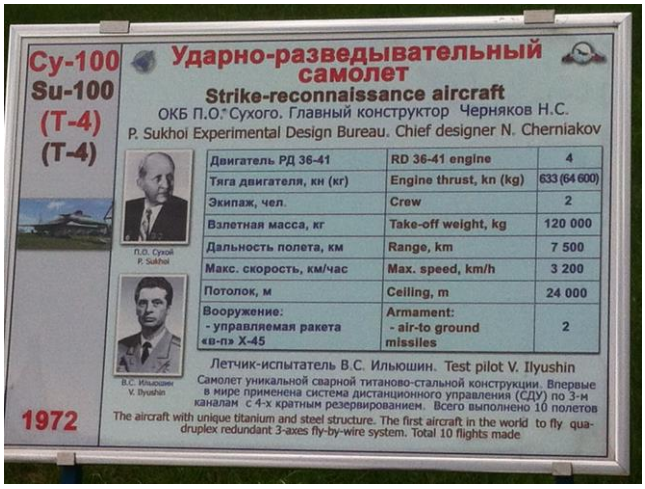
ENIGMA 2000 NEWSLETTER

http://enigma2000group.org



Imagery courtesy of 'Stained Glass'

ISSUE 99

March 2017

http://www.enigma2000.org.uk

The Number Station scene continues to be lively in 2017.

There is always the thought as the year ends that some long-established schedules might not survive into the New Year, as has been the case in the past, but everything still seems to be going strong.

That said, there does not appear to be much that is new; there still seems to be only two S06 Russian Man schedules running and the Thursday and Friday E06 and G06 schedules have continued to send the same message of fifty-two 5F groups which have been used since November of last year.

The Thursday E07, 2110 UTC start, continues to grace the airwaves with two minutes of, "000" - "no message", as has been the case for some time. Of the whole E07 / E07a set-up, the schedule which sends the most "full message" transmissions is the Monday + Wednesday 2000 UTC start schedule which made the move from AM to SSB in the early summer of last year.

On a positive note, the HM01 Mixed Mode Spanish language station from Cuba has been appearing with signals which have been stronger than for some time in the UK morning.

Not a number station in the usual meaning, but interesting nevertheless:- A Russian Language station using SSB on 11,297 kHz, appears to be weather information, female voice - and only stays on the air for five minutes at a time.

First noticed in the second week of February, thought it was a number station at first – because the content includes lots of numbers which sound like those we are familiar with from the S06 number station.

Seems to be start up at five minutes before the hour and goes off exactly on the hour, and again at twenty-five minutes past the hour and stops precisely on the half hour, heard many times in the UK daylight hours during February.

Words which can be recognised other than the numbers include something like "temperature", "minus" and "millimetre", so the best guess is that this is airfield weather information in the standard format of wind speed and direction, temperature, dew-point and barometric pressure, perhaps in both millimetres of mercury and millibars – or hectopascals as we are supposed to say these daysfor the altimeter setting.

Strange that it only stays on for five minutes.

Morse Stations

All frequencies listed in kHz. Freqs are generally +- 1k
This is a representative sample of the logs received, giving an indication of station behaviour and the range of times/freqs heard. These need to be read in conjunction with any other articles/charts/comments appended to this issue.

Morse - Number Stations

UNID CW

X2M (Unidentified Chinese Station) Possibly Diplomatic **Now designated UM03 - (Numbers & Oddities)**

Following on from our last newsletter Jean-Paul (JPL) has continued to monitor this unidentified Chinese station, although this often hampered by a weak signal. He reports that the 5-character code is very unusual & may possibly be diplomatic traffic.

Schedule appears to start at 0830z JPL has also noted that X2M always ceases transmissions at 0945z - even though this is normally in the middle of transmitting a message. Although attempts were made to monitor the station on Sunday 22 January, nothing was heard, so it may be that there is no schedule on transmission on Sundays.

Below are truncated examples of logs of the transmissions monitored by JPL showing message headers along with an example of traffic heard.

This station has now been designated as **UM03** & future logs & information will appear in the 'Numbers & Oddities' newsletters

7920//8250//8410	0931 - 0944z	12 Jan	X2M Messages in 5-character code (Remote tuner New Zealand) 01 01 CK 100 CK 100 TIME 1631 TIME 1631 DATE 1201 DATE 1201 BT 03 03 CK 100 CK 100 TIME 1637 TIME 1637 DATE 1201 DATE 1201 BT 05 05 CK 100 CK 100 TIME 1643 TIME 1643 DATE 1201 DATE 1201 BT		JPL	THU
7920//8250//8410	0918 - 0945z	17 Jan	X2M Messages in 5-character code (Remote tuner New Zealand) 17 17 CK 100 CK 100 TIME 1618 TIME 1618 DATE 1701 DATE 1701 BT 19 19 CK 100 CK 100 TIME 1624 TIME 1624 DATE 1701 DATE 1701 BT 21 21 CK 100 CK 100 TIME 1631 TIME 1631 DATE 1701 DATE 1701 BT 23 23 CK 100 CK 100 TIME 1637 TIME 1637 DATE 1701 DATE 1701 BT 25 25 CK 100 CK 100 TIME 1643 TIME 1643 DATE 1701 DATE 1701 BT		JPL	TUE
7920//8250//8410	0916 - 0944z	08 Feb	X2M Messages in 5-character code (Remote tuner New Zealand) 17 17 CK 100 CK 100 TIME 1617 TIME 1617 DATE 0802 DATE 0802 BT 19 19 CK 100 CK 100 TIME 1625 TIME 1625 DATE 0802 DATE 0802 BT 01 01 CK 100 CK 100 TIME 1630 TIME 1630 DATE 0802 DATE 0802 BT 03 03 CK 100 CK 100 TIME 1636 TIME 1636 DATE 0802 DATE 0802 BT 05 05 CK 100 CK 100 TIME 1642 TIME 1642 DATE 0802 DATE 0802 BT		JPL	WED
7920//8250//8410	0916 - 0945z	14 Feb	X2M Messages in 5-character code (Remote tuner Hong Kong) 17 17 CK 100 CK 100 TIME 1. 18 TIME 1618 DATE 1402 DATE 1402 BT 19 19 CK 100 CK 100 TIME 1624 TIME 1624 DATE 1402 DATE 1402 BT 01 01 CK 100 CK 100 TIME 1632 TIME 1632 DATE 1402 DATE 1402 BT 03 03 CK 100 CK 100 TIME 1638 TIME 1638 DATE 1402 DATE 1402 BT 05 05 CK 100 CK 100 TIME 1644 TIME 1644 DATE 1402 DATE 1402 BT		JPL	TUE

7920//8250//8410	0856 (IP) - 0945z	15 Feb	X2M	Messages in 5-character code (Remote tuner New Zealand)	JPL	WED

71 71 CK 100 CK 100 TIME 1601 TIME 1601 DATE 1502 DATE 1502 BT
73 73 CK 100 CK 100 TIME 1607 TIME 1607 DATE 1502 DATE 1502 BT
75 75 CK 100 CK 100 TIME 1612 TIME 1612 DATE 1502 DATE 1502 BT
77 77 CK 100 CK 100 TIME 1618 TIME 1618 DATE 1502 DATE 1502 BT
61 61 CK 100 CK 100 TIME 1629 TIME 1629 DATE 1502 DATE 1502 BT
63 63 CK 100 CK 100 TIME 1635 TIME 1635 DATE 1502 DATE 1502 BT
65 65 CK 100 CK 100 TIME 1641 TIME 1641 DATE 1502 DATE 1502 BT

UNID 7920//8250//8410kHz 0916z 08 Feb 2017

X2M Messages in 5-character code

UN5T6 7U43N D5TUA 4U5A3 (IP – Cont'd – Machine sent – 0916z)
AR
17 17 CK 100 CK 100 TIME 1617 TIME 1617 DATE 0802 DATE 0802 BT
NT6U4 3NT6U (Cont'd – 0918z) AR

19 19 CK 100 CK 100 TIME 1625 TIME 1625 DATE 0802 DATE 0802 BT
73A4T 3A4TN (Cont'd – 0924z) AR

CQ (x3) DE X2M (x2) VVV (x 3) (0930z) MSG MSG ENG ENG
CQ (x3) DE X2M (x2) VVV (x 3) (0930z) MSG MSG ENG ENG

01 01 CK 100 CK 100 TIME 1630 TIME 1630 DATE 0802 DATE 0802 BT
546UN 6UNT7 (Cont'd – 0932z)
AR
03 03 CK 100 CK 100 TIME 1636 TIME 1636 DATE 0802 DATE 0802 BT
..5A6 T6A7U 6U73N (Cont'd – 0937z)
AR
05 05 CK 100 CK 100 TIME 1642 TIME 1642 DATE 0802 DATE 0802 BT
T6734 73NT6 (Cont'd – 0943z) (Silent in middle of the message – 0944z)

Courtesy JPL

UNID Chinese

3299.5	1424z	19 Feb	Unknown Chinese CW	Via SDR Japan	F5JBR	SUN

LV **PTS de GEI** (x2) 1234AAA1234 VVV LV **PTH de GEI** 1234 AAA 1234
QTC QTC **NR NR 21 WU 20 06 19 2300 WTT 118 159 347 545 697 250 = WV**
12340 21950 21032 72049 43947 06314 12348 82049 28034 35714
60254 08643 04234 45890 084636 09540 K

M01/ 1 XIV MCW, hand (197 sched for Nov - Feb). Will change to M01/2 sched ID 463 for Mar - Apr.

January 2017:

5320	1800z	03 Jan	'197' 514 30 = =	23419...	...LG 03891 = =	Fair-Strong. Part copy with heavy QRM	BR/CB	TUE
	1800z	05 Jan	'197' 121 30 = =	94552...	...LG 26607 = =	Strong, fast. Numerous errors from grp24	CB	THU
	1800z	10 Jan	'197' 645 30 = =	56888...	...LG 90481 = =	Strong, slow. Pause between figs. No errors	BR	TUE
	1800z	12 Jan	'197' 467 30 = =	32540...	...LG 12213 = =	Strong, fast. Corrections & continuous grps	CB	THU
	1800z	17 Jan	'197' 850 30 = =	93356...	...LG 10503 = =	Fair, slow with pauses between figs	BR/CB	TUE
	1800z	19 Jan	'197' 272 30 = =	10524...	...LG 48460 =	Weak, fast. Number of errors noted	CB	THU
	1800z	24 Jan	'197' 876 30 = =	11049...	...LG 28162 = =	Fair, med-fast. Two corrected errors	BR	TUE
	1800z	26 Jan	NRH	Strong XJT signal on frequency			BR	THU
	1800z	31 Jan	'197' 273 30 = =	12033...	...LG 36654 = =	Good dropping to weak after grp03. Fast	BR	TUE
4490	2000z	03 Jan	'197' 702 30 = =	84763...	...LG . . . . . = =	Strong, fast. Solid to grp25 then heavy QRN	CB	TUE
	2000z	05 Jan	'197' 151 30 = =	63785...	...LG 24196 = =	Fair/ Fast. QRM present. No noted errors	BR	THU
	2000z	10 Jan	'197' 745 30 = =	64260...	...LG 93765 = =	Strong, slow. Pause between figs. No errors	BR	TUE
	2000z	12 Jan	'197' 897 30 = =	56548...	...LG 34346 = =	Fair, fast. Many errors. Poor copy at times	CB	THU
	2000z	17 Jan	'197' 517 30 = =	01447...	...LG 24644 = =	Strong, slow with pauses between figs	CB	TUE
	2000z	19 Jan	'197' 418 30 = =	95518...	...LG 17673 = =	Strong, fast. Steady delivery with some errors	CB	THU
	2000z	24 Jan	'197' 542 30 = =	41153...	...LG 46893 = =	Strong, med-fast. Three corrected errors	BR	TUE
	20**09**z	26 Jan	'197' 457 30 = =	. . . .	...LG 11195 = =	Good, med-fast. Late start. Ended 2015z	BR	THU
	2001z	31 Jan	'197' 419 30 = =	08203...	...LG 70410 = =	Fair, fast. Good steady delivery	BR	TUE
5465	0700z	01 Jan	No transmission				BR	SUN
	0700z	08 Jan	'197' 702 30 = =	56673...	...LG . . . . . = =	Fair, fast. Faded towards end - Via Twente	BR	SUN
	0700z	15 Jan	'197' 787 30 = =	46344...	...LG 63255 = =	Fair, fast. Good CW. With errors, 1 corrected	BR	SUN
	0700z	22 Jan	'197' 801 30 = = = =	12815...	...LG	Fair dropping to weak. Numerous errors	BR	SUN
	07**01**z	29 Jan	'197' 125 30 = =	67543...	...LG . . . . . = =	Strong dropping to fair during msg. Fast	BR	SUN
5810	1500z	07 Jan	'197' 517 30 = =	. . . .	...LG 17385 = =	Fair, fast. Severe XJT QRM - Via Twente	BR	SAT
	1500z	14 Jan	'197' 282 30 = =	. . . .	...LG 44938 = =	Good, fast. Severe XJT QRM - Via Twente	BR	SAT
	1500z	21 Jan	NRH	Strong XJT signal on frequency			BR	SAT
	1500z	26 Jan	NRH	Strong XJT signal on frequency			BR	SAT

February 2017:

4490	2000z	02 Feb	'197' 722 30 = =	55978...	...LG 26119 = =	Strong, fast. 1 error in msg & only 29 grps sent	BR	THU
	2000z	07 Feb	'197' 235 30 = =	49676...	...LG 52110 = =	Strong, med-fast. Pauses between each fig.	BR	TUE
	2000z	09 Feb	'197' 648 30 = =	30194...	...LG 60831 = =	Strong, V.fast. Some irregular spacing mid-grp	BR	THU
	2000z	14 Feb	'197' 525 30 = =	19060...	...LG 59541 = =	Strong, med-fast. Several grps sent once only	BR	TUE
	2000z	16 Feb	'197' 392 30 = =	16686...	...LG 17983 = =	Strong, fast. Excellent CW. Error grp08	BR	THU
	2000z	21 Feb	'197' 404 30 = =	33113...	...LG . . . . . = =	Fair > Weak. Poor copy Mostly unreadable	BR	TUE
	2000z	23 Feb	'197' 986 30 = =	32113...	...LG 90818 = =	Good, V.fast. Numerous corrected errors!	BR	THU
	2000z	28 Feb	'197' 633 30 = =	. . . .	...LG 15237 = =	Weak, med-fast. Poor copy	BR	TUE
5320	1800z	02 Feb	'197' 504 30 = =	10911...	...LG 44779 = =	Weak, fast & irregular. Some long zeros used	BR	THU
	1800z	07 Feb	'197' 745 30 = =	10887...	...LG 09385 = =	Weak/Fair, Med-fast. Pauses between each fig.	BR	TUE
	1800z	09 Feb	'197' 864 30 = =	10800...	...LG . .357 = =	Weak, fast. Good steady CW. Poor copy	BR	THU
	1800z	14 Feb	'197' 391 30 = =	59096...	...LG 05480 = =		AB	TUE
	1800z	16 Feb	'197' 236 30 = =	60906...	...LG 79530 = =	Weak, fast. Difficult copy. No noted errors	BR	THU
	1800z	21 Feb	'197' 126 30 = =	60394...	...LG 25899 = =	Good, Fast. Errors numerous & varied	BR	TUE
	1800z	23 Feb	'197' 404 30 = =	33113...	...LG 35743 = =	Good, V.fast. Numerous corrected errors!	BR	THU
	1800z	28 Feb	'197' 631 30 = =	99075...	...LG 96026 = =	Fair, med-fast. Good, steady CW	BR	TUE
5465	0700z	05 Feb	'197' 421 30 = =	71675...	...LG . .650 = =	Fair/Weak. Numerous errors inc. 4 fig. grps	BR	SUN
	0700z	12 Feb	'197' 234 30 = =	89714...	...LG 74210 = =		AB	SUN
	0700z	19 Feb	'197' 118 30 = =	18833...	...LG 87725 = =	Strong, fast. Numerous errors. **On 5466kHz**	BR	SUN
5810	1500z	04 Feb	Signal present but unusable due to strong XJT on frequency				BR	SAT
	1500z	11 Feb	NRH	Strong XJT signal on frequency			BR/HFD	SAT
	1500z	18 Feb	'197' 621 30 = =	78009...	...LG 32456 = =	Stanag 4285 QRM (Via SDR Silec, Poland)	E.SMITH	SAT
	1500z	25 Feb	'197' 118 30 = =	91712...	...LG	Stanag 4285 QRM (Via SDR Silec, Poland)	E.SMITH	SAT

M01a (From Feb 2016 M01a has been redefined to cover all M01 variants - excepting M01b)

Lots of activity logged from mid-February by André, (F5JBR).

4907	1314 (IP) - 1357z	14 Feb		CW	F5JBR	TUE
		(1314z)	..... 13769 62840			
			89100 87875 11044 64707 27074 68211 31667 41934 36472 90414 = = 328 328 35 35 000			
		(1324z)	162 (x3) 687 82 (x2)			
			162 (x3) 687 82 (x2)			
			111			
			162 (x3) 687 88 (x2) 162 (x3) 687 88 (x2)			
			111 999			
			329 55			
			340 340 35 35 = =			
			16603 90545 63812 91818 03059 41983 96052 78307 11230 66567			
			55165 71058 65678 21540 64497 00646 65920 85074 78427 47266			
			16603 36472 30313 76331 42109 13769 91222 04995 86883 07428			
			07596 38006 12290 21099 30055 = 340 35 000			
		(1350z)	513 (x3) 363 67 (x2) 513 (x3) 363 67 (x2) 513 (x3) 363 67 (x2)			
4899	1400z		231 231 231 231 231 231 111			
4916	1407z		231 231 231 231 231 231 111			
4899	1408z		839 839 839 657 10 111			
4514	1424z		459 (x3) 433 16 (x2) 459 (x3) 433 16 (x2) 459 (x3) 434 68 (x2)			
			040 02 333 00			
			459 (x3) 333 00			
			111 999			
			952 20 =			
			55112 57883 40194 50169 19124 41070 95899 21522 13578 97041			
			66262 33994 22661 61332 24279 589647 82377 11892 20872 21262 = 952 20			
			111 000			
4404	1439z		455 (x3) 460 90 (x2) 455 (x3) 460 90 (x2) 111 000			
			333 569 31 040 02 455 111 000 111 000 455			
4502	1523z		190 (x3) 241 29 (x2) 190 (x3) 241 29 (x2) 190 (x3) 240 49 (x2) 190 (x3) 236 59 (x2)			
			040 02 333 249 04			
			190 (x3) 249 04 (x2) 190 (x3) 247 40 (x2) 190 (x3) 236 51 (x2) 190 (x3) 236 51			
3223	1741 - 1749z		257 (x3) 791 88 (x2) 257 (x3) 791 88 (x2) 257 (x3) 792 97 (x2) 257 (x3) 792 97 (x2)			
2166	1826 - 1842z		236 (x3) 196 96 (x2) 236 (x3) 197 96 (x2) 236 (x3) 196 74 (x2)			
			040 01			
			236 (x3) 184 04 (x2) 236 (x3)			
			040 01			
			236 (x3) 333 18 19 333 18 333 19 111 000			
2142	1906z		245 (x3) 740 91 (x2) 245 (x3) 740 91 (x2) 245 (x3) 740 91 (x2) 245 (x3) 740 37 (x2) 245 (x3) 752 77			

2165	1910 - 1927z		333 474 21 333 474 21 (x2) 040 02 040 02 333 473 21 111 333 154 111 333 14 111 999 157 10 = 79194 42575 30827 92327 65995 57598 60692 84245 95309 14871 = 157 10 000 111 333 157 10 = 79194 42575 30827 92327 65995 57598 60692 84245 95309 14871 = 157 10 000			
2468	1950 - 1955z		496 (x3) 811 12 (x2) 496 (x3) 811 12 (x2) 333 811 13 333 811 13 111 000			
2468	2047z		496 (x3) 816 53 (x2) 496 (x3) 811 73 (x2) 496 (x3) 819 93 (x2)			
4382	2130		389 (x3) 499 53 (x2) 389 (x3) 490 24 (x2) 389 (x3) 491 85 (x2)			
4907	0620z (IP)	15 Feb	(In Progress) ..... 13467 58944 0649 55738 = 345 20 000	CW	F5JBR	WED
2415	0625z (IP)		16755 16755 16755 859 111 999 246 12 = 37843 63606 19741 28761 84782 22967 46139 59190 90843 61744 19938 34870 = 246 12 000			
4957	0646z		513 (x3) 361 51 (x2) 111 999 346 35 = 54011 25286 96137 20750 02327 32224 78727 73800 57850 84159 85181 29203 19961 82334 52869 32708 85767 82713 22726 0123 98303 43348 27789 44805 64722 65287 13674 93416 64497 20362 95098 07322 81865 13706 15401 = 346 35 000 111 333 01 57950			
3380	0728z		647 (x3) 467 88 (x2)			
3643	0734z		104 (x3) 379 74 (x2) 104 (x3) 379 74 (x2) 104 (x3) 373 93 (x2)			
5273	0757z (IP)		(In progress) ....= 347 35 000 111 333 00 347 35 000			
5812	0800z		870 (x3) 992 81 (x2) 111			
2317	1830z		257 (x3) 299 75 (x2) 257 (x3) 285 81 (x2) 257 (x3) 285 81 333 111 040 02 257 (x3) 333 19 20 333 19 111 333 20 111 333 00 333 00 111 000			
2227	1835z (IP)		236 24 111 000 111 000 111 333 555 255 11 265 11 236 24 236 24 000			
5317	1424z	16 Feb	273 (x3) 909 42 (x2) 273 (x3) 909 42 (x2) 040 04	CW	F5JBR	THU
4753	1459z		918 (x3) 040 2 333 982 03 (x2) 111 999 384 15 = 03513 20684 74153 50521 75232 97553 52936 14542 65249 83090 28189 12151 03599 05620 45304 = 384 15 111 000			
3361	1648z		349 (x3) 202 56 (x2) 333 349 (x3) 299 63 (x2) 111 000			
2722	1818z		593 (x3) 332 54 (x2) 593 (x3) 332 54 (x2)			
3234	0404 (IP) - 0408z	17 Feb	810 810 810 91298 91298 (In progress - Sequence repeated until 0408z)	(SDR Sweden)	BR	WED
3943	0542z (IP)	19 Feb	111 111 000 111 111 000	CW	F5JBR	SUN
2539	0501z (IP)	21 Feb	66145 87224 17103 43761 83708 83319 26342 04989 52150 4980 21073 = 243 74 000 333 111 333 15 95963 000 333 111 333 25 02375 000 111 333 35 92206 000		F5JBR	TUE
7485	1308 - 1314z	22 Feb	273 (x3) 668 75 (x2) 333 (x1) 650 57 (x2) 333 (x1) 650 57 (x2) 111 000		F5JBR	WED
	1330 - 1334z		273 (x3) 170 92 (x2) 333 (x1) 177 22 (x2) 111 000			
	1345 - 1353z		273 (x3) 175 82 (x2) 333 (x1) 179 11 (x2) 333 (x1) 177 10 (x2) 111 000			
	1401 - 1408z		273 (x3) 175 83 (x2) 111 999 689 19 = 78737 08410 89755 19795 04152 69769 47962 62909 26460 88213 11928 83169 23209 03452 92822 29880 44750 04544 82809 = 689 19 000			

3807	0721z	24 Feb	162 (x3) 293 73 (x3) 162 (x3) 207 13 (x2) 111 000						F5JBR	FRI
5018	1000z	25 Feb	603 (x3) 904 22 (x2)						F5JBR	SAT

M01b

January 2017:

2405//3180	2110 - 2126z	06 Jan	'610' 531 30 = = 42097 95925.... 89608 000	Weak//Fair	MCW	BR/HFD		FRI
	2110 - 2127z	27 Jan	'610' 531 30 = = 42097 95925.... 89608 000	Weak//Fair	MCW	BR		FRI
2425//3205	2015z	16 Jan	NRH			HFD		SUN
2435//3519	1920z (IP)	16 Jan	Weak			HFD		SUN
2485//3160	2041 - 2058z	12 Jan	'382' 531 30 = = 42097 95925.... 89608 000	Fair//Weak	MCW	BR		THU

February 2017:

2435//3520	1910z	20 Feb	'853' 327 32 = =			HFD		MON
2470//3545	1932 - 1950z	09 Feb	'910' 327 32 = = 18273 87203.... 19725 000	Weak//Strong	MCW	BR		THU
2485//3160	2041 - 2059z	09 Feb	'382' 327 32 = = 18273 87203.... 19725 000	Fair//Good	MCW	BR		THU

M01b 2405//3180kHz 2110z 06 Jan17

610 (R3m) 531 531 30 30 = =

42097 95925 48811 42789 95084
80120 62255 68184 28645 48693
32535 47663 74596 40342 34900
48448 98503 74589 11160 73345
72853 91943 09410 89971 06781
31022 88248 09316 64095 89608
= =
531 531 30 30 000

Courtesy BR

M01b 2470//3545kHz 1932z 09 Feb17

910(R4m) 327 327 32 32 = =

18273 87203 96876 87673 19668
64012 92723 46489 65183 77666
15547 53871 53808 62523 77746
62333 66196 53929 92971 68460
96434 62242 36172 84750 26562
38640 10839 58422 49107 78625
84165 19725 = =

327 327 32 32 000

Courtesy BR

M08a XVIII ICW / CW, some MCW

M08a continued into the new year on the same schedules as 2016, V02a continued to be heard mixing with the M08a Morse every week on Tuesday and Thursdays at 2000z until 09 February. On 10 February things started to go awry, the 1400z schedule started very late and was repeatedly transmitting 12345 67890. Following this event all schedules where there was a transmission contained this same broadcast until 21 February, when the usual weekend call-ups 18262 22501 35022 began to be transmitted, very unusual since this was a Tuesday. This format continued until 2000z on 23 February after which no more M08a transmissions were heard although the usual noisy carrier continues to appear from time to time.

Not too much out of the ordinary to report, on 30 January at 2000z all three call-ups ended with 2. There were a few occasions where the Morse would cut out so only a fraction of the message could be copied, interestingly, this only occurred in the 2000z time slot.

A 20kHz wide signal was seen on 05 February spreading from 8135-8155kHz. It was thought this might be related to the Morse transmission in that time slot, however, subsequently this signal was seen on different nearby frequencies and not only in the 2300z hour, so probably is not related.

January 2017:

7554	2000z	03 Jan	[46111 50441 33782]	Simultaneous with V02a	AnonUS	TUE
	2000z	04 Jan	[85551 07881 11212]		AnonUS	WED
	2000z	05 Jan	[42482 56 -11 68242]	Extremely weak, mixing with V02a	AnonUS	THU
	2000z	06 Jan	[84662 06302 10731]		AnonUS	FRI
	2000z	09 Jan	[33622 444?2 57781]	Extremely weak	AnonUS	MON
	2000z	10 Jan	[33652 46071 58412]	Simultaneous with V02a	AnonUS	TUE
	2000z	11 Jan	[43381 54121 77452]		AnonUS	WED
	2000z	12 Jan	[12871 25312 38631]	Simultaneous with V02a	AnonUS	THU
	2000z	13 Jan	[33632 45152 58481]		AnonUS	FRI
	2000z	14 Jan		Noisy carrier, no Morse	AnonUS	SAT
	2000z	16 Jan	[05501 18832 22252]		AnonUS	MON
	2000z	17 Jan	[43262 56502 78821]	Simultaneous with V02a	AnonUS	TUE
	2000z	18 Jan	[83281 06521 10842]		AnonUS	WED
	2000z	19 Jan	[43602 55031 68451]	Simultaneous with V02a	AnonUS	THU
	2000z	20 Jan	[44562 55302 68631]		AnonUS	FRI
	2000z	23 Jan	[66812 87542 01071]		AnonUS	MON
	2000z	24 Jan	[- - - -- - - - - - - - -]	Up late in progress with intermittent signal. Simultaneous with V02a	AnonUS	TUE
	2000z	25 Jan	[06211 10642 21372]		AnonUS	WED
	2000z	26 Jan	[44302 57631 31871]	Simultaneous with V02a	AnonUS	THU
	2000z	30 Jan	[02512 23242 36572]	All 3 call-ups end with 2	AnonUS	MON

8009	2300z	04 Jan	[38081 42322 65741]		AnonUS	WED
	2300z	09 Jan	[- - - - - - - - - - - - - --]	Up in progress at 2300z	AnonUS	MON
	2300z	11 Jan	[02841 25272 38501]		AnonUS	WED
	2300z	16 Jan	[77162 81481 04722]		AnonUS	MON
	2300z	18 Jan	[58351 62782 74111]		AnonUS	WED
	2300z	25 Jan	[62472 74712 97231]		AnonUS	WED
	2300z	30 Jan	[17541 82782 04112]		AnonUS	MON
8096	1400z	02 Jan	[80342 03771 16102]		AnonUS	MON
	1400z	04 Jan	[13561 25001 38322]		AnonUS	WED
	1400z	05 Jan	[37142 41461 54702]		AnonUS	THU
	1400z	06 Jan	[12772 25111 38432]		AnonUS	FRI
	1400z	09 Jan	[45721 57451 60771]	Very weak, all 3 call-ups end with 1	AnonUS	MON
	1400z	10 Jan	[47442 51771 64102]		AnonUS	TUE
	1400z	11 Jan	[56472 60712 72141]		AnonUS	WED
	1400z	12 Jan	[03551 26872 30311]		AnonUS	THU
	1400z	13 Jan	[31602 52432 65761]		AnonUS	FRI
	1400z	14 Jan		Noisy carrier, no Morse	AnonUS	SAT
	1400z	15 Jan		Noisy carrier, no Morse	AnonUS	SUN
	1400z	16 Jan	[10282 23511 36842]		AnonUS	MON
	1400z	17 Jan	[32111 43841 56272]		AnonUS	TUE
	1400z	18 Jan	[07872 11201 24631]		AnonUS	WED
	1400z	20 Jan	[- - - - -- 3322 87332]	Up late in progress	AnonUS	FRI
	1400z	23 Jan	[78802 02331 15662]		AnonUS	MON
	1415z	24 Jan	[-- - -- - - - - - 73212]	Up very late in progress	AnonUS	TUE
	1400z	25 Jan	[87562 11001 24321]		AnonUS	WED
	1400z	26 Jan	[23242 36561 40001]		AnonUS	THU
	1400z	27 Jan	[04132 26762 30201]		AnonUS	FRI
	1400z	30 Jan	[18882 22212 34641]		AnonUS	MON
	1400z	31 Jan	[10572 32212 45541]		AnonUS	TUE
8135	2300z	03 Jan	[71502 84831 07251]		AnonUS	TUE
	2300z	05 Jan	[62762 75281 88521]		AnonUS	THU
	2300z	06 Jan	[58821 62251 75672]		AnonUS	FRI
	2300z	08 Jan		Loud hum with weak HM01 in the background. No Morse	AnonUS	SUN
	2300z	12 Jan	[22351 45682 58011]		AnonUS	THU
	2300z	13 Jan	[14502 26021 30352]		AnonUS	FRI
	2300z	14 Jan		Noisy carrier, no Morse	AnonUS	SAT
	2300z	17 Jan	[06602 10032 23452]		AnonUS	TUE
	2300z	19 Jan	Up at 2300z in progress		AnonUS	THU
	2300z	20 Jan	[16132 30551 43881]		AnonUS	FRI
	2300z	24 Jan	[22041 45362 58701]		AnonUS	TUE
	2300z	27 Jan	[44642 57061 61302]		AnonUS	FRI

February 2017:

7554	2000z	01 Feb	[51381 63622 86142]		AnonUS	WED
	2000z	02 Feb	TX cutting out with only a fraction of a second of Morse every 3 seconds. Simultaneous with V02a.		AnonUS	THU
	2000z	03 Feb	Same problem as yesterday, TX cutting out with only a fraction of a second of Morse every 3 secs.		AnonUS	FRI
	2000z	05 Feb		Hum but no Morse	AnonUS	SUN
	2000z	06 Feb	TX cutting out with only a fraction of a second of Morse every 3 seconds		AnonUS	MON
	2000z	07 Feb	[24582 37811 41242]	Simultaneous with V02a	AnonUS	TUE
	2000z	08 Feb	[57002 68632 82051]		AnonUS	WED
	2000z	09 Feb	[53672 65001 87631]	Simultaneous with V02a	AnonUS	THU
	1945z	10 Feb	**12345 67890** repeated	Already in progress at 1945z	AnonUS	FRI
	1950z	11 Feb	**12345 67890** repeated	Came up at 1950z, still in progress at 2045z	AnonUS	SAT
	2000z	12 Feb	**12345 67890** repeated	Still in progress at 2045z	AnonUS	SUN
	2000z	13 Feb	**12345 67890** repeated	Came up at 2024z	AnonUS	MON
	2000z	14 Feb	**12345 67890** repeated.		AnonUS	TUE
	2000z	15 Feb	**12345 67890** repeated.		AnonUS	WED
	2300z	15 Feb	[**12345 67890**]		Danix	WED
	2000z	16 Feb	**12345 67890** repeated.		AnonUS	THU
	2000z	17 Feb	**12345 67890** repeated.		AnonUS	FRI
	2000z	19 Feb	**12345 67890** repeated.		AnonUS	SUN
	2000z	20 Feb	**12345 67890** repeated.		AnonUS	MON
	2000z	21 Feb	[18262 22501 35022]	Up late with the call-ups usually transmitted on weekends	AnonUS	TUE
	2000z	22 Feb	[18262 22501 35022]	Up late with weekend call-ups Still in progress at 2042z	AnonUS	WED
	2000z	23 Feb	[18262 22501 35022]	Up late with weekend call-ups	AnonUS	THU
8009	2300z	01 Feb	[11532 34862 47281]		AnonUS	WED
	2300z	06 Feb	[48041 51372 64701]		AnonUS	MON
	2300z	08 Feb	[11422 24751 37272]		AnonUS	WED
	2300z	13 Feb	**12345 67890** repeated		AnonUS	MON
	2300z	15 Feb	**12345 67890** repeated		AnonUS	WED
	2300z	20 Feb	**12345 67890** repeated		AnonUS	MON
	2300z	21 Feb		In progress at 2258z Wrong frequency for Tuesday	AnonUS	TUE
	2300z	22 Feb		Hum but no Morse by 2302z	AnonUS	WED
8096	1400z	01 Feb	[-- - -- 84121 07442]		AnonUS	WED
	1400z	02 Feb	[53401 75231 87562]	Pre TX transmission check had some voice traffic but unable to copy	AnonUS	THU
	1400z	03 Feb	[06001 10422 23751]		AnonUS	FRI
	1400z	05 Feb		Hum but no Morse	SUN	
	1400z	06 Feb	[73452 85282 07511]		AnonUS	MON

8096	1400z	07 Feb	[16852 20271 33512]			AnonUS	TUE
	1400z	08 Feb	[82622 05141 17472]			AnonUS	WED
	1400z	09 Feb	[42512 53242 67361]			AnonUS	THU
	1426z	10 Feb	**12345 67890** repeated	Came up at 1426z. Still in progress at 1439z		AnonUS	FRI
	1426z	11 Feb	**12345 67890** repeated	Came up at 1350z		AnonUS	SAT
	1400z	12 Feb	**12345 67890** repeated	Came up at 1345z		AnonUS	SUN
	1400z	13 Feb	**12345 67890** repeated			AnonUS	MON
	1400z	14 Feb	**12345 67890** repeated			AnonUS	TUE
	1400z	15 Feb	**12345 67890** repeated			AnonUS	WED
	1400z	15 Feb	[**12345 67890**]		Via KiwiSDR Kansas	Danix	WED
	1400z	16 Feb	**12345 67890** repeated			AnonUS	THU
	1400z	16 Feb	[**12345 67890**]		Via KiwiSDR Kansas	Danix	THU
	1400z	17 Feb	**12345 67890** repeated			AnonUS	FRI
	1400z	18 Feb	**12345 67890** repeated			AnonUS	SAT
	1400z	19 Feb	**12345 67890** repeated			AnonUS	SUN
	1400z	20 Feb	**12345 67890** repeated			AnonUS	MON
	1400z	21 Feb	**12345 67890** repeated			AnonUS	TUE
	1400z	23 Feb	[18262 22501 35022]	Weekend call-ups		AnonUS	THU
8135	2300z	02 Feb	[67281 80821 03252]			AnonUS	THU
	2300z	03 Feb	[56562 60801 73322]			AnonUS	FRI
	2300z	05 Feb	20kHz wide signal from 8135-8155kHz with peaks every 50Hz. See 28 Oct 2016 for similar			AnonUS	SUN
	2300z	07 Feb	[53002 76321 80752]			AnonUS	TUE
	2300z	09 Feb	Only the usual hum present followed by the same signal as seen on 05 Feb			AnonUS	THU
	2300z	10 Feb	**12345 67890** repeated	Came up at 2254z with slow Morse		AnonUS	FRI
	2300z	12 Feb	**12345 67890** repeated	20kHz wide signal present form 8120-8140kHz		AnonUS	SUN
	2300z	14 Feb	**12345 67890** repeated			AnonUS	TUE
	2300z	16 Feb	**12345 67890** repeated			AnonUS	THU
	2300z	17 Feb	**12345 67890** repeated			AnonUS	FRI
	2300z	17 Feb	[**12345 67890**]			Danix	FRI
	2300z	19 Feb	**12345 67890** repeated			AnonUS	SUN

M12 IB ICW, some MCW / CW, short 0. Reuses many freqs year on year.

New ID's may be only for the month/sched shown, but not necessarily unknown . The reason for their reuse, some after long periods of time, is unknown.

New Year's Holidays in Russia
The New Year holidays in Russia resulted in the expected skeleton service from M12 for the first 10 days of the year, the 'core' IDs of 257 & 463 missing from their schedules while the remaining transmissions all sent null messages. From Wednesday, 11 January all schedules returned with the majority sending messages.

M12 Daytime Schedule heard in New Zealand
On February 02 Jean-Paul (JPL) logged the end of the 1330z transmission & the full 1350z sending on 8062kHz & 7462kHz respectively of the M12 ID 104 schedule using the remote tuner in New Zealand. This would be quite remarkable for an M12 signal originating in Russia. Then on the following day, JPL managed to hear the 1330z transmission again & sent us a recording that showed a strong, clear signal.

This made JPL wonder if the target for these transmissions might be Australia or New Zealand. We know from the Asiatic schedules that M12 operates to areas outside of Europe & that regular schedules are in current use.

The puzzling part is that the Asiatic schedules are not audible in Europe & have to be logged via distant on-line SDRs. However, the ID 104 schedule is also a very good signal into the UK - as well as into New Zealand. So are some of these transmissions also being relayed through a site outside of Europe?

7462	1350z	02 Feb	104 1 (6559 123) 85872 97136....	(Remote tuner New Zealand)	JPL	THU

Schedules still in Flux
M12 still seem to be experimenting & testing schedules. Daniel, (Danix) noted the 2210z ID 975 transmissions on various days of the week - before it settled down to a regular Monday/Thursday slot. Edd, (E.SMITH) logged ID 725 at 1300z on Tuesday, 17 January noted that it failed to appear on the following Tuesday, 24 January, before it reappeared again on Friday, 03 February - This time at the earlier time of 1230z.

Out of Schedule - 24 group Message
On Monday 27 February Following an unexpected XPA transmission at 0807z on 3835kHz, Ary, (AB) caught this out-of-schedule M12 just 23 minutes later. This message has only 24 groups - an unusually low count.

