



# Monitoring System

Observe the screenshots and comments below!

Intruders from: **February 24<sup>th</sup> 2018** - persistent or earlier: black – recent: blue - new: red

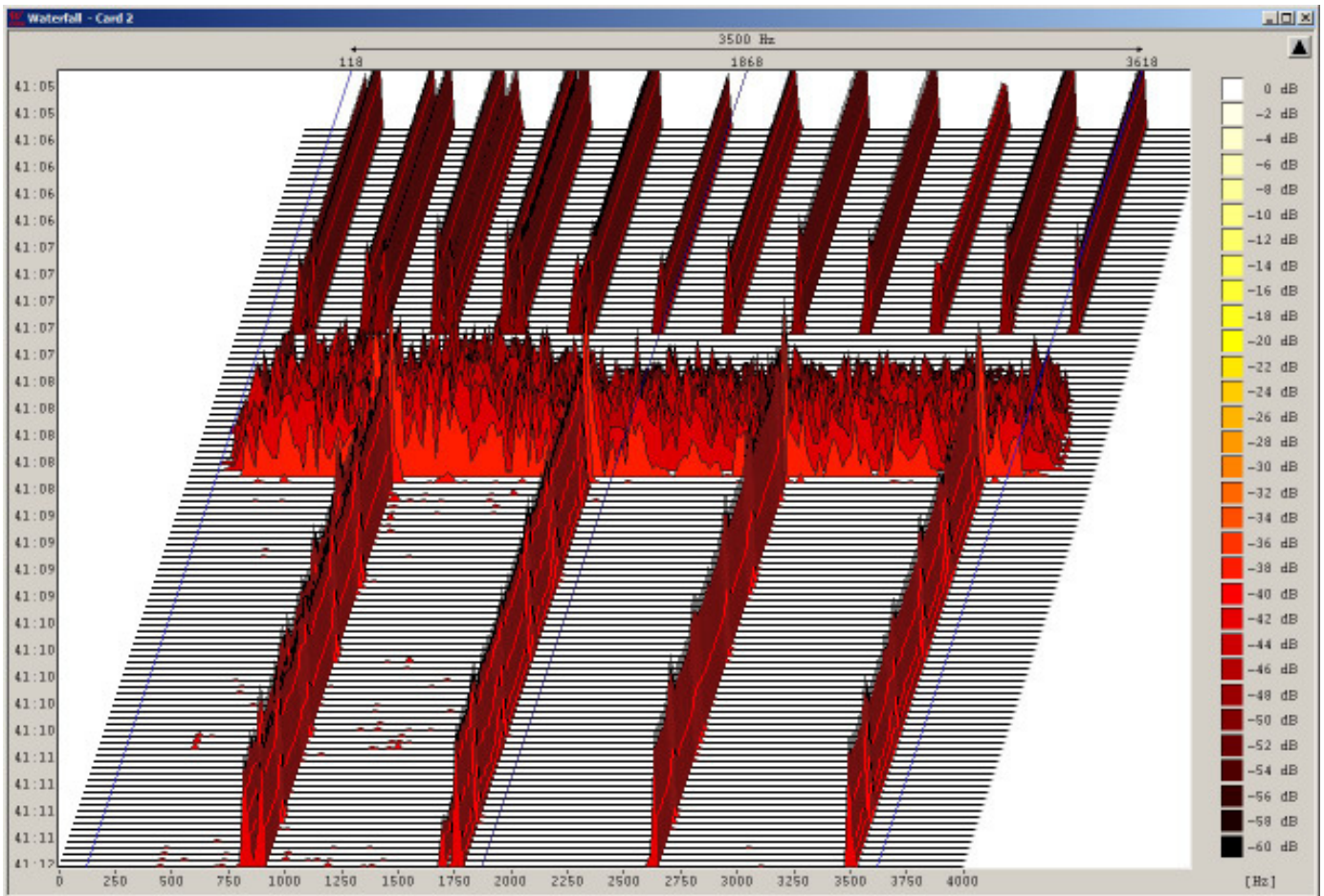
kHz	UTC	DATE	ITU	IDENT	MODE	BD	SH	DETAILS
3535.000	1730	17.02.18	G		USB			UK fishery
3560.000	1833	18.02.18	E	names	USB			Spanish fishery
5352.500	2100	18.02.18	CIS		A3E			CIS pirates – very unstable carrier
5354.000	2018	22.02.18	E		USB			Spanish fishery
5360.000	2053	19.02.18	E	names	USB			Spanish fishery
5361.800	1710	09.02.18	DNK		PSK8A	2400	2400	Stanag-4285 – DNK Navy Aarhus – legal!
6990.000	1632	22.02.18	CHN		FMOP		160k	CHN wideband OTHR – 6990 – 7150 kHz
7000.000	1630	10.01.18	INS		USB			Indonesian pirates – USB and LSB
7000.900	1618	19.02.18	RUS		OFDM	29.8	2780	OFDM 60 – PSK4B - Sevastopol
7008.000	0936	24.02.18	RUS		F1B	75	250	NE of Smolensk
7024.000	1542	15.02.18	CHN		FMOP		160k	CHN wideband radar – screenshot
7039.300	1840	23.02.18	RUS	“K”	A1A			beacon “K” – “RCC” – Petropav. Kam.
7039.400	ady	dly	RUS	“M”	A1A			beacon “M” – “RTS” - Magadan
7120.000	1500	dly	SOM		A3E/BC			Radio Hargaysa - Somalia
7140.024	1510	dly	ERI		A3E		9k	Radio Eritrea + QRM by Radio Ethiopia
7181.555	1510	dly	ERI		A3E		9k	Radio Eritrea + QRM by Radio Ethiopia
7193.000	1330	13.02.18	RUS	RDL	F1B	50	200	Kaliningrad - RUS navy
10145.000	2020	21.02.18	MRC		USB			Moroccan fishery
14192.000	vt	dly	RUS		F1B	50	200	RUS navy Kaliningrad
14221.000	2000	dly	KGZ		F1B	50	200	Kyrgyzstan – Bishkek – every evening
14260.000	0805	21.09.17	UKR		A3E			encrypted msgs – SZRU in Rivne
14260.900	0944	13.02.18	RUS		OFDM	29.5	2750	OFDM 60 – PSK4B - Moscow
14284.900	0954	13.02.18	RUS		OFDM	29.5	2750	OFDM 60 – PSK4B - Moscow
14295.000	0910	24.02.18	CHN		FMOP		10k	CHN OTH radar – 50 sps – 5 sec bursts
14295.000	ady	dly	TJK		A3E		9k	3 <sup>rd</sup> from 4765 – Radio Tajikistan
14338.390	0819	06.02.18	RUS		F1B	600	600	DPRK-FSK 600 – DPRK emba Moscow
14346.000	0913	24.02.18	CHN		FMOP		10k	CHN OTH radar – 67 sps – 3.8 sec bursts
18107.000	vt	vd	RUS	RDL	F1B	50	200	Moscow – RUS navy – shared band!
21190.000	0728	27.10.17	RUS		F1B	100	1000	harmonic from 10595 kHz - Moscow
21438.000	0948	15.11.17	RUS	RCV	A1A			RUS navy - Sevastopol
28085.000	ady	dly	POR		F1B	51	300	Enagal GPS buoys – Atlantic Ocean
28960.000	0850	18.11.17	IRN		FMOP		50k	Iranian radar bursts – 150 and 313 sps
29400.000	0940	18.11.17	IRN		FMOP		50k	Iranian radar bursts – screenshot

