## ENIGMA 2000 NEWSLETTER


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## Colossus, the world's first electronic computer, as seen at Bletchley Park National Codebreaking Centre.

Colossus was the worlds first electronic computer and designed by Dr Tommy Flowers to break the German Lorenz encryption, or Tunny as it was known at Bletchley. It was so secret that its use by GCHQ [the Soviets had picked up German Lorenz machines and refurbished them to use during the Cold War] continued into the ' 60 s whilst the US boasted of their world first with their ENIAC machine. [See BBC2 Codebreaker, broadcast 2100 26/10/2011]. There was more to codebreaking than just Enigma.
Dr Flowers received no public recognition other than a road name and an educational centre bearing his name [now closed].
The LateTony Sale, computer scientist, museum curator and MI5 Scientific officer led a team to rebuild Colossus years after Churchill 'apparently' ordered their destruction. [Read more inside]. The rebuild, now working, is a standing ovation to the memory of its designer, Dr Tommy Flowers.



## Tony Sale [Front Cover pic]

Taken from ‘The Times’ Thursday, September 01, 2011
A computer scientist and historian who worked at the Science Museum in London and was a founding member of the Computer Conservation Society, Tony Sale was best known for his remarkable feat in building a replica of the wartime Colossus machine, Britain's first real computer and the device that played a decisive role in code breaking at Bletchley Park.
The early code breaking that played such a part in winning many of the vital campaigns of the Second World War, ranging from the fight against Rommel in the Western Desert through the Battle of the Atlantic fought against the U-boats to the campaign in northwest Europe in 1944-45, had been done by hand at Bletchley.

As the war progressed the mathematician and cryptanalyst Alan Turing became convinced that aspects of this process could be mechanised. Through a number of evolutionary stages, beginning with a 24 -valve machine christened Heath Robinson, the first computer-style machine called Colossus, which was largely the brainchild of the telecommunications engineer Tommy Flowers (obituary November 10, 1998), was built at Dollis Hill, Northwest London, in 1943, and transported to Bletchley.
Although Flowers himself described it as a "string and sealing wax affair" the code-cracking Colossus could do in hours what had previously taken weeks. Although Colossus was not what today would be recognised as a computer, its development was a decisive step in the intelligence war, and it arrived just in time to tackle the flood of information interception and collating problems that were to be associated with the Normandy campaign.

A 2,400-valve Colossus Mk II, replacing the original 1,500-valve Colossus, was ready in time for D-Day itself. Eleven such machines were built, but at the end of the war all but two were destroyed on the orders of Churchill, as were all the plans for them. The survivors were removed to GCHQ at Cheltenham where they were thought to have remained in operation until 1958, eventually being dismantled some time between then and 1960 .

Extraordinary secrecy surrounded the details of Colossus long after they could have had any interest to modern computer scientists or to any potential enemy. In 1991 Sale was working at the Science Museum in London, restoring some early British computers, when he became convinced that it would be possible to rebuild Colossus. He began the search for information on the machine which amounted only to eight wartime photographs that had been taken of the machine in addition to some fragments of circuit diagrams "which some engineers had kept illegally, as engineers always do", as Sale later remarked. Over the next 14 years Sale led a team that re-created the Colossus computer from scratch.

At the same time he and colleagues also started a campaign to save Bletchley Park from demolition by property developers. As a result of this great effort, today the Colossus replica may be seen in all its antiquated splendour at the National Museum of Computing at Bletchley Park. Anthony Edgar Sale (Tony to friends and colleagues) was born in 1931 and educated at Dulwich College. At the age of 12 he demonstrated his engineering genius by building a robot which he called George out of Meccano.

This prototype was to be substantially improved when in 1949 he joined the RAF as a radar specialist at RAF Debden in Essex, and embarked on a new George, using scrap metal from a crashed RAF Wellington bomber. Powered by a pair of motorcycle batteries inside his chest, this new George could walk, turn his head, move his arms and sit down. George attracted official attention and approval at Debden, and was put on display at open days at the RAF base.

After leaving the RAF Sale worked at Marconi Research Laboratories, and later for the Security Service (MI5) where he served for six years as a scientific officer, rising to become the intelligence agency's principal scientific officer. In the meantime he had become a member of the British Computer Society of which he was subsequently to become its technical director, and in 1988 a Fellow.
For a number of years after leaving the Security Service he established and ran a computer software company before, in 1989, joining the Science Museum, where he became interested in the history of the British computer and as a curator managed the museum's Computer Restoration Project. From this he came to believe that it would be possible to reconstruct the Colossus computer. In 1989 he was one of a group that established the Computer Conservation Society.
He was also involved in the campaign to save Bletchley Park from property development. At Bletchley he founded the National Museum of Computing to preserve the nation's ageing computers and it was there that the re-created wartime Colossus found a home and became the centrepiece on its completion in 2007. Visitors to the museum can also see Sale's robot George among the other creations on display.

Last November Sale had reactivated the robot after decades of inactivity, replacing the original motorcycle batteries with lithium ones. As Sale said at the time: "I dug him out of the garage where he had been standing for 45 years, I had a fair bit of confidence he would work again and luckily I was right. I put some oil on the bearings and added a couple of new lithium batteries in his legs, switched him on and away he went. It was a lovely moment." In 1992 Sale had become secretary of the Bletchley Park Trust of which he was later a trustee. For his Colossus work he was awarded the Comdex IT Personality of the Year in 1997 and in 2000 received the Silver Medal of the Royal Scottish Society of Arts. Sale is survived by his wife Margaret and by three children.

Tony Sale , computer historian and conservationist, was born on January 30, 1931. He died on August 28, 2011, aged 80
[Taken from 'The Times' Thursday, September 01, 2011]

Editorial
In the Comment section of NL66 Mike L stated his intention to cancel July and August for 2012 and have 3 Septembers instead - Guess what, that plan is also scrapped.
September and October have turned out to be his most uncomfortably traumatic since the start of E2k.
We thought the computer problems in August were bad enough but little did we know of what was to hit us through September and October. Three consecutive total systems failures on different machines, including the back-up, which between them wiped out 5 years worth of research notes and archives and all had to be rebuilt file by file to avoid the loss of even more.
Large chunks of the NL got themselves re-written three times, as late as $30^{\text {th }}$ Oct.
Better not to dwell on Pauls gas supply tribulations - that's a story of its own.
Both of us are relieved to see this Newsletter being put to bed.
Enjoy, once again, our (heroic :) ) efforts, time to get some sleep.
Paul \& Mike L

## The quick roundup

M12 Ops having a bit of a rest, no sign of the brain crunching super messages for this issue.
M23 Not only sends its annual message but also a 3 message transmission, first we have noticed in many years of logging (or first ever sent, Ed)which fortunately JPL caught in full. Paul also noted the use of 'mirrored' groups, see entry.
M45, error ? or not - see M01 entry
M89 More new freqs logged plus it comes up with more entertainment in the shape of the HJ4I / YI4K pair bursting onto the scene with a huge flurry of messages then promptly going away, we wonder for how many years this time.

## Comment

We 're beginning to wonder here at Enigma Towers how many more major incidents this year is going to throw at us, it just keeps coming faster than we can keep up with it.
The most recent examples include the one that impinges very closely on our hobby;-
Russian (allegedly) spies arrested in Germany - not only in Germany but one of them in Jochens (Kopf E2kde) home town of Marburg, apparently while listening to her radio.
The media, both local and international, of course applied their highly developed investigative skills and came up with the usual Pre-Packaged off target complete and utter rubbish.
E2k on the other hand applied its dustbin searching skills (basic investigation) which pointed us in the general direction of a Polytone transmission being auto decoded, sooner or later we will find out if we were right.
The bright side for E2k was that Jochen, now known to some in the German media as an intelligent 'Talking Head' once again received interview requests, thus ably imparting some sense into the hysteria.
There are still too many conflicting stories floating about though.
Gaddafi, Muammar- gone at last. A somewhat inglorious end, including mutilation, according to some accounts but we cannot help wondering what road the Libyan people are going to find themselves travelling down over the coming months.
Gaddafi, Saif - being widely pursued across the deserts of Southern Libya by quite an assortment of parties interested in his health and wellbeing !!!! - or is the reported 10 Million US Dollars + Gold Bullion in the baggage got something to do with it ?

One scenario we will be keeping a very close eye on in the coming months is the tense relationship between Iran/Israel/ USA. There have been steady rumblings since the summer that the course of events here are deteriorating rapidly and with this weeks news that the Israeli Mil has test fired a medium range ballistic missile must give cause for concern to the Arabian Gulf Nations.

## Morse Stations

Freqs are generally +-1 k
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.