6835	0830z	27 Feb	687 1 (8590 24) 22326 68140.... 98222 99220 000		AB	TUE
			687 6 87 687 1 8590 24 8590 24 22326 68140 47776 90492 78784 82408 68423 59445 08496 92601 52677 35478 43053 53430 05042 84725 55483 32750 04661 67950 58301 02259 98222 99220 000 000			

Our comments in the last newsletter prompted Peter, (PoSW) to take a look at M12, resulting in this comprehensive log reproduced in full here;

"M12 Morse:- as stated on page 13 of En98, "M12 activity is currently at the lowest we have seen..... ". There was a time, not all that long ago, when tuning around in the mid evening on almost any day of the week would find an M12 with a strong signal. *(Yes, indeed, Peter. They were difficult to miss! - Ed).* A couple of M12 schedules have been noted in the first months of 2017, call "257" on 9,176 + 7,931 + 6,904 kHz, the usual twenty minute spacing, starting up at 1800 UTC on Wednesdays and at 1700 UTC on Mondays in February:-

08-Feb-17, Wednesday:- 1800 UTC start, DK/GC "4620 143". Running at the same time as the related E07 Wednesday schedule.

13-Feb-17, Monday:- 1700 UTC start, DK/GC "1181 79".

15-Feb-17, Wednesday:- 1800 UTC start, DK/GC "1058 130". Signal strengths generally between an indicated S7 to S9.

A UK morning M12 schedule logged on Sundays and Thursdays in January and February:-

22-Jan-17, Sunday:- 1010 UTC, 13,369 kHz, “369 369 369 1”, DK/GC “3985 157” x 2, S9+, very strong CW.
1030 UTC, 14,669 kHz, second sending, S8 to S9.
1050 UTC, 15,969 kHz, third sending, S9.

26-Jan-17, Thursday:- 1010 UTC, 13,369 kHz, “369 369 369 000”, over S9.
1030 UTC, 14,669 kHz, second sending, slightly weaker signal.

29-Jan-17, Sunday:- 1010 UTC, 13,369 kHz, and 1030 UTC, 14,669 kHz, both over S9, “369 369 369 000”.

Moving up in frequency;

02-Feb-17, Thursday:- , 1010 UTC, 13,569 kHz, “582 582 582 000”.
1030 UTC, 14,869 kHz, second sending.

05-Feb-17, Sunday:- 1010 UTC, 13,569 kHz, “582 582 582 000”, peaking well over S9.
1030 UTC, 14,869 kHz, second sending, also over S9.

09-Feb-17, Thursday:- 1010 UTC, 13,569 kHz, and 1030 UTC, 14,869 kHz, “582 582 582 000”, both over S9.

12-Feb-17, Sunday:- 1010 UTC, 13,569 kHz, “582 582 582 000”, S9.
1030 UTC, 14,869 kHz, second sending, slightly weaker signal.

16-Feb-17, Thursday:- 1010 UTC, 13,569 kHz, a full message for a change, “582 582 582 1”, DK/GC “2016 83” x 2, over S9.
1030 UTC, 14,869 kHz, second sending, also over S9.
1050 UTC, 16,269 kHz, third sending, also pushing the S-meter over the “9” mark.

19-Feb-17, Sunday:- 1010 UTC, 13,569 kHz, “582” and “2016 83” again, over S9.
1030 UTC, 14,869 kHz, and 1050 UTC, 16,269 kHz, repeats, both S9.

26-Feb-17, Sunday:- 1010 UTC, 13,569 kHz, and 1030 UTC, 14,869 kHz, “582 582 582 000”, both S9 signals."

Asiatic M12 Scheds (See EN97 for Token's Asiatic Schedule)

14493/13393/11593	0100/20/40z	03 Jan	435 000	(Via Manila Philippines SDR)	BR	TUE
	0100/20/40z	05 Jan	435 000	(Via Hong Kong SDR)	BR	THU
	0100/20/40z	10 Jan	435 000	(Via Manila Philippines SDR)	BR	TUE
	0100/20/40z	12 Jan	435 000	(Via Hong Kong SDR)	BR	THU
	0100/20/40z	17 Jan	435 1 (875 57) 93704 02825....	(Via Hong Kong SDR)	BR	TUE
	0100/20/40z	19 Jan	435 1 (875 57) 93704 02825....	(Via Hong Kong SDR)	BR	THU
	0100/20/40z	26 Jan	435 000	(Via Hong Kong SDR)	BR	THU
14793/13903/12203	0100/20/40z	02 Feb	792 1 (382 63) 76096 2 . .13....	(Via Manila Philippines SDR)	BR	THU
	0100/20/40z	07 Feb	792 1 (564 117) 11620 33927....	(Via Manila Philippines SDR)	BR	TUE
	0100/20/40z	14 Feb	792 000	(Via Tucson Arizona SDR)	BR	TUE
	0100/20/40z	16 Feb	792 000	(Via Manila Philippines SDR)	BR	THU
	0100/20/40z	21 Feb	792 000	(Via Manila Philippines SDR)	BR	TUE
	0100/20/40z	23 Feb	792 000	(Via Hong Kong SDR)	BR	THU
	0100/20/40z	28 Feb	792 000	(Via Hong Kong SDR)	BR	TUE

European M12 Logs

January 2017: **New scheds in bold type**

5361/4461/4061	2200/20/40z	04 Jan	340 000		BR	WED
	2200/20/40z	11 Jan	340 1 (9047 139) 84308 78319....		BR	WED
	2200/20/40z	18 Jan	340 000		BR	WED
	2200/20/40z	25 Jan	340 1 (3892 155) 53378 52478....		BR	WED
5838/7438/9238	0600/20/40z	07 Jan	842 000		BR	SAT
	0600/20/40z	14 Jan	842 1 (9047 139) 84308 78319 ..... 49781 56640 000 000		E.SMITH/HFD	SAT
	0600/20/40z	21 Jan	842 000		BR	SAT
	0600/20/40z	28 Jan	842 1 (3892 155) 53378 52478..... 47695 55634 000 000		E.SMITH	SAT
6937/5737/---	2210/30/50z	09 Jan	975 000 Very strong	[Note 1]	Danix	MON
	2210/30/50z	12 Jan	975 000		BR	THU
	2210/30/50z	16 Jan	975 000		BR	MON
	2210/30/50z	19 Jan	975 000		BR	THU
	2210/30/50z	26 Jan	975 000		BR	THU
7692/6792/5892	1310/30/50z	07 Jan	678 000		HFD	SAT
	1310/30/50z	12 Jan	678 1 (4921 63) 14867 43438....		BR	THU
	1310/30/50z	14 Jan	679 1 (4921 63) 14867 43438....		BR	SAT
	1310/30/50z	19 Jan	678 000		E.SMITH	THU
	1310/30/50z	21 Jan	678 000		BR	SAT
	1310/30/50z	26 Jan	678 1 (3546 71) 73613 85499.... 00134 52462 000 000		AB/E.SMITH	THU
	1310/30/50z	28 Jan	678 1 (3546 71) 83613 85499....		BR	SAT
8047/6802/5788	1900/20/40z	04 Jan	NRH		BR	WED
	1900/20/40z	11 Jan	463 1 (9614 141) 97689 13921....		BR	WED
	1900/20/40z	18 Jan	463 1 (2579 133) 65291 61272....		BR	WED
	1900/20/40z	25 Jan	463 1 (6480 142) 33951 70845....		BR	WED

9176/7931/6904	1800/20/40z	04 Jan	NRH	BR	WED
	1800/20/40z	11 Jan	257 1 (9839 132) 31963 18418....	BR	WED
	1800/20/40z	18 Jan	257 1 (9959 147) 39583 98208....	BR	WED
	1800/20/40z	25 Jan	257 1 (8054 147) 18839 09949 ..... 76332 22101 000 000 Strong	BR/Topol	WED
8116	**1742 (IP) - 1748z**	**25 Jan**	**..... 81120 31797 000 000 Very Strong**	Topol	WED
10547	**1400z**	**09 Jan**	**505 1 (2713 49) 36213 36588 ... 56803 000 000** Weak sigs	Gert	MON
10547/9047/7547	**1400/20/40z**	**11 Jan**	**505 1 (2713 49) 36213 36588.... 56803 000 000**	AB	WED
	1400/20/40z	16 Jan	505 000	BR	MON
	1400/20/40z	23 Jan	505 1 (5576 57) 54642 61599....	BR	MON
	1400/20/40z	25 Jan	505 1 (5576 57) 54642 61599.... 62952 41679 000 000	E.SMITH	WED
	1400/20/40z	18 Jan	505 000	E.SMITH	WED
	1400/20/40z	30 Jan	505 000	BR	MON
11369/14669/15969	1010/30/50z	15 Jan	369 1	HFD	SUN
	1010/30/50z	19 Jan	369 1 (3985 157) 92408 57669 ..... 86994 91714 000 000	E.SMITH	THU
	1010/30/50z	22 Jan	369 1 (3985 157) Very strong	PoSW	SUN
	1010/30/50z	26 Jan	369 000	E.SMITH/PoSW	THU
	1010/30/50z	29 Jan	369 000	PoSW	SUN
13386/12189/11491	**1300/20/40z**	**17 Jan**	**725 1 (9051 60) 58885 91650.... 11789 000 000** (Failed to appear 24 Jan)	E.SMITH	TUE
14377/13461/12114	**1230/1250/1310z**	**19 Jan**	**317 1 (518 44) 91980 50487 ..... 08668 60324 000 000** [Note 2]	E.SMITH	THU
	1230/1250/1310z	**31 Jan**	**317 1 (6209 68) 25311 99006....**	BR	TUE
14669	1030z	15 Jan	369 1 (5304 193) 21604 46105 ... 69244 000 000	Gert	SUN

[Note 1] Not a new schedule. It has been jumping around the week at those times and frequencies, now it seems to be on Monday. The frequencies don't seem to change at all. (*Danix)*

[Note 2] During 13461kHz 1250z there was a break in transmission, a restart of the Call – Up, then message resent from the beginning.

February 2017:

5429/4629/4029	2200/20/40z	01 Feb	460 000	HFD	WED
	2200/20/40z	08 Feb	460 1 (800 67) 69908 30370....	BR	WED
	2200/20/40z	15 Feb	460 000	BR	WED
	2200/20/40z	22 Feb	460 1 (6963 177) 99543 35423....	BR	WED
6835	**0830z**	**27 Feb**	**687 1 (8590 24) 22326 68140.... 98222 99220 000 000**	AB	MON
6937/5737/---	2210/30/50z	02 Feb	975 000	BR	THU
	2210/30/50z	06 Feb	975 000	BR	MON
	2210/30/50z	09 Feb	975 000	BR	THU
	2210/30/50z	13 Feb	975 000	BR	MON
	2210/30/50z	16 Feb	975 000	BR	THU
	2210/30/50z	20 Feb	975 000	BR	MON
	2210/30/50z	27 Feb	975 000	BR	THU
7637/9137/10237	0600/20/40z	04 Feb	612 000	E.SMITH/HFD	SAT
	0600/20/40z	11 Feb	612 1 (800 67) 69908 30370..... 11882 37587 000 000	AB/E.SMITH	SAT
	0600/20/40z	18 Feb	612 000	E.SMITH	SAT
	0600/20/40z	25 Feb	612 1 (6963 177) 99543 35423..... 69519 97552 000 000	AB/E.SMITH	SAT
8047/6802/5788	1900/20/40z	01 Feb	463 1 (8981 140) 80997 85571....	BR	WED
	1900/20/40z	08 Feb	463 1 (8591 146) 23732 47155....	BR/HFD	WED
	1900/20/40z	15 Feb	463 1 (9253 148) 84069 01372....	BR	WED
	1900/20/40z	22 Feb	463 1 (1522 131) 47334 08251....	BR	WED
9162/8062/7462	1310/30/50z	02 Feb	104 1 (6559 123) 85872 97136 ..... 93214 12684 000 000	E.SMITH/HFD	THU
	1310/30/50z	04 Feb	104 1 (6559 123) 85872 97136 ..... 93214 12684 000 000	E.SMITH/HFD	SAT
	1310/30/50z	09 Feb	104 000	E.SMITH	THU
	1310/30/50z	11 Feb	104 000	AB	SAT
	1310/30/50z	16 Feb	104 1 (1913 87) 98525 67263 ..... 48611 99751 000 000	E.SMITH	THU
	1310/30/50z	18 Feb	104 1 (1913 87) 98525 67263 ..... 48611 99751 000 000	E.SMITH	SAT
	1310/30/50z	23 Feb	104 000	E.SMITH	THU
	1310/30/50z	25 Feb	104 000	E.SMITH	SAT
9176/7931/6904	1800/20/40z	01 Feb	257 1 (Weak - unusable on all 3 freqs)	BR	WED
	1800/20/40z	08 Feb	257 1 (4620 143) 66569 35566....	BR/PoSW	WED
	1700/20/40z	**13 Feb**	**257 1 (1181 79)**	PoSW	MON
6904	**1733z**	**15 Feb**	**257 1 (8364 81) 97396 27691.....54897 32769 000 000**	F5JBR	WED
	1800/20/40z	15 Feb	257 1 (1058 130) 24760 66066....	BR/PoSW	WED
	1800/20/40z	22 Feb	257 1 (8618 146) 03235 72343....	BR	WED
13362/11562/10362	**1400/20/40z**	**01 Feb**	**353 000**	E.SMITH	WED
	1400/20/40z	06 Feb	353 1 (4487 91) 41649 62887..... 31689 84308 000 000 [Note3]	AB	MON
	1400/20/40z	08 Feb	353 1 (4487 91) 41649 62887..... 31689 84308 000 000	E.SMITH	WED
	1400/20/40z	13 Feb	353 1 (2643 135) 50339 99655....	BR	MON

13362/11562/10362	1400/20/40z	15 Feb	353 000	E.SMITH	WED
	1400/20/40z	20 Feb	353 000	BR	MON
	1400/20/40z	22 Feb	353 000	AB/E.SMITH	WED
	1400/20/40z	27 Feb	353 000	BR	MON
13386/12189/11491	**1230/1250/1010z**	**03 Feb**	**725 1 (3499 74) 05347 48386..... 18950 23116 000 000** [Note 4]	E.SMITH	FRI
13569/14869/16269	1010/30/50z	02 Feb	582 000	E.SMITH/HFD/PoSW	THU
	1010/30/50z	05 Feb	582 000 Strong	PoSW	SUN
	1010/30/50z	09 Feb	582 000	E.SMITH/PoSW	THU
	1010/30/50z	12 Feb	582 000	PoSW	SUN
	1010/30/50z	16 Feb	582 1 (2016 83) 95483 79897 ..... 56465 53493 000 000	E.SMITH/PoSW	THU
	1010/30/50z	19 Feb	582 1 (2016 83) Strong	PoSW	SUN
	1010/30/50z	23 Feb	582 1 (308 91) 22259 27761 ..... 95627 67199 000 000	AB/E.SMITH	THU
	1010/30/50z	26 Feb	582 000 Strong	PoSW	SUN

[Note 3] 1400z sending stopped after grp24. Sent 353 353 353 1 before restarting message from grp 15 *(AB)*

[Note 4] Last heard on Tuesday 17 Jan with a 1300/20/40z time slot using same 725 I.D *(E.SMITH)*

M12 10547/9047/7547kHz 1400/1420/1440z 11 Jan 2017

505 505 505 1 (R2m) 2713 49 2713 49

36213 36588 55062 89770 31765 29053 39337 29160 60210 66981
87871 80534 18075 48729 99472 33752 54031 62963 24757 08139
68076 73146 49332 60180 84073 95727 95107 23084 74626 45653
50157 64495 26012 73991 66373 85772 61275 95948 83460 59791
16807 22420 36411 90644 46359 18114 59494 01255 56803
000 000

Courtesy AB

M12 14377/13461/12114kHz 1230/1250/1310z 19 Jan 2017

317 317 317 1 (R2m) 518 44 518 44

91980 50487 90978 62875 96180 03951 74718 80728 49534 21210
28634 70953 68026 30700 06338 21827 80391 71758 63262 11701
18836 94898 78013 95482 36531 56564 05033 87601 03505 67823
53219 13548 59397 24039 39762 09394 41157 26871 36570 81645
10587 30863 08668 60324 000 000

Courtesy E.SMITH

M14 IA MCW / ICW Short 0

January 2017:

3687	1600z	17 Jan	273 000	MCW	RNGB	TUE
4636	1820z	10 Jan	186 (**2222** 518 86) 3258 53500....61220 = 518 86 00000 [Note 1]		AB/HFD	TUE
4753	1920z	25 Jan	748 (unworkable) 0000z Weak Same msg as noted by Ary on 14 Dec & 10 Jan		HFD/JkC	WED
4975	1800z	06 Jan	382 00000		HFD	FRI
5374	1700z	06 Jan	382 00000		HFD	FRI
	1700z	20 Jan	382 00000		AB	FRI
	1714z	20 Jan	432 88266 70954 88233 49206 59234 81822 5166S (stops)		AB	FRI
17458	0930z	10 Jan	617 00000		RNGB	TUE
	0930z	25 Jan	617 00000		E.SMITH/RNGB	WED

[Note 1] Russian voices heard after the transmission. This also happened on the 06 Jan. I don't know if it is connected to M14. The carrier was still on the air in both cases. Message contained some 2 & 3 fig groups as well as 5 fig.

February 2017:

4636	1820z	14 Feb	186 (518 86) 32498 53900.... 61220 **51** (Stops) [Note 2]	CW	AB	TUE
4761	1918 - 1941z	15 Feb	586 [748] (518 86) 32498 53900....61220 518 86 00000 Strong [Note 3]	MCW	BR	WED
5240	2300z	12 Feb	376 (490 91) 52378 90126.... 62841 32465 490 91 00000	CW	AB	MON
	2300z	27 Feb	376 (184 59) 13253 26472.... 12311 84502 184 59 00000	CW	AB	MON
5430	0758z	11 Feb	171 (490 91) 52378 90126.... 62841 32465 490 91 00000	CW	AB/HFD	SAT
	0800z	25 Feb	171 (184 59) 13253 26472.... 12311 84502 184 59 00000	CW	AB/E.SMITH	SAT
	0843 - 0844z	**25 Feb**	60066 818015 88200 46813 14275 59900 94503 79388 78007 228 [Note4]	MCW	E.SMITH	SAT
5560	**0831z**	**11 Feb**	**05028**	CW	AB	SAT
	0832z	**11 Feb**	**957**	CW	AB	SAT
	0850z	**11 Feb**	**89Ö**	CW	AB	SAT
	0858z	11 Feb	171 (490 91) 52378 90126.... 62841 32465 490 91 00000	CW	AB/HFD	SAT
	0900z	25 Feb	171 (184 59) 13253 26472.... 12311 84502 184 59 00000	CW	AB/E.SMITH	SAT
5825	0000z	13 Feb	376 (490 91) 52378 90126.... 62841 32465 490 91 00000	CW	AB	MON
	0000z	26 Feb	376 (184 59) 13253 26472.... 12311 84502 184 59 00000	CW	AB	MON
5947	0558z	12 Feb	382 00000		AB/HFD	SUN

6767	0658z	12 Feb	382 00000			AB/HFD		SUN
8165	0606z (IP)	21 Feb	In Progress	…. 89456 89340 124 89 00000	ICW	E.SMITH		TUE
17458	0930 - 0934z	10 Feb	617 00000		CW	E.SMITH		FRI

[Note 2] Call 186 sent for 3 minutes - Stops & resumes at 1829z. Msg sent complete but ending DK/GC cut short. *(AB)*

[Note 3] Call 196 sent for 4 minutes - then 586 746 (Each singly), then 748 for 1 minute. ID changed on the fly? *(BR)*

[Note 4] Single groups. Transmission & carrier cut abruptly at 0844z *(E.SMITH)*

M14 5430kHz 0800z & 5560kHz 0859z 25 February 2017

171 (R4) 184 184 59 59 = =

13253 26472 48950 52141 08745 63532 21745 53413 96423 84276
24132 68321 07621 31242 74629 73241 96313 45261 76498 51823
23456 73192 42613 53804 61235 62897 41324 89376 53421 06213
01834 63505 32676 38101 78365 23609 56782 25301 79178 54305
41326 98635 27467 08531 34245 87625 45631 36782 25314 10250
73414 53212 07642 46263 34127 09751 49653 12311 84502 = =

184 184 59 59 00000

Courtesy AB & E.SMITH

M23 O ICW

No logs

M24 IA MCW / ICW / MCWCC (high speed version of M14), short 0

No logs

M76 Schedule on 3280kHz (Changes to 3820kHz or 3294kHz over the year). A detailed analysis can be found in ENIGMA Newsletter 93 - May2016.

Difficult to receive with a good signal into the UK most of the time, monitors rely on various SDRs for logs of this station.

After the signal became too weak to receive due to the advancing summer, the signal was expected to reappear towards late autumn. Unfortunately, despite regular attempts by Guy (GD) & occasional checks by other monitors the station has not been heard. The station was regularly heard on the three known frequencies in previous years & was still using these when rediscovered early in 2016. We will continue to make checks for this station, but it does appear as if this may have gone the way that many others have over the years. Our thanks to Guy for his interest in this station over a number of years & for his continued efforts to search for this station.

M97 CW, partner station to V30 10375kHz Starts 1453 - 1500z (Variable) .

Due to the poor reception of this signal in both the UK and Canada, GlobalTuners receivers at Hong Kong, Mojave Desert & Sydney - as well as the Twente SDR, were used frequently to confirm the msg detail.

No logs. Not heard for some time now, but has previously been absent for long periods without activity before suddenly reappearing - usually with the same message!

Morse Stations - Not Number Related

M51 XlX

3881//6825 Usual unscheduled & random continuous transmissions heard throughout January & February, often ceasing just before, or commencing shortly after the daily M51a transmissions. These seem to be almost continuously transmitted on these two frequencies now.

6825	0832 (IP) - 0920z	02 Feb	Continuous 5-character groups including punctuation & other symbols QAQSD NNCJE 74302 DRWED ?/.<SK>' NVBXC NSWPO NDEYJ DJKED AXZVS NVLRU LDPEJ WRSFU 43269 HGKRO ... ends at 0920 UTC	AB	TUE.

M51a (FAV22) Daily Mon - Fri, Sun & some Sats. See NL 72 for details

6825	0758z (IP)	08 Jan	VVV (x3) DE FAV22 (x3) QLH 3881/5825 KHz			(Remote tuner New Zealand)	JPL	SUN
3881//6825								
	1230 - 1303z	21 Feb	Mardi-Leçon	02-2/1 Codé	02-2/2 Clair,	02-2/3 Codé, 02-2/4 Clair (600 grps/hr)	BR	TUE
	1230 - 1307z	22 Feb	Mercredi- Leçon	03-2/1 Codé,	03-2/2 Clair,	03-2/3 Codé, 03-2/4 Clair (720 grps/hr)	BR	WED
	1230 - 1306z	24 Feb	Vendredi- Leçon	05-2/1 Codé,	05-2/2 Clair,	05-2/3 Codé, 05-2/4 Clair (960 grps/hr)	BR	FRI

M89 O

This is a summary of activity from the M89 stations.

Operator Chat from M89

Op. chat & traffic reported on the following freqs. (All in kHz).

3145 3412 3415 3678 3757 3844	4096 4119 4120 4125 4159 4242 4301 4321 4377 4435 4669 4769 4855	5104 5105 5233 5285 5299 5331 5400 5455 5481 5523 5535 5587 5588	5591 5778 5792 5825 5829 5831	6622 6666 6743 6865	7750 7931 7932	10217 10566

New Scheds for Jan / Feb 2017: **From logs submitted from JPL**

V TR2Q (x3) DE 5TUH (x2) - Believe this new Round Slip & frequencies replaces NG3Y DE 2QLC

4060//4573	New Round Slip & Freqs	First heard 01 Jan	V TR2Q (x3) DE 5TUH (x2)
4060//4609	New Round Slip & Freqs	First heard 04 Jan	V TR2Q (x3) DE 5TUH (x2)
4060//4609	Changed Round Slip	First heard 09 Jan	V FIK3 (x3) DE 54V5 (x2)
4060//4609	Changed Round Slip on //	First heard 11 Jan	V TR2Q (x3) DE 5TUH (x2) on 4060kHz
		First heard 11 Jan	V FIK3 (x3) DE S4JH (x2) on 4609kHz
4060//4609	Round Slip back to original	First heard 12 Jan	V TR2Q (x3) DE 5TUH (x2)
4060	Round Slip sent only on 4060	First heard 05 Feb	V TR2Q (x3) DE 5TUH (x2)
4609	Round Slip sent only on 4609	First heard 05 Feb	V FIK3 (x3) DE H4JH (x2)
	(Returned to sending the same Round Slip on 27 February - V TR2Q (x3) DE 5TUH (x2)		

Both Round Slips in traffic at the same time. Round Slip on 4609 sending faster than the one on 4060. Interesting to see that both stations are sending the same message number, group count, date, and time. However, the messages are different!!!

6053//10458	New Round Slip & Freqs	First heard 01 Jan	V TR2Q (x3) DE 5TUH (x2)
6053//10178	New Round Slip & Freqs	First heard 12 Jan	V TR2Q (x3) DE 5TUH (x2)
6053	Round Slip sent only on 4060	First Heard 11 Feb	V TR2Q (x3) DE 5TUH (x2)
10178	Round Slip sent only on 10178	First heard 11 Feb	V FIK3 (x3) DE H4JH (x2)
10178//NRH	New Round Slip & Freqs	First heard 06 Jan	V TR2Q (x3) DE 5TUH (x2)
10178//NRH	Round Slip Changed	First heard 11 Jan	V FIK3 (x3) DE 54V5 (x2)
3377//3777//4532	New freq for this Round Slip	First heard 13 Jan	V M8JF (x3) DE RIS9 (x2)
8430	New freq for this Round Slip	First heard 15 Feb	V BR3S (x3) DE JU9D (x2)
4720//**5150**	New freq for this Round Slip	First heard 21 Feb	VVV WNF DE FXM
5081//NRH	New Round Slip & Freq	First heard 21 Feb	VV WKY9 (x3) DE DOG5 (x2) V

Chart of M89 Freq & Call signs heard in Jan / Feb 2017 **New Scheds shown in Bold Type** **Courtesy of JPL with additions from F5JBR**

Freq in KHz	Call Slip
3377//4532	**V M8JF (x3) DE RIS9 (x2)**
3642//NRH	V DKG6 (x3) DE 3A7D (x2)
3642//7602	V DKG6 (x3) DE 3A7D (x2)
3777//4532	V M8JF (x3) DE RIS9 (x2)
4060//NRH	**V TR2Q (x3) DE 5TUH (x2)**
4060//4573	**V TR2Q (x3) DE 5TUH (x2)**
4060//4609	**V TR2Q (x3) DE 5TUH (x2)**
4060//4609	**V FIK3 (x3) DE 54V5 (x2)**
4060//4609	V FIK3 (x3) DE **S4JH** (x2) (See notes Above)
4131//NRH	V JKDJ (x3) DE SLBC (x2)
4720//**5150**	VVV WNF (x3) DE FXM (x2)
4609	**V FIK3 (x3) DE H4JH (x2)** (See notes Above)
4860// NRH	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ?
4860// 6840	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ?
5081//NRH	**VV WKY9 (x3) DE DOG5 (x2) V**
5177//NRH	V JKDJ (x3) DE SLBC (x2)

Freq in kHz	Call Slip
5801//NRH	V DKG6 (x3) DE 3A7D (x2)
5801//10180	V DKG6 (x3) DE 3A7D (x2)
6053//10458	**V TR2Q (x3) DE 5TUH (x2)**
6053//10178	**V TR2Q (x3) DE 5TUH (x2)**
6793//NRH	V M8JF (x3) DE RIS9 (x2)
6793//8060	V M8JF (x3) DE RIS9 (x2)
6840//10640	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K
7602//NRH	V DKG6 (x3) DE 3A7D (x2)
8350//NRH	V WNF (x3) DE FXM (x2)
8430//NRH	**V BR3S (x3) DE JU9D (x2)**
10178//NRH	**V TR2Q (x3) DE 5TUH (x2)**
10178//NRH	**V FIK3 (x3) DE 54V5 (x2)**
10178/	**V FIK3 (x3) DE H4JH (x2)** (See notes above)
10180//NRH	V DKG6 (x3) DE 3A7D (x2)
10458//NRH	**V TR2Q (x3) DE 5TUH (x2)**
10640//NRH	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K *Courtesy JP*

M89 3757kHz 1238 - 1259z 10 January 2017

UFT8

VVV KFLH DE UFT8 QSY 0257 QSY 0257 K K (IP – Cont'd - 1238z)
VVV KFLH DE UFT8 QSY 4636 QSY 4636 K K (1244z)
..86 DE KFLH KFLH F QSA 2 QSA ?K
(Appears that QSY 4637 refers to this frequency – 3757!!!)
RRR QSA 4 ... K (1245z0
R R BT BT 543 EEEEE AR BT
3655 AR
R HR WK NR 312 K
HR WK NR 312 K
R R HR NR 106 K
R R HR MSG GA K (1247z)
R OK
MSG NR 4079 CK 50 35 0110 2020 RMKS .832 TO 9.62 K K (1247z)
NR 4079 CK 4. 35 0110 2020 RMKS
R TIME K
R R .. BT 2020
R OK K (1249z)
R GA
BT BT BT .. T .. (Fading badly now – 1249z)
AR
R RPT 14 K EEEE RPT 14W K (1252z)
RPT 32W TO 35W K
R RPT 41W K (1253z)
R OK QSL 2054 K (1253z)
R AS AS (1254z)
HR 7G GA
NR 4089 EEEEEE (1256z)
HR 7G GA
NR 4089/K EEEEEE
HR 7G GA
NR 489 CK 41 35 0110 2020 RMKS 9462 TO 4832 K (1258z)
R GA
R R 7G GA
7N4T ATTA A75A A764
(Cont'd – unable to monitor any longer – 1259z)

Courtesy JPL

M89 7931kHz 0931 (IP) - 0938z 22 January 2017

CZTA

H29M DE CZTA (IP – Machine sent – 0933z)
NWQT DE CZTA K (0933z)
NWQT DE CZTA K (0934z)
WWKW DE CZTA K (0935z)
WWKW DE CZTA K (0936z)
9OFF DE CZTA K (0937z)
K86J DE CZTA K (0938z - Silent)

M89 3145kHz 1726 (IP) - 1728z 29 January 2017

D8YF / 7THR

VV 5PUM DE D8YF K (IP - Machine sent – 1725z)
OK QSL QSL 0125 0125 K (1726z)
HW NR 109 109
R NIL SK GB (1726z)
VV 5PUM DE 7THR K
R OK QSL QSL 0128 0128 (1727z)
R HR NR 012 012
NIL SK GB (1728z - Silent)

M89 3844kHz 1655 - 1707z 13 January 2017

7ZZ DE JVG

7ZZ DE JVG QSA ? VVV (IP - 1655z)
7ZZ DE JVG QSA ? K (1655z)
VVV 7ZZ (x3) DE JVG (x2) QSA T QSY 28 (1656z)
VVV 7ZZ DE JVG QSA T QSY 47 QSA T QSY 28
VVV 7ZZ DE JVG QSA T QSY 28 QSA T QSY 28 K
(1700z - Silent)
VVV 7ZZ DE JVG QSA T QSY 28 QSA T QSY 28 QSV QSV K (1702z)
VVV 7ZZ DE JVG QSV QSV (1705z)
VVV 7ZZ DE JVG QSA 1 QSV QSV K
VVV 7ZZ DE JVG QSA 1 QSV QSV K (1707z - Silent)

Courtesy JPL

DP Stations

7610	Call sign DP91	All logged via remote tuner in Siberia			
	0307 - 0315z	21 Jan	Calls to DP stations DP6891 & DP6292	JPL	SAT
	0300 - 0305z	22 Jan	Calls to DP stations DP6291, DP6891, DP8391	JPL	SUN
	0257 - 0310z	29 Jan	Calls to DP stations DP85, DP6291, DP6691, DP8391	JPL	SUN
	0300 (IP) - 0315z	30 Jan	Calls to DP stations DP 62, DP6191, DP6291, DP6821, DP6891, DP6991 DP8391	JPL	MON

M95 O XSV, XSV70, XSV85

M95 Morse Logs (Bold type indicates new logging)

4243	Message number differs from current XSV70 and XSV85 message numbers.				
	2347 (IP) - 2350z	12 Feb	NR 64 CK 16 35 0213 0638 BT (Remote tuner Japan)	JPL	SUN
			NR 25 CK 088 35 0213 .... (Audio problems on SRD)	JPL	SUN
	2342 (IP) - 2352z	13 Feb	NR 013 CK 19 35 0214 063. BT (Remote tuner Hong Kong)	JPL	MON
			NR 06 . CK 173 35 0214 . ... BT	JPL	MON

4243//9054	Message number differs from current XSV70 and XSV85 message numbers. All logged via remote tuner New Zealand unless stated.				
	1148 (IP) - 1222z	01 Jan	NR 026 CK 20 35 0101 1510 BT	JPL	SUN
			NR 02 CK 166 35 0101 1600 BT	JPL	SUN
			NR 024 CK 19 35 0101 1640 BT	JPL	SUN
	2344 (IP) - 2350z	01 Jan	NR 025 CK 19 35 0102 0650 BT	JPL	SUN
	1149 (IP) - 1154z	02 Jan	CK 170 35 0102 1620 (Sent EXTREMELY SLOW!)	JPL	MON
	1147 (IP) - 1216z	03 Jan	NR 030 CK 22 35 0103 1448 BT	JPL	TUE
			NR 06 CK 132 35 0103 1625 BT	JPL	TUE
	1140 - 1217z	04 Jan	NR 032 CK 18 35 0104 1525 BT	JPL	WED
			NR 08 CK 122 35 0104 1613 BT	JPL	WED
			NR 033 CK 15 35 0104 1631 BT	JPL	WED
	1141 (IP) - 1206z	06 Jan	NR 036 CK 20 35 0106 1506 BT	JPL	FRI
			NR 039 CK 21 35 0106 1639 BT	JPL	FRI
			NR 12 CK 146 35 0106 1624 BT	JPL	FRI
	1200 - 1207z	11 Jan	NR 22 145 35 0111 1612 BT	JPL	WED
	1200 - 1216z	12 Jan	NR 062 CK 22 35 0119 1526 BT	JPL	THU
			NR 38 178 35 0119 1548 BT	JPL	THU
			NR 080 30 35 0119 1641 BT	JPL	THU
			NR 081 17 35 0119 1643 BT	JPL	THU
	1146 (IP) - 1216z	21 Jan	NR 066 CK 21 35 0121 1512 BT	JPL	SAT
			NR 42 CK 158 35 0121 1605 BT	JPL	SAT
			NR 089 CK 20 35 0121 1654 BT	JPL	SAT
	0852 (IP) - 0905z	22 Jan	NR 44 CK 133 35 0122 1536 BT	JPL	SUN
			NR 092 CK 20 35 0122 1630 BT	JPL	SUN

	0853 (IP) - 0901z	23 Jan	NR 070 CK 17 35 0123 1531 BT		JPL	MON
			NR 46 CK 129 35 0123 1605 BT		JPL	MON
			NR 095 CK 15 35 0123 1622 BT		JPL	MON
	1144 (IP) - 1225z	31 Jan	NR 086 CK 29 35 0131 1518 BT		JPL	TUE
			NR 62 CK 182 35 0131 1629 BT		JPL	TUE
			NR 027 CK 23 35 0131 1632 BT		JPL	TUE
	1149 (IP) - 1212z	09 Feb	NR 004 CK 22 35 0209 1521 BT		JPL	THU
			NR 18 CK 101 35 0209 1601 BT		JPL	THU
			NR 054 CK 16 35 0209 1621 BT		JPL	THU
	1140 - 1205z	13 Feb	NR 012 CK 19 35 0213 1558 BT		JPL	MON
			NR 26 CK 148 35 0213 1615 BT		JPL	MON
			NR 066 CK 18 35 0213 16A9 BT		JPL	MON
	0911 (IP) - 0913z	14 Feb	Msgs in 3-character code No headers logged		JPL	TUE
	1146 (IP) - 1156z	19 Feb	NR 024 CK 29 35 0219 1513 BT		JPL	SUN
			NR 38 CK 211 35 0219 1610 BT		JPL	SUN
	1140 (IP) - 1205z	20 Feb	NR 026 CK 35 35 0220 1521 BT		JPL	MON
			NR 087 CK 23 35 0220 1616 BT		JPL	MON
			NR 40 CK 209 35 0220 162. BT		JPL	MON
	1143 (IP) - 1211z	21 Feb	NR 018 20 35 0221 1526 BT		JPL	TUE
			NR 42 CK 133 35 0221 1557 BT		JPL	TUE
			NR 090 CK 22 35 0221 1608 BT		JPL	TUE
	1156 (IP) - 1220z	23 Feb	NR 46 CK 154 35 0223 1500 BT		JPL	THU
			NR 032 CK 25 35 0223 1518 BT		JPL	THU
			NR 096 CK 13 35 0223 1541 BT		JPL	THU
4283	Call sign XSV70					
	1327 (IP) - 1338z	12 Feb	NR 129 CK 189 35 0212 1619	(Remote tuner Japan)	JPL	SUN
4364//8073	Call Sign XSV85		All logged via remote tuner New Zealand unless stated.			
	1130 - 1145z	03 Jan	0009 CK 180 35 0103 1552 BT		JPL	TUE
	1131 - 1144z	31 Jan	NR 0110 CK 240 35 0131 1521 BT		JPL	TUE
	1140 - 1147z	07 Feb	NR 0131 CK 320 35 0207 1551 BT		JPL	TUE
	1130 - 1148z	09 Feb	NR 0138 CK 4A 35 0209 A528 BT		JPL	THU
			NR 0139 CK 220 35 0209 1600 BT		JPL	THU
	1130 - 1203z	13 Feb	NR 0154 CK 319 35 0UA3 A557 BT		JPL	MON
			NR 0155 CK 41 35 0UA3 A6TN BT		JPL	MON
	1130 - 1139z	20 Feb	NR 0173 CK 225 35 0220 1523 BT		JPL	MON
	1135 - 1143z	21 Feb	NR 0175 CK 39 35 0221 1523 BT		JPL	TUE
			NR 0176 CK 226 35 0221 1534 BT		JPL	TUE
4688	05 05 05					
	1237 (IP) - 1249z	11 Feb	05 05 05 & Op. chatter	(Remote tuner New Zealand)	JPL	SAT
5120	Message format indicates part of QV5B family					
	1204 - 1221z	02 Jan	BT 689/X6558/8316/12/21/71/XL158A/COMM/8865 AR	(Remote tuner New Zealand)	JPL	MON
			NR 04/CCK CK 28 39 0102 2000 RMKS 8865 TO 898. 9965 3505 0297 35DE		JPL	MON
	1534 (IP) - 1038z	28 Feb	NR 56/CCK CK 28 39 0228 2330 RMKS 0079 TO 2047 5013 .221 2376 0357 BT		JPL	TUE
5308	Message format indicates QV5B family					
	1409 (IP) - 1433z	17 Jan	MSG NR 001 CK 299 13 0117 22.. BT	(Remote tuner New Zealand)	JPL	TUE
			NR 0001/CCK CK299 14 0117 2200 RMKS 018. TO 0111 0112 BT			
5500	**Message format indicates QV5B family**					
	1036 (IP) - 1042z	01 Jan	NR 01/CCK CK 55 53 .... 90 RMKS CQ BT	(Remote tuner New Zealand)	JPL	SUN
	1230 (IP) - 1258z	08 Jan	**KRSY - 4 letter coded messages - Very Rare**	(Remote tuner New Zealand)	JPL	SUN
	1335 (IP) - 1357z	08 Jan	Messages in 4- character code	(Remote tuner New Zealand)	JPL	SUN
			NR 0002 ND NR 0023 CK N6 BT CK CK N		JPL	SUN
			NR 0023 CK 96 24 09A1 130		JPL	SUN
5566	0959 (IP) - 1007z	14 Feb	18/CCK CK 61 47 0214 1800 RMKS 3773 TO 2583 BT	(Remote tuner New Zealand)	JPL	TUE
	1414 (IP) - 1452z	16 Feb	NR 4089 CK 10 CR CW CLS 244 EEEEE	(Remote tuner New Zealand)	JPL	THU
7553	Call sign XSV70					
	0908 - 0947z	22 Jan	BNEC DE XSV70	(Remote tuner New Zealand)	JPL	SUN
			NR 064 CK 100 35 0122 0722		JPL	SUN
			NR 065 CK 102 35 0122 1535		JPL	SUN
			NR 066 CK 179 35 0122 1535		JPL	SUN
	0942 (IP) - 0944z	13 Feb	Messages in 3-character code. No headers logged	(Remote tuner Japan)	JPL	MON
	0947 (IP) - 0949z	14 Feb	Messages in 3-character code. No headers logged	(Remote tuner New Zealand)	JPL	TUE

