	0941 0946	12 26	02	IRN		OTHR	150+ 313 sps	45k0	OTHR; Bursts sweep rate alternating
29500.0	1015 0917	07 24	02	IRN		OTHR	150+ 313 sps	45k0	OTHR; bursts sweep rate alternating often
29595.0	0944	05	02	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
29615.0	0944	05	02	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
29615.0	0905	23	02	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
29675.0	1332	22	02			F3E			short traffic only; female voice; Taxi

Errors and omissions excepted

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USKA Monitoring System (Intruder watch)
<https://www.uska.ch>

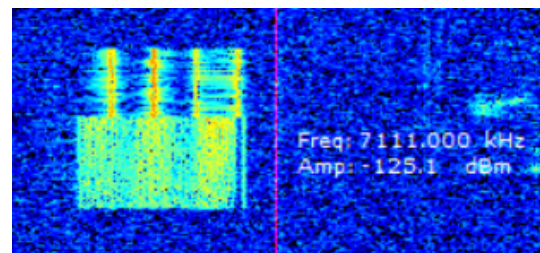
Member of IARU Monitoring System R1
<https://www.iaru-r1.org/spectrum/monitoring-system/>



Am 3.2.23 1529z: Zwei OTHR auf 21158 und 21185 kHz: Contayner, FMOP, 40 sps, Bandbreite je 12kHz



CIS 12 Signal, 12x120Bd PSK2, Pilotton bei 3300Hz
Bandbreite 2.7 kHz



CHN30: 30 x 60Bd PSK4; Bandbreite 2.5 kHz
Preamble 4x60Bd PSK4, tone spacing 400Hz