M01/2 XIV MCW, hand (463 sked for Sept - Oct)
Will change to M01/1 sked ID 197 for Nov - Feb)
No repeat mssgs sent

| 5474 | 18.00z | 01 Sept | '463' $32030=$ = 29140 |
| :---: | :---: | :---: | :---: |
| 5475 | 18.00z | 08 Sept | '463' 50530 * * 36981 note the '= =' missing ? |
| 5020 | 20.00z | " | '463' *** $30==77766$, fair, slow |
| 6261 | 15.00z | 10 Sept | '463' $33230==92747$, strong, fast |
| 6510 | 07.00z | 11 Sept | '463' $48730=$ = 47512, strong, errors |
| 5475 | 18.00z | 13 Sept | '463' $48630==83624$, strong,slow, Link11 QRM |
| 5020 | 20.00z | " | '463' $77430=$ = 56656, good, slow |
| 6261 | 15.00z | 17 Sept | '463' $14430==81429$, strong, exlt op |
| 6508 | 07.00z | 18 Sept | '463' $44130=$ = 06511, fair |
| 5475 | 18.00z | 22 Sept | '463' $52330==60378$, strong, uncorrected errors |
| 5475 | 18.00z | 27 Sept | '463' $28730==15582$, strong, slow, DK only x1 |

Here's a very interesting one caught by CB and BR
$5474 \quad 18.00 \mathrm{z} \quad 29$ Sept '463' $41830==43074$, strong, errors
Prior to, during and after this TX Chris and Brian heard another station sending 'dits' and then '280 32000 which Chris thought may have been an M01a :-
It was an M45 sending, on its May-Aug 5474 freq sending a Sept '555' 28032 TX -at the wrong time / wrong freq !!!!! - Operator cock-up ? , Pirate ? Change of habit ?

| 5017 | 20.00 z | 29 Sept |
| :--- | :--- | :--- |
| 5475 | 18.00 z | 04 Oct |
| 5475 | 18.00 z | 11 Oct |
| 5020 | 18.00 z | 13 Oct |
|  |  |  |
| 6261 | 15.00 z | 15 Oct |
| 6508 | 07.00 z | 16 Oct |
| 5474 | $"$ | 18 Oct |
| 5475 | 18.00 z | 20 Oct |
| 6508 | 07.00 z | 30 Oct |

'463' 19930 = = 07605, v strong, sent one '563'
'463' $66730==97623$, strong, slow
'463' $67330==53506$, strong, slow-stilted
'463' 08730 * * 20253, strong, fast, missed = =
This TX sent on wrong freq, this is 20.00 z freq. '463' $32430==82555$, strong, QSB '463' ........... $=38504, \mathrm{v}$ poor, almost $\mathrm{u} / \mathrm{r}$ '463' $07130==60901$, fair, noise '463' $13430==94307$, strong, slow, data QRM '463' $20930==$ *****, v weak, improving

```
5020kHz2000z
06/09[463 345 30=80730 .. 74796 = 345 30 000] 2010z Fair RTTYQRM3 QSB2
```

$46334530=$
8073058442394504630659895111949230435400419100642 2034542054179841209564598312898202032015639318192 81802065120193180611401292302223922297803118874796 $=34530000 \quad$ Courtesy Spectre

5020kHz 2000z 27/09[463 $34830=64017$...] 2010z Very Weak QRN3 QSB3
5474kHz1800z 06/09[463 $02230=84496$...] 1810z Very Weak QRN4 QSB3
1800z 15/09[46378430=68669 ... 56743=78430 000] 1810z Weak QRN2 QSB2
1800z 22/09[463523 $30=60378$... $71579=52330000]$ 1809z Fair QRM3 QSB2
$46352330=$
60378450153779393984116963463851029882022324522544
69951500505156145174909357784262846449019593163764
10566995611017969770824292742265792795371358671579
$=52330000 \quad$ Courtesy Spectre
$6508 \mathrm{kHz} \mathrm{0700z} \quad 18 / 09[46344130=06511 \ldots 62534=44130000] 0709 \mathrm{z}$ Weak QRN2 QSB2
Spectre

Spectre
$46387330=$
73913410506331025017850688320226528361911730194905
85404763587643673076963300502885029492741314574821
60491743950088676395841556132117097171722068155439
8691430822
(Note 32 groups were sent instead of 30.) Courtesy Spectre

6261 kHz 1500 z

## October:

$5020 \mathrm{kHz2000z} \quad 06 / 10[46387330=73913 \ldots 30822=87330000] 2013 z$ QRN3 QSB3

Spectre

Spectre

M01a (formerly end of month TXs, now random)
$\widehat{\text { RNGB }}$ catches this strange TX

| 8131 | 18.00z | 19 Sept 33303247032473330324703247 R |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 18.03z | changes to 333031779849840317703177 R |  |  |
|  | 18.09z | changes to 9849849840310703107984984 R |  |  |
|  |  |  | TX ends 128.17 z with 111000 |  |
| 7811 | 19.15z | 20 Sept | i/p 8718718712089220892 | R |
| 6992 | 23.17 z | 22 Sept | i/p 9269269263925639256 | R |
| M01b |  |  |  |  |
| Messages repeated |  |  |  |  |
| 3510//4605 | 18.32z | 01 Sept | $20110631==86025$ |  |
| 3625//4440 | 19.02z | 02 Sept | $15310631==86025$ |  |
| 3520//4585 | 20.10z | " | $58210631==86025$ |  |
| 4440 | 19.04z | 09 Sept | $15310631==86025$, weak, v | QRM |
| 3644//4454 | 19.15z | 19 Sept | $77161838==68073$ |  |
| 3510//4605 | 18.32z | 29 Sept | $20161838==68073$ |  |
| 3536//4591 | 18.11 z | 03 Oct | $42061838==68073$ |  |
| 6509 | 07.00z | 09 Oct | $4633775797759 \ldots .63324=2$ | 000, Odd format? |
| 5811 | 15.15 z | 14 Oct | $15845030=68132$ |  |
| 4441//3626 | 19.02z | " | $15361838==68037$ |  |
| 5941 | 15.05 z | 27 Oct | $15945030=68132$ |  |
| 3510 | 18.32z | " | $201550 * *==35307$, v weak |  |

M01b logs
September:

| $4440 \mathrm{kHz1902z}$ | 02/09[153106 $31=86025 \ldots 9903512345$ = 10631 000] 1921z Fair QRN3 QSB2 | Spectre | FRI |
| :---: | :---: | :---: | :---: |
| 4585kHz2010z | 09/09[582 $10631=86025 \ldots 9903512345=10631000]$ 2027z Weak QRN2 QSB2 | Spectre | FRI |
|  | 4440/4585kHz 2010z 09/09 Transcript: <br> 58210631 = <br> 86025864239657440460340020046762773690285373803382 <br> 69828491246275403121401312733533387218368672425957 <br> 14752952002854913387321966200212569731499818599035 <br> 12345 <br> $=10631000$ <br> Courtesy Spectre |  |  |
| $4590 \mathrm{kHz} \mathrm{1810z}$ | 12/09[420 $10631=86025 \ldots 9903512345=10631000] 1823 z$ Weak QRN3 QSB3 | Spectre | MON |
| 5810 kHz 1515 z | 23/09[158 $13530=62811$...] 1531z Very Weak QRN3 QSB2 | Spectre | FRI |

## October:

68073522497890194062787797444052257943394675716580
63362435483104316474502850828967347516683186190972
57287947976285365171363224993731270659643309712741 0888072377250711251689660611335632293010
$=61838000 \quad$ Courtesy Spectre

M01c
No reports
M03 III ICW, some CW

| 9150 | $11.15 z$ | 08 Sept | $650 / 00$ |
| :--- | :--- | :--- | :--- |
| 9150 | $13.20 z$ | $08 / 22$ Sept | $437 / 00$ |
| 6977 |  |  |  |
| 9150 | $11.15 z$ | 20 Sept | $272 / 00$ |
| 6977 | $15.35 z$ | $"$ | $798 / 00$ |
| 9150 | $11.15 z$ | 29 Sept | $650 / 00$ |
| 6977 | $11.40 z$ | $04 / 08$ Oct | $786 / 00$ |
| 6977 | $11.40 z$ | 18 Oct | $78138=24822$ |
| $"$ | $15.35 z$ | $"$ | $798 / 00$ |
| 9150 | $11.15 z$ | 19 Oct | $650 / 00$ |
| 9150 | $13.20 z$ | 19 Oct | $43537=45283$ |
| 6977 | $11.40 z$ | 26 Oct | $786 / 00$ |
| 6977 | $15.35 z$ | $"$ | $790 / 38=45618$ |

M03logs
September:

| 6977kHz 1140z | $24 / 09[786 / 00] 1143 z$ Weak QRN2 QSB2 | Spectre |
| ---: | :--- | :--- |
|  |  |  |
| $9150 \mathrm{kHz} 1115 z$ | $20 / 09[272 / 00] 1118 z$ Fair QRN2 QSB2 | Spectre |
| $1320 z$ | $22 / 09[437 / 00] 1323 z$ Weak QRN2 QSB2 | Spectre |
| $1320 z$ | $25 / 09[437 / 00] 1323 z$ Fair QRN2 QSB2 | TUE |
| $1115 z$ | $28 / 09[650 / 00] 1118 z$ Weak QRN2 QSB3 | Spectre |
| Spectre | SUN | WED |