7553//9153	Call sign XSV70					
	0934 (IP) - 0956z	09 Jan	NR 027 CK 207 35 0109 1615	(Remote tuner New Zealand)	JPL	MON
			NR 025 CK 96 35 0109 0710		JPL	MON
	0918 (IP) - 0942z	20 Jan	NR 058 CK 124 35 0120 0714	(Remote tuner New Zealand)	JPL	FRI
			NR 059 CK 104 35 0120 1545		JPL	FRI
			NR 060 CK 193 35 0120 1545		JPL	FRI
	0941 (IP) - 0953z	01 Feb	NR 094 CK 114 35 0201 0713	(Remote tuner New Zealand)	JPL	WED
	1335 (IP) - 1346z	02 Feb	NR 099 CK 235 35 0202 1630	(Remote tuner New Zealand)	JPL	THU
7553//**9156**	Call sign XSV70					
	0903 - 0949z	23 Jan	NR 067 CK 105 35 0123 0711	(Remote tuner New Zealand)	JPL	MON
			NR 068 CK 94 35 0123 1553			
			NR 069 CK 181 35 0123 1553		JPL	MON
8073	Usual format is Initial call-up in voice USB, then to digital 4+4 mode LSB, finally, switching to CW					
	CW call-up is V BNGC (x3) DE XSV85 (x2) All logged via Remote tuner New Zealand unless stated.					
	1131 - 1210z	01 Jan	NR 0003 CK 288 35 0101 1550 BT		JPL	SUN
			NR 0004 CK 30 35 0101 1553 BT		JPL	SUN
	1135 - 1146z	02 Jan	NR 0007 CK 239 35 0102 1559 BT		JPL	MON
	1130 - 1137z	04 Jan	NR 0011 CK 162 35 0A04 A... BT		JPL	WED
	1130 - 1141z	06 Jan	NR 0015 CK 149 35 0106 1648 BT		JPL	FRI
	1130 - 1159z	11 Jan	NR 0032 CK 47 35 0111 1617 BT		JPL	WED
			NR 0033 CK 218 35 0111 1627 BT		JPL	WED
	1129 - 1146z	19 Jan	NR 0064 CK 331 35 0119 1546 BT		JPL	THU
	1134 - 1146z	21 Jan	NR 0072 CK 368 35 0121 1550 BT		JPL	SAT
	1129 - 1140z	19 Feb	NR 0171 CK 214 35 0219 1551 BT		JPL	SUN

M95 4243kHz 1140z 04 Jan 2017

Initial call-up in voice USB 1130z Female operator
Chinese digital 4+4 QPSK 75/3000 LSB 1143z
V Switched to CW 1148z

VV HR 7G TO YR PSE CY (1149z)
NR 032 CK 18 35 0104 1525 BT
5TD UTT TT4 3U6 3A4 353 35D 4T3 U7U ND4
445 3DA TTU TT3 446 3D3 4D4 AR (1151z)
MSG AGN
NR 032 CK 18 35 0104 1525 BT
5TD UTT TT4 3U6 3A4 353 35D 4T3 U7U N4A
445 3DA TTU TT3 773 446 3D3 4D4 AR (1153z)
A HR MSG GA
NR 08 CK 122 35 0104 16.3 BT
UT. TT4 3U6 3A4 TTU 773 353 (Cont'd – 1155z)
AR (1203z)
MSG AGN
NR 08 CK 122 35 0104 1613 BT
UTU TT4 3U6 3A4 TTU 773 353 U4T 354 DN7 (Cont'd – 1204z)
AR (1212z)
A HR MSG GA
NR 033 CK 15 35 0104 1631 BT
UT5 TT4 3U6 3A4 TTA TTU TT3 773 356 75D
36T 4A7 445 4D4 3DA AR (1214z)
MSG AGN
NR 033 CK 15 35 0104 1631 BT
UT5 TT4 3U6 3A4 TTA TTU TT3 773 356 75D
36T 4A7 445 4D4 3DA AR (1215z)
A HR UP SB WK (1215z)

(Switched to voice – USB – Female – Chinese)
(Now V26 sked – 1217z)

Courtesy JPL

M95 5555kHz 1230z 08 Jan 2017

KRSY

00G RR.. (In Progress – Hand sent – 1231z) (Long zeros)
(Known M95 frequency)

WDEA WDEA DE KRSY KRSYK

YK7/6 EEEE (1231z)
000005 EEEE EEE0KR KLT KLWZ SYPO ORWXHMOWOP K N? R TKS T QSV K (Long zeros)

WOJS JIY WYOX NSYEOCPHFWYZ NJSO XKREEFOPMSHE KGOW BT

EBAY DSLU RKOB Q FXR I FXRW PORZ XBLO WIOK CKOR HSRU XESY UNOM LHYT KOBQ QFXR W MSHEKGOW .. YDEI EFOP MSHE KGOW BAYD PORZ XBLO WIOK CKOR HSRU XESY UA EEEE UNOM LHYT KOBQ FXW MROH FOLG YOGS PIQG XVJO OPTV OQSG NHMQ UOGNF (1235z)

(**Appears to be 4 letter coded message - Very rare**)

OCPH FWYZ NJ.O (1235z - Silent)
HR 7G GA K (1248z)
HR 7G GA K
R R XX (Appears to be another station)
37N4 6TU7 7U3D ... DU4D 46AA (Cont'd – No message number sent - Hand sent – fast – 1249z)
PI QZXVJOOPTVQSG (1250z)
HH NR 7G M QSR 7N
5 02. UAA. 7G GA K (1251z - Silent) (Monitored until 1258z)

Courtesy JPL

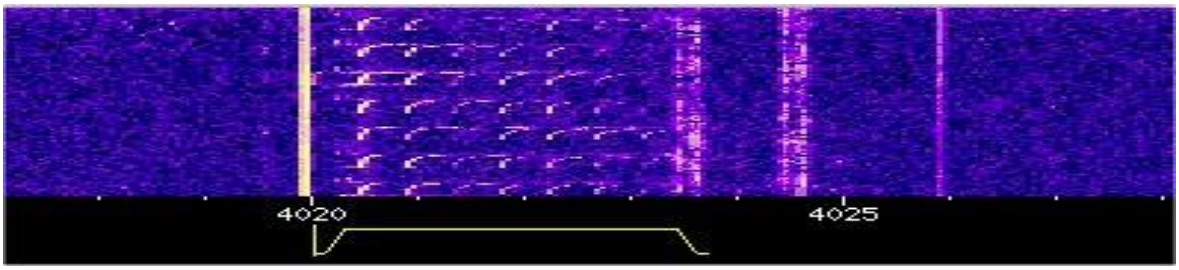
Oddities

New Russian Net Control Marker

On 02 February Ary, (AB) logged a fast buzzer signal active on 4020kHz, that was new to him & which was not a mirror of 'The Buzzer' on 4625kHz.

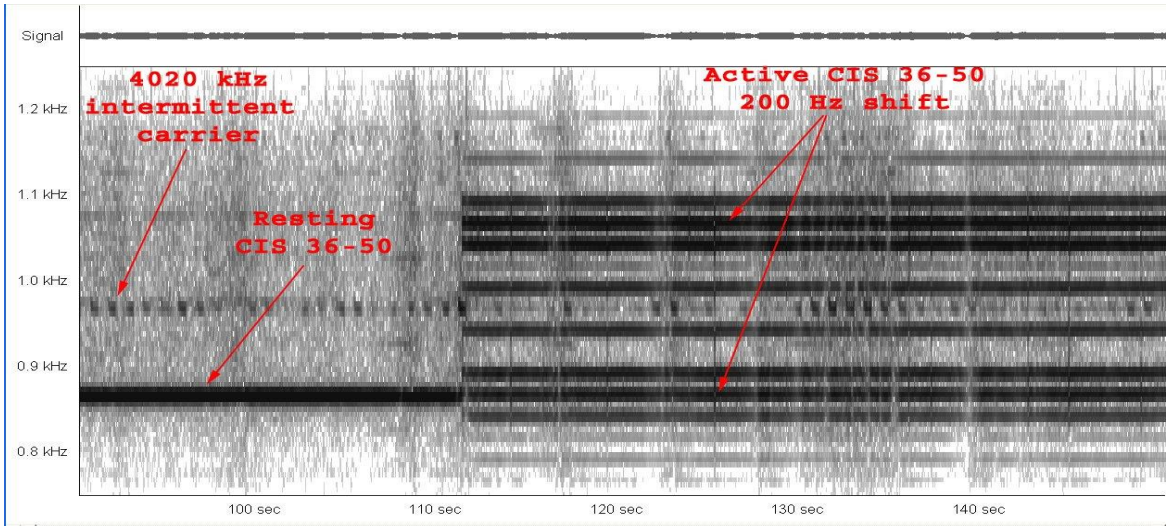
On Saturday 04 Ary reported the station still active & surmised that it was possibly another new Russian military frequency marker. Further reports confirmed that the signal was being heard in Germany by Jochen with a fair signal & by Gary (HJH) with a medium strength signal at his location near Cardiff.

A continuous carrier could be heard that made it appear that the signal was transmitting in full AM, however, examination of the signal by Token showed that the carrier was from an unrelated CIS 36-50 transmission in standby mode.



03 February 2250z Fast Buzzer with CIS 36-50 carrier showing far left (Image Twente SDR - Netherlands) *Courtesy BR*

Token states that there is a broken carrier with the new signal, sent every time a tone is sent. For an extended period of time there was a CIS 36-50 signal setting on the same frequency, which he is pretty sure is unrelated. The resting leg of the CIS was on 4019.9 kHz, so 100 Hz lower than the intermittent carrier of the 4020 kHz signal.



05 Feb CIS36 50 on 4020kHz *Courtesy Token!*

This new signal on 4020kHz is still active & Ary has confirmed that it is a new Russian net control station in the same category as S28, S30 etc.

So far only test counts etc. have been heard...

4020kHz Marker Logs

4020	1536z	02 Feb	Buzzer-like Marker	USB		AB	THU
	0540z	04 Feb	Buzzer-like Marker	USB		AB	SAT
	0545z	09 Feb	'Alarm' Active	USB		E.SMITH	THU
	1332z	09 Feb	'Alarm' Active	USB		E.SMITH	THU
	0426z	10 Feb	'Alarm' Active	USB		E.SMITH	FRI
	2040z	11 Feb	Alarm type signal	USB		chpa	SAT
	1945z	16 Feb	Air-horn type signal	USB	Good	chpa	THU
	1647z	17 Feb	Air-horn channel marker	USB		AB	FRI
	1707z	17 Feb	Air-horn type signal	USB	Good	chpa	FRI

5292kHz Marker

5292	1409z	17 Feb	Channel Marker 'D'	USB	Good	chpa	FRI
	1649z	17 Feb	Channel Marker 'D'	USB		AB	FRI

S28 **'The Buzzer'**

4625	1905z	05 Jan	S28	'The Buzzer' Marker	USB	Very weak	chpa	THU
	0614z	06 Jan	S28	'The Buzzer' Marker	USB	Good	chpa	FRI
	1535 - 1537z	09 Jan	S28	Voice message in Russian	USB	Good	chpa	MON
	0547z	17 Feb	S28	'The Buzzer' Marker	USB	Good	chpa	FRI
	1716z	17 Feb	S28	'The Buzzer' Marker	USB	Good	chpa	FRI
		18 Feb	S28	'The Buzzer' Marker	USB	Good	HJH	SAT

4625//**6330**

	1644z		17 Feb	S28	**'The Buzzer' Marker with a mirror on 6330kHz**		AB	FRI

S30 **'The Pip'**

3756	1855z	05 Jan		'Pip Marker (Night freq)	USB	Good	chpa	THU
	1748z	06 Jan		'Pip Marker (Night freq)	USB	Fair with background QRM	HJH	FRI
	1650z	17 Feb		'Pip Marker (Night freq)	USB		AB	FRI
	1725z	17 Feb		'Pip Marker (Night freq)	USB	Good	chpa	FRI

S32 **'Squeaky Wheel'**

3828	1858z	05 Jan	S32	'Squeaky Wheel' marker	USB		chpa	THU
	1651z	17 Feb	S32	'Squeaky Wheel' marker	USB		AB	FRI
	1727z	17 Feb	S32	'Squeaky Wheel' marker	USB	Weak	chpa	FRI

XSL **'Slot Machine'** (Japanese Navy)

6250	2150z	13 Feb	XSL	'Slot Machine'	QPSK 1500 Bd	Fair	DanAR	MON
8588	2150z	13 Feb	XSL	'Slot Machine'	QPSK 1500 Bd	Weak	DanAR	MON

Contributors: AB, AnonUS, BR, CB, chpa, Daniel/AR, Danix, E.SMITH, F5JBR, Gert, HFD, HJH, JkC, Jochen, JPL, RNGB, Token, Topol
Thank you all for your logs.

Voice stations

E06 Jan/Feb log:

First /Third Thursday (repeats Friday) 0600z 13960kHz 0700z 16350kHz

05/01 & 19/01 '139' 684 102 51571 86298 86641 16497 44233 28294 11828 73592 67667 13152 85404 42109 84416 22708 37130 94973 92490 44637 68539 30661 13247 05628 87559 36241 94219 79259 16657 71870 50321 85779 60457 52643 91867 25955 43775 82500 12850 16205 55998 19869 37902 17177 62744 79734 51398 72977 70752 01822 57110 03231 56929 39576 41880 15157 97488 49640 41719 27860 58137 86496 33800 26006 31224 31978 02758 85085 30801 14332 54744 35448 81535 96518 77678 57286 62404 38436 71122 23777 91111 62758 94223 34539 60165 79074 05163 06623 60555 46019 90541 15202 53963 76074 08151 01158 79442 12734 91553 87751 05519 34723 89923 73559 684 102 00000

0600z 17470kHz 0700z 20085kHz

02/02 '702' 956 134 73475 16022 64100 37490 10296 01090 83249 43015 51838 96746 04288 77116 42578 30033 60734 69876 61266 09128 40631 72225 91136 68145 79263 59191 75368 38192 83220 93978 56241 36894 46755 53482 21418 93555 46349 44900 05794 52160 24455 68158 22351 19386 98321 03817 20450 49828 54865 31157 95005 85616 17507 06127 94977 92616 95923 53844 04614 60401 54643 55328 95883 58171 61432 33166 75545 63831 01394 65786 75274 08392 67739 85040 58299 02893 65148 36763 40976 40028 86667 09014 52745 87677 50082 57685 82901 16507 04695 84152 87617 28847 44458 44671 55665 81024 88383 96193 56255 16340 14182 08303 17454 50877 56058 95945 08596 79333 02606 52652 25142 93053 55738 88934 99416 27458 36586 05549 85657 81063 49316 56303 92826 73253 38785 80108 63602 33029 02988 06957 23010 35882 46225 67505 45115 31019 956 134 00000

First/Third Thursday of month 2030z 4836kHz

19/01 '321' x 3 00000 @2027z pause then '321'…….149 52 12265……95732 149 52 00000] 2040z S8 Malc
Same old message!
02/02 '321' 149 52 12265 10965 47839 38654…..etc]
16/02 '321' 149 52 groups

Friday following First & Third Thursday 2130z 4760kHz

06/01 '472' 149 52 12265 10965 47839 38654 84677 93453 72217 84393 04673 97564 01824 75643 84221 95647 92112 94543 76577 43435 47322 84232 95674 87344 57438 45763 49325 57438 92190 96785 21244 05674 01765 76354 83645 21234 97564 82133 07564 83234 75312 71211 05674 65374 67321 94884 23483 82521 41212 57333 85331 53234 05124 95732 149 52 00000

20/01 '472' 149 52 12265……95732 149 52 00000] 2140z (Windows Shutdown @ 2143z)

03/02 '472' 149 52 12265 10965……05124 95732] Same old message! Windows XP shutdown sound after the message

Unscheduled:-
There were a number of transmissions on Saturday 04/02. I caught these ones, the others I couldn't find any more information about.

10308kHz 0931z 04/02 I.P. [305 246 18 69297 60664.....04445 71414 00000] 0938z Ed Smith SAT

14667kHz 1014z 04/02 [351 842 55 26443 44827 ..... 29081 10460 00000] 1029z Ed Smith SAT

13931kHz 1032z 04/02 I.P. [305 246 18 69297 60664 ..... 04445 71414 00000] 1038z USB E.SMITH SAT

7931kHz 1535z 04/02 I.P. [..... 643 20 00000] QSA3 QSB4 UNABLE TO READ 1538z USB E.SMITH SAT
10308kHz 0931z 04/02 I.P. [305 246 18 69297 60664 21232 19891 03184 48936 45751 03139 46774 24268 12336 00809 34560 38776 54869 23907 04445 71414 00000] 0938z Ed Smith SAT
Transcript:
14667kHz 1014z 04/02 [351 842 55 26443 44827 68939 16508 44564 36928 89166 77467 54630 44372 65748 26244 73065 35385 45368 98962 69047 73602 09942 98930 02731 52945 69775 56172 91701 73618 62292 14806 16582 13904 29758 15433 01739 77445 74450 64734 32024 20710 14712 09468 91490 90307 57039 35020 24867 90552 09851 28788 01149 03615 05597 20527 29081 10460 00000] 1029z
*Mistake - 42nd group 90307 transmitted two pairs.

PoSW's log follws on:

First + Third Thursdays in the Month, 2027 Or 2028 UTC Schedule:-

5-Jan-17:- 2027:30s UTC approx, 4,836 kHz, calling "321", DK/GC "149 149 52 52", the message which has been sent by Thursday and Friday evening E06 and G06 for some time now.

19-Jan-17:- 2026:40s UTC, 4,836 kHz, and a false start; started calling "321 321 321 00000" at a somewhat more rapid speed of delivery than is usual, then stopped just after 2028 UTC and went into "321" call mode for "full message" format, DK/GC "149 149 52 52".

2-Feb-17:- 2028 UTC, 4,836 kHz, "321" and "149 149 52 52", S9 signal.

16-Feb-17:- Call-up in progress when tuned in just after 2027 UTC, "321" and "149 149 52 52", as always.

Friday 2127 Or 2128 UTC Schedule Following First + Third Thursdays in the Month:-

6-Jan-17:- 2127 UTC, 4,754 kHz, was expecting this to appear on 4,760, calling "472", DK/GC "149 149 52 52", the familiar message starting with, "12265 10965 47839....." and so on. S9 with QSB, ended around 2140 UTC. Carrier stayed on for a while, a musical "chime", no doubt something to do with computers, heard at 2143:50s UTC.

3-Feb-17:- 2127 and 40s UTC, 4,760 kHz, "472" and "149 149 52 52".

17-Feb-17:- 2126 and 40s UTC, 4,760 kHz, "472" and "149 149 52 52", ended after 2139:40s UTC, that "chime" heard about 25 seconds afterwards.

E07

Sunday/Wednesday

January 2017

1800z	**8194kHz**	**1820z**	**6794kHz**	**1840z**	**5294kHz**	
01/01	Unworkable, poor conx					
15/01	Carrier only			[1820z NRH]		
25/01	172 000					Weak

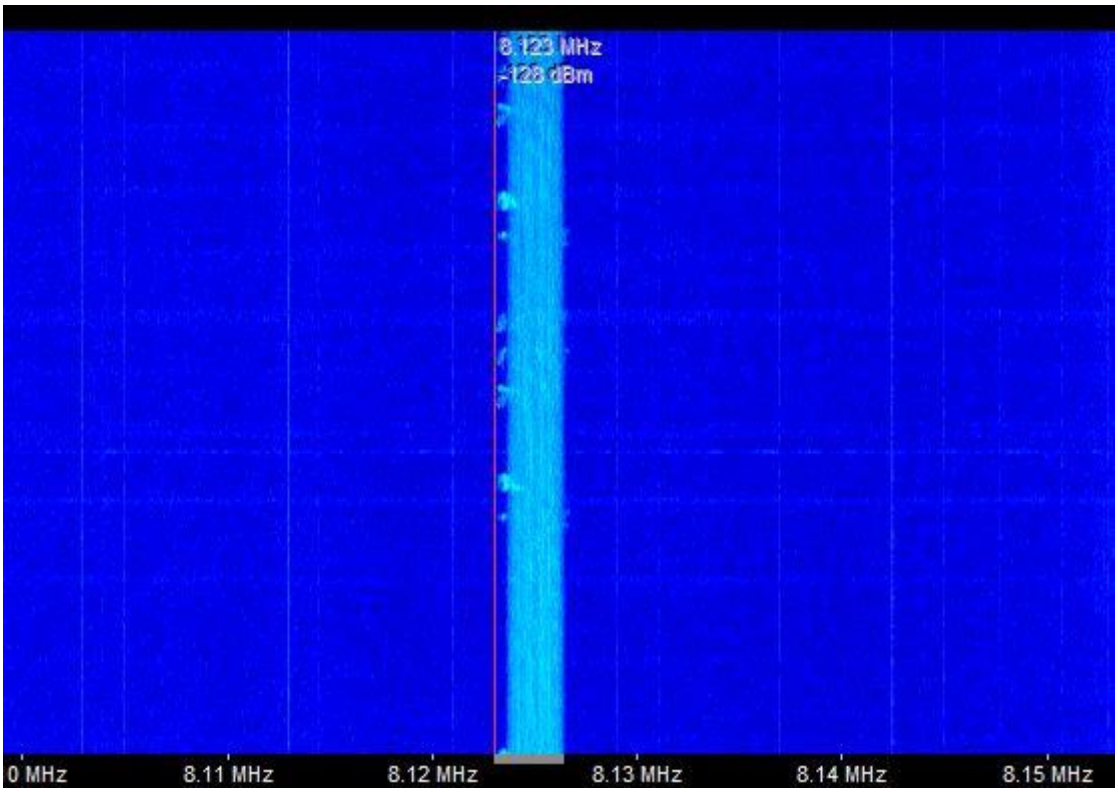
February 2017

1800z	**10219kHz**	**1820z**	**9119kHz**	**1840z**	**7519kHz**	
15/02	215 000					Strong
19/02	215 000					Fair
22/02	215 000					Weak
26/02	215 000					Weak

Sunday/Saturday [USB]

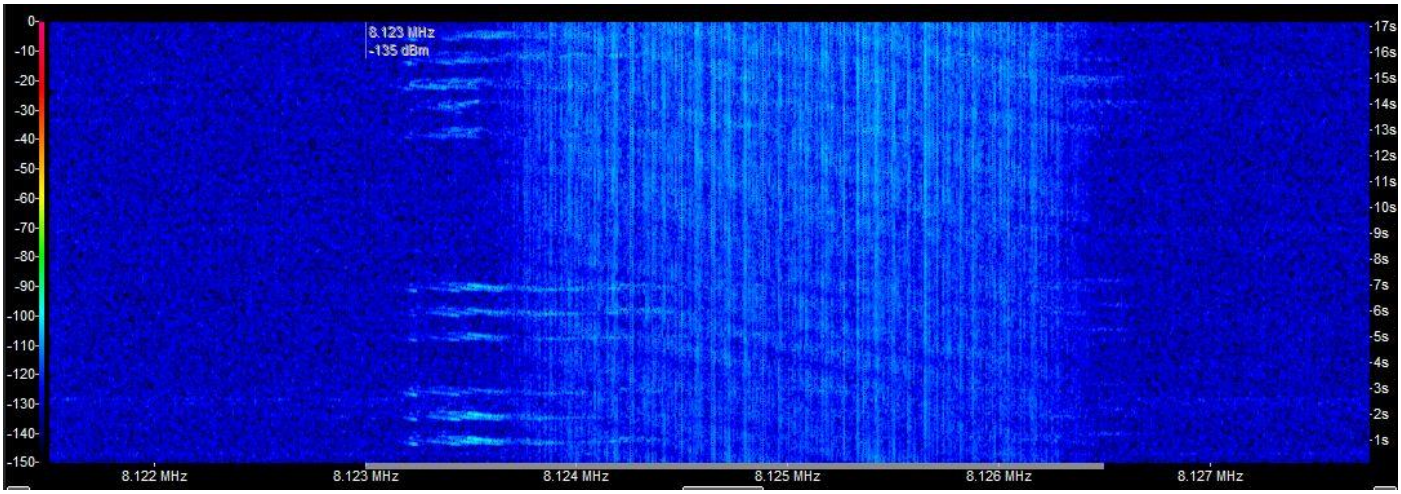
January 2017

0700z 8123kHz 0720z 9323kHz 0740z 10423kHz



E07 USB battling with XJTQRM '281 46'

01/01	134 000	[0700z, weak XJTQRM3]	Weak
07/01	134 1 205 43 62740 ... 49340 000 000	[0700z, very weak XJTQRM5]	Very weak
08/01	134 1 205 43 62740 ... 49340 000 000	[0740z NRH my QTH]	Fair
14/01	134 000	[0700z, XJTQRM3]	Strong
15/01	134 000	[0700z, XJTQRM3]	Strong
21/01	134 1 534 30 42942 ... 92053 000 000	[0700z V.strong]	Weak
22/01	134 1 534 30 42942 ... 92053 000 000	[0740z V.strong]	Weak
28/01	134 1 281 46 42906 ... 79282 000 000	[0740z Fair, noisy]	Very strong
29/01	134 1 281 46 42906 ... 79282 000 000	[0720z Fair, noisy]	Very strong

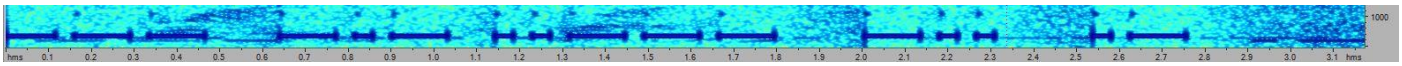


In clearer detail E07 USB, final groups 0747z 29/01/2017 '79282 000 000

February 2017

0700z	**10112kHz**	**0720z**	**11112kHz**	**0740z**	**12112kHz**	
04/02	111 1 207 26 63148 ... 37173 000 000					Strong
05/02	111 1 207 26 63148 ... 37173 000 000					Fair
11/02	111 1 207 26 63148 ... 31713 000 000					Strong
12/02	111 1 207 26 63148 ... 31713 000 000				[0700z CWQRM2 -UN0OA/IK4PKK]	Strong

111 1 207 26
63148 54578 44820 64016 10339
86176 45019 83309 26293 71529
31188 73158 44276 57760 96307
41663 60004 41797 19711 99646
90896 56315 09522 61613 71109
31713
000 000 *Courtesy AB*



[0700z CWQRM2 see above 'OK2DA']

18/02	111 000	Fair
19/02	111 000	Weak
25/02	111 000	Fair, QSB
26/02	111 000	Very strong

Monday/Wednesday

January 2017

2000z	**6776kHz**	**2020z**	**5767kHz**	**2040z**	**5076kHz**	
04/01	NRH					
11/01	770 1 680 47 37120 ... 41736 000 000					Weak
16/01	770 000					2000z Weak,2020z Very Strong
25/01	770 1 631 60 91292 ... 37895 000					Strong

770 1 631 60
91292 56996 53418 92429 86300 91274 15879 78571 35227 14307
05375 12186 00719 82565 72506 90829 15562 63900 44313 26380
56123 51956 78737 37866 41524 31510 37237 64468 51553 19690
97592 60842 83992 14482 81571 58281 98761 60478 50708 92308
18841 95335 03533 86683 05617 46537 36027 57262 48538 29886
78652 64317 03110 29682 85588 27880 05717 79016 24205 37895
000 000 *Courtesy JkC*

February 2017

2000z	**8157kHz**	**2020z**	**6857kHz**	**2040z**	**5257kHz**	
13/02	182 2 735 87 69120 … 15616 000 000					With errors

182 182 182 1 735 87 735 87
69120 89097 99941 82936 79586 56338 48014 78360 02779
73105 56179 11355 06100 04811 89314 08800 71688 38659
58911 27577 29793 18024 29849 23707 70449 65195 79857
52672 94642 45532 09302 09127 27021 88394 75132 40352
77172 37053 05073 03107 75349 47060 03187 14631 26965
43273 93558 31495 02834 32819 06602 06704 47020 82469
32818 76426 16095 70273 20237 81100 39671 43214 10873
34780 31570 45137 06381 88971 45526 60777 08026 95360
36064 73456 83200 26150 46962 78740 74629 35151 61261
25751 72948 69532 51442 71647 15616
000 000 *Courtesy Ary*

Note:
Error in the 2040 UTC transmission.
182 182 182 1 735 87 735 stops and restarts
182 182 182 1 735 87 735 87
69120 89097 99941 82936 79586 56338 48014 78360 etc.

20/02	182 000	Strong/V.Strong
22/02	182 000	Fair
27/02	182 1 428 14 90048 .. 34433 000 000	Very strong

Tuesday, one intercept only

6864kHz0700z 28/02 I.P. [321 1 101 22 51966 91365 ..... 15211 19232 000 000] 0704z USB E.SMITH TUE

321 1 101 22
51966 91365 84040 73069 45055 01771 79243 56940 00604 12545
90875 90903 82700 07949 59694 81799 91436 54246 60142 65299
15211 19232
000 000 *Courtesy Edd*
[**No repeats found**].

Tuesday/Friday

January 2017

1100z 13523kHz 1120z 12123kHz 1140z 10623kHz

10/01 516 1 2330 97 07788 ... 37796 000 000 Weak/Fair

516 1 2330 97
07788 52143 86472 49836 83024 60007 80381 00300 50533 56331
27368 71300 12107 97922 28057 20846 81784 68398 37845 84599
98108 25479 15184 98450 61828 60521 12929 21076 08383 40479
88397 23736 10641 66110 45651 11721 28690 47183 86099 99814
62607 84634 04799 26516 03744 66492 47522 08271 07323 51387
05184 85909 90103 35680 26064 25074 10519 04350 18317 41614
11330 15809 24184 19879 25855 88967 07304 57081 50264 46799
75689 34451 29701 26788 16580 37578 51802 78860 27287 11729
82495 41857 48028 64521 68144 65634 86833 00392 93010 51579
92629 85069 75557 72587 46496 51617 37796
000 000 *Courtesy Ary*

10/01 516 1 2330 97 07788 ... 37796 000 000 Weak

17/01 516 000

20/01 516 000

24/01 516 1 8190 89 27978 ... 69881 000 000

27/01 516 1 8190 89 27978 ... 69881 000 000 Strong

516 1 8190 89
27978 72720 37473 54563 76176 62175 26593 69757 06362 04387
82877 11449 19879 71929 33265 75323 49560 55114 80634 21311
08964 50175 22922 19418 41002 41750 29885 66517 36625 52991
19288 51464 18454 60730 22775 91541 56937 30193 77243 00063
10189 11028 24072 85192 94451 52505 49110 95116 87278 01191
19427 84633 14319 50220 53802 19366 93847 21055 47639 36195
89511 31759 39918 86669 79215 11490 68754 50073 47153 79881
96989 88675 06829 33951 22428 07528 26121 70168 60706 89310
39324 15446 18153 52924 99771 21748 51169 17279 69881
000 000 *Courtesy JkC*

February 2017

1100z 16161kHz 1120z 14661kHz 1140z 13661kHz

03/02 163 000

07/02 163 000

10/02 163 000

14/02 14/02 [163 1 400 137 93273 69733 ..... 21754 68557 000 000

17/02 163 000

21/02 163 1 7786 123 88620 ... 16780 000 000 [1140z Weak] Fair

163 1 7786 123

88620 46439 94541 52336 02013 74199 45834 13598 40128 93235
05327 58283 86387 13243 11494 76377 25827 74973 09729 57027
80977 10112 17880 14209 07095 02676 07693 33395 40893 01319
80278 00251 89625 84054 91133 30215 86128 87592 26379 98989
21711 97203 23844 88687 43272 14437 93646 04516 44662 06044
60738 02516 24195 53211 59032 16593 70833 98669 94098 03749
57218 68879 55656 55091 32146 02003 89556 49606 13643 92214
81463 60019 79912 73400 64962 12777 73011 55394 46096 57137
22651 13679 48045 40248 32236 52293 38414 46708 65332 42030
37312 64423 86786 68876 08282 90857 33069 97720 74193 09512
11463 46550 16846 91785 67606 29120 91414 44758 55780 56976
82147 53457 00273 63107 68934 53853 20491 60372 64455 57208
37695 51396 16780 000 000 *Courtesy Edd*

24/02 163 1 7786 123 88620 ... 16780 000 000 Weak

28/02 163 1 9845 116 00796 ... 75946 000 000 Strong
163 1 9845 116

00796 21114 60274 80575 73772 08657 72264 10120 33417 99966
59486 10363 20905 46467 71122 86549 28567 75991 51702 21953
70826 59150 82599 92691 30634 92618 43728 72662 44758 46965
43088 85307 75161 16848 53819 48189 49628 06888 67168 11811
94811 45025 90584 77182 97229 50566 90575 78990 88310 90139
20914 02937 72556 83357 12447 45552 94618 25860 33085 84813
48962 77743 78627 91099 65909 34992 98909 85963 03335 93147
73888 80089 80739 85369 30679 14298 55849 51352 54350 75048
47879 19424 35521 47705 44926 45286 88033 24853 37413 52505
25159 50538 39752 36593 09154 46295 56128 64310 84764 38540
45588 34992 96206 89175 90466 03942 77208 68232 19196 70120
69646 92243 87276 59616 74989 75946
000 000 *Courtesy Edd*

Thursday

January 2017

Nil reports

February 2017

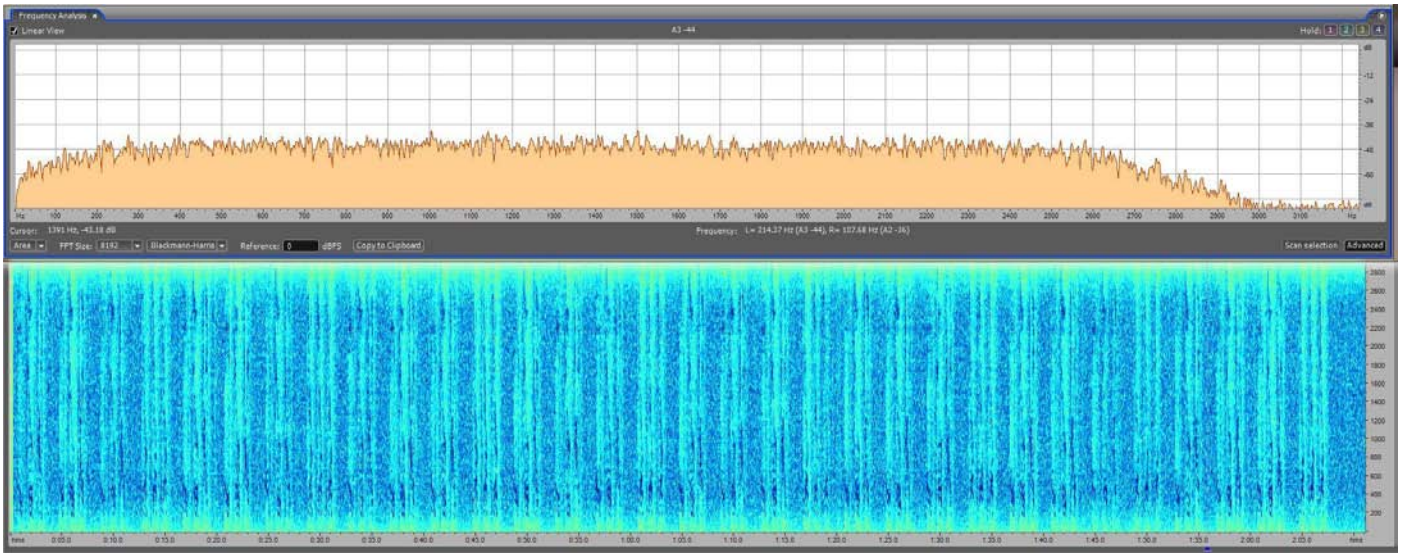
2010z	**6777kHz**	**2030z**	**5449kHz**	**2050z**	**4483kHz**	
09/02	744 000					Weak
16/02	744 000					Strong carrier, weak audio
23/02	744 000					Strong carrier, weak audio

E07a

Wednesday

January 2017

2100z	**5877kHz**	**2120z**	**5277kHz**	**2120z**	**4577kHz**	
04/01	825 000					Strong
11/01	825 000					Strong
18/01	825 1 16258 8834 67 76867 ... 56392 000 000					Very strong
25/01	825 000					Strong

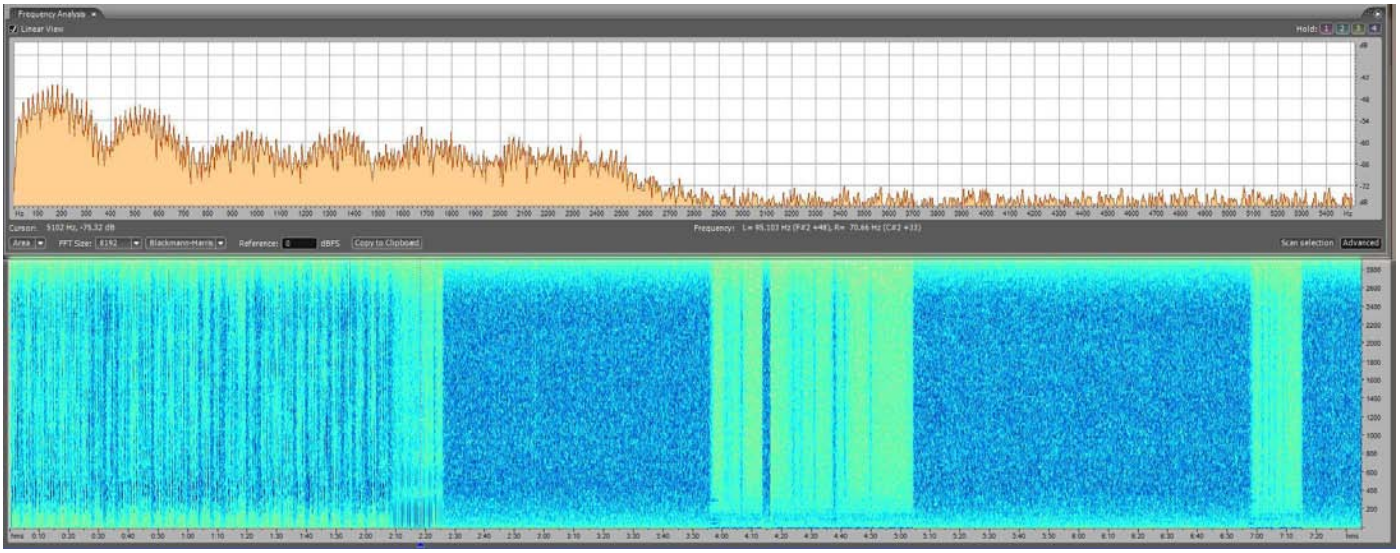


E07 a Very strong sending with excellent conditions [for a change] 825 825 825 000 as sent 2100z 08/02

February 2017

01/02	825 000	Very strong, noisy
08/02	825 000	Very strong*

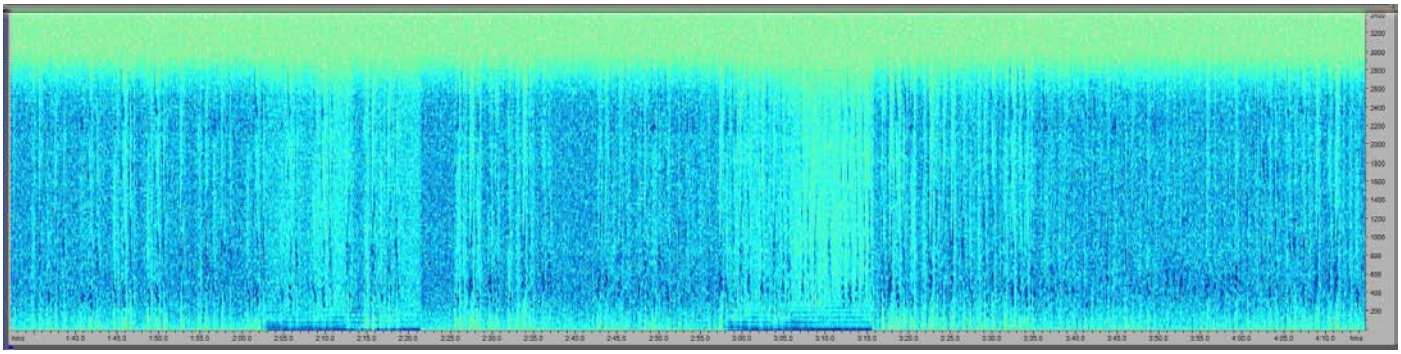
* 2120z followed by 'clicking' signal and three very strong carriers; see below:



E07a 5277kHz 2120z 08/02. Note usual train of 825 825 825 ending 000 with a series of clicks following then three additional very strong carriers

15/02 825 000 Very strong

22/02 825 1 61815 3643 79 44343 ... 79503 000 000 Very strong
Strong carrier across 2140z sending at 2142.02 to 2142.22 and 2142.58 to 2143.18 [see image below].