UTC = universal time coordinated (=GMT) /// ady = all day /// vt = various times /// dly = daily /// vd = various days  
date (dd.mm.yy) /// IDENT = call, selcall /// MODE -> USB , LSB, A3E = AM, F3E = FM, F1B = FSK / RTTY, PSK, FMCW  
ALE = MIL-188-141A /// NWAf = North West Africa /// con = continuous /// ITU = ITU-abbreviation /// BD = Baud  
/// SH = shift (Hz) or signal spread /// DETAILS = observed details /// unid (ui) = unidentified /// AF = Airforce /// MOI =  
Ministry of Interior /// MOD = Ministry of Defense /// MFA = Ministry of Foreign Affairs /// MEa = Middle East /// FEa = Far  
East /// EAf = East Africa /// CAf = Central Africa /// CIS = Commonwealth of Independent States (earlier UDSSR) /// NAf =  
North Africa /// NEu = Northern Europe /// PRC = People’s Republic of China /// emba = embassy /// DPRK = Democratic  
People Republic of North Korea /// NGO = Non Governmental Organization /// MOPO = Ministry of Public Order /// FSK =  
frequency shift keying /// PSK = phase shift keying /// EU = Europe /// SPS = sweeps/sec = PRF -> OTH radar ///  
OTHR = OTH radar -> FMCW = frequency modulated continuous wave -> FMOP = freq. mod. on pulse