## October:

| $6977 \mathrm{kHz1140z}$ | 01/10[786/00] 1143z Fair QRN2 QSB2 | Spectre | SAT |
| :---: | :---: | :---: | :---: |
| 1140z | 25/10[786/00] 1143z Fair QRN3 QSB2 | Spectre | TUE |
| $9150 \mathrm{kHz1115z}$ | 25/10[276/31 = $24924 \ldots 37848$ = 000] 1131z Fair QRN2 QSB2 | Spectre | TUE |
|  | 276/31 $=$ |  |  |
|  | 24924282303108148996172560501396289025403120706517 |  |  |
|  | 31865883291841633625032515631907722590898851115133 |  |  |
|  | 84531300119227406449318168067828459110444437336199 |  |  |
|  | 37848 |  |  |
|  | = 000 Courtesy Spectre |  |  |
| 9150kHz1115z | 26/10[450/37 = $57917 \ldots 74314=000] 1133 z$ Weak QRN2 QSB2 | Spectre | WED |

450/37 =
57917655613118202151898137235545668331972925185503
53542027135090348888038941212248193794411208178527
50222565218268394656151373112506557196679854760147
15755195716558381957642529767274314
$=000 \quad$ Courtesy Spectre

M03c (Stutter groups)
No reports

M03d
No reports

M03e
No reports
M08a XVIII ICW / CW, some MCW
These are the frequencies logged during the period, to be read in conjunction with Mark Slatens charts.

Mark reports a possible new sked Monday, 0300z, 6376 - 6380, any confirmations welcome.
Freqs
5800, 5898, 8135

Above use/are MCW
5883, 5900, 6785, 6855, 6932, 7519, 7526, 7554, 8009, 8097,10445, 10714

## M08c

No reports

M08d
No reports

M12 IB ICW, some MCW / CW, short 0 . Reuses many freqs year on year.
To be read in conjunction with Brians included monthly charts.
New ID's may be only for the month/sked shown, but not necessarily unknown, all are clearly identified on Brians charts. The reason for their reuse, some after long periods of time, is unknown.


M12 logs
September:

| 5893kHz2120z | 28/09[785 785785000$]$ 2122z Fair QRN2 QSB2 | Spectre | WED |
| :---: | :---: | :---: | :---: |
| 6793kHz2100z | 28/09[785 785785000$]$ 2102z Fair QRN2 QSB2 | Spectre | WED |
| $6904 \mathrm{kHz1940z}$ | 12/09[257 11189868590 ... 71264000 000] 1948z Fair QRN3 QSB2 | Spectre | MON |
| $7931 \mathrm{kHz1920z}$ | 12/09[257 11189868590 ... 71264000 000] 1928z Fair QRN3 QSB2 | Spectre | MON |
| 9176kHz1900z | 12/09[257 11189868590 ... 71264000 000] 1908z Fair QRN3 QSB2 | Spectre | MON |
| 13472kHz1320z | 12/09[344 344344 000] 1322z Fair QRN2 QSB2 | Spectre | MON |
| 14375kHz1300z | 12/09[344 344344 000] 1302z Fair QRN2 QSB2 | Spectre | MON |
| October: |  |  |  |
| $5214 \mathrm{kHz2120z}$ | 05/10[826 826826 000] 2122z Fair XJTQRM3 | Spectre | WED |
| $5814 \mathrm{kHZ2100z}$ | 05/10[826 826826 000] 2102z Fair QRN2 QSB2 | Spectre | WED |
| $7964 \mathrm{kHz1340z}$ | 24/10[839 117415588204 ... 96968000 000] 1352z Fair QRN3 QSB2 | Spectre | MON |
| $9324 \mathrm{kHz1320z}$ | 24/10[839 117415588204 ... 96968000 000] 1332z Fair QRN3 QSB2 | Spectre | MON |
| 10804 kHz 1300 z | 24/10[839 $117415588204 \ldots 96968000$ 000] 1312z Fair QRN3 QSB2 | Spectre | MON |

M12a (two message variant)
The above entries are a good example of the M12a behaviour for repeat messages. The first message in one TX becomes the second of the next TX. See Brians charts for further detail.

| $10343 / 9264 / 8116$ | 08 Sept | 12427049498829 |
| :--- | :---: | :---: |
| 704 but with the repeated 98829 first group = M12 sendings. | $1242248757-$ first TXsuddenly stops, then the $2^{\text {nd }} \& 3^{\text {rd }}$ Txs send 1241 |  |
| Possibly an operator error. |  |  |
| $9176 / 7931 / 6904$ | $17.00 / 20 / 40 \mathrm{z}$ | 20 Oct |

$\frac{\text { M14 }}{18041}$ IA MCW / ICW / MCWCC, short 0

| 18041 | 05.00 z | 09 Sept | $95237451==56794$ |
| :--- | :--- | :--- | :--- |
| 5464 | 19.20 z | 14 Sept | $53773215==14782$ |
| 5945 | 18.20 z | 27 Sept | 34659615 |
| 4518 | 16.00 z | 04 Oct | 91300000 |
| 8193 MCW | 18.00 z | 09 Oct | 26900000 |
| 5947 | 19.19 z | 11 Oct | $34694115==\mathbf{1 2 3 4 5 6 5 7 8 9 9}$ |
| 5241 | $23.05 z$ | 23 Oct | *** 842 15 |

M14a (two message variant)
No reports
$\frac{\text { M18 }}{3881}$ IC Time strings, UTC +4 19.55z 04 Oct 020002000201 0201, a bit fast !
M23 $\underline{0}$ ICW

| $\overline{5345}$ | $16.58 / 17.58 z$ | $07 / 11 / 14$ Sept | '579' R12 |
| :--- | :--- | :--- | :--- |
| 5345 | $16.00 z$ | 15 Sept | '246' R15 |$=3131=06519$

The annual mssg from M23 caught by GD, a remarkable catch. It repeated and was i/p at $17.23 z$ caught by Spectre and Paul, now will it fire up again for 18.00 z ?

Well it looks as if it did, as in the meantime JPL had intercepted this lot with more interesting results - $\mathbf{3}$ different messages being sent.
We do not know if this 'normal', which we have previously missed, or something very special as our archive info does not make comment.
15 Sep 101621 -1627 5345 CW M23 (In traffic) BT (1822z) 31 (x2) BT 06519 (Long zeros) (Thurs) (// N/H) (GlobalTuners Germany) JPL

Here is a copy of what was sent:
(In traffic - long zeros)
.. 9933045071030 BT
? ? (IMI IMI)
BT 3131 BT (1622z)
06519054030042781809972759276231308240724253766393
48020911578652843753820863542003537083116281073732
2356341108543484858612877 054e (1627z stopped - would normally ends with AR AR)

15 Sep 101700 -1725 5345 CW M23 246 (R15) (Message sent - see below) (Long zeros) (Thurs) (// N/H) (GlobalTuners Germany) JPL)

246 (Cont'd) (1700z)
BT 3232 BT (1715z)
34197068038988619954577039210349229489133025557462

53249467838999221255393154920567998109825266146683

23821812107214570484031812158579144927252035195825
3086071379

## BT IMI IMI BT

3232 BT
34197 (Repeat of above message) (Did not get to the end of the message as the GlobalTuners was changed frequency by another user at 1725 z )

15 Sep 101800 -1827 5345 CW M23 246 (R15) (Message sent - see below) (Long zeros) (Thurs) (// N/H) (GlobalTuners Germany/Italy) (JPL)

## BT 3131 BT

5707013806097821546890302 424.. (Again, Globaltuner was tuned to another freq to another user) (Note that this message 31 is different from the other one above)
(Appears to have sen 3 different messages!)

Then all is repeated again here, quite a 'cornucopia' of loggings

| 5345 | 16.00 z | $19 / 20 / 21$ Sept | $246 \mathrm{R} 1531=06519 \ldots ., 19^{\text {th }}$ timed out on repeat |
| :--- | :--- | :--- | :--- |
| 5345 | 17.00 z | $"$ | $246 \mathrm{R} 1531=34197 \ldots \ldots 19^{\text {th }}$ timed out on repeat |
| 5345 | 18.00 z | $"$ | $246 \mathrm{R} 1531=57070$ |
| $5345 / / 4980$ | 08.29 z | 20 Sept | $246 \mathrm{R} 153131=$ |

57070138060978215468903024229480197841326444906497 01249125286048170674599769287815217566733798331431
52561229522553111465182393558939797893584866078538
6083132257 BT
IMI IMI
On the three 20 Sept loggings Paul noted another little quirk, that the $2^{\text {nd }} \& 30^{\text {th }}$ gp figures were reversed, as shown in above entry.
The same three messages were logged again on 21/22 Sept at the earlier times of 06.29/07.29/08.31z

| 5345 | 16.58z | 13 Oct | 246 R - no mssg sent |
| :---: | :---: | :---: | :---: |
| 5435//4951 | 0.30/11.30/14.20/15.20 | 16 Oct | 246 R |
| " | " "" | 17 Oct | 246 R |

Congratulations to all who caught these interesting TXs.