Note carriers within message structure

Thursday

January 2017

0530z	**5111kHz**	**0550z**	**5811kHz**	**0610z**	**6911kHz**
05/01	189 000				
12/01	189 000				Very strong
19/01	189 1 16258 8834 67 76867 ... 56392 000 000				Strong
26/01	189 000				

February 2017

02/02	825 000		Very strong, noisy
09/02	189 00	[Both distorted, sounding 'Dalek'[t] like]	Very strong

[t] As if run through a ring modulator

16/02	189 000		Very strong
23/02	189 1 61815 3643 79 44343 ... 79503 000 000		Strong, noisy

189 1 61815 3643 79
44343 61352 53860 48317 06109 09165 22009 94253 64914 58697
62721 31616 25443 51603 47416 47074 93525 25234 74668 36440
68992 77828 01014 99937 37606 64957 26472 19184 59941 96451
60550 18896 91753 72956 03500 10695 50645 68123 51169 01848
04398 48159 46465 46224 17146 48349 02678 03096 06547 22476
43576 52921 25066 70596 25768 46690 28428 37026 84601 27446
44322 72507 99957 13991 13059 70255 83004 67394 17766 83264
18730 69490 15606 39892 58847 55625 14949 65157 79503
000 000 *Courtesy Ary*

Friday

January 2017

1610z	**7632kHz**	**1630z**	**6832kHz**	**1650z**	**5832kHz**	
20/01	688 000					Weak
27/01	688 000					Fair

February 2017

1610z	**9347kHz**	**1630z**	**8147kHz**	**1650z**	**6847kHz**	
03/02	318 000			[1610z NRH]		Weak
10/02	318 000					Fair
17/02	318 000					Very strong
24/02	318 000					Weak

Saturday

January 2017

0900z	**11123kHz**	**0920z**	**12223kHz**	**0940z**	**13423kHz**	
14/01	114 000					Fair
21/01	114 000					Fair

February 2017

0900z	**11053kHz**	**0920z**	**12153kHz**	**0940z**	**13553kHz**	
04/02	015 000					0900zWeak, 0920zStrong
11/02	015 000					Fair
18/02	015 000					Fair
25/02	015 000					Weak

PoSW's logs:

Wednesday Schedule, 2100 UTC Start:-

4-Jan-17:- 2100 UTC, 5,877 kHz, "825 825 825 000", not the usual rock-crusher of a signal we usually get from this schedule, S7 at best.
2120 UTC, 5,277 kHz, second sending, also S7.

11-Jan-17:- 2100 UTC, 5,877 kHz, "825 825 825 000", over S9.

18-Jan-17:- 2100 UTC, 5,877 kHz, "full message" this evening, "825 825 825 1 16258", DK/GC "8834 67" x 2, back on form with an S9+ signal.
2120 UTC, 5,277 kHz, second sending, also S9+.
2140 UTC, 4,577 kHz, third sending, weakest signal of the three transmissions but nevertheless pushing that needle way over the "9" mark.

25-Jan-17:- 2100 UTC, 5,877 kHz, and 2120 UTC, 5,277 kHz, "825 825 825 000", both transmissions over S9.

1-Feb-17:- 2100 UTC, 5,877 kHz, "825 825 825 000", S8.
2120 UTC, 5,277 kHz, second sending, much stronger signal, S9+.

8-Feb-17:- 2100 UTC, 5,877 kHz, "825 825 825 000", over S9.

Saturday Schedule, 0900 UTC Start:-

7-Jan-17:- 0920 UTC, 12,123 kHz, missed 0800Z sending, "114 114 114 000", S7.

21-Jan-17:- 0900 UTC, 11,123 kHz, "114 114 114 000", S8 to S9.
0920 UTC, 12,123 kHz, second sending, slightly weaker signal.

28-Jan-17:- 0900 UTC, 11,123 kHz, "114 114 114 000", S7.

4-Feb-17:- 0900 UTC, 11,053 kHz, "015 015 015 000", S8.
0920 UTC, 12,153 kHz, second sending, indicating S9.

11-Feb-17:- 0900 UTC, 11,053 kHz, "015 015 015 000", S7.
0920 UTC, 12,153 kHz, second sending, also around S9.

25-Feb-17:- 0900 UTC, 11,053 kHz, "015 015 015 000", over S9.
0920 UTC, 12,153 kHz, second sending, slightly weaker signal.

E11 log Jan/Feb

4505kHz	1605z	03/01 [238/00] Out 1608z S9	Malc, RNGB	TUE
	1605z	08/01 [237/00]	Gary H	SUN
	1605z	10/01 [231/00] Out 1608z S9 (TX going out on 4504kHz too!!)	Malc	TUE
	1605z	15/01 [230/00] Good	RNGB	SUN
	1605z	24/01 [238/00] Fair	RNGB	TUE
	1605z	14/02 [238/00]	ANDRÉ	TUE
	1605z	19/02 [236/00] Out 1608z S5	Malc	SUN
5082kHz	1730z	12/01 [418/00] Out 1733z S2	Malc	THU
	1730z	02/02 [415/00]	RNGB	THU
5409kHz	1530z	12/01 [268/00] Out 1533z S5	Malc	THU
	1530z	19/01 [264/00] Out 1533z S7	Malc	THU
	1530z	26/01 [267/00] Out 1533z QSA4 QRM1 QSB1	JkC	THU
5779kHz	0315z	26/01 [253/00]	Ary	THU
	0315z	15/02 [259/00] Out 0318z	Ed Smith	WED
6304kHz	2000z	03/02 [574/00] Fair	RNGB	FRI
	2000z	10/02 [571/00] Weak	RNGB	FRI
6849kHz	0530z	26/01 [649/00]	Ary	THU
	0530z	02/02 [641/00]	Ary, Ed Smith	THU
	0530z	16/02 [640/00] Out 0533z	Ed Smith	THU
	0530z	23/02 [641/00]	Ary	THU
7371kHz	0820z	02/01 [434/00] Out 0823z S3	Malc	MON
	0820z	05/01 [432/00] Out 0823z S4	Malc	THU
	0820z	09/01 [438/00] Out 0823z S4	Malc, RNGB	MON
7840kHz	0645z	26/01 [515/00]	Ary	THU
	0645z	02/02 [517/00]	Ary	THU
	0645z	23/02 [518/00]	Ary	THU
7984kHz	1205z	03/01 [461/00] Out 1208z S3	Malc, RNGB	TUE
	1205z	04/01 [466/00] Out 1208z S3	Malc	WED
	1205z	10/01 [461/00]	Ary	TUE
	1205z	11/01 [464/00] Out 1208z S3	Malc	WED
	1205z	31/01 [462/00] Out 1208z Mirror image transmitting on 7969kHz.	RNGB, Ed Smith	TUE
	1205z	07/02 [466/00] Strong	RNGB	TUE
	1205z	14/02 [463/00] Out 1208z	Ed Smith	TUE
	1205z	15/02 [462/00]	RNGB	WED
8545kHz	1730z	07/01 [408/00]	RNGB	SAT
	1730z	25/01 [400/00] Fair	RNGB	WED
	1730z	08/02 [400/00]	RNGB	WED
	1730z	25/02 [402/00] Good	RNGB	SAT
8680kHz	1300z	05/01 [583/00] Good	RNGB	THU
	1300z	19/01 [581/00] Out 1303z S3	Malc, Ed Smith	THU
	1300z	11/02 [585/00] Out 1303z	Ed Smith, RNGB	SAT
	1300z	16/02 [588/00]	Gary H, Malc	THU
	1300z	23/02 [586/00]	Ary, Ed Smith	THU
	1300z	25/02 [588/00] Out 1303z S2	Malc	SAT
8800kHz	1000z	06/01 [309/00] Good	RNGB	FRI
	1000z	17/01 [300/00] Out 1003z	Ed Smith	TUE
	1000z	20/01 [300/00] Out 1003z	RNGB, Ed Smith	FRI
	1000z	24/01 [308/00] Out	Ed Smith	TUE
	1000z	27/01 [305/00] Out 1003z QSA4 QRM2 QSB1	JkC	FRI
	1000z	31/01 [304/00] Out 1003z	Ed Smith	TUE
	1000z	03/02 [309/00] Out 1003z	Ed Smith	FRI
	1000z	07/02 [302/00]	RNGB	TUE
	1000z	10/02 [305/00] Out 1003z	Ed Smith	FRI
	1000z	21/02 [300/00] Out 1003z S4	Malc, Ed Smirth	TUE
	1000z	24/02 [302/00] Out 1003z S6	Malc	FRI
9130kHz	0710z	17/01 [635/00]	RNGB	TUE
	0710z	27/01 [636/00] Out 0713z QSA4 QRM1 QSB1	JkC	FRI
	0710z	21/02 [639/00]	RNGB	TUE
	0710z	24/02 [635/00] Out 0713z S2	Malc	FRI

9443kHz	1705z	07/01 [392/00]	Gary H	SAT
	1705z	25/01 [395/00] Weak	RNGB	WED
	1705z	04/02 [395/00] Out 1708z	Ed Smith	SAT
	1705z	15/02 [391/00]	Gary H	WED
	1705z	18/02 [393/00] Out 1708z	Ed Smith	SAT
	1705z	22/02 [399/00] Strong	Brixmis	WED
9446kHz	0900z	02/01 [532/00]	RNGB	MON
	0900z	04/01 [536/00] Good	RNGB	WED
	0900z	09/01 [535/00] Out 0903z S2	Malc	MON
	0900z	11/01 [535/00] Out 0903z S7	Malc	WED
	0900z	16/01 [530/00] Out 0903z S4	Malc	MON
	0900z	18/01 [538/00]	RNGB	WED
	0900z	30/01 [532/00] Good	RNGB	MON
	0900z	01/02 [534/00]	RNGB	WED
	0900z	08/02 [536/00] Out 0903z	Ed Smith	WED
	0900z	20/02 [532/00] Out 0903z S3	Malc	MON
	0900z	22/02 [536/00]	RNGB	WED
	0900z	27/02 [535/00] Strong	RNGB	MON
9950kHz	0930z	04/01 [270/00] Good	RNGB	WED
	0930z	05/01 [277/00] Out 0933z S2	Malc	THU
	0930z	19/01 [277/00] Out 0933z S4	Malc, RNGB	THU
	0930z	25/01 [279/00] Good	RNGB	WED
	0930z	26/01 [277/00]	Ary	THU
	0930z	08/02 [278/00] Out 0933z	Ed Smith	WED
	0930z	15/02 [277/00]	Ary	WED
	0930z	16/02 [276/00] Good	RNGB	THU
	0930z	22/02 [277/00] Out 0933z	Ed Smith	WED
	0930z	23/02 [279/00]	Ary	THU
10213kHz	0745z	09/01 [261/00] Out 0748z S4	Malc	MON
	0745z	16/01 [263/00] Out 0808z S5	Malc, RNGB	MON
	0745z	23/01 [268/00] Strong	RNGB	MON
	0745z	06/02 [269/00] Strong	RNGB	MON
	0745z	20/02 [260/00] Out 0748z S4	Malc	MON
	0745z	27/02 [261/00] Strong	RNGB	MON
10429kHz	0805z	11/01 [313/00] Out 0808z S6	Malc, RNGB	WED
	0805z	08/02 [316/00] Out 0808z	Ed Smith, RNGB	WED
	0805z	22/02 [319/00] Good	RNGB	WED
	0805z	26/02 [311/00] Out 0808z S5	Malc	SUN
10448kHz	1625z	04/01 [974/00]	Gary H	WED
	1625z	08/01 [978/00]	RNGB	SUN
	1625z	22/01 [974/00]	RNGB	SUN
	1625z	25/01 [977/00] Out 1628z QSA3 QRM1 QSB1	JkC	WED
	1625z	22/02 [975/00]	Brixmis	WED
11100kHz	0820z	23/01 [432/00] Good	RNGB	MON
	0820z	26/01 [434/00]	Ary	THU
	0820z	30/01 [430/00] Fair	RNGB	MON
	0820z	02/02 [434/00] Good	RNGB	THU
	0820z	06/02 [431/00] Strong	RNGB	MON
	0820z	09/02 [439/00]	RNGB	THU
	0820z	20/02 [436/00] Out 0823z S5	Malc	MON
	0820z	23/02 [432/00] Out 0823z	Ed Smith	THU
	0820z	27/02 [432/00] Good	RNGB	MON
11107kHz	2005z	01/01 [363/00] Very weak	RNGB	SUN
	2005z	07/01 [364/00]	Malc	SAT
	2005z	15/01 [367/00] Out 2008z S6 QSB4	Malc	SUN
	2005z	11/02 [368/00] Remote tuner – Grenoble, France	RNGB	SAT
	2005z	25/02 [364/00] Weak	RNGB	SAT
12153kHz	1045z	03/01 [575/00] Out 1048z S5	Malc, RNGB	TUE
	1045z	10/01 [577/00] Out 1048z S7	Malc	TUE
	1045z	07/02 [576/00] Strong	RNGB	TUE
	1045z	21/02 [573/00] Strong	RNGB	TUE

12924kHz	0710z	02/02 [496/00]	Ary	THU
	0710z	04/02 [490/00] Weak	RNGB	SAT
	0710z	09/02 [491/00]	RNGB	THU
	0710z	23/02 [490/00] Out 0713z KiwiSDR Ukraine.	Ed Smith	THU
14666kHz	1345z	10/01 [915/00]	Ary	TUE
	1345z	31/01 [919/00]	RNGB	TUE
	1345z	07/02 [911/00] Out 1348z	Ed Smith	TUE
	1345z	21/02 [917/00] Weak	RNGB	TUE
	1345z	25/02 [915/00] Out 1348z S2	Malc	SAT
16112kHz	0745z	05/01 [338/00]	RNGB	THU
	0745z	26/01 [332/00]	Ary	THU
	0730z	27/01 [351/00] Out 0733z QSA4 QRM1 QSB1	JkC	FRI
	0745z	02/02 [332/00] Very weak	RNGB	THU
	0730z	05/02 [355/00]	RNGB	SUN
	0745z	07/02 [333/00] Weak	RNGB	TUE
	0745z	09/02 [338/00] Weak	RNGB	THU
	0745z	16/02 [333/00] Weak	RNGB	THU
16335kHz	1650z	19/02 [925/00] Out 1653z S2	Malc	SUN
	1650z	26/02 [920/00] Out 1653z S2	Malc	SUN

E11a log Jan/Feb

4505kHz	1605z	17/01 [230/37 78089 43617 10064 80176 79692 62860 47187 40613……99179 14241]	RNGB	TUE
	1605z	21/02 [236/39 78610 73548 54899 62830 11664 30663……91384 85150] Ourt 1615z S6	RNGB, Malc	TUE
5082kHz	1730z	19/01 [418/37 81784 99055 97986 54380 78152 91669 10601……34738] Out 1740z S8 QSB3	RNGB, Malc	THU
	1730z	09/02 [416/37 12675 29549 56738 23073 86084 47894 33598 04721……30785 00153] Good	RNGB	THU
5409kHz	1530z	16/02 [264/37 40536 65124 ….. 38672 32608] Out 1540z	Ed Smith	THU
6304kHz	2000z	27/01 [579/33 55992 40241 34654 97150 65862 33106 64233.....39011 89894] Out 2010z	JkC	FRI
	2000z	17/02 [577/33 75548 80615 93206 78306 45470 50839 53222 06321……35399 19373] Good	RNGB	FRI
6849kHz	0530z	09/08 [646/33 06908 36523 77303 72005 74507 26367 58611 92233.....63540 15373] Out 0540z	Ed Smith	THU
7840kHz	0645z	16/02 [518/39 47701 65464 27649 06539 25170 95033 97963 62216 22601……96429 30791]	RNGB	THU
7984kHz	1205z	17/01 [465/34 40259 32718 21349 81656 74677 29437 12141 ……49052 72086] Fair	RNGB	TUE
	1205z	18/01 [465/34 40259……etc] Repeat of Tuesday	RNGB	WED
	1205z	21/02 [460/35 16156 08917 24473 22065 45789 17482 44449……14817 78197]	Ary, Ed Smith	TUE
	1205z	22/02 [460/35 16156……etc] Repeat of Tuesday	Ary, RNGB	WED
8545kHz	1730z	11/01 [406/32 15830……..42493] Out 1739z S4	Malc	WED
	1730z	14/01 [406/32 15830……etc] Repeat of Weds	Malc	SAT
	1730z	15/02 [409/37 23631 51004 39125 02307 88974 80851 11077……43906 00855]	RNGB, Gary H	WED
8680kHz	1300z	12/01 [585/39 06627……93568] Out 1310z S3	Malc	THU
	1300z	14/01 [585/39 06627 33983 78559 73235 34363 26576 41833 05132……15537 93568] Fair	RNGB	SAT
	1300z	02/02 [587/31 31373 73777 07994 86475 86854 94073 46397..... 83692 09125] Out 1309z	RNGB, Ed Smith	THU
8800kHz	1000z	10/01 [304/40 56616……25477] Out 1010z S3	Malc	TUE
	1000z	14/02 [307/35 10672 29610 13380 15884 81074 61987 19951.....55161 06248] Out 1010z	Ed Smith	TUE
	1000z	17/02 [307/35 10672……etc] Repeat of Tuesday	RNGB	FRI
9130kHz	0710z	07/02 [639/37 32830 95858 42066 37830 86216 92592 32033 92698.....22213 43122]	RNGB	TUE
	0710z	10/02 [639/37 32830 95858 42066 37830 86216 92592 32033 92698.....22213 43122] Out 0720z	Ed Smith	FRI
9443kHz	1705z	11/01 [390/38 58802……..80635] Out 1715z S3	Malc	WED
	1705z	14/01 [390/38 58802……etc] Repeat of Weds	Malc	SAT
9446kHz	0900z	23/01 [535/32 03778 52287 89459 35420 89391 72430 26220 25724…….16398 83399]	RNGB	MON
	0900z	15/02 [530/37 84988 71932 89108 40174 38040 92268 62613 52288……etc]	RNGB	WED
9950kHz	0930z	11/01 [273/32 77214 41571 74526 31597 14528 08086 30093……44588 97660 0940z S7	Malc	WED
	0930z	12/01 [273/32 77214…..etc] Repeat of Weds	RNGB	THU
	0930z	02/02 [270/30 71914 68896 87303 52377 61038 35087 12559 57408……83563 82685] Good	RNGB	THU
10213kHz	0745z	02/01 [268/30 12321 76922 20573 82014 63726 57709 40794 82352……]	RNGB	MON
	0745z	13/02 [264/37 40536 65124 67351 06625 14823 01305 87043 35583……38672 32608] Good	RNGB	MON

10429kHz	0805z	04/01 [319/39 43707 01516 58643 53117 83131 08975 52592 09136……97889 52850] Out 0815z	RNGB	WED
	0805z	15/02 [314/37 33641 38471 18992 68609 82252 38371 19078 47265……86942 16119] Fair	RNGB	WED
10448kHz	1625z	11/01 [977/37 58325……..65294] Out 1635z S2	Malc	WED
	1625z	15/02 [970/37 04857 21246 46644 17616 57869 50117 05225 49767……66955 98346] Good	Gary H	WED
	1625z	19/02 [970/37 04857……etc] Repeat of Wednesday	Malc	SUN
11100kHz	0820z	16/01 [438/33 87233 78042 55321 32884 06831 14969 02932 14766……40278 23671] Good	RNGB	MON
	0820z	19/01 [438/33 87233……etc] Repeat of Monday	RNGB	THU
	0820z	13/02 [438/32 88441 91012 04902 83173 56876 29768 34024 83498……58473 01387] Good	RNGB	MON
	0820z	16/02 [438/32 88441……01387] Out 0829z S7	Malc	THU
11107kHz	2005z	05/02 [366/36 78432 48569 48078 70840 13357 84693 18697 55970……70152 98823] Weak	RNGB	SUN
12153kHz	1045z	24/01 [579/33 55992 40241 34654 97150 65862 33106 64233 10521……39011 89884] Strong	RNGB	TUE
12924kHz	0710z	07/01 [491/31…….] too weak to copy	RNGB	SAT
	1745z	13/02 [245/35 01974 54403 58048 28287 20114 17337 26851 78389……35315 06983]	Ary	MON
	0710z	16/02 [492/33 91683 93673 76584 34856 22835 89090 39930 80389……69466 38134]	RNGB	THU
	0710z	18/02 [492/33 91683…..etc] Heavy QRM Repeat of Thursday	RNGB	SAT
14666kHz	1345z	03/01 [914/35 63233 13666 84227 67483 88531 60288 53472 90668……51179 12355] Weak	RNGB	TUE
	1345z	14/02 [911/34 75358 57100 04642 90830 75167 33459 17347 21393.....60682 13014]	Brixmis, Ed Smith	TUE
16112kHz	0745z	17/01 [332/32 88361 93359 73744 93164 09057 77409 81181 54738……68694 66822] Weak	RNGB	TUE
	0745z	19/01 [332/32 88361……66822] Weak, Repeat of Tuesday	RNGB	THU
	0745z	21/02 [331/34 99198 86380 64080 83973 41426 95304 05341……69477 31031]	Ary, Malc	TUE
	0745z	23/02 [331/34 99198…..etc] Repeat of Tuesday	Ary	THU
17535kHz	0545z	01/02 [347/37 14521 66706 06230 77228 74286 60394...55341] 0555z Via KiwiSDR Warsaw	Danix	WED
20167kHz	1225z	24/02 [528/34 13743 03037 98150 93049 01085…...57795 65734] Out 1235z KiwiSDR Austria.	Ed Smith	FRI

E17z

Thursday

January 2017

0800z 11170kHz 0820z 9820kHz

05/01	674 208 5 17099 94961 35826 65906 77333 208 5 00000 [0800z pause lg/dk]	Weak
12/01	674 208 5 17099 94961 35836 65906 77233 208 5 00000	Weak
19/01	674 283 5 39683 35468 35208 35868 49131 283 5 00000	Weak

February 2017

02/02	674 210 5 40048 43617 30343 84217 43043 210 5 00000	Weak

*0800z * There were a couple of mistakes with this transmission, the four was missing from first the group first number, and a twenty-five second pause in-between the last group and decode key

16/02	Too weak, unworkable	
23/02	674 213 5 33362 32079 40063 40372 89762 213 5 00000	Weak

E25

Edd sent in details of an E25 schedule he found on Priyom site. As to its viability? Give it a go.

http://priyom.org/number-stations/english/e25/schedule

We also passed it on to our operator MHOS who did a run of possibilities and produced the following short report:
The schedule is experimental and should not be immediately discounted

Checks made on schedule tabulated on next page

6140kHz 0600z 20/02 - 1100z N.R.H AM MON
6140kHz 0600z 27/02 – 1307z N.R.H. AM MON

6140kHz 0600z 21/02 - 1212z N.R.H. AM TUE
6140kHz 0600z 28/02 – 1300z N.R.H. AM TUE

6140kHz 0600z 22/02 – 1230z N.R.H. AM WED

6140kHz 0600z 23/02 – 1300z N.R.H. AM THU
6140kHz 0600z 16/02 - 1300z N.R.H. AM THU

6140kHz 0600z 17/02 - 1100z N.R.H. AM FRI
6140kHz 0600z 24/02 - 0800z N.R.H. AM FRI
6140kHz 1003z 24/02 - 1233z N.R.H. AM FRI

6140kHz 0600z 18/02 - 1100z N.R.H. AM SAT
6140kHz 0600z 25/02 - 0900z N.R.H. AM SAT

9450kHz 1106z 27/02 - 1339z N.R.H. AM MON

9450kHz 1139z 28/02 – 1323z N.R.H. AM TUE

9450kHz 1130z 16/02 – 1300z N.R.H. AM THU

9450kHz 1130z 22/02 – 1430z N.R.H. AM WED

9450kHz 0900z 23/02 – 1300z N.R.H. AM THU

9450kHz 1101z 24/02 - 1230z N.R.H. AM FRI

Logs

9600kHz 1223z 03/01 I.P. Test Song: AMR Diab - Agmal Ma Fiky. 1232z AM E.SMITH TUE [***Credit to qsr711*** *for alerting me to it and naming the song].*

9600kHz 1227z 04/01 I.P. Test Song: Teslam El Ayady. 1230z [Cuts out and ends with tone]. AM E.SMITH WED
[Song name from another Priyom user].

9600kHz 1226z I.P. 08/02 I.P. Near Eastern style music ending with test tone. 1230z AM E.SMITH WED

9600kHz 1105z 16/02 I.P. Near Eastern music followed by test tone. 1110z AM KiwiSDR Greece. E.SMITH THU

9600kHz 1102z 17/02 I.P. Near Eastern music followed by test tone. 1110z AM KiwiSDR Greece. E.SMITH THU

9600kHz 1110z 18/02. Near Eastern music. 1115z KiwiSDR Greece. E.SMITH SAT
[Preceded by continuous test tone from 1102z – Music 1110z – Carrier off 1115z].

9600kHz 1110z 20/02 [Near Eastern music] 1114z AM E.SMITH MON
[Preceded by continuous test tone from 1057z – Music 1110z – Carrier off 1114z].

9600kHz 1100z 23/02 [Near Eastern music] QSA2 QSB3 1110z AM E.SMITH THU
[Preceded by continuous test tone from 1058z – Music 1100z – Tone + Carrier off 1110z].

G06

PoSW's log, followed by others' intercepts:

The G06 schedules appearing in the UK evening time have survived into 2017.

Second + Fourth Thursdays in the Month Schedule - perhaps nominally 1830 UTC but of late usually starts two or three minutes before that time:-
12-Jan-17:- 1827 UTC, or a few seconds afterwards, 4,519 kHz, calling "271", DK/GC "149 149 52 52", signal somewhat weaker than usual for this schedule.

26-Jan-17:- 1828 UTC, 4,513 kHz - not the usual 4,519 - "271" and "149 149 52 52", over S9.

9-Feb-17:- 1827:25s UTC, 4,519 kHz, call "271", DK/GC "149 149 52 52", over S9.

23-Feb-17:- 1826:40s UTC, 4,519 kHz, "271" and "149 149 52 52", over S9.

Friday Schedule Following Second + Fourth Thursdays in the Month - starts several minutes before 1930 UTC:-
13-Jan-17:- 1927 UTC, 4,792 kHz, calling "436", DK/GC "149 149 52 52", that sequence of fifty-two 5F groups starting with, "12265 10965 47839.... " which has been transmitted by Thursday and Friday G06 and E06 schedules for some time now. This schedule usually an S9 signal but only managing S6 to S7 at best this evening.

27-Jan-17:- 1928 UTC, call-up in progress when tuned in just after this time – 4,792 kHz, "436" and "149 149 52 52" - of course! Weak signal, down in the local QRM.

10-Feb-17:- 1927:19s UTC – start-up times are getting earlier for these schedules, "436" and "436" and "149 149 52 52", signal peaking over S9.

First + Second Mondays in the Month 1700 + 1800 UTC Schedule - the remarks above with reference to early starts also applying to this appearance of the G06 YL:-
2-Jan-17:- 1701 UTC, found in progress, 3,529 kHz, "691 691 691 00000", stopped about 30 seconds after being tuned in so no doubt started well before the hour. Inside the 80 metre amateur band, strong CW on close frequency.
1759 UTC, 4,478 kHz, second sending, in progress when found, stopped 1801:25s UTC.

9-Jan-17:- 1658 UTC, 3,513 kHz, in progress when tuned in, "691 691 691 00000", stopped approx 1701:15s UTC.
1757 UTC, 4,478 kHz, second sending, again in progress when tuned in.

6-Feb-17:- 1657 and 40 seconds UTC, 3,516 kHz, "691 691 691 00000", over S9, several strong amateur CW stations on close frequencies.
1757 and 34s UTC – start time gets earlier and earlier - 4,478 kHz, second sending, over S9.

Others' Logs:

Monday

January 2017

0758z 5320kHz

02/01 329 00000 Weak

16/01 329 00000 Weak

20/02 329 00000 Weak

1800z 4478kHz

09/01 691 00000

February 2017

1700z 3516kHz

06/02 691 000 [1657z]

Wednesday

February 2017

1158z 4782kHz 1300z 4057kHz

08/02 691 00000

Thursday

January 2017

1300z 4460kHz

19/01 329 329 329 00000 Windows XP error/Game sounds. Weak

1830z 4519kHz

12/01 271 149 52 12265 ... .95732 149 52 00000 Weak

February 2017

1257z 4454kHz

09/02 329 00000

1258z 4460kHz

23/02 329 00000

1826z 4519kHz

23/02 271 149 52 12265 ... 95732 149 52 00000 Fair

Friday

January 2017

1930z 4792kHz [at 1927z]

13/01 436 149 52 12265 ... 95732 149 52 00000

436 149 52
12265 10965 47839 38654 84677 93453 72217 84393 04673 97564
01824 75643 84221 95647 92112 94543 76577 43435 47322 84232
95674 87344 57438 45763 49325 57438 92190 96785 21244 05674
01765 76354 83645 21234 97564 82133 07564 83234 75312 71211
05674 65374 67321 94884 23483 82521 41212 57333 85331 53234
05124 95732
149 52 00000
Windows XP shutdown sound
Operator chat at 1945z *Courtesy Ary*

27/01 436 149 52 12265 ... 95735 149 52 00000 [Up early 1928z] Strong

February 2017

1930z 4792kHz

24/02 436 149 52 12265 ... .95732 149 52 00000 Very strong

S06/S06a Russian Logs

We start with PoSW's logs thence moving on to RNGB's indepth coverage:

What are, apparently, the only two remaining regular S06 Russian Man schedules likely to be heard in the UK evening time have survived into 2017. For several years the month of December saw the end of other S06 schedules, that is they were not found in the January of the following year, but these two survivors of a once prolific set-up continue in the New Year:-

First + Third Saturdays in the Month 2000 + 2100 UTC Schedule:-
7-Jan-17:- 2000 UTC, 4,012 kHz, "913 913 913 00000", over S9.
2100 UTC, 3,408 kHz, second sending, also over S9 as it would need to be on this low frequency where local interference from "domestic entertainment electronics" is really starting to become a pain. These frequencies not too far removed from the 4,031 + 3,505, +/-, used in the last months of 2016.

21-Jan-17:- 2000 UTC, 4,012 kHz, "913 913 913 00000", over S9.
2100 UTC, 3,398 kHz, lower frequency than last time and the lowest frequency of any logged number station for quite a while.

First + Third Fridays in the Month 2000 + 2100 UTC - Or 1900 + 2000 UTC – Schedule:-
20-Jan-17:- 2101 UTC, 5,412 kHz, found about one minute into transmission, "514 514 514 00000", S8 on a clear frequency. Presumably the second sending although a search at 2000
found no sign of the first one.

In February this schedule moved by one hour:-
3-Feb-17:- 2000 UTC, 5,412 kHz, "514 514 514 00000", weak signal. Carrier with audio hum noted on 5,412 at 1939 UTC, tone at 1950. On the possibility that this might do the one hour shift routine a search was made at 1900 UTC for the first sending, but nothing found.

17-Feb-17:- 1900 UTC, 7,607 kHz, "514 514 514 00000", the elusive first sending of this schedule, S8 on a clear frequency.
2000 UTC, 5,412 kHz, second sending, over S9.

S06s YL Voice:-
A few of the stronger S06s schedules, all received during the UK daytime:-

Monday 0830 + 0840 UTC, Call "371":-
2-Jan-17:- 0830 UTC, 8,057 kHz, DK/GC "290 290 5 5", "33796 13577 74526 46647 79302", signal strength S5 to S6.
0840 UTC, 8,530 kHz, second sending, slightly weaker signal.

30-Jan-17:- 0830 UTC, 8,057 kHz, "371 371 371 00000", the "no message" format often used by S06s in the last days of the month.
0839 UTC, 8,530 kHz, second sending started about one minute early, seems to be the standard procedure for the repeat of "no message".

13-Feb-17:- 0830 UTC, 8,057 kHz, DK/GC "405 405 6 6", "47694 45680 45089 32417 39736 35697", S7.
0840 UTC, 8,530 kHz, second sending, also S7.

20-Feb-17:- 0830 UTC, 8,057 kHz, DK/GC "264 264 5 5", "46062 68672 97478 39685 30485".
0840 UTC, 8,530 kHz, second sending, both transmissions indicating S8.

Tuesday 0800 + 0810 UTC Schedule, Call "352":-
3-Jan-17:- 0800 UTC, 11,945 kHz, DK/GC "847 847 6 6", "52401 63919 92699 14600 74248 48754". Something unusual here; the 5F groups are spoken twice and on the second
uttering of the second group an additional "8" was tacked on to the end so that it became a 6F, "639198". Merely an error in the way the messages are put together or of some deeper significance?
0810 UTC, 13,195 kHz, second sending, also came with the extra "8" on the end of the second speaking of group no. 2. Both transmissions S9 signals.

17-Jan-17:- 0800 UTC, 11,945 kHz, weak signal, mostly inaudible.
0810 UTC, 13,195 kHz, second sending, much stronger signal, peaking over S9, DK/GC "870 870 6 6", "47694 45680 45089 32417 39736 35697".

24-Jan-17:- 0800 UTC, 11,945 kHz, DK/GC "870 870 6 6", 5Fs as on the 17th. S9 with QSB.
0810 UTC, 13,195 kHz, second sending, also S9.

31-Jan-17:- 0800 UTC, 11,945 kHz, "352 352 352 00000", "no message" at the end of the month.
0809 UTC, just after, 13,195 kHz, second sending.

21-Feb-17:- 0800 UTC, 11,945 kHz, DK/GC "897 897 6 6", "36998 39801 37331 38881 37914 43071", S8.
0810 UTC, 13,195 kHz, second sending, the ionosphere must have been acting up, signal strength indicating S9 at the start of the transmission but only just readable by the end five minutes or so later.

Wednesday 1000 + 1010 UTC Schedule, Call "729":-
4-Jan-17:- 1000 UTC, 12,365 kHz, DK/GC "834 834 5 5", "44745 16330 88418 30480 88650", S9 signal.
1010 UTC, 14,280 kHz, second sending, also S9.

11-Jan-17:- 1000 UTC, 12,365 kHz, "834 834 5 5" and 5Fs as on the 4th. S9+, very strong signal.
1010 UTC, 14,280 kHz, also S9+.

18-Jan-17:- 1000 UTC, 12,365 kHz, DK/GC "841 841 5 5", "36138 39315 38868 30447 31788", S9 with QSB.
1010 UTC, 14,280 kHz, second sending much weaker, faded into the noise.

1-Feb-17:- 1000 UTC, 12,365 kHz, DK/GC "830 830 5 5", "13193 32521 36333 91530 64794", S9+.
1010 UTC, 14,280 kHz, second sending, weaker signal, S7.

8-Feb-17:- 1000 UTC, 12,365 kHz, "830 830 5 5" and 5Fs as on the 1st, S9+ signal.
1010 UTC, 14,280 kHz, second sending, slightly weaker.

15-Feb-17:- 1000 UTC, 12,365 kHz, DK/GC "481 481 5 5", "36772 98493 36340 32048 34338", strength S8.
1010 UTC, 14,280 kHz, second sending inside the 20 metre amateur band, also S8.

Thursday 1200 + 1210 UTC Schedule, Call "425":-
9-Feb-17:- 1200 UTC, 12,155 kHz, DK/GC "918 918 6 6", "92325 36615 36491 49588 41061 83354", S9.
1210 UTC, 10,920 kHz, second sending, weaker signal, S5 to S6.

16-Feb-17:- 1200 UTC, 12,155 kHz, DK/GC "837 837 6 6", "40048 43617 30343 84217 43043 39553", S9+.

Friday 0930 + 0940 UTC Schedule, Call "516":-
6-Jan-17:- 0930 UTC, 11,780 kHz, DK/GC "983 983 7 7", "20534 11160 43494 37638 16070 48834 53735", S7 signal.
0940 UTC, 12,570 kHz, second sending, stronger signal, indicating S9.

13-Jan-17:- 0930 UTC, 11,780 kHz, "983 983 7 7" and 5Fs as on the 6th. S9+ with QSB.
0940 UTC, 12,570 kHz, second sending, S9+.

20-Jan-17:- 0930 UTC, 11,780 kHz, DK/GC "849 849 7 7", "46125 36533 48389 49877 43257 38902 44069", S9.
0940 UTC, 12,570 kHz, second sending, over S9.

27-Jan-17:- 0930 UTC, 11,780 kHz, DK/GC and 5Fs the same as on the 20th, S9+.
0940 UTC, 12,570 kHz, also S9+.

3-Feb-17:- 0930 UTC, 11,780 kHz, DK/GC "420 420 7 7", "31829 47694 45680 45089 32417 39736 35697", S8, a weaker broadcast station heard underneath, the carriers of the two transmissions interacting to form a very low frequency beat note.
0940 UTC, 12,570 kHz, second sending, stronger signal, S9.

10-Feb-17:- 0930 UTC, 11,780 kHz, "420 420 7 7" and 5Fs as on 3-Feb, S9+, very strong.
0940 UTC, 12,570 kHz, second sending, also S9+.

17-Feb-17:- 0930 UTC, 11,780 kHz, "429 429 7 7", "37569 35656 44868 36582 39730 49674 31829" S9+.
0940 UTC, 12,570 kHz, S9+ again.

Saturday 0800 + 0810 UTC Schedule, Call "254":-
7-Jan-17:- 0800 UTC, 8,680 kHz, DK/GC "810 810 6 6", S8 to S9, "34031 33430 37536 34906 35455 94372". Not heard this one before, was not sure of the frequency of the second sending, looked at the prediction list afterwards, says 8,260.

No sign of this one on the following Saturday; then looked at the prediction list again and saw that, unusually for S06s, it only transmits on the first Saturday in the month.

4-Feb-17:- 0800 UTC, 8,680 kHz, DK/GC "837 837 6 6", S8, "49294 38064 31724 37324 39316 46660".
0810 UTC, 8,260 kHz, second sending, weaker signal, S6 to S7.

RNGB's coverage

S06 log January 2017

Daily Mon- Fri 0400z 15721kHz

Thursdays (Repeats following day) 0830z 16243kHz 0930z 13469kHz
12/01 '842' 139 48 29363 90193 69170 07417 86762 05658 43785 41856 40309 52687 38225 24492 75487 87698 54472 39715 61693 69845 24211 00521 11719 77225 83606 91121 38608 09900 82157 79987 64563 53168 92824 39219 61586 99537 15612 31213 28548 52812 91792 48547 34373 62763 70973 18030 82019 63789 98165 04842 139 48 00000

19/01 '842' 506 49 97125 70813 65713 29481 04444 33823 48295 57307 04400 68876 55698 33810 78389 66427 32549 18910 84980 89115 16047 93601 79120 36558 03660 17174 91989 13357 36931 64992 13682 11272 56088 20298 45914 41493 05138 18431 16932 77942 92137 66946 75817 97550 34336 90043 08378 28444 42852 70741 41798 506 49 00000

26/01 '842' 137 50 00010 38588 93250 44991 68592 99986 93357 14492 78010 42104 06311 27339 63798 84573 15131 97825 68398 69471 54481 95739 98042 89454 70140 37441 46914 52328 60593 87593 74534 11735 49192 13722 47312 18629 60325 60790 80182 73257 98024 37990 39292 82299 50448 34920 91646 50879 68685 09345 12677 64128 137 50 00000

Fridays (1st & 3rd) 2000z 7607khz 2100z 5412kHz (frequencies may vary slightly)
06/01 '514' 00000
20/01 '514' 00000

Saturdays (1st/3rd) 2000z 4012kHz 2100z 3408kHz (frequencies may vary slightly)

Non scheduled:

10254kHz 1230z 10/01 I.P. [480 312 45 50135 80378 77662 36926 77384 32258 43795 81190 22191 26184 55053 99625 71339 69531 12708 92028 19160 26665 57696 44576 21605 59812 38872 29052 63405 35848 23128 89060 02032 01790 18411 66539 17503 89817 46338 63102 37871 29829 19860 90023 39302 58963 10418 29009 56318 00000] 1242z Ed Smith TUE
9337kHz repeat at 1300z

S06. 9463kHz 1001z 17/01 I.P. [480 621 43 73995 85328 87650 23576 55716 52066 01630 66200 57401 84853 00773 88198 03406 11905 45671 09335 66502

84676 22763 63948 35769 95824 79412 98651 94441 68080 27822 77305 23843 95883 08867 73626 67677 92924 75241 15470 32175 64478 75710 14096 55206 60429 13963 00000] 1012z Ed Smith TUE

S06. 10254kHz 1230z 17/01 [480 621 43 73995 85328 ..... 60429 13963 00000] 1242z Ed Smith TUE*

* Also transmitting parallel on 10159kHz QSA2.

S06. 9337kHz 1300z 17/01 [480 621 43 73995 85328 ..... 60429 13963 00000] 1312z Ed Smith TUE

S06. 9463kHz 1001z 17/01 I.P. [480 621 43 73995 85328 87650 23576 55716 52066 01630 66200 57401 84853 00773 88198 03406 11905 45671 09335 66502 84676 22763 63948 35769 95824 79412 98651 94441 68080 27822 77305 23843 95883 08867 73626 67677 92924 75241 15470 32175 64478 75710 14096 55206 60429 13963 00000] 1012z E.SMITH TUE

9463kHz
24/01 1000z '480' 267 41 67421 97700 61483 28452 43208 78646 87173 43262 04309 72604 46472 76509 47464 91755 34140 31170 87099 87476 50135 80378 36926 77384 32258 43795 81190 22191 26184 16869 81013 09636 **72604** 93390 **46472 76509 47464 91755 34140 31170 87099 87476 80378 267 41 00000**

S06 12164 23-01-2017 1039 S06 USB (looks like a repeat of 9463kHz at 1000z)
Unscheduled message i.p.
22198 26184 16869 81013 09636 72604 93390 46472 76509 47464 91755 34140 31170 87099 87476 80378 267 41 00000

Currently (1052z) more activity on 12164 kHz

9337kHz 1230z 24/01 [480 267 41 67421 97700 …... 87476 80378 00000] 1241z USB/AM Ed Smith TUE
8077kHz 1304z 24/01 I.P. [.....87476 80378 00000] 1311z Ed Smith TUE

9337kHz 1230z 31/01 '480' 527 43 99625 71339 ..... 55044 77254 00000] 1242z USB/AM Ed Smith TUE
'480' 527 43 99625 71339 69531 12708 92028 19160 26665 57696 44576 21605 38872 29052 63405 35848 23128 89060 02032 01790 18411 66539 89817 46338 63102 37871 29829 19860 90023 39302 58963 10418 46472 76509 47464 91755 34140 31170 87099 87476 74804 95315 02521 55044 77254 00000] 1012z Ed Smith

S06s January log:

Monday

2nd/9th	0830/0840z	8057/8530	'371' 290 5 33796 13577 74526 46647 79302
16th/23rd			'371' 480 5 31653 46933 35868 47892 37858
2nd/9th	0900/0910z	14675/12830	'872' 930 5 10597 23521 47550 92883 69901
16th/23rd			'872' 490 5 32474 32388 49873 31492 34793
2nd/9th	1300/1310z	8420/10635	'831' 927 5 48115 24151 51802 23807 15521
16th/23rd			'831' 965 7 40951 35790 31868 37023 31760 46556 31578

Tuesday

3rd/10th	0600/0610z	16145/14240	'438' No reports
17th/24th			'438' No reports
3rd/10th	0700/0715z	5250/6320	'374' 512 6 23247 17099 94961 35826 78927 34694
17th/24th			'374' 528 6 41645 35709 36414 49790 32639 39730
3rd/10th	0730/0740z	7410/11532	'427' 561 8 46062 68672 97478 39685 30485 96632 52537 53317
17th/24th			'427' 803 5 38034 37823 38230 48235 38702
3rd/10th	0800/0810z	11945/13195	'352' 847 6 52401 63919 92699 14600 74248 48754 (2nd group repeat 639198)
17th/24th			'352' 870 6 47694 45680 45089 32417 39736 35697
3rd/10th	1000/1010z	6440/5660	'893' 247 5 93351 42191 30821 33725 37661
17th/24th			'893' 251 6 32391 33-32 35044 41354 31663 41731
3rd/10th	1100/1110z	5035/5975	'754' 213 6 4.347??? too weak to copy
17th/24th			'754' 230 32863 32582 38053 33231 42923 42032
3rd/10th	1500/1510z	6845/9170	'537' 201 6 15690 85544 34558 49232 43249 33666
17th/24th			'537' 218 6 34173 32391 38632 35044 41354 31717

Wednesday

4th/11th	0820/0830z	8417/9262	'471' 589 6 92883 69901 10597 22531 16949 84116
18th/25th			'471' 920 5 37979 37681 32817 38732 32863
4th/11th	0830/0840z	7062/10532	'464' 973 5 33796 13577 74526 46646 69302
18th/25th			'464' 295 7 37324 39316 35660 30387 53085 36310 39739
4th/11th	0830/0840z	11535/11830	'745' 938 6 32831 89130 37383 34643 30492 42198
18th/25th			'745' 280 6 38105 42424 81310 42873 39245 37374
4th/11th	1000/1010z	12365/14280	'729' 834 5 44745 16330 88418 30480 88650
18th/25th			'729' 841 5 36138 39315 38868 30447 31788

Thursday

5th/12th (E17z)	0800/0810z	11170/9820	'674' 208 5 17099 94961 35826 65906 77233
19th/26th			'674' 283 5 39683 35468 35208 35868 49131
5th/12th	0930/0940z	8812/9540	'314' 968 5 96320 36793 53038 76342 15009
19th/26th			'314' 820 5 38304 37823 38230 48235 38702
5th/12th	1200/1210z	12155/10920	'425' 917 6 88146 57856 98835 46186 16945 80744
19th/26th			'425' 870 6 39382 45739 49645 32975 45356 49396

Friday

6th/13th	0900/0910z	5765/6315	‘624’ 850 7 06123 22536 88280 84116 53718 78924 34694
20th/27th			‘624’ 958 7 33322 33383 47789 37938 42112 43936 40252
6th/13th	0930/0940z	11780/12570	‘516’ 983 7 20534 11160 43494 37638 16070 48834 53735
20th/27th			‘516’ 849 7 46125 36533 48389 49877 43257 38902 44069

Saturday

7th	0800/0810z	8680/8260	‘254’ 810 6 34031 33430 37536 34906 35455 94372

Sunday

1st/8th	0630/0640z	13470/16515	‘524’ 813 6 39654 32387 44142 30697 33104 31985
15th/22nd			‘524’ 987 6 46062 58672 97478 39685 30485 96632

S06 log February 2017

Daily Mon- Fri 0400z 15721kHz No reports

Tuesdays 1000z 9463kHz 1030z 7353kHz 1230z 9337kHz 1300z 8077kHz

07/02 ‘480’ 752 41 77479 03752 62892 95901 70394 16432 54239 60685 45440 93446 16377 82115 50637 57420 10276 03243 48730 41612 13948 73415 55663 25581 77890 31175 47907 42842 41314 59321 99407 13073 89496 01428 13748 38932 10878 44775 21692 07355 01994 73310 61447 752 41 00000

14/02 ‘480’ 712 44 52066 01630 66200 57401 84853 00773 88198 03406 11905 45671 09335 66502 84676 22763 63948 35769 95824 79412 98651 94441 68080 27822 77305 23843 95883 08867 73626 67677 92924 75241 15470 32175 64478 75710 14096 73995 85328 87650 23576 55716 55206 60429 13963 73321 712 44 00000] 1312z

21/02 NRH

Thursdays (Repeats following day) 0830z 17440kHz 0930z 15614kHz

02/02 ‘842’ 539 30 05201 49877 21251 17119 11692 86929 30948 95112 85814 61418 38300 84037 79444 15514 43089 02506 59152 24621 10118 88374 58443 52335 12710 59999 02751 69161 95057 71713 05623 27187 569 30 00000

09/02 ‘842’ 970 31 12028 67703 72478 01984 70978 14694 09157 96647 13832 42568 46147 17655 38879 66582 53753 61612 29608 81491 67340 88332 75007 56828 32499 90390 36068 63143 04987 36595 81905 46390 91400 970 31 00000

16/02 ‘842’ 156 32 34814 18046 15576 71034 17190 66339 99169 99947 17933 58251 36344 56976 74409 74930 79387 11365 46779 61867 54272 60516 34829 56847 19136 19196 77728 32448 95531 54495 72623 32774 70858 21768 156 32 00000

Fridays (1st & 3rd) 1900z 7607khz 2000z 5412kHz (frequencies may vary slightly)

03/02 ‘514’ 00000
17/02 ‘514’ 00000

Saturdays (1st/3rd) 2000z 4012kHz 2100z 3398kHz (frequencies may vary slightly)

04/02 ‘913’ 00000
18/02 ‘913’ 00000

S06s February log:

Monday

6th/13th	0830/0840z	8057/8530	‘371’ 405 6 47694 45680 45089 32417 39736 35697
20th/27th			‘371’ 264 5 46062 68672 97478 39685 30485
6th/13th	0900/0910z	14675/12830	‘872’ 954 6 32391 38632 35044 41354 31663 41731
20th/27th			‘872’ 951 6 88620 58069 61732 74537 57440 10597
6th/13th	1300/1310z	8420/10635	‘831’ 270 5 32382 38053 33231 42923 42032
20th/27th			‘831’ 570 6 33796 13577 74526 46647 79302

Tuesday

7th/14th	0600/0610z	16145/14240	‘438’ 206 5 39742 23416 45268 47504 31287
21st/28th			‘438’ 970 5 01405 15003 24357 60684 54545
7th/14th	0700/0715z	5250/6320	‘374’ 819 5 37947 39747 31323 31829 47967
21st/28th			‘374’ 952 6 88146 57856 98835 46186 16945 80744
7th/14th	0730/0740z	7410/11532	‘427’ 896 5 33699 39998 30667 35947 83964
21st/28th			‘427’ 839 5 82333 36958 29423 48076 33739
7th/14th	0800/0810z	11945/13195	‘352’ 496 7 44475 30322 36034 35445 44008 38453 48324
21st/28th			‘352’ 897 6 36998 39801 37331 38881 37914 43071
7th/14th	1000/1010z	6440/5660	‘893’ 401 5 43637 41341 47217 30487 34053
21st/28th			‘893’ 426 5 87240 34625 38363 22126 26122
7th/14th	1100/1110z	5035/5975	‘754’ 930 6 37184 36129 33983 83321 81235 32469
21st/28th			‘754’ 893 6 38034 39477 22267 27555 22300 91480
7th/14th	1500/1510z	6845/9170	‘537’ 281 6 88443 36772 98493 36340 32048 34338
21st/28th			‘537’ 849 6 34032 33420 37536 34906 39698 35454

Wednesday

1st/8th	0820/0830z	8417/9262	'471' 935 6 43334 30147 30494 43014 81015 46544
15th/22nd			'471' 825 6 37796 85258 38303 48833 37437 55584
1st/8th	0830/0840z	7062/10532	'464' 951 7 82333 36958 39423 48076 33739 43384 33898
15th/22nd			'464' 920 5 34917 36991 38643 37967 89762
1st/8th	0830/0840z	11535/11830	'745' 908 6 34645 31830 33885 42384 35438 80044
15th/22nd			'745' 802 6 44008 38753 48324 33885 31830 32860
1st/8th	1000/1010z	12365/14280	'729' 830 5 13193 32521 36333 91530 64794
15th/22nd			'729' 481 5 36772 98493 36340 32048 34338

Thursday

2nd/9th (E17z)	0800/0810z	11170/9820	'674' 210 5 40048 43617 30343 84217 43043
16th/23rd			'674' 213 5 33362 32079 40063 40372 89762
2nd/9th	0930/0940z	8812/9540	'314' 259 6 40244 36012 38323 47552 43630 40846
16th/23rd			'314' 578 6 35861 33432 89319 32494 37142 32842
2nd/9th	1200/1210z	12155/10920	'425' 918 6 92325 36615 36491 49588 41061 83354
16th/23rd			'425' 837 6 40048 43617 30343 84217 43043 39553

Friday

3rd/10th	0900/0910z	5765/6315	'624' 509 7 31492 34793 31365 46933 35868 47892 37858
17th/24th			'624' 983 5 48555 73473 33884 39303 85258
3rd/10th	0930/0940z	11780/12570	'516' 420 7 31829 47694 45680 45089 32417 39736 35697
17th/24th			'516' 429 7 37569 35656 44868 36582 39730 49674 31829

Saturday

4th	0800/0810z	8680/8260	'254' 837 6 49294 38064 31724 37324 39316 46660

Sunday

5th/12th	0630/0640z	13470/16515	'524' 961 7 39382 45739 49645 32975 45356 49396 39265
19th/26th			'524' 980 6 43090 84663 83473 33599 30743 37625

S11a log Jan/Feb

4828kHz	0455z	20/01 [320/40 50009 88139 84762 43723…...02684 57591] КОНЕЦ 0508z KiwiSDR Ukraine	Ed Smith	FRI
	0455z	07/02 [326/00] КОНЕЦ 0458z KiwiSDR Ukraine.	Ed Smith	TUE
	0455z	10/02 [329/00] КОНЕЦ 0458z KiwiSDR Ukraine.	Ed Smith	FRI
	0455z	14/02 [322/00] КОНЕЦ 0458z	Ed Smith	TUE
	0455z	21/02 [327/32 26735 95514 02142 11629 78218…...13812 81993] КОНЕЦ 0506z KiwiSDR Italy.	Ed Smith	TUE
	9455z	24/02 [327/32 26735…..etc] Repeat of Tuesday	Ed Smith	FRI
5815kHz	1955z	04/01 [376/00] Konyetz 1958z S2	Malc	WED
	1955z	06/01 [371/00]	Thomas	FRI
	1955z	25/01 [371/00] КОНЕЦ 1958z QSA4 QRM2 QSB2	JkC	WED
	1955z	27/01 [378/00] КОНЕЦ]1958z QSA3 QRM1 QSB2	JkC	FRI
	1955z	03/02 [370/36 52276 40983 04780 93404 30193 04690 29295 59636……45079 27388] Good	RNGB	FRI
	1955z	10/02 [372/00] Good	RNGB	FRI
	1955z	15/02 [371/00] Konyetz 1958z S9	Malc	WED
	1955z	17/02 [370/00] Strong	RNGB	FRI
7504kHz	0915z	03/01 [486/00] Konyetz 0918z S4	Malc	TUE
	0915z	06/01 [481/00]	RNGB	FRI
	0915z	09/01 [484/00]	RNGB	TUE
	0915z	13/01 [487/00] Konyetz 0918z S2	Malc	FRI
	0915z	17/01 [484/00]	RNGB	TUE
	0915z	20/01 [481/00] Fair	RNGB, Malc	FRI
	0915z	24/01 [480/37 79875 91452 47396 71325 38362 87226 64554 78190……40025 46615] Good	RNGB	TUE
	0915z	27/01 [480/37 79875 ... 46615 КОНЕЦ 0727z	JkC	FRI
	0915z	31/01 [487/00] Good	RNGB	TUE
	0915z	03/02 [485/00]	RNGB	FRI
	0915z	07/02 [482/36 88235 71251 86611 91971 74522 29369 98282 67141……35021 76020] 0926z	RNGB	TUE
	0915z	14/02 [483/00] КОНЕЦ 0918z	Ed Smith	TUE
	0915z	21/02 [487/00]	RNGB	TUE
	0915z	24/02 [483/00] Konyetz 0918z S3	Malc	FRI
9130kHz	1102z	26/01 [I.P. ВНИМАНИЕ 56103 15441 86957 74147 41718 89279 07187 91350 21878 84647 45509 09785 08378 22443 43255 18438 99678 83835 37987 41462] КОНЕЦ 1104z	Ed Smith	THU
	1132z	26/01 [I.P. ВНИМАНИЕ 64473 68313 55804 58648 79900 90912 12349 98992 23599 05212 19408 40637 27744 02364 43403 95282 79429 76209 69726 53400] КОНЕЦ 1134z	Ed Smith	THU
9610kHz	1020z	03/01 [424/00] Konyetz 1023z S2	Malc, RNGB	TUE
	1020z	10/01 [429/00] Konyetz 1023z S3	Malc	TUE

	1020z	17/01 [421/37 09789 56187 95167 68582 31185 60118 67254 13059……82147 88175]	Ed Smith	TUE
	1020z	20/01 [421/37 09789……etc] Repeat of Tuesday	RNGB	FRI
	1020z	24/01 [427/00] Good	RNGB	TUE
	1020z	27/01 [429/00] КОНЕЦ 1023z QSA4 QRM1 QSB1	JkC	FRI
	1020z	31/01 [427/00]	RNGB	TUE
	1020z	07/02 [421/00] Strong	RNGB	TUE
	1020z	14/02 [426/00] КОНЕЦ 1023z	Ed Smith	TUE
	1020z	17/02 [424/00] Good	RNGB	FRI
	1020z	21/02 [422/30 56837 24797 99432 62517 63752 76126 11577 05845……95806 25485] 1030z	Ed Smith, RNGB	TUE
	1020z	24/02 [422/30 VNIMANIE 56837…..etc] Repeat of Tuesday	Malc	FRI
10728kHz	1540z	18/01 [564/00]	RNGB	WED
	1540z	25/01 [563/00]	Gary H	WED
	1540z	01/02 [561/00]	RNGB	WED
	1540z	15/02 [563/31 67733……..00323] S9	Malc	WED
	1540z	18/02 [563/31 67733 02039 94299 39529 70472 90381……40882 00323] KiwiSDR Italy.	Ed Smith	SAT
	1540z	22/02 [565/00]	RNGB	WED
	1540z	25/02 [565/00] Konyetz 1543z S3	Malc	SAT
12530kHz	1015z	05/01 [477/00] Good	RNGB	THU
	1015z	09/01 [472/36 17545 45087 58038 24197 32010 99656 49383 60007……68326 88656] Fair	RNGB	MON
	1015z	16/01 [479/00] Konyetz 1018z S6	Malc, RNGB	MON
	1015z	26/01 [471/00] КОНЕЦ 1018z KiwiSDR Italy.	Ed Smith	THU
	1015z	30/01 [470/00] Strong	RNGB	MON
	1015z	06/02 [472/00] Strong	RNGB	MON
	1015z	09/02 [475/00] КОНЕЦ 1018z QSA2	Ed Smith, RNGB	THU
	1015z	13/02 [476/40 96641 87539 01373 13198 71768 33409 25503 49447……52548 12046] Good	RNGB	MON
	1015z	20/02 [476/00] Konyetz 1018z S7	Malc	MON
	1015z	23/02 [479/00] Strong	RNGB	THU
19099kHz	0715z	23/01 [385/00] Weak	RNGB	MON
	0715z	30/01 [389/00] Very weak HK remote	RNGB	MON
	0715z	13/02 [389/00] Weak Grenoble, France remote	RNGB	MON
	0715z	15/02 [380/00] КОНЕЦ 0718z KiwiSDR Japan	Ed Smith	WED
	0715z	20/02 [387/00] ? Barely audible	RNGB	MON
	0715z	22/02 [385/00] КОНЕЦ 0718z KiwiSDR Italy.	Ed Smith	WED

V02a

Jan-Feb 2017

V02a put in at least 13 appearances during January and early February, always mixing with M08a in the 2000z time slot. When the morse transmission switched to the 12345 67890 format V02a was not heard. One transmission on 8135kHz is listed as V02a but was only the SS/YL voice repeating “Uno” The Uno was repeated 100 times before a slight pause then another 100 Unos. The transmission was very intermittent on two occasions and this corresponded to the same intermittent signal with the M08a transmission so it appears to have been a transmitter problem.

Logs

V02a 7554kHz 2000z 3/1 [A07042 20672 33001] Simultaneous with M08a TUE
V02a 7554kHz 2000z 5/1 [A76641 ?7471 4771?] Extremely weak mixing with M08a THU
V02a 7554kHz 2000z 10/1 [A46081 50322 63741] Simultaneous with M08a. TUE
V02a 7554kHz 2000z 12/1 [A76132 08862 12201] Simultaneous with M08a. THU
V02a 7554kHz 2020z 15/1 Difficult to categorize but at 2020z the V02a/HM01 voice came up repeating "Uno" continuously, still in progress at 2045z. SUN
V02a 8135kHz 2254z 15/1 V02a/HM01 voice repeating "Uno" 100 times followed by a slight pause then repeat. Continued until 2312z. See similar event on 8/11
V02a 7554kHz 2000z 17/1 [A24142 37461 50802] Simultaneous with M08a. TUE
V02a 7554kHz 2000z 19/1 [A17261 38682 42021] Simultaneous with M08a. THU
V02a 7554kHz 2000z 24/1 [----- ----- -----] Up late in progress with intermittent signal. Simultaneous with M08a. TUE
V02a 7554kHz 2000z 26/1 [A05232 18552 22881] Simultaneous with M08a. THU
V02a 7554kHz 2000z 2/2 TX cutting out with only a fraction of a second of voice every 3 seconds. Simultaneous with M08a. THU
V02a 7554kHz 2000z 7/2 [A88742 02161 15502] Simultaneous with M08a. TUE
V02a 7554kHz 2000z 9/2 [A34541 46871 50202] Simultaneous with M08a. THU

V07

Sunday

January 2017

0100z	**16037kHz**	**0120z**	**14637kHz**	**0140z**	**12137kHz**	
01/01	661 000					Weak
08/01	661 000					Weak, audio distortion
22/01	661 000					Weak*

*FromT:

It might be worth noting, there appears to have been an operator error during both of these transmissions. Normally this outlet of V07 is transmitted in USB. Typically this source tunes the transmitter up with an AM signal, often playing music during the tune up, as much as 30 minutes before the V07 transmission, and then the transmitter is switched to USB mode and left on-air until transmission time. For these transmission on January 22 both time slots were transmitted in AM, not the normal USB. From tune up until after end of message the transmitter stayed in AM mode for both time slots.

29/01 661 000 [Preceded by test tones] Fair

February 2017

0100z 18368kHz 0120z 16268kHz 0140z 13968kHz

05/02 329 000 Weak

12/02 329 1 325 59 07883 ... 1430? --- --- Weak

19/02 329 000 Weak

26/02 329 1 Weak, unworkable

V13

9276kHz1200z	20/02 V13 AM New Star Broadcasting Station	AB	MON
11430kHz 0500z	11/02 V13 AM New Star Broadcasting Station	AB	SAT
0600z	11/02 V13 AM New Star Broadcasting Station	AB	SAT
11430kHz0500z	20/02 V13 AM New Star Broadcasting Station	AB	MON
0600z	20/02 V13 AM New Star Broadcasting Station	AB	MON
15250kHz0700z	20/02 V13 AM New Star Broadcasting Station	AB	MON
15250kHz0800z	20/02 V13 AM New Star Broadcasting Station	AB	MON

V21

The Babbler continues to be present on 5637kHz and 6529kHz with generally weak signals. A few transmissions were logged as listed below. An open mic on 5637kHz on 11/2 proved interesting as another SS/OM could be heard counting in the background, we have noted two simultaneous Babblers on 6529kHz before, presumably there is at least one more as yet unknown frequency in operation.

Logs.

V21 5637kHz 1420z 28/1 [62 to72 then 62 to 72 again then count to 99 Found in progress, off at 1433z SAT

V21 kHz 1415z 4/2 [40, 10, 40, 30.....40, 40, 10, 30, 20.....continues. At one point he leaves an open mic and another SS/OM can be heard counting in the background. SAT

V21 5637kHz 1415z 11/2 In progress, 99 then 00, 00 00 25 sound of chair scraping on the floor, 16, 14, 26, 16 SAT

V21 6529kHz 1400z 11/2 SS/OM counting. SAT

V26

4243kHz1222z	01/01/17[(From M95 sked - USB - Chinese - Female - // 9054) (Remote tuner New Zealand)]	JPL	SUN
4243kHz0958z	03/01/17[(IP - USB - Chinese - Female - // 9054) (Remote tuner New Zealand)]	JPL	TUE
4243kHz1216z	03/01/17[(IP - USB - Chinese - Female - // 9054) (Remote tuner New Zealand)]	JPL	TUE
4243kHz1217z	04/01/17[(FM M95 sked - USB - Chinese - Female - // 9054) (Remote tuner New Zealand)]	JPL	WED
4243kHz1206z	06/01/17[(FM M95 sked - USB - Chinese - Female - // 9054) (Remote tuner New Zealand)]	JPL	FRI
4243kHz1216z	19/01/17[(FM M95 sked - USB - Chinese - Female - // 9054) (Remote tuner New Zealand)]	JPL	THU
4243kHz1216z	21/01/17[(FM M95 sked - USB - Chinese - Female - // 9054) (Remote tuner New Zealand)]	JPL	SAT
4243kHz1225z	31/01/17[(FM M95 sked - USB - Chinese - Female - // 9054) (Remote tuner New Zealand)]	JPL	TUE
4243kHz1210z	05/02/17[(IP - USB - Chinese - Female - // N/H) (Remote tuner Japan)]	JPL	SUN
4243kHz1212z	09/02/17[(From M95 sked - USB - Chinese - Female - // 9054) (Remote tuner New Zealand)]	JPL	THU
4243kHz1205z	13/02/17[(From M95 sked - USB - Chinese - Female - // 9054) (Remote tuner New Zealand)]	JPL	MON
14/02/17[(From M95 sked - USB - Chinese - Female - // 9054) (Remote tuner New Zealand)]		JPL	TUE
4243kHz1205z	20/02/17[(From M95 sked - USB - Chinese - Female - // 9054) (Remote tuner New Zealand)]	JPL	MON
4243kHz1211z	21/02/17[(From M95 sked - USB - Chinese - Female - // 9054) (Remote tuner New Zealand)]	JPL	TUE
4243kHz1220z	23/02/17[(From M95 sked - USB - Chinese - Female - // 9054) (Remote tuner New Zealand)]	JPL	THU
4364kHz1203z	13/02/17[(From M95 sked - USB - Chinese - Female - // 8073) (Remote tuner New Zealand)]	JPL	MON

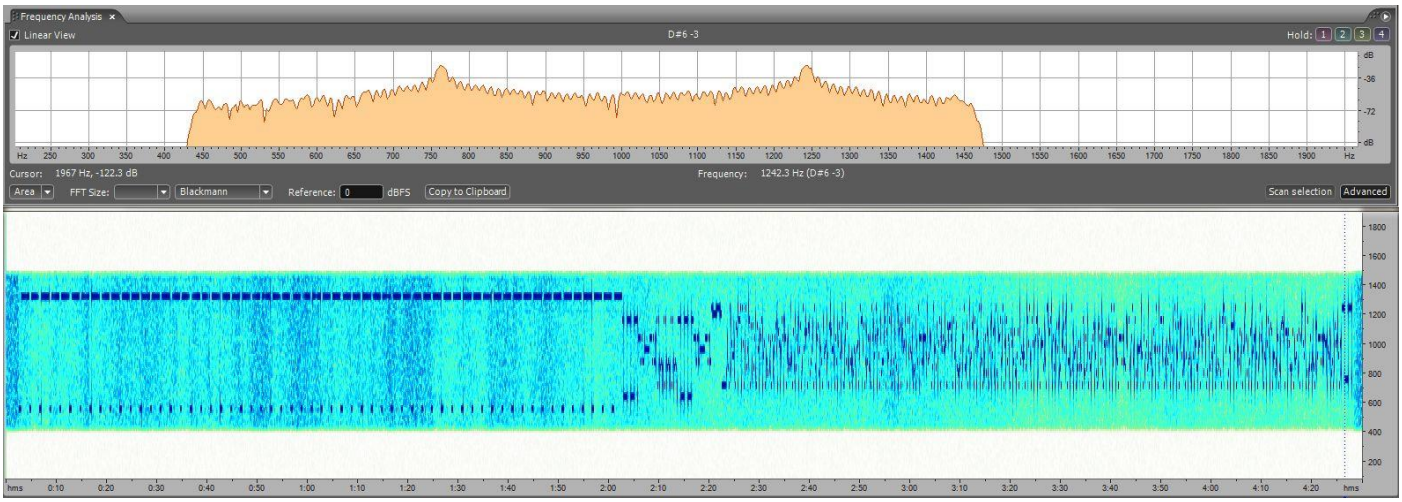
8073kHz1218z	01/01/17[(From M95 sked - USB - Chinese - Female - // N/H) (Remote tuner New Zealand)]	JPL	SUN
8073kHz1203z	13/02/17[(From M95 sked - USB - Chinese - Female - // 4364) (Remote tuner New Zealand)]	JPL	MON
9054kHz1222z	01/01/17[(From M95 sked - USB - Chinese - Female - // 4243) (Remote tuner New Zealand)]	JPL	SUN
9054kHz0958z	03/01/17[(IP - USB - Chinese - Female - // 4243) (Remote tuner New Zealand)]	JPL	TUE
9054kHz1217z	03/01/17[(IP - USB - Chinese - Female - // 4243) (Remote tuner New Zealand)]	JPL	TUE
9054kHz1217z	04/01/17[(FM M95 sked - USB - Chinese - Female - // 4243) (Remote tuner New Zealand)]	JPL	WED
9054kHz1206z	06/01/17[(FM M95 sked - USB - Chinese - Female - // 4243) (Remote tuner New Zealand)]	JPL	FRI
9054kHz1216z	19/01/17[(FM M95 sked - USB - Chinese - Female - // 4243) (Remote tuner New Zealand)]	JPL	THU
9054kHz1216z	21/01/17[(FM M95 sked - USB - Chinese - Female - // 4243) (Remote tuner New Zealand)]	JPL	SAT
9054kHz2340z	29/01 Voice - USB - Chinese - Female- Call Up- QSA2	DanAR	SUN
9054kHz2342z	29/01 Digital Data-LSB- QSA2	DanAR	SUN
9054kHz0020z	30/01 Voice - USB - Chinese - Female -with msg- QSA2	DanAR	MON
9054kHz1225z	31/01/17[(FM M95 sked - USB - Chinese - Female - // 4243) (Remote tuner New Zealand)]	JPL	TUE
9054kHz1212z	09/02/17[(From M95 sked - USB - Chinese - Female - // 4243) (Remote tuner New Zealand)]	JPL	THU
9054kHz1205z	13/02/17[(From M95 sked - USB - Chinese - Female - // 4243) (Remote tuner New Zealand)]	JPL	MON
9054kHz0913z	14/02/17[(From M95 sked - USB - Chinese - Female - // 4243) (Remote tuner New Zealand)]	JPL	TUE
9054kHz1205z	20/02/17[(From M95 sked - USB - Chinese - Female - // 4243) (Remote tuner New Zealand)]	JPL	MON
9054kHz1211z	21/02/17[(From M95 sked - USB - Chinese - Female - // 4243) (Remote tuner New Zealand)]	JPL	TUE
9054kHz1220z	23/02/17[(From M95 sked - USB - Chinese - Female - // 4243) (Remote tuner New Zealand)]	JPL	THU
9054kHz 2340z	23/02 Voice - USB - Chinese - Female- Call Up- QSA2	DanAR	THU
9054kHz0010z	24/02 Voice - USB - Chinese - Female -with msg- QSA2	DanAR	FRI

Polytones, Data and Hybrids

XPA c

January 2017

0700z 9108kHz 0720z 10908kHz 0740z 12208kHz



XPA c 12208kHz 0740z 28/01/2017

04/01	192 000 03623 00001 00000 10140		Strong
07/01	192 000 05694 00001 00000 10140	[0700/0720z Weak]	Strong
11/01	192 1 01680 00213 84196 03736		Very strong
14/01	192 1 01680 00213 84196 03736		Fair
18/01	192 000 09405 00001 00000 10140		Strong
21/01	192 000 06702 00001 00000 10140		Strong
25/01	192 1 03616 00195 38305 05066		Fair, QSB3
28/01	192 1 03616 00195 38305 05066	[0720z Weak, QSB to nil]	Very strong

February 2017

0700z	**11409kHz**	**0720z**	**13509kHz**	**0740z**	**14609kHz**	
01/02	456 1 05436 00189 06714 13477					Strong
04/02	456 1 05436 00189 06714 13477					Very strong
08/02	456 1 00588 00107 37616 00352				[0740z Weak]	Fair
11/02	456 1 00588 00107 37616 00352				[0700z Weak]	Very strong
15/02	456 000 03658 00001 00000 10140				[0740zNRH]	Very strong
18/02	456 000 02337 00001 00000 10140					Strong
22/02	456 1 09502 00163 30577 52243				[0740z incomplete, ran to grp 157]	Very strong
25/02	456 1 09502 00163 30577 52243				[0700z]	Very strong

RRRRYYYYYYYYYYYYYYYY
S9S9S9S9S9S9S9S9S9S9S9S9S9S9S
456 456 456 1 456 456 456 1 456 456 456 1
S9S9S9S9S9S9S9S9S9S9S9S9S9S9S

4444444444

4MMMMMMMMMMMMMMMMMMM
09502 00163 30577 25892 14604 86647 64188 15407 00176 10002
61757 81001 11546 60011 46246 50466 68718 37118 91262 42494
60660 91398 97728 61083 45086 43572 83517 22559 04775 80633
14967 74717 12790 85121 55981 16145 35959 40409 79161 51419
64190 45931 93553 22285 05288 01736 43496 33672 30642 82138
26824 75426 79608 97738 60378 88125 98220 19761 68731 51390
82509 30677 95642 18313

91809 58906 95941 95413 46178 54681 69034 10562 05212 73492
28098 52226 91718 34779 17569 69069 96054 12948 57288 29826
86530 41692 63191 26380 80216 18159 53913 07547 35326 16056
00945 58004 27303 43870 61089 49314 89574 40268 40126 03155
57649 49617 67622 90238 08193 63730 87235 01227 88912 28885
50812 85344 34582 62256 20716 19786 92408 88859 21295 66250
24728 54136 37053 15066

45183 48360 14327 90957 10573 95741 14754 34521 35924 11327
61430 36934 22172 42924 45651 57845 48678 59642 05041 23709
08754 36362 42196 92032 09140 84026 59289 06730 03329 08646
51982 40190 98277 83350 56048 00963 72879 52243++++++++++++++++++++S3Y M3M4M□□~□~9Y6995
Courtesy PLdn

XPA2 m

Sunday/Tuesday

January 2017

1300z	**16138kHz**	**1320z**	**14438kHz**	**1340z**	**13438kHz**	
01/01	01732 00001 00000 10140					Very strong
08/01	02510 00001 00000 10140					Very strong
10/01	07929 00069 99363 46613					Strong
15/01	07929 00069 99363 46613					Very strong
17/01	02072 00001 00000 10140					Very strong
22/01	03700 00001 00000 10140				[1300zV.strong]	Weak
24/01	07221 00081 61432 10644					Very strong
31/01	09267 00001 00000 10140				[1300z Fair, QSB3]	Very strong

February 2017

1500z	**16338kHz**	**1520z**	**14538kHz**	**1540z**	**13538kHz**	
05/02	04544 00001 00000 10140					Very strong
07/02	01239 00001 00000 10140					Strong
12/02	05197 00093 49856 36652				[1520z Strong]	Weak
14/02	05197 00093 49856 36652				[1500z strong]	Weak, QSB3
19/02	07374 00001 00000 10140					Fair

21/02	09909 00001 00000 10140	[1540zStrong, QRM3]	Very strong
26/02	03397 00001 00000 10140		Strong
28/02	01893 00001 00000 10140	[1500z strong]	Weak, QSB3

XPA2 p

Monday/Wednesday

January 2017

0800z	**15978kHz**	**0820z**	**14978kHz**	**0840z**	**14378kHz**	
02/01	06899 00001 00000 10140			[0800z Very weak]		Very strong
04/01	02409 00001 00000 10140					Very strong
09/01	05260 00001 00000 10140					Strong
11/01	05830 00001 00000 10140			[0800z NRH]		Very strong
16/01	04492 00193 22333 51117					Very strong
18/01	04492 00193 22333 51117					Very strong
25/01	07860 00001 00000 10140					Very strong
23/01	07977 00001 00000 10140			[0820z unworkable]		Weak
30/01	03568 00163 57863 61251			[0820z unworkable]		Strong

February 2017

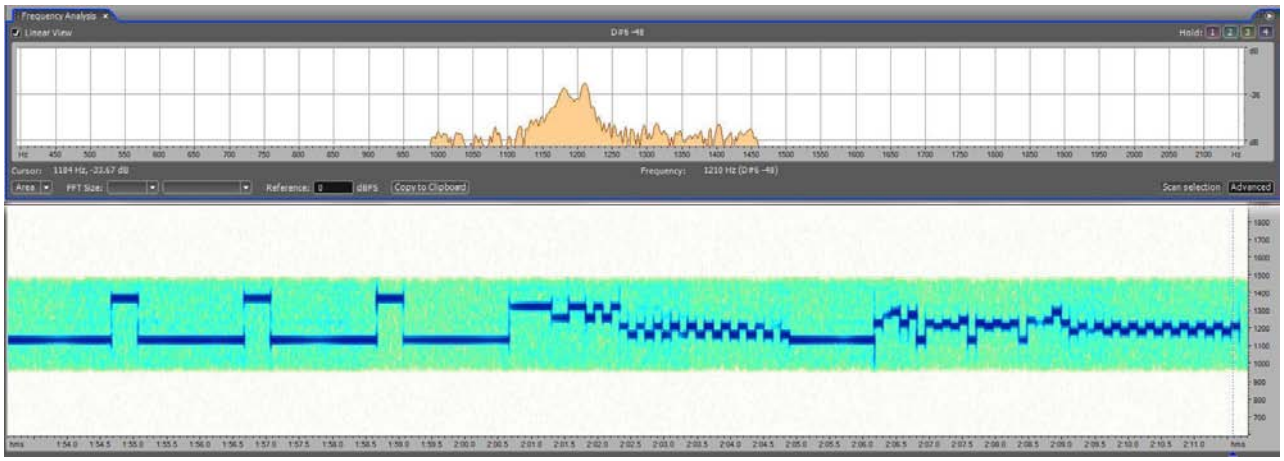
0800z	**15983kHz**	**0820z**	**14783kHz**	**0840z**	**13883kHz**	
01/02	03568 00163 57863 61251					Very strong
06/02	08635 00001 00000 10140					Very strong
08/02	09949 00001 00000 10140					Strong
13/02	08723 00001 00000 10140					Very strong
15/02	03989 00001 00000 10140			[0820zWeak]		Strong
20/02	09519 00001 00000 10140					Very strong
22/02	05407 00001 00000 10140					Very strong
27/02	08624 00149 94771 06047			[0820zWeak]		Very strong

XPA2 r

Friday/Saturday

January 2017

1400z	**16167kHz**	**1420z**	**14663kHz**	**1440z**	**13923kHz**



XPA2 r 14663kHz 1420z 28/01/2017

06/17	09455 00001 00000 10140	[1400z NRH]	Very strong
07/17	03531 00001 00000 10140		Very strong
13/01	02140 00063 93131 70156		Very strong
14/01	Very weak, unworkable		
20/01	01973 00077 82671 30251	[1400zV.strong]	Weak
21/01	01973 00077 82671 30251	[1400zV.strong]	Weak
27/01	03051 00001 00000 10140		Very strong
28/01	03403 00001 00000 10140		Very strong

February 2017

1400z	**18667kHz**	**1420z**	**17419kHz**	**1440z**	**16212kHz**	
03/02	06952 00067 43229 16223					Very strong
04/02	06952 00067 43229 16223				[1400/1420z unworkable]	Fair
10/02	04286 00083 98792 61623					Very strong
11/02	04286 00083 98792 61623					Very strong
17/02	02292 00001 00000 10140					Very strong
18/02	09033 00001 00000 10140					Strong
24/02	02411 00115 48543 04764				[Condx poor, 1400/1420z NRH]	Weak
25/02	02411 00115 48543 04764				[1400z Weak]	Strong

Rivet (Build 88) by Ian Wraith

02411 00115 48543 60671 64604 73085 76170 93550 32683 06212
63327 29448 80440 07766 00630 51455 44287 16234 49709 49634
63888 54283 72668 30569 67965 55433 60089 06724 22224 78029
16431 42142 10857 88457 09166 01523 84639 69915 58999 41745
56242 51109 54857 07500 55248 03732 80448 95266 55489 07047
66446 33013 56601 33115 41044 28603 01891 28347 02476 60736
71929 78996 75687 23763 17476 96174 17455 98273 88263 67070
63102 45244 65191 84338 35632 77688 99692 43869 66654 12323
40592 05980 72849 66422 54821 42240 22425 65470 27392 99278
67108 67542 59286 05732 90572 43936 89484 41819 13956 69354
07558 59052 21918 16907 72869 41707 98859 62989 66503 58173
24323 75346 63905 03617 32932 86231 98409 04763
End Tone
Courtesy PLdn

XPA2 t

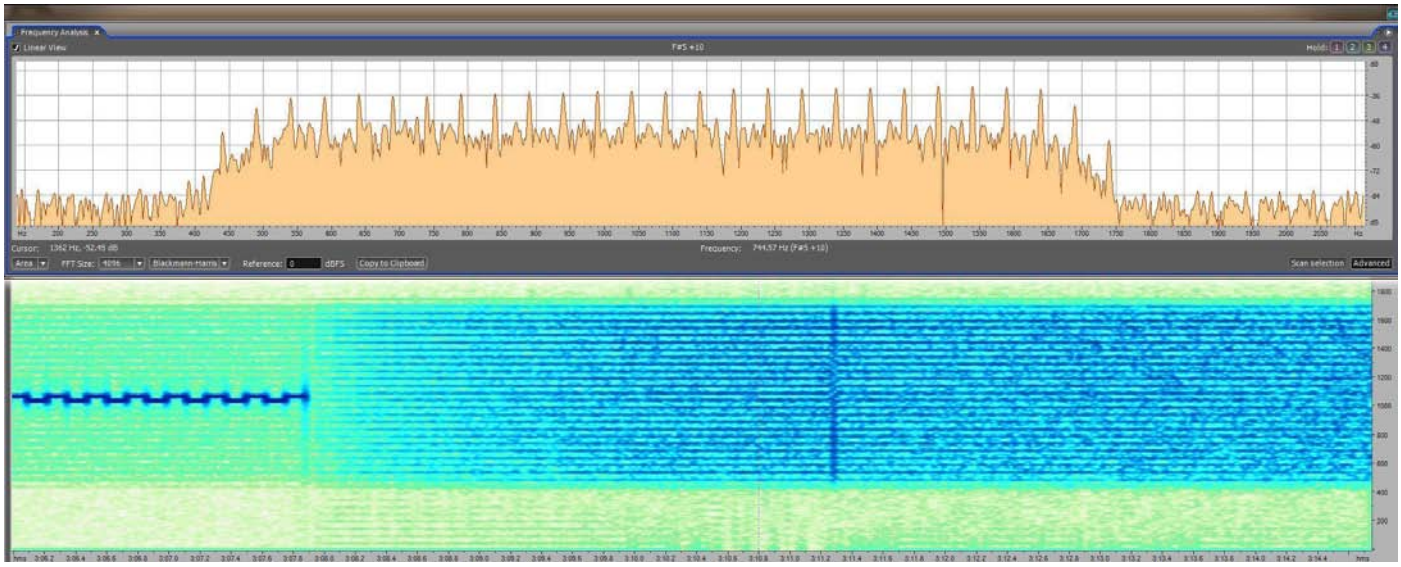
Tuesday/Friday

January 2017

0700z	**13472kHz**	**0720z**	**14772kHz**	**0740z**	**16272kHz**	
03/01	05738 00001 00000 10140					Strong
06/01	07917 00001 00000 10140				[0700z XWPQRM2]	Weak
10/01	02140 00063 93131 70156					Very strong
13/01	02140 00063 93131 70156					Very strong

02140 00063 93131 13212 75851 48490 60455 37579 53896 23108
20938 05013 94538 32509 47707 30670 41852 50612 56677 43038
94584 32715 23894 20818 81551 92184 45006 67679 34232 66357
90343 92864 27883 92027 24270 12170 04438 19993 79680 88384
47549 24038 41104 85576 71463 44658 49890 93836 08220 67533
99561 10088 29760 97841 34085 05111 42930 85568 70483 94282
09066 87435 60773 86445 89273 70156 *Courtesy PLdn*

17/01	00408 00079 91712 01242	Very strong
20/01	00408 00079 91712 01242	Very strong
24/01	01722 00001 00000 10140	Very strong
27/01	04428 00001 00000 10140	Very strong
31/01	02457 00001 00000 10140	Very strong



Signal abutting XPA2 t 15958kHz 0720z 07/02 QRM3

February 2017

0700z	**14558kHz**	**0720z**	**15958kHz**	**0740z**	**17458kHz**	
03/02		09482 00001 00000 10140				Very strong
07/02		05275 00075 36355 62220				Strong
10/02		05275 00075 36355 62220			[0700z Very strong]	Fair, QSB2
14/02		00220 00165 97034 00257				Very strong
17/02		00200 00165 97034 00257				Fair
21/02		02597 00001 00000 10140				Very strong
24/02		04273 00001 00000 10140			[0720/0740z unworkable]	Weak, QSB3/4
28/02		08257 00001 00000 10140			[0740z Fair]	Very strong

FSK M42

M42c

Daily Monday – Friday	**0000/0100z**	**17471/14421**	18/01	Serial #14, Groups 245
Monday	**0025/0035z**	**13452/11106**	02/01	No reports
	0125/0135z	**-”-/-”-**	09/01	No reports
			16/01	No reports
			23/01	No reports
			30/01	No reports
	0025/0035z	**15803/12195**	06/02	No reports
	0125/0135z	-”-/-”-	13/02	Link ID 00117, Date 13th, Serial #7, Groups 179
			20/02	Link ID 00117, Date 17th, Serial #8. Groups 135
			27/02	Link ID 00117, Date 24th, Serial #9, Groups 148
First Wednesday (repeats Friday)	**1940/1950/2000z**	**7629/6783/4034**	04/01	Null message
	1940/1950/2000z	**8156/6844/4527**	01/02	Null message
Friday	**2230/2240z**	**17411/15956**	06/01	Link ID 00116, Date 6th, Serial #1, Groups 157
	2330/2340z	**-”-/-”-**	13/01	Link ID 00116, Date 13th, Serial #2, Groups 145
			20/01	Link ID 00116, Date 20th, Serial #3, Groups 164
			27/01	Link ID 00116, Date 27th, Serial #4, Groups 186
	2230/2240z	**20741/18401**	03/02	Link ID 00116, Date 3rd, Serial #5, Groups 179
	2330/2340z	**-”-/-”-**	10/02	Link ID 00116, Date 10th, Serial #6, Groups ?
			17/02	Link ID 00116, Date 17th, Serial #7, Groups 133
			24/02	Link ID 00116, Date 24th, Serial #8, Groups 156

Saturday	**1300/1310/1320z**	**18526/16142/14674**	07/01	Null message
			14/01	Null message
			21/01	Null message
			28/01	Null message
	1300/1310/1320z	**19441/17456/15817**	04/02	Null message
			11/02	Null message
			18/02	Null message
			25/02	Null message
Saturday	**1810/1820/1830z**	**7684/5387/4572**	07/01	Null message
			14/01	Null message
			21/01	Null message
			28/01	Null message
	1810/1820/1830z	**9153/7641/5251**	04/02	Null message
			11/02	Null message
			18/02	Null message
			25/02	Null message

M42d

Extraordinary events and uncommon message examples are highlighted.

Daily Monday – Friday	**0200/0300z**	**16321/14881**	18/01	Link ID 41018, Date 18th, Serial #8, Groups 245
			27/01	Link ID 41018, Date 27th, Serial #15, Groups 245
			30/01	Link ID 41018, Date 30th, Serial #16, Groups 245
			02/02	Link ID 41018, Date 2nd, Serial #19, Groups 245
Sunday (repeats Monday)	**1530/1540/1550z**	**10378/9169/7419**	01/01	Link ID 20501, Null message
			08/01	Link ID 20501, Null message
			15/01	Link ID 20501, Null message
			22/01	Link ID 20501, Null message
			29/01	Link ID 20501, Null message
	1530/1540/1550z	**13464/11548/9323**	05/02	Link ID 20501, Null message
			12/02	Link ID 20501, Null message
			19/02	Link ID 20501, Null message
			26/02	Link ID 20501, Null message
First/Third Monday (repeats Wednesday 2200/2210/2220z)	**0500/0510/0520z**	**6926/5945/4816**	02/01	Link ID 45079, Null message
			16/01	Link ID 45079, Null message
	0500/0510/0520z	**7328/6778/5126**	06/02	Link ID 45079, Null message
			20/02	Link ID 45079, Null message
Tuesday	**1500/1510/1520z**	**10856/8174/6988**	03/01	Link ID 16404, Null message
			10/01	Link ID 16404, Null message
			17/01	Link ID 16404, Null message
			24/01	Link ID 16404, Null message
			31/01	Link ID 16404, Date 30th, Serial #19, Groups 118
	1500/1510/1520z	**12116/10275/8176**	07/02	Link ID 16405, Null message
			14/02	Link ID 16404, Date 14th, Serial #20, Groups 119
			21/02	Link ID 16404, Null message
			28/02	Link ID 16404, Null message
Tuesday (repeats Wednesday)	**1650/1700/1710z**	**10383/9046/7313**	03/01	Link ID 20501, Null message
			10/01	Link ID 20501, Null message
			17/01	Link ID 20501, Null message
			24/01	Link ID 20501, Null message
			31/01	Link ID 20501, Date 30th, Serial #64, Groups 104
	1650/1700/1710z	**13374/11165/9219**	07/02	Link ID 20501, Null message
			14/02	Link ID 20501, Null message
			21/02	Link ID 20501, Null message
			28/02	Link ID 20501, Null message
Tuesday (repeats Friday 0600/0610/0620z)	**2300/2310/2320z**	**8126/7643/5148**	03/01	Link ID 40988, Null message
			10/01	Link ID 40988, Null message
			17/01	Link ID 40988, Null message
			24/01	Link ID 40988, Null message
			31/01	Link ID 40988, Null message

	2300/2310/2320z	**9234/7819/5361**	07/02	Link ID 40988, Null message
			14/02	Link ID 40988, Null message
			21/02	NRH
			28/02	NRH
Wednesday	**0600/0610/0620z**	**20154/18304/16156**	04/01	No reports
(repeats Thursday)			11/01	Link ID 32817, Date 7th, Serial #2, Groups 469
			18/01	Link ID 32816, Null message
			25/01	Link ID 32816, Date 21st, Serial #3, Groups 317
	0600/0610/0620z	**20072/18291/16071**	01/02	Link ID 32817, Date 28th, Serial #4, Groups 469
			08/02	No reports
			15/02	No reports
			22/02	Link ID 32817, Date 18th, Serial #7, Groups 319
Wednesday	**0800/0810/0820z**	**19928/17489/15914**	04/01	Link ID 45075, Null message
(repeats Thursday)			11/01	Link ID 45075, Null message
			18/01	Link ID 45075, Null message
			25/01	Link ID 45075, Null message
	0800/0810/0820z	**19654/17461/15869**	01/02	Link ID 45075, Null message
			08/02	Link ID 45075, Null message
			15/02	Link ID 45075, Null message
			22/02	Link ID 45075, Null message
Second/Fourth Wednesday	**0900/0910/0920z**	**20735/18037/16250**	11/01	Link ID 16405, Date 11th, Serial #8, Groups 180
(repeats Thursday)			25/01	Link ID 16405, Date 24th, Serial #9, Groups 222
	0900/0910/0920z	**20916/18730/16165**	08/02	Link ID 16404, Date 7th, Serial #10, Groups 162
			22/02	Link ID 16404, Date 22nd, Serial #11, Groups 74
Wednesday	**1000/1010/1020z**	**19313/16348/14494**	04/01	Link ID 49202, Null message
(repeats Thursday)			11/01	Link ID 49202, Null message
			18/01	Link ID 49202, Null message
			25/01	Link ID 49202, Null message
	1000/1010/1020z	**19984/17489/15621**	01/02	Link ID 49202, Null message
			08/02	Link ID 49202, Null message
			15/02	Link ID 49202, Null message
			22/02	Link ID 49202, Null message
Second/Fourth Wednesday	**1015/1025/1035z**	**19433/16048/14976**	11/01	Link ID 20492, Null message
(repeats Thursday)			25/01	Link ID 20492, Null message
	1015/1025/1035z	**20639/17539/15644**	08/02	Link ID 20492, Null message
			22/02	Link ID 20492, Null message
First/Third Wednesday	**1230/1240/1250z**	**16329/14826/12166**	04/01	Link ID 53277, Null message
			18/01	Link ID 53277, Null message
	1230/1240/1250z	**18235/16144/14519**	01/02	Link ID 53277, Null message
			15/02	Link ID 53277, Null message
Thursday	**1330/1340/1350z**	**12186/10243/8175**	05/01	Link ID 49237, Null message
(repeats Friday)			12/01	Link ID 49237, Null message
			19/01	Link ID 49237, Null message
			26/01	Link ID 49237, Null message
	1330/1340/1350z	**14983/12196/9917**	02/02	Link ID 49237, Null message
			09/02	Link ID 49237, Null message
			16/02	Link ID 49237, Null message
			23/02	Link ID 49237, Date 22nd, Serial #27, Groups 130
Second/Fourth Saturday	**0900/0910/0920z**	**14534/12149/10483**	14/01	Link ID 45114, Date 13th, Serial #47, Groups 224
(repeats Sunday)			28/01	Link ID 45114, Date 27th, Serial #48, Groups 150
	0900/0910/0920z	**15638/13486/11128**	11/02	Link ID 45114, Date 10th, Serial #49, Groups 228
			25/02	Link ID 45114, Date 22nd, Serial #50, Groups 116
Second/Fourth Saturday	**1000/1010/1020z**	**20973/18736/16328**	14/01	Link ID 45057, Date 13th, Serial #91, Groups 57
(repeats Sunday)			28/01	Link ID 45057, Null message
	1000/1010/1020z	**20894/18429/16153**	11/02 & 25/02	Link ID 45057, Date 10th, Serial #92, Groups 217

Saturday (repeats Sunday)	**1100/1110/1120z**	**16174/14855/12214**	07/01	Link ID 36882, Null message
			14/01	Link ID 36882, Date 13th, Serial #79, Groups 266
			21/01	Link ID 36882, Date 20th, Serial #80, Groups 364
			28/01	Link ID 36882, Date 27th, Serial #81, Groups 200
	1100/1110/1120z	**18911/16234/14426**	04/02	Link ID 36882, Date 3rd, Serial #82, Groups 68
			11/02	Link ID 36882, Date 10th, Serial #83, Groups 392
			18/02	Link ID 36882, Date 17th, Serial #84, Groups 246
			25/02	Link ID 36882, Date 22nd, Serial #85, Groups 454
Saturday (repeats Sunday)	**1500/1510/1520z**	**20564/18471/16308**	07/01	Link ID 32821, Null message
			14/01	Link ID 32821, Null message
			21/01	Link ID 32821, Null message
			28/01	Link ID 32821, Null message
	1500/1510/1520z	**22878/20216/18253**	04/02	Link ID 32821, Null message
			11/02	Link ID 32821, Null message
			18/02	Link ID 32821, Null message
			25/02	Link ID 32821, Date 22nd, Serial #30, Groups 192

Logs sent by: Ary, DanAr, Danix

Many thanks Danix

HM01

HM01 has continued with all the usual schedules, no changes have been noted since the M08a transmissions started going awry on 10/2. In fact there were no occasions in the past two months where the callups ceased to increment on a daily basis.

Transmissions started with a Spanish broadcast station on two occasions, presumably Radio Havana Cuba, also on one occasion a SS/OM voice was present in USB mode on 11436kHz and this seemed to be related to the HM01. A translation is not available yet.

Five messages with F1* extensions were transmitted over the past two months, the usual rules applied to these, file names beginning with 36 have the F1G extension and those beginning 50 have the F1C extension. Files transmitted were 50720408.F1C, 50184421.F1C, 50472216.F1C, 50556686.F1C and 36172710.F1G.

Logs

HM01 11435kHz 1600z 1/1 [33616 50161 34258 66357 14553 02446] New callup position 2, 50161 = 00365010.TXT. SUN
HM01 11435kHz 1600z 3/1 [33618 50162 05001 51841 14555 02448] Two new callups since Sunday, positions 3 and 4, 05001 = 45070500.TXT, 51841 = 66425184.TXT. TUE
HM01 11435kHz 1600z 4/1 [33619 50163 05002 51842 14556 02449] WED
HM01 11435kHz 1600z 5/1 [50101 50164 05003 51843 14557 58821] New callups positions 1 and 6, 50101 = 00365010.TXT, 58821 = 81265882.TXT. THU
HM01 11435kHz 1600z 6/1 [50101 50165 05004 51844 14558 58821] FRI
HM01 11435kHz 1600z 7/1 [50102 50166 05005 51845 14559 58822] SAT
HM01 11435kHz 1600z 8/1 [50103 50167 05006 51846 44111 58823] Up late, TX started with a Spanish broadcast station. New callup position 5, 44111 = 41444411.TXT. SUN
HM01 11435kHz 1600z 9/1 [50104 50168 05007 51847 44111 58824] MON
HM01 11435kHz 1600z 11/1 [50106 30031 72231 38831 44113 58826] New callups positions 2, 3 and 4, 30031 = 13113003.TXT, 72231 = 33877223.TXT, 38831 = 07663883.TXT. WED
HM01 11435kHz 1600z 12/1 [50107 30032 72232 38831 44114 58827] THU
HM01 11435kHz 1600z 13/1 [50108 30033 72233 38832 44115 03281] New callup position 6, 03281 = 52200328.TXT. FRI
HM01 11435kHz 1600z 14/1 [50109 30034 72234 38833 44116 03281] SAT
HM01 11435kHz 1600z 15/1 [58011 30035 72235 38834 44117 03282] New callup position 1, 58011 = 21125801.TXT. SUN
HM01 11435kHz 1600z 16/1 [58011 30036 72236 38835 16061 03283] New callup position 5, 16061 = 77381606.TXT MON
HM01 11435kHz 1600z 17/1 [58012 30037 72237 38836 16061 03284] TUE
HM01 11435kHz 1600z 18/1 [58013 30038 72238 38837 16062 03285] WED
HM01 11435kHz 1600z 19/1 [58014 30039 61741 38838 16063 03286] New callup position 3, 61741 = 24666174.TXT. THU
HM01 11435kHz 1600z 20/1 [58015 53121 61742 41351 16064 03287] New callups positions 2 and 4, 53121 = 13235312.TXT, 41351 = 34354135.TXT. FRI
HM01 11435kHz 1600z 21/1 [58016 53121 61743 41351 16065 60021] New callup position 6, 60021 = 55436002.TXT. SAT
HM01 11435kHz 1600z 22/1 [58017 53122 61744 41352 16066 60021] SUN
HM01 11435kHz 1600z 23/1 [58018 53123 61745 41353 16067 60022] MON
HM01 11435kHz 1600z 24/1 [58019 53124 61746 41354 04081 60023] New callup position 5, 04081 = 50720408.F1C. TUE
HM01 11435kHz 1600z 25/1 [44211 53125 61747 41355 04081 60024] New callup position 1, 44211 = 50184421.F1C. WED
HM01 11435kHz 1600z 26/1 [44211 53126 61748 41356 04082 60025] THU
HM01 11435kHz 1600z 27/1 [44212 53127 61749 41357 04083 60026] FRI
HM01 11435kHz 1600z 28/1 [44213 53128 22161 62181 04084 60027] New callups positions 3 and 4, 22161 = 50472216.F1C, 62181 = 37706218.TXT. SAT
HM01 11435kHz 1600z 29/1 [44214 08871 22161 62181 04085 24341] New callups positions 2 and 6, 08871 = 04740887.TXT, 24341 = 37272434.TXT. SUN
HM01 11435kHz 1600z 30/1 [44215 08871 22162 62182 04086 24341] MON
HM01 11435kHz 1600z 31/1 [44216 08872 22163 62183 04087 24342] TUE
HM01 11435kHz 1600z 1/2 [44217 08873 22164 62184 04088 24343] WED
HM01 11435kHz 1600z 2/2 [86381 08874 22165 62185 04089 24344] New callup position 1, 86381 = 84018638.TXT. THU
HM01 11435kHz 1600z 3/2 [86381 08875 22166 62186 30461 24345] New callup position 5, 30461 = 44203046.TXT FRI
HM01 11435kHz 1600z 4/2 [86382 08876 22167 62187 30461 24346] SAT
HM01 11435kHz 1600z 5/2 [86383 08877 22168 62188 30462 24347] SUN
HM01 11435kHz 1600z 6/2 [86384 08878 88671 48551 30463 24348] New callup positions 3 and 4, 88671 = 20748867.TXT, 48551 = 28174855.TXT. MON
HM01 11435kHz 1600z 7/2 [86385 08879 88671 48551 30464 28701] New callup position 6, 28701 = 60172870.TXT. TUE
HM01 11435kHz 1600z 8/2 [86386 46351 88672 48552 30465 28701] New callup position 2, 46351 = 83044635.TXT WED
HM01 11435kHz 1600z 9/2 [86387 46351 88673 48553 30466 28702] Came up with broadcast station at 1610z. THU
HM01 11435kHz 1600z 10/2 [86388 46352 88674 48554 30467 28703] FRI

HM01 11435kHz 1600z 11/2 [34621 46353 88675 48555 30468 28704] New callup position 1, 34621 = 06633462.TXT. SAT
HM01 11435kHz 1600z 12/2 [34621 46354 88676 48556 06301 28705] New callup position 5, 06301 = 41060630.TXT. SUN
HM01 11435kHz 1600z 13/2 [34622 46355 88677 48557 06301 28706] MON
HM01 11435kHz 1600z 14/2 [34623 46356 88678 48558 06302 28707] TUE
HM01 11435kHz 1600z 15/2 [34624 46357 88679 48559 06303 27101] New callup position 6, 27101 = 36172710.F1G. WED
HM01 11435kHz 1600z 16/2 [34625 46358 66861 68251 06304 27101] New callups position 3 and 4, 66861 = 50556686.F1C, 68251 = 47346825.TXT. THU
HM01 11435kHz 1600z 17/2 [34626 46359 66861 68251 06305 27102] FRI
HM01 11435kHz 1600z 18/2 [34627 40641 66862 68252 06306 27103] New callup position 2, 40641 = 58564064.TXT. SAT
HM01 11435kHz 1600z 19/2 [34628 40641 66863 68253 06307 27104] SUN
HM01 11435kHz 1600z 20/2 [84431 40642 66864 68254 06308 27105] New callup position 1, 84431 = 22818443.TXT. MON
HM01 11435kHz 1600z 21/2 [84431 40643 66865 68255 06309 27106] TUE
HM01 11435kHz 1600z 22/2 [84432 40644 66866 68256 73631 27107] New callup position 5, 73631 = 38467363.TXT. WED
HM01 11435kHz 1600z 23/2 [84433 40645 66867 68257 73631 27108]
HM01 11435kHz 1600z 24/2 [84434 40646 66868 78651 73632 88401] New callup positions 4 and 6, 78651 = 58877865.TXT, 88401 = 03238840.TXT. FRI
HM01 11435kHz 1600z 25/2 [84435 40647 33831 78651 73633 88401] New callup position 3, 33831 = 66283383.TXT. SAT
HM01 11435kHz 1600z 26/2 [84436 52511 33831 78652 73634 88402] New callup position 3, 52511 = 52405251.TXT. SUN
HM01 11435kHz 1600z 27/2 [84437 52511 33832 78653 73635 88403] MON
HM01 11635kHz 1800z 28/2 [53361 52512 33833 78654 73636 88404] New callup position 1, 53361 = 34735336.TXT. TUE

Peter's logs and analysis from the UK

Signals from the Cuban "mixed mode" station have improved somewhat in the first couple of months of 2017, that is to say reception in the UK has been better than for some considerable time.

16-Jan17, Monday:- 0855 and 45s UTC, 9,240 kHz, "58011 30035 72235 38834 44117 03282", peaking S9, as always with the sudden deep fading, quickly down and then instantly back up again, infuriatingly and in keeping with Sod's Law, the principle on which the whole universe runs, often occurs on one of the 5F groups. Data noise at 0859 UTC.
18-Jan-17, Wednesday:- 0825 and 40s UTC, starting up after the break, "58012 30037 72237 38836 16061 03284", peaking S9.

20-Jan-17, Friday:- 0857 UTC, 9,240 kHz, call-up in progress, "58014 30039 61741 38838 16063 03286", S9 with the usual deep fading.

25-Jan-17, Wednesday:- 0828 UTC, 9,065 kHz, last minute of the call-up routine after the break, "58019 53124 61746 41354 04081 60023", over S9 with QSB. Much weaker signal when checked at 0848 UTC, stopped 0850.

31-Jan-17, Tuesday:- 1003 UTC, 12,180 kHz, transmission in progress, 5Fs "44215 08871 22162 62182 04086 24341", S7 to S8 with deep QSB.

10-Feb-17, Friday:- 0832 UTC, 9,065 kHz, transmission in progress, 5Fs "86387 46351 88673 48553 30466 28702", indicating well over S9 with the usual QSB.

13-Feb-17, Monday:- 0825 UTC, 9,065 kHz, "34621 46354 88676 48556 06301 28705", peaking over S9.

15-Feb-17, Wednesday:- 0757 UTC, 9,065 kHz, in progress when tuned in, "34623 46356 88678 48558 06302 28707", S8, data noise at 0758:40s UTC.

16-Feb-17, Thursday:- 0957 UTC, 12,180 kHz, last minute or so of the call-up, "34624 46357 88679 48559 06303 27101", over S9 with strong audio, best copy on this frequency for some time, data at 0958:40s UTC.

18-Feb-17, Saturday:- 0957 UTC, 12,180 kHz, as always in progress when tuned in, "34626 46359 66861 68251 06305 27102", over S9.

19-Feb-17, Sunday:- 0858 UTC, 9,240 kHz, "34627 40641 66862 68252 06306 27103", S9 with QSB, data at 0859:35s UTC.
1002 UTC, 9,155 kHz, transmission in progress, peaking S9, 5Fs as earlier.

20-Feb-17, Monday:- 0846 UTC, 9,065 kHz, last few minutes of a transmission, S9 with the usual deep fading, heard last four 5F groups, "66863 68253 06307 27104", carrier went off 0853:30s UTC.

21-Feb-17, Tuesday:- 1025:10s UTC, 12,180 kHz, "88431 40642 66864 68254 06308 27105",
S9 with QSB, strong FSK signal on HF side.

22-Feb-17, Wednesday:- 0925:8s UTC, 9,240 kHz, "84431 40643 66865 68255 06309 27106"
S7 to S8, data noise started at 0928:30s UTC.

25-Feb-17, Saturday:- 0957 UTC, 12,180 kHz, last minute or so of the call-up routine, "84434 40646 66868 78651 73632 88401", data noise started at 0958:30s UTC, S9 with the usual fading.

26-Feb-17, Sunday:- 0955 UTC, just after, 9,155 kHz, "84435 40647 33831 78651 73633 88401", over S9 when at its strongest.

Daniel's logs from the Argentine:

10715kHz2200z	01/01(33616 60161 14258 61357 54553 52446) QSA2 QRN3	DanAR	SUN
2200z	04/01(50101 50165 05004 51844 14558 51821) QSA2	DanAR	WED
2200z	08/01(50103 50167 05006 51846 44111 58823) QSA2	DanAR	SUN
2200z	09/01(50104 50168 05007 51847 44111 58824) QSA2	DanAR	MON
2200z	13/01(50108 30033 72233 38832 44115 03281) QSA2	DanAR	FRI
2200z	23/01(58018 53123 61745 41353 16067 60022) QSA2 QRM1	DanAR	MON
2200z	30/01(44215 08871 22162 62182 04086 24341) QSA3	DanAR	MON

10715kHz2200z	01/02 (44217 08873 22164 62184 04088 24343) QSA3	DanAR	WED
2200z	03/02 (86381 08875 22166 62186 30461 24345) QSA2	DanAR	FRI
2200z	05/02 (86383 08877 22168 62188 30462 24347) QSA2	DanAR	SUN
2200z	06/02 (86384 08878 88671 48551 30463 24348) QSA3	DanAR	MON
2200z	22/02 (84432 40644 66866 68276 76631 27107) QSA2	DanAR	WED
2200z	27/02 (84437 52511 33832 78653 73635 88403) QSA2	DanAR	MON

16180kHz2100z	12/01(50107 30032 72232 38831 44114 58827) QSA1	DanAR	THU
2100z	28/02 (53361 52512 33833 78654 73636 88404) QSA2	DanAR	TUE
16180kHz2100z	02/02 (86381 08874 22165 62185 04089 24344) QSA3	DanAR	THU
17480kHz2200z	23/02 (84433 40645 66867 68257 73631 27108) QSA3	DanAR	THU

HM02 - Believed variant of Russian Family 1. Station under investigation

Consists of a short FSK sequence that appears to contain no data, possibly a tuning signal, followed by a message in FSK Morse.

Transmission times are variable with the carrier often appearing some time before the transmissions start.

Schedule: **Latest:** **Daily:** **4761kHz** **0520z** **Heard on 30 / 31 December 2016 & continuing into January & February 2017**

Daily: 7351kHz 0440 - 0500z (Variable) From 14 April.

Daily: 6261kHz 0540 - 0600z (Variable) Up to March28
0440 - 0500z (Variable) From 29 March change due to Daylight Saving adjustment.

Once again we are seeing a number of repeated - or part repeated messages. Often a message will have one or more groups added to the end, while at other times the message has been shortened by the omission of groups.

Previously we have seen occasional days where no transmission was heard, but in January there was a large number of missing days - 15 out of 31, where no message was heard. On several of these days a carrier was heard, and it is possible that a message was transmitted at an earlier time. In February, however, the incidence of missing days has dropped back to previous noted levels.

The time of the schedule has greatly improved from previous months & now always starts at 0520z, or occasionally at 0519z.

Morse msg Logs

January 2017:

4761	0520z	01 Jan	NRH	BR	SUN
	0520 - 0529z	02 Jan	932 46 = 68055 80101.... 34267 = 000 Good	AB/BR	MON
	0520 - 0528z	03 Jan	247 49 = 68336 42480.... 54528 = 000 Good / Fair with QSB	BR	TUE
	0520 - 0530z	04 Jan	535 48 = 64338 50490.... 46339 = Good / Fair with QSB No 000 sent	BR	WED
	0520 - 0528z	05 Jan	951 41 = 27687 30547.... 03203 = 000	BR	THU
	0520 - 0528z	06 Jan	968 43 = **10770 78155**.... 26382 = 000 Via Twente SDR	AB	FRI
	0520z	07 Jan	NRH	AB	SAT
	0520z	08 Jan	NRH - Carrier heard for a few minutes	AB	SUN
	0520z	09 Jan	NRH	AB/BR	MON
	0520 - 0529z	10 Jan	344 47 = **10770 78155**.... 56109 = 000 Strong. **Same msg as 06 Jan with 4 additional grps**	AB/BR	TUE
	0520z	11 Jan	NRH	AB/BR	WED
	05**22** - 0530z	12 Jan	159 44 = 64002 15146.... 00876 = 000 Strong. Carrier until 0522z	AB/BR	THU
	0520 - 0529z	13 Jan	915 30 = ... 72646 = 000 Weak, Mostly unreadable. Improved towards end of msg	AB/BR	FRI
	0520z	14 Jan	NRH	AB/BR	SAT
	0520z	15 Jan	NRH	AB/BR	SUN
	0520z	16 Jan	NRH - Carrier heard at 0518 - 0519z	AB/BR	MON
	0520z	17 Jan	NRH	AB/BR	TUE
	0520 - 0527z	18 Jan	927 43 = 58656 11821.... 00788 = 000 Good, fast	BR	WED
	0520z	19 Jan	NRH	AB/BR	THU
	0520z	20 Jan	NRH	AB/BR	FRI
	0520 - 0528z	21 Jan	257 42 = **03400 32973.... 15139** = 000 Good	AB/BR	SAT
	0520 - 0530z	22 Jan	817 43 = 77304 47605.... 84262 = 000 Fair. 3 min. pause between FSK call-up & start of msg	AB/BR	SUN
	0520z	23 Jan	NRH	AB/BR	MON
	0520 - 0528z	24 Jan	921 48 = 54427 28177.... 41638 = 000 Strong	AB/BR	TUE
	0520 - 0528z	25 Jan	307 41 = 37833 68734.... 79284 = 000 Fair	AB/BR	WED
	05**19** - 0528z	26 Jan	462 44 = 37833 68734.... 40561 = 000 Strong Same msg as 25 Jan with 3 additional grps	AB/BR	THU
	0520z	27 Jan	NRH	AB/BR	FRI
	0520z	28 Jan	975 47 = 28822 08572.... 21012 = 000	AB	SAT
	0520z	29 Jan	NRH	AB/BR	SUN
	0520 - 0528z	30 Jan	807 42 = 26227 71071.... 34333 = 000 Fair with QRM from adjacent data transmission	AB/BR	MON
	0520z	31 Jan	NRH	AB/BR	TUE

February 2017:

4761	0520 - 0528z	01 Feb	259 46 = 76653 27710.... 25445 = 000	Fair - Weak. Last part of msg difficult to copy		AB/BR	WED
	0520z	02 Feb	Carrier present - No transmission heard			AB/BR	THU
	0520 - 0528z	03 Feb	971 43 = 83041 54648....48752 = 000	Weak		AB/BR	FRI
	0520z	04 Feb	NRH			AB/BR	SAT
	0520 - 0529z	05 Feb	811 48 = 71656 33062.... 03886 = 000	Strong with QSB		AB/BR	SUN
	0520z	06 Feb	NRH			AB/BR	MON
	0520 - 0532z	07 Feb	956 53 = 90047 83793.... 72524 = 000	Good/Fair	[Note 1]	AB/BR	TUE
	0520z	08 Feb	NRH - Digital signal present on frequency			AB/BR	WED
	0520 - 0529z	09 Feb	791 52 = 65036 32320.... 77068 = 000	Good		AB/BR	THU
	0520 - 0529z	10 Feb	238 48 = **12649 08179**.... **50613** = 000	Strong/Good		AB/BR	FRI
	0520z	11 Feb	173 44 = **12649 08179**.... 06868 = 000	**Same msg as 10 Feb with last 4 grps omitted**		AB	SAT
	0520z	12 Feb	NRH			AB/BR	SUN
	0520 - 0528z	13 Feb	829 47 = 48703 74616.... 03618 = 000	Strong		AB/BR	MON
	0520 - 0528z	14 Feb	917 42 = 80278 32241.... 43673 = 000	Good with deep QSB		AB/BR	TUE
	05**19** - 0528z	15 Feb	459 47 = 60572 86064.... 56743 = 000	Good with QSB		AB/BR	WED
	0520 - 0528z	16 Feb	357 43 = 89082 49912.... 55874 = 000	Strong		AB/BR	THU
	0520 - 0528z	17 Feb	928 44 = 42127 83415.... 72255 = 000	Good		AB/BR	FRI
	0520 - 0528z	18 Feb	912 42 = 80278 32241.... 43673 = 000	Fair Same msg as 14 Feb		AB/BR	SAT
	0520 - 0528z	19 Feb	242 44 = 80278 32241.... 12876 = 000	Fair Same msg as 14 Feb with 2 additional grps		BR	SUN
	0520 - 0528z	20 Feb	257 42 = **03400 32973.... 15139** = 000	Good with QSB **Same msg as 21 Jan**		AB/BR	MON
	0520 - 0529z	21 Feb	965 47 = 77643 58643.... 57037 = 000	At 0529z sends the FSK intro again, then off *(AB)*		AB/BR	TUE
	0520 - 0528z	22 Feb	671 43 = **80695 76781**.... 32620 = 000	Good / Strong		AB/BR	WED
	05**19** - 0527z	23 Feb	649 49 = 08573 02306.... 41110 = 000	Strong		AB/BR	THU
	0520 - 0529z	24 Feb	873 44 = **80695 76781**.... 92667 = 000	Good **Same msg as Feb 22 with 1 additional grp**		AB/BR	FRI
	0520 - 0532z	25 Feb	417 50 = 33968 76862.... 50866 = 000	Strong / Good		AB/BR	SAT
	0520 - 0529z	26 Feb	238 48 = **12649 08179**.... **50613** =	Good **Same msg as 10 Feb** 000 not sent		AB/BR	SUN
	0520 - 0528z	27 Feb	659 47 = 98808 88906.... 13570 = 000	Fair.	[Note 2]	AB/BR	MON
	0520 - 0529z	28 Feb	294 48 = **12649 08179**.... **50613** = 000	Good **Same msg as 10 Feb / 26 Feb**		AB/BR	TUE

[Note 1] At 0518z sent two bursts of FSK 200/129 as follows:-
UACFI UACFI UACFI UACFI UACFI UACFI UACFI UACFI UACFI UACFI
Then into regular FSK call-up followed by the Morse message

[Note 2] Message is made up of 30 unique groups followed by grps11 - 27 repeated to make 47 grp message

HM02 4761kHz 0520z 06 Jan 2017

FSK-19.8bd/129Hz/FSK-CW

968 43 =

10770 78155 08811 17553 51473 34004 78471 48312 68413 14054
30072 14043 57813 41861 53155 83488 72461 04263 15250 37305
16137 72440 56083 70043 36658 33555 03360 38607 01166 08824
58125 11072 45820 10310 38700 81211 31001 25714 44024 67133
40335 56082 26382 =

968 43

968 43 = (Rpt of msg) =

968 43 000

Courtesy AB

HM02 4761kHz 0512z 18 Jan 2017

[FSK Call-up]

927 43 =

58656 11821 53505 73554 34045 35081 43500 70302 25761 60006
16853 36461 28778 12318 23044 80205 21708 71555 51453 15567
44182 52676 42732 37040 46681 85464 67286 83537 82486 78121
00335 45104 61466 38353 56757 62150 36308 30436 64005 28254
54485 22488 00788 =

927 43

927 43 = (Rpt msg) =

927 43 000

Courtesy BR

X06 Mazielka (1c) logs section

Date	Day	UTC	Freq	Scale	Monitor	Comments
20170107	Sat	1328/1332	16167	1--6--	Schorschi	Fair X06b before XPA2
20170108	Sun	1153/1203	16138	1--6--	LU5EMM	X06b with S1 before XPA2m
20170108	Sun	1205/1208	16138	1--6--	LU5EMM	Weak X06b before XPA2m
20170108	Sun	1228/1229	16138	1--6--	LU5EMM	Weak X06b before XPA2m
20170108	Sun	1237	16138	1--6--	LU5EMM	Weak X06b before XPA2m
20170112	Thu	0815	16153	153624	Antonio/IT	G249
20170118	Wed	1010-1011	14358	154263	Schorschi	Monitored in progress with S9, R
20170120	Fri	1025/1030	13523	2-----	Schorschi	X06b single tone variant before E07
20170120	Fri	1230	16167	2-----	Schorschi	X06b single tone before XPA2, S9
20170120	Fri	1311-1318	16167	2-----	Schorschi	X06b single tone before XPA2, S9
20170127	Fri	1318	16167	1--6--	Schorschi	X06b with S9 before XPA2

Date	Day UTC	Freq	Scale	Monitor	Comments
20170129	Sun 1213	16138	1--6--	LU5EMM	X06b before XPA2m
20170129	Sun 1216/1218	16138	1--6--	LU5EMM	X06b before XPA2m
20170129	Sun 1757-1800	8169	145632	Schorschi	Fair, G411 (new group)
20170130	Mon 1920	6776	1--6--	Schorschi	X06b before E07 with S9
20170201	Wed 0933-0938	14631	362154	EdwardSmith	I. p., G32
20170201	Wed 1113-1122	16115	215346	Schorschi	I. p., S9, G25
20170201	Wed 1302	14650	215346	Edward	I. p., G25
20170202	Thu 1238-1241	13405	352416	Edward	I. p., G43
20170203	Fri 1004-1009	12215	361245	Edward	I. p., G53
20170203	Fri 1022-1032	13547	625413	Schorschi	I. p., S9, G56
20170208	Wed 1014	14358	154263	RNGB	I. p., R (end time missing)
20170209	Thu 1003-1012	16223	164532	Edward	I. p., G106
20170209	Thu 1537-1539	7961	263145	Ary/NL	I. p., G111
20170210	Fri 1101-1103	12213	615243	Edward	I. p., G127
20170215	Wed 0725/0728	15983	1--6--	Ary	X06b before XPA2
20170215	Wed 1134	16115	215346	Edward	I. p., G167
20170216	Thu 0935-0942	18197	645321	Edward	I. p., R

Thanks to all contributors to this report of EN99, one edition before number 100, where I will bring the history of E2Kde (2004-2015).