## Notice board:

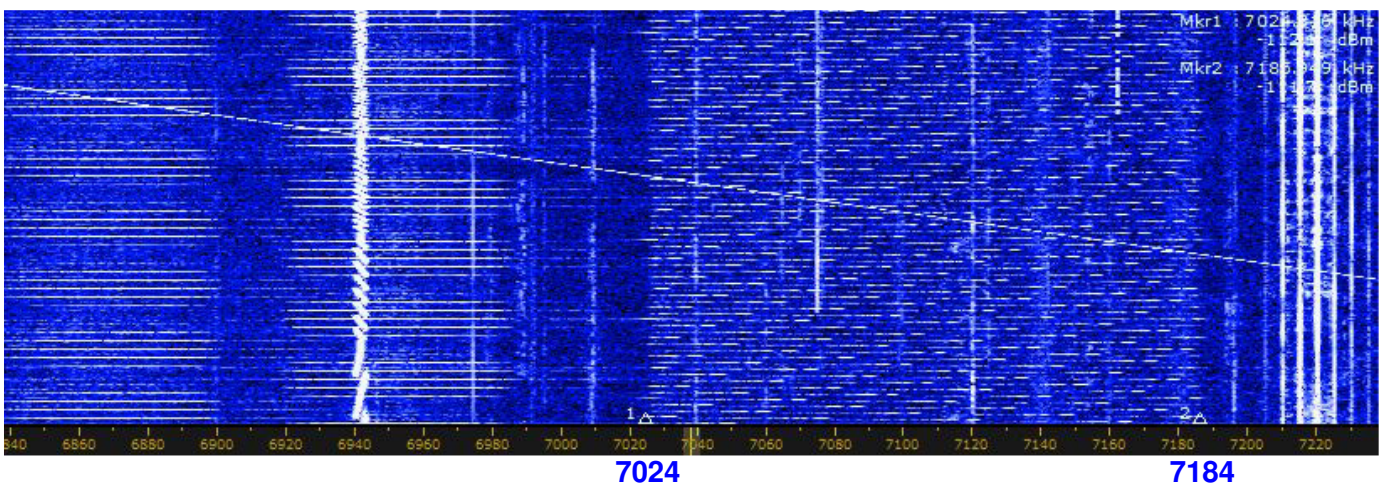
Please note: All digital mode frequencies are center frequencies. Exceptions are mentioned!  
**USB: 3500 - 3535 – 3550 – 3555 - 3560 – 5350 – 5360 - 7000 - 10125 - Spanish fishery very often**  
**Illegal BCs: 7120 -> Radio Hargaysa Somalia ++ 7200 -> Radio Taiwan and Chinese jammer ++ 18080 ->**  
**Sound of Hope (Taiwan) + CHN jammer ++ 7140 and 7180 -> Radio Eritrea + QRM by Radio Ethiopia**  
**28000 – 29700 kHz – crowded of CIS taxis in FM – daily (not audible at this time)**

Iranian radar bursts on 29400.0 kHz – FMOP - 307 and 870 sps alternating  
Nov. 18<sup>th</sup> 2017 at 0941 utc  
Screenshot: DK2OM with Wavecom W-Code – Waterfall showing the bursts and a gap



Chinese wideband OTH-radar – FMOP – 10 sps – covering 160 kHz (7024 – 7184 kHz)

Screenshot: DK2OM with Perseus on Feb. 15<sup>th</sup> 2018 at 1542 utc



Measurements and screenshots: DK2OM with W-Code (Wavecom), W-PCI (Wavecom) or Perseus