## M23 logs <br> September:

| 5345kHz1806z | 02/09 [(I.P.) CW 579 Repeated] 1916z Fair QRN2 QSB2 | Spectre | FRI |
| :---: | :---: | :---: | :---: |
| 1709z | 06/09 [(I.P.) CW 579 Repeated] 1710z Fair QRN2 QSB2 | Spectre | TUE |
| 1800z | 08/09 [CW 579 Repeated] 1810z Fair QRN2 QSB2 | Spectre | THU |
| 1700z | 09/09 [CW 579 Repeated] 1710z Fair QRN2 | Spectre | FRI |
| 1800z | 09/09 [CW 579 Repeated] 1810z Fair QRN2 | Spectre | FRI |
| 1600z | 10/09 [CW 579 Repeated] 1610z Fair QRN2 QSB2 | Spectre | SAT |
| 1700z | 10/09 [CW 579 Repeated] 1710z Fair QRN2 QSB2 | Spectre | SAT |
| 1800z | 10/09 [CW 579 Repeated] 1810z Fair QRN2 QSB2 | Spectre | SAT |
| 1700 z | 11/09 [CW 579 Repeated] 1710z Fair QRN2 QSB2 | Spectre | SUN |
| 1800z | 11/09 [CW 579 Repeated] 1810z Fair QRN2 QSB2 | Spectre | SUN |
| 1700z | 12/09 [CW 579 Repeated] 1710z Fair QRN2 QSB2 | Spectre | MON |
| 1800z | 12/09 [CW 579 Repeated] 1810z Fair QRN2 QSB2 | Spectre | MON |
| 1700z | 13/09 [CW 579 Repeated] 1710z Fair QRN2 QSB2 | Spectre | TUE |
| 1800z | 13/09 [CW 579 Repeated] 1810z Fair QRN2 QSB2 | Spectre | TUE |




5345 kHz 1029z
5345 kHz 1129 z 5345kHz1658z
5345kHz1758z

| $18 / 10[246(\mathrm{R})] 1051 \mathrm{z}$ Very strong $/ / 4951 \mathrm{kHzz}$ |  |
| :--- | :--- | :--- |
| $18 / 10[246(\mathrm{R})] 1051 \mathrm{z}$ Very strong $/ / 4951 \mathrm{kHz}$ |  |
| $30 / 10[579(\mathrm{R})] 1810 \mathrm{z}$ Very strong ended ‘ 57 ’ | $/ / 4951 \mathrm{kHz}$ |
| $31 / 10[579(\mathrm{R})] 1810 \mathrm{z}$ Very strong ended ‘ 57 ’ | 4951 kHz |

M24 IA MCW / ICW / MCWCC (high speed version of M14), short 0
$10190 \quad 19.05 z \quad 22$ Oct $51204953=91346$

M24a as M24 with $2^{\text {nd }}$ addressee hand keyed, rarely intercepted.
No report
M39 ICX? ICW / MCW
No reports

M44
No reports

M45/2 XIV (Sept/Oct) MCW, slow, hand, paired gps
Will change to M45/1 for Nov-Feb on 3525//4025 at 18.02 z clg ' 525 '

| $4555 / / 4955$ | 18.02 z | 06 Sept | $55528032=38383$ (as S21 sending 18.42z) |
| :--- | :--- | :--- | :--- |
| $4955 / / 4555$ | $"$ | 27 Sept | $555($ R4 $28032 \ldots .$. |
| 4555 | $"$ | 30 Sept | 555 R, v weak, almost u/r |
| $4955 / / 4555$ | $"$ | 18 Oct | 555 |
| $"$ | $"$ | 20 Oct | $55544334=92211$ |

M50 XIV MCW
No reports
M51
Usual activity, expertly logged by Spectre
September:

| $4889 k H z 1958 z$ | $01 / 09$ [NR 60 S 01 21:58:33 1983 BT KSNRN ...] Fair QRN3 QSB2 |
| ---: | :--- |
| $2100 z$ | $01 / 09$ [NR 70 S 01 23:00:48 1983 BT OIBBN ... RIWNK BT] 2107z Fair QRN2 QSB2 |
| 2107 z | $01 / 09$ [NR 71 S 01 23:07:08 1983 BT ELURS ... CRPER BT] 2113z Fair QRN2 QSB2 |
| $2113 z$ | $01 / 09$ [NR 72 S 01 23:13:22 1983 BT RSQES ... ORVWH BT] 2119z Fair QRN2 QSB2 |
| $2119 z$ | $01 / 09$ [NR 73 S 01 23:19:28 1983 BT ZOQTG ... YBXG* BT] 2126z Fair QRN2 QSB2 |
| 2157 z | $01 / 09$ [NR 79 S 01 23:57:18 1983 BT EMKGP ... PRQKQ BT] 2203z Fair QRN2 QSB2 |
| $2203 z$ | $01 / 09$ [NR 80 S 02 00:03:30 1983 BT BYRKE ... OSPSP BT] 2209z Fair QRN2 QSB2 |
| $2209 z$ | $01 / 09$ [NR 81 S 02 00:09:45 1983 BT IODTU ... MFIUY BT] 2216z Fair QRN3 QSB2 |
| $2216 z$ | $01 / 09$ [NR 82 S 02 00:16:01 1983 BT XOBFY ... IJBGI BT] 2222z Fair QRN3 QSB2 |
| $2222 z$ | $01 / 09$ [NR 83 S 02 00:22:13 1983 BT MFWYN ... IGSQC BT] 2228z Fair QRN3 QSB2 |
| $2253 z$ | $01 / 09$ [NR 88 S 02 00:53:06 1983 BT BGURN ... WHUFZ BT] 2259z Fair QRN3 QSB2 |
| $2259 z$ | $01 / 09$ [NR 89 S 02 00:59:21 1983 BT KBHOO ... VD*XM BT] 2306z Fair QRN3 QSB2 |
| $2331 z$ | $01 / 09$ [NR 04 S 02 01:31:12 1983 BT FVSAY ... KGWXO BT] 2338z Fair QRN3 QSB3 |
| $2350 z$ | $01 / 09$ [NR 07 S 02 01:50:03 1983 BT DEWPM ... VTXKJ BT] 2356z Fair QRN2 QSB2 |
| $2356 z$ | $01 / 09$ [NR 08 S 02 01:56:20 1983 BT OWZVI ... KNGQD BT] 0002z Fair QRN2 QSB3 |
|  |  |
| $0002 z$ | $02 / 09$ [NR 09 S 02 02:02:17 1983 BT OPQLQ ... AZTZD BT] 0008z Fair QRN2 QSB3 |
| $0008 z$ | $02 / 09$ [NR 10 S 02 02:08:32 1983 BT SXHIN ... WMZJC BT] 0014z Fair QRN2 QSB3 |
| $0014 z$ | $02 / 09$ [NR 11 S 02 02:14:50 1983 BT GEBBB ... MDABM BT] 0020z Fair QRN2 QSB3 |
| $0021 z$ | $02 / 09$ [NR 12 S 02 02:21:20 1983 BT NJAVE ... YMHFD BT] 0027z Fair QRN2 QSB3 |
| $0027 z$ | $02 / 09$ [NR 13 S 02 02:27:12 1983 BT AQQBO ... QJITQ BT] 0033z Fair QRN2 QSB3 |
| $0033 z$ | $02 / 09$ [NR 14 S 02 02:33:27 1983 BT DZDFT ... FSSKQ BT] 0039z Fair QRN2 QSB2 |


| Spectre | THU |
| :--- | :---: |
| Spectre | THU |
| Spectre | THU |
| Spectre | THU |
| Spectre | THU |
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| Spectre | THU |
| Spectre | THU |
| Spectre | THU |
| Spectre | THU |
| Spectre | THU |
|  |  |
| Spectre | FRI |
| Spectre | FRI |
| Spectre | FRI |
| Spectre | FRI |
| Spectre | FRI |
| Spectre | FRI |

4889kHz 0033z 02/09 Transcript:
NR 14 S 02 02:33:27 1983 BT
DZDFT XTRQA RZARJ BRMDP SMJBF TTTKB SXCJB YHSIZ SEQSQ LSEIW
PKREV HJBAU YXXPL JGBUD SPGPS TVMPP WDQXR EYBQK XGQBK CYIBR TEUIH HMPTG MLFTR SHGKJ VIOQD HAFWU BWSLD KGLTR OWNEX GMIAV UTFOM HBBGD XJFPE FEPGI OHKER SZKBF LBJBN AJNEP OLLWQ TUJCY VLISN QRJZD URFQE PDUGM FPAEG IVDEO VXALS BEKCW BKFYY ABBXB KGXPO TTUNJ YYDLN CPIRF GHULF DGFSN GDKWC QWAVP SDVMM UMJFN IMFFJ RYJXZ MNAQC EPMMD XERWM RGSOI CMLIV OMNWN PSOYT EQAGP QVYBB USTNH YGZYL NURJS SNDLZ LJQLC ZIHSC BRWHP CBMNY QSKOG TCMCG VMUKZ FATLM JKCSQ ZRRYJ UHATC HNZPK YUGOB YJXJL IPOKE NMRFQ HMRRR YGZAW JDQQR OLNBU MBSEX RNWLF AGUCD AYVHM FSSKQ BT