Jochen Schäfer, Numbers- and X06 Teamkopf

Thanks to all our contributors:

Ary, AndyF, Edd, BR, DanAr, DoK, E, HH, HJH, JkC, Jochen, KW, Malc, MaleAnon, MNSDB, PEW, PoSW, PLdn, RNGB, Schorshi, SG, Spectre3000, T!, tING,

Apologies to anyone missed.

Gizza Job!

PoSW's Items of interest in the media:-

Voting - a civic duty, so some would have as believe, but could it all go horribly wrong?
"Electronic voting brings hacking risk - ex-spy chief" is the headline over a short item by Jon Stone in the *I* newspaper of 4-January which says, "Adopting electronic voting could leave British elections vulnerable to cyber attack by other countries, the former head of MI6 has said.

Sir John Sawers said traditional pencil and paper approaches to voting were 'actually much more secure', following allegations that the recent US presidential election was subject to hacking.

'The more things that go on-line, the more susceptible you are to cyber attacks,' Sir John, who stepped down in 2014, said.
'We need to have systems which are robust,' he said in an interview for the BBC documentary *The New World : Axis of Power*. 'The only trouble is, the younger generation of people expect to be able to do things remotely and through electronic devices.
'Bizarrely the stubby pencil and piece of paper that you put your cross on in the ballot box is actually much more secure than anything which is electronic.'
The Electoral Commission has called for 'radical changes' to the voting system, while the House of Commons speaker, John Bercow, said secure on-line voting should be an option for all voters by 2020."

More government waste – but hey, so what, it's only the poor old taxpayer's money:- from *The Times* of 25-January comes an article by Richard Ford, Home Correspondent with the headline, "Delays to emergency services radio system could cost £475m", which goes on to say, "The Home Office faces a bill of up to £475 million for the late delivery of a new emergency communications system for the police, fire and ambulance services, a parliamentary committee report warns today.

It says officials have failed to put in place detailed contingency arrangements to deal with the risk in delays in switching over to the new system. The £12 billion project is intended to replace the UK-wide radio Airwave system used by the emergency services with a cheaper alternative based on a 4G network provided by EE.
The new system is projected to go live in December 2019 but the Commons public accounts committee report says it seems unlikely that the 'ambitious target date' will be met.
The National Audit Office estimated that the programme was between five and ten months
behind target while representatives of the emergency services were less than 50 per cent confident it would be delivered on time.
The report says that despite the prospect of delay, the Home Office has not budgeted for an extended period when the emergency services move from Airwave to the new network.
'The current Airwave contracts expire in December 2019 and the only contingency if the Emergency Service Network (ESN) is not functional by then is to extend them, which would cost an estimated £475 million for a year's delay nationwide,' it says.
It says that while the Home Office has negotiated a fixed price to extend the old system
on a regional or monthly basis, detailed contingency plans for the extensions had not been prepared. It adds that the department has made no budgetary provisions for delay.
Meg Hillier, chairwoman of the committee, said: 'The stakes in this programme are extremely high.
'It is absolutely right that emergency services will not commit to using ESN in potentially life-or-death situations until they are convinced it works.
'Questions continue to hang over the technology, not least how it will operate on underground rail systems in London and elsewhere, high-risk environments that present unique challenges in emergencies. These must be addressed urgently'.
She added: 'It is critical for public safety and achieving value for money that the government has a firm grasp of the implications of delays in its timetable and a costed plan to tackle them.'
The National Audit Office said last year that the new network 'is inherently high risk and such an approach has not yet been used, nationwide, anywhere in the world'.
It highlighted significant technical challenges, including developing hand-held and vehicle- mounted devices that would work with the emergency services network and producing new software to enable 'radio-like' communications between emergency services workers and control rooms.
A Home Office spokesman said: 'The time-scales are ambitious because we want to get the most from technology that will help save lives, but we are clear that no risks will be taken with public safety and the existing Airwave system will continue until transition on to ESN is completed.' "

From the same issue of *The Times* comes another interesting story, written by Marc Horne, with the somewhat less than cheerful headline of, "Nuclear sub crash 'could have started war'" which says, "Two nuclear submarines collided off the coast of Britain in an incident that was covered up for more than 40 years, an official CIA document has revealed.
The crash between an American submarine carrying 160 nuclear warheads and a Soviet vessel was so serious that it could have lead to a third world war, one expert claimed.
The incident took place near Holy Loch, Argyll, about 30 miles from Glasgow. The US maintained a nuclear submarine base at Holy Loch between 1961 and 1992.
Details of the crash have now been confirmed in a US military cable released by the CIA, which shows that it happened just outside the port. The cable was marked 'Secret eyes only' and sent to Henry Kissinger, who was then the US secretary of state, by Brent
Scowcroft, a national security adviser to President Ford on November 3, 1974.
The document, seen by *The Times*, read: 'Have just received word from the Pentagon that one of our Poseidon submarines has just collided with a Soviet submarine. The SSBN *James Madison* was departing Holy Loch to take up station when it collided with a Soviet submarine waiting outside the port to take up trail.
'Both submarines surfaced and the Soviet boat subsequently submerged again. There is no report yet of the extent of damage. Will keep you posted.'
The document was among about 13 million pages of unclassified documents that have been placed on-line this month by the CIA.
The revelation comes days after it emerged that Trident, Britain's submarine-based nuclear deterrent, malfunctioned during a test in Florida last June.
The SNP said last night that the 1974 incident highlighted the danger of housing nuclear submarines in UK waters.
Hans Kristensen, a nuclear weapons expert employed by the Federation of American Scientists in Washington believes there could easily have been a disaster 'if the crew on one of the submarines had misinterpreted the collision as an attack and decided to defend itself and sink the other submarine,
Mr Kristensen, a former special adviser to the Danish Ministry of Defence, added: 'The *James Madison* was a ballistic missile submarine armed with 16 Poseidon missiles with 160 nuclear warheads. The worst case scenario would probably have been if the collision had triggered explosions that ignited the ballistic missile fuel and ejected or destroyed the warheads. 'The submarines could also have capsized with the loss of all on board leaving 'hot' nuclear reactors in relatively shallow waters close to rich fishing grounds.'
John Large, the chartered engineer who led the nuclear risk assessment team during the raising of the stricken Russian submarine *Kursk* in 2001 described the collision as a serious event.
'You could have got a fire, which would have been a disaster,' he said. 'If you had a fire in one missile silo you could have a discharge of quite a considerable amount of plutonium into the marine environment. It would have caused serious contamination.'
It is understood that the US submarine was left with significant damage to its hull and was taken into dry dock at Holy Loch for inspection and repairs."

Point to ponder:- "It has been said that an engineer is a man who can do for ten shillings what any man can do for a pound" - Nevil Shute, English novelist

Excellent Peter, thanks

A quicky from elsewhere:

Russian officers 'passed secrets to US for 7 years'
Tom Parfitt, Moscow
February 6 2017, 12:01am, The Times
http://www.thetimes.co.uk/edition/world/russian-officers-passed-secrets-to-us-for-7-years-qt3dvbkg7

Two senior officers from Russia's FSB spy agency passed state secrets to the United States for at least seven years in an espionage coup for Washington, it was alleged yesterday.
Sergei Mikhailov and Dmitri Dokuchayev have been charged with treason alongside Ruslan Stoyanov, a manager from the cybersecurity and anti-virus company Kaspersky Lab, who is accused of being an intermediary.
They are said to have helped the US pinpoint Russian hacking during the presidential election. The news of the arrests in December emerged late last month and details of the charges have not been officially released.
Yesterday a source familiar with the investigation said that the two FSB officers received payments to pass secret data to Mr Stoyanov and a representative of another cybersecurity company. The information was then transferred to "acquaintances abroad who worked closely with foreign special services".
"This is not a one-off story, this activity was carried out for a minimum of seven years and caused substantial harm to the interests of the Russian Federation," the source told the Rosbalt news agency.
Mr Mikhailov, a department head at the FSB's Centre for Information Security, was arrested dramatically during a conference in Moscow. A sack was pulled over his head and he was marched out of the room. Mr Dokuchayev, one of Mr Mikhailov's subordinates, is said to be a former hacker known as "Forb" who was recruited to the FSB under threat of prosecution.
Security and law-enforcement sources have told Russian media that the men passed information indirectly to the CIA or an organisation close to it.
Ivan Pavlov, a lawyer, is acting for one of the three accused men although he has refused to say which one. He said all three had been charged with state treason, which carries a potential 20-year prison sentence. The case files "refer to America but not the CIA", he claimed.
Novaya Gazeta, the independent newspaper, said that Mr Mikhailov was suspected of handing the US information on Vladimir Fomenko, the owner of King Servers. Hackers used servers provided by the company to breach election databases in Illinois and Arizona last summer, according to ThreatConnect, a US cybersecurity company.
Mr Pavlov said yesterday that Mr Mikhailov had retracted an initial confession to the treason charge.
There has been a flurry of leaks about the highly secret treason investigation in Russian media, suggesting a clash of interests inside the FSB.
Two sources told the RBK news agency that the centre where the two accused officers worked was in conflict with the Centre for Information Defence and Special Communications, a rival FSB body with overlapping responsibilities. Andrei Ivashko, the head of that rival centre, is said to be friends with Konstantin Malofeev, founder of Tsargrad, a small television channel that first revealed the FSB arrests.
The scandal has been spiced further by reports that it may be linked to the arrest of three men from the Shaltai-Boltai (Humpty Dumpty) hacking group. Vladimir Anikeyev, known as "Lewis", and two associates nicknamed March Hare and The Hatter were taken into custody in November but the arrests only emerged recently. They are charged with gaining "illegal access to computer information".
Some media claimed that Mr Mikhailov had infiltrated the group and was using it for his own purposes, but a lawyer acting for Mr Anikeyev said yesterday that the treason case and the arrest of his client were not connected.

http://www.thetimes.co.uk/edition/world/russian-officers-passed-secrets-to-us-for-7-years-qt3dvbkg7

Onto Spectre's News articles

The Vox 06/01/2017

http://www.vox.com/world/2017/1/6/14194986/russia-hack-intelligence-report-election-trump

The key findings from the US intelligence report on the Russia hack, decoded

Late Friday afternoon, the Office of the Director of National Intelligence (ODNI) released a declassified version of its report on Russia's interference in the US presidential election. The report, which draws on intelligence gathered by the FBI, CIA, and NSA, concludes with "high confidence" that "Russian President Vladimir Putin ordered an influence campaign in 2016 aimed at the US presidential election" that included hacking the personal email accounts of Democratic Party officials and political figures.

According to the report, Putin's aim was to impugn Hillary Clinton's credibility and boost Donald Trump's chances of winning the election, and more broadly to make the US electoral system look shady and untrustworthy.

Much of this has already been reported publicly. But there are some key findings in this report, such as the precise nature of the link between WikiLeaks and the Russian hackers, that hadn't been disclosed before.

Here's a guide to the report — its most important findings and, in particular, the new and important disclosures it contains.

All three intel agencies agree that Putin personally ordered the hack, and that the goal was to help Trump
The ODNI report states conclusively that Putin personally ordered the email hacks of Democratic Party officials as part of a broader campaign to influence the US election in Trump's favor. This seems to have sprung, in part, from Putin's paranoia concerning perceived US attempts to undermine his government.

The report explains that Putin was incensed about a series of scandals that embarrassed his government, such as the Panama Papers leak, which revealed (among other things) a secret $2 billion account held by Putin personally. The Russian hacking campaign was designed in part to throw a similar kind of dirt on the United States, which he held responsible for his embarrassment.

"Putin publicly pointed to the Panama Papers disclosure and the Olympic doping scandal as US-directed efforts to defame Russia, suggesting he sought to use disclosures to discredit the image of the United States and cast it as hypocritical," the ODNI report states.

The campaign was designed to disproportionately target Clinton, whom Putin saw as a threat — he blamed her, in particular, for the 2011 anti-government protests in Russia. So the "consistent goals" of the influence campaign, the report says, were "to undermine public faith in the US democratic process, denigrate Secretary Clinton, and harm her electability and potential presidency."

As time went on, however, the Russian campaign shifted — evolving into an attempt not just to hurt Clinton but to outright elect Trump. The Kremlin, according to the report, saw Trump as potential ally — someone with the right policy views and the right dealmaking disposition.

“Putin has had many positive experiences working with Western political leaders whose business interests made them more disposed to deal with Russia, such as former Italian Prime Minister Silvio Berlusconi and former German Chancellor Gerhard Schroeder,” the report’s authors explain.

There’s an interesting diversion at this point in the report. The CIA and FBI conclude that the hack was designed to help Trump “with high confidence,” whereas the NSA does so only with “moderate confidence.” This is a little hint as to the sources for this report’s conclusions.

The CIA and the FBI rely more on “human intelligence” — that is, spies talking to sources. The NSA is responsible for what’s called “signals intelligence”: electronic intercepts, email surveillance, and so forth. This suggests that one of the report’s main conclusions — that the goal was to elect Trump — is based less on technical analysis and more on information American spies gleaned from their sources.

Then, as the election got closer and closer and a Trump victory looked less and less likely, Russian aims shifted again — becoming a campaign aimed at weakening a future Clinton administration.

It seems the Kremlin was just as surprised as the rest of the world when Trump won — and, indeed, thrilled. CNN and the Washington Post reported that the classified version of the report includes quotes from leading Russian officials celebrating on the night of Trump’s victory. They were, in the Post’s telling, “congratulating themselves.”

Russia gave the information to WikiLeaks

The ODNI report clears up one key source of confusion about Russia’s efforts: how WikiLeaks got involved.

We knew before this report that Russia was behind the hack of thousands of private emails from Clinton allies. We also knew that WikiLeaks published a huge number of those same emails. What we didn’t know is how the stolen emails got from the Russian hackers to WikiLeaks.

The report sheds some light on that question. It suggests that agents of Russia’s military intelligence service, the GRU, specifically chose WikiLeaks to be the outlet for much of its disclosures — and handed off the information to the organization.

“We assess with high confidence that the GRU relayed material it acquired from the DNC and senior Democratic officials to WikiLeaks,” the ODNI writes. “Moscow most likely chose WikiLeaks because of its self proclaimed reputation for authenticity.”

This fits with what we knew publicly but directly contradicts WikiLeaks chief Julian Assange’s recent assertion that “our source is not the Russian government.” Which makes it seem like either the intelligence community’s assessment as well as the publicly available evidence are both way off base or Assange is lying.

There’s a third option, though: that the Russian agents hid their identity from Assange, using a fake persona — Guccifer 2.0, an allegedly Romanian hacker who is, in all likelihood, a front for Russian intelligence — as a cutout. The ODNI report, in one sentence, kind of suggests that’s what happened (though the sentence is hard to parse):

“We assess with high confidence that Russian military intelligence (General Staff Main Intelligence Directorate or GRU) used the Guccifer 2.0 persona and DCLeaks.com to release US victim data obtained in cyber operations publicly and in exclusives to media outlets and relayed material to WikiLeaks,” the report says.

Whether or not that interpretation is right, it’s quite clear from the report that US intelligence believes the Russian military intelligence service is WikiLeaks’ source. This was always the most likely scenario, and now we’ve got the ODNI report to back it up.

Russian trolls were ready to delegitimize Clinton if she won
The email hacks, according to ODNI, were only one part of a broader disinformation campaign targeting the US election.

“Moscow’s influence campaign followed a Russian messaging strategy that blends covert intelligence operations — such as cyber activity — with overt efforts by Russian Government agencies, state-funded media, third-party intermediaries, and paid social media users or ‘trolls,’” the report explains, in what might be the first ever use of the word “trolls” in an official ODNI report.

One of the most interesting little tidbits about these Russian social media trolls is what they were planning to do in the event of a Clinton victory. According to ODNI, Russia’s social media operatives were primed to launch a massive propaganda campaign aimed at undermining the legitimacy of the election — playing into Trump’s theme that the election was “rigged.”

“Before the election, Russian diplomats had publicly denounced the US electoral process and were prepared to publicly call into question the validity of the results,” the report explains. “ProKremlin bloggers had prepared a Twitter campaign, #DemocracyRIP, on election night in anticipation of Secretary Clinton’s victory, judging from their social media activity.”

Trump won, of course, so this plan never came to fruition. Official Moscow shut up after Trump’s victory, wanting to maximize its influence with its preferred president.

“Putin, Russian officials, and other pro-Kremlin pundits stopped publicly criticizing the US election process as unfair almost immediately after the election because Moscow probably assessed it would be counterproductive to building positive relations,” ODNI writes.

RT is way more important than we think
The ODNI report focuses, to an almost surprising degree, on RT — the Kremlin’s international, English-language propaganda media outlet. The report contains several striking observations about RT’s reach, message, and proximity to the Russian government.

For instance, RT videos get more YouTube views than many other prominent, mainstream media outlets (though it’s possible these numbers are goosed):

The report also reveals that top staff at RT’s bureaus are very, very close to the Kremlin: The head of RT's Arabic-language service, Aydar Aganin, was transferred from Russia’s diplomatic service to manage RT's Arabic-language expansion, suggesting a close relationship between RT and Russia's foreign-policy apparatus.

In addition, the report states that RT's London Bureau is managed by Darya Pushkova — the daughter of Aleksey Pushkov, the current chair of the Russian State Duma’s foreign affairs committee and a former speechwriter for former Soviet leader Mikhail Gorbachev.

According to the report, RT — as well as Sputnik, another Russian government–funded English-language propaganda outlet — began aggressively producing pro-Trump and anti-Clinton content starting in March 2016. That just so happens to be the exact same time the Russian hacking campaign targeting Democrats began.

During the 2016 campaign, RT aired a number of weird, conspiratorial segments — some starring WikiLeaks' Julian Assange — that cast Clinton as corrupt and funded by ISIS and portrayed the US electoral system as rigged.

Interestingly, the ODNI report also describes RT programming that promoted stories intended to benefit Russian economic interests — including what the report terms "anti-fracking programming."

"This is likely reflective of the Russian Government's concern about the impact of fracking and US natural gas production on the global energy market and the potential challenges to Gazprom's profitability," the report states. Gazprom is a huge Russian government-owned oil and gas company.

All of this makes it crystal clear that Russian information ops go way beyond just hacking — and that media outlets like RT and Sputnik are major elements of their US-focused propaganda campaign.

This is the beginning, not the end
The report concludes on an ominous note.

Given the success of Russia's hacking and information campaign in the 2016 election, the ODNI expects that Putin will try to run a similar playbook in future democratic elections — in both the United States and worldwide.

"We assess the Russian intelligence services would have seen their election influence campaign as at least a qualified success because of their perceived ability to impact public discussion," ODNI writes.

In fact, as the report explains, a new round of hacking began the day after the election:

Immediately after Election Day, we assess Russian intelligence began a spearphishing campaign targeting US Government employees and individuals associated with US think tanks and NGOs in national security, defense, and foreign policy fields. This campaign could provide material for future influence efforts as well as foreign intelligence collection on the incoming administration's goals and plans.

In conclusion, Russia really did try to influence the 2016 US election — and there's every reason to expect it will try again when the 2020 campaign kicks off.

The Guardian 12/01/2017

https://www.theguardian.com/us-news/2017/jan/11/trump-russia-report-opposition-research-john-mccain

How the Trump dossier came to light: secret sources, a retired spy and John McCain

What began as opposition research during the Republican primary slowly grew from a covert investigation into an extraordinary but unverified global story

The extraordinary but unverified documents published on Tuesday on Donald Trump's ties with Moscow began life as a piece of opposition research, which has become as much a part of US politics as yard signs and coloured balloons.

There is a small industry of research and investigative firms in Washington, typically staffed by a mix of former journalists and security officials, adept at finding information about politicians that the politicians would rather stay hidden. The firms often do not know who exactly is hiring them; the request could come from a law firm acting on behalf of a client from one of the parties.

In this case, the request for opposition research on Donald Trump came from one of his Republican opponents in the primary campaign. The research firm then hired one of its sub-contractors who it used regularly on all things Russian: a retired western European former counter-intelligence official, with a long history of dealing with the shadow world of Moscow's spooks and siloviki (securocrats).

By the time the contractor had started his research, however, the Republican primary was over. The original client had dropped out, but the firm that had hired him had found a new, Democratic client. This was not necessarily the Hillary Clinton campaign or the Democratic National Committee. Opposition research is frequently financed by wealthy individuals who have donated all they can and are looking for other ways to help.

By July, the counter-intelligence contractor had collected a significant amount of material based on Russian sources who he had grown to trust over the years – not just in Moscow, but also among oligarchs living in the west. He delivered his reports, but the gravity of their contents weighed on him. If the allegations were real, their implications were overwhelming.

He delivered a set to former colleagues in the FBI, whose counter-intelligence division would be the appropriate body to investigate. It is believed he also passed a copy to his own country's intelligence service, but it felt constrained in what action it could take and left it up to the Americans to do their own investigation and draw their own conclusions.

As summer turned to autumn, the investigator was asked for more information by the FBI but heard nothing back about any investigation. The bureau seemed obsessed instead with classified material that flowed through a private email server set up by Clinton's aides. The FBI's director, James Comey, threw the election into a spin 11 days before the vote by announcing his investigators were examining newly discovered material.

The former intelligence official grew concerned that there was a cover-up in progress. On a trip to New York in October, he was persuaded to tell his story to David Corn, the Washington editor of Mother Jones, who first reported the existence of the material on 31 October.

The FBI however continued to refuse to comment on the issue, despite reports that it had requested and perhaps acquired a warrant for further investigation from the Foreign intelligence surveillance (Fisa) court. The silence was not altogether surprising. The FBI counter-intelligence division, headquartered in Washington, is extremely secretive, much more so than the New York field office, which had strong links to former prosecutor and mayor Rudy Giuliani, who was by then working for Trump. The threat of leaks from New York about Clinton emails had reportedly pushed Comey into making his October surprise announcement.

Trump calls salacious allegations in Russia dossier 'fake news' – as it happened
Follow the aftermath of the publication of explosive unverified allegations that Donald Trump had secret contacts with Moscow and that Russia has personally compromising material on the president-elect

In mid-November, the documents took another route into Washington that ultimately led to them being mentioned in the joint intelligence report on Russian interference that was delivered to President Obama and President-elect Trump. On 18 November, the annual Halifax International Security Forum opened in the Canadian city, bringing together serving and former security and foreign policy officials from around the world.

Senator John McCain, a hawkish Republican, was there and was introduced to a former senior western diplomat who had seen the documents, knew their source and thought him highly reliable. McCain decided the implications were sufficiently alarming to dispatch a trusted emissary, a former US official, to meet the source and find out more.

The emissary hastily arranged a transatlantic flight and met the source at the airport as arranged. (The Guardian has agreed not to specify the city or country where the meeting took place.) The meeting had a certain cold war tradecraft to it, as he was told to look for a man with a copy of the Financial Times. Having found each other, the retired counter-intelligence officer drove the emissary to his house, where they discussed the documents and their background.

The emissary flew back within 24 hours and showed McCain the documents, saying it was hard to impossible to verify them without a proper investigation. McCain said he was reluctant to get involved, lest it be perceived as payback for insulting remarks Trump had made about him during his rambunctious campaign.

However, on 9 December, McCain arranged a one-on-one meeting with Comey, with no aides present, and handed them over.

BuzzFeed publishes unsubstantiated Trump report, raising ethics questions

“Upon examination of the contents, and unable to make a judgment about their accuracy, I delivered the information to the Director of the FBI. That has been the extent of my contact with the FBI or any other government agency regarding this issue,” the senator said in a statement on Wednesday morning.

It is not clear what underpinned the FBI’s decision to include a summary of the documents in its highly classified briefing to the president and president-elect and their top staff, before the bureau had completed its investigation. It may have been as a defensive measure, to prove for posterity that it was not involved in a cover-up, or because its investigators believed them to be credible.

Whatever the motive, it was quickly leaked – first to CNN, which reported on the material on Wednesday. That triggered a controversial decision by BuzzFeed to publish an unredacted version of the documents on its website. It is unclear where the BuzzFeed version came from. The author of the reports had been insistent on blotting out references to his Russian sources in the copies he gave to the press, out of fear for their safety. The unredacted version could have come from the original client, who commissioned the research, or from intermediaries between the counter-intelligence contractor and the client.

The Daily Caller 17/01/2017

http://dailycaller.com/2017/01/17/chinese-military-prepares-to-throw-punches-over-foreign-spying

Chinese Military Prepares ‘To Throw Punches’ Over Foreign Spying

The Chinese military warns that China must be prepared to counter serious national security threats from foreign reconnaissance and surveillance activities.

China should be prepared “to throw a punch;” otherwise, it may be on the receiving end of “one hundred punches,” the PLA Daily, the primary publication of the People’s Liberation Army, asserts.

Several incidents have raised alarms in China.

The USNS Bowditch’s unmanned underwater drone activities in the South China Sea, the appearance of high-quality images of China’s second aircraft carrier, which is still in development and considered a state secret, in reports from Kyodo News Agency, and the tracking of Chinese navy submarines put China at a disadvantage regarding intelligence.

“It is a major security threat that we cannot afford to ignore,” the PLA Daily argued, “If a war were to break out tomorrow, intelligence would be our Achilles heel.”

The article claims that foreign spying has repeatedly cost China dearly.

Before the Sino-Japanese War, Japan sent spies into the Qing government to collect intelligence for nearly two decades. When war broke out, China never stood a chance, China’s military asserts.

“We are determined to step up our counter-reconnaissance efforts, and we are certain that we can contain activities that are harmful to China’s national interests,” the report added.

The Chinese People’s Liberation Army Navy took action against the U.S. last month. China seized a U.S. naval unmanned underwater vehicle in the presence of the USNS Bowditch.

“It should be emphasized that the U.S. has been regularly sending ships and planes into Chinese waters for reconnaissance purposes for a long time. China is firmly opposed to these activities and demands the U.S. stop immediately,” Ministry of National Defense spokesman Yang Yujun said.

“China will remain vigilant to U.S. activities and shall take necessary measures to respond,” he added.

“Intelligence gathering around China has posed a severe threat to China’s national security,” the Global Times argued. “If the U.S.military won’t adjust its general strategy of close-up surveillance of China, close encounters between the two sides will not decrease.”

“The unmanned drone was just the tip of the iceberg when it comes to U.S. military actions against China,” Chinese foreign affairs expert Hua Yiwen wrote in a People’s Daily article.

The article did not mention China’s intelligence-gathering activities.

The Sun 28/01/2017

https://www.thesun.co.uk/news/2727446/russian-spy-donald-trump-dirty-dossier-dead-car-moscow/

DIRTY DOSSIER DEATH Russian spy linked to Donald Trump's dirty dossier found DEAD in his car in Moscow

Oleg Erovinkin is suspected of being Brit spy Christopher Steele's key source behind widely discredited allegations against President Trump

A FORMER KGB spy chief suspected of helping Brit spook Christopher Steele compile the Trump 'dirty dossier' has been found dead in mysterious circumstances.

Oleg Erovinkin, described as a key source behind the widely discredited document, was found dead in the back of his car in Moscow on Boxing Day.

Media reports in Russia suggest his death was the result of foul play, reports the Telegraph.

A former general in the intelligence agency the KBG and its successor the FSB, Erovinkin was reportedly a key aide to former deputy prime minister Igor Sechin.

Erovinkin acted as a 'go-between' for Russian Presdident Vladimir Putin and Sechin who is now head of the state-owned oil company Rosneft, it has been reported.

The Register 03/02/2017

https://www.theregister.co.uk/2017/02/03/china_russia_aerospace_apt/

Chinese hackers switch tactics for spying on Russian jet makers

New spear-phishing method for copy-pasting military hardware

Chinese state-sponsored hackers are targeting military and aerospace interests in Russia and Belarus.

Since the summer of 2016, a group began using a new downloader known as ZeroT, spear-phishing emails to install the PlugX remote access Trojan (RAT), according to security researchers at Proofpoint.

In previous campaigns, the group used spear-phishing emails with Microsoft Word document attachments utilising CVE-2012-0158, or URLs linking to .rar-compressed executable nasties. These attacks have continued alongside the deployment of ZeroT, a previously unknown malware strain, from June 2016 onwards.

China's People's Liberation Army (PLA) units are notorious for running campaigns aimed at stealing intellectual property as well as intelligence from western governments, NGOs and Chinese dissident groups. Aerospace firms in the US and Europe have long been high up on this extensive target list. An alleged Chinese knock-off of Lockheed Martin F-35 Joint Strike Fighter is the most frequently cited example, not least because a Chinese national was convicted and jailed over stealing its blueprints, but this is just one example of what military analysts allege is general theft and copying by Beijing.

Proofpoint's research shows that Russian firms, a previously under-publicised target (at least in the tech or business press), are also on the hit list. Chinese jets that look uncannily similar to Russian or US counterparts are documented in a story by US Naval Institute News here.

Related News Story From 2015

USNS News 27/10/2015

China's Military Built with Cloned Weapons

Historically, China has been a great innovator contributing inventions such as gunpowder, paper and the compass to human advancement. However, China has earned an international reputation in recent decades as being the home of a prolific copycat culture.

The Chinese have become proficient at cloning products ranging from designer handbags and the latest smartphones to movies and alcoholic beverages. Fake Apple stores, counterfeit KFC restaurants and imitation IKEA big-box outlets dot the Chinese landscape. They have even built entire replica European towns.

Some Western observers believe this cultural attitude towards imitation is rooted in Confucianism where followers traditionally learned by replicating masterworks and then tried to improve upon them.

The fact that the Chinese commonly refer to today's imitation products as "Shanzhai" indicates that they recognize the dubious nature of the current practice. The term "Shanzhai" translates to "mountain stronghold" and was originally applied to pirate factories producing counterfeit goods in remote areas beyond the reach of regulatory control.

The copycat business is no longer restricted to outlying lawless regions. It has entered the mainstream and been embraced by government officials who seem content to allow other nations to develop products and technology which they can then acquire legitimately through licensing or illegitimately through counterfeiting and espionage. This approach allows China to stay competitive on the world stage while saving them the time and money it would cost to develop their own products.

An industry in which Chinese cloning has excelled to a disconcerting degree is the manufacture of weapon systems. China's expanding military and growing assertiveness has been bolstered by weapons cloned from the arsenals of other countries. Bleeding edge U.S. aircraft including the Lockheed Martin F-35 Joint Strike Fighter and Northrop Grumman X-47B unmanned combat air vehicle (UCAV) have Chinese counterparts that are remarkably similar. Some of the technology used in these designs was almost certainly acquired through a vigorous Chinese cyber spying campaign.

U.S. Defense officials have stated that Chinese military hackers undertaking "technical reconnaissance" have succeeded in pilfering highly classified technical documents on a number of occasions. The sensitive technical data that is known to have been compromised is now evident in the latest versions of several Chinese weapons.

Officials also suspect that China has managed to obtain valuable technical advances by making backroom deals with U.S. allies that bought American weapons. It is for this reason that the U.S. decided not to export the Lockheed Martin F-22 Raptor stealth fighter.

It is not only American weapon designs and technology that have been stolen and replicated by the Chinese. Russia has at times served as China's unwitting research and development department. After the collapse of the Soviet Union, Russia was in need of money and held a fire sale of its state of the art Sukhoi Su-27 fighter. China bought two dozen of the fighters but later negotiated for a license to assemble additional planes domestically using key components imported from Russia. Within a few years China claimed that the fighter no longer met their needs and canceled the contract. To the fury of the Russians, the Chinese soon debuted the indigenously built and equipped Shenyang J-11B fighter that looks identical to the Su-27.

Russia continued to use Chinese money from arms sales to develop new technology, which China then stole. After several deals in which the Chinese quickly reversed engineered Russian weapons to produce their own versions, Russia finally wised up and began to reject Chinese requests to purchase single examples of their most advanced systems on a "trial" basis.

To add salt to Russia's wounds, China is now exporting knockoff weapons to the international market and undercutting Russia's own arms trade in the process. But like a counterfeit Louis Vuitton handbag with a faulty zipper, Chinese clone weapons may be more style over performance.

"I think the big issue with all Chinese weapons – including copies of Western equipment – is that they remain untested in combat," Eric Wertheim author of U.S. Naval Institute's Combat Fleets of the World and a naval analyst said.
"We just don't know how they will perform, so while they may be far less expensive than their western counterparts, many countries are understandably reluctant to take the risk of acquiring products that haven't passed the ultimate test of combat. I expect that some of these systems are likely to perform as advertised while others may significantly underperform compared to their western counterparts."

Although Chinese clone weapons may not yet posses the quality and capabilities of the originals, several U.S. military and industry officials have expressed concern that the ongoing sophisticated cyber espionage campaign will allow China to rapidly improve their arsenal and even soon produce aircraft that will match all aspects of US fifth generation fighters like the F-22 and F-35.

Zero Hedge 14/02/2017

Russian Trawlers …..

http://www.zerohedge.com/news/2017-02-14/russian-spy-ship-spotted-us-east-coast

The last time a Russian spy ship was spotted in relative proximity to the US, was in September 2015, when shortly after five Chinese naval ships were observed in the Bering Sea, U.S. military satellites identified a Russian spy ship - capable of cutting undersea communications cables and other sensors - off the coast of Kings Bay, Ga., home to the U.S. Navy's East Coast ballistic missile submarine fleet. Needless to say, the US navy - and Pentagon - were quite displeased: after all it is only Russia that is allowed to be surrounded by NATO forces.

Fast forward to today, when two US officials told Fox News that a Russian spy ship has been spotted patrolling off the East Coast of the United States on Tuesday morning, the first such patrol since President Trump took office. According to Fox News, the Russian spy ship was 70 miles off the coast of Delaware, heading north at 10 knots, according to one official. That location means the ship is in international waters. The U.S. territory line is 12 nautical miles. It was not immediately clear where the Russian spy ship was headed.

The ship, the SSV-175 Viktor Leonov, last sailed near the U.S. in April 2015, an official said. The ship is capable of intercepting communications or signals, as well as measuring U.S. Navy sonar capability. The Russian spy ship is also armed with surface-to-air missiles.

"It's not a huge concern, but we are keeping our eyes on it," one official said.

This action by the Russian military follows recent missile test launches by Iran and North Korea.

During the Cold War, Russian intelligence gathering ships routinely parked off U.S. submarine bases along the East Coast and as noted above, in 2015, another Russian spy ship was spotted near the U.S. outside the submarine base in Kings Bay, in the most recent close encounter.

Outside of U.S. intelligence gathering satellites monitoring the Russian spy ship's voyage north, there are several airborne platforms along the East Coast that could be used by the U.S. military to monitor the Russian ship, according to one official. Currently there are four U.S. Navy warships in the Atlantic off the coast of Norfolk participating in normal training, but none have been tasked with shadowing the Russian spy ship.

There are no U.S. Navy aircraft carriers nearby.

The USS Eisenhower, an aircraft carrier, is currently off the coast of Florida doing carrier qualifications, with young pilots making their first landings. Ike does not currently have strike aircraft.
It is certainly unclear (albeit sarcastic) if the ship has been dispatched in response to the resignation of Mike Flynn.

CNN 15/02/2017

http://edition.cnn.com/2017/02/14/politics/russia-cruise-missile-spy-ship/

Russia deploys missile in apparent treaty violation

Washington (CNN)Moscow has deployed a cruise missile in an apparent treaty violation, a senior military official told CNN Tuesday.

The move is just the latest in a string of Russian provocations in the early days of the Trump administration, which has called for warmer relations with the Kremlin.

The traditional US adversary has also positioned a spy ship off the coast of Delaware and carried out flights near a US Navy warship, concerning American officials. The administration has not officially drawn any links between the three events.
The ground-launched cruise missile seems to run counter to the 1987 Intermediate-Range Nuclear Forces (INF) Treaty, the senior military official said. The New York Times first reported is deployment.

While declining to speak on intelligence matters, a spokesman for the US State Department did draw attention to Russian violations of the treaty.

"The Russian Federation remains in violation of its INF Treaty obligations not to possess, produce or flight-test a ground-launched cruise missile with a range capability of 500 to 5,500 kilometers, or to possess or produce launchers of such missiles," acting spokesman Mark Toner said in a statement issued Tuesday. Russia is believed to have tested one such missile in 2014.

"We have made very clear our concerns about Russia's violation, the risks it poses to European and Asian security, and our strong interest in returning Russia to compliance with the treaty," Toner added.

Just last week, a US Navy warship in the Black Sea had three encounters with Russian aircraft Friday that were deemed to be unsafe and unprofessional because of how close the Russian planes flew to the US, according to a senior defense official.
The USS Porter, a guided-missile destroyer, was operating in the Black Sea when it was approached three times by Russian aircraft, including one IL-38 and two Su-24s. The Navy calculated the Russian planes may be have flown as close as 1,000 yards laterally from the ship and 1,000 feet over the water, but did not cross the deck of the Porter.

Moscow pushed back on the allegation Tuesday, with Russian Defense Ministry spokesman Igor Konashenkov telling Russian state media "there has been no incident on February 10th involving flybys of Russian military planes in the Black Sea next to USS Porter."

Meanwhile, a US defense official told CNN that the Russian spy ship, the SSV-175 Viktor Leonov, is sailing in international waters off the coast of Delaware. The vessel is outfitted with a variety of high-tech spying equipment and is designed to intercept signals intelligence. Fox News first reported on the ship's location.

The official noted that this is not the first time the ship has been deployed off the coast of the US. Similar patrols were carried out by the Leonov in 2014 off the coast of Florida and in 2015, adding that such missions were much more common during the Cold War.

The Russian cruise missile would be capable of threatening NATO's European members. Secretary of Defense James Mattis is due to visit NATO's headquarters to meet with his counterparts Wednesday.

"The INF Treaty eliminated an entire category of weapons that threatened Europe, in particular the threat of short-warning attacks. The treaty remains a key component of our security, and any Russian non-compliance is a serious concern for the alliance," a NATO official told CNN.

"NATO allies have the capabilities in place to ensure that Russia will not gain any military advantage from disregarding the INF Treaty," the official added.

The Kremlin's moves come the day after Trump's national security adviser, Michael Flynn, was forced to resign after failing to fully disclose conversations he had with Russia's ambassador to the US concerning US sanctions while he was not yet in office.

Trump has in the past expressed interest in arms reduction talks with the Kremlin and indicated he would seek a new opening with Moscow.

White House press secretary Sean Spicer, however, said Tuesday that, "The president has been incredibly tough on Russia."
Spicer pointed to UN Ambassador Nikki Haley's recent remarks on the Russia's actions in east Ukraine and occupation of Crimea, adding that Trump "expects the Russian government to deescalate violence in the Ukraine and return Crimea."

"At the same time he fully expects to and wants to be able to get along with Russia unlike previous administrations," he added.

In a Tuesday evening tweet, the Russian embassy in Washington said Russia "will continue to patiently explain to the new US administration why Crimea is Russia."

Trump himself, though, repeatedly praised Putin on the campaign trail as well as since being elected, while offering few if any criticisms.

Asked about sanctions against Russia, newly minted Treasury Secretary Steven Mnuchin said Tuesday that sanctions were an important tool but would not specify any intensions towards Russia.
"Our current sanctions programs are in place, and I would say sanctions are an important tool that we will continue to look at for various different countries. But it's a very important program within the Treasury Department," Mnuchin said.
In contrast, Sen. Tom Cotton, an Arkansas Republican, called for a strong response to the cruise missile.

"If the last administration showed us anything, it's that ignoring these kinds of provocations simply means they will proliferate," he said in a statement. "I've said before we need to set firm boundaries for Russia's behavior -- and enforce them to the hilt. I take this news as evidence that the US should build up its nuclear forces in Europe."

Thanks Spectre

Chart Section Index

March 2017

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Mar kHz, ID, ...	Apr kHz, ID, ...
x							0000		M14	01A	5826 376	5826 376
						x	0100/0120/0140		V07	01B	18074/15874/14374 883	
x	x	x	x	x	x	x	0200		V13	0	15388	15388
						x	0300/0320/0340		V07	01B		14823/13423/11523 845
x	x	x	x	x	x	x	0300		V13	0	15388	15388
		x	x				0315		E11	03	7850 25#	5779 25#
x	x	x	x	x			0400		S06	01A	15721 480	15721 480
x	x	x	x	x	x	x	0400		V13	0	15388	15388
			x				0430/0450/0510		E07A	01B		6788/ 7488/ 9322 741
x	x	x	x	x	x	x	0440 (var)		HM02	01C	7351 Summer time	7351
x							0450		E11	03	6304 41#	6304 41#
	x			x			0455		S11A	03	5358 32#	5358 32#
x		x		x		x	0500		HM01	18	5855	5855
	x		x		x		0500		HM01	18	11462	11462
x	x	x	x	x	x	x	0500		V13	0	9522, 11430 search	9522, 11430 search
					x		0500/0520/0540		M12	01B		8176/ 9376/10476 134
			x	x			0500/0600	1/3	E06	01A		15650/17470 951
x			x				0530		E11	03	7317 64#	7317 64#
		x					0530/0540		S06S	01A	9296/10365 464	9296/10365 464
			x				0530/0550/0610		E07A	01B	6922/ 8122/ 9322 913	
x	x	x	x	x	x	x	0540 (var)		HM02	01C	7351 Winter time	
		x		x			0545		E11	03	15915 34#	15915 34#
x		x		x		x	0600		HM01	18	10345	10345
	x		x		x		0600		HM01	18	14375	14375
x	x	x	x	x	x	x	0600		V13	0	9522, 11430 search	9522, 11430 search
x				x			0600		E11	03	18#, search	18#, search
	x						0600/0610		S06S	01A	15855/16485 438	15855/16485 438
					x	x	0600/0620/0640		E07	01B		9064/10264/11464 024
					x		0600/0620/0640		M12	01B	8158/ 9258/10658 126	
		x			x		0600/0620/0640		XPAc	01B		10359/11559/13559
			x	x			0600/0700	1/3	E06	01B	16230/19325 864	

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Mar kHz, ID, ...	Apr kHz, ID, ...
						x	0600/0700		M14	01A	6824/6990 382	6824/6990 382
						x	0630/0640		S06S	01A	22185/20050 524	22185/20050 524
	x		x				0645		E11	03	10800 51#	10800 51#
x		x		x		x	0700		HM01	18	9330	9330
	x		x		x		0700		HM01	18	13435	13435
						x	0700		M01	01B	6510 463	6510 463
	x						0700/0710(15)		S06S	01A	5760/ 6930 374	5760/ 6930 374
x	x	x	x	x	x	x	0700		V13	0	15250	15250
					x	x	0700/0720/0740		E07	01B	10112/11112/12112 111	
		x			x		0700/0720/0740		XPAc	01B	11409/13509/14609	
	x			x			0700/0720/0740		XPA2t	01B	13431/14631/15931	16347/17447/18747
	x			x			0710		E11	03	10221 63#	10221 63#
			x		x		0710		E11	03	14769 49#	14769 49#
		x					0710/0730/0750		M12	01B	17472/19372/ 438, search	16294/18194/ 215, search
x		x					0715		S11A	03	14940 38#	14940 38#
				x		x	0730		E11	03	15825 35#	15825 35#
	x						0730/0740		S06S	01A	7425/11560 11560/12140 427	7425/11560 11560/12140 427
x							0745		E11	03	10213 26#	10213 26#
	x		x				0745		E11	03	14575 33#	14575 33#
x							0800	1/3	G06	01A	6810 329	6810 329
x		x		x		x	0800		HM01	18	9065	9065
	x		x		x		0800		HM01	18	11365	11365
x	x	x	x	x	x	x	0800		V13	0	15250	15250
			x				0800/0810		E17Z	01A	14260/12930 674	14260/12930 674
	x						0800/0810		S06S	01A	11635/10420 352	11635/10420 352
					x		0800/0810	1	S06S	01A	10350/ 8520 254	10350/ 8520 254
					x		0800/0820/0840		E07A	01B		12218/13418/14418 244
	x						0800/0820/0840		M12	01B	8053/ 9178/10287 816	8053/ 9178/10287 816
x		x					0800/0820/0840		XPA2p	01B	15956/14956/13956	
					x		0800/0900		M14	01A	5430/ 5561 171	5430/ 5561 171
		x				x	0805		E11	03	11450 31#	11450 31#
x			x				0820		E11	03	7317 43#	7317 43#

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Mar kHz, ID, ...	Apr kHz, ID, ...
		x					0820/0830		S06S	01A	8630/ 9255 471, check!	8630/ 9255 471, check!
x							0830/0840		S06S	01A	9220/ 8270 371	9220/ 8270 371
		x					0830/0840		S06S	01A	11530/12140 745	11530/12140 745
			x	x			0830/0930		S06	01A	19415/16268 842	19078/16318 842
x		x					0900		E11	03	9399 53#	9399 53#
x		x		x		x	0900		HM01	18	9240	9240
	x		x		x		0900		HM01	18	11462	11462
x							0900/0910		S06S	01A	14580/13165 872	14580/13165 872
			x				0900/0910		S06S	01A	5744/ 6524 624	5744/ 6524 624
					x		0900/0920/0940		E07A	01B	11133/12133/13433 114	
	x			x			0915		S11A	03	7317 48#	7317 48#
		x	x				0930		E11	03	8803 27#	8803 27#
			x				0930/0940		S06S	01A	9081/10514 314	9081/10514 314
				x			0930/0940		S06S	01A	12140/13515 516, search	12140/13515 516, search
	x			x			1000		E11	03	30#, search	30#, search
x		x		x		x	1000		HM01	18	5855, 9155	5855, 9155
	x		x		x		1000		HM01	18	12180	12180
	x						1000/1010		S06S	01A	6410/ 7340 893	6410/ 7340 893
		x					1000/1010		S06S	01A	13365/14505 729	13365/14505 729
			x			x	1010/1030/1050		M12	01B	14769/16269/18169 721	
x			x				1015		S11A	03	16112 47#	16112 47#
	x			x			1020		S11A	03	9960 42#	9960 42#
	x						1045		E11	03	8102 57#	8102 57#
	x						1100/1110		S06S	01A	6190/ 7230 754	6190/ 7230 754
x							1100/1120/1140		M12	01B	12205/13559/14728 973	12205/13559/14728 973
		x					1200	?	G06	01A	x5186 691, search	x5186 691, search
x	x	x	x	x	x	x	1200		V13	0	7502, 9276 search	7502, 9276 search
x							1200/1210		S06S	01A	9145/11460 831	9145/11460 831
			x				1200/1210		S06S	01A	12415/14212 425	12415/14212 425

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Mar kHz, ID, ...	Apr kHz, ID, ...
					x		1200/1210/1220		M42C	01A		18206/16159/14551
				x			1200/1220/1240		M12	01B	10343/ 9264/ 8116 124	10343/ 9264/ 8116 124
	x	x					1205		E11	03	9443 46#	9443 46#
x				x			1225		E11	03	20286 52#	20286 52#
	x	x					1300		E11	03	15632 13#	15632 13#
			x		x		1300		E11	03	10302 58#	58#
		x					1300	?	G06	01A	x5436 691, search	x5436 691, search
			x				1300	1/3	G06	01A	4598 329	4598 329
x	x	x	x	x	x	x	1300		V13	0	7502, 9276 search	7502, 9276 search
					x		1300/1310/1320		M42C	01A	18437/16305/14719	
	x					x	1300/1320/1340		XPA2m	01B		
			x		x		1310/1330/1350		M12	01B	12214/10814/ 9214 282	14468/13568/12178 451
	x				x		1345		E11	03	13046 91#	13046 91#
x	x	x	x	x	x	x	1400		M08A	18	8096	8096
				x	x		1400/1420/1440		XPA2r	01B	18667/17419/16212	
	x		x				1450		E11	03	10641 44#	10641 44#
					x		1500		M01	14	6260 463	6260 463
	x	x	x				1500		S06	01A	14913 387	
	x						1500/1510		S06S	01A	6464/ 7242 537	6464/ 7242 537
				x			1500/1520/1540		M12	01B	20936/19436/ 944, search	20441/19041/ 404, search
	x					x	1500/1520/1540		XPA2m	01B	16138/14438/13438	
				x		x	1500/1520/1540		XPA2p	01B		16147/14947/14447
				x			1510/1530/1550		E07A	01B		12174/11074/10274 102
			x				1530		E11	03	10330 26#	10330 26#
		x			x		1540		S11A	03	10800 56#	10800 56#
x	x	x	x	x	x	x	1600		HM01	18	11435	11435
	x	x	x				1500		S06	01A	10387 387	
	x					x	1605		E11	03	6397 23#	6397 23#
				x			1610/1630/1650		E07A	01B	11473/10173/ 9373 413	
		x				x	1625		E11	03	10448 97#	10448 97#
				x		x	1630		E11	03	13873 92#	13873 92#

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Mar kHz, ID, ...	Apr kHz, ID, ...
x							1700	1/2	G06	01A	x4767 691, search	x4767 691, search
x	x	x	x	x	x	x	1700		HM01	18	11530	11530
		x				x	1700/1720/1740		E07	01B		14603/13403/12103 641
				x			1700/1800	1/3	M14	01A	5945/ 5477 382	5945/ 5477 382
		x			x		1705		E11	03	10213 39#	10213 39#
		x			x		1730		E11	03	5844 40#	5844 40#
			x				1730		E11	03	9371 41#	9371 41#
		x					1740/1840	3	E06	01A	2015: 13433/10166 634, search	
x						x	1745		E11	03	13470 24#	13470 24#
x							1800	1/2	G06	01A	x4953 691, search	x4953 691, search
x	x	x	x	x	x	x	1800		HM01	18	11635	11635
	x		x				1800		M01	14	5475 463	5475 463
		x				x	1800/1820/1840		E07	01B	13419/12139/10739 417	
			x				1800/1820/1840		M12	01B	11435/10598/ 9327 938	11435/10598/ 9327 938
	x					x	1800/1820/1840		XPA2m	01B		14538/13538/12138
x							1810		M01B	14		3535, 4590 420
					x		1810/1820/1830		M42C	01A	12184/10292/ 8054	14517/12196/10413
	x						1820	2/4	M14	01A	5945 346	5945 346
			x				1830	2/4	G06	01A	5934 579	5934 579
			x				1832		M01B	14		3510, 4605 201
	x			x			1840/1850/1900	1	M42C	01A		12194/10581/ 8112
x		x					1900/1920/1940		E07	01B		ex 12108/10708/ 9208 search
		x					1900/1920/1940		M12	01B	8047/ 6802/ 5788 463	8047/ 6802/ 5788 463
				x	x		1900/1920/1940		XPA2r	01B		17462/16114/14828
				x			1900/2000	1/3	S06	01A		x9496/ 6924 514, search
					x		1900/2000	1/3	S06	01A		x4756/ 4059 913, search
				x			1902		M01B	14		3625, 4941 153
x							1910		M01B	14	3625, 4440 153	
x							1915		M01B	14		3644, 4454 771
		x					1920	2/4	M14	01A	5464 537	5464 537

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Mar kHz, ID, ...	Apr kHz, ID, ...
	x		x				1925		E11	03	10620 55#	10620 55#
				x			1930	2/4	G06	01A	5442 947	5442 947
	x			x			1940/1950/2000	1	M42C	01A	10467/ 8094/ 6779	
		x		x			1955		S11A	03	4016 37#	4016 37#
				x			2000		E11	03	7377 57#	7377 57#
	x		x				2000		M01	14	5020 463	5020 463
x	x	x	x	x	x	x	2000		M08A/ V02A	18	7554	7554
x		x					2000/2020/2040		E07	01B	x9273/ 7873/ 6873 search	
		x					2000/2020/2040		E07A	01A		8144/ 6944/ 5744 147, search
	x						2000/2020/2040		M12	01B	9176/ 7931/ 6904 257	9176/ 7931/ 6904 257
				x			2000/2100	1/3	S06	01A	x9496/ 6924 514, search	
					x		2000/2100	1/3	S06	01A	x4756/ 4059 913, search	
				x			2002		M01B	14	3625, 4941 153	
					x	x	2005		E11	03	8186 36#	8186 36#
				x			2010		M01B	14		3520, 4585(4940) 582
			x				2010/2030/2050		E07	01B		9387/ 7526/ 5884 358
x							2015		M01B	14	3644, 4454 771	
			x				2030	1/3	E06	01A	5186 891	5186 891
			x				2042		M01B	14	3715, 4570 477	
x		x		x		x	2100		HM01	18	11635	11635
	x		x		x		2100		HM01	18	16180	16180
		x					2100/2120/2140		E07A	01A	5877/ 5277/ 4577 825	
		x					2100/2120/2140		M12	01B		6793/ 5893/ 4593 785
				x			2110		M01B	14	3520, 4585(4940) 582	
			x				2110/2130/2150		E07	01B	7516/ 5836/ 4497 584	
		x			x		2110/2130/2150		M12	01B		11469/10469/ 9169 441
				x			2130	1/3	E06	01A	5197 634	5197 634
x		x		x		x	2200		HM01	18	10715	10715
	x		x		x		2200		HM01	18	17480	17480
		x					2200/2220/2240		M12	01B	5763/ 5163/ 4463 714	
	x		x		x		2300		M08A	18	8135	8135

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Mar kHz, ID, ...	Apr kHz, ID, ...
						x	2300		M14	01A	5240 376	5240 376

M01 FREQUENCY LIST

Frequencies may vary by a few kHz

JAN FEB NOV DEC M01/1 197

DAY	TIME UTC	FREQ kHz
TUE / THU	1800	5320
TUE / THU	2000	4490
SAT	1500	5810
SUN	0700	5465

MAR APRIL SEPT OCT M01/2 463

DAY	TIME UTC	FREQ kHz
TUE / THU	1800	5475
TUE / THU	2000	5020
SAT	1500	6260
SUN	0700	6510

MAY JUNE JULY AUG M01/3 025

DAY	TIME UTC	FREQ kHz
TUE / THU	1800	5280
TUE / THU	2000	4905
SAT	1500	6435
SUN	0700	6780

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jan kHz, ID, ...	Feb kHz, ID, ...	Mar kHz, ID, ...	Apr kHz, ID, ...	Remarks
		x	x				0315		E11	03	5779 **25#**	5779 **25#**	7850 **25#**	5779 **25#**	since 01/14, last log 02/17
x							0450		E11	03	5082 **41#**	5082 **41#**	6304 **41#**	6304 **41#**	since 02/10, last log 12/16 2nd transmission Thu 1730z
	x			x			0455		S11A	03	4828 **32#**	4828 **32#**	5358 **32#**	5358 **32#**	since 09/14, last log 02/17
x			x				0530		E11	03	6849 **64#**	6849 **64#**	7317 **64#**	7317 **64#**	since 05/16, last log 02/17
		x		x			0545		E11	03	**17535** **34#**	**17535** **34#**	15915 **34#**	15915 **34#**	since 06/11, last log 01/17
x				x			0600		E11	03	13046 **18#**	13046 **18#**	**18#**, search	**18#**, search	since 07/15, last log 12/16
	x		x				0645		E11	03	**7840** **51#**	**7840** **51#**	10800 **51#**	10800 **51#**	since 07/09, last log 02/16
	x			x			0710		E11	03	10800 **63#**	**9130** **63#**	10221 **63#**	10221 **63#**	since 02/11, last log 02/17
			x		x		0710		E11	03	12924 **49#**	12924 **49#**	14769 **49#**	14769 **49#**	since 07/15, last log 02/16
x		x					0715		S11A	03	19099 **38#**	19099 **38#**	14940 **38#**	14940 **38#**	since 05/14, last log 01/17
				x		x	0730		E11	03	16112 **35#**	16112 **35#**	15825 35#	15825 35#	since 04/15, last log 02/17
x							0745		E11	03	10213 **26#**	10213 **26#**	10213 **26#**	10213 **26#**	since 03/14, last log 02/17 2nd transmission Thu 1530z
	x		x				0745		E11	03	16112 **33#**	16112 **33#**	14575 **33#**	14575 **33#**	since 10/11, last log 02/17
		x				x	0805		E11	03	10429 **31#**	10429 **31#**	11450 **31#**	11450 **31#**	since 07/14, last log 02/17
x			x				0820		E11	03	7371 **43#**	**11100** **43#**	x7317 **43#, search**	x7317 **43#, search**	since 10/09, last log 02/17
x		x					0900		E11	03	9446 **53#**	9446 **53#**	9399 **53#**	9399 **53#**	since 10/05, last log 02/17
	x			x			0915		S11A	03	7504 **48#**	7504 **48#**	7317 **48#**	7317 **48#**	since 01/10, last log 02/17
		x	x				0930		E11	03	9950 **27#**	9950 **27#**	8803 **27#**	8803 **27#**	since 02/14, last log 02/17
	x			x			1000		E11	03	**8800** **30#**	**8800** **30#**	**30#, search**	**30#, search**	since 11/16, last log 02/17
x			x				1015		S11A	03	12530 **47#**	12530 **47#**	16112 **47#**	16112 **47#**	since 04/10, last log 02/17
	x			x			1020		S11A	03	9610 **42#**	9610 **42#**	9960 **42#**	9960 **42#**	since 02/10, last log 02/17 2nd transmission Thu 1730z
	x						1045		E11	03	12153 **57#**	12153 **57#**	8102 **57#**	8102 **57#**	since 01/12, last log 02/17 2nd transmission Fri 2000z
	x	x					1205		E11	03	7984 **46#**	7984 **46#**	9443 **46#**	9443 **46#**	since 03/10, last log 02/17 2nd transmission Mon 0450z
x				x			1225		E11	03	20167 **52#**	20167 **52#**	20286 **52#**	20286 **52#**	since 05/15, last log 02/17
	x	x					1300		E11	03	18030 **13#**	18030 **13#**	15632 **13#**	15632 **13#**	since 08/13, last log 02/17
			x		x		1300		E11	03	8680 **58#**	8680 **58#**	10302 **58#**	**58#**	since 02/16, last log 02/17
	x				**x**		1345		E11	03	14666 **91#**	14666 **91#**	13046 **91#**	13046 **91#**	since 10/15, last log 02/17
	x		x				1450		E11	03	8196 **44#**	8196 **44#**	10641 **44#**	10641 **44#**	since 02/16, last log 12/16
			x				1530		E11	03	5409 **26#**	5409 **26#**	10330 **26#**	10330 **26#**	since 06/14, last log 02/17 2nd transmission Mon 0745z
		x			x		1540		S11A	03	10728 **56#**	10728 **56#**	10800 **56#**	10800 **56#**	since 03/16, last log 02/17
	x					x	1605		E11	03	4505 **23#**	4505 **23#**	6397 **23#**	6397 **23#**	since 11/15, last log 02/17
		x				x	1625		E11	03	10448 **97#**	10448 **97#**	10448 **97#**	10448 **97#**	since 02/15, last log 02/17
				x		x	1630 **1650?**		E11	03	16335 **92#**	16335 **92#**	13873 **92#**	13873 **92#**	since 05/16, last log 12/16
		x			x		1705		E11	03	9443 **39#**	9443 **39#**	10213 **39#**	10213 **39#**	since 02/14, last log 02/17
		x			x		1730		E11	03	**8545** **40#**	**8545** **40#**	5844 **40#**	5844 **40#**	since 06/16, last log 01/17
			x				1730		E11	03	5082 **41#**	5082 **41#**	9371 **41#**	9371 **41#**	since 03/10, last log 01/17 2nd transmission Mon 0450z
x						x	1745		E11	03	**12924** **24#**	**12924** **24#**	13470 **24#**	13470 **24#**	since 05/16, last log 02/17
	x		x				1925		E11	03	**12067** **55#**	**12067** **55#**	10620 **55#**	10620 **55#**	since 07/15, last log 01/17
		x		x			1955		S11A	03	5815 **37#**	5815 **37#**	4016 **37#**	4016 **37#**	since 02/14, last log 02/17
				x			2000		E11	03	6304 **57#**	6304 **57#**	7377 **57#**	7377 **57#**	since 03/12, last log 01/17 2nd transmission Tue 1045z
					x	x	2005		E11	03	11107 **36#**	11107 **36#**	8186 **36#**	8186 **36#**	since 03/14, last log 02/17 2nd transmission Thu 1530z

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jan kHz, ID, ...	Feb kHz, ID, ...	Mar kHz, ID, ...	Apr kHz, ID, ...	Remarks
x							0800	1/3	G06	01A	5320 329	5320 329	6810 329	6810 329	since 07/10, last log 02/17 repeat at Thu 1300Z
		x					1200	?	G06	01A	**4771** **691**	**4771** **691**	**x5186** **691, search**	**x5186** **691, search**	since 10/14, last log 0/17 yearly changing frequencies + id repeat at 1300Z
		x					1300	?	G06	01A	**4057** **691**	**4057** **691**	**x5436** **691, search**	**x5436** **691, search**	since 10/14, last log 02/17 yearly changing frequencies + id repeat from 1200Z
			x				1300	1/3	G06	01A	4460 329	4460 329	4598 329	4598 329	since 09/11, last log 0/17 repeat from Mon 0800Z
x							1700	1/2	G06	01A	**3529** **691**	**3529** **691**	**x4767** **691, search**	**x4767** **691, search**	since 04/10, last log 02/17 yearly changing frequencies + id repeat at 1800Z
x							1800	1/2	G06	01A	**4478** **691**	**4478** **691**	**x4953** **691, search**	**x4953** **691, search**	since 05/09, last log 0/17 yearly changing frequencies + id repeat from 1700Z
			x				1830	2/4	G06	01A	4519 271	4519 271	5934 579	5934 579	since 05/01, last log 02/17 repeat at Fri 1930Z
				x			1930	2/4	G06	01A	4792 436	4792 436	5442 947	5442 947	since 04/01, last log 02/17 repeat from Thu 1830Z

Current HM01 Schedules

Freq 1	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
5855	0500	0500		0500		0500	
11462			0500		0500		0500
10345	0600	0600		0600		0600	
14375			0600		0600		0600
9330	0700	0700		0700		0700	
13435			0700		0700		0700
9065	0800	0800		0800		0800	
11635			0800		0800		0800
9240	0900	0900		0900		0900	
11462			0900		0900		0900
5855	1000	1000		1000		1000	
9155	1000	1000		1000		1000	
12180			1000		1000		1000
11435	1600	1600	1600	1600	1600	1600	1600
11530	1700	1700	1700	1700	1700	1700	1700
11635	1800	1800	1800	1800	1800	1800	1800
11635	2100	2100		2100		2100	
16180			2100		2100		2100
10715	2200	2200		2200		2200	
17480			2200		2200		2200

M42d Schedules (March 2, 2017) Most schedules repeat the next day using the same times and frequencies if a message was sent, unless noted. Yellow schedules indicate message-only repeats of other schedules, not always present.

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ID
Every	Mon - Fri	**02:00**	16321												41018
		03:00	14881												
New message every day, no repeats the following days. Parallels M42c at 0000/0100z, S06 at 0400z, and M14 at 0500z.															

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ID
1st, 3rd	Monday	**04:00**				?	11414	12064	11049	10748	9436	9354			45079
		04:10				8184	10169	10926	9126	9139	7923	7956			
		04:20				6773	8169	9049	8137	7424	6776	6774			
		05:00	6926	7328	10249								7658	6788	
		05:10	5945	6778	8137								6778	5384	
		05:20	4816	5126	5948								5361	4454	
Repeats messages the following Wednesday at 21:00 or 22:00 (look further down for frequencies) instead of the following day.															

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ID
Every	Tuesday	**16:50**	10383	13374	?	?	?	?	?	?	?	?	?	9313	20501
		17:00	9046	11165	?	?	?	?	?	?	?	?	?	7928	
		17:10	7313	9219	?	?	?	?	?	?	?	?	?	6783	

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ID
Every	Tuesday	**23:00**	8126	9234	10643	11124	13378	14981	14456	12184	11158	10521	8173	8048	40988
		23:10	7643	7819	8051	9248	11096	12203	12188	10189	9175	8044	6836	6789	
		23:20	5148	5361	6924	7946	9129	11148	11084	8116	7919	6941	5269	4038	
Repeats messages the following Friday at 06:00 (look further down for frequencies) instead of the following day.															

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ID
Every	Wednesday	**06:00**	20154	20072	18189	16325	17420	17512	17419	16346	15930	19268	20082	20157	32816 32817
		06:10	18304	18291	16046	14724	15673	15930	15707	14847	13503	17548	18207	18241	
		06:20	16156	16071	14459	12172	13361	13503	13446	12223	11109	15779	16141	16204	

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ID
Every	Wednesday	**08:00**	19928	19654	18431	17496	15993	15906	15844	15938	16324	18546	20314	20838	45075
		08:10	17489	17461	16278	15829	13581	13468	13396	13554	14616	16231	18183	18294	
		08:20	15914	15869	14423	13408	11494	11114	11089	11461	12188	14629	16154	16313	

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ID
2nd, 4th	Wednesday	**08:00**				19138	17488	16330	15795	16319	18178	20018			16404 16405
		08:10				17545	15823	14367	13428	14378	15613	18325			
		08:20				15626	13459	12141	11060	11636	13459	16248			
		09:00	20735	20916	20386								20476	20875	
		09:10	18037	18730	18215								18915	18747	
		09:20	16250	16165	16061								16328	16316	

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ID
2nd, 4th	Wednesday	**09:15**				17537	14638	15629	14948	17434	16146	19476			20492
		09:25				14576	12156	13376	12176	14369	13385	17458			
		09:35				11639	10164	11544	10177	11163	11434	15884			
		10:15	19433	20639	20138								20349	18046	
		10:25	16048	17539	17428								18573	16326	
		10:35	14976	15644	14983								16245	14944	

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ID
Every	Wednesday	**10:00**	19313	19984	20961							22863	20996	20983	49202
		10:10	16348	17489	18553							20674	19163	19139	
		10:20	14494	15621	16264							18594	17428	17463	
		22:00				13983	15838	17476	16031	15618	12184				
		22:10				12209	13984	15843	14369	13374	10168				
		22:20				10203	11167	13488	12193	11081	9286				

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ID
1st, 3rd	Wednesday	**12:30**	16329	18235	18563	18476	17430	16286	16244	17455	18517	19363	18191	17478	53277
		12:40	14826	16144	16314	16168	15814	14517	14649	15923	16309	17476	15963	15838	
		12:50	12166	14519	14723	14643	13487	12179	12206	13388	14464	15873	13436	13387	

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ID
Follows 1st, 3rd Monday	Wednesday	**21:00**				10636	?	12218	?	13548	?	9948			45079
		21:10				8163	?	11164	?	11516	10161	8115			
		21:20				6854	?	9418	?	8145	8184	6826			
		22:00	6828	?	10164								?	?	
		22:10	5129	?	8076								?	?	
		22:20	4534	4989	6769								?	?	
Message-only repeat slot of 1st & 3rd Monday 04:00 or 05:00.															

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ID
Every	Thursday	**13:30**	12186	14983	16054	?	?	?	?	?	?	?	?	?	49237
		13:40	10243	12196	13471	?	?	?	?	?	?	?	?	?	
		13:50	8175	9917	11062	?	?	?	?	?	?	?	?	?	

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ID
		06:00	9068	12214	?	15991	16189	17483	16291	15946	15864	15813	13381	10236	
–	Friday	**06:10**	7853	10226	13419	13546	14408	15888	14519	13561	13483	13389	11018	8093	40988
		06:20	6964	9091	11133	11161	12191	13394	12186	11148	11126	11044	9139	6814	
Message-only repeat slot of Tuesday 23:00.															

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ID
2nd, 4th	Saturday	**08:00**				?	?	?	13468	12223	13384	14986			45114 45115
		08:10				?	?	?	11634	10186	11463	12219			
		08:20				?	?	?	9486	8094	9328	10574			
		09:00	14534	15638	?								15623	13938	
		09:10	12149	13486	?								13469	12136	
		09:20	10483	11128	?								11569	10314	

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ID
2nd, 4th	Saturday	**09:00**				17481	17426	16314	16089	16186	16341	18919			45057
		09:10				15946	15818	14569	14384	14571	14706	16268			
		09:20				13543	13396	12191	12173	12195	12217	14486			
		10:00	20973	20894	18948								20868	20951	
		10:10	18736	18429	16223								18259	18643	
		10:20	16328	16153	14639								16113	16314	

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ID
Every	Saturday	**11:00**	16174	18911	?	?	?	?	?	?	?	?	16236	15623	36882
		11:10	14855	16234	?	?	?	?	?	?	?	?	14419	13854	
		11:20	12214	14426	?	?	?	?	?	?	?	?	12128	11586	

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ID
Every	Saturday	**15:00**	20564	22878	22913							22963	22871	20648	32821
		15:10	18471	20216	20374							20461	20629	18483	
		15:20	16308	18253	18406							18356	18553	16196	
		21:00				20386	18751	18323	17436	16289	15928				
		21:10				18509	16174	15886	15789	14461	13396				
		21:20				16231	14563	13581	13473	12176	11143				

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ID
2nd, 4th	Saturday	**15:30**	20868	22986	22874							20806	22984	20741	32821
		15:40	18689	20363	20634							18441	20719	18368	
		15:50	16156	18669	18751							17463	18348	16343	
		21:30				20589	18663	18521	18246	17429	?				
		21:40				18371	16344	16256	16149	15861	13498				
		21:50				16108	14869	14641	14474	13486	11054				

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ID
Every	Sunday	**15:30**	10378	13464	?	?	?	?	?	?	?	?	?	?	20501
		15:40	9169	11548	?	?	?	?	?	?	?	?	?	?	
		15:50	7419	9323	?	?	?	?	?	?	?	?	?	?	

M42c Schedules (February 24, 2017) Most schedules repeat the next day using the same times and frequencies if a message was sent, unless noted.

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Every	Mon - Fri	**00:00**	17471											
		01:00	14421											
New message every day. Parallels M42d at 0200/0300z, S06 at 0400z, and M14 at 0500z.														

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Every	Monday	**00:25** **01:25**	13452	15803	16023	?	?	16218	14878	16023	15672	14434	12101	10884
		00:35 **01:35**	11106	12195	13555	?	?	?	12185	14373	13892	11439	9215	8157
Doesn’t repeat the following days.														

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1st	Wednesday	**18:40**				12194	14363	14621	14829	15854	13467	11136		
		18:50				10581	12189	12206	12214	13543	11084	9074		
		19:00				8112	10346	10465	10932	11126	9052	7723		
		19:40	7629	8156	10467								8172	7684
		19:50	6783	6844	8094								6791	5326
		20:00	4034	4527	6779								4546	4029
Repeats messages the following Friday (same times and frequencies) instead of the following day.														

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Every	Friday	**22:30 23:30**	17411	20741	20700	?	?	19224	18562	20823	20618	20966	20741	18169
		22:40 23:40	15956	18401	18726	19405	?	17491	16218	18397	18048	18954	18702	15765
Doesn’t repeat the following days.														

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Every	Saturday	**12:00**				18206	17431	17496	16329	17482	17441	19526		
		12:10				16159	15827	15932	14641	15967	15845	17463		
		12:20				14551	13376	13481	12187	13396	13506	15824		
		13:00	18526	19441	18437								20374	20562
		13:10	16142	17456	16305								18351	18194
		13:20	14674	15817	14719								16249	16107

Week	Day	UTC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Every	Saturday	**18:10**	7684	9153	12184	14517	15806	16322	16147	15931	13384	11462	9247	8131
		18:20	5387	7641	10292	12196	13512	14804	14389	13452	11441	9226	7762	6824
		18:30	4572	5251	8054	10413	11131	12207	12214	11093	9184	7829	5216	4471

XPA Sched c and XPA2 [Sched m, r & t] Russian Intelligence Multitone Systems [Radiogramma] Transmission Schedules

Zulu > / Month v	0600/0700 Sched c Wednesday/Saturday USB 10baud			XPA2 Sched m Various times Sun/Tue H 00 H+20 H+40 1300,1500,1800,2000,2100			XPA2 Sched r Various times Fri/Sat H 00 H+20 H+40 1400, 1900, 2100			XPA2 Sched t Tuesday/Friday H 00 H+20 H+40 0700z		
Jan	9108	10908	12208	16138	14438	13438	16167	14663	13923	13472	14772	16272
Feb	11409	13509	14609	16338	14538	13538	18667	17419	16212	14558	15958	17458
Mar	11409	13509	14609	16138	14438	13438	18667	17419	16212	13431	14631	15931
Apr	10359	11559	13559	14538	13538	12138	17462	16114	14828	16347	17447	18747
May	10868	12168	13368	14538	13538	12138	17462	16114	14828	19667	18767	17467
June	11409	13509	14609	14738	13438	12138	16167	14663	13923	19514	18214	16314
July	11409	13509	14609	14538	13538	12138	15967	13884	12217	20173	18763	17473
Aug	10868	12168	13368	14738	13438	12138	16167	14663	13923	20049	18549	17449
Sept	10359	11559	13559	14538	13538	12138	16167	14663	13923	17429	18629	20129
Oct	10868	12168	13368	16338	14538	13538	17462	16114	14828	16284	18184	19584
Nov	11409	13509	14609	18238	16238	14438	17462	16114	14828	14517	16017	17417
Dec	7756	9056	10656	14538	13538	12138	15967	13884	12217	13393	14493	16293

Notes:

XPA c 0600/0700z schedule appears to be robust with reasonably strong signals into UK

XPA2 m Repetitive frequency triplets, appears robust, generally strong into UK
XPA2 r Schedule appears robust; generally very strong signals to UK
XPA2 t Weak in UK
XPA2 p Six day variable schedule, separate document

Bespoke decoding program used to decode: 'Sepal'

Updated 19/12/2016

XPA2 p Russian Intelligence Multitone Systems [Radiogramma] Transmission Schedules

Zulu H+20	Sun			Mon			Tue			Wed			Thu			Fri			Sat		
Jan 0800				15978	14978	14378				15978	14978	14378									
Feb 0800				15983	14783	13883				15983	14783	13883									
Mar 0800				15956	14956	13956				15956	14956	13956									
Apr 1500	16147	14947	14447													16147	14947	14447			
May 1500	16314	15814	14514													16314	15814	14514			
June 1900							15884	14984	14384				15884	14984	14384						
July 1900							15884	14984	14384				15884	14984	14384						
Aug 1900							16314	15814	14514				16314	15814	14514						
Sept 1500	16147	14947	14447													16147	14947	14447			
Oct 1500	16147	14947	14447													16147	14947	14447			
Nov 0800				16073	14973	14373				16073	14973	14373									
Dec 0800				15861	14761	13561				15861	14761	13561									

XPA2 p

Appears to be a robust schedule
Usually sttrong into UK, latest poorconditions affect sendings

08/11/2015

SPECIAL MATTERS

Operation Jallaa: Nil Return

MESSAGES: **'E' Many thanks for your input**

RELEVANT WEBSITES

ENIGMA 2000 Website:	http://www.enigma2000.org.uk
Frequency Details can be downloaded from:	http://www.cvni.net/radio/
More Info on 'oddities' can be found on Brian of Sussex' excellent web pages:	http://www.brogers.dsl.pipex.com/page2.html
Time zone information:	http://www.timeanddate.com/library/abbreviations/timezones/
Encyclopedia of Espionage, Intelligence, and Security	http://www.espionageinfo.com/
EyeSpyMag!	http://www.eyespymag.com