

# ENIGMA 2000 NEWSLETTER



<http://www.enigma2000.org.uk>



## **Russian Diplomatic Facility 16 Kensington Palace Gardens London W8 (circa 1997)**

**Interestingly this is the address given to Christine Keeler by her lover Evgeni Ivanov, a GRU Officer operating under cover as the Soviet assistant naval attaché.**

**Note the antenna mountings. Not easily visible is the VGDSH Caged Dipole so typical of Soviet Bloc establishments, including the Russia Embassy Chancery Bldg 4 KPG today.**

**ISSUE 117  
March 2020**

<http://www.enigma2000.org.uk>

# Editorial

To start, we apologise for the gremlins that affected our last NLin the 'Predictions' section. More haste less speed on my account. Many thanks to Ary who tipped us off, sadly the email went into my spam folder and wasn't see until much later and really obviating my options to correct. *Mea Culpa*.

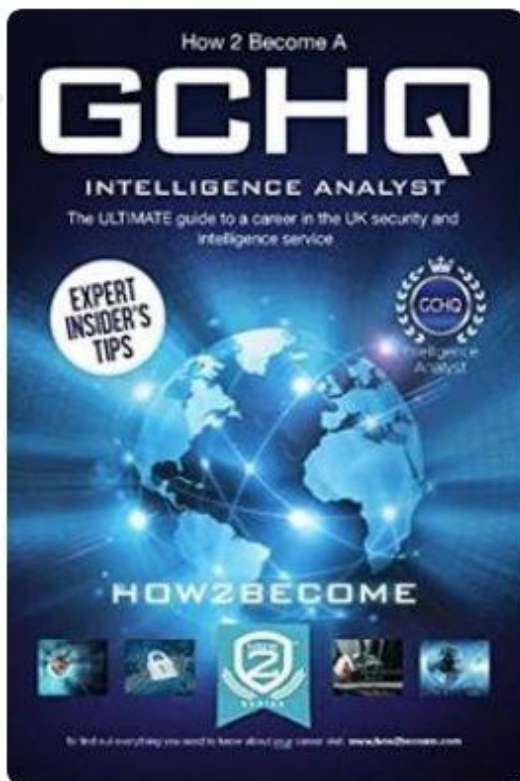
All the number stations have survived into 2020 which suggests that the espionage trade is as buoyant as ever. The E07 English station, after being heard with "no message" transmissions for the first few weeks of the year, at least on those E07 schedules heard in the UK with good signals, perked up a bit with messages with group counts of over 200 in February. Those S06s Russian YL transmissions heard with strong signals in January and February had, in the main, messages consisting of five 5F groups

As before Christmas and the change of year the XPA2 Polytone stations seem to be undergoing frequency changes monthly with the Fri/Sat [previously known as schedule r] offering having either closed down or moved.

There are many polytone schedules; whilst it is not possible for us to track all of them we try to cover the four remaining long running schedules as we can.

Propagation is still worrying but the odd forecast of things changing for the better is encouraging; the continuing rise of noise in the UK due to poor – actually none – policing of the spectrum for cheapo switch mode power supply units, badly made electronic devices for the mass market and sadly broadband distribution. Just goes to show big money organisations do exactly what they want.

# Recommended[?] Reading



## **EPub How to Become a GCHQ INTELLIGENCE ANALYST: The ultimate guide to a career in the UK's security**

[Get Book] How to Become a GCHQ INTELLIGENCE ANALYST: The ultimate guide to a career in the UK's security and intelligence service, GCHQ (How2become) (Ultimate Career Guide) Author how2become, #Kindle #Nonfiction #BookChat #Bibliophile #KindleBargains #Suspense #WomensFiction #Books #BookAddict

[More information](#)

This was sent in by JK [Jakey to his mates]. He's not read it and neither have I. What we'd like to know is, 'Who's the author and what qualifications does this bloke actually have?'

Answers on a postage stamp please,

# 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

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

Variant formats continue to be used on an irregular but frequent basis. Four variant formats have been identified

Standard Format:	197 (R4m) 117 117 30 30 == 93447 .... 20478 == 117 117 30 30 000	(Still the most commonly used format)
Variant Format 1:	197 (R4m) 147/30 147/30 78902 ... 86083 147/30 000	(Not used for some time now)
Variant Format 2:	197 (R4m) 521=30 == 521=30 == 46547 ... 88305 = 521=30 == 521=30 0=0=0	(Not used for some time now)
Variant Format 3:	463 (R4m) 127 30 == == 84820 ... LG 82607 == == 127 127 30 30 000	(Not used at all during Jan/Feb)
Variant Format 4:	197 (R4m) 589 589 = 30 30 == = 40728 .... 58918 == = 589 589 = 30 30 000	(Used six times in Jan/Feb)

### January 2020:

4490	2000z	02 Jan	'197' 528 30 == 76749 ... 07473 ==	Fair, fast. Hesitant at times. Error in grp18 repeat	BR	THU
	2000z	07 Jan	'197' 537 = 30 == <b>90753 ... 00371</b> ==	Good, med-fast. No errors noted	Format 4 BR	TUE
	2000z	09 Jan	'197' 617 30 == 87909 ... 07773 ==	Good, very fast. No errors. Excellent Morse	BR/E.SMITH	THU
	2000z	14 Jan	'197' 373 30 == 02930 ... 38791 ==	Good, fast. Jumbled grps 16-17 & 23-24	BR/E.SMITH	TUE
	2000z	16 Jan	'197' 219 = 30 == 83217 ... 71629 ==	Good, slow. Severe local QRM	Format 4 BR	THU
	2000z	21 Jan	'197' 117 30 == 71040 ... 08045 ==	Good, fast. Grp14 49875 498755	BR	TUE
	2000z	23 Jan	'197' 746 30 == 24035 ... 89067 ==	Good, fast. Several errors noted. Long pause before grp01	BR	THU
	2000z	28 Jan	'197' 411 30 == 64350 ... 92551 ==	Good, slow. DK / GC sent as 411 30 411 30	BR	TUE
5320	1800z	02 Jan	NRH		BR	THU
	1800z	07 Jan	'197' 411 = 30 == <b>16745 ... 23000</b> ==	Fair, med-fast. Sent start as 411=30 411=30 ==	Format 4 BR	TUE
	1800z	09 Jan	'197' 712 30 == 78679 ... 18426 ==	Fair, fast. Two repeat errors noted. Both shortened grps	BR	THU
	1800z	14 Jan	'197' 339 30 == . . . . .	Weak with fading, mostly unreadable	E.SMITH	TUE
	1800z	16 Jan	'197' Extremely weak - No useful copy		BR	THU
	1800z	23 Jan	'197' 221 30 == 39807 ... 77035 ==	Fair, fast. Several errors noted. Intermittent digital QRM	BR	THU
	1800z	28 Jan	'197' 223 30 == 51940 ... 41254 ==	Fair, slow. Some QSB. No errors	BR	TUE
5465	0700z	05 Jan	'197' 281 30 == 98869 ... 41757 ==	Weak/Fair, fast. No errors noted	BR/E.SMITH	SUN
	0700z	12 Jan	'197' 602 = 30 == <b>90753 ... 00371</b> ==	Good/clear. <b>Same msg as 07 Jan 2000z</b>	Format 4 E.SMITH	SUN
	0700z	19 Jan	'197' 981 30 == 98366 ... 12712 ==	Good/Clear	E.SMITH	SUN
	0659z	26 Jan	'197' 387 30 == 31341 ... 44523 ==	Good/Clear	E.SMITH	SUN
5810	1500z	04 Jan	'197' 112 30 == 93090 ... 90534 ==	Fair, fast. One error - Grp14 00206 003206	BR/E.SMITH	SAT
	1500z	11 Jan	'197' 825 30 == <b>16745 ... 23000</b> ==	<b>Same msg as 07 Jan 1800z with changed Decode Key</b>	E.SMITH	SAT
	1500z	18 Jan	'197' 157 30 == 9 . . 22 ... 33087 ==	Good, fast. Long call-up. Sever QRM from pirate BC	BR	SAT
	1500z	25 Jan	'197' 371 30 // 02493 ... 38439 ==	Good under strong STANAG. One long zero at start GC	BR/E.SMITH	SAT

### February 2020:

4490	2000z	04 Feb	'197' 309 30 == 01971... 39211 ==	Standard Format. Fair. MCW	E.SMITH	TUE
	2000z	06 Feb	'197' 139 30 == 75798 ... 79863 ==	Fair. Fast. Several errors noted	BR	THU
	2000z	11 Feb	'197' 397 30 == 13492 ... 92318 ==	Fair/Good, fast. Good Morse. No errors noted	BR	TUE
	2000z	18 Feb	NRH		BR/E.SMITH	THU
	2000z	25 Feb	'197' 235 30 == 93276 ... 80235 ==	Good. Speed variable. Three errors - all corrected	BR	TUE
	2000z	27 Feb	'197' 177 30 == 11048 ... 81741407105 ==	Lots of (intentional?) errors	AB	THU
5320	1800z	04 Feb	'197'	Unable to determine format. Constant, strong fading, mostly unreadable	E.SMITH	TUE
	1800z	06 Feb	'197' 137 30 == 55887 ... 21987 ==	Fair, fast. Several errors noted. Irregular at times	BR	THU
	1800z	11 Feb	'197' 618 30 == . 3492 ... 82106 ==	Weak, fast. Irregular at times	BR	TUE
	1800z	13 Feb	'197' 213 30 == 29149 ... 95887 ==	Good, fast. One error Grp26 611758 61758	BR	THU
	1800z	18 Feb	'197' 127 30 == 71948 ... 27970 ==	Fair, fast. Good Morse. Two noted errors grps11 & 20	BR/E.SMITH	TUE
	1800z	20 Feb	'197' 777 30 92891 ... 53625 ==	Fair, slow. Several errors noted. == omitted at start	BR	THU
	1800z	25 Feb	'197' 421 30 == 19347 ... 82015 ==	Fair, fast. One corrected error in grp04 repeat	AB/BR	TUE
	1800z	27 Feb	'197' 652 30 == 79853 ... 32219 329 ==	Lots of (intentional?) errors	AB	THU
5465	<b>0659z</b>	02 Feb	'197' 417 30 == 98893 ... 57146 ==	Variant Format. Good/Clear.	E.SMITH	SUN
	0700z	09 Feb	'197' 226 30 == 82978 ... 47023 ==	Standard Format. Good/Clear.	E.SMITH	SUN
	0700z	16 Feb	'197' 520 = 30 == 68916 ... 37529 ==	Fair, slow. No errors noted.	Format 4 BR/E.SMITH	SUN
	0700z	23 Feb	'197' 327 30 == 28684 ... 9326 3932 ==	Standard Format. Good, QSB2.	E.SMITH	SUN
5810	1500z	01 Feb	'197' 227 30 == 85262 ... 72401 ==	Strong, becoming weak via SDR Moscow. STANAG QRM	E.SMITH	SAT
	1500z	08 Feb	'197' 979 = 30 == 02xxx ... xx985 ==	Very poor copy under strong STANAG	Format 4 BR/E.SMITH	SAT
	1500z	15 Feb	'197' 517 == 32455 ... 65726 ==	Good, slow. GC missing at start of msg. No errors	BR	SAT
	<b>1450z</b>	22 Feb	'197' 321 30 == 02590 ... 62267 ==	Started early - Usually at 1500z. Several errors. Hand sent	AB/E.SMITH	SAT
	1500z	29 Feb	'197' 430 30 == 12869 ... . . . . . ==	Fair, fast. Excellent Morse. No errors. LG under digi sig	BR	SAT



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

In date/time order. Logs are shown as continuous. In practice there are often pauses between lines – Often quite lengthy pauses.

Firstly, logs from André, F5JBR

5858	0746z	27 Jan	564(x3) 56912 (x2) 564(x3) 55886 (x2)	F5JBR	MON
5173	0800z	27 Jan	564 (x3) 24262 (x2)	F5JBR	MON
6769	0902z	27 Jan	598 (x3) 30482 (x2) 598 (x3) 30482 (x2) 598 (x3) 10482 (x2) 598 12274 (x2)	F5JBR	MON
5744	1612z	28 Jan	273 (x3) 625 09 (x2) 273 (x3) 628 08 (x2) 273 (x3) 632 88 (x2)	F5JBR	TUE
3830	1355z	29 Jan	903 (x3) 957 87 (x2) 903 (x3) 957 87 (x2) 111 111 111 000	F5JBR	WED
4884	0905z	05 Feb	714 (x3) 66898 (x2) 333 111 333 000 111 999 151 10 = 65987 64451 45210 45878 65896 64412 45882 45210 45211 78543 = 151 10 111 000	F5JBR	WED
4578	0908z (IP)	05 Feb	.... In Progress 91343 93677 68575 13957 41671 05305 61094 56526 56647 83891 04021/013622 000 111 333 05/21505 000 111 333 09/ 69975 000 111 000 111 333 11/47789 000 111 333 13/93677 000 111 000	F5JBR	WED
			<i>NOTE: 111 333 09/ 69975 000 and 111 000 and 111 333 11/47789 000 : message group repetitions ???</i>		
4589	0931z	05 Feb	460 (x3) 35979 (x2) 460 (x3) 35049 (x2) 460 (x3) 35202 (x2) 460 (x3) 35322 (x2)	F5JBR	WED

The following logs from Edd, E.SMITH;

**M01a Training**

4146	0816 (IP) – 0817z	15 Jan	832 (x3) 83291 (x2) (Rx2) *Stopped sending group on nine during second repeat 111 0 0 0 Good/Clear. Machine sent. Monitored until 1524z, no more activity.	E.SMITH	WED
4544	1105 (IP) - 1108z	15 Jan	111 333 18 111 999 856 10 / xxxxx xx860 54023 73880 58969 73841 63834 61556 63795 99637 / 856 10 0 0 0 Mostly clear, some fading. Machine sent. Monitored until 1530z, no more activity.	E.SMITH	WED
4418	1522 (IP) - 1531z	15 Jan	333 31998 31998 (x6) 333 31998 31998 (x6) 333 32538 32538 (x6) 333 33138 33138 (x2) *Finished monitoring on third repeat. Good/Clear. Slowly machine sent.	E.SMITH	WED
4987	0945 (IP) – 1026z	16 Jan	x5389 111 999 85810 = 10 = 98746 5 85810 = 98746 54651 68174 35719 65431 51742 63272 14965 34165 86745 = 858 10 111 = 35719 65431 51742 63272 111 0 0 0	E.SMITH	THU
	(0952z ... 1014z)		31 351 351 63893 63893 351 (x3) 63893 351 (x3) 63893 (x2) (Rx2) 3 51 351 351 63893 63893 351 111 999 542 10 = 87004 17984 56540 89704 15741 58708 41897 4 111 = 542 10 = 87004 17984 56540 89704 15741 58708 41897 41049 60106 13987 = 542 10 333		

111 = 542 10  
 111 = 542 10  
 111 0 0 0  
 Good/Clear. Slowly machine sent. Monitored until 1507z, no more activity.

5306 0947 (IP) - 1000z 16 Jan 111 (x2) (SDR Silec, Poland) E.SMITH THU  
 0 3 0 1  
 783 783 783  
 111 999 0  
 651 30 = 02982 36354 43603 29888 15999 43252 05583 47579 80753 76378  
 69904 99568 69879 57406 32849 29328 16923 88963 91713 17558  
 62025 76920 53596 64409 64248 78175 53685 03349 36273 89892 = 651 30  
 111 999  
 784 30 = 51858 58063 99520 02036 19408 91495 13175 02607 60214 07960  
 68634 77772 57206 46439 98005 81972 94472 06359 06289 15918  
 43125 45341 45469 93349 10127 29116 06543 59319 90577 xxxx4 = 784 30 0 0 0  
 111 0 0 0

Mostly clear, some fading. Hand sent (italics) and machine sent. Each hand sent section before the messages had pauses of a minute or more in-between. The hand sending with M01a is always very bad e.g. digits will sometimes sound like two letters. The machine sent is manually keyed. Monitored until 1507z, no more activity.

The ellipses are for a pause in transmission of around a minute, give or take a few seconds.

4989 1027 (IP) - 1029z 28 Jan 316 (x3) 67362 (x2) (SDR Silec, Poland) E.SMITH TUE  
 316 (x3) 6736  
 ...  
 111 0 0 0

Good/Clear. Typed manually into a machine with a character speed of approximately 13 wpm.

Finished monitoring this frequency at 1030z, and restarted at 1241z.

4989 1313 - 1319z 28 Jan 316 (x3) 67279 (x2) (SDR Silec, Poland) E.SMITH TUE  
 316 (x3) 672  
 ...  
 111 999  
 619 10 = 47035 47684 32168 04716 57408 16874 09865 74061 03549 80416 = 619 10  
 111 = 47684  
 111 0 0 0

Good/Clear. Typed manually into a machine with a character speed of approximately 13 wpm. Finished monitoring at 1655z, there was no more Morse traffic however there was a RTTY transmission between 1456z - 1503z, I have no idea if it was related or not.

4321 0916 (IP) - 0923z 29 Jan 61121 61121 (SDR Silec, Poland) E.SMITH WED  
 267 (x3) 61121 (x2) (Rx5)  
 267 (x3) 61041  
 267 (x3) 61041 (x2) (Rx6)

Good/Clear. Typed manually into a machine with a character speed of of approximately 19 wpm. Frequency monitored until 1350z with no more activity.

**M01b**

**Missing Modulation**

On Thursday 30 January & Monday 03 February, good carriers were heard on both parallel frequencies – but no modulation was transmitted. The 30 January transmission was also monitored by Ary, AB, via a Russian SDR who was able to confirm that no modulation was present. This could have been either a technical problem or operator error.

**January 2020:**

2405//3180	2110z	31 Jan	'610' 712 31 = 04590 89706 ...	Fair//Strong	MCW	AB/BR	FRI
2435//3520	<b>1914z</b> 1910z	06 Jan	'853' 712 31 = 04590 89706 ...	<b>Late start</b> Fair//Fair	MCW	BR	MON
		13 Jan	'853' 712 31 = 04590 89706 ...	Weak//Good	MCW	BR	MON
2470//3545	1932 – 1949z 1932z	02 Jan	'910' 712 31 = 04590 ... 79437 000	Fair//Good	MCW	BR	THU
		30 Jan	Good, strong carriers both freqs – No modulation			AB/BR	THU
2485//3160	2040z	30 Jan	Good, strong carriers both freqs – No modulation			AB/BR	THU

**February 2020:**

2405//3180	2110z	14 Feb	'610' 591 32 = 50912 70920....	NRH//Strong		BR	FRI
2425//3205	2015z 2015z 2015z	03 Feb	Good, strong carriers both freqs – No modulation			BR	MON
		17 Feb	'375' 591 32 = 50912 70920....	XJT//Strong		BR	MON
		24 Feb	'375' 591 32 = 50912 70920....	XJT//Strong		BR	MON
2435//3520	1910z 1910z	03 Feb	Good, strong carriers both freqs – No modulation			BR	MON
		17 Feb	'853' 591 32 = 50912 70920....	Fair-Good//Strong		BR	MON
2470//3545	1932 – 1949z 1932z	06 Feb	'910' 591 32 = 50912 ... 77018 000	Fair//Good		BR	THU
		20 Feb	'910' 591 32 = 50912 70920....	NRH//Strong		BR	THU

2485//3160	2042z	06 Feb	'382' 591 32 = 50912 70920....	Fair//Good	BR	THU
	2042z	13 Feb	'382' 591 32 = 50912 70920....	Fair//Strong	BR	THU
	2042z	20 Feb	'382' 591 32 = 50912 70920....	Weak-Fair//Strong	BR	THU
2655//3195	2002z	07 Feb	'866' 591 32 = 50912 70920....	Good//Strong	BR	FRI
	2002z	21 Feb	'866' 591 32 = 50912 70920....	Fair//Good	BR	FRI

<b>M01b 2470//3545kHz 1932z 02 January 2020</b>						
910 (R4m) 712 712 31 31 ==						
04590 89706 14348 30194 73700 11891 43550 07641 38556 47903						
28361 55934 24799 88028 81367 52035 01061 14765 98597 40370						
74754 03650 90055 75388 85070 50764 01270 48626 21891 90085						
79437 ==						
712 712 31 31 000						
<i>Courtesy BR</i>						

<b>M01b 2470//3545kHz 1932z 06 February 2020</b>						
910 (R4m) 591 591 32 32 ==						
50912 70920 02196 50561 13635 66109 48087 91369 44404 42916						
64771 68889 55964 43971 24293 06140 86744 69769 37409 56019						
09249 82878 73085 21950 20784 98317 14265 12370 48701 20912						
11825 77018 ==						
591 591 32 32 000						
<i>Courtesy BR</i>						

**M08a** XVIII ICW / CW, some MCW

No Reports

**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.

**Asiatic M12 Scheds**

17472/16272/14972	0100/20/40z	30 Jan	429 1	(Via SDR Japan)	HFD	THU
-------------------	-------------	--------	-------	-----------------	-----	-----

**European M12 Logs**

As expected, M12 had the usual extended New Year's break with core schedules missing & all others sending null messages, with a return to normal service from Sunday, 12 January.

Perhaps coincidence, but all transmissions logged from Thursday 20 February onwards were **all null messages**. Most unusual!

Edd, (E,SMITH), reports an interesting observation on the late night M12 transmissions;

I left a recorder on overnight, test tones were sent preceding the transmissions by almost three hours on 5778/6788/8178kHz. I've noticed the same on most of these night M12 transmissions, the test tones being sent on all three frequencies before a null message, hours before their transmission. (E.SMITH)

**January 2020:** New scheds in bold type

5778/6778/8178	2200/20/40z	03 Jan	771 000			BR	FRI
	2200/20/40z	04 Jan	771 000	Good/Clear	(SDR Enschede)	E.SMITH	SAT
	2200/20/40z	10 Jan	771 000	Good/Clear	(SDR Enschede)	E.SMITH/HFD	FRI
	2200/20/40z	11 Jan	771 000	Good/Clear	(SDR Enschede)	E.SMITH	SAT
	2200/20/40z	17 Jan	771 000	Good/Clear	(SDR Enschede)	E.SMITH	FRI
	2200/20/40z	24 Jan	771 000	Good/Clear	(SDR Enschede)	E.SMITH	FRI
	2200/20/40z	31 Jan	771 1 (147 67) 18369 72918....			BR	FRI
<b>6786</b>	<b>0050z</b>	<b>28 Jan</b>	<b>874 000</b>	<b>First txm probably at 0030z</b>		AB	TUE
<b>5886/6786/---</b>	<b>0030/0050/0110z</b>	<b>31 Jan</b>	<b>874 000</b>			AB	FRI
<b>6786/7986/---</b>	<b>0600/20/40z</b>	<b>05 Jan</b>	<b>792 000</b>	Weak with fading	(SDR Enschede)	E.SMITH	SUN
	0600/20/40z	07 Jan	792 000	Good/Clear	(SDR Enschede)	E.SMITH/HFD	TUE
	0600/20/40z	12 Jan	792 1 (6506 88) 71491 69262 ... 97319 53413 000 000	Good/Clear		E.SMITH	SUN
	0600/20/40z	14 Jan	792 1 (401 156) 25426 51360 ... 43270 56576 000 000	Good/Clear		E.SMITH	TUE
	0600/20/40z	19 Jan	792 1 (401 156) 25426 51360 ... 43270 56576 000 000	Good/Clear		E.SMITH	SUN
	0600/20/40z	21 Jan	792 1 (7582 112) 28047 88206 ... 08912 09404 000 000	Strong OTHR		E.SMITH	TUE
	0600/20/40z	26 Jan	792 1 (7582 112) 28047 88206 ... 08912 09404 000 000	Good/Clear		E.SMITH	SUN
	0600/20/40z	28 Jan	792 1 (441 82) 45769 58737 ... 51818 65864 000 000	Good/Clear		E.SMITH	TUE
6864/5764/---	2050/2110/2130z	01 Jan	875 000			BR	WED
	2050/2110/2130z	03 Jan	875 000			HFD	FRI
	2050/2110/2130z	08 Jan	875 000			BR	WED
	2050/2110/2130z	10 Jan	875 000	Good/Clear	(SDR Enschede)	E.SMITH	FRI
	2050/2110/2130z	15 Jan	875 000	Good/Clear	(SDR Enschede)	E.SMITH	WED
	2050/2110/2130z	17 Jan	875 000	Good/Clear	(SDR Enschede)	E.SMITH	FRI
	2050/2110/2130z	22 Jan	875 000	Good/Clear.	(SDR Enschede)	E.SMITH	WED
	2050/2110/2130z	24 Jan	875 000	Fair/Mostly readable, some fading		E.SMITH	FRI
	2050/2110/2130z	29 Jan	875 000	Good/Clear		E.SMITH	WED
	2050/2110/2130z	31 Jan	875 000			BR	FRI

6937/5737/---	2210/30/50z	02 Jan	975 000					BR	THU
	2210/30/50z	06 Jan	975 000					HFD	MON
	2210/30/50z	09 Jan	975 000		Good/Clear	(SDR Enschede)		E.SMITH	THU
	2210/30/50z	13 Jan	975 000		Good/Clear	(SDR Enschede)		E.SMITH	MON
	2210/30/50z	16 Jan	975 000		Good/Clear	(SDR Enschede)		E.SMITH	THU
	2210/30/50z	20 Jan	975 1 (187 84)	36467 18445 ...	82859 25693 000 000	Good/Clear		E.SMITH	MON
	2210/30/50z	23 Jan	975 1 (187 84)	36467 18445 ...	82859 25693 000 000	Good/Clear		E.SMITH	THU
	2110/30/50z	27 Jan	975 000		Good/Clear	(SDR Enschede)		E.SMITH	MON
	2210/30/50z	30 Jan	975 000		Good/Clear.	(SDR Enschede)		E.SMITH	THU
8047/6802/5788	1800/20/40z	13 Jan	463 1 (5441 99)	94189 19437....				BR	MON
	2000/20/40z	18 Jan	463 1 (7187 93)	16095 82748 ...	75901 52006 000 000	Poor copy		E.SMITH	SAT
<b>9317/10484/11552</b>	<b>0530/0550/0610z</b>	<b>14 Jan</b>	<b>135 1 (5755 112)</b>	<b>93619 77656 ...</b>	<b>28078 09831 000 000</b>	Good/Clear		E.SMITH	TUE
	0530/0550/0610z	21 Jan	135 1 (8986 112)	33352 51726 ...	28892 67461 000 000	Good/Clear		E.SMITH	TUE
	0530/0550/0610z	28 Jan	135 1 (8588 108)	48259 81863 ...	72139 43955 000 000	Mostly Weak		E.SMITH	TU
10547/9047/7547	1400/20/40z	01 Jan	505 000					BR	WED
	1400/20/40z	06 Jan	505 000		Fair to weak	(SDR Enschede)		E.SMITH/HFD	MON
	1400/20/40z	08 Jan	505 000		Good/Clear	(SDR Enschede)		E.SMITH	WED
	1400/20/40z	13 Jan	505 1 (424 144)	39000 64142 ...	94427 21955 000 000	Fair, fading		E.SMITH	MON
	1400/20/40z	15 Jan	505 1 (424 144)	39000 64142 ...	94427 21955 000 000	Some fading		E.SMITH	WED
	1400/20/40z	20 Jan	505 1 (284 39)	74699 61769 ...	27219 91774 000 000	Good/Clear		E.SMITH	MON
	1400/20/40z	22 Jan	505 1 (284 39)	74699 61769 ...	27219 91774 000 000			Gert	WED
	1400/20/40z	27 Jan	505 1 (284 39)	74699 61769 ...	27219 91774 000 000	Good/Clear		E.SMITH	MON
	1400/20/40z	29 Jan	505 1 (284 39)	74699 61769 ...	27219 91774 000 000	Good/Clear		E.SMITH	WED
<b>11439/10339/9239</b>	<b>0110/30/50z</b>	<b>16 Jan</b>	<b>432 1 (9581 108)</b>	<b>52423 45118 ...</b>	<b>03673 23089 000 000</b>	Good/Clear		E.SMITH	THU
	<b>0110/30/50z</b>	<b>19 Jan</b>	<b>432 1 (9581 108)</b>	<b>52423 45118 ...</b>	<b>03673 23089 000 000</b>	Weak, poor copy		E.SMITH	SUN
13932/13532/12132	1310/30/50z	01 Jan	951 000					HFD	WED
13932	1310z	03 Jan	951 000					Gert	FRI
	1310/30/50z	08 Jan	951 000		Good/Clear	(SDR Enschede)		E.SMITH	WED
	1310/30/50z	10 Jan	951 000		Good/Clear	(SDR Enschede)		E.SMITH	FRI
13532	1330z	15 Jan	951 000		Good/Clear	(SDR Enschede)		E.SMITH	WED
	1310/30/50z	17 Jan	951 000		Good/Clear	(SDR Enschede)		E.SMITH	FRI
	1310/30/50z	22 Jan	951 000		Strong over QRM/OTHR			E.SMITH	WED
	1310/30/50z	31 Jan	951 1 (423 56)	62259 58559 ...	55664 38498 000 000	Good/Clear		E.SMITH	FRI
	1310/30/50z	31 Jan	951 1 (423 56)	62259 58559 ...	55664 38498 000 000			Gert	FRI
17457	0822z	01 Jan	Weak/Unreadable. No message.			(SDR Enschede)		E.SMITH	SUN
<b>16357/17457/18357</b>	<b>0800/20/40z</b>	<b>05 Jan</b>	<b>343 000</b>		Fair to weak	(SDR Enschede)		E.SMITH	SUN
	0800/20/40z	08 Jan	343 000		Fair to weak	(SDR Enschede)		E.SMITH	WED
	0800/20/40z	12 Jan	343 000		Fair	(SDR Enschede)		E.SMITH	SUN
17457	0820z	15 Jan	343 000		Good/Clear	(SDR Enschede)		E.SMITH	WED
	0800/20/40z	19 Jan	343 000		Good/Clear	(SDR Enschede)		E.SMITH	SUN
	0800/20/40z	22 Jan	343 1 ... 000 000		Weak/Unreadable			E.SMITH	WED
	0800/20/40z	26 Jan	343 1 (465 123)	90569 86073 ...	92816 84542 000 000	Starting weak		E.SMITH	SUN
	0800/20/40z	29 Jan	343 000		Good/Clear	(SDR Enschede)		E.SMITH	WED
<b>February 2020:</b>									
5734/6834/7634	0030/0050/0110z	11 Feb	786 1 (334 77)	05601 69499 ...	63483 25953 000 000	Fair		E.SMITH	TUE
	0030/0050/0110z	14 Feb	786 1 (334 77)	05601 69499 ...	63483 25953 000 000	Good		E.SMITH	FRI
	0030/0050/0110z	18 Feb	786 000			Good/Clear		E.SMITH	TUE
	0030/0050/0110z	21 Feb	786 000			Good/Clear		E.SMITH	FRI
5832/6832/7732	2200/20/40z	01 Feb	887 1 (147 67)	18369 72918 ...	45216 47152 000 000	Good/Clear		E.SMITH/HFD	SAT
	2200/20/40z	07 Feb	887 1 (147 67)	18369 72918....	45216 47152 000 000			BR/E.SMITH	FRI
	2200/20/40z	15 Feb	887 000					BR/E.SMITH	SAT
	2200/20/40z	21 Feb	887 000					BR/E.SMITH	FRI
	2200/20/40z	22 Feb	887 000					BR	SAT
6937/5737/4537	2210/30/50z	03 Feb	975 000					E.SMITH	MON
	2210/30/50z	10 Feb	975 1 (509 75)	72286 82124....	33487 64681 000 000			BR/E.SMITH	MON
	2210/30/50z	13 Feb	975 1 (509 75)	72286 82124 ...	33487 64681 000 000	Good/Clear		E.SMITH	THU
	2210/30/50z	17 Feb	975 000					BR/E.SMITH	MON
	2210/30/50z	20 Feb	975 000					BR	THU
	2210/30/50z	24 Feb	975 000					BR	MON
	2210/30/50z	27 Feb	975 000					BR	THU
6941/5841/---	2050/2110/2130z	05 Feb	986 000					E.SMITH/HFD	WED
	2050/2110/2130z	07 Feb	986 000					BR/E.SMITH	FRI
	2050/2110/2130z	12 Feb	986 000					BR/E.SMITH	WED
	2050/2110/2130z	14 Feb	986 000					BR/E.SMITH	FRI
	2050/2110/2130z	19 Feb	986 000					BR	WED
	2050/2110/2130z	21 Feb	986 000			Under unknown QRM		E.SMITH	FRI
	2050/2110/2130z	26 Feb	986 000					BR	WED
<b>7546/9146/10646</b>	<b>0600/20/40z</b>	<b>02 Feb</b>	<b>516 1 (441 82)</b>	<b>45769 58737 ...</b>	<b>51818 65864 000 000</b>	Good/Clear		E.SMITH	SUN
	<b>0600/20/40z</b>	<b>04 Feb</b>	<b>516 000</b>			Clear over QRM/RTTY		E.SMITH	TUE
	0600/20/40z	09 Feb	516 000			Strong/Clear over QRM/RTTY		E.SMITH	SUN

	0600/20/40z	11 Feb	516 1 (381 131)	45226 17677 ... 47109 85672 000 000	Clear then fading	E.SMITH	TUE
	0600/20/40z	16 Feb	516 1 (381 131)	45226 17677 ... 47109 85672 000 000	Clear then fading	E.SMITH	SUN
	0600/20/40z	18 Feb	516 1 (333 96)	99093 97187 ... 00008 05647 000 000	Strong with fading	E.SMITH	TUE
	0600/20/40z	23 Feb	516 1 (333 96)	99093 97187 ... 00008 05647 000 000	Good/Clear	E.SMITH	SUN
9317/10484/11554	0530/0550/0610z	04 Feb	135 1 (4047 107)	95976 34700 ... 91462 18829 000 000	Weak	E.SMITH	TUE
	0530/0550/0610z	11 Feb	135 1 (1311 104)	45283 78149 ... 56822 96981 000 000	Poor	E.SMITH	TUE
	0530/0550/0610z	18 Feb	135 1 (9563 109)	99825 63540 ... 05326 48593 000 000	Good	E.SMITH	TUE
11435/10598/9327	1600/20/40z	14 Feb	938 1 (4563 62)	... 000 000	QSA2 Unable to read message	E.SMITH	FRI
	1600/20/40z	21 Feb	938 1 (5341 76)	73381 91945 ... 59020 92849 000 000	Poor/Fading	E.SMITH	FRI
<b>11464/10464/9164</b>	<b>0110/0130/0150z</b>	<b>06 Feb</b>	<b>441 000</b>		Very weak (SDR Enschede)	E.SMITH	THU
	0110/0130/0150z	13 Feb	441 1 (2073 76)	46337 38589 ... 04628 54391 000 000	Weak	E.SMITH	THU
	0110/0130/0150z	16 Feb	441 1 (2073 76)	46337 38589 ... 04628 54391 000 000	11464kHz NRH	E.SMITH	SUN
12162/11566/10711	1710/30/50z	12 Feb	546 1 (7066 107)	48162 64103 ... 96345 97605 000 000	Weak	E.SMITH	WED
13362/11562/10362	1400/20/40z	03 Feb	353 000			E.SMITH	MON
	1400/20/40z	05 Feb	353 000			E.SMITH/HFD	WED
	1400/20/40z	10 Feb	353 1 (464 120)	26915 13307 ... 24361 50463 000 000	Good, QSB2	E.SMITH	MON
	1400/20/40z	12 Feb	353 1 (464 120)	26915 13307.... 24361 50463 000 000		BR/E.SMITH	WED
	1400/20/40z	17 Feb	353 1 (464 120)	26915 13307.... 24361 50463 000 000		BR/E.SMITH	MON
	1400/20/40z	19 Feb	353 1 (464 120)	26915 13307....		BR	WED
	1400/20/40z	24 Feb	353 000			BR	MON
	1400/20/40z	26 Feb	353 000			BR	WED
14377/13461/12114	2000/20/40z	13 Feb	TX with message: QSA1 with fading/Mostly inaudible			E.SMITH	THU
	2000/20/40z	20 Feb	Message sent. QSA1/Unable to read			E.SMITH	THU
14489/14389/12189	1310/30/50z	05 Feb	441 1 (423 56)	62259 58559 ... 55664 38498 000 000		E.SMITH/HFD	WED
	1310/30/50z	07 Feb	441 1 (423 56)	62259 58559....55664 38498 000 000		BR/E.SMITH	FRI
	1310/30/50z	12 Feb	441 1 (149 20)	59817 45962....65585 58375 000 000		BR/E.SMITH	WED
	1310/30/50z	19 Feb	441 1 (149 20)	59817 45962 ... 65585 58375 000 000		E.SMITH/Gert	WED
	1310/30/50z	26 Feb	441 000			BR	WED
	1310/30/50z	28 Feb	441 000			Gert	FRI
<b>17415/18215/---</b>	<b>0800/20/40z</b>	<b>02 Feb</b>	<b>427 000</b>		Fair (SDR Enschede)	E.SMITH	SUN
	0800/20/40z	05 Feb	427 000		Fair (SDR Enschede)	E.SMITH	WED
	0800/20/40z	09 Feb	427 000		Weak (SDR Enschede)	E.SMITH	SUN
	0800/20/40z	12 Feb	427 1 (5761 93)	60163 17870 ... 29502 81069 000 000	Weak	E.SMITH	WED
	0800/20/40z	16 Feb	427 1 (5761 93)	60163 66962 ... 29502 81069 000 000	Fair	E.SMITH	SUN
	0800/20/40z	19 Feb	427 000		Poor	E.SMITH	WED
	0800/20/40z	23 Feb	427 000		Fair	E.SMITH	WED

**M12 10547/9047/7547kHz 1400/1420/1440z 20 Jan 2020**

505 505 505 1 (R2m) 284 39 284 39

74699 61769 33272 15304 48450 70923 19104 46755 66953 44474  
86646 52365 40531 80595 94408 94162 80795 00320 92994 73776  
66125 62808 33980 96436 60444 04573 21135 88872 34169 98892  
79763 34204 24408 22901 21408 51161 65903 27219 91774  
000 000

*Courtesy Gert & E.SMITH*

**M12 13932/13532/12132kHz 1310/1330/1350z 31 Jan 2020**

951 951 951 1 (R2m) 423 56 423 56

62259 58559 19870 27606 63720 02491 02081 67630 19590 69029  
33141 49127 71518 96923 42735 28257 02326 71918 08127 12919  
42210 63761 75012 17785 12366 90022 44411 35110 91389 78091  
60655 31632 77257 88669 89315 51365 93187 73504 45395 37826  
25235 31331 93281 24869 78422 68823 64069 69847 12470 88089  
22818 04220 26779 27809 55664 38498  
000 000

*Courtesy Gert & E.SMITH*

**M14 IA MCW / ICW Short 0**

**January 2020:**

4480	2000z	03 Jan	735 00000		(SDR Poland)	ER	FRI
4636	1820z	28 Jan	186 (617 32) = 45384 ... 94527 == 00000	S9+30 Signal	(SDR Poland)	ER	TUE
4650	0900z	04 Jan	523 (421 33) = 75683 ... 87654 == 00000		(SDR Poland)	ER	SAT
	0900z	11 Jan	523 (623 33) = 09465 ... 09786 == 00000	Only 28 grps sent	(SDR Sweden)	ER	SAT
	0900z	18 Jan	523 (137 32) = 13723 ... 77944 == 00000	Weak	(SDR Poland)	ER	SAT
4730	0800z	04 Jan	523 (421 33) = 75683 ... 87654 == 00000		(SDR Poland)	ER	SAT
	0800z	11 Jan	523 (623 33) = 09465 ... 09786 == 00000	Only 28 grps sent	(SDR Sweden)	ER	SAT
	0800z	18 Jan	523 (137 32) = 13723 ... 77944 == 00000	Weak	(SDR Poland)	ER	SAT
	0800z	25 Jan	523 (523 32) = 58292 ... 31882 == 00000	Grp01 rpt as 58192	(SDR Poland)	ER	SAT
4761	1920z	29 Jan	748 (617 32) = 45384 ... 94527 == 00000			ER/HFD	WED
4813	1900z	03 Jan	735 00000		(SDR Poland)	ER	FRI
5388	1600z	08 Jan	654 00000			HFD	WED



9463	1344z	21 Jan	801 (465 23) = 75135 21751 ..... 14733 04380 = 647 29 00000	Fair/Readable	CW	E.SMITH	TUE
17485	0930z	10 Jan	617 00000	(SDR Sweden)		ER	FRI
<b>February 2020:</b>							
4626	1820z	25 Feb	186 (991 32) = 12381 99102 ... 90931 22890 991 991 32 32 == 00000	MCW		AB	TUE
4650	0900z	01 Feb	523 (501 33) = 02031 ... 50560 == 00000	No odd groups/errors	(SDR Poland)	ER	SAT
	0900z	08 Feb	523 (501 33) = 02031 ... 50560 == 00000	No odd groups/errors	(SDR Poland)	ER	SAT
	0900z	15 Feb	523 (235 33) = 75683 ... 87654 == 00000	No odd groups/errors	(SDR Poland)	ER	SAT
	0900z	22 Feb	523 (421 33) = 75693 ... 87654 == 00000		(SDR Poland)	ER	SAT
	0900z	29 Feb	523 (421 33) = 75693 ... 87654 == 00000		(SDR Sweden)	ER	SAT
4730	0800z	01 Feb	523 (501 33) = 02031 ... 50560 == 00000	No odd groups/errors	(SDR Poland)	ER	SAT
	0800z	08 Feb	523 (501 33) = 02031 ... 50560 == 00000	No odd groups/errors	(SDR Poland)	ER	SAT
	0800z	15 Feb	523 (235 33) = 75683 ... 87654 == 00000	No odd groups/errors	(SDR Poland)	ER	SAT
	0800z	22 Feb	523 (421 33) = 75693 ... 87654 == 00000		(SDR Poland)	ER	SAT
	0800z	29 Feb	Unreadable weak signal		(SDR Poland)	ER	SAT
4760	0000z	17 Feb	617 (235 33) = 75683 65412 ... 78965 87654 = 235 33 33 00000			AB	MON
4763	1920z	12 Feb	748 (235 33) = 75683 65412 ... 78965 87654 = 235 33 00000	(SDR Poland)		ER	WED
4893	2300z	16 Feb	617 (235 33) = 75683 65412 ... 78965 87654 = 235 33 33 00000			AB	SUN
15994	0930z	11 Feb	617 (534 128) = 47082 99747 ... 49169 14439 = 534 128 00000	Good		E.SMITH	TUE
	0930z	26 Feb	617 (534 128) = 47082 99747 ... 49169 14439 = 534 128 00000			ER/E.SMITH	WED
17458	0930z	10 Feb	617 (534 128) = 47082 99747 ... 49169 14439 = 534 128 00000			E.SMITH/RNGB	MON
	0930z	25 Feb	617 (534 128) = 47082 99747 ... 49169 14439 = 534 128 00000	Good/Clear		E.SMITH	TUE

<b>M14 4730kHz 0800z 04 January 2020</b>							
523 (R4m) 421 421 33 33 ==							
75683 65412 89032 79231 90234 65232 98745 13579 24680 14790							
08642 97531 12789 78523 13457 46257 39456 12568 67345 97123							
39045 58596 25790 21349 64321 79658 12457 23568 80123 06745							
69743 78965 87654 ==							
421 421 33 33 00000							
<i>Courtesy ER</i>							

<b>M14 4626kHz 1820z 25 February 2020</b>							
186 (R4m) 991 991 32 32 ==							
12381 99102 44810 09182 44614 98011 36172 88912 94311 89110							
47712 89122 04203 48192 99031 88721 99042 49108 28119 94011							
55617 89445 02516 89102 44812 89901 44718 23819 13902 89881							
90931 22890 ==							
991 991 32 32 00000							
<i>Courtesy AB</i>							

**M23** O ICW

5345	1630 – 1640z	11 Feb	111 (R10)	Found by JPL on Monday, 10 Feb.	AB	TUE
	1630 – 1640z	12 Feb	111 (R10)		AB	WED
	1630 – 1640z	14 Feb	111 (R10)		AB	FRI
	1630 – 1640z	16 Feb	111 (R10)		AB	SUN
	1630 – 1640z	17 Feb	111 (R10)		AB	MON
	1630 – 1640z	18 Feb	111 (R10)		AB	TUE
	1630 – 1640z	19 Feb	111 (R10)		AB	WED
	1630 – 1640z	20 Feb	111 (R10)		AB	THU
	1630 – 1640z	21 Feb	111 (R10)		AB	FRI
5345	1630 - 1640z	24 Feb	111 (R10)		Strong BR	MON

**Morse Stations - Not Number Related**

**4XZ Israeli Navy (Previously M22)**

Still active sending Round Slip & coded messages daily. (Also uses 4331kHz & 6607kHz)

9377	0824z (IP)	01 Jan	Repeating slip [VVV DE 4XZ 4XZ ==	Good/Clear	CW	E.SMITH	WED
	0851z (IP)	03 Jan	Repeating slip [VVV DE 4XZ 4XZ ==	Good/Clear	CW	E.SMITH	FRI

**M51** XIX

3881//6825 100 grp 5-ltr messages with headers

No reports

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

3881//6825

1230 - 1306z	19 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 - 1256z	20 Feb	Jeudi- Leçon	04-2/1 Codé,	04-2/2 Clair,	04-2/3 Codé,	04-2/4 Clair (840 grps/hr)	BR	THU
1230 - 1306z	21 Feb	Vendredi- Leçon	05-2/1 Codé,	05-2/2 Clair,	05-2/3 Codé,	05-2/4 Clair (960 grps/hr)	BR	FRI

**M51b** Non-stop 5-character groups composed of M51a messages on 3881//6825kHz

No Reports

**M89** O

This is a summary of activity from the M89 stations.

**Traffic & Operator Chat from M89**

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

2984	3110	3488	4101	5123	6123	7660
	3164	3522	4120	5132	6854	7733
	3178	3533	4123	5212	6890	7832
	3198	3567	4135	5246		
	3200	3618	4313	5398		
	3229	3663	4354	5415		
	3238	3731	4405	5445		
	3245	3732	4520	5467		
	3262	3740	4535	5555		
	3265	3768	4585	5566		
	3301	3769	4711	5761		
	3332	3789	4841	5816		
	3344	3816		5844		
	3346	3826		5873		
	3358	3834				
	3379	3867				
	3380	3870				
	3420	3885				
	3430	3892				

**New Scheds for Jan / Feb 2020: From logs submitted from JPL & F5JBR**

2984	New frequency for this Round Slip	First heard 28 January	V QWS1 (x3) DE 87DS (x2)
3842//4898	Sending different Round Slips // Known Round Slip but new Freq	First heard 13 January First heard 13 January	V 8FDH (x3) DE 5J9K (x2) on 3842kHz V QWS1 (x3) DE 87DS (x2) on 4898kHz
3842//4135	Sending different Round Slips	First heard 22 October First heard 22 October	<b>V DFDH (x3) DE 5JNK (x2)</b> on 3842kHz <b>V 3DAU (x3) DE GU5H (x2)</b> on 4135kHz
3842//4135	Sending different Round Slips //	First heard 02 February First heard 02 February	V 8FBH (x3) DE 5J9K (x2) on 3842kHz <b>V 3D1U (x3) DE G25H (x2)</b> on 4135kHz
5858//10563	Sending different Round Slips	First heard 11 February First heard 11 February	V 8FDH (x3) DE 5J9K (x2) on 5858kHz V 3D1U (x3) DE G25H (x2) on 10563kHz
7653//10563	Previously unknown Round Slip & Freq Sending different Round Slips //	First heard 11 January First heard 11 January	<b>V 7KMO (x3) DE RNL6 (x2)</b> on 7653kHz V 3DAU (x3) DE GU5H (x2) on 10563kHz
7653//NRH	New frequency & Round Slip	First heard 01 February	V 8RVF (x3) DE CV4K (x2)

**DP Stations**

6212//7832	New frequency & // for this Round Slip	First heard 10 February	CQ (x3) DE DP91 (x2) V
------------	--	-------------------------	------------------------

**Chart of M89 Freq & Call signs heard in Jan / Feb 2020**      **New Scheds shown in Bold Type**      **From logs submitted from JPL & F5JBR**

<u>Freq in KHz</u>	<u>Call Slip</u>
<b>2984//NRH</b>	V QWS1 (x3) DE 87DS (x2)
3238//4870	V M8JF (x3) DE RIS9 (x2)
3842//NRH	V 8FDH (x3) DE 5J9K (x2)
3842//NRH	V <b>8FBH</b> (x3) DE 5J9K (x2)
3842// <b>4135</b>	V 8FBH (x3) DE 5J9K (x2) <b>(Different R/Slip)</b>
3842// <b>4898</b>	V 8FDH (x3) DE 5J9K (x2) <b>(Different R/Slip)</b>
3850//4860	Q2M (x3) DE NYZ (x2) (R5) QSA ? K (R5)
3850//4860//6840	Q2M (x3) DE NYZ (x2) (R5) QSA ? K (R5)
4131//NRH	V JKDJ (x3) DE SLBC (x2)
4131//4886	V JKDJ (x3) DE SLBC (x2)
<b>4135//3842</b>	<b>V 3DIU (x3) DE G25H (x2) (Different R/Slip)</b>
4720//5150	VVV WNF (x3) DE FXM (x2)
4860// 6840	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ?
4870//NRH	V M8JF (x3) DE RIS9 (x2)
<b>4870//6874//8157</b>	V M8JF (x3) DE RIS9 (x2)
<b>4898//NRH</b>	<b>V QWS1 (x3) DE 87DS (x2)</b>
<b>4898//3842</b>	<b>V QWS1 (x3) DE 87DS (x2) (Different R/Slip)</b>

<u>Freq in kHz</u>	<u>Call Slip</u>
5177//NRH	V JKDJ (x3) DE SLBC (x2)
5858//NRH	V 8FDH (x3) DE 5J9K (x2)
5858//NRH	V <b>8FBH</b> (x3) DE 5J9K (x2)
5858//10563	V <b>8FBH</b> (x3) DE 5J9K (x2)
<b>5858//10563</b>	V 8FDH (x3) DE 5J9K (x2) <b>(Different R/Slip)</b>
<b>6840//8290//8360//10640</b>	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K
6874//8157	V M8JF (x3) DE RIS9 (x2)
7620//8350	V WNF(x3) DE FXM (x2) (R5) (Hand Sent)
<b>7653//NRH</b>	<b>V 8RVF (x3) DE CV4K (x2)</b>
<b>7653//10563</b>	<b>V 7KMO (x3) DE RNL6 (x2) (Different R/Slip)</b>
8157//NRH	V M8JF (x3) DE RIS9 (x2)
<b>8290//8360//10640</b>	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K
<b>10563//NRH</b>	<b>V 3DIU (x3) DE G25H (x2)</b>
<b>10563//5858</b>	<b>V 3DIU (x3) DE G25H (x2) (Different R/Slip)</b>
<b>10563//7653</b>	<b>V 3DIU (x3) DE GU5H (x2) (Different R/Slip)</b>

3178	1225z (IP) 18 Feb	R R BOZ CHG USB WK K (IP – Hand sent – 1228z)	(Remote tuner Hong Kong)	JPL	TUE
	(Switched to voice USB – Male – Chinese -1229z)	<b>(Switch to unknown digital mode - USB - Not Chinese digital 4+4 QPSK 75/3000)</b>			
3238	1259z 02 Feb	R HR WK NR 00140 K	(Remote tuner Novosibirsk)	JPL	SUN
		R HR WK NR 08020 K (M8JF DE RIS9 weak in background)			
	1605z (IP) 10 Feb	NR 070/EX 0010 RMKS CQ BT AK47/CF36 AR	(Remote tuner Novosibirsk)	JPL	MON
		NR 071 CK 199 35 0211 0000 RMKS CQ BT (RIS9 R/S in background - This station much louder than RIS9)			
		<i>(Note that the number 35 used after the CK group is normally used by M95 stations 8073 // 4364 and 9054 //4243)</i>			
3245	GBYH ? 1720z (IP) 15 Feb	VV GBYH DE FG5R K	(Remote tuner Shanghai)	JPL	SAT
		VV GBYH DE HBCY K			
		VV GBYH DE FRDX K			
3262	2013z (IP) 10 Feb	COMM/0079 AR NR 4120 HR WK NR 4020	(Remote tuner Chengdu)	JPL	MON
3332	1922z (IP) 06 Feb	FF NR 6409/EX 0311 BT	(Remote tuner Novosibirsk)	JPL	THU
		X3Y/Z AR BT			
3358	1403z 02 Feb	NR 040 CK 54 32 0202 2200 RMKS 8847 TO 8845 K	(Remote tuner Nanning)	JPL	SUN
3380	2143z 02 Feb	0542 RMKS 6652 TO 5152/QTC 8/1450 A K	(Remote tuner Novosibirsk)	JPL	SUN
		FF/053/EX 0546 RMKS 5152 TO 6652 BT			
		HZX8/GTR4 AR K			
		NR 154 CK 89 74 0203 0548 RMKS 6652 TO 5152 K			
		MSG NR 054 CK 89 27 0203 0550 RMKS 5152 TO 6652 K			
3488	1238z (IP) 27 Feb	NR 157 CK 89 12 0227 1930 RMKS 0.06 TO .70.. EEE	(Remote tuner Novosibirsk)	JPL	THU
		RMKS 07.6 TO 070A EEE RMKS 0706 TO 0703 BT			
3663	CZN6 1931z (IP) 07 Feb	NR 0195 CK 111 42 0208 0330 RMKS 9229 TO 9256 K	(Remote tuner Shanghai)	JPL	FRI
3769	1246z (IP) 27 Feb	IEC Y ? III IEC BT 2912 AR K K (Exercise associated)	(Remote tuner Novosibirsk)	JPL	THU
		NR 2232 CK 91 33 0227 2030 RMKS S9694 TO 0018 K			
3834	1242z (IP) 07 Feb	NR 11.. CK 0207 .. 40 RMKS ....TO 1096 K	(Remote tuner Novosibirsk)	JPL	FRI
3842//4135	1257z 06 Feb	NR 024 CK 499 50 0206 2100 BT	(Remote tuner Novosibirsk)	JPL	THU
4153	1600z (IP) 12 Feb	NR 289 CK 81 62 0212 2359 RMKS 2327 TO 1752 BT	(Remote tuner Novosibirsk)	JPL	WED
4535	1428z 02 Feb	NR 079/EX 222. RMKS 8997 TO 6652 BT	(Remote tuner Chengdu)	JPL	SUN
		NR 136 CK 89 74 0202 2228 RMKS 6652 TO 8997 K			
4841	0853z 02 Feb	R IEC BT 3560 AR K (Exercise associated)	(Remote tuner Hebei)	JPL	SUN
		MSG NR 2131 CK 91 .8 0202 1630 RMKS BT 9092 TO 3292 AR K			
4680	IB8Q 0905z 11 Feb	V Y7JF (x3) DE IB8Q (x2)	(Remote tuner Novosibirsk)	JPL	TUE
		NR 009 17 33 RMKS 1124 TO 096 BT	COMM/1750/00Z 227/1124/096 AR		
		NR 010 1735 RMKS 1124 TO 051 BT	COMM/1830/TTZ224/1124/051 AR		
5479//10722	0800z 25 Feb	V YHXD (x3) DE SAQC (x2)	(Remote tuner Novosibirsk)	JPL	TUE
		BT ZZ89 TR9W/1408/1280 AR QSL ? HR WK NR 110 (IP – Hand sent – Return to R/S -0800z)			

5761	1116z (IP) 10 Feb	21/BT BT D8T6/K71.. AR QSY 87 (This type of tfc normally associated with Exercise)	(Remote tuner Novosibirsk)	JPL	MON
5873	0941z (IP) 23 Feb	NR 161/EX CK 99 49 0223 1730 RMKS 5402 TO 5518 K	(Remote tuner Novosibirsk)	JPL	SUN
6123	0828z 02 Feb	IEC BT 9140 AR K (IP – Hand sent – Exercise)	(Remote tuner Nanning)	JPL	SUN
6874//8157	RIS9 0744z 11 Jan	V M8JF (x3) DE RIS9 (x2) (IP - Cont'd) BT 438/5543/5393/63/./139/468 AR (From R/S – 0745z) BT 438/5543/53/3/6./33/3149. /A AR (Return to R/S – 0746Z)	(Remote tuner Novosibirsk)	JPL	SAT
7653	CV4K 1332z 26 Jan	CV4K Wkg 8RVF (ONLY : 8RVF de CV4K V)	(Remote tuner Sweden)	F5JBR	SUN
8157	RIS9 0237z 11 Jan	V M8JF (x3) DE RIS9 (x2) (IP - Cont'd) BT 275/0273/3/130772/8 AR (IP – Machine sent – 0237z) BT 275/0273/3/140772/8 AR BT 275/8159/7/7334/8 AR BT 275/8159/7/7334/8 AR (Return to R/S – 0239z)	(Remote tuner Novosibirsk)	JPL	SAT

**M89 3380kHz 2143 (IP) - 2159z 02 February 2020**

**0542 RMKS 6652 TO 5152/QTC 8/1450 A K (IP – Hand sent – 2143z)**  
R QSL 0546 K (Both stations on this frequency)  
R QSL 0546 K (2144z)  
R QSL 0546 K (2145z)  
R U F GA K  
R HR F GA K  
**R GA FF/053/EX 0546 RMKS 5152 TO 6652 BT**  
**HZX8/GTR4 AR K**  
R QSL 0548 K (2147z)  
R QSL 0547 K  
**R NR 154 CK 89 74 0203 0548 RMKS 6652 TO 5152 K (2148z)**  
R GA K  
R 7G 1W BT 7D5A 4T5D KD5 DDU4 463A 4NAD 673A .D3 N  
TUAD TTAN K (2149Z)  
AR  
R QSL 0553 K (2152z)  
U 7G GA K  
R AS AS (2153z)  
HR MSG K (2155z)  
R GA K  
**R MSG NR 054 CK 89 27 0203 0550 RMKS 5152 TO 6652 K**  
R RPT TIME K  
R RPT TIME 0550 K  
R GA K  
R MSG BT 5U6N D3UT AUD3 474U 6A57 D64U 6D7T 5D57  
R RPT 10W K (2158z)  
R ? 05W BT 6A  
R (2159z)

*Courtesy JPL*

**M89 3332kHz 1922 - 1924z 06 February 2020**

FF NR 6409/EX 0311 BT (IP – Hand sent – 1922z)  
X3Y/Z AR BT  
X3Y/Z AR  
BT X3Y/Z AR QSL 2324 QSY 18 1SY 18 (1924z)

**M89 3245kHz 1720 - 1725z 15 February 2020**

R QSL 0120 QSL 0120 K (IP – Machine sent – 1720z)  
R NIL SK (All stations on this frequency)  
R GB (1721z)  
0122 QSL 0122 K  
NIL  
SK  
**VV GBYH DE FG5R K (1722z)**  
OK QSL QSL 0122 0122 K  
R NIL SK  
R GB  
**VV GBYH DE HBCY K**  
R OK QSL QSL 0125 0125 K  
R NIL SK  
R GB (1724z)  
QSL QSL 0122 0122 K  
R NIL SK  
R GB  
**VV GBYH DE FRDX K (1725z)**  
R QSL QSL 012. (Fading – 1725z)

*Courtesy JPL*

**DP Stations**

<b>4832</b>	1611z (IP)	21 Feb	(Suspect DP91) HR NIL SK GB	(Remote tuner Novosibirsk)	JPL	FRI
<b>6212//7832</b>	1000 - 1010z	10 Feb	CQ (x3) DE DP91 (x2) V	(Remote tuner Novosibirsk)	JPL	MON
	1000 – 1010z	23 Feb	CQ (x3) DE DP91 (x2) V	(Remote tuner Novosibirsk)	JPL	SUN
<b>6396</b>	1008 - 1038z	22 Feb	CQ (x3) DE DP91 (x2) V MSG NR 01 49 0222 1815 W (IP – Machine sent – 1018z) DP391 MSG NR 01 49 BT BT MSG NR 01 49 0222 1815 EEE (Silent - 1019z) (Monitored until 1038z)	(Remote tuner Novosibirsk)	JPL	SAT
	1012 - 1135z	24 Feb	(DP391) VVV (1012z) VVV (1016z) VV (1129z) (Monitored until 1135z)	(Remote tuner Novosibirsk)	JPL	MON
<b>7832//NRH</b>	1000 - 1009z	11 Feb	CQ (x3) DE DP91 (x2) V	(Remote tuner Novosibirsk)	JPL	TUE
	1008 - 1009z	22 Feb	CQ (x3) DE DP91 (x2) V	(Remote tuner Novosibirsk)	JPL	SAT
	1000 - 1010z	24 Feb	N (Sent approx every 8 seconds – 1000z) (Tx technical issue?) HR NIL SK GB (Cont'd – Machine sent – 1010z)	(Remote tuner Novosibirsk)	JPL	MON

**M95** O XSV, XSV70, XSV85

**M95 Morse Logs** (Bold type indicates new logging)

3021	RF56	1647 - 1651z	07 Feb	DE RF56 - Machine sent NR 042/CCK CK 199 96 0207 2200 RMKS BT 7393 TO 7163/7387/74337410 0937/7364/7353/7443/7448/7663/7373 TO 7393 AR K	(Remote tuner Chengdu)	JPL	FRI
<b>3427</b>		1815 (IP) - 1819z	02 Feb	4-character msgs. Hand sent NR 044/CCK CK 89 27 0203 0215 RMKS 7962 TO 6652 BT	(Remote tuner Novosibirsk)	JPL	SUN
3642//NRH	<b>Call Sign 3A7D</b>	(Active daily - only first marker log has been included)					
3642//7602	<b>Call Sign 3A7D</b>	(Active daily - only first marker log has been included)					
<b>3789</b>	<b>Call Sign 8PQD</b>	1444 - 1501z	29 Jan	Working outstations Outstations : II1B CT4D WB5S D6UE CTV6 3L1B DCQ6 L4NR 3..Q YQI3 4QTW SNM1 Wkg 8PQD (is Y3BK) (QSO and Repeat Groups MSG) in Duplex - Qsx on 4125	(Remote tuner Sweden)	F5JBR	WED
<b>3942</b>	<b>Call Sign Y3BK</b>	1310z	25 Jan	QSO and MSG NR 130 CCK CK99 66 01 25 2100 RMKS CQ in Simplex	(Remote tuner Sweden)	F5JBR	SAT
The Net Station use a series of callsigns : NET Station Y3BK Outstations : Z5HI 4HEA SU7L Q4DF R8PQ 4HEA 5U8L V1ND 9XLF WJY4 1RBZ 0Z2D The Outstations respond using another series of callsigns NET Station 8PQD Outstations : II1B CT4D WB5S D6UE CTV6 3L1B DCQ6 L4NR 3..Q YQI3 4QTW SNM1							
<b>3968//NRH</b>	<b>Call Sign SAQC (Previously3A7D)</b>	<b>Suspect change in frequency and Round Slip for DKG6 DE 3A7D</b>					
	1921z	01 Feb	V YHXD (x3) DE SAQC (x2)		(Remote tuner Novosibirsk)	JPL	SAT
	1839z	01 Feb	YHXD de SAQC V		(Remote tuner Sweden)	F5JBR	SAT
<b>3968//6936</b>	<b>Call Sign SAQC (Previously3A7D)</b>	<b>Suspect change in frequency and Round Slip for DKG6 DE 3A7D</b>					
	1909z	10 Jan	V YHXD (x3) DE SAQC (x2)		(Remote tuner Novosibirsk)	JPL	FRI
	1911z	01 Feb	YHXD de SAQC V		(Remote tuner Sweden)	F5JBR	MON
<b>4125</b>	<b>Call Sign CBFQ</b>	1259z	13 Jan	V UISD (x3) DE CBFQ (x2) NR 036/CCK 31 46 0113 2100 RMKS 2374 TO 8404 8470 8405 8448 BT	(Remote tuner Irkutsk)	JPL	MON
<b>4125</b>	<b>Call Sign Y3BK</b>	1436 - 1501z	29 Jan	Working outstations Y3BK Wkg Z5HI Q4DF 4HEA SU7L Q4DF V1ND 9XLF WJY4 1RBZ 0Z2D (QSO and MSG) in Duplex - Qsx on 3789	(Remote tuner Sweden)	F5JBR	WED
4243//NRH	Call Sign XSV85	1144 - 1200z	04 Feb	NR 083 CK 57 35 0204 1532 BT NR 08 CK 196 35 0204 1558 BT	(Remote tuner Japan)	JPL	TUE
		1147 - 1203z	06 Feb	NR 087 CK 52 35 0206 1537 BT NR 12 CK 165 35 0206 1555 BT	(Remote tuner Hong Kong)	JPL	THU
		1151 (IP) - 1230z	16 Feb	NR 32 CK 169 35 0216 1514 BT NR 008 CK 36 35 0216 1549 BT NR 014 CK 16 35 0216 1620 BT NR 015 CK 21 35 0216 1621 BT	(Remote tuner Japan)	JPL	SUN
		1147 (IP) - 1159z	20 Feb	NR 016 CK 41 35 0220 1541 BT NR 031 CK 14 35 0220 1613 BT NR 40 CK 195 35 0220 1620 BT	(Remote tuner ShangHai)	JPL	THU
		1156 (IP) - 1210z	27 Feb	NR 54 CK 185 35 0227 1602 BT	(Remote tuner Hong Kong)	JPL	THU
4243//9054	Message number differs from current XSV70 and XSV85 message numbers.	1208 - 1225z	07 Feb	NR 14 CK 161 35 0207 1602 BT NR 075 CK 15 35 0207 1637 BT	(Remote tuner Hong Kong)	JPL	FRI
		1146 (IP) - 1147z	15 Feb	NR 0159 CK 34 35 0215 1543 BT NR 0159 CK 34 35 0215 1543 BT	(Remote tuner Hong Kong)	JPL	SAT
		1146 (IP) - 1214z	15 Feb	NR 30 CK 120 35 0215 1513 BT NR 006 CK 46 35 0215 1602 BT NR 008 CK 13 35 0215 1617 BT NR 009 CK 16 35 0215 1618 BT	(Remote tuner Hong Kong)	JPL	SAT
		1147 (IP) - 1149z	18 Feb	NR 36 CK 248 35 0218 1526 BT	(Remote tuner Hong Kong)	JPL	TUE
4364//8073	Call Sign XSV85	1131 - 1144z	04 Feb	NR 0120 CK 297 35 0204 1006 BT	(Remote tuner Hong Kong)	JPL	TUE
		1133 - 1147z	06 Feb	NR 0128 CK 367 35 0206 1630 BT	(Remote tuner Hong Kong)	JPL	THU
		1143 - 1203z	07 Feb	NR 0133 CK 40 35 0207 1617 BT	(Remote tuner Hong Kong)	JPL	FRI
		1143 - 1146z	16 Feb	NR 0163 CK 328 35 0216 1709 BT	(Remote tuner Hong Kong)	JPL	SUN
		1132 - 1145z	18 Feb	NR 0171 CK 299 35 0218 1600 BT	(Remote tuner Hong Kong)	JPL	TUE
		1133 - 1148z	20 Feb	NR 0179 CK 36 35 0220 1554 BT NR 0180 CK 322 35 0220 1555 BT	(Remote tuner ShangHai)	JPL	THU

4545	0801 (IP) - 0802z	02 Feb	4-character msgs. Hand sent NR 001/CCK CK 91 23 0202 1600 RMKS 5715 TO 1048 K	(Remote tuner Chengdu)	JPL	SUN
4616	1336 (IP) - 1336z	02 Feb	4-character msgs. Hand sent NR ..1/CCK CK 99 .. 02.. RMKS 190 TO 1633 BT	(Remote tuner Japan)] Weak/fading	JPL	SUN
5479//NRH	<b>Call Sign SAQC</b> 0230z	11 Jan	V YHXD (x3) DE SAQC (x2) (IP - Cont'd)	(Remote tuner Novosibirsk)	JPL	SAT
5479//10722	<b>Call Sign SAQC</b> 0259z	11 Jan	V YHXD (x3) DE SAQC (x2) (IP - Cont'd) NR 063/CCK CK 199 05 4 0111 1100 RMKS 2416 TO	(Remote tuner Novosibirsk)	JPL	SAT
	0246z	13 Jan	V YHXD (x3) DE SAQC (x2) (IP - Cont'd)	(Remote tuner Irkutsk)	JPL	MON
	0731z	02 Feb	V YHXD (x3) DE SAQC (x2) (IP - Cont'd)	(Remote tuner Kazakhstan)	JPL	SUN
	0851 - 0915z	11 Feb	NR .7 CK 17 35 0211 1625 BT	(Remote tuner Novosibirsk)	JPL	TUE
5525	1031 (IP) - 1037z	10 Feb	NR 001/CCK CK 99 06 0210 1830 RMKS 4046 TO 4047 K	(Remote Novosibirsk)	JPL	MON
5888	<b>05 05 05</b> 0821 (IP) - 0823z	02 Feb	4-character msgs. Very slow. Long zero	(Remote tuner Nanning)	JPL	SUN
7710	0834 (IP) - 0835z	02 Feb	4-character msgs. Hand sent NR 0033/CCK CK 199 24 003 1610 RMKS CQ BT	(Remote tuner Nanning)	JPL	SUN
10180	<b>Call Sign 3A7D</b>	(Active daily - only first marker log has been included)				
10722	<b>Call Sign SAQC</b> 1028z	26 Jan	SAQC Wkg YHXD (ONLY : YHXD de SAQC V)	(Remote tuner Sweden)	F5JBR	SUN
	0742z	01 Feb	SAQC Wkg YHXD (ONLY : YHXD de SAQC V)	(Remote tuner Sweden)	F5JBR	SAT

**M95 4125kHz 1259 - 1307z 13 January 2020**

**V UISD (x3) DE CBFQ (x2)**

**UISD DE CBFQ** (IP - Cont'd - Hand sent - 1259z)

HR MSG GA HR MSG GA

NR 036/CCK CK 31 46 EEEE

**NR 036/CCK 31 46 0113 2100 RMKS 2374 TO 8404 8470 8405 8448 BT**

6TND U756 35NU 3NA7 3TN7 5NUT (Cont'd - 1302z)

AR HR MSG GA HR MSG GA (1304z)

**NR 036/CCK 31 46 0113 2100 RMKS 2374 TO 8404 8470 8405 8448 BT**

6TND U756 (Cont'd - 1306z)

AR HR WK NR 270 270 HR NIL SK GB (1307z)

**M95 4243kHz 1147 (IP) - 11203z 06 February 2020**

BNGC DE XSV85

In Chinese digital 4+4 QPSK 75/3000 - LSB - 1147z

Switched to CW - Hand sent - 1150z

HR MSG TO YR PSE CY (1150z)

VV HR MSG TO YR PSE CY (1153z)

**NR 087 CK 52 35 0206 1537 BT**

5AA UTT TT6 3U6 3A4 5T7 5TD 75U 357 4TN (Cont'd - 1154z)

AR MSG AGN

**NR 087 CK 52 35 0206 1537 BT** (Repeats message - 1158z)

AR A HR MSG GA

**NR 12 CK 165 35 0206 1555 BT**

UTU TT6 3U6 3A4 TTU 773 354 N3D 353 4AA (Cont'd - 1203z)

*Courtesy JPL*

**M95 4243kHz 1151 (IP) - 1230z 16 February 2020**

VV HR MSG TO YR PSE CY (1151z)

**NR 32 CK 169 35 0216 1514 BT**

UTU TA6 3U6 3A4 .TU 7TA NU6 N65 7T5 777 (Cont'd - 1152z)

AR (1215z)

A HR MSG GA

**NR 008 CK 36 35 0216 1549 BT**

5AA UTT TA6 3U6 7TA N44 3A4 5T7 5TD 75U

354 377 4A5 44N 3D6 346 N3U 44D 3D5 4D6

5TN 75U 354 377 4A5 44N 3D6 4D6 5AA 75U

357 377 4A5 44D 3D5 4D6 AR (1217z)

MSG AGN

**NR 008 CK 36 35 0216 1549 BT** (Repeats message - 1218z)

AR

A HR MSG GA

**NR 014 CK 16 35 0216 1620 BT**

UT5 TA6 3U6 7TA TTA TTU TT3 773 4UT 456

47T 34T 44D 46N DD7 NT6 AR (1221z)

MSG AGN

**NR 014 CK 16 35 0216 1620 BT** (Repeats message - 1222z)

AR

A HR MSG GA

**NR 015 CK 21 35 0216 1621 BT**

UT5 TA6 3U6 3A4 TTA TTU TT3 773 353 N3D

35U 4UT 456 47T 34T 44D 46N 4D6 3D6 N3D

3D5 AR (1225z)

MSG AGN

**NR 015 CK 21 35 0216 1621 BT** (Repeats message - 1226z)

AR

A HR UP SB WK (1227z)

Switched to voice - USB - Female - Chinese -

Now V26 sked - 1230z

*Courtesy JPL*



## Marker Beacons (MX MXI)

First a short report from PoSW who has logged a few beacons for us this time;

"Several of those CW single letter transmissions were noted with strong signals while tuning around during the cold, damp mornings of an English winter mostly between 0700 and 0830 UTC, frequencies rounded off to the nearest kHz:-

5154 kHz letter "P", sometimes a weaker "S" heard underneath.  
 5157 kHz letter "L", on several occasions had an "XJT" noise-maker for company.  
 8495 kHz letters "P" and "C", also with "XJT"  
 8498 kHz letter "L"  
 7509 kHz this one heard several times later in the day after 1300 UTC, strong "P" with weaker "D" underneath and close to a strong broadcast station."  
*(Thanks for the report PoSW)*

### Beacon Logs:

3593.7	2320z	27 Jan	MXI CW Beacon "D"	Sevastopol		BR	MON
3593.8	2326z	09 Feb	MXI CW Beacon "P"	Kaliningrad		BR	SUN
3594.1	1642z	27 Jan	MXI CW Beacon "A"	Astrakhan		BR	MON
3657	2331z	09 Feb	MXV CW Beacon "V"			BR	SUN
4338	1442z	28 Jan	MXV CW Beacon "V"	QSA3	(SDR Silec, Poland)	E.SMITH	TUE
	1624z	24 Feb	NRH		At times malfunctioning and repeating with an extra dot after the dash. NRH at 0800z 29 Jan	E.SMITH	MON
	1630z	24 Feb	MXV CW Beacon "V"	QSA3 (Switched on)	(SDR Silec, Poland) [Note 1]	E.SMITH	MON
	1446z	27 Feb	MXV CW Beacon "V"	QSA4	(SDR Silec, Poland)	E.SMITH	MON
4557.7	2334z	09 Jan	MXI CW Beacon "D"	Sevastopol		BR	SUN
4558.8	2324z	27 Jan	MXI CW Beacon "P"	Kaliningrad (Weak)		BR	MON
4557.9	2324z	27 Jan	MXI CW Beacon "S"	Sevoromorsk		BR	MON
4558.1	2333z	09 Feb	MXI CW Beacon "A"	Astrakhan		BR	SUN
5153.7	2328z	27 Jan	MXI CW Beacon "D"	Sevastopol		BR	MON
5153.8	1647z	27 Jan	MXI CW Beacon "P"	Kaliningrad		BR	MON
5153.9	1647z	27 Jan	MXI CW Beacon "S"	Sevoromorsk		BR	MON
5154.1	2335z	09 Feb	MXI CW Beacon "A"	Astrakhan		BR	SUN
5156.7	1415z	13 Feb	MX CW Beacon "L"		Good	chpa	THU
5156.9	2330z	27 Jan	MX CW Beacon "L"	St Petersburg (Fast)	(Under heavy STANAG)	BR	MON
5342	1110z	02 Jan	MXV CW Beacon "V"	QSA3 QSB3	(SDR Moscow)	E.SMITH	THU
	0858z	03 Jan	MXV CW Beacon "V"	QSA3 QSB3	(SDR Balkhash, Kazakhstan)	E.SMITH	FRI
	0556z	05 Jan	MXV CW Beacon "V"	QSA4 QSB4	(SDR Balkhash, Kazakhstan)	E.SMITH	SUN
	1244z	06 Jan	MXV CW Beacon "V"	QSA2	(SDR Balkhash, Kazakhstan)	E.SMITH	MON
	1245z	06 Jan	MXV CW Beacon "V"	QSA4 QSB3	(SDR Ivhevsk, Russia)		
	0433z	07 Jan	MXV CW Beacon "V"	QSA3 QSB3	(SDR Balkhash, Kazakhstan)	E.SMITH	TUE
	0659z	09 Jan	MXV CW Beacon "V"	QSA2	(SDR Balkhash, Kazakhstan)	E.SMITH	THU
	0507z	10 Jan	MXV CW Beacon "V"	QSA3 QSB4	(SDR Balkhash, Kazakhstan)	E.SMITH	FRI
	0518z	11 Jan	MXV CW Beacon "V"	QSA3 QSB3	(SDR Balkhash, Kazakhstan)	E.SMITH	SAT
	0427z	12 Jan	MXV CW Beacon "V"	QSA3 QSB4	(SDR Balkhash, Kazakhstan)	E.SMITH	SUN
	1157z	13 Jan	MXV CW Beacon "V"	QSA2	(SDR Balkhash, Kazakhstan)	E.SMITH	MON
	0333z	14 Jan	MXV CW Beacon "V"	QSA3 QSB3	(SDR Silec, Poland)	E.SMITH	TUE
	0828z	15 Jan	MXV CW Beacon "V"	QSA3 QSB4	(SDR Balkhash, Kazakhstan)	E.SMITH	WED
	0303z	16 Jan	MXV CW Beacon "V"	QSA3	(SDR Balkhash, Kazakhstan)	E.SMITH	THU
	0200z	17 Jan	MXV CW Beacon "V"	QSA3 QSB4	(SDR Balkhash, Kazakhstan)	E.SMITH	FRI
	0335z	18 Jan	MXV CW Beacon "V"	QSA4 QSB4	(SDR Balkhash, Kazakhstan)	E.SMITH	SAT
	0509z	19 Jan	MXV CW Beacon "V"	QSA2	(SDR Balkhash, Kazakhstan)	E.SMITH	SUN
	1251z	20 Jan	MXV CW Beacon "V"	QSA2	(SDR Silec, Poland)	E.SMITH	MON
	0409z	21 Jan	MXV CW Beacon "V"	QSA3 QSB4	(SDR Balkhash, Kazakhstan)	E.SMITH	TUE
	0744z	23 Jan	MXV CW Beacon "V"	QSA3 QSB4	(SDR Balkhash, Kazakhstan)	E.SMITH	THU
	0341z	24 Jan	MXV CW Beacon "V"	QSA4	(SDR Novosibirsk, Russia)	E.SMITH	FRI
	1324z	25 Jan	MXV CW Beacon "V"	QSA3	(SDR Silec, Poland)	E.SMITH	SAT
	0409z	27 Jan	MXV CW Beacon "V"	QSA4	(SDR Novosibirsk, Russia)	E.SMITH	MON
	0409z	28 Jan	MXV CW Beacon "V"	QSA4	(SDR Novosibirsk, Russia)	E.SMITH	TUE
	0409z	30 Jan	MXV CW Beacon "V"	QSA3 QSB4	(SDR Novosibirsk, Russia)	E.SMITH	THU
	0831z	31 Jan	MXV CW Beacon "V"	QSA3 QSB4	(SDR Balkhash, Kazakhstan)	E.SMITH	FRI
	0621z	01 Feb	MXV CW Beacon "V"	QSA3 QSB4	(SDR Balkhash, Kazakhstan)	E.SMITH	SAT
	0419z	02 Feb	MXV CW Beacon "V"	QSA3 QSB3	(SDR Balkhash, Kazakhstan)	E.SMITH	SUN
	1119z	24 Feb	MXV CW Beacon "V"	QSA4 QSB4	(SDR Balkhash, Kazakhstan)	E.SMITH	MON
	0840z	27 Feb	NRH		(SDR Novosibirsk, Russia)	E.SMITH	THU
	1238z	27 Feb	MXV CW Beacon "V"	QSA4	(SDR Balkhash, Kazakhstan)	E.SMITH	MON
7508.7	2334z	27 Jan	MXI CW Beacon "D"	Sevastopol		BR	MON
7508.8	1652z	27 Jan	MXI CW Beacon "P"			BR	MON
7509.1	2335z	27 Jan	MXI CW Beacon "A"	Astrakhan		BR	MON
7611	0542z	29 Jan	MXV CW Beacon "V"	QSA3	(SDR Novosibirsk, Russia)	E.SMITH	WED
	0408z	30 Jan	MXV CW Beacon "V"	QSA3	(SDR Novosibirsk, Russia)	E.SMITH	THU
	0833z	31 Jan	MXV CW Beacon "V"	QSA4	(SDR Novosibirsk, Russia)	E.SMITH	FRI
	0607z	01 Feb	MXV CW Beacon "V"	QSA4	(SDR Novosibirsk, Russia)	E.SMITH	SAT
	0418z	02 Feb	MXV CW Beacon "V"	QSA4	(SDR Novosibirsk, Russia)	E.SMITH	SUN

1118z	24 Feb	MXV CW Beacon "V" QSA4	(SDR Novosibirsk, Russia)	E.SMITH	MON
0839z	27 Feb	MXV CW Beacon "V" QSA3	(SDR Novosibirsk, Russia)	E.SMITH	THU
8494.7 2337z	27 Jan	MXI CW Beacon "D" Sevastopol		BR	MON
13527.7 1417z	13 Feb	MXI CW Beacon "D"	Good	chpa	THU

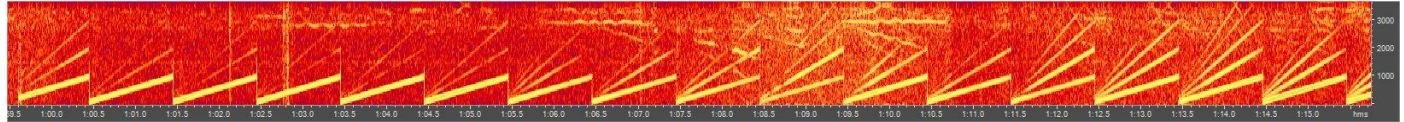
[Note 1] During February the MXV 4338kHz Marker was switched on between 1400z - 0100z to transmit between the times when 7611kHz & 5342kHz were off. From what I've monitored in March those former three frequencies have had no activity & 5590kHz is currently transmitting "V". (E.SMITH)

## Oddities

### UNID – Siren 9565kHz

Edd, (E.SMITH), found this siren active in the 31 metre broadcast band. Edd states that the signal sounded like a jammer, but may well not be one.

9565	0748	22 Jan	'Siren'	(Via SDR Enschede)	Good/Clear	AM	E.SMITH	WED
------	------	--------	---------	--------------------	------------	----	---------	-----



9565kHz 0748z 22January 2020

Siren – A sawtooth generated signal

Sample Courtesy E.SMITH

### 5292kHz Marker

5292	1410z	13 Feb	Marker		Good	USB	chpa	THU
------	-------	--------	--------	--	------	-----	------	-----

### S28 'The Buzzer'

4625	1408z	13 Feb	S28	'The Buzzer' Marker	USB	Good	chpa	THU
	0510z	15 Feb	S28	'The Buzzer' Marker	USB	UVB-76. Very good	blw	SAT
	0536z	18 Feb	S28	'The Buzzer' Marker	USB	(Via remote Japan) Weak	blw	TUE
	0505z	20 Feb	S28	'The Buzzer' Marker	USB	Very weak, but heard at times	blw	THU
	1552z	20 Feb	S28	'The Buzzer' Marker	USB	Signal was weak but clear	HJH	THU

Nothing heard on alternative frequencies 4810 or 9250 QTH Nr. Cardiff

### S30 'The Pip'

5448	1358z	13 Feb	S30	'Pip' Marker (Day freq)	USB	Good	chpa	THU
------	-------	--------	-----	-------------------------	-----	------	------	-----

### XSL Japanese Slot Machine (Japanese Navy)

4153	0524z	18 Feb	XSL	'Japanese Slot Machine'	USB	(Via remote Japan)	blw	TUE
4231	0525z	18 Feb	XSL	'Japanese Slot Machine'	USB	(Via remote Japan)	blw	TUE
4291	0525z	18 Feb	XSL	'Japanese Slot Machine'	USB	(Via remote Japan)	blw	TUE

### Contributors:

AB, blw, BR, chpa, E.SMITH, ER, F5JBR, Gert, HFD, HJH, JPL, PoSW, RRGB *Thank you all for your logs.*



# E07

PoSW offers his analysis:

## Sunday + Wednesday Schedule, 1800 UTC Start:-

8-Jan-20, Wednesday:- 1800 UTC, 6963 kHz, “987 987 987 000”, weak.  
1820 UTC, 5863 kHz, second sending, also weak.

12-Jan-20, Sunday:- 1800 UTC, 6963 kHz, “987 987 987 000”, weak.  
1820 UTC, 5863 kHz, stronger.

19-Jan-20, Sunday:- 1800 UTC, 6963 kHz, “987 987 987 000”, S7.  
1820 UTC, 5863 kHz, weak.

22-Jan-20, Wednesday:- 1800 UTC, 6963 kHz and 1820 UTC, 5863 kHz, “987 987 987 000”.

29-Jan-20, Wednesday:- 1800 UTC, 6963 kHz, S7 to S8 and 1820 UTC, 5863 kHz, stronger,  
“987 987 987 000”.

2-Feb-20, Sunday:- 1800 UTC, 8144 kHz, “197 197 197 000”, weak but clear signal.  
1820 UTC, 6944 kHz, second sending much stronger.

9-Feb-20, Sunday:- 1800 UTC, 8144 kHz, very weak signal, unreadable.  
1820 UTC, 6944 kHz, much stronger, “197 197 197 000”.

12-Feb-20, Wednesday:- 1800 UTC, 8144 kHz, “197 197 197 1”, DK/GC “9097 205” x 2,  
long messages back on the agenda, S6 to S7, ended 1823 UTC.  
1828 UTC, 6944 kHz, also S6 to S7.  
1856 UTC, 5744 kHz, third sending, strongest, S9.

19-Feb-20, Wednesday:- 1800 UTC, 8144 kHz, S7, “197 197 197 000”.  
1820 UTC, 6944 kHz, weaker.

23-Feb-20, Sunday:- 1800 UTC, 8144 kHz, “197 197 197 1”, DK/GC “9097 205” x 2, the return of the long message heard on the 12th, S6 to S7.  
1828 UTC, just before, second sending, peaking S8.  
1856 UTC, 5744 kHz, back down to S6-S7.

26-Feb-20, Wednesday:- 1800 UTC, 8144 kHz, “197” and “9097 205” again, good signal.  
1828 UTC, 6944 kHz, weaker.  
1856 UTC, 5744 kHz, stronger, peaking well over S9.

## Monday + Wednesday Schedule, 2000 UTC Start:-

6-Jan-20, Monday:- 2000 UTC, 6776 kHz, “770 770 770 000”, S5.  
2020 UTC, 5767 kHz, stronger.

8-Jan-20, Wednesday:- 2000 UTC, 6776 kHz and 2020 UTC, 5767 kHz, both S6 to S7,  
“770 770 770 000”.

13-Jan-20, Monday:- 2000 UTC, 6776 kHz and 2020 UTC 5767 kHz, both strong signals, S-meter peaking over 9, “770 770 770 000”.

20-Jan-20, Monday:- 2000 UTC, 6776 kHz and 2020 UTC, 5767 kHz, both strong, “770 770 770 000”.

22-Jan-20, Wednesday:- 2000 UTC, 6776 kHz and 2020 UTC, 5767 kHz, strong signals again,  
“770 770 770 000”.

27-Jan-20, Monday:- 2000 UTC, 6776 kHz, a full message for the first time this year, “770 770 770 1”, DK/GC “990 76” x 2, strong signal, well  
over S9.  
2020 UTC, 5767 kHz, over S9.  
2040 UTC, 5067 kHz, around S9.

29-Jan-20, Wednesday:- 2000 UTC, 6776 kHz, “770” and “990 76” again, strong signal.  
2020 UTC 5767 kHz and 2040 UTC, 5067 kHz, both strong.

3-Feb-20, Monday:- 2000 UTC, 8157 kHz, “182 182 182 000”, good signal.  
2020 UTC, 6857 kHz, peaking over S9.

5-Feb-20, Wednesday:- 2000 UTC, 8157 kHz and 2020 UTC, 6857 kHz, both strong, “182 182 182 000”.

10-Feb-20, Monday:- 2000 UTC, 8157 kHz, “182 182 182 000”, good signal, S8.  
2020 UTC, 6857 kHz, also S8.

12-Feb-20, Wednesday:- 2000 UTC, 8157 kHz and 2020 UTC, 6857 kHz, both strong, “182 182 182 000”.

17-Feb-20, Monday:- 2000 UTC, 8157 kHz, “182 182 182 1” for a full message, DK/GC “960 89” x 2, weak signal.  
2020 UTC, 6857 kHz, much stronger, S9.  
2040 UTC, 5257 kHz, also strong.

19-Feb-20, Wednesday:- 2000 UTC, 8157 kHz, “182” and “960 89” again, weak.  
2020 UTC, 6857 kHz and 5257 kHz, both stronger.

**Sunday Schedule, 0700 UTC Start:-**

The Saturday + Sunday 0700z schedule which ran for several years appears to have ceased, last heard in November 2019 and has been replaced by a Sunday only E07:-  
5-Jan-20:- 0700 UTC, 9326 kHz, “345 345 345 000”, peaking around S7.  
0720 UTC, 10426 kHz, second sending, weaker.

12-Jan-20:- 0700 UTC, 9326 kHz, “345 345 345 000”, weak.  
0720 UTC, 10426 kHz, stronger.

19-Jan-20:- 0700 UTC, 9326 kHz, “345 345 345 000”, S6 to S7, missed the second sending.

No change of frequencies in February:-

2-Feb-20:- 0700 UTC, 9326 kHz, “345 345 345 000”, S7.  
0720 UTC, 10426 kHz, also S7.

9-Feb-20:- 0700 UTC, 9326 kHz, “full message” this morning, and a long one. “345 345 345 1”, DK/GC “988 279” x 2, ended 0730 UTC so total transmission time of half an hour.

0735 UTC, just after, 10426 kHz, second sending, peaking S8.

0810:30s UTC, 11526 kHz, third sending, strongest of the three transmissions, over S9.

Strong winds this morning, my antenna swing back and forth, Stansted Air Traffic on VHF

reporting wind gusting 41 knots, “wind shear and severe turbulence reported between 500 and 4,000 feet”, probably considered no more than a pleasant breeze in those parts of the world which suffer from hurricanes, tornadoes and typhoons, but quite extreme for these parts.

16-Feb-20:- 0700 UTC, 9326 kHz, “345” and “988 279” again, strong signal.

0735:15s UTC, 10426 kHz, also strong.

0810 UTC, just after, 11526 kHz, interference from a strong broadcast station on 11530 with music of a Middle Eastern flavour.

**Others’ logs**

**Sunday/Wednesday**

**January 2020**

1800z	6963kHz	1820z	5863kHz	1840z	4793kHz	
01/01	987 1 9952 121 94932 ... 45457 000 000					[1840z Fair]
05/01	987 000					Very weak (Dutch SDR)
08/01	987 000					Weak
12/01	987 000					Weak
15/01	987 000					Weak
22/01	987 000					Fair
29/01	987 000					Weak

**February 2020**

1800z	8144kHz	1820z	6944kHz	1840z	5744kHz	
02/02	197 000					Weak
05/02	197 000					Weak
09/02	197 000					Weak
12/02	197 1 9097 205 95999 ... 44901 000 000					Weak
16/02	197 1 9097 205 95999 ... 44901 000 000					Weak
	Note23min duration and revised start times: 1800/1828/1856z					
23/02	197 1 9097 205 95999 ... 44901 000 000					Weak
	Note23min duration and revised start times: 1800/1828/1856z					
26/02	197 1 9097 205 95999 ... 44901 000 000					Weak
	Note23min duration and revised start times: 1800/1828/1856z					

**Sunday/ Saturday**

**January 2020**

No reports

**February 2020**

**0700z 9326kHz 0720z 10426kHz 0740z 11526kHz**

09/02 345 1 988 279 88420 ... 03573 000 000 [0810z Fair] Weak  
Note: Transmission times c30m exceeds schedule slot of 20m; modified slots as 0735 and 0810z

**Monday/Wednesday**

**January 2020**

**2000z 6776kHz 2020z 5767kHz 2040z 5067kHz**

01/01 770 000 Weak  
08/01 770 000 Weak  
13/01 770 000 Fair  
15/01 770 000 Weak  
20/01 770 000 Strong  
22/01 770 000 Weak  
27/01 770 1 990 76 49913 ... 58543 000 000 Weak

**February 2020**

**2000z 8157kHz 2020z 6857kHz 2040z 5257kHz**

03/02 182 000 2000z Weak/2020z Fair  
05/02 182 000 Weak  
10/02 182 000 Weak/Fair  
12/02 182 000 Weak  
17/02 182 1 960 89 73036 ... 04161 000 000 [2000z Weak (Dutch SDR)] Fair  
19/02 182 1 960 89 73036 ... 04161 000 000 [2000z Weak] Fair  
24/02 182 000 Weak  
26/02 182 000 Weak

**Tuesday/Friday**

**January 2020**

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

03/01 516 000 Weak (Dutch SDR)  
07/01 516 000 Weak  
10/01 516 000 Weak  
14/01 516 1 9905 68 84249 ... 51287 000 000 Weak  
17/01 516 1 9905 68 84249 ... 51287 000 000 Weak  
21/01 516 000 Fair to Weak  
24/01 516 000 Weak  
28/01 516 1 485 138 94997 ... 95360 000 000 Weak



**February 2020**

<b>1100z</b>	<b>16161kHz</b>	<b>1120z</b>	<b>14661kHz</b>	<b>1140z</b>	<b>13361kHz</b>	
04/02	163 1 116 54 17572 ...	69926 000 000				Weak
07/02	163 1 116 54 17572 ...	69926 000 000				Weak
14/02	163 1 477 112 37949 ...	72968 000 000				Weak
14/02	163 1 477 112 37949 ...	72968 000 000				Weak
18/02	163 1 477 112 37949 ...	72968 000 000				Weak
21/02	163 1 477 112 37949 ...	03911 000 000				Fair
25/02	163 000					Weak
28/02	163 000					Weak

**Tuesday/Friday****January 2020**

<b>0700z</b>	<b>14472kHz</b>	<b>0720z</b>	<b>14972kHz</b>	<b>0740z</b>	<b>16272kHz</b>	
07/01	492 000					Weak [0720z]
10/01	492 1 479 151 42105 ...	99904 000 000				Weak
14/01	492 000					Weak
21/01	492 1 9157 122 40920 ...	52608 000 000			[0740z only]	Weak (Dutch SDR)
24/01	492 1 9157 122 40920 ...	52608 000 000			[0740z only]	Weak (Dutch SDR)
28/01	492 000					Weak

**February 2020**

<b>0700z</b>	<b>15823kHz</b>	<b>0720z</b>	<b>16323kHz</b>	<b>0740z</b>	<b>18623kHz</b>	
14/02	836 000					Weak [FRI]
25/02	836 000					Weak (Dutch SDR)

**Thursday/Saturday****January 2020**

<b>1410z</b>	<b>11593kHz</b>	<b>1430z</b>	<b>10293kHz</b>	<b>1450z</b>	<b>9323kHz</b>	
02/01	916 000					Weak
04/01	916 000					Weak
09/01	916 000					Weak
11/01	NRH					
18/01	916 000					Strong (Dutch SDR)
25/01	916 000					Weak
30/01	916 1 2602 78 14202 ...	08648 000 000			[1410z QRM]	Weak

**February 2020**

<b>1410z</b>	<b>13368kHz</b>	<b>1430z</b>	<b>12168kHz</b>	<b>1450z</b>	<b>9323kHz</b>	
15/02	745 000					Weak
20/02	745 1 7189 65 53942 ...	99908 000 000				Weak
22/02	745 1 7189 65 53492 ...	99908 000 000				Weak (Dutch SDR)
29/02	745 000					Weak

**Saturday**

**January 2020**

1400z	10323kHz	1420z	9123kHz	1440z	
04/01	310 000				Weak
11/01	310 000				Weak
18/01	310 000				Strong (Dutch SDR)
25/01	310 000				Weak/Strong

**February 2020**

1400z	11464kHz	1420z	10764kHz	1440z		
01/02	472 000				Ary	SAT
15/02	472 1 988 279 88420 ... 03573 000 000				[1510z Fair]	Weak
22/02	472 000					Fair
29/02	472 000					Weak

**E07a**

**Wednesday**

**January 2020**

2100z	5877kHz	2120z	5277kHz	2140z	4577kHz	
02/01	825 000					Strong
08/01	825 000					Very strong
15/01	825 000					Strong
22/01	825 1 68470 9679 83 12758 ... 89038 000 000					Very strong
29/01	825 000					Very strong

**February 2020**

05/02	825 1 32128 7410 107 29091 ... 63849 000 000				[2140zDigiQRM2]	Very strong
12/02	825 000					Very strong
19/02	825 00					Very strong
26/02	825 000				[2100z DataQRM2]	Very strong

**Thursday**

**January 2020**

0530z	5111kHz	0550z	5811kHz	0610z	6911kHz	
09/01	189 000					Weak, local QRM
16/01	189 000					Very strong
23/01	189 1 68470 9679 83 12758 ... 89038 000 000					Very strong
30/01	189 000					Very strong

**February 2020**

06/02	189 1 32128 7410 107 29091 ... 63849 000 000					Very strong
13/02	189 000					Very strong
20/02	189 000				[0530z QRM3]	Fair
27/02	189 000					Very strong

**Friday**

**January 2020**

1610z	7632kHz	1630z	6832kHz	1650z	5832kHz	
03/01	688 000					Weak/Fair
10/01	688 000					1610z Fair, 1630z Weak
17/01	688 000					Weak
24/01	688 000					Weak

**February 2020**

1610z	9347kHz	1630z	8147kHz	1650z	6847kHz	
07/02	318 000					Weak
14/02	318 000					Weak
21/02	318 000					Weak
28/02	318 000					Weak

**Saturday**

**January 2020**

0900z	11123kHz	0920z	12123kHz	0940z	13423kHz	
04/01	114 000					Weak/Fair
11/01	114 000					Weak
25/01	114 000					Weak

**February 2020**

0900z	11053kHz	0920z	12153kHz	0940z	13553kHz	
01/02	015 000					Weak
08/02	015 000					Weak
15/02	015 000				[0920z Just audible]	Weak
22/02	015 000					Weak
29/02	015 000					Weak

**Followed by PoSW's logs and analysis:**

**Friday Schedule, 1610 UTC Start:-**

3-Jan-20:- 1610 UTC, 7632 kHz, "688 688 688 000".  
1630 UTC, 6832 kHz, second sending, both transmissions around a "7" on the S-meter.

10-Jan-20:- 1630 UTC, 6832 kHz, "688 688 688 000", strong signal, peaking over S9.

24-Jan-20:- 1610 UTC, 7632 kHz, "688 688 688 000", weak signal.  
1630 UTC, 6832 kHz, much stronger.

31-Jan-20:- 1610 UTC, 7632 kHz and 1630 UTC, 6832 kHz, both good signals, "688 688 688 000".

7-Feb-20:- 1610 UTC, 9347 kHz, "318 318 318 000", strong signal, over S9.  
1630 UTC, 8147 kHz, slightly weaker.

21-Feb-20:- 1610 UTC, 9347 kHz, "318 318 318 000", weak.  
1630 UTC, 8147 kHz, stronger.

**Saturday Schedule, 0900 UTC Start:-**

4-Jan-20:- 0900 UTC, 11123 kHz, "114 114 114 000", S5.  
0920 UTC, 12123 kHz, stronger.

11-Jan-20:- 0900 UTC, 11123 kHz and 0920 UTC, 12123 kHz, both around S6, "114 114 114 000".

18-Jan-20:- 0900 UTC, 11123 kHz, "114 114 114 000", S5.  
0920 UTC, 12123 kHz, stronger.

1-Feb-20:- 0900 UTC, 11053 kHz, "015 015 015 000".  
 0920 UTC, 12153 kHz, second sending, both peaking S8.

8-Feb-20:- 0900 UTC, 11053 kHz, "015 015 015 000", weak.  
 0920 UTC, 12153 kHz, stronger.

15-Feb-20:- 0900 UTC, 11053 kHz and 0920 UTC, 12153 kHz, "015 015 015 000".

**Wednesday Schedule, 2100 UTC Start:-**

8-Jan-20:- 2100 UTC, 5877 kHz, "825 825 825 000", peaking around S8, not the usual S9+.  
 2120 UTC, 5277 kHz, stronger.

15-Jan-20:- 2100 UTC, 5877 kHz and 2120 UTC, 5277 kHz, both strong, "825 825 825 000".

22-Jan-20:- 2100 UTC, 5877 kHz, first full message from an E07a this month and indeed, this year, "825 825 825 1 68470", DK/GC "9679 83" x 2, strong signal.

2120 UTC, 5277 kHz, strong.

2140 UTC, 4577 kHz, third sending, over-riding an "XJT" on the same frequency.

29-Jan-20:- 2100 UTC, 5877 kHz and 2120 UTC, 5277 kHz, both S9+, "825 825 825 000".

5-Feb-20:- 2100 UTC, 5877 kHz, full message this evening, "825 825 825 1 32128", DK/GC "7410 107" x 2, strong signal.

2120 UTC, 5277 kHz, peaking S9+.

2140 UTC, 4577 kHz, also S9+, over-riding weaker "XJT".

12-Feb-20:- 2100 UTC, 5877 kHz, "825 825 825 000", very strong.

2120 UTC, 5277 kHz, also very strong.

19-Feb-20:- 2100 UTC, 5877 kHz and 2120 UTC, 5277 kHz, both strong, "825 825 825 000".

## **E11&E11a log Jan/Feb**

4505kHz	1705z	01/01 [391/35 36507.....36591] Out 1715z S3	Malc	WED
	1705z	04/01 [391/35 36507.....etc] Repeat of Wednesday	Malc	SAT
	1705z	08/01 [396/00] Out 1708z S9	Malc	WED
	1705z	11/01 [390/00] Out 1708z S8	Malc	SAT
	0710z	12/01 [496/35 25992 32852.....09758 79312] Out 0720z Good/Clear. (SDR Enschede)	Ed Smith, HfD	SUN
	1705z	15/01 [390/00] Out 1708z S3	Malc, Gary H	WED
	0710z	18/01 [490/00]	RNGB	SAT
	1705z	18/01 [395/00] Out 1708z S4	Malc,	SAT
	1705z	22/01 [395/00] Out 1708z S9	Malc	WED
	1705z	25/01 [393/00] Out 1708z S3	Malc, RNGB	SAT
	0710z	01/02 [498/34 03986 23095 43474 55475 11680 05105.....16050 59180 96128]	Ary	SAT
	0710z	02/02 [498/34 03986.....etc] Repeat of Saturday	RNGB	SUN
	1705z	05/02 [391/39 72853.....68283] Out 1716z S5	Malc	WED
	0710z	09/02 [490/00] Out 0713z S4	Malc	SUN
	1705z	12/02 [396/00] Out 1705z S7	Malc	WED
	0805z	15/02 [313/00] Out 0808z S3	Malc	SAT
	1705z	15/02 [396/00] Out 1708z S7	Malc	SAT
	1705z	19/02 [392/00]	Gary H, Malc	WED
	1705z	26/02 [390/00]	Gary H	WED
	1705z	29/02 [393/00] Out 1708z S5	Malc	SAT
4909kHz	0805z	04/01 [315/35 58177.....95332] Out 0815z S8	Malc	SAT
	1930z	04/01 [363/38 52163.....42810] Out 1941z S9+10	Malc	SAT
	0805z	05/01 [315/35 58177 .....etc] Repeat of Saturday	Malc	SUN
	1930z	05/01 [363/38 ATTENTION 52163.....etc] Repeat of Saturday	Malc	SUN
	0805z	11/01 [319/00] Out 0808z S2	Malc	SAT
	0805z	12/01 [312/00] Out 0808z S2	Malc	SUN
	1930z	12/01 [360/00] Out 1933z S4	Malc	SUN
	0805z	18/01 [315/00] Out 0808z S2	Malc	SAT
	1930z	18/01 [368/00] Out 1933z S4	Malc	SAT
	0805z	25/01 [313/00] Out 0808z S4	Malc	SAT
	0805z	26/01 [314/00] Out 0808z S5	Malc	SUN
	1930z	26/01 [360/00] Out 1933z S5	Malc	SUN
	0805z	08/02 [310/31 22345.....66628] Out 0814z S3	Malc	SAT
	1930z	08/02 [366/00] Out 1933z S3	Malc	SAT
	0805z	09/02 [310/31 22345.....etc] Repeat of Saturday	Malc	SUN
	1930z	09/02 [360/00] Out 1933z S7	Malc, Gary H	SUN
	1930z	15/02 [369/00] Out 1933z S9	Malc, Andre	SAT
	1930z	16/02 [360/00] Out 1633z S4	Malc	SUN
	0805z	22/02 [319/00] Out 0808z S4	Malc	SAT
	1930z	22/02 [369/34 06151.....04788] Out 1940z S5	Malc	SAT
	0805z	29/02 [313/00] Out 0808z S2	Malc	SAT

5082kHz	1625z	01/01 [974/00] Out 1628z S3	Malc	WED	
	1625z	05/01 [970/00] Out 1628z S5	Malc	SUN	
	1530z	06/01 [527/00] Out 1533z S3	Malc	MON	
	1530z	08/01 [976/00] Out 1533z S4	Malc	WED	
	1625z	08/01 [976/00]	Gary H	WED	
	1530z	10/01 [528/00] Out 1533z S4	Malc	FRI	
	1625z	12/01 [978/00] Out 1628z S2	Malc	SUN	
	1530z	13/01 [524/00] Out 1533z S3	Malc	MON	
	1626z	15/01 [975/31 53435.....93574] Out 1628z S3	Malc, Gary H	WED	
	1530z	17/01 [524/00] Out 1533z S3	Malc	FRI	
	1625z	20/01 [975/31 53435 89515 09415 65019 84851 40007 52592 24774.....43042 93574]	Gary H	MON	
	1530z	20/01 [525/32 43654.....99196] Out 1540z S5	Malc	MON	
	1530z	24/01 [525/32 43654.....etc] Repeat of Monday	Malc	FRI	
	1530z	27/01 [521/00] Out 1533z S3	Malc	MON	
	1625z	26/10 [970/00] Out 1628z S2	Malc	SUN	
	1530z	03/02 [522/00] Out 1533z S2	Malc	MON	
	1625z	05/02 [974/00] Out S5	Malc	WED	
	1530z	07/02 [528/00]	Gary H, Malc	FRI	
	1625z	09/02 [977/00] Out 1628z S5	Malc	SUN	
	1625z	12/02 [976/00] Out 1628z S5	Malc	WED	
	1530z	14/02 [524/00] Out 1533z S5	Malc, Gary H	FRI	
	1625z	16/02 [970/00] Out 1628z S6	Malc	SUN	
	1530z	17/02 [521/31 08987 46664 11261 33668 78872 65069.....06675 76748] Out 1540z S5	Ary, Malc, Gary H	MON	
	1625z	19/02 [972/35 01261.....06697] Out 1635z S3	Malc	WED	
	1530z	21/02 [525/33 10028.....54301] Out 1540z S4	Malc	FRI	
	1530z	24/02 [522/00] Out 1533z S3	Malc	MON	
	1625z	26/02 [977/00]	Gary H	WED	
	1625z	26/02 [977/00] Out 1628z S5	Malc	WED	
	1530z	28/02 [522/00] Out 1533z S3	Malc	FRI	
	5149kHz	0820z	02/01 [435/00] Out 0823z S3	RNGB, Malc	THU
		0820z	10/01 [435/00] Out 0823z S3	Malc	FRI
		0820z	16/12 [435/31 06732 39928 50872 88502 36520 21819 24020 48228.....89763 01723]	RNGB, Malc	THU
		0820z	17/01 [435/31 06732.....etc] Repeat of Thursday	Malc	FRI
		0820z	24/01 [432/00] Out 0823z S3	Malc, RNGB	FRI
		0820z	30/01 [432/00] Out 0823z S5	Malc	THU
		0820z	31/01 [436/00] Out 0823z S3	Malc	FRI
		0820z	06/02 [438/00]	RNGB	THU
0820z		07/02 [436/00] Out 0823z S2	Malc, RNGB	FRI	
0820z		14/02 [435/00] Out 0823z S3	Malc	FRI	
0820z		20/02 [432/38 97892.....47412] Out 0831z S3	Malc	THU	
0820z		27/02 [430/00] Out 0823z S2	Malc	THU	
0820z		28/02 [439/00] Out 0823z S2	Malc, RNGB	FRI	
5344kHz	1605z	05/01 [238/00] Out 1608z S5	Malc	SUN	
	1605z	07/01 [232/39 57993.....40878] Out 1616z S6	Malc	TUE	
	1605z	12/01 [232/39 57993.....40878] Out 1616z S4	Malc	SUN	
	1605z	14/01 [231/00] Out 1608z S3	Malc	TUE	
	1605z	19/01 [233/00]	Gary H	SUN	
	1605z	21/01 [231/00] Out 1608z S4	Malc	TUE	
	1530z	26/01 [236/00] Out 1533z S5	Malc	SUN	
	1605z	28/01 [235/00] Out 1608z S3	Malc	TUE	
	1605z	04/02 [232/00]	Gary H, Malc	TUE	
	1605z	09/02 [230/00] Out 1608z S5	Malc	SUN	
	1605z	11/02 [237/00] Out 1608z S4	Malc	TUE	
	1605z	16/02 [235/00] Out 1608z S4	Malc	SUN	
	1605z	18/02 [236/35 53227.....40010] Out 1615z S5	Malc	TUE	
5409kHz	1530z	02/01 [260/00] Out 1533z S9	Malc	THU	
	1530z	30/01 [267/00] Out 1533z S3	Malc, Gary H	THU	
	1530z	20/02 [269/00] Out 1533z S5	Malc	THU	
	1530z	27/02 [261/38 20279.....27829] Out 1541z S7	Malc	THU	
5779kHz	1730z	02/01 [416/00] Weak (Dutch SDR)	RNGB, Malc	THU	
	0315z	09/01 [258/32 84395.....etc]	HfD	THU	
	1730z	30/01 [413/00] Out 1733z S2	Malc	THU	
	1730z	20/02 [418/00] Out 1733z S2 + QRM	Malc	THU	
	1730z	27/02 [413/00] Out 1733z S3	Malc	THU	

6280kHz	1700z	16/01 [334/40 69236.....02125] Out 1711z S6	Malc, Hfd	THU
	1700z	21/01 [334/00] Out 1703z S4	Malc	TUE
	1700z	28/01 [337/00] Out 1703z S9	Malc	TUE
	1700z	30/01 [331/00] Out 1703z S5	Malc	THU
	1700z	04/02 [338/00] Out 1703z S6	Malc	TUE
	1700z	11/02 [334/00] Out 1703z S6	Malc	TUE
	1700z	18/02 [334/00] Out 1703z S7	Malc	TUE
	1700z	20/02 [334/00] Out 1703z S5	Malc	THU
	1700z	25/02 [334/36 21909.....26820] Out 1710z S4	Malc	TUE
	1700z	27/02 [334/36 21909.....etc] Repeat of Tuesday	Malc	THU
6433kHz	1205z	01/01 [460/00] Out 1208z S2	Malc	WED
	1205z	07/01 [461/00] Out 1208z S3	Malc	TUE
	1205z	08/01 [462/00] Out 1208z S2	Malc	WED
	1205z	14/01 [463/39 75584.....20259] Out 1216z S3 (Dutch SDR)	Malc	TUE
	1205z	21/01 [466/00] Out 1208z S2	Malc	TUE
	1205z	22/01 [469/00] Out 1208z S3	Malc, RNGB	WED
	1205z	28/01 [466/00] Out 1208z S2	Malc	TUE
	1205z	04/02 [465/35 22760.....63877] Out 1215z S2	Malc	TUE
	1205z	05/02 [465/35 22760.....etc] Repeat of Tuesday	Malc	WED
	1205z	12/02 [460/00] Out 1208z S2	Malc	WED
	1205z	18/02 [465/00] Out 1208z S2	Malc	TUE
	1205z	19/02 [646/00] Out 1208z S3 (Dutch SDR)	Malc	WED
	1205z	25/02 [463/00] Out 1208z S2	Malc	TUE
	1205z	26/02 [460/00] Out 1203z S2	Malc	WED
6804kHz	0700z	07/01 [571/00] Out 0703z S2	Malc	TUE
	0700z	14/01 [577/00]	RNGB	TUE
	0700z	21/01 [579/00]	RNGB	TUE
	0700z	28/01 [570/36 78138.....30441] Out 0710z S4	Malc	TUE
	0700z	04/02 [574/31 40669 49387 82240 70790- 57915 60730.....88694 57166]	RNGB, Malc	TUE
	0700z	18/02 [575/00] Out 0703z S3	Malc	TUE
	0700z	25/02 [579/00] Out 0703z S2	Malc	TUE
6849kHz	1650z	05/01 [920/00] Out 1653z S5	Malc	SUN
	1900z	06/01 [648/00] Out 1903z S3	Malc	MON
	1650z	10/01 [920/00] Out 1653z S2	Malc	FRI
	1650z	12/01 [922/00] Out 1653z S2	Malc	SUN
	1910z	13/01 [648/00] Out 1913z S3 (Dutch SDR)	Malc	MON
	1900z	16/01 [640/00] Out 1903z S2	Malc	THU
	1900z	20/01 [647/00] Out 1903z S8	Malc	MON
	1900z	23/01 [643/00]	RNGB	THU
	1650z	24/01 [920/00] Out 1653z S3	Malc	FRI
	1900z	30/01 [643/00] Out 1903z S2	Malc	THU
	1900z	03/02 [640/00] Out 1903z S2 + QRM	Malc	MON
	1650z	07/02 [927/00] Out 1653z S3	Malc	FRI
	1650z	09/02 [924/00] Out 1653z S4	Malc	SUN
	1650z	14/02 [929/00] Out 1653z S6	Malc	FRI
	1650z	16/02 [920/00] Out 1653z S4	Malc	SUN
	1900z	17/02 [640/00] Out 1903z S2 + QRM	Malc	MON
	1900z	20/02 [644/00] Out 1903z S2	Malc	THU
	1650z	21/02 [927/35 90768.....51755] Out 1700z S2	Malc	FRI
	1650z	28/02 [922/00] Out 1653z S4	Malc	FRI
	7469kHz	0930z	02/01 [278/00]	RNGB, Malc
0930z		08/01 [537/40 30507..... 08239] Out 0941z S4	Malc	WED
0930z		15/01 [273/00] Out 0933z S3	Malc	WED
0930z		16/01 [270/00] Out 0933z S2	Malc	THU
0930z		22/01 [273/00] Out 0933z S3	Malc	WED
0930z		29/01 [270/00] Out 0933z S3	Malc	WED
0930z		30/01 [275/00] Out 0933z S2	Malc	THU
0930z		05/02 [279/34 47755.....78533] Out 0940z S2	Malc	WED
0930z		12/02 [270/00] Out 0933z S2	Malc	WED
0930z		19/02 [273/00] Out 0933z S2	Malc	WED
0930z		20/02 [279/00] Out 0933z S3	Malc	THU
0930z		26/02 [278/00] Out 0933z S2	Malc	WED
0930z		27/02 [277/00] Out 0933z S3	Malc, RNGB	THU
7840kHz		0645z	04/02 [515/00]	RNGB



7984kHz	1045z	01/01 [697/00] Out 1048z S2	Malc	WED	
	1045z	06/01 [696/00] Out 1048z S3	Malc	MON	
	1045z	08/01 [698/00] Out 1048z S7	Malc	WED	
	1045z	13/01 [691/00] Out 1048z S2	Malc	MON	
	1045z	20/01 [698/00] Out 1048z S2	Malc	MON	
	1045z	22/01 [693/00] Out 1048z S2	Malc	WED	
	1045z	27/01 [692/33 91739.....32289] Out 1055z S3	Malc	MON	
	1045z	29/01 [692/33 91739.....etc] Repeat of Monday	Malc	WED	
	1045z	03/02 [696/00] Out 1048z S2	Malc	MON	
	1045z	05/02 [698/00]	dhmz, Malc	WED	
	1045z	10/02 [697/00] Out 1048z S3	Malc	MON	
	1045z	12/02 [691/00] Out 1048z S2	Malc	WED	
	1045z	17/02 [691/35 74069.....25677] Out 1055z S2	Malc	MON	
	1045z	19/02 [691/35 74069.....etc] Repeat of Monday	Malc	WED	
	1045z	26/02 [694/00] Out 1048z S2	Malc, RNGB	WED	
	8597kHz	1000z	03/01 [304/00]	RNGB	FRI
0900z		06/01 [532/36 86797.....60423] Out 0911z S3	Malc	MON	
1000z		07/01 [308/00] Out 1003z S2	Malc, RNGB	TUE	
0900z		08/01 [532/36 86797 95859 43039 57536 43513 08431.....54673 60473] Out 0910z S3	RNGB, Malc	WED	
0900z		13/01 [530/00] Out 0903z S3	Malc	MON	
1000z		14/01 [306/00] Out 1003z S2	Malc	TUE	
0900z		15/01 [536/00] Out 0903z S3	Malc	WED	
1000z		17/01 [305/00] Out 1003z S4	Malc	FRI	
0900z		20/01 [530/00] Out 0903z S3	Malc	MON	
1000z		21/01 [305/21 20118.....35744] Out 1007z S2	Malc	TUE	
0900z		22/01 [537/00] Out 0903z S7	Malc	WED	
1000z		24/01 [305/21 20118.....35744] Out 1007z S5	Malc	FRI	
0900z		27/01 [533/00] Out 0903z S3	Malc	MON	
1000z		28/01 [308/00] Out 1003z S2	Malc	TUE	
1000z		29/01 [535/00] Out 1003z S3	Malc	WED	
1000z		31/01 [306/00]	RNGB	FRI	
0900z		03/02 [538/00]	RNGB, Malc	MON	
1000z		04/02 [307/00] Out 1003z S3	Malc	TUE	
0900z		05/02 [538/00] Out 0903z S3	Malc	WED	
1000z		07/02 [300/00] Out 1003z S2	Malc	FRI	
0900z		10/02 [530/00] Out 0903z S3	Malc, RNGB	MON	
0900z		12/02 [530/40 97733..... 93152] Out 0911z S3	Malc	WED	
1000z		14/02 [309/25 85330.....01532] Out 1007z S3	Malc	FRI	
0900z		17/02 [531/39 98854.....02854] Out 0908z S2 (Dutch SDR)	Malc	MON	
1000z		18/02 [308/00] Out 1003z S3	Malc	TUE	
0900z		19/02 [537/00] Out 0903z S3	Malc	WED	
1000z		21/02 [302/00] Out 1003z S2	Malc	FRI	
0900z		24/02 [530/39 69681..... 05193] Out 0911z S3	Malc	MON	
0900z		26/02 [530/39 69681 12206 88374 91057 92889 59202 37175 78683.....22057 05193]	RNGB, Malc	WED	
1000z		28/02 [306/00] Out 1003z S2	Malc	FRI	
9130kHz		0715z	07/01 [630/00] Out 0718z S2	Malc, RNGB	TUE
		0715z	10/01 [634/00] Out 0718z S4	Malc	FRI
	0715z	14/01 [635/00] Out 0718z S4 (Dutch SDR)	Malc, RNGB	TUE	
	0715z	21/01 [634/36 27683 04534 37511 06388 83694 17628 96976 36450.....13006 87951]	RNGB	TUE	
	0715z	28/01 [635/00] Out 0718z S3	Malc	TUE	
	0715z	04/02 [635/00]	RNGB, Malc	TUE	
	0715z	11/02 [630/00] Out 0748z S3	Malc	TUE	
	0715z	14/02 [634/00] Out 0718z S4	Malc	FRI	
	0715z	18/02 [639/33 55599.....45042] Out 0724z S3	Malc	TUE	
	0715z	25/02 [639/00] Out 0718z S3	Malc, RNGB	TUE	
10213kHz	0745z	06/01 [260/00] Out 0748z S5	Malc	MON	
	0745z	13/01 [261/00] Out 0748z S5	Malc	MON	
	0745z	20/01 [264/36 47591 20802 31756 89751 61104 02644 37920 69840.....02191 39047]	RNGB, Malc	MON	
	0745z	27/01 [267/00] Out 0748z S5	Malc	MON	
	0745z	03/02 [261/00] Out 0748z S5	Malc	MON	
	0745z	10/02 [261/00] Out 0748z S4	Malc	MON	
	0745z	17/02 [266/00] Out 0748z S8	Malc	MON	
	0745z	20/02 [220/00] Out 0748z S3 (Dutch SDR)	Malc	THU	
0745z	24/02 [261/38 20279..... 27829] Out 0756z	Malc	MON		
10487kHz	1910z	10/01 [618/00] Out 1913z S2	Malc	FRI	
	1910z	12/01 [610/00] Out 1013z S2	Malc	SUN	
	1910z	17/01 [610/00] Out 1913z S2	Malc	FRI	

11450kHz	0640z	20/01 [942/00] Fair	(Dutch SDR)		RNGB	MON
	0640z	03/02 [949/00]			RNGB	MON
	0640z	10/07 [949/29 98387 50317 86630 68610 14134 20793 14592 04817.....18630 77147]			RNGB	MON
12089kHz	0845z	02/20 [150/00] Out 0848z S3			Malc	THU
	0845z	07/01 [152/00] Out 0848z S2			Malc, RNGB	TUE
	0845z	14/01 [150/00] Out 0848z S5			Malc	TUE
	0845z	16/01 [156/00] Out 0848z S3			Malc	THU
	0845z	21/01 [159/00] Out 0848z S2	(Dutch SDR)		Malc	TUE
	0845z	28/01 [151/37 31259 41018 26188 04257 05517 14290 29895 47257.....62098 75557]			RNGB, Malc	TUE
	0845z	30/01 [151/37 31259.....etc] Repeat of Tuesday			Malc	THU
	0845z	06/02 [159/00]			RNGB	THU
	0845z	11/02 [150/00] Out 0848z S2			Malc	TUE
	0845z	18/02 [154/21 80644.....75683] Out 0853z S2			Malc	TUE
	0845z	20/02 [154/21 80644.....etc] Repeat of Tuesday			Malc	THU
	0845z	25/02 [150/00] Out 0848z S2			Malc, RNGB	TUE
	0845z	27/02 [154/00] 0848z S3	(Dutch SDR)		Malc, RNGB	THU
12924kHz	1745z	05/01 [242/00] Out 1748z S2	(Dutch SDR)		Malc	SUN
	1745z	06/01 [240/33 67090.....53204] Out 1755z S4	(Dutch SDR)		Malc	MON
	1745z	12/01 [240/33 67090.....etc] Repeat of Monday			Malc	SUN
	1745z	27/01 [240/00] Out 1748z S4	(Dutch SDR)		Malc	MON
13363kHz	1345z	04/01 [919/00] Out 1348z S4	(Dutch SDR)		Malc	SAT
	1345z	07/01 [912/00] Out 1348z S2	(Dutch SDR)		Malc	TUE
	1345z	14/01 [911/32 60830.....51908] Out S3	(Dutch SDR)		Malc	TUE
	1345z	21/01 [914/00] Out 1348z S9			Malc	TUE
	1345z	28/01 [917/00] Out 1348z S2	(Dutch SDR)		Malc	TUE
	1345z	15/02 [911/00] Out 1348z S2			Malc	SAT
	1345z	18/02 [919/00] Out S3	(Dutch SDR)		Malc	TUE
	1345z	25/02 [910/36 08855.....81654] Out 1356z S2	(Dutch SDR)		Malc	TUE
	1345z	29/02 [910/36 08695.....etc] Repeat of Tuesday			Malc	SAT
13908kHz	0745z	16/01 [220/00]			HfD	THU
	0745z	21/01 [225/34 78201 52203 37421 54456 26155 31457 96185.....24147 ]	(Polish SDR)		RNGB, Malc	TUE
	0745z	30/01 [223/00]			RNGB	THU
	0745z	04/02 [224/00]			RNGB, Malc	TUE
	0745z	11/02 [224/34 87889.....13890] Out 0755z S4	(Dutch SDR)		Malc	TUE
	0745z	18/02 [221/00] Out 0748z S3	(Dutch SDR)		Malc	TUE
	0745z	25/02 [228/00] Out 0748z S3	(Dutch SDR)		Malc, RNGB	TUE
	0745z	27/02 [229/00] Out 0748z S3	(Dutch SDR)		Malc, RNGB	THU
14611kHz	0820z	07/01 [130/00] Out 0823z S2	(Dutch SDR)		Malc, RNGB	TUE
	0820z	08/01 [136/00] Out 0823z S2	(Dutch SDR)		Malc	WED
	0820z	14/01 [135/35 36630 14669 35392 01995 81133 08257 96339 74909.....71038 93022]			Malc	TUE
	0820z	15/01 [135/35 36630 14669 35392 01995 81133 08257 96339 74909.....71038 93022]			RNGB, Malc	WED
	0820z	21/01 [131/00] Strong	(Polish SDR)		RNGB	TUE
	0820z	22/01 [137/00] Out 0823z S1			Malc	WED
	0820z	28/01 [134/00]			RNGB, Malc	TUE
	0820z	29/01 [135/00] Out 0823z S2			Malc, RNGB	WED
	0820z	04/02 [131/00]			RNGB, Malc	TUE
	0820z	05/02 [134/00]			RNGB, Malc	WED
	0820z	18/02 [134/00] Out 0823z S2			Malc	TUE
	0820z	19/02 [130/00] Out 0823z S2	(Dutch SDR)		Malc	WED
	0820z	25/02 [134/00] Out 0823z S2 + QRM	(Dutch SDR)		Malc	TUE
	0820z	26/02 [131/00] Out 0823z S2	(Dutch SDR)		Malc	WED
15720kHz	0830z	13/01 [181/24 91614 to 36728] Out 0839z	very weak and fading		Malc, HfD	MON
	0830z	17/01 [181/24 91614 50851 84885 82095 57137 29938 08284.....61482 36728]	Weak		RNGB	FRI
	0830z	20/01 [189/00] Out 0833z S2	(Dutch SDR)		Malc, RNGB	MON
	0830z	24/01 [188/00] Out 0833z S2			Malc, RNGB	FRI
	0830z	27/01 [188/00] Out 0833z S2			RNGB, Malc	MON
	0830z	31/01 [185/00] Strong	(Polish SDR)		RNGB, Malc	FRI
	0830z	03/02 [189/00] Out 0833z S2	(Dutch SDR)		Malc	MON
	0830z	07/02 [182/00] Out 0833z S2	(Dutch SDR)		Malc	FRI
	0830z	10/02 [180/00] Out 0833z S2	(Dutch SDR)		Malc, RNGB	MON
	0830z	17/02 [180/40 48669.....36660?] Out 0841z S2	QSB1		Malc	MON
	0830z	21/02 [180/40 48669.....etc] Repeat of Monday			Malc	FRI
	0830z	28/02 [183/00] Out 0833z S2	(Dutch SDR)		Malc	FRI

17378kHz	0745z	10/01 [343/00] Out 0748z S2	(Dutch SDR)	Malc, HfD	FRI
	0745z	15/01 [346/00] Out 0748z S2	(Dutch SDR)	Malc	WED
	0745z	29/01 [348/00]		RNGB	WED
	0745z	31/01 [347/00] Out 0748z S2	(Dutch SDR)	Malc	FRI
	0745z	05/02 [344/00]		RNGB	WED
	0745z	07/02 [342/00] Out 0748z S2	(Dutch SDR)	Malc	FRI
	0745z	19/07 [344/00]		Ary	WED

## E17z

### Thursday

#### January 2020

0800z	11170kHz	0810z	9820kHz		
02/01		217 859 6 69856 82541 98423 79033 15452 10002 859 6 00000		[0810z(Dutch SDR)]	Weak
09/01		217 859 6 69856 82541 98423 79023 15452 10002 859 6 00000		[0800z Unworkable]	Weak(Dutch SDR)
16/01		217 946 5 88620 58069 61732 74537 57330 946 5 00000			Weak(Dutch SDR)
30/01		217 000			Weak

#### February 2020

20/02		217 968 5 88620 58069 61732 74537 57440 968 5 00000		[0800z (Dutch SDR)]	Weak
27/02		217 968 5 88620 58069 61732 74537 57440 983 5 00000			Weak

## E25

Not heard

## G06

### We start with PoSW's observations:

#### Second + Fourth Thursdays in the Month 1830 UTC Schedule:-

9-Jan-20:- 4519 kHz, call "271", DK/GC "241 241 45 45", ended after 1841 UTC, computer shut-down sound just before 1842.

23-Jan-20:- 4519 kHz, call "271", DK/GC "271 271 44 44", the decode key – if that is what it is - the same as the call. Had started when tuned in just after 1829 UTC, peaking S9 but sinking into local noise at times. Ended after 1840z, computer shut-down heard at 1841:15s approx.

13-Feb-20:- 4519 kHz, call "271", DK/GC "579 579 44 44", lots of strange noises on this frequency, ended after 1842 UTC, computer shut-down followed by hum at 1844:30s.

#### Friday 1930 UTC Schedule Following Second + Fourth Thursdays:-

10-Jan-20:- 4792 kHz, call "436", DK/GC "242 242 44 44", weak signal at times with difficult copy, appeared to be transmitted in USB carrier suppressed mode instead of the usual USB plus carrier.

24-Jan-20:- 4792 kHz, started well before the half-hour, call "436", DK/GC "271 271 44 44", ended after 1940z, computer shut-down heard afterwards.

#### First + Second Mondays in the Month 1700 + 1800 UTC Schedule:-

6-Jan-20:- 1659 UTC, 3605 kHz, found in progress a minute before the hour, weak signal,

"731 731 731 00000", weak signal, voice stopped at approx 1702:30s UTC so must have started extra early. Unable to find a second sending at 1800 UTC.

No sign on 3-Feb-20 at 1700 UTC although there was a weak carrier on 3605, no voice heard but since this is inside the 80 metre band it could have been an amateur tuning up and no transmission found at 1800.

### Others' observations, next page

**Monday**

**January/February 2020**

**0800z 5320kHz**

NRH?

**1700z 3605kHz 1800z nnnnkHz**

06/01 731 00000 Ary MON

**Wednesday**

**January 2020**

**1200z 4920kHz 1300z 4028kHz**

08/01 731 000 Ary WED

**February 2020**

**1158z 4897kHz 1258z 4034kHz**

**Thursday**

**January 2020**

**1300z 4460kHz**

09/01 NRH

**1830z 4519kHz**

09/01 271 241 45 12435 ... 32442 241 45 00000 Weak

23/01 271 271 44 11532 ... 87820 271 44 00000 Weak

**February 2020**

**1830z 4533kHz**

09/01 NRH

**Friday**

**January 2020**

**1930z 4792kHz**

10/01 436 242 44 31532 ... 38780 242 44 00000 Weak

24/01 436 271 44 11532 ... 38780 271 44 00000 Weak(Dutch SDR)

**February 2020**

14/02 436 579 44 11532 ... 38780 579 44 00000 Fair

# **S06**

## **S06 log January 2020**

**Thursdays**

**0830z 16243kHz 0930z 13469kHz**

09/01 '842' 179 30 70976 72349 85846 22650 59052 56912 20102 03783 77172 25716 34740 28014 43292 29845 66700 62641 81852 06328 50215 99301 28463 95288 71339 70400 30771 38069 27276 89460 68966 73479 179 30 00000

16/01 '842' 760 35 94528 20628 28174 80660 89469 53298 35949 14599 99214 26023 38201 12278 86018 83633 01942 97994 92536 20255 76967 91600 47394 00854 72362 34786 15368 05934 48732 95982 40645 41568 37094 08569 56585 81940 20361 760 35 00000

23/01 '842' 913 40 98720 93208 87560 51915 76828 42884 34650 96058 16706 16485 65815 28139 60603 64696 06625 11707 79866 87181 45119 10583 86644 84898 62133 84191 29295 30867 53896 44311 94919 76584 32854 02953 67462 36274 17652 66521 14810 16150 48222 52481 913 40 00000

30/01 '842' 761 45 47035 17085 04683 57370 59092 07951 22751 20613 10797 98923 14763 40926 86193 07854 33132 71179 78611 21294 85102 95026 18496 27374 65894 36392 39606 40578 51323 66328 32044 60602 60835 61919 55523 32477 26883 96924 11338 00150 31588 68849 96458 70716 96630 92125 88194 761 45 00000

**Fridays (1st & 3rd) 2000z 7378khz 2100z 5097kHz**

03/01 '452' 00000  
17/01 '452' 00000

**Other transmissions:**

Monday 27/01 0632z (in progress) **6792khz** '381' 51 groups (thanks F5JBR)

**S06c**

Tuesday 21/01 1317z **7823kHz** I.P. '11625' repeated until 1319z Fair. SDR Enschede Ed Smith

**S06s January log:**

**Monday**

6th/13th 0630/0640z 13470/16515 '462' 915 7 94475 31467 53568 83168 97998 10205 64336  
20th/27th '462' 903 5 73687 04656 39895 91670 29267  
6th/13th 0830/0840z 8057/8530 '764' 209 5 69816 97314 15802 70076 29426  
20th/27th '764' 812 5 80113 13680 24519 33226 36362  
6th/13th 0900/0910z 14675/12830 '232' 907 5 95693 44707 03156 44395 63319  
20th/27th '232' 809 5 04731 60677 77532 61912 06987  
6th/13th 1300/1310z 8420/10635 '149' 260 5 10107 60562 48015 26417 12362  
20th/27th '149' 823 5 61719 58159 87639 92294 17231

**Tuesday**

7th/14th 0600/0610z 16145/14240 '438' 519 6 04465 31467 52268 83168 97998 65860  
21st/28th '438' 516 7 65959 30803 83773 48081 15577 34020 27466  
7th/14th 0700/0710z 5250/6320 '452' 839 6 36924 98924 75353 33884 82749 10076  
21st/28th '452' 971 6 24541 33941 56823 43884 85518 35628  
7th/14th 0730/0740z 7410/11532 '427' 819 5 20205 64336 95534 98446 87636  
21st/28th '427' 869 5 33976 50598 23496 41266 49805  
7th/14th 0800/0810z 11945/13195 '127' 936 5 73687 04565 39895 91670 29257  
21st/28th '127' 469 5 24541 33941 56823 43884 85518  
7th/14th 1000/1010z 6440/5660 '427' 910 5 69816 97314 15802 70076 29421  
21st/28th '427' 839 5 56599 04308 83774 48081 15557  
7th/14th 1100/1110z 5035/5975 '265' 489 7 08446 87636 04475 31467 53368 83168 97998  
21st/28th '265' 943 7 81918 04774 05990 45844 28524 22280 79744  
7th/14th 1500/1510z 6845/9170 '914' 236 5 81155 15870 20136 51543 38142  
21st/28th '914' 870 5 59036 20030 16199 83296 25251

**Wednesday**

1st/8th 0830/0840z 11535/11830 '172' 869 5 35359 40299 67011 76992 30175  
15th/22nd '172' 904 5 76985 13776 95091 35527 04464  
1st/8th 0830/0840z 7062/10532 '464' 915 7 87332 46509 21277 46550 20975 39880 15088  
15th/22nd '464' 807 5 92103 50754 67971 25571 71582  
1st/8th 1000/1010z 12365/14280 '276' 934 5 02062 24122 33346 65132 02232  
15th/22nd '276' 418 5 06802 37432 33175 52224 32227

**Thursday**

2nd/9th (E17z) 0800/0810z 11170/9820 '217' 859 6 69856 82541 98423 79033 15452 10002  
16th/23rd '217' 946 5 88620 58069 61732 74537 57330  
2nd/9th 0930/0940z 8812/9540 '698' 273 5 11169 03439 43548 19152 23063  
16th/23rd '698' 407 5 21767 53672 11834 81022 36903  
2nd/9th 1200/1210z 12155/10920 '175' 948 6 20205 64336 95534 08446 87636 04475  
16th/23rd '175' 824 6 52401 63919 92699 14600 84248 48754

**Friday**

3rd/10th 0630/0640z 11780/12570 '156' 932 7 73687 04565 39895 91670 29257 69816 97314  
17th/24th '156' 203 7 88620 58069 61732 74537 53770 10597 23521  
31st 0830/0840z 11040/12153 '156' 00000  
3rd/10th 0900/0910z 5765/6315 '239' 810 5 36924 98924 56353 33884 84286  
17th/24th '239' 461 5 88905 67201 65653 29875 31124

**Saturday**

4th 0800/0810z 8680/8260 '132' 846 5 73687 04565 39895 91670 29257

With thanks to Daniel E, RNGB, Malc, Ary, HfD



## **S06 AND S06a RUSSIAN STATIONS from PoSW**

### **S06 OM Voice:-**

The last remaining S06 schedule transmitted in the UK evening time – unless someone knows otherwise – has survived into 2020; in the past many S06 schedules ceased at the end of the year in the December but not found in the January following on.

### **First + Third Fridays 2000 UTC + 2100 UTC Schedule:-**

3-Jan-20:- 2001 UTC, 7380 kHz, S06 OM found in progress with, “452 452 452 00000”,

fair signal, S7 or so, very strong broadcast station on LF side removed by using RX in USB mode.

2100 UTC, 5097 kHz, second sending, also S7, a search for pre-transmission warm-up routine found a carrier with tone followed by a single spoken “452” around 2045z.

17-Jan-20:- No sign of S06 at 2000 UTC on 7380; searching up and down there appeared to be a very weak signal close to the S9+ broadcast station on 7375, on the LF side which may - or may not – have been S06. No problem with the second sending:-

2100 UTC, 5097 kHz, “452 452 452 00000”, fair signal.

In February this schedule moved by one hour, as it has often done in the past, this time back to appear earlier than in January:-

7-Feb-20:- 2000 UTC, 5097 kHz, so the first sending would have been at 1900 on 7380

or thereabouts, “452 452 452 00000”.

21-Feb-20:- Unable to find a transmission at 1900 UTC but the second sending showed up as expected:-

2000 UTC, 5097 kHz, weak signal, “452 452 452 00000”.

### **S06s YL Voice:-**

Some of the stronger S06s transmissions heard in the first two months of 2020:-

### **Monday 0830 + 0840 UTC Schedule, Call “764”:-**

6-Jan-20:- 0830 UTC, 8057 kHz, DK/GC “209 209 5 5”, good signal, “69816 97314 15802 70076 29426”.

0840 UTC, 8530 kHz, second sending, slightly weaker.

20-Jan-20:- 0830 UTC, 8057 kHz, DK/GC “812 812 5 5”, “80113 13680 24519 33226 36362”.

0840 UTC, 8530 kHz, both transmissions S7.

3-Feb-20:- 0830 UTC, 8057 kHz, DK/GC “831 831 5 5”, “52401 63919 92699 14600 74248”, S6 to S7.

0840 UTC, 8530 kHz, also S6 to S7.

17-Feb-20:- 0830 UTC, 8057 kHz, DK/GC “809 809 5 5”, “80113 13680 24519 33226 36362”, S8.

0840 UTC, 8530 kHz, strong, well over S9.

### **Tuesday 0730 + 0740 UTC Schedule, Call “427”:-**

7-Jan-20:- 0730 UTC, 7410 kHz, DK/GC “819 819 5 5”, weak signal, “20205 64336 95534 98446 87336”.

0740 UTC, 11532 kHz, weak signal, strong broadcast station on close frequency.

14-Jan-20:- 0730 UTC, 7410 kHz, DK/GC “819 819 5 5”, same 5Fs as last time, strong signal, well over S9.

0740 UTC, 11532 kHz, strong, competing well with the broadcaster on 11530.

21-Jan-20:- 0730 UTC, 7410 kHz, DK/GC “869 869 5 5”, “33976 50598 23496 41266 49805”, S6 to S7.

0740 UTC, 11532 kHz, weak, the broadcast station winning the fight this morning.

28-Jan-20:- 0730 UTC, 7410 kHz, DK/GC “869 869 5 5”, 5Fs as on 21-Jan, strong signal.

0740 UTC, 11532 kHz with the usual interference.

4-Feb-20:- 0730 UTC, 7410 kHz, DK/GC “906 906 5 5”, “40614 77249 40678 17976 21816”, S8.

0740 UTC, 11532 kHz, second sending weak with the usual interference, although the pre-transmission carrier came up very strong for a few seconds and then became weak again as though the TX power had briefly been switched much higher.

18-Feb-20:- 0730 UTC, 7410 kHz, DK/GC “981 981 5 5”, S6 to S7, “49952 08251 89751 87844 55146”.

0740 UTC, 11532 kHz, weak and with the usual broadcast interference.

### **Tuesday 0800 + 0810 UTC Schedule, Call “127”:-**

7-Jan-20:- 0800 UTC, 11945 kHz, weak signal, DK/GC “936 936 5 5”, “73687 04565 39895 91670 29257”.

0810 UTC, 13195 kHz, second sending, much stronger.

14-Jan-20:- 0800 UTC, 11495 kHz, DK/GC “936 936 5 5” and 5Fs as on the 7<sup>th</sup>.

0810 UTC, 13195 kHz, strong pulse wide-band pulse interference came up at around 0813:30s UTC wiping out S6s but went off after a minute or so.

4-Feb-20:- 0800 UTC, 11945 kHz, DK/GC “408 408 5 5”, “54516 25616 56069 96813 14199”, S7 with QSB.

0810 UTC, 13195 kHz, slightly weaker.

18-Feb-20:- 0800 UTC, 11945 kHz, DK/GC "846 846 5 5", "49848 40527 08280 81987 05991", S6.  
0810 UTC, 13195 kHz, a couple of S-points stronger.

**Wednesday 0830 UTC + 0840 UTC Schedule, Call "172":-**

8-Jan-20:- 0830 UTC, 11535 kHz, DK/GC "869 869 5 5", strong signal, "35359 40299 67011 76992 30175"  
0840 UTC, 11830 kHz, also strong, well over S9.

15-Jan-20:- 0830 UTC, 11535 kHz, DK/GC "904 904 5 5", S8, "76985 13776 95091 35527 04464.  
0840 UTC, 11830 kHz, very strong.

5-Feb-20:- 0830 UTC, 11535 kHz, DK/GC "439 439 5 5", "88620 58069 61732 74537 53440", peaking S8.  
0840 UTC, 11830 kHz, well over S9.

19-Feb-20:- 0830 UTC, 11535 kHz, DK/GC "408 408 5 5", "45478 59849 85286 34173 00259", very strong S9+ signal.  
0840 UTC, 11830 kHz, slightly weaker.

**Wednesday 1000 + 1010 UTC Schedule, Call "276":-**

8-Jan-20:- 1000 UTC, 12365 kHz, DK/GC "934 934 5 5", "02062 24122 33346 65132 02232", strong signal.  
1010 UTC, 14280 kHz, much weaker, difficult copy.

15-Jan-20:- 1000 UTC, 12365 kHz, DK/GC "418 418 5 5", S5 at best, "06802 37432 33175 52224 32227".  
1010 UTC, 14280 kHz, very weak.

29-Jan-20:- 1000 UTC, 12365 kHz, "276 276 276 00000", the usual "no message" because this is the fifth Wednesday in this month.  
1009 UTC, 14280 kHz, and the usual one minute early start for the second sending of a "no message".

12-Feb-20:- 1000 UTC, 12365 kHz, DK/GC "831 831 5 5", peaking S8, "33796 13577 74526 46647 79302".  
1010 UTC, 14280 kHz, weaker, inside 20 metre band, interference from amateur SSB in unknown language, possibly deliberate.

**First Saturday in the Month Schedule, 0800 + 0810 UTC Schedule, Call "132":-**

4-Jan-20:- 0800 UTC, 8680 kHz, DK/GC "846 846 5 5", weak signal, "73687 04565 39895  
91670 29257".  
0810 UTC, 8260 kHz, stronger.

1-Feb-20:- 0800 UTC, 8680 kHz, DK/GC "860 860 7 7", peaking S7 with QSB, "52401 63919 92699 14600 74248 48754 65125".  
0810 UTC, 8260 kHz, also around S7.

## S11a log Jan/Feb

4242kHz	0915z	06/01 [485/00] Konyetz 0918z S5		Malc, RNGB	MON
	0915z	13/01 [480/00] Konyetz 0918z S2	(Dutch SDR)	Malc	MON
	0915z	17/01 [480/00] Konyetz 0918z S2		Malc	FRI
	0915z	20/01 [480/00] Konyetz 0918z S2		Malc, RNGB	MON
	0915z	24/01 [484/00] Konyetz 0918z S2		Malc, RNGB	FRI
	0915z	27/01 [484/39 91453.....65475] Konyetz 0927z S2		Malc	MON
	0915z	31/01 [484/39 91453.....etc] Repeat of Monday		Malc	FRI
	0915z	03/02 [482/00] Weak		RNGB, Malc	MON
	0915z	07/02 [484/00] Konyetz 0918z S3	(Dutch SDR)	Malc	FRI
	0915z	10/02 [480/00] Konyetz 0918z S2		Malc, RNGB	MON
	0915z	14/02 [487/00] Konyetz 0918z S2		Malc	FRI
	0915z	17/02 [485/31 06340.....31692] Konyetz 0925z S3 (Dutch SDR)		Malc	MON
	0915z	21/02 [485/31 06340.....etc] Repeat of Monday		Malc	FRI
	0915z	24/02 [484/00] Konyetz 0918z S2	(Dutch SDR)	Malc	MON
	0915z	28/02 [482/00] Konyetz 0918z S2	(Dutch SDR)	Malc, RNGB	FRI
4505kHz	0715z	01/02 [121/30 32167 96813 06068 60434 05461.....68797 01356 ] - crazy world of 121 again!		Ary	SAT
5371kHz	1100z	08/01 [378/00] Konyetz 1103z S6		Malc	WED
	1100z	10/01 [377/00] Konyetz 1103z S3		Malc	FRI
	1100z	17/01 [370/00] Konyetz 1103z S2		Malc, Ed Smith	FRI
	1100z	22/01 [370/00] Konyetz 1103z S3		Malc, RNGB	WED
	1100z	24/01 [370/00] Konyetz 1103z S3		Malc	FRI
	1100z	29/01 [372/00] Konyetz 1103z S4		Malc	WED
	1100z	31/01 [370/00]		RNGB	FRI
	1100z	05/02 [372/00]		dhmz, Malc, RNGB	WED
	1100z	07/02 [371/00] Konyetz 1103z S2		Malc	FRI



1100z	12/02 [370/00] Konyetz 1103z S3		Malc	WED
1100z	14/02 [378/00] Konyetz S3		Malc	FRI
1100z	19/02 [373/32 01261.....06697] Konyetz 1111z S3		Malc	WED
1100z	21/02 [373/32 85825.....03911] Konyetz 1111z S2		Malc	FRI
1100z	26/02 [372/00] Konyetz 1103z S2		Malc	WED
1100z	28/02 [373/00] Konyetz 1103z S2		Malc, RNGB	FRI
7600kHz	1020z 03/01 [427/00]		RNGB	FRI
	1020z 07/01 [429/00] Konyetz 1023z S6		Malc	TUE
	1020z 14/01 [424/00] Konyetz 1018z S4		Malc	TUE
	1020z 17/01 [420/00] Konyetz 1023z S4		Malc	FRI
	1020z 21/01 [427/33 10255.....83180] Konyetz 1031z S3		Malc	TUE
	1020z 24/01 [427/33 10255 35444 68064 48620 91606 69107 89727 89135.....20886 83180]		RNGB, Malc	FRI
	1020z 28/01 [424/00] Konyetz 1023z S2		Malc	TUE
	1020z 04/02 [421/00]		RNGB, Malc	TUE
	1020z 07/02 [425/00] Konyetz 1023z S3		Malc	FRI
	1020z 14/02 [423/40 16124..... 93546] Konyetz 1033z S3		Malc	FRI
	1020z 21/02 [429/00] Konyetz 1023z S3		Malc	FRI
	1020z 25/02 [426/36 61668.....05819] Konyetz 1031z S4 (Dutch SDR)		Malc	TUE
	1020z 28/02 [426/31 61668.....etc] Repeat of Tuesday		Malc, PLondon	FRI
9050kHz	0700z 06/01 [470/00] Konyetz 0703z Weak under static. (SDR Enschede)		Ed Smith	MON
	0700z 09/01 [471/00] Konyetz 0703z Weak under static (SDR Enschede)		Ed Smith	THU
	0700z 13/01 [477/00] Konyetz 0703z Weak under static. (SDR Enschede)		Ed Smith	MON
	0700z 20/01 [470/00] Konyetz 0703z Weak under static. (SDR Enschede)		Ed Smith	MON
	0700z 23/01 [476/00] Konyetz 0703z Weak under static. (SDR Enschede)		Ed Smith	THU
	0700z 30/01 [471/33 02060 03941 78244 60637 67600 40517 57909.....96451 92410] (Polish SDR)		RNGB, Ed Smith	THU
	0700z 06/02 [477/00]		RNGB	THU
	0700z 10/02 [471/39 27023 16800 94930 50899 48089 40810 84198 96970.....24149 40522]		RNGB	MON
11486kHz	1850z 04/01 [284/00]		Ary, Malc	SAT
	1850z 08/01 [280/00] Konyetz 1853z S2		Malc	WED
	1850z 22/01 [285/00] Konyetz 1853z S2		Malc	WED
	1850z 25/01 [286/00] Konyetz 1853z S1 (Dutch SDR)		Malc	SAT
	1850z 05/02 [284/00] Konyetz 1853z S2		Malc	WED
	1850z 12/02 [282/31 76638.....85150] Konyetz 1900z S2 QSB1		Malc	WED
	1850z 15/02 [282/31 76638.....etc] Repeat of Wednesday		Malc	SAT
	1850z 19/02 [286/00] Konyetz 1853z S3 (Dutch SDR)		Malc	WED
	1850z 29/02 [281/00]		RNGB	SAT

## V02 a

Nil Reports

## V06

Expert catch by Daniel in the Argentine

10755kHz0830z 29/01 975 89412 248 30 85340 ... 99319 248 30 00000 DanAr WED

975 975 975 89412 (R4m, stops just before 0834z)

975 975 975 89412 (R1m)

248 30

85340 28247 39957 87573 11710 91406 53657 52103 47227 96919

38720 54275 89143 95659 47642 22162 80815 94423 39479 51421

77373 28020 59050 95019 63049 89656 07626 10460 56104 99319

248 30 00000 Courtesy DanAr

Sound sample available on Group, courtesy Daniel

## V07

Sunday

January 2020

0100z 15893kHz 0120z 14963kHz 0140z 13893kHz

12/01 868 1 5875 106 17027 ... 53667 000 000 [Freqs via Priyom ... tnx] Weak

19/01 868 1 555 142 56763 ... 29701 000 000 Weak

26/01 868 1 384 130 63150 ... 76158 000 000 Weak

**19/01**

868 868 868 1  
555 142  
56763 09377 38942 00622 91986  
35609 41284 43315 93275 32047  
64233 64983 38047 18375 02305  
37897 53969 03344 19463 33822  
36664 48823 66302 07034 74750  
88088 77363 08400 30242 28633  
65455 25944 33139 29677 06802  
53518 72808 36583 93642 04257  
86283 19603 34388 92455 12756  
29967 56019 76064 74412 70446  
51557 70337 68046 69245 57176  
03086 16539 77114 42045 57026  
40105 41250 01037 56177 01385  
73722 23454 53579 46607 56319  
73000 71162 82743 02379 83955  
59383 89514 30649 37770 18674  
81729 53667 17850 15967 30580  
19224 03147 66151 24188 97979  
15395 74974 33838 60909 27312  
73012 38641 29465 59316 07026  
66514 66004 25495 86697 19761  
04567 24848 00423 75891 84990  
21900 74325 42318 16452 85627  
20419 06902 98820 29083 62805  
68832 46083 42978 59770 03244  
72435 96809 64301 16158 57685  
34125 80717 94892 99098 68745  
75486 31401 31138 64633 67961  
08582 29701 000 000  
*Courtesy DanAr*

**26/01**

868 868 868 1  
384 130  
63150 73066 90994 88377 27300  
28754 09538 47013 06081 42447  
08351 05886 93045 67309 81617  
75280 76021 95087 10628 69820  
60863 71152 38918 81199 65372  
35197 06529 74506 43102 75556  
25738 70452 53023 11179 16890  
37512 02160 27821 64274 16834  
47266 17531 87915 62295 91194  
84555 35767 62860 48039 97428  
04976 19574 19722 31364 34662  
38827 88888 61111 13890 53624  
04563 06248 83901 70094 83279  
70808 25811 00281 08061 78632  
83253 72110 57312 91100 89204  
88030 90020 28717 98475 68654  
54190 65735 64354 71343 20227  
12852 59827 70012 84006 91924  
10248 61272 47486 18969 78688  
12738 71381 50423 39960 32331  
50312 77332 78991 21089 27966  
60902 83164 53889 96532 63295  
73046 86746 83814 17181 66496  
63340 81519 08720 20994 23187  
66415 28099 71084 38322 72203  
58811 82097 87495 33174 76518  
000 000 *Courtesy DanAr*

**February 2020**

**0100z 15874kHz 0120z 14774kHz 0140z 13874kHz**

09/02 878 000 Weak

16/02 878 1 3503 156 11861 ... 21122 000 000 Weak

DanAr notes: Transmission started late without introduction – revised start times due to duration.

Token writes: "The message was 156 code groups, this caused the 0100z transmission to run up until the time the 0120z transmission should have started. The V07 transmitter came up and tuned up, using its standard AM tuning, at about 0124z on 14774 kHz. The low level hum of the transmitter was observed from that point on. However, the message was never sent on 14774 kHz, even though the transmitter was on frequency. The transmitter moved to 13874 kHz and tuned up at about 0147z. The message started in mid message at about 0149z. I assume this was all operator error, as it did not sound like there was a technical issue."

23/02 878 1 8245 162 31798 ... 37942 000 000 [\*BCQRM 0120z] Weak

\* The broadcasting is SOH Xi Wang Zhi Sheng from Taiwan in 14775 khz (Short-Wave.info). Tonight started emission 3'40 sec after V07 start and finished transmission shortly after V07 end. Thanks DanAr

**23/02**

878 878 878 1  
8245 162  
31798 15694 26632 16098 41926  
83811 19551 18604 95135 15629  
68064 54437 56198 66998 73659  
15463 87380 36130 78424 06754  
05590 02681 48498 22724 43740  
84722 77487 27028 42399 08372  
71683 03109 39651 83196 13684  
83905 34825 68332 28578 84053  
87361 22669 38006 69172 13338  
17695 28337 20626 27719 10242  
95908 32821 83642 57401 65656  
11770 82152 71637 48504 91559  
43387 71926 81335 62982 82793  
66563 13414 32645 35815 04573  
72674 62707 94251 31010 84963  
16205 98988 63896 87778 33418  
19726 74890 65829 18494 82749  
60329 04880 20982 25278 05569  
35136 90565 87677 34778 16593  
93312 11526 29351 67074 03280  
21645 01040 83891 28160 14684  
24648 62102 15404 35131 38091  
72551 21101 28016 56386 27331  
37382 83992 63931 73009 43333  
07292 64713 55389 89747 91914  
21963 53101 70970 56821 75431  
41544 68488 60237 05933 82033  
23203 54686 71112 36762 14201  
08615 50887 49728 35146 18437  
90905 57353 11197 81649 48805  
33743 21310 62286 34445 45622  
05316 81227 49290 05094 84268  
57158 37942 000 000  
*Courtesy DanAr*

# V15 North Korean Intelligence via Radio Pyongyang

657, 3250, 3320, 6400kHz Listed in DATE ORDER

## V24 South Korean intelligence

4925kHz1430z 15/01 Dvorak's Slavonic Dances followed by a message in Korean [web sdr Tokyo] Ary WED

## V26

4243kHz1214z	15/02 [(From M95 sked - USB - Chinese - Female - // 9054) (Remote tuner Hong Kong)]	JPL	SAT
4243kHz1230z	16/02 [(From M95 sked - USB - Chinese - Female - // N/H) (Remote tuner Japan)]	JPL	SUN
9054kHz0915z	01/02 [(From M95 sked - USB - Chinese - Female - // N/H) (Remote tuner Novosibirsk)]	JPL	TUE
9054kHz1214z	15/02 [(From M95 sked - USB - Chinese - Female - // 4243) (Remote tuner Hong Kong)]	JPL	SAT

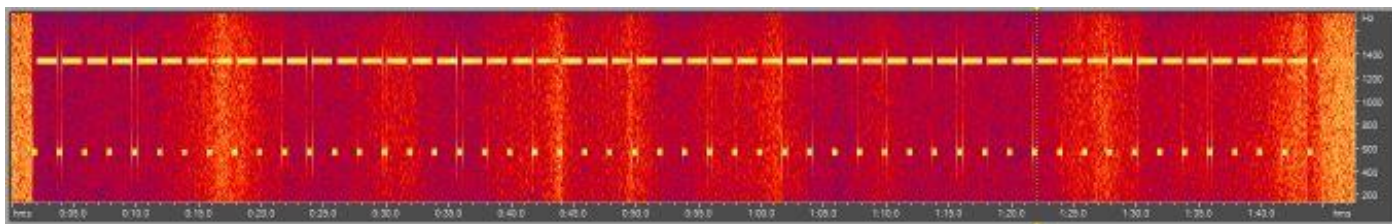
# Polytones

## XPA1 c

Tuesday/Thursday

January 2020

0810z 12157kHz 0830z 13462kHz 0850z 14374kHz



02/01	Message	HFD	THU
07/01	265 000 02448 00001 00000 ... 37256	[0830z 1m43s of intro only as above]	Strong
09/01	265 000 07055 00001 00000 ... 33664	[080z Weak, noisy]	Fair
14/01	265 1 05815 00104 56400 ... 13745	[0810z Strong]	Very strong
16/01	265 1 05815 00104 56400 ... 13745	[0850z Fair, QRM3]	Strong

265 265 265 1 265 265 265 1 265 265 265 1

05815 00104 56400 25097 91277 46963 38592 99744 29692 74126  
 62350 23617 78566 46376 78059 57045 06599 42317 98537 84826  
 29514 05072 31322 40591 51627 90436 00568 30296 22570 91246  
 69289 92366 60562 77597 68974 86715 05118 99126 39726 33881  
 52934 03579 52632 47428 23188 23863 74521 55693 80694 47667  
 43335 80957 81657 47988 29013 23415 63674 56251 46886 07977  
 79094 52443 92851 34379

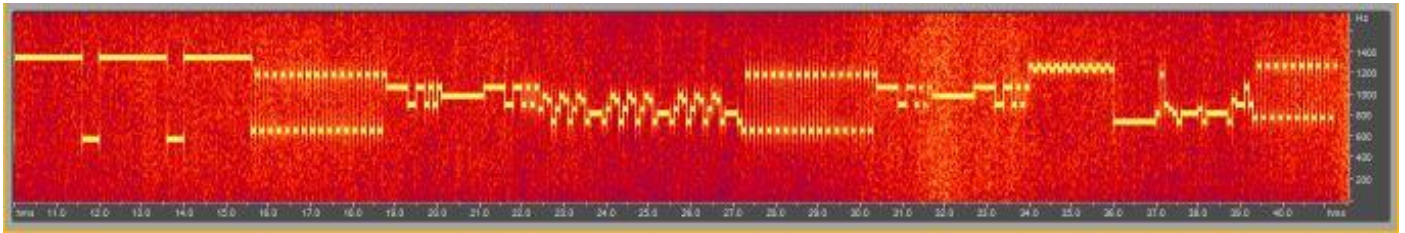
15925 26366 23046 82389 53122 84484 83236 24322 74855 30512  
 25678 65832 79429 52512 84390 00764 36086 80644 84345 41649  
 91586 49683 98557 77418 80270 77458 40972 75398 74205 05556  
 96417 33686 16070 71379 29485 44517 42057 64147 28855 36655  
 41240 3754 13745

Courtesy PLdn

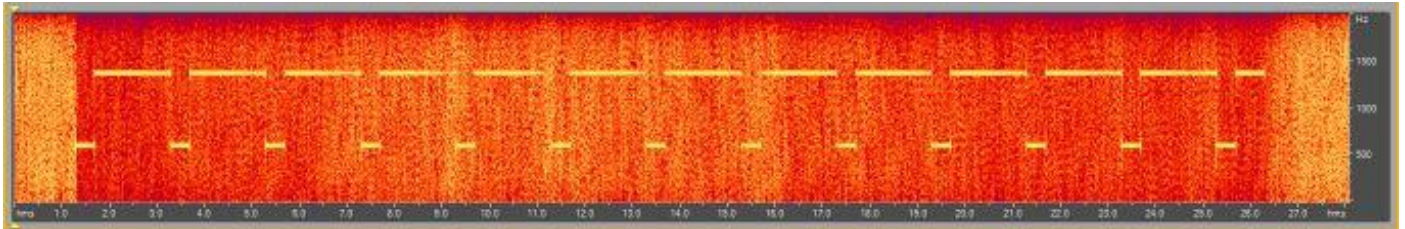
23/01	265 000 03861 00001 00000 ... 35661	[0810z Fair]	Very strong
30/01	265 000 0007437 00001 00000 ... 36662		Very strong

February 2020

0810z 13397kHz 0830z 14413kHz 0850z 15972kHz



0810z 06/02/2020



0850z 06/02/2020

06/02	143 000 09210 00001 00000 ... 32262	[0850z 25s intro only]	Strong
13/02	143 000 02317 00001 00000 ... 36253	[0850z Strong]	Very strong
20/02	143 000 02866 00001 00000 ... 40260	[0850z NRH]	Very strong
25/02	143 000 05034 00001 00000 ... 33260		Very strong
27/02	143 000 02092 00001 00000 ... 32263		Very strong

## XPA2 m

## NEW FREQS

Sunday/Tuesday

January 2020

1200z 10921kHz 1220z 12221kHz 1240z 13521kHz

07/01	04787 00001 00000 ... 40264		Strong
12/01	08464 00086 56786 ... 35025		Very strong
14/01	08012 00156 66644 ... 10203		Very strong
19/01	08012 00156 66644 ... 10203		Strong
26/01	06612 00112 60693 ... 45673		Strong

February 2020

1200z 11163kHz 1220z 13363kHz 1240z 14563kHz

02/02	00505 00082 09868 ... 60475	[1200z Very strong]	Strong
09/02	06665 00096 30203 ... 11632	[1220z Strong]	Very strong
16/02	00325 00188 81489 ... 00271	[1200z Strong, QSB3]	Fair
23/02	00295 00198 38190 ... 53457		Fair

# XPA2 p

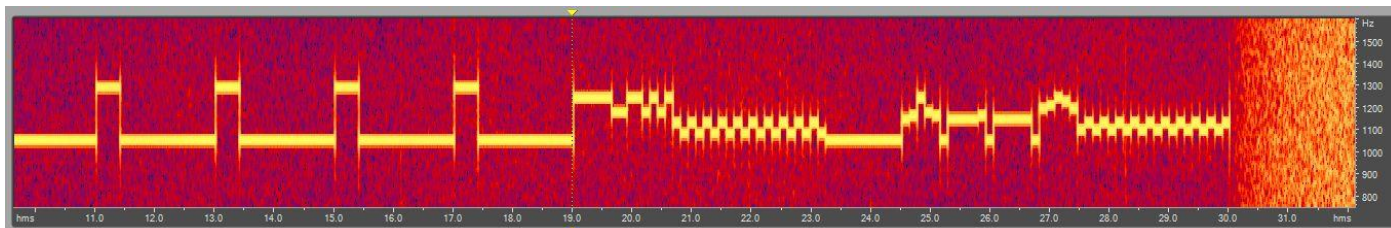
# NEW FREQS

Monday/Wednesday

January 2020

0800z 11493kHz 0820z 13393kHz 0840z 14793kHz

06/01 03914 00001 00000 ... 37654 Fair



08/01	01621 00001 00000 ... 34653	[0800z Fair]	Very strong, as above
13/01	06889 00118 82970 ... 30323	[0800z QRM3/4]	Strong
20/01	06889 00118 82970 ... 30323	[0800z QRM3]	Strong
27/01	00173 00100 18237 ... 76511	[0800z Fair, noisy]	Very strong

00173 00100 18237 71771 53072 78510 12011 06501 08610 68220  
 23355 68274 85127 82598 79587 64799 93171 10494 43194 54012  
 45977 18699 61601 26649 18655 25105 10515 18227 38947 92661  
 45573 64972 73166 74554 63956 93179 87863 83625 77887 08722  
 16813 84428 60111 18728 29701 17553 52043 88670 67843 66621  
 28670 04566 45709 49390 08272 49871 27300 29423 11548 69861  
 17655 30377 63626 14213 41388 33454 70104 72683 59727 90770  
 85555 21595 95695 31431 54880 55700 63504 28454 81915 10014  
 02183 40759 61511 16424 83051 51944 73508 98103 50750 88813  
 83658 07917 44806 67347 57118 84566 19325 71661 54072 64560  
 79044 76511 *Courtesy PLdn*

February 2020

0800z 13387kHz 0820z 13887kHz 0840z 14787kHz

03/02 00173 00100 18237 ... 76511 [0840z QSB3] Strong

00173 00100 18237 71771 53072 78510 12011 06501 08610 68220  
 23355 68274 85127 82598 79587 64799 93171 10494 43194 54012  
 45977 18699 61601 26649 18655 25105 10515 18227 38947 92661  
 45573 64972 73166 74554 63956 93179 87863 83625 77887 08722  
 16813 84428 60111 18728 29701 17553 52043 88670 67843 66621  
 28670 04566 45709 49390 08272 49871 27300 29423 11548 69861  
 17655 30377 63626 14213 41388 33454 70104 72683 59727 90770  
 85555 21595 95695 31431 54880 55700 63504 28454 81915 10014  
 02183 40759 61514 65500 16424 83051 51944 73508 98103 50750  
 88813 83658 07917 44806 67347 57118 84566 19325 71661 54072  
 64560 79044 76511 *Courtesy Ary*

10/02 06326 00074 71644 ... 53063 [0800z LocalQRM2] Strong

06326 00074 71644 59154 58522 16396 95697 03798 20909 91993  
 39876 56285 78433 69774 24216 59811 40449 27223 74664 87417  
 57377 12197 60694 31762 76428 54098 98069 97832 22378 23418  
 72261 37488 06128 22565 60361 57744 30508 38075 23727 92386  
 07678 29278 94770 27454 12012 47509 56515 73419 58144 71176  
 86490 28024 01779 87707 43963 44735 95253 60489 25641 46199  
 02676 43919 22188 34377 34894 15418 93806 40555 41408 43834  
 73069 94418 25708 54914 10788 84458 53063 *Courtesy PLdn*

17/02 06326 00074 71644 ... 53063 Fair

23/02 00295 00198 38190 ... 53457 Fair

26/02 01869 00001 00000 ... 41657 Strong

## Other uncatalogued XPA2 schedules [H-FD]

### 1B XPA2

Thu 02.01.2020 0910Z 14794 msg  
Thu 02.01.2020 0930Z 13994 msg  
Thu 02.01.2020 0950Z 12194 msg

Thu 02.01.2020 1600Z 10465 msg      via KiwiSDR RUS  
Thu 02.01.2020 1620Z 9165 msg       via KiwiSDR RUS  
Thu 02.01.2020 1640Z 8065 msg       via KiwiSDR RUS

Fri 03.01.2020 1200Z 10726 msg  
Fri 03.01.2020 1220Z 11426 msg  
Fri 03.01.2020 1240Z 12226 msg

Sat 04.01.2020 1600Z 9317 msg  
Sat 04.01.2020 1620Z 8117 msg  
Sat 04.01.2020 1640Z 7517 msg

Mon 13.01.2020 0910Z 14977 msg  
Mon 13.01.2020 0930Z 13971 msg  
Mon 13.01.2020 0950Z 13371 msg

### 1B XPA2

Sat 01.02.2020 0910Z 16146 msg  
Sat 01.02.2020 0930Z 15846 msg  
Sat 01.02.2020 0950Z 14446 msg

Sat 01.02.2020 1600Z 11461 msg  
Sat 01.02.2020 1620Z 10261 msg  
Sat 01.02.2020 1640Z 9161 msg

Wed 05.02.2020 0910Z 16102 msg  
Wed 05.02.2020 0930Z 14951 msg  
Wed 05.02.2020 0950Z 13991 msg

Wed 05.02.2020 1200Z 11575 msg  
Wed 05.02.2020 1220Z 13375 msg  
Wed 05.02.2020 1240Z 13975 msg

Thu 06.02.2020 1600Z 12173 msg, weak  
Thu 06.02.2020 1620Z 10373 msg, weak  
Thu 06.02.2020 1640Z 9373 msg, weak

## XPB

## XPB1

### [From H-FD]

Sun 05.01.2020 2000Z 7771 msg, 4:30      via KiwiSDR RUS  
Sun 05.01.2020 2010Z 7471 msg           via KiwiSDR RUS  
Sun 05.01.2020 2020Z 6771 msg           via KiwiSDR RUS  
Sun 05.01.2020 2030Z 5771 msg  
Sun 05.01.2020 2040Z 5171 msg  
Sun 05.01.2020 2050Z 4771 msg

Mon 06.01.2020 1100Z 14769 msg  
Mon 06.01.2020 1110Z 14369 msg  
Mon 06.01.2020 1120Z 13969 msg  
Mon 06.01.2020 1130Z 13369 msg  
Mon 06.01.2020 1140Z 12169 msg  
Mon 06.01.2020 1150Z 11169 msg

Sat 01.02.2020 1100Z 15814 msg, 4:30  
Sat 01.02.2020 1110Z 14814 msg  
Sat 01.02.2020 1120Z 14414 msg  
Sat 01.02.2020 1130Z 13914 msg  
Sat 01.02.2020 1140Z 13414 msg  
Sat 01.02.2020 1150Z 12214 msg

Tue 04.02.2020 2000Z 8064 msg  
Tue 04.02.2020 2010Z 7964 msg  
Tue 04.02.2020 2020Z 6964 msg  
Tue 04.02.2020 2030Z 5864 msg  
Tue 04.02.2020 2040Z 5364 msg  
Tue 04.02.2020 2050Z 4464 msg

**[From Ary]**

8064 02-02-2020 2000 XPB1 not sure. I copied the last seconds  
7964 02-02-2020 2010 XPB1 not sure. I copied the last seconds  
6964 02-02-2020 2020 XPB1  
5864 02-02-2020 2030 XPB1  
5434 02-02-2020 2040 XPB1  
4464 02-02-2020 2050 XPB1

# Tones and Hybrids

## X06 Mazielka (1c) logs section

<u>Date</u>	<u>Day</u>	<u>UTC</u>	<u>Freq</u>	<u>Scale</u>	<u>Monitor</u>	<u>Comments</u>
20200107	Tue	1522/1524	9165	1--6--	Ary/NL	X06b before XPA2
20200107	Tue	1523	8065	1--6--	Ary	X06b before XPA2
20200107	Tue	1523	10465	1--6--	Ary	X06b before XPA2
20200107	Tue	1526	8065	1--6--	Ary	X06b before XPA2
20200107	Tue	1527	9165	1--6--	Ary	X06b before XPA2
20200107	Tue	1528	10465	1--6--	Ary	X06b before XPA2
20200107	Tue	1536	8065	1--6--	Ary	X06b before XPA2
20200107	Tue	1538	9165	1--6--	Ary	X06b before XPA2
20200107	Tue	1540	10465	1--6--	Ary	X06b before XPA2
20200113	Mon	1903	6776	1--6--	Schorschi	X06b before E07 with S9
20200115	Wed	1108-1110	14650	215346	Edd Smith	Good/clear, TX to Mumbai, G167(1)
20200117	Fri	0702-0704	12200	241563	Ary	I. p., TX to Karachi, G187
20200118	Sat	1014	12169	1--6--	Ary	X06b before XPB1
20200121	Tue	0905	11462	165423	Schorschi	S9, TX to Brussels, G151(2)
20200128	Tue	1025-1036	14970	216354	Edd	I. p., TX to Chennai, G228 (SDR)
20200201	Sat	1000	12214	1--6--	Schorschi	X06b with S9
20200203	Mon	0700	13387	1--6--	Ary	X06b before XPA2
20200207	Fri	1548	8147	1--6--	Ary	X06b before E07a
20200207	Fri	1549	9347	1--6--	Ary	X06b before E07a
20200209	Sun	0629	9326	1--6--	Ary	X06b before E07
20200212	Wed	1919	4739	1--6--	Ary	X06b
20200214	Fri	0954-0958	11514	124356	Danix	TX to Dushanbe, G420 (new group)
20200214	Fri	1522/1525	9347	1--6--	Ary	X06b before E07a
20200214	Fri	1525	8147	1--6--	Ary	X06b before E07a
20200218	Tue	0704/0706	13397	1--6--	Ary	X06b before XPA2
20200221	Fri	1002-1004	12215	361245	Ary	TX to Copenhagen, G190
20200221	Fri	1505	9347	1--6--	Ary	X06b before E07a
20200221	Fri	1505	8147	1--6--	Ary	X06b before E07a

- 1) I. p. via SDR Enschede
- 2) Together with HM01 on the same frequency

Many thanks to all contributors as usual. Till next time I say good-bye

Jochen Schäfer, Numbers-, X06 Database and Teamkopf

## HM01 MIXED MODE

From PoSW and followed by others' observations [Mainly DanAr/SR]

The mixed mode station from Cuba continues in 2020, at least the transmission on 9065 kHz which starts around 0800 UTC on Sundays, Mondays, Wednesdays and Fridays has been heard with reasonable copy in January and February especially after the break which usually ends the ten minutes or so of plain carrier at 0830, give or take. The same six 5F groups remained unchanged throughout until late February.

### **January 2020**

8-Jan-20, Wednesday:- 0835 UTC, 9065 kHz, transmission in progress, peaking S9 with deep fading up and down, 5Fs "77236 61724 01307 67503 26321 03484", same as first logged in mid November of last year when HM01 became audible again after a considerable time in the doldrums.

12-Jan-20, Sunday:- 0830 UTC, 9065 kHz, call-up after the break, same 5Fs, S9 with deep QSB, data sounds at 0833:40s UTC.

17-Jan-20, Friday:- 0837 UTC, 9065 kHz, transmission in progress, S9 with QSB, there is an FSK/RTTY station very close to this frequency always there but not usually strong enough to cause a problem, was somewhat stronger than usual this morning. Same 5F groups.

19-Jan-20, Sunday:- 0832 UTC, 9330 kHz, call-up in progress, would appear to be on the wrong frequency, 9330 normally used at 0700z. Peaking over S9 with QSB, data at 0833:40s, transmission stopped at 0850:30s UTC.

0900:10s UTC, 9330 kHz, starting up on the same frequency, carrier did not go QRT after the last transmission, signal weaker, S6 with QSB.

20-Jan-20, Monday:- 0836 UTC, 9065 kHz, transmission in progress, "77236 61724 01307 67503 26321 03464", so no change.

## February 2020

2-Feb-20, Sunday:- 0834 UTC, 9065 kHz, transmission in progress, S9 with deep fading, same 5F groups, transmission stopped 0850:20s UTC, carrier went off just before 0851.

3-Feb-20, Monday:- 0830 UTC, just after, 9065 kHz, starting up, "77236 61724 01307 67503 26321 03484".

12-Feb-20, Wednesday:- 0836 UTC, 9065 kHz, transmission in progress, same 5Fs.

16-Feb-20, Sunday:- 0839 UTC, 9330 kHz – not on the expected 9065. S9 with the usual deep fading up and down, "77236 61724 01307 67503 26321 03484". Stopped after 0850 UTC, gave all the signs of staying on this frequency for the 0900z sending carrier but went off after 0858. 0900 UTC 9240 kHz, started exactly on the hour as near as dammit, same 5Fs, S9 with QSB.

26-Feb-20, Wednesday:- 0845 UTC, 9065 kHz, last few minutes of a transmission, weak signal, reception of HM01 has been poor for several days, some 5Fs not heard clearly

but well enough to hear that they have changed from those which had remained the same for several weeks, "53?74 75408 42577 06684 255?5 851?4", stopped at 0850 UTC.

0900 UTC, just before, 9240 kHz, starting up, S8 with deep fading up and down, became weaker during the call up, 5Fs "53574 75408 42577 06684 25545 85154", data sounds at 0903:15s UTC.

28-Feb-20, Friday:- 0900 UTC, just before, 9240 kHz, "53574 75408 42577 06684 25545 85154", with the usual fading.

## Others' observations:

10715kHz2200z	12/01 (77236 61724 01307 67503 26321 03484) QSA2	DanAr	SUN
2200z	02/02 (77236 61724 01307 67503 26321 03484) QSA2	DanAr	SUN
11435kHz1610z	15/01 HM01 in progress with a very loud signal.	SR	WED
11530kHz1718z	29/01 HM01 with a very good signal	SR	WED

Ary notes, "Finally new groups. The first since 5 Nov 2019:"

11530kHz1716z 21/02 AM/RDFT i.p. 53574 75408 42577 06684 25545 85154

25615357.TXT  
36177540.FIG  
83074257.TXT  
75670668.TXT  
18182554.TXT  
62558515.TXT

11635kHz2200z	13/01 (77236 61724 01307 67503 26321 03484) QSA3 [Expected on 10715kHz]	DanAr	MON
2145z	19/01 HM01 heard with very loud signal. Unusually strong	SR	SUN
17480kHz2200z	14/01 (77236 61724 01307 67503 26321 03484) QSA3	DanAr	TUE
2200z	06/02 (77236 61724 01307 67503 26321 03484) QSA2 QRN1	DanAr	THU

## 1C F01 [H-FD]

Thu 06.02.2020 1015Z 12184 FSK 200/500, 7:55

Thu 06.02.2020 1025Z 10169 FSK 200/500

Thu 06.02.2020 1035Z 8079 FSK 200/500



# Gizza Job .....



This is a **CyberFirst** world

Applications open  
2 September 2019

**Cyber First**  
CAREERS

 **GCHQ**  
National Cyber Security Centre  
a part of GCHQ





 **GCHQ**  
CAREERS

**Technical Opportunities**  
Across our UK sites  
[gchq-careers.co.uk](http://gchq-careers.co.uk)



 **GCHQ**  
CAREERS

**Language Opportunities**  
Cheltenham & London  
[gchq-careers.co.uk](http://gchq-careers.co.uk)



 **GCHQ**  
CAREERS

**Security Officers**  
Manchester  
[gchq-careers.co.uk](http://gchq-careers.co.uk)



 **GCHQ**  
CAREERS

**Developers & Programmers**  
Across our UK sites  
[gchq-careers.co.uk](http://gchq-careers.co.uk)

## Two Items of Interest

# The 'ultra-secretive Cell' on an office park in Banbury where British spies decided it was safe to open up Britain's 5G network to China (and it has a huge 'Huawei' sign outside)

The Huawei Cyber Security Evaluation Centre is in an 'office village' in Banbury. It's totally tip-top secret - right up to the massive sign on the front. It is visible to anyone wandering past and millions more via Google Street View.

By David Wilcock, Whitehall Correspondent For Mailonline

Published: 12:04, 29 January 2020 | Updated: 13:17, 29 January 2020

<https://www.dailymail.co.uk/news/article-7942289/Ultra-secretive-Cell-Banbury-UK-spooks-decided-safe-open-5G-network-China.html>

It could be the home of a real-life Wernham Hogg, the fictional firm in Ricky Gervais's hit comedy *The Office*.

The nondescript unit is in an 'office village' on the outskirts of the Oxfordshire town of Banbury, close to the M40 motorway and in the shadow of an enormous Amazon warehouse shipping goods around the UK.

But in fact this is the home of a secret operation nicknamed 'The Cell', tasked with making sure that Chinese tech giant Huawei isn't helping the Communist state to spy on Britain.

And it's totally tip-top secret - right up to the massive sign on the front that announces the presence of the Huawei Cyber Security Evaluation Centre (HCSEC) - as The Cell is more correctly called.

It is immediately visible to anyone wandering past - admittedly probably not that many - but also to millions via Google Street View.

Part of the National Cyber Security Centre (NCSC), this is where spooks decided that Huawei could be allowed to take part in the UK's 5G network, a decision that has angered Washington and Tory back-benchers alike.

Boris Johnson today defended the Government's decision, saying it would not do anything to compromise the country's critical national security infrastructure.

Mr Johnson told MPs at Prime Minister's Questions: 'I think that it is absolutely vital that people in this country do have access to the best technology available but that we also do absolutely nothing to imperil our relationship with the United States, to do anything to compromise our critical national security infrastructure, or to do anything to imperil our extremely valuable co-operation with Five Eyes security partners.'

It's totally tip-top secret - right up to the massive sign on the front that announces the presence of the Huawei Cyber Security Evaluation Centre (HCSEC)

What does it do?

It checks Huawei's latest hardware and software products to make sure they are not being used as a cover for spying or data theft by the autocratic Communist state. Or as its oversight board says, it provides 'security evaluation for a range of products used in the UK telecommunications market'.

Who works there?

There are around 35 British staff there who are employed by Huawei. Since 2014 their work has been monitored by GCHQ, the Cabinet Office and Home Office. Where is it?

It is on the northern edge of Banbury, a market town in Northern Oxfordshire better known for having a medieval cross mentioned in a nursery rhyme. The set of rooms, owned by Huawei, are in Endeavour House. Its neighbours include the British Valve And Actuator Association.

At this out-of-the-way site they test equipment supplied by Huawei, destined for use in the UK.

Crucially, the Cell has the only access to Huawei's confidential 'source code' and is the only facility that can really test whether there are vulnerabilities that could allow 'back-door' access to networks.

Since 2014 the work of the British nationals employed there has been monitored by GCHQ, the Cabinet Office and Home Office.

The Cell's British cyber security experts - who are nonetheless on the Huawei payroll - have to go through 'developed vetting', the top level of clearance for people with access to top secret information.

Their work is monitored by Government officials on the HCSEC oversight board, set up after Parliament's Intelligence and Security Committee, led by former Defence Secretary Sir Malcolm Rifkind, expressed concern about the firm's grip on the UK telecoms market in 2013.

According to its 2019 report, the HCSEC's oversight board is made up of a mixture of security service and civil service figures and senior Huawei managers.

The board is chaired by Ciaran Martin, the NCSC's chief executive, with Huawei's executive director Ryan Ding as his deputy.

While Huawei is a private firm, critics say it is part of China's state security apparatus and could be used as a cover for espionage, which is why yesterday's 5G decision is so controversial.

The Government acknowledged Huawei is a 'high risk vendor' but argues that it will not have a role in the core parts of the 5G network

Mr Johnson was earlier accused of defying misgivings from his own ministers to press ahead.

Defence Secretary Ben Wallace is said to have urged the PM at a crunch National Security Council meeting to heed warnings from the US over the Chinese tech giant.

Why is Huawei's involvement in UK 5G controversial?

Huawei has come under scrutiny over allegations of close ties to the Chinese state.

Founder Ren Zhengfei's past links to the military have been cited as a concern, as has China's history of state sponsorship and surveillance.

Chinese law can also compel firms to co-operate with Chinese national intelligence work, which some critics have suggested could see Beijing require Huawei to spy on people through so-called 'back doors' in its telecoms equipment.

Huawei has vehemently denied the allegations of any ties with the Chinese state and says it abides by the laws of every country in which it operates.

Mr Wallace branded Beijing a 'friend of no-one', according to the Times - but eventually accepted the decision to allow the firm 'limited' involvement in the infrastructure project.

The wrangling emerged as US Secretary of State Mike Pompeo flies into Britain for what could be a turbulent visit.

The White House voiced 'disappointment' over the decision, after intensely lobbying for the UK to shun Huawei.

And the same document, released last March said its work 'has continued to identify concerning issues in Huawei's approach to software development bringing significantly increased risk to UK operators, which requires ongoing management and mitigation'.

As the Government gave the green light for the controversial Chinese tech firm to play a limited role in the UK's 5G network, the NCSC said the risk of its involvement was 'manageable'.

Huawei is already subject to oversight arrangements which ensure that any 'embedded malicious functionality could be detected should it exist', the analysis said.

The NCSC said: 'Due to the UK's mitigation strategy, which includes HCSEC as an essential component, our assessment is that the risk of trojan functionality in Huawei equipment remains manageable.'

Why is Huawei so important to 5G?

Huawei has invested billions of pounds into research and development around 5G network infrastructure and, as a result, is now considered the industry leader in 5G technology.

It is also already part of the existing network infrastructure in a number of countries, including in the UK.

As a result, using one of Huawei's rivals, and most likely alternatives - Ericsson or Nokia - for the building of 5G networks, would likely cause a delay and add cost to the introduction of widespread 5G in the UK.

In contrast, none of the four largest mobile carriers in the United States use Huawei equipment in their networks.

'Placing "backdoors" in any Huawei equipment supplied into the UK is not the lowest risk, easiest to perform or most effective means for the Chinese state to perform a major cyber attack on UK telecoms networks today.'

The NCSC did raise concerns about any single supplier of equipment being allowed to play a dominant role in the network.

The guidance issued by NCSC excludes 'high-risk vendors' such as Huawei from 'core' parts of the network, and sensitive locations including nuclear sites and military bases.

They will also be limited to a minority presence of no more than 35% in the periphery of the network, known as the access network, elements which connect devices and equipment to mobile phone masts.

The NCSC stressed that it was 'important to avoid the situation in which the UK becomes nationally dependent on a particular supplier'.

It added: 'Without government intervention, the NCSC considers there to be a realistic likelihood that due to commercial factors, the UK would become "nationally dependent" on Huawei within three years.'

Defaults Done

National dependence on a high-risk vendor would present a 'significant national security risk', the NCSC said.

Restrictions being placed by ministers on 'high-risk' 5G vendors

The advice being issued to UK telecoms operators is that 'high-risk vendors' should be:

Excluded from all safety related and safety critical networks in critical national infrastructure

Excluded from security critical 'core' functions, the sensitive part of the network

Excluded from sensitive geographic locations, such as nuclear sites and military bases

Limited to a minority presence of no more than 35 per cent in the periphery of the network, known as the access network, which connect devices and equipment to mobile phone masts

NCSC technical director Dr Ian Levy said Huawei had always been treated as a high-risk vendor and the authorities have 'worked to limit their use in the UK'.

'We've never 'trusted' Huawei and the artefacts you can see (like the Huawei Cyber Security Evaluation Centre (HCSEC) and the oversight board reports) exist because we treat them differently to other vendors,' he said.

'We ask operators to use Huawei in a limited way so we can collectively manage the risk and NCSC put in place a wider mitigation strategy, of which HCSEC is the most visible part.'

Ciaran Martin, chief executive of the NCSC, said: 'This package will ensure that the UK has a very strong, practical and technically sound framework for digital security in the years ahead.'

'The National Cyber Security Centre has issued advice to telecoms network operators to help with the industry roll-out of 5G and full-fibre networks in line with the Government's objectives.'

'High-risk vendors have never been, and never will be, in our most sensitive networks.'

'Taken together these measures add up to a very strong framework for digital security.'

Boris Johnson scrambles to stop Huawei's 5G role wrecking Special Relationship with Donald Trump as he faces first Tory mutiny in Commons - and stormy meeting with US Secretary of State Mike Pompeo

Boris Johnson today vowed the Huawei row will not 'imperil' the Special Relationship amid claims he defied misgivings from his own ministers to give the firm a role in the 5G network.

The PM is desperately trying to contain a Tory mutiny after it emerged Defence Secretary Ben Wallace warned against the involvement of the Chinese tech giant at a crunch National Security Council meeting.

Mr Wallace reportedly branded Beijing a 'friend of no-one' - but eventually accepted the decision to allow the firm 'limited' involvement in the infrastructure project.

The wrangling was revealed as Mr Johnson faces the prospect of his first major Commons revolt on the issue - with former Cabinet ministers saying his huge 80-strong majority might not be enough to save him from defeat.

US Secretary of State Mike Pompeo is also flying into Britain later for what could be a stormy visit.

The White House has voiced 'disappointment' over the decision, after intensely lobbying for the UK to shun Huawei.

But challenged on the issue at PMQs this afternoon, Mr Johnson said: 'I want to assure the House and indeed the country that I think it is absolutely vital that people in this country do have access to the best technology available...'

'But that we also do absolutely nothing to imperil our relationship with the United States, to do anything to compromise our critical national security infrastructure or to do anything to imperil our extremely valuable cooperation with Five Eyes security partners.'

Boris Johnson insisted he would not do anything to 'imperil' relations with the US as he took PMQs today

Defence Secretary Ben Wallace is said to have urged the PM at a crunch National Security Council meeting to heed warnings from the US over the Chinese tech giant

The wrangling emerged as US Secretary of State Mike Pompeo (left) flies into Britain for what could be a turbulent visit. He is expected to hold talks with Mr Johnson (right) tomorrow

There have been warnings that intelligence-sharing could be at risk, although the government insists there is no link between 5G and dissemination of classified material.

Mr Johnson spoke to Donald Trump by telephone yesterday to explain the move in an attempt to defuse the row.

Former Cabinet minister Damian Green warned this morning that Mr Johnson could face a damaging Commons revolt on the issue - despite his huge 80-strong majority.

Pointing out that a slew of Tory MPs criticised the decision during a debate yesterday, Mr Green told BBC Radio 4's Today programme: 'One of the things that that frankly surprised me was the breadth of the opposition to the current stance of the government on the Conservative back benches.'

'We don't know yet, when push comes to shove and votes happen, how many people will actually put their heads above the parapet. But certainly it's very widespread.'

With Washington focused on the unveiling of the president's Middle East peace plan, the official response to the news from London was muted.

However a series of senior congressional figures spoke out to condemn the move - warning it could damage Boris Johnson's hopes of a swift, post-Brexit trade deal.

Senator Lindsey Graham, a strong supporter of the president, said he was 'very concerned' and urged the UK to think again.

'This decision has the potential to jeopardise US-UK intelligence sharing agreements and could greatly complicate a US-UK free trade agreement,' he tweeted.

'I hope the British government will reconsider its decision.'

Senator Mitt Romney, a former Republican presidential candidate, described the decision as 'disconcerting'.

'By prioritising costs, the UK is sacrificing national security and inviting the Chinese Communist Party's surveillance state in. I implore our British allies to reverse their decision,' he said.

Senator Tom Cotton, a member of the Senate intelligence committee called for a 'thorough review' of intelligence sharing arrangements with the UK.

'I fear London has freed itself from Brussels only to cede sovereignty to Beijing,' he said.

'Allowing Huawei to build the UK's 5G networks today is like allowing the KGB to build its telephone network during the Cold War.'

However, Culture Secretary Baroness Morgan said Britain's use of Huawei equipment in its 4G network meant the UK was better placed than others to monitor possible spying by China within the 5G network roll-out.

The Cabinet minister told BBC Breakfast: 'We've had conversations with our other allies around the world to make absolutely clear that yesterday's decision in no way affects the ability for the UK to share classified data with our allies and partners, including the US.'

Mr Johnson called Donald Trump to explain the Huawei decision, but the White House made clear it was 'disappointed'

'But the US start from a different position from us because they haven't had Huawei in their 4G networks.

'We've got that expertise, we've had the oversight of Huawei for quite a number of years now, which gives our agencies the ability to give reassurance that having them involved in the periphery of the network does not present the security challenge I think others are worried about.'

Mr Pompeo's two-day visit - during which he will meet Mr Johnson and Dominic Raab - is likely to offer the first real indication of the extent of any damage to the so-called special relationship.

The US administration has consistently argued that giving Huawei a role in 5G could allow the Chinese a 'back door' into the telecoms network through which they could carry out espionage or cyber attacks.

President Trump raised the issue personally with Mr Johnson at December's meeting of Nato leaders in London while a high-level delegation was dispatched from Washington earlier this month in a last ditch attempt to persuade ministers not to go ahead.

The Government has acknowledged Huawei is a 'high risk vendor' but argues that by banning it from the most sensitive elements of the network and restricting its involvement to 35 per cent, it can manage the risks.

The clash comes at sensitive moment in US-UK relations - just as Mr Johnson is hoping to make rapid progress on a trade deal.

The US has already threatened to retaliate with tariffs on the UK car industry, if the Government goes ahead with a planned tax on big tech companies.

The two countries are also at odds over the Iran nuclear deal and the refusal of the US to extradite the wife of an American intelligence official charged with causing the death of 19-year-old motorcyclist Harry Dunn.

Meanwhile Mr Johnson is facing a backlash at home from Tory MPs fiercely opposed to the Huawei decision, including former leader Sir Iain Duncan Smith and ex-Brexit secretary David Davis.

Ministers have said they will legislate at the 'earliest opportunity' to put the new guidance on telecoms providers into law, opening up the prospect of a potentially damaging Commons revolt.

Mr Johnson however appears to have concluded that honouring his general election pledge to 'level up' the 'left behind' areas of the country must be the priority.

Rolling out 5G across the country is regarded as key to improving economic performance and excluding Huawei would mean delays and higher costs.

<https://www.dailymail.co.uk/news/article-7942289/Ultra-secretive-Cell-Banbury-UK-spooks-decided-safe-open-5G-network-China.html>

**This extract is well worth viewing; an excellent and thought provoking article**

Another article worth a quick read is this taken from the London Evening Standard of Wednesday 5<sup>th</sup> February, 2020

## RAF chief hails 'flying iPhone' spy planes battling Russian threat

ROBERT FOX Defence Editor

<https://www.standard.co.uk/news/politics/raf-chief-spy-planes-russia-a4354221.html>

The RAF's latest submarine-hunting spy plane is "the equivalent of a flying iPhone", according to a top commander.

Air Vice Marshal Harvey Smyth, the RAF's senior operational commander, hailed the Poseidon P-8A's capabilities as the first of the new planes arrived at RAF Lossiemouth.

"It's like the iPhone because it can be constantly upgraded to meet each new threat as it emerges," he said. The nine-strong fleet of maritime patrol aircraft, equipped with torpedoes and harpoon anti-ship missiles, is at the core of a £3billion programme for Britain's contribution to an allied force of surveillance planes operating out of the Scottish base.

The Poseidons fill a gap left by the cancellation of the Nimrod patrol aircraft programme in the defence review 10 years ago. Since then the UK has called on patrol aircraft from allies such as France, Canada, Norway and the US to track Russian spy vessels and submarines approaching Britain.

The new planes will work in a joint force with the US Navy and Norway. Both deploy the Poseidon, and will swap pilots and crew with the RAF.

Russian activity by air, sea and underwater is now at its most intense since the Cold War, with 10 Russian submarines being detected at one time in the north Atlantic in October last year.

"There's a new adventurism," the head of the RAF, Air Chief Marshal Mike Wigston, said yesterday. "They are not playing to the rules with the incursions of their aircraft. Sometimes they don't file flight plans and turn off their identification transmission. They are interfering in the normal commerce of the seas."

The Poseidons arrive as the services face what one of their chiefs calls a pivotal year, with the Government about to launch the most comprehensive defence, security and foreign policy review since the Cold War.

<https://www.standard.co.uk/news/politics/raf-chief-spy-planes-russia-a4354221.html>

[How do you milk sheep? Bring out a new £1000 iPhone every year]!

## PoSW's Items of Interest in the Media:-

Turkish spies get a boost:- Turkey does not immediately come to mind with regard to the world of espionage, but according to an item in *The Times* of 8-January things are on the move. "Erdogan's spy agency given huge new base", is the headline over a piece written by Hannah Lucinda Smith in Istanbul which says, "President Erdogan has unveiled the new headquarters of the Turkish national intelligence services in Ankara, a vast complex that has been dubbed 'The Fortress'.

Covering 500 acres in the Etimesgut district of the capital, the centre replaces the old headquarters that came under attack on the night of the 2006 coup attempt. It was projected to cost £100 million when it was announced in January 2016.

At the opening, Mr Erdogan, 65, praised MIT, the intelligence agency, saying that the nation had 'gained the capability to act in line with its own interests across the world without needing any country's consent or aid'.

The remit and reach of MIT has expanded vastly since 2010 when Hakan Fiden, the present intelligence chief and a close ally of Mr Erdogan, took charge. It used to be focused largely on domestic security. Since the Arab Spring in late 2010 Turkish intelligence agents have worked in battle zones across the Middle East.

In the early years of the Syrian war, MIT ran a joint operations room in southern Turkey with the British and American intelligence agencies, providing support to the rebels fighting President Assad. However, MIT has also faced criticism for not reacting quickly enough to the Isis threat when foreign extremists first started crossing the Turkish border into Syria, and the opposition has questioned whether MIT knew in advance that the coup attempt was being plotted in 2016.

The agency's budget has more than quadrupled in ten years, and since 2017 it has reported directly to the president."

Sonic boom – the aftermath:- It was on a pleasant summer evening last year that the residents of the counties of north Essex and south Cambridgeshire were shaken by a loud bang which turned out to be a sonic boom from a Royal Air Force Typhoon fighter travelling somewhat faster than a bat out of hell in response to an incident involving a commercial airliner, see *Enigma Newsletter* 113 p.49. The individual responsible for this was recently the subject of a court case the details of which appeared in one of our local papers, the *Saffron Walden Reporter* of 20 February under the headline, "Court case", which says:- "A woman who tried to open a plane door while intoxicated has been sentenced to two years in prison.

Chloe Haines, 26, received the penalty for assault by beating and recklessly or negligently acting in a manner likely to endanger an aircraft within.

Haines was a passenger on a Jet2 flight to Turkey on June 22 2019 when she became verbally abusive to passengers and staff on board. She attempted to open the emergency exit doors, forcing the plane to land at Stansted Airport.

Haines appeared at Chelmsford Crown Court on Wednesday February 12 having previously entered guilty pleas in December of last year.

Chief Inspector Lee Devall, Stansted Airport's deputy commander said; 'This was a terrifying incident which left an entire plane, including experienced cabin crew members, in fear for their safety.

'If Haines had managed to open the door, there's no telling what might have happened to those on board. The cabin crew put their lives at risk to prevent the door from being opened, even they were incredibly frightened. They showed immense bravery and should be commended.'"

Spies on TV:- The state of television in this country is in general, appalling, the soubriquet "Idiot's Lantern" is truly justified, with my TV increasingly used as a medium of display for the DVD player since most - but not all - of the films likely to appeal to men of middle age and older are available on DVD for modest sums of money. However, there are occasional bright spots amongst all the dross, for example the Talking Pictures, Sony Action and Sony Classics film channels and the Smithsonian and PBS America channels for factual programming. It was PBS America which showed an interesting documentary in early February with the title, *The Spy Who Stole the Atom Bomb* centred around the spy ring operated by the female agent "Sonia" with links to top atomic scientist Klaus Fuchs who was providing top secret information relating to the development of the atomic bomb to the Soviets by way of Sonia, born as Ruth Kuczynski, later with the surname Beurton having married an Englishman with that name, the radio operator of the spy network.

Generally well done, I thought, although one or two errors to make the knowledgeable viewer sit up and take notice; there was a reference to the conference held between the British Prime Minister, Winston Churchill, and the American President whom I am sure I heard named as Theodore Roosevelt; Theodore? Some mistake, surely? Franklin D, I think.

Theodore died in 1919 and was therefore in no condition to lead the USA in World War 2. There were several reconstructions of Sonia's activities including a depiction of her busy with her radio transmitter using CW of course, working the Morse key by just using a couple of fingers pressing down on it, fairly sure that's not the correct way to do it. Also there was a scene where British counter espionage were investigating with one of the officers using a telephone; it was the correct type for the era, General Post Office issue with a dial but the cord connecting the handset with the body of the phone was a modern coiled plastic type. I don't think this would have been around in the 1940's, certainly not in this country, it would have been cotton-covered cable. Nevertheless, something out of the ordinary and well worth watching, probably will be repeated at some point in the not too distant future.

Point to ponder:- "Some day a real rain'll come and wash all the scum off the streets" - spoken by Travis Bickle, played by Robert De Niro, in the motion picture, *Taxi Driver*.

*Thanks Peter.*

## Spectre's News Round

BBC News 16/01/2020 <https://www.bbc.co.uk/news/world-us-canada-51100759>

### **US officials ground drones over espionage fears**

US officials may put an end to a civilian drone programme because of their concerns about the unmanned aerial vehicles that are made in China. The officials are apparently worried that the Chinese-made drones could be used to spy on people in the US.

After a volcano exploded in Hawaii in May 2018, US scientists used drones to save a man from the lava: "Follow the drone," they said. He made it through the jungle.

Drones save people. They also map terrain, survey land and inspect pipelines. The scientists use drones for these and other purposes on a daily basis, and they have bragged about their successes in the field.

Many of the aircraft are made by Chinese companies, though. They are now grounded because of concerns about espionage.



The drones had been deployed for years by the scientists and others at the US Department of the Interior, a federal agency that manages national parks and other duties. But the head of the federal agency, David Bernhardt, is apparently now worried that the drones could be used for espionage.

He is examining the agency's civilian drone programme in an effort to determine whether or not it should be continued. During this time, many of the drones are grounded, according to an agency spokeswoman, Melissa Brown. "Until this review is completed, the secretary has directed that drones manufactured in China or made from Chinese components be grounded," according to a statement she sent to the BBC.

Drones that are used to fight fires and help rescue people are still allowed to fly, she added. News of the fleet's grounding was first reported in the Financial Times.

Mr Bernhardt's review of the drone programme reflects a growing concern among US officials about Chinese technology and espionage.

President Donald Trump has spoken in dark terms about China, saying that its leaders have "cheated" the US and that its intelligence agents spy on people here. Chinese officials deny the accusations. Despite the rhetoric, US-China relations have improved.

On Wednesday, Trump is planning to sign an initial trade deal with Chinese leaders. Still, fundamental issues remain, such as the fight over technology. US officials have said in the past that Huawei, the telecommunications company, and other Chinese companies could pose a security threat.

Some Chinese analysts say the fight is not over national security but market share. The Chinese are better at making products, they say, and Americans are jealous. The Chinese analysts see the US policies as a form of protectionism.

The drones are now at the centre of the US-China dispute.

Many of the drones that are used by US scientists are made by a Shenzhen-based company called Da Jiang Innovations Science and Technology Company, or, DJI. The company dominates the drone market, according to a research company, Skylogic.

US officials have in the past expressed concerns about DJI. Agents at a US immigration office said in 2017 that the company's drones could collect information about US sites and transmit data back to Beijing.

Rules and norms are different for private companies in China than they are in the US. Business executives in China stay in close contact with government officials. US officials worry about the information that Chinese drones could collect and what might be done with the data.

The Chinese executives could pass the data on to Beijing officials, explains Sarah Cook, a senior analyst with Freedom House, a non-profit organisation.

Executives who work for DJI say their drones are trustworthy. Michael Oldenburg, a spokesman for DJI Technology Inc, tells the BBC there is no "credible evidence to support a broad country-of-origin restriction on drone technology".

Many US analysts agree with Oldenburg's assessment. "I doubt the Chinese government is using the drones to conduct massive surveillance," says David Fidler, an adjunct senior fellow at the Council on Foreign Relations.

Fidler and others admit it is impossible to know how much information the drones are gathering, however. Analysts emphasise that the Chinese officials pose a threat to the US and that Chinese companies should be banned from certain kinds of work.

"I wouldn't want a Chinese server operating our nuclear system," says Paul Rosenzweig, a senior fellow at the conservative R Street Institute who served as a US Department of Homeland Security official during the George W Bush White House years.

Yet Rosenzweig and others say that the drones seem benign. The aircraft fly over wildlife areas and parks and are unlikely to collect sensitive data. "It is an acceptable risk," Rosenzweig says, adding: "I don't think drones covering Yosemite National Park are a real threat."

The real assessment, the one from the secretary of the interior, is yet to be announced, however. In the meantime, scientists and others wait - and wonder - about the fate of the drones.

Aljazeera 20/01/2020 <https://www.aljazeera.com/news/2020/01/german-army-translator-trial-spying-iran-200120080055456.html>

### **German army translator on trial over spying for Iran**

The suspect was arrested in January 2019, reportedly after a tip-off from an overseas source and an ensuing set-up.

A German-Afghan translator for the German army goes on trial on Monday, along with his wife, on charges of spying for Iran.

Abdul S is accused of "a particularly serious case of treason" and of "violating state secrets" in 18 instances, according to the higher regional court of Koblenz in western Germany.

Asiea is accused of "helping her husband from the very beginning" with his espionage activities for Iranian intelligence services, the Koblenz court said, but she had not been detained by police.

Abdul worked for several years as a civilian translator and cultural adviser to the German Bundeswehr at the Heinrich-Hertz barracks in the town of Daun, near Koblenz.

Officials have been tight-lipped about the case, revealing no details about the information that was allegedly leaked.

Abdul himself "has yet to comment on the accusations against him", the court said in a statement.

He risks life in jail if found guilty, which in Germany usually means a sentence of at least 15 years.

His wife faces a maximum of 11 years in prison.

The court case will be held behind closed doors and is expected to last until the end of March.

Germany's BfV domestic intelligence agency has identified Iran as one of the countries most active in spying on Germany, along with China and Russia.

Iranian spy services "are regularly looking for appropriate sources to cover the information needs of the regime", the BfV said in a report.

In 2018, Germany arrested a Vienna-based Iranian diplomat suspected of being a spy, with prosecutors alleging he was plotting with a Belgium-based couple to bomb an Iranian opposition rally in Paris.

In another high-profile case, former German intelligence agent Markus Reichel was convicted in 2016 for spying for both the CIA and the Russian secret service.

In 2011, Germany jailed a married couple for spying for the Russian secret services for more than 20

Morning Star 28/01/2020 <https://morningstaronline.co.uk/article/w/russia-claims-us-spy-boss-was-on-downed-aircraft-in-afghanistan>

### **Russia claims US spy boss was on downed aircraft in Afghanistan**

RUSSIA claimed that the US intelligence chief that planned the assassination of Iranian commander General Qasem Soleimani was killed in a plane downed over Afghanistan on Wednesday.

Intelligence sources said that the head of CIA operations in Iran, Michael D'Andrea, was on board the Bombardier E-11A plane which crashed in Ghazni.

The Taliban claimed to have shot down the spy plane, although this has not been confirmed.

Mr D'Andrea was seen as taking a more aggressive stance towards Iran since he was appointed head of the CIA's Iran mission centre in 2017.

He was known by the nicknames Ayatollah Mike, the Dark Prince and the Undertaker.

The CIA chief was known for the agency's notorious "signature strike" in which drone attacks were launched against people simply because of a belief that their behaviour made them appear to be terrorists.

It is believed that he also masterminded the murder of former Hezbollah boss Imad Mughniyeh in Damascus, Syria, in 2008 and played a key role in the hunt for Osama bin Laden.

Radio Free Europe 29/01/2020 <https://www.rferl.org/a/afghanistan-crashed-us-jet-spy-plane/30405496.html>

### **U.S. Jet That Crashed In Afghanistan Was No Ordinary 'Spy Plane'**

When a U.S. Air Force jet crashed on January 27 on a remote plain south of Kabul, killing at least two crew members, it was initially described by the governor of Afghanistan's Ghazni Province as a civilian passenger plane.

Since then, international media have variously described it as a "modified private business jet," a "spy plane," an "electronic surveillance" aircraft, and a hub for "WiFi in the sky."

So what exactly was the role of the Canadian-built Bombardier E-11A aircraft that crashed some 150 kilometers from the Afghan capital?

Richard Aboulafia, vice president of analysis at the Virginia-based aviation consultancy Teal Group, tells RFE/RL that the plane was much more significant than an ordinary surveillance or communications aircraft.

It was one of just four Bombardier E-11As that were purchased by the U.S. Air Force and "outfitted with a suite of signals intelligence and signals transfer capabilities" known as the Battlefield Airborne Communications Node (BACN), Aboulafia says.

The BACN is a multimillion-dollar communications system that translates and relays real-time battlefield communications between ground troops and aircraft used by the U.S.-led international coalition forces in Afghanistan.

It is able to relay voice communications, video, photographic images, and other data between aircraft and ground troops that are often using different types of communications networks.

#### **'High-Value Asset'**

Aboulafia says that made the E-11A a "very high-value asset" that would have performed "command-and-control battle management" functions as well as communication, electronic warfare tasks, and surveillance.

From an altitude high above the range of any Taliban weaponry, Aboulafia says the E-11A would have carried out "a combination of battle-management functions, communications functions, and a little bit of signals intelligence -- which does involve some surveillance."

"Basically, 'WiFi in the sky' is one way of looking at it," he says. "But when you are a signals intelligence plane, there are a whole host of applications for that."

Designed to fly at an altitude "way above 40,000 feet," Aboulafia says the E-11A is not a go-to plane for monitoring Taliban radio or cell phone communications.

He says that task would usually be carried out by smaller planes that conduct "lower-level signals monitoring," including turbo-propeller aircraft.

But, from their position high above the battlefields and mountains of Afghanistan, Aboulafia says the E-11A's crew would have received and relayed intelligence that had been obtained from Taliban communications by lower-flying surveillance aircraft or ground monitors.

"The E-11A collects signals intelligence," Aboulafia explains. "There might be people on board analyzing it, disseminating it, transferring it -- everything like that. There is a whole host of work involved with signals on the battlefield."

"The idea is to pick up as many signals as possible -- anything from radios to cell phone calls -- and transfer that information," he says. "It also transfers communications between friendly forces. It's a kind of giant signals processor."

Technically, calling the E-11A a "modified private-business jet" also is correct -- but leaves out significant details about the plane's mission.

The air frame of the E-11A is an adaption of "one of the most expensive private-business jets you can buy -- a very high-altitude aircraft that typically seats eight to 12 people" known as the Bombardier Global Express, Aboulafia says.

Some countries have modified the plane for use as a military air-ambulance, a cargo-transport plane, or for specialized military-surveillance missions.

#### Battlefield Disaster

GlobalSecurity.org, a U.S. based security think tank, says the U.S. Air Force developed the E-11As BACN payload in response to "communications shortfalls" that led to a 2005 battlefield disaster for U.S. forces in northern Afghanistan.

Operation Red Wings -- a joint mission involving U.S. Navy SEALs, U.S. Army Special Operations Forces, and U.S. Marines -- was meant to target Taliban fighters in the Pech district of Kunar Province.

But the mountainous terrain prevented a four-man Navy SEAL reconnaissance team from establishing reliable communications with their command center.

Within hours of their arrival, the team of U.S. Navy SEALs was attacked by the Taliban. Three were eventually killed.

A Taliban rocket-propelled grenade then struck a Chinook helicopter as it attempted to land an extraction team -- killing 16 more U.S. special forces.

Marcus Luttrell, the only surviving member of the initial Navy SEALs team, described the events in detail in his 2007 book *Lone Survivor*. A Hollywood film adaptation of Luttrell's book was released under the same title in 2013.

"Due to Afghanistan's mountainous terrain and lack of existing communication infrastructure, serious communication challenges prevented the four-man SEAL patrol from effectively establishing contact with their combat operations center, leaving them vulnerable to the attacks that claimed the lives of 19 U.S. special operations service members," GlobalSecurity.org says.

The U.S. military has rejected Taliban claims that its fighters shot down the E-11A in Ghazni Province, saying the cause of the crash is still under investigation but that there is no sign it was shot down.

Aboulafia says video footage of the wreckage posted on a Taliban website shortly after the crash supports that Pentagon statement.

#### Crash Landing?

Rather than a widespread field of debris, the footage shows the plane's upright fuselage still connected with the tail section -- suggesting it had made a crash landing rather than being downed by a rocket or antiaircraft fire.

The footage does show the top of the plane completely burned away. But there are few signs of fire on the underside of the plane.

That reinforces a statement by an Afghan provincial government official who said the plane caught fire only after it hit the ground.

Aboulafia says it is unclear whether the plane burned because of the crash or if one of its crew members engaged a self-destruct mechanism after the landing to ensure that the high-tech equipment would not fall into the hands of Taliban fighters, several of whom were near the scene shortly after the crash.

But he said it would be a top priority for the Pentagon to prevent the BACN system from being transferred to Iran or Russia, where jamming mechanisms could then be developed to disable its vital battlefield communication links between U.S. ground troops and their command centers.

Two burned bodies are seen in the video footage near the wreckage. The Pentagon said on January 28 that helicopter-borne U.S. forces recovered those remains and the plane's flight recorder a few hours after the crash. In a statement, the U.S. Defense Department added that those U.S. forces also destroyed the remnants of the aircraft.

Taliban spokesman Zabiullah Mujahid said on January 28 that Taliban fighters on the ground counted six bodies at the site of the crash.

Unidentified U.S. officials initially were quoted as saying the plane was carrying fewer than five people when it crashed. Later, U.S. military officials said the entire crew consisted of the two people who were killed and retrieved.

The Guardian 30/01/2020 <https://www.theguardian.com/technology/2020/jan/30/uk-doing-the-wrong-thing-on-huawei-says-australian-ex-spy>

#### **UK doing the wrong thing on Huawei, says Australian ex-spy**

Simeon Gilding says Britain relying on 'flawed and outdated' cybersecurity model

Britain has done the wrong thing in allowing Huawei to supply it with 5G equipment because China cannot be prevented from exploiting the technology for mass surveillance, according to a senior former Australian spy.

Simeon Gilding, a director of the Australian Signals Directorate until December, said his country's intelligence agency was unable to design cybersecurity controls that could prevent China from gaining backdoor access to Huawei.

"We developed pages of cybersecurity mitigation measures to see if it was possible to prevent a sophisticated state actor from accessing our networks through a vendor. But we failed," he wrote in a blog for an Australian thinktank.

He said the UK was relying on "a flawed and outdated cybersecurity model to convince themselves that they can manage the risk that Chinese intelligence services could use Huawei's access to UK telco networks to insert bad code".

This week Boris Johnson's government announced that the UK would allow Huawei to supply a maximum of 35% of 5G base stations and antennas, a decision immediately criticised by Washington and many Conservative backbenchers.



Australia, like the United States, has decided to ban Huawei equipment on the grounds of security risks. But the UK's spy agencies insist the risks can be mitigated despite China's record of state-sponsored hacking.

Gilding highlighted China's 2017 intelligence law, which gave the country the power to direct a company to assist it in carrying out spying if requested. Putting himself in China's position, he asked: "What could we do with that and could anyone stop us?"

He continued: "We concluded that we could be awesome, no one would know and, if they did, we could plausibly deny our activities, safe in the knowledge that it would be too late to reverse billions of dollars' worth of investment."

The posting was cited by a Conservative party MP Bob Seely in a debate in the Commons on Thursday afternoon. He said it led him to conclude there were "justifiable questions" over the UK's Huawei policy "and that we all collectively need to think very carefully about this decision".

A second MP, Stewart McDonald, the defence spokesman for the SNP, said that what Seely had described was "the equivalent of a digital Dunkirk".

Similar criticisms were made by Mike Pompeo, the US secretary of state, who was visiting the UK. At an event on Thursday morning, Pompeo said having Huawei technology within the network was "very difficult to mitigate".

"When you allow the information of your citizens or the national security information of your citizens to transit a network that the Chinese Communist party has a legal mandate to obtain, it creates risk," Pompeo said.

Unhappy backbench Conservatives are trying to see if they can force the government to harden its position against Huawei and commit to eliminating the company's technology over the next three years.

But Vodafone and BT, the owner of the EE network, have both said the rollout of 5G would be delayed by two or three years without Huawei and the costs to consumers would be higher because Huawei's equipment is cheaper than rivals.

*Thanks Spectre!*

# Chart Section Index

1. Prediction Chart
2. M01 Schedule
3. Family III
4. G06 Chart

March 2020

The charts in this publication remain the intellectual property of the originator with whom the original Copyright is retained

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Mar kHz, ID, ...	Apr kHz, ID, ...
		x	x				0315		E11	03	7850 25#	5779 25#
x	x	x	x	x	x	x	0400		V13	0	15388	15388
			x				0430/0450/0510		E07A	01B		6788/ 7488/ 9322 741
				x		x	0435		E11	03	5779 35#	5779 35#
x							0450		E11	03	5371 41#	5371 41#
	x					x	0500/0520/0540		M12	01B		
x	x	x	x	x	x	x	0500		V13	0	11430	11430
x		x					0510		S11A	03	11116 65#	11116 65#
x		x		x		x	0455		HM01	18	10860	10860
	x		x		x		0455		HM01	18	11462	11462
	x				x		0500/0520/0540		M12	01B		<b>search</b>
			x	x			0500/0600	1/3	E06	01A		15645/17470 951
	x			x			0530		M01A	14	9441 751	9441 751
		x	x				0530		M01A	14	9129 or 9192 498	9129 or 9192 498
	x						0530/0550/0610		M12	01B	9317/10484/11552 135	9317/10484/11552 135
			x				0530/0550/0610		E07A	01B	6922/ 8122/ 9322 913	
		x	x				0540		M01A	14	7692 536	7692 536
x		x		x		x	0555		HM01	18	10345	10345
	x		x		x		0555		HM01	18	14375	14375
	x					x	0600/0620/0640		M12	01B	<b>search</b>	
x	x	x	x	x	x	x	0600		V13	0	11430	11430
	x						0600/0610		S06S	01A	15855/16485 438	15855/16485 438
						x	0600/0620/0640		E07	01B		9064/10264/11464 024, <b>search</b>
	x				x		0600/0620/0640		M12	01B	<b>search</b>	
			x	x			0600/0700	1/3	E06	01B	16230/19325 864	
	x			x			0620		M01A	14	10233 or 10235 354/458	10233 or 10235 354/458
		x	x				0620		M01A	14	9421 135	9421 135
	x			x			0630		M01A	14	9447 143/796	9447 143/796
		x	x				0630		M01A	14	8111 902/536	8111 902/536
x							0630/0640		S06S	01A	22185/20050 462	22185/20050 462
x		x					0640		E11	03	12153 94#	12153 94#

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Mar kHz, ID, ...	Apr kHz, ID, ...
	x		x				0645		E11	03	10800 51#	10800 51#
x		x		x		x	0655		HM01	18	9330	9330
	x		x		x		0655		HM01	18	13435	13435
x			x				0700		S11A	03	8597 47#	8597 47#
	x			x			0700		E11	03	8180 57#	8180 57#
x	x	x	x	x	x	x	0700		V13	0	15250	15250
						x	0700		M01	01B	6510 463	6510 463
	x						0700/0710		S06S	01A	5760/ 6930 452	5760/ 6930 452
	x			x			0700/0720/0740		E07	01B	14942/16142/18042 910	17453/18453/19653 446
						x	0700/0720/0740		E07	01B	10112/11112/12112 111, <b>search</b>	
	x		x				0700/0720/0740		M12	01B		10904/10204/ 9304 923
x		x					0700/0720/0740		XPA2	01B		11167/12167/13567 <b>check</b>
					x	x	0710		E11	03	8102 49#	8102 49#
	x			x			0710		M01A	14	10651 297/358	10651 297/358
		x	x				0710		M01A	14	9175 146/208	9175 146/208
	x		x				0710/0730/0750		XPA1	01B		10428/11431/13441
	x			x			0715		E11	03	9963 63#	9963 63#
	x			x			0720		M01A	14	9151 728	9151 728
	x						0730/0740		S06S	01A	7425/11560 427	7425/11560 427
x							0745		E11	03	10213 26#	10213 26#
		x		x			0745		E11	03	17410 34#	17410 34#
x		x		x		x	0755		HM01	18	9065	9065
	x		x		x		0755		HM01	18	11365	11365
x	x	x	x	x	x	x	0800		V13	0	15250	15250
x							0800	1/3	G06	01A	6810 329	6810 329
			x				0800/0810		E17Z	01A	14260/12930 217	14260/12930 217
	x						0800/0810		S06S	01A	11635/10420 127	11635/10420 127
					x		0800/0810	1	S06S	01A	10350/ 8520 132	10350/ 8520 132
					x		0800/0820/0840		E07A	01B		12218/13418/14418 244
x		x					0800/0820/0840		XPA2	01B	12192/13892/14892 <b>check</b>	

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Mar kHz, ID, ...	Apr kHz, ID, ...
					x		0800/0900		M14	01A	4730/ 4650 523	4730/ 4650 523
					x	x	0805		E11	03	5371 31#	5371 31#
	x		x				0810/0830/0850		XPA1	01B	12132/13453/14576	
			x	x			0820		E11	03	5941 43#	5941 43#
	x	x					0820		E11	03	19184 13#	19184 13#
x				x			<b>0830</b>		E11	03	x13873 18#, <b>search</b>	x13873 18#
x							0830/0840		S06S	01A	9220/ 8270 764	9220/ 8270 764
		x					0830/0840		S06S	01A	9082/ 9952 464	9082/ 9952 464
		x					0830/0840		S06S	01A	11530/12140 172	11530/12140 172
				x			0830/0840		S06S	01A	x12140/13515 156, <b>search</b>	x12140/13515 156
			x	x			0830/0930		S06	01A	19415/16268 842	19078/16318 842
	x		x				0845		E11	03	12202 15#	12202 15#
x		x		x		x	0855		HM01	18	9240	9240
	x		x		x		0855		HM01	18	11462	11462
x		x					0900		E11	03	8180 53#	8180 53#
x							0900/0910		S06S	01A	14580/13165 232	14580/13165 232
				x			0900/0910		S06S	01A	5744/ 6524 239	5744/ 6524 239
					x		0900/0920/0940		E07A	01B	11133/12133/13433 114	
x		x					0910/0930/0950		XPA2	01B	18333/16345/14838	18038/17474/16286
			x		x		0910/0930/0950		XPA2	01B	16261/15961/14861	15849/14659/13459
x				x			0915		S11A	03	4505 48#	4505 48#
x	x	x	x	x	x	x	0930		M14	01A	17458/15994 617, only 10., (11.), 25., (26)	17458/15994 617, only 10., (11.), 25., (26)
		x	x				0930		E11	03	6940 27#	6940 27#
			x				0930/0940		S06S	01A	9081/10514 698	9081/10514 698
x		x		x		x	0955		HM01	18	9155	9155
	x		x		x		0955		HM01	18	12180	12180
		x		x			1000		E11	03	7317 30#	7317 30#
	x						1000/1010		S06S	01A	6410/ 7340 427	6410/ 7340 427
		x					1000/1010		S06S	01A	13365/14505 276	13365/14505 276
x	x	x	x	x			1015/1025/1035		F01	01C	10861/ 8076/ 6974	10177/ 9317/ 7572

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Mar kHz, ID, ...	Apr kHz, ID, ...
	x			x			1020		S11A	03	7469 42#	7469 42#
x		x					1045		E11	03	7317 69#	7317 69#
		x		x			1100		S11A	03	6433 37#	6433 37#
	x						1100/1110		S06S	01A	6190/ 7230 265	6190/ 7230 265
x					x		1100/1110/1110 1130/1140/1150		XPB1	01B	<b>search</b>	
	x			x			1100/1120/1140		E07	01B	19118/17418/15918 149	20574/19074/17474 504
x	x	x	x	x	x	x	1200		V13	0	9276	9276
		x					1200/1300	1/2	G06	01A	x5234,x5412 731, <b>search</b>	x5234,x5412 731
x							1200/1210		S06S	01A	9145/11460 149	9145/11460 149
			x				1200/1210		S06S	01A	12415/14212 175	12415/14212 175
x					x		1200/1210/1210 1230/1240/1250		XPB1	01B		<b>search</b>
	x					x	1200/1220/1240		XPA2	01B	11575/13375/13975	<b>search</b>
		x		x			1200/1220/1240		XPA2	01B	<b>search</b>	<b>search</b>
	x	x					1205		E11	03	6923 46#	6923 46#
		x		x			1210/1230/1250		M12	01B		12174/11474/10974 149
			x				1300	1/3	G06	01A	4598 329	4598 329
x	x	x	x	x	x	x	1300		V13	0	9276	9276
					x		1300/1320/1340		E07	01B		9064/10264/11464 024, <b>search</b>
		x		x			1310/1330/1350		M12	01B	13952/13452/12152 941	
	x				x		1345		E11	03	14972 91#	14972 91#
					x		1400/1420/1440		E07	01B	10112/11112/12112 111, <b>search</b>	
x		x					1400/1420/1440		M12	01B	16276/14876/13376 283	18524/17424/15824 548
			x		x		1410/1430/1450		E07	01B	16284/14854/13384 328	16331/15831/14831 893
	x	x	x				1500/1600		S06	01A	14913/10387 387	
					x		1500		M01	14	6260 463	6260 463
	x						1500/1510		S06S	01A	6464/ 7242 914	6464/ 7242 914
x					x		1500/1520/1540		XPA2	01B		15881/14481/13381
				x			1510/1530/1550		E07A	01B		12174/11074/10274 102

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Mar kHz, ID, ...	Apr kHz, ID, ...
x				x			1530		E11	03	5737 52#	5737 52#
			x				1530		E11	03	10330 26#	10330 26#
x	x	x	x	x	x	x	1555		HM01	18	11435	11435
	x						1600	1/3	M14	01A	654, <b>search</b>	654
		x					1600	1/3	M14	01A	654, <b>search</b>	654
x					x		1600/1620/1640		XPA2	01B	12163/10863/ 9363	
	x		x				1600/1620/1640		XPA2	01B	13994/13494/12194	15819/14919/13919
	x					x	1605		E11	03	5082 23#	5082 23#
				x			1610/1630/1650		E07A	01B	11473/10173/ 9373 413	
		x				x	1625		E11	03	5082 97#	5082 97#
				x		x	1650		E11	03	11116 92#	11116 92#
x	x	x	x	x	x	x	1655		HM01	18	11530	11530
	x		x				<b>1700</b>		E11	03	x10800 33#, <b>search</b>	x10800 33#
		x				x	1700/1720/1740		E07	01B		13417/12117/10717 417
			x				1700/1720/1740		M12	01B	12162/11566/10711 546	12162/11566/10711 546
x							1700/1800	1/2	G06	01A	x4792, 4877 731, <b>search</b>	x4792, 4877 731
				x			1700/1800	1/3	M14	01A	5945/ 5477 382	5945/ 5477 382
		x			x		1705		E11	03	4181 39#	4181 39#
		x					1710/1730/1750		M12	01B	12162/11566/10711 546	12162/11566/10711 546
			x				1730		E11	03	7864 41#	7864 41#
		x					1740/1840	3	E06	01A	2015: 13433/10166 634, <b>search</b>	
x						x	1745		E11	03	13470 24#	13470 24#
x	x	x	x	x	x	x	1755		HM01	18	11635	11635
	x		x				1800		M01	14	5475 463	5475 463
		x				x	1800/1820/1840		E07	01B	10321/ 9121/ 7821 318	
x							1800/1820/1840		M12	01B	8047/ 6802/ 5788 463	8047/ 6802/ 5788 463
			x				1800/1820/1840		M12	01B	12162/11566/10711 546	12162/11566/10711 546
x							1810		M01B	14	3535, 4590 420 (summer time)	3535, 4590 420

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Mar kHz, ID, ...	Apr kHz, ID, ...
	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 (summer time)	3510, 4605 201
x				x			1840/1850/1900	1	F01	01A		12194/10581/ 8112
		x			x		1850		S11A	03	10213 28#	10213 28#
x			x				1900		E11	03	7317 64#	7317 64#
	x					x	1900/1910/1910 1930/1940/1950		XPB1	01B		13447/12147/11547 10447/ 9347/ 8147 <b>check</b>
x		x					1900/1920/1940		E07	01B		15819/14419/12219 842
		x					1900/1920/1940		M12	01B	8047/ 6802/ 5788 463	8047/ 6802/ 5788 463
				x			1900/2000	1/3	M14	01A	5275/ 4875 735	5275/ 4875 735
				x			1900/2000	1/3	S06	01A		x8191/x5943 452
				x			1902		M01B	14	3625, 4941 153 (summer time)	3625, 4941 153
				x		x	1910		E11	03	8530 61#	8530 61#
x							1910		M01B	14	3625, 4440 153 (winter time)	
x							1915		M01B	14	3645, 4455 771 (summer time)	3645, 4455 771
		x					1920	2/4	M14	01A	5464 537	5464 537
				x			1930	2/4	G06	01A	5442 947	5442 947
					x	x	1930		E11	03	4505 36#	4505 36#



## 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 01/20
			x		x		0435		E11	03	6280 35#	6280 35#	5779 35#	5779 35#	since 04/15, last log 01/20
x							0450		E11	03	4909 41#	4909 41#	5371 41#	5371 41#	since 02/10, last log 01/20 2nd transmission Thu 1730z
x	x						0510		S11A	03	9057 65#	9057 65#	11116 65#	11116 65#	since 08/19, last log 01/20
x		x					0640		E11	03	11450 94#	11450 94#	12153 94#	12153 94#	since 07/17, last log 01/20
	x		x				0645		E11	03	7840 51#	7840 51#	10800 51#	10800 51#	since 07/09, last log 01/20
x			x				0700		S11A	03	9050 47#	9050 47#	8597 47#	8597 47#	since 04/10, last log 12/19 until 09/19 at 1015z
	x			x			0700		E11	03	6804 57#	6804 57#	8180 57#	8180 57#	since 01/12, last log 02/20
				x	x		0710		E11	03	4505 49#	4505 49#	8102 49#	8102 49#	since 07/15, last log 02/20
	x			x			0715		E11	03	9130 63#	9130 63#	9963 63#	9963 63#	since 02/11, last log 02/20
x							0745		E11	03	10213 26#	10213 26#	10213 26#	10213 26#	since 03/14, last log 02/20 2nd transmission Thu 1530z
		x		x			0745		E11	03	17378 34#	17378 34#	17410 34#	17410 34#	since 06/17, last log 02/20
					x	x	0805		E11	03	4909 31#	4909 31#	5371 31#	5371 31#	since 07/14, last log 02/20
			x	x			0820		E11	03	5149 43#	5149 43#	5941 43#	5941 43#	since 10/09, last log 02/20
	x	x					0820		E11	03	14611 13#	14611 13#	19184 13#	19184 13#	since 12/18, last log 02/20
x				x			<b>0830</b>		E11	03	<b>15720</b> 18#	15720 18#	x13873 18#, <b>search</b>	x13873 18#	since 07/15, last log 02/20 until 12/19 0600z
	x		x				0845		E11	03	12089 15#	12089 15#	12202 15#	12202 15#	since 07/17, last log 02/20
x		x					0900		E11	03	8597 53#	8597 53#	8180 53#	8180 53#	since 10/05, last log 02/20
x				x			0915		S11A	03	4242 48#	4242 48#	4505 48#	4505 48#	since 04/19, last log 02/20
		x	x				0930		E11	03	7469 27#	7469 27#	6940 27#	6940 27#	since 02/14, last log 01/20
	x			x			1000		E11	03	8597 30#	8597 30#	7317 30#	7317 30#	since 11/16, last log 02/20
	x			x			1020		S11A	03	7600 42#	7600 42#	7469 42#	7469 42#	since 02/10, last log 02/20
x		x					1045		E11	03	7984 69#	7984 69#	7317 69#	7317 69#	since 03/18, last log 02/20
		x		x			1100		S11A	03	5371 37#	5371 37#	6433 37#	6433 37#	since 02/14, last log 02/20
	x	x					1205		E11	03	6433 46#	6433 46#	6923 46#	6923 46#	since 03/10, last log 02/20
	x				x		1345		E11	03	13363 91#	13363 91#	14972 91#	14972 91#	since 10/15, last log 02/20
x				x			1530		E11	03	5082 52#	5082 52#	5737 52#	5737 52#	since 05/15, last log 02/20
			x				1530		E11	03	5409 26#	5409 26#	10330 26#	10330 26#	since 06/14, last log 01/20 2nd transmission Mon 0745z
	x				x		1605		E11	03	5344 23#	5344 23#	5082 23#	5082 23#	since 11/15, last log 02/20
		x			x		1625		E11	03	5082 97#	5082 97#	5082 97#	5082 97#	since 02/15, last log 02/20
			x		x		1650		E11	03	6849 92#	6849 92#	11116 92#	11116 92#	since 05/16, last log 02/20
x		x					<b>1700</b>		E11	03	<b>6280</b> 33#	6280 33#	x10800 33#, <b>search</b>	x10800 33#	since 06/17, last log 02/20
		x			x		1705		E11	03	4505 39#	4505 39#	4181 39#	4181 39#	since 02/14, last log 01/20
			x				1730		E11	03	5779 41#	5779 41#	7864 41#	7864 41#	since 03/10, last log 01/20 2nd transmission Mon 0450z
x					x		1745		E11	03	12924 24#	12924 24#	13470 24#	13470 24#	since 04/18, last log 02/20
		x			x		1850		S11A	03	11486 28#	11486 28#	10213 28#	10213 28#	since 06/17, last log 12/19
x			x				1900		E11	03	6849 64#	6849 64#	7317 64#	7317 64#	since 05/16, last log 02/20
				x	x		1910		E11	03	10487 61#	10487 61#	8530 61#	8530 61#	since 04/17, last log 01/20
					x	x	1930		E11	03	4909 36#	4909 36#	4505 36#	4505 36#	since 03/14, last log 02/20 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 12/19 repeat at Thu 1300Z <b>i n a c t i v e ?</b>
		x					1200/1300	1/2	G06	01A	<b>4824/ 4028</b> 731	4824/ 4028 731	x5234,x5412 731, <b>search</b>	x5234,x5412 731	since 10/14, last log 01/20 yearly changing frequencies + id <b>i n a c t i v e ?</b>
			x				1300	1/3	G06	01A	4460 329	4460 329	4598 329	4598 329	since 09/11, last log 12/19 repeat from Mon 0800Z <b>i n a c t i v e ?</b>
x							1700/1800	1/2	G06	01A	3605/x4528 731, <b>search</b>	3605/x4528 731	x4792, 4877 731, <b>search</b>	x4792, 4877 731	since 04/10, last log 01/20 yearly changing frequencies + id <b>i n a c t i v e ?</b>
			x				1830	2/4	G06	01A	4519 271	4519 271	5934 579	5934 579	since 05/01, last log 01/20 repeat at Fri 1930Z
				x			1930	2/4	G06	01A	4792 436	4792 436	5442 947	5442 947	since 04/01, last log 01/20 repeat from Thu 1830Z

## SPECIAL MATTERS

### Thanks to all our contributors:

Ary, Edd, BR, CC, Danix, DanAr, E, F5, HH, HJH, JkC, Jochen, KW, Malc, MaleAnon, PoSW, PLdn, RNGB, tiNG  
Apologies to anyone missed.



## MESSAGES:

**E:**

## 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.eyespy.com>

# 2020

January	February	March
S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
April	May	June
S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
July	August	September
S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
October	November	December
S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Statements affecting the use of ENIGMA2000 material of all description and intellectual property of others:

### Copyright & Fair Use Policy

© All items posted on our website and within our newsletter remain the property of ENIGMA 2000 and are copyright.

The above applies only to documents found on this website and not logs sent to ENIGMA 2000 for their sole use which cannot be used elsewhere.

Within the Number Monitors Group site, the following applies:

### USE OF POSTINGS, IMAGES, SOUND SAMPLES and OTHER FILES:

©All items posted here remain the property of ENIGMA 2000 and are copyright.

MEMBERS' LOGS & IMAGERY POSTED HERE \*SOLELY FOR ENIGMA2000 USE\* CANNOT BE LIFTED FOR USE ELSEWHERE.