Courtesy Spectre


Spectre
Spectre Spectre Spectre Spectre Spectre

FRI FRI FRI FRI FRI FRI

## M51 5426kHz 2203z 16/09 Transcript:

## NR 06 S 15 00:03:51 1983 BT

GBRJC GSBUD PXQGA IRNZV UULAY EVLGZ MUUCP NQAHN YGDFV DGXTR LMXAP GWRUK MWCON EPQYU FMMJU FFOUN RBBDY DMNFO KHUNV WINPP UOYFV YDZSC PEACT TZEJC OCSVC DZBOW PNQJO XSYUV ILJMV WQOCC FYVAZ YGXNE VMSSA GWLIY PIVGK YLWXE EBQWM RPWCA CCIEH YIIHL HAMJZ HQUTE YIBCW KHWDC GTZLN HTDTS WLNSQ BJHSB WJIDL KVZJY HLJHD RISUM POKQL EIXPA YONQT AAECQ KUYZW ZEYCU DPWBF BXCAN BIEXR PCPIN VIJWC AEFJG OMTEQ KLNBP GZDBC LTLIU VSZUR BYGQG BIEXR PCPIN VIJWC AEFJG OMTEQ KLNBP GZDBC LTLIU VSZUR BYGQG P*VGS JTWSP NMWNB CWIRY QWWBB KEYVP KOLVM CHNBR LRJXR TAILN
PIJHS UGNAM FEQNE YLOWG HFQWZ TWLCS ISFKA XNGKC XFTOJ QQWBQ PIJHS UGNAM FEQNE YLOWG HFQWZ TWLCS ISFKA XNGKC XFTOJ QQWBQ
ANBUY DEGOS GGVKQ LESKU AAVGH LMIKM DYMNW TSEGG FBJWS XGJRB ANB

* = Not Heard.

Courtesy Spectre

5426 kHz 2210 z
2216z
2222z
2228z
2235z
2241z
2247z
2253z
2259z
2306z
2212z
2318z
2325z
2331z
2337z
2343z
2350z
2356z

0002z
0008z
0014z
0020z
0026z
0033z
0039z
0046z
0052z
0058z
0104z
0110z
0116z
0123z
0129z
0135z
0142z
0148z
0154z
0200z
0206z 0213z

16/09 [NR 07 S 15 00:10:05 1983 BT IVGVG ... GRRAP BT] 2216z Fair QRN2 QSB2

17/09 [NR 25 S 15 02:02:30 1983 BT JCYKW ... HZBXU BT] 0008z Fair QRN2 QSB2 17/09 [NR 26 S 15 02:08:48 1983 BT SAENE ... YJKVB BT] 0014z Fair QRN2 QSB2 17/09 [NR 27 S 15 02:14:51 1983 BT LLLCG ... WBRCT BT] 0020z Fair QRN2 QSB3 17/09 [NR 28 S 15 02:20:58 1983 BT SFLAK ... JLQWN BT] 0026z Fair QRN2 QSB3 17/09 [NR 29 S 15 02:26:14 1983 BT UGNJX ... GHUCD BT] 0033z Fair QRN2 QSB3 17/09 [NR 30 S 15 02:33:31 1983 BT COYHS ... GFFGA BT] 0039z Fair QRN2 QSB3 17/09 [NR 31 S 15 02:39:51 1983 BT ZWAIH ... GBJFG BT] 0046z Fair QRN2 QSB3 17/09 [NR 32 S 15 02:46:02 1983 BT DTKTW ... TNBMS BT] 0052z Fair QRN2 QSB3 17/09 [NR 33 S 15 02:52:14 1983 BT WOKQZ ... RJJGE BT] 0058z Fair QRN2 QSB3 17/09 [NR 34 S 15 02:58:26 1983 BT BOPQJ ... BRCVZ BT] 0103z Fair QRN2 QSB3 17/09 [NR 35 S 15 03:04:28 1983 BT HAYEJ ... EWQGJ BT] 0110z Fair QRN2 QSB3 17/09 [NR 36 S 15 03:10:38 1983 BT REBBF ... KNDKZ BT] 0116z Fair QRN2 QSB3 17/09 [NR 37 S 15 03:16:57 1983 BT RIPUP ... MEOTD BT] 0123z Fair QRN2 QSB3 17/09 [NR 38 S 15 03:23:12 1983 BT INDRJ ... YWOLC BT] 0129z Fair QRN2 QSB3 17/09 [NR 39 S 15 03:29:29 1983 BT ZRNBC ... EYOQN BT] 0135z Fair QRN2 QSB3 17/09 [NR 40 S 15 03:35:49 1983 BT LUXBL ... FSVJH BT] 0142z Fair QRN2 QSB3 17/09 [NR 41 S 15 03:42:02 1983 BT PRDPX ... SYRZY BT] 0148z Fair QRN2 QSB3 17/09 [NR 42 S 15 03:48:22 1983 BT IAJIM ... WWLND BT] 0154z Fair QRN2 QSB3 17/09 [NR 43 S 15 03:54:35 1983 BT JJXGR ... QLQQJ BT] 0200z Fair QRN2 QSB3 17/09 [NR 44 S 15 04:00:52 1983 BT ZXWAB ... MLUGT BT] 0206z Fair QRN2 QSB3 17/09 [NR 45 S 15 04:04:07 1983 BT VQQSA ... TSWGD BT] 0213z Fair QRN2 QSB3 17/09 [NR 46 S 15 04:13:20 1983 BT KPEXE ... CVRRT BT] 0219z Fair QRN2 QSB3 S

M51 5426kHz 0213z 17/09 Transcript:
NR 46 S 15 04:13:20 1983 BT
KPEXE TWJNS GUKRO TOFUM PNDKL FSKXV CFCTH WLMZC AGQSZ EVEHC VCNAW VILNH CLMPZ ZLUMZ QHVYD LKLOA IHUPN ZFYLU IQSLD BWOEJ JUNMF IYUDQ WOFGH TDWNE GNUVD MQFZF EKDMW DUJJV LZPTU AAOUH YWSJV QRGBK YHEEP PPKSS VZORG HKEXK UVEAA TMBNM FTSQF ANVHG KJBVQ ZWTUV YUKES OYLAK RZOFT PKTRT FLVAU JSEGL ZPJRU YOBNX SFFNF LWBZK OCFMG VYTTP WLQRO EYVLZ HAEJA YWZHL LFTOX QKLRN POUQO TATVQ TMDGB ZWCAB RUJUQ XLAKC FKZMT QFAJD IBNOK OENNY SSBMM ZNXRN SOZNO SDYGG NHFWL YVNOP NIRUW QRZQJ ETIBO EZUBT WTKND ZWFND HHMFH XZTBE CCCEO MQZQC FBQID KSEUQ AATUU QPKRY WGYBG ZDDDW ZFYRM ICTJJ XJHGJ QUPHN PVKGC BEDEX BZGPH CVRRT BT

6818kHz1123z
1949z
1955z
2001z 2008z

17/09 [NR 27 S 15 21:49:32 1983 BT USXJX ... AJFFR BT] 1955z Fair QRN2 QSB3 17/09 [NR 28 S 15 21:55:44 1983 BT QWRFH ... BEENR BT] 2001z Fair QRN2 QSB3 17/09 [NR 29 S 15 22:01:50 1983 BT OGLFG ... VVDNJ BT] 2008z Fair QRN2 QSB3 17/09 [NR 30 S 15 22:08:04 1983 BT PVDOT ... (TX Switched Off)] 2010z Fair QRN2 QSB3

## October:

5426kHz1949z 5426 kHz 1956 z 5426kHz2002z 5426kHz2008z 5426kHz2014z 5426kHz2020z 5426kHz2027z 5426 kHz 2033 z 5426kHz2039z 5426 kHz 2045 z 5426kHz2049z 5426 kHz 2055 z 5426kHz2100z 5426kHz2110z

5426kHz2116z 5426KHz2123z 5426kHz2129z 5426kHz2135z 5426kHz2141z 5426 kHz 2148 z 5426kHz2340z 5426kHz2346z 5426kHz2353z 5426kHz2359z

5426 kHz 0005 z
5426kHz0011z 5426kHz0018z 5426kHz0024z 5426kHz0030z

6818 kHz 1957 z

6818kHz2003z

6818kHz2009z 6818kHz2016z 6818kHz2022z 6818 kHz 2028 z $6818 \mathrm{kHz} 2035 z$ 6818kHz 2041z 6818 kHz 2047 z

04/10[NR 82 O 04 21:49:56 1983 BT EATZW ... ULFTJ BT] 1956z Fair QRN2 QSB2 04/10[NR 83 O 04 21:56:07 1983 BT BFVDK ... YBPEJ BT] 2002z Fair QRN2 QSB2 04/10[NR 84 O 04 22:02:21 1983 BT HDOYK ... ETMZS BT] 2008z Fair QRN2 QSB2 04/10[NR 85 O 04 22:08:41 1983 BT SDLGD ... TWNUT BT] 2014z Fair QRN2 QSB2 04/10[NR 86 O 04 22:14:42 1983 BT PUHXE ... NCZBM BT] 2020z Fair QRN3 QSB2 04/10[NR 87 O 04 22:20:56 1983 BT ZYNFZ ... FAZBH BT] 2027z Fair QRN3 QSB2 04/10[NR 88 O 04 22:27:09 1983 BT EDHWH ... FTTAZ BT] 2033z Fair QRN3 QSB2 04/10[NR 89 O 04 22:33:20 1983 BT RWJBL ... BEDVQ BT] 2039z Fair QRN3 QSB3 04/10[NR 90 O 04 22:39:33 1983 BT JNVQF ... CDJPJ BT] 2045z Fair QRN3 QSB2 04/10[NR 01 O 04 22:45:47 1983 BT HRIJF ... EADXI BT] 2049z Fair QRN3 QSB3 04/10[NR 02 O 04 22:49:55 1983 BT EPTMX ... BAJMX BT] 2055z Fair QRN3 QSB3 04/10[NR 03 O 04 22:55:15 1983 BT ETFTA ... PTDTJ BT] 2100z Fair QRN2 QSB3 04/10[NR 04 O 04 23:00:19 1983 BT VSLQH ... QTIHA BT] 2110z Fair QRN3 QSB3 04/10[NR 05 O 04 23:10:35 1983 BT SFYIA ... YKLAT BT] 2116z Fair QRN3 QSB3

NR Ø6 O Ø4 23:16:49 1983 BT
JCUYC GDEMP WRUPP AZLMC SOTLB LSOKI YLTQE MVVMY JNKBZ BHTVI HLIBH ZOVSH QJWCA OYJPJ VSSXU OEWDY EQDJA UWECG JLNAJ YRWFG GGMXT OFSDC WWQRD JNIPB PKLAI BNJNH AKHGG BAEYX OHWAG TKLGQ ASDYS QBSXY SQPRC OMXHI GBXJA AECCK MEJMF KYNOO RKPOA SUUCH QNLTH MQQYT JPF*E UNGYQ KSMNU NNQHZ MFKDU GTUTV KSTBM KSGAU POZNN JIBIK IMQXH NTMBB TRNYQ OEZRO AITPL XOCIM SOHDA RCVQB SXQL X GDLJI HSBAH OSAUB JCZFN DRADF XDCIZ NYHIR YZJSZ XFBNT UBRBL HAECP VRARG QVMRT MZWTF VYATS JSQRY MMGPH KEYFM DDQSA GDZSV VREHF BDNTK VVHKG WWETN OUVKN UAFXH UIXDC SM*DA QUAPK SDGTP KWOMM LUSOH JUXQB MLFXE LUQQL CPVKV HHMQU ESPNQ TOVYJ

04/10[NR 06 O 04 23:16:49 1983 BT JCUYC ... TOVYJ BT] 2123z Fair QRN3 QSB3 04/10[NR 07 O 04 23:23:04 1983 BT UREJA ... HGIGD BT] 2129z Fair QRN3 QSB3 04/10[NR 08 O 04 23:29:09 1983 BT LFCZJ ... SHCLC BT] 2135z Fair QRN3 QSB3 04/10[NR 09 O 04 23:35:30 1983 BT CKCTR ... HRFSW BT] 2141z Fair QRN3 QSB3 04/10[NR 10 O 04 23:41:51 1983 BT GCDVS ... IYUMP BT] 2148z Fair QRN3 QSB3 04/10[NR 11 O 04 23:48:12 1983 BT KXGUY ... TUIBT BT] 2154z Fair QRN3 QSB3 04/10[NR 29 O 05 01:40:38 1983 BT LDVQQ ... TWEIB BT] 2346z Fair QRN3 QSB3 04/10[NR 30 O 05 01:46:52 1983 BT RSYCA ... NATSH BT] 2353z Fair QRN3 QSB3 04/10[NR 31 O 05 01:53:01 1983 BT DOFHN ... PZVWT BT] 2359z Fair QRN2 QSB3 04/10[NR 32 O 05 01:59:18 1983 BT UQKQM ... YEVVB BT] 0005z Fair QRN3 QSB3

NR 33 O Ø5 Ø2:Ø5:31 1983 BT
GHVFZ RVROQ QYXNL PSCAY OXFTP HDFNN HCLFL WKALJ LDDBH PITWT ZKAD WZDVH LKVRI KJESQ AXBVR CQJTX JNCDB OHMAD RXGSH CDTHG EWWUX MTIVB BQTAI OZJZA BJBZM QPHSL NLGAH HGJKI CURFH DNSTD MMFDR OYFRU VEUGT EOEBC DQWPB MDHTD HOEMM JWXUM OTYZL HSNBZ GSBEY JSZEE QNWCK LNHMK KHEDK IJJNY EWIQU VJZDX CAGVW FPHVN XOMLP LFCXK ULJRT TKSKD XEIJG ZEHES SDZCZ QXVUN ZPKSZ VQHRD TNOFC FVGTN OYEPG VELED BLBCP NPMYY SNFSU GLYSY YDIAB TPUNK OXDVC KULSK KSHLZ CEBDJ CPKCY NAWOE XXEGQ DPCUA VBNES QNDKE TQUUZ MARLQ EGJHH ZOJQW OSOMP CSAOA FSRLC KWBCM MDZNH VAOOT SPMTL QQVRQ CZHLA SVKOS VMCVB PIOSC HBAKD MFRPB KSKCM VSXKW BT

## NR Ø9 O 17 22:Ø3:28 1983 BT

TLISP SSJWG KQARJ PJMGM TJNCG JEXUF WEVHU TJPWV ENVZN QMYDR
YIDCK IHOGN BPAPY SDCCI AGPWY BKXQH AMMXX FKXYL MIVJM FOAML
IBCGI QTKJQ WARFD HNPHR FBLQE CSUQP KLNPV XCMJN ZRYXJ JOONY
UXGPW CHWVW SBPPG JSSDB FSYNL FWPPT LLEHD IXXJO WITCB IBLAN IJBHZ GTMAT LRWCT XJSXJ PQOMK QFYPP WQYJY LUSZS ZTNCL KJGJM BOGDJ ATSOS MFBTW IBGEH BKVTQ UVRVF VIQNQ YSCKN ZTJKG YLPCS YESIX AUHSU RCWFO GBKPG OKSDY WVTQS VSYBJ TPZGC TGDQE HSOWQ YKWYC UZZAB XJKBZ KJHXH PQUII WYTXE LKJWP SYPFT UFFIG MZHRZ
YPSFN VEKZA EVECJ L MQFI LYWXC QCOWJ EGWXT BTIFC NTWCN UCCW
EQNVV HWMWW PCMAB FCHKY ZJKOP JYDPV MWKCG MZWHB WVENX NATMY
BT

17/10[NR 09 O 17 22:03:28 1983 BT TLISP ... NATMY BT] 2009z Fair QRN2 QSB2

17/10[NR 10 O 17 22:09:52 1983 BT HOQWZ ... GGIPI BT] 2016z Fair QRN2 QSB2 17/10[NR 11 O 17 22:16:00 1983 BT QZTXD ... VLMVE BT] 2022z Fair QRN2 QSB2 17/10[NR 12 O 17 22:22:25 1983 BT ACLDS ... JJNET BT] 2028z Fair QRN2 QSB2 17/10[NR 13 O 17 22:28:44 1983 BT BDMIN ... HYSNY BT] 2035z Fair QRN2 QSB2 17/10[NR 14 O 17 22:35:01 1983 BT YQIZJ ... MMJNW BT] 2041z Fair QRN2 QSB2 17/10[NR 15 O 17 22:41:19 1983 BT WSVXI ... RTISW BT] 2047z Fair QRN2 QSB2 17/10[NR 16 O 17 22:47:34 1983 BT QINKS ... UDFZX BT] 2053z Fair QRN2 QSB2

BT NR 73 O 25 21:24:53 1983 BT
BDMFK SMSPD QCLDE VPADG ZFUHK HOTTU QNSZW FGOCW MMFLH XGPBN BDUCU IDMSR TKBGB OVBJQ WVEGQ DBMDF KWRMZ ETFTH HBECL CDPNM OVDNG DWRCB TVNLL EAPZE GMCKO TKYWA SZBOH IGWKK CHGZI MLVXD AMEPT NVTOX ZMUUM TZVNE NJDJV KOLLI ZYPDS WPJDL TJHJV YXYXV LVALU CZEWS UKYVL XHQZT JZACI DOHUD ANERL IZTFR WTPGZ BPEBV ANQNM BRWKA YXIHX OYKAC HLZAN WQMFL OJUZL PLLSP JUQIC WPHKW QOBLP AZNXJ NQHDA HSKJX VHDME ARFGV HSAYO VBHMI DSBVQ ZMGWO VEGBC MWTRQ SCSTR RABOJ GBCVJ LXYZO PERJD YHOXJ ORRAN NPSUX DXBJZ TGDIY GRCAU XMCHD PXKEW RDIDM JKVML EKXQZ ZAVUY IHLIP NPHMD EUARI BAJUP VBCJH OCWFM YBVJY NSXAR JXDYD XKOWR SFO*S BT

6818kHz1931z 6818kHz1937z 6818 kHz 1943 z 6818kHz1950z 6818kHz1956z 6818kHz2002z

25/10[NR 74 O 25 21:31:12 1983 BT FMHDY ... PIQSA BT] 1937z Fair QRN2 QSB3
Spectre
TUE 25/10[NR 75 O 25 21:37:33 1983 BT EMUJX ... AOXKP BT] 1943z Fair QRN2 QSB3 25/10[NR 76 O 25 21:43:48 1983 BT MMJZD ... ECGIR BT] 1950z Fair QRN2 QSB3 25/10[NR 77 O 25 21:50:24 1983 BT KEUEG ... TMDQD BT] 1956z Fair QRN2 QSB3 25/10[NR 78 O 25 21:56:21 1983 BT DDXCT ... DBVVQ BT] 2002z Fair QRN2 QSB3 25/10[NR 79 O 25 22:02:26 1983 BT ENDHZ ... GMDUI BT] 2005z Fair QRN2 QSB3

9320kHz1322z 9320kHz1327z 9320kHz1335z 9320kHz1341z 9320kHz1406z 9320kHz1412z 9320 kHz 1418 z

> 24/10[NR 63 O 24 15:22:45 1983 BT SKIZD ... PATIA BT] 1327z Fair QRN3 QSB2 24/10[NR 64 O 24 15:27:56 1983 BT TMKOY ... BGMAE BT] 1335z Fair QRN3 QSB2 24/10[NR 65 O 24 15:35:10 1983 BT SZDCE ... NKFAC BT] 1341z Fair QRN3 QSB2 24/10[NR 66 O 24 15:41:30 1983 BT *QIRT ... CXIRF BT] 1347z Fair QRN3 QSB2 24/10[NR 70 O 24 16:06:09 1983 BT WREMP ... JWRGH BT] 1412z Fair QRN3 QSB2 24/10[NR 71 O 24 16:12:21 1983 BT ZZIBH ... CARKX BT] 1418z Fair QRN3 QSB2 24/10[NR 72 O 24 16:18:39 1983 BT ILUAJ ... REHTT BT] 1425z Fair QRN3 QSB3

Spectre kindly sent a number of sample messages [Thanks]. To preserve space a small representative files are shewn for M51.
M55 $\underline{0}$
No reports
M62 $\mathbf{O}$
No reports
M76 $\underline{0}$
No reports
M87 O
No reports

## M89 O

The 'VVV' calls with 'QSA' ending appear to have ceased.
J-PL keeps a close eye on this station and makes good use of the Global Tuners network, as do a few other members which combined has added some more new freqs to our watch lists.
The short hand sent messages appear to have reduced but turn up in 'bunches' - tests ?

| 4860//6840 | 19.20 | 17/27 Sept VVV Q2M de NYZ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 4225//5500 | 19.27z | " |  | V | 7NPE de QV5B |
| 3797 | 19.32z | " |  | V | H2FL de DRV8 |
| 10799 | 01.26z | 18 Sept |  | V | WITN de GNXG with Intro Tfc |
| (NR 45 RMKS 7 ..30198.9..N123 6/.../1930 LZ5/..3/9003/98.8 etc ,poor copy) |  |  |  |  |  |
| 3297 | 15.28z | 18 Sept |  | V | GKVZ de Q7NW |
| 10180 New | 11.30z | 24 Sept | i/p | DKG6 d | 3A7D , per EW |
| 10779 | 17.53z | " |  | V | WITN de GNXG |
| 5500//4225 | 18.16z | 25 Sept | V | 7NPE de | QV5B |
| 10180 | 02.19z | " |  | V | DKG6 de 3A7D |
| 8040 | 22.58z | 27 Sept |  | V | H2FL de DRV8 |
| 6773 | 22.16z | 28 Sept |  | V | H2FL de DRV8 |
| 3642 | 22.18z | " |  | V | DKG6 de 3A7D |
| 4860//6840 | 22.20 z | " |  |  | V Q2M de NYZ |
| 4982 | 13.33z | 30 Sept | V | HJ4I de | I4K in traffic sending |

1928009302139 BT etc, This call only heard on 4770 previously, No // found yet but there are probably another 3 day/night freqs out there. 4982 also now heard at $16.52 / 19.53 / 22.32 z$

| 4982 | 12.15 z | $02 / 06$ Oct V | HJ4I de YI4K, TX in extended repeating |
| :--- | :--- | :--- | :--- |
| traffic, poss test or exercise. |  |  |  |

multiple short messages, already up to No 168 for the month.
YI4K not heard from 7 Oct - short term station ? New freqs ?
JPL turned up this additional info:-
ITU Monitoring, Tokyo some years ago placed it at.
Bearing 281 deg
Loc E115 52 N32 37
This is additional to the Newsletter 66 update.
So it's not new but an irregular- wonder the purpose (Ed)

| $10640 / / 6840$ | $01.22 z$ | 07 Oct |
| :--- | :--- | :--- |
| $6840 / / 4860$ | $19.20 z$ | 11 Oct |
| 10779 | $03.15 z$ | 18 Oct |
| 7602 | $14.40 z$ | 19 Oct |

VVV Q2M de NYZ
VVV Q2M de NYZ
10779 03.15z 18 Oct V WITN de GNXG
7602 14.40z 19 Oct VKG6 de 3A7D

## SK01 (Data Mode generic classification, Cuban TX’s)

See comments in Issue 49 which still apply.
J-Fl \& DJs log mails provide details of ongoing developments.
Freqs reported
6768, 10432
SK01

Contributors
AB, BR, CB, Danix, DoK, EW, Fanis, FN, FS, Gert, GD, GN, HFD, JO, JPL, kd4kym,Mark SA, MB, ML, MP, MS, PoL, PP, RNGB, SC, Spectre, AnonEU, AnonUK

## GERMAN BRANCH REPORT

Spy happenings and X06 logs - the report from ENIGMA2000's German Branch (E2Kde) and X06 team
Hallo liebe Freunde und Kollegen der deutschen Branche und des X06 Teams (Hello dear friends and colleagues of the German Branch and X06 team)
As you can see, I am still on board and not arrested like the Russian spy couple in late October, although I also live in Marburg:-). You can imagine, that this event was reason enough for the German media to ask E2Kde for details about numbers stations. You will see more below, but before that, another media event, which is a bit longer ago, and as usual news and logs from the X06 team at the end.

## Numbers stations' article in "Mysteries"

In the September/October edition of the "Mysteries" magazine you can find an article about numbers stations: "Spies on the air - via shortwave". This magazine is located in Basel/Switzerland, but the most readers come from Germany. There is only a print version in German available, which you can order via the website (www.mysteries-magazin.com).
The focus of the article itself is on an interview with me and of course general information about numbers stations, but it contains also a link to ENIGMA2000 and to the historical "case Kurras" numbers station, which was reconstructed by Jörg Drobick (JörgE2Kde) and placed on his website (http://scz.bplaced.net/d/kurras.mp3).

## Numbers contribution in SWR3

The German spy case from the weekend of October $21^{\text {st }}$ to $23^{\text {rd }}$ was of course a subject of many German media. One radio journalist from the Southwest German Radio (SWR) asked me for numbers details. During this interview he could tell me also some details about the Russian spy couple, arrested in Marburg. They were living in Landau (Rhineland-Palatine) for some years, because the husband was working in the German agency of the French car buildling company "Faurecia". He was suspicious to make industrial espionage during his job. The wife was surprised while hearing and decoding a numbers station, as the police stormed the couple's appartement in Marburg (district Michelbach) on October $22^{\text {nd }}$. In the popular music programme SWR3, there was a short contribution about numbers stations between 1100 and 1130 UTC (that's 1300 to 1330 CEST). I will get a copy of it, and if it's short enough, it'll be sent to the "Files" section of our group, together with a short translation.

## X06 team

It got 2 new members: Eddy from Southern Australia and WebWeasel from the Priyom team. He and his colleagues are supporting the X06 team with interesting logs, and as our Teamkopf I am in contact with Priyom. Eddy brings us very interesting logs from another area of this world, and it's amazing, that he can receive X06 and CROWD36 very clearly in Australia.

As you can now see, many things happened on the X06 subject:
X06 Mazielka (1C) logs section

| Date | Day UTC | Freq | Scale | Monitor | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 20110901 | Thu 0727 | 15973 | 162543 | Peter/UK | Fair, M228 |
| 20110902 | Fri 0622 | 16320 | 241563 | Peter | Good, M229 |
| 20110902 | Fri 0854-0902 | 14824 | 625413 | Hans/NO | Weak/fair, some local QRM, M230 |
| 20110902 | Fri 0926-0927 | 16103 | 645321 | Hans | Fair (new freq), R |
| 20110902 | Fri 0956 | 12215 | 361245 | Peter | Good, M231 |
| 20110902 | Fri 1102 | 16276 | 314265 | Peter | Very weak, M232 |
| 20110902 | Fri 1201-1207 | 16103 | 231654 | Peter, Hans | Different scale, fair, R |
| 20110905 | Mon 0651-0656 | 10161 | 165324 | Peter | Good, M233 |
| 20110906 | Tue 0758-0802 | 12157 | 165423 | Peter | Good, M234 |
| 20110907 | Wed 0746-0751 | 12152 | 432516 | Peter | Good, M235 |
| 20110907 | Wed 0834-0844 | 14631 | 362154 | Peter,Linkz | Fair, M236 |
| 20110907 | Wed 0851 | 20690 | 156345 | Linkz/FR | X06b(?) |
| 20110907 | Wed 0953-0957 | 18346 | 214356 | Peter | Fair, M237 |
| 20110907 | Wed 1642-1645 | 14871 | 156234 | Peter | Alert type 2(1) Good, M238 |
| 20110907 | Wed 1656-1657 | 13940 | 156234 | Peter,Linkz | 2(2) Weak/poor, M239 |
| 20110908 | Thu 1524 | 9106 | 564213 | Linkz | Strange modulation, M240 |
| 20110909 | Fri 0744-0749 | 12177 | 215346 | Peter, Hans | New style (error?), fair/strong |
| 20110909 | Fri 0749-0751 | 12177 | 356412 | Peter, Hans | Fair/strong, M241 |
| 20110909 | Fri 0754-0801 | 16115 | 215346 | Hans | Alert 2(1) Fair/strong, M242 |
| 20110909 | Fri 0801-0803 | 14650 | 215346 | Hans | 2(2) Strong, M243 |
| 20110909 | Fri 0805-0807 | 16153 | 153624 | Peter | M244 |
| 20110909 | Fri 0956-1004 | 17463 | 256134 | Peter | Alert 2(1) M245 |
| 20110909 | Fri 1004-1005 | 19611 | 256134 | Peter | 2(2) M246 |
| 20110912 | Mon 0954-0957 | 13517 | 463125 | Hans | New style |
| 20110913 | Tue 1029-1031 | 9253 | 612534 | Hans | Alert 2(1) Fair, R |
|  |  |  |  |  | 13 |


| Date | Day UTC | Freq | Scale | Monitor | Commen |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 20110913 | Tue 1032-1040 | 14675 | 612534 | Hans | 2(2) Fair/strong, R |
| 20110914 | Wed 1253-1304 | 14650 | 215346 | Ian, Peter | 1259-1302: CROWD36, 14656 kHz, R |
| 20110914 | Wed 1306-1308 | 14970 | 216354 | Peter | Weak, R |
| 20110914 | Wed 1309 | 14871 | 156234 | Peter | M247 |
| 20110915 | Thu 0723-0726 | 12219 | 162543 | Peter | M248 (CROWD36 before and after X06) |
| 20110915 | Thu 0735 | 8100 | 131-36 | WebWeasel | X06b, S9+ (moved to several freqs)* |
| 20110915 | Thu 1157 | 13415 | 131-36 | WebWeasel | X06b |
| 20110915 | Thu 1419 | 6940 | 131-36 | Danix, Hans, WebWeasel, Ian Wraith | Very strong X06b |
| 20110915 | Thu 1406-1411 | 14871 | 156234 | Peter | Fair, M249 (again framed by CROWD) |
| 20110915 | Thu 1628-1734 | 7730 | 131-36 | WebWeasel | X06b |
| 20110915 | Thu 1735 | 8100 | 131-36 | WebWeasel | X06b |
| 20110916 | Fri 0635 | 16320 | 241563 | Alexinroma | New style, M250 (started w/ 463125) |
| 20110916 | Fri 0937-0938 | 16103 | 645321 | RNGB | Monitored in progress, R |
| 20110916 | Fri 1000 | 12215 | 361245 | Peter | New Style, M251 |
| 20110917 | Sat 1013 | 20720 | 123456 | WebWeasel | X06c on new freq!! |
| 20110917 | Sat 1130 | 22925 | 123456 | Linkz | X06c on new freq, 5+ h active!! |
| 20110918 | Sun 0838 | 11090 | 123456 | Linkz | X06c |
| 20110918 | Sun 0944 | 12060 | 351264 | Linkz | Rare scale, R |
| 20110918 | Sun 1625 | 12223 | 1--2-- | Mikesndbs | X06b with S7, monitored in progress |
| 20110918 | Sun 1723 | 12100 | 123456 | Mikesndbs | X06c with S9 |
| 20110918 | Sun 1840 | 10255 | 351264 | Linkz | Alert 2, both R (1) |
| 20110918 | Sun 1845 | 11010 | 351264 | Linkz | 2(2) |
| 20110919 | Mon 1606-1614 | 11438 | 532614 | Alex, Peter | Good in AM (CROWD36 at 1616), M252 |
| 20110919 | Mon 1808 | 6940 | 123456 | WebWeasel, Peter | X06c - very faint, but there |
| 20110919 | Mon 1930 | 7730 | 123456 | Max/IT | X06c changed freq |
| 20110920 | Tue 0829-0833 | 14631 | 362154 | Eddy/AU | R |
| 20110920 | Tue 0915-0924 | 18206 | 246531 | Peter | Strong, M253 |
| 20110920 | Tue 1738 | 7856 | 123456 | FrankE2Kde | X06c |
| 20110920 | Tue 1756 | 7730 | 123456 | Frank | X06c |
| 20110920 | Tue 1906 | 10871 | 123456 | Frank | X06c on new freq! |
| 20110920 | Tue 2325-0255 | 7856 | 123456 | Frank, Gary | X06c with S8 |
| 20110921 | Wed 0756-0758 | 14377 | 432516 | Peter | Weak, M254 |
| 20110922 | Thu 0758-0802 | 12126 | 521634 | Peter, Alex, Eddy | M255 (preceded by CROWD36) |
| 20110922 | Thu 0935-0939 | 13506 | 164532 | Peter | Strong, M256 |
| 20110922 | Thu 2023-2024 | 10731 | 314265 | LU5EMM | M257** |
| 20110926 | Mon 0616-0620 | 14450 | 464646 | RNGB | X06a i. p., 1 min break (0618-0619) |
| 20110926 | Mon 0620-0621 | 14450 | 246135 | RNGB | Changed to test scale |
| 20111001 | Sat 0917 | 19511 | 314265 | Linkz | Alert 2(1) R |
| 20111001 | Sat 0927 | 20665 | 325614 | Linkz | New freq, R |
| 20111001 | Sat 0932 | 16276 | 314265 | Linkz | 2(2) R |
| 20111003 | Mon 0705-0710 | 10161 | 165324 | Alex | S9+ in AM, M258 |
| 20111004 | Tue 1157-1159 | 14650 | 215346 | Peter | M259, new schedule |
| 20111005 | Wed 0954-1000 | 18346 | 214356 | Alex | Very strong, M260 |
| 20111007 | Fri 0940 | 17445 | 362154 | WebWeasel | R |
| 20111011 | Tue 0802 | 9300 | 123456 | Kopf, RNGB | X06c (i. p.) |
| 20111011 | Tue 1232-1239 | 12100 | 612534 | LU5EMM | Alert 2(1) R |
| 20111011 | Tue 1240-1247 | 14675 | 612534 | RNGB | 2(2) Monitored i. p., R |
| 20111012 | Wed 0742-0745 | 9365 | 412356 | KopfE2Kde | New style, M261 |
| 20111012 | Wed 0753-0755 | 13419 | 465132 | Kopf | M262 |
| 20111017 | Mon 0653-0657 | 12122 | 165324 | Alex | M263 |
| 20111017 | Mon 1555-1558 | 11438 | 532614 | Alex | M264, followed by CROWD36 1600-1603 |
| 20111018 | Tue 1510-1519 | 14650 | 215346 | Ian | M265 (CROWD36 on freqs nearby) |
| 20111019 | Wed 1000-1005 | 14501 | 214356 | Ian | R (CROWD36 at 1006-1009, 14502 kHz ) |
| 20111020 | Thu 0640 | 17468 | 436512 | Fritz/CH | R |
| 20111020 | Thu 1913-1917 | 5412 | 213546 | WebWeasel | Rare scale \& freq (®), then CROWD36 |
| 20111021 | Fri 1002-1007 | 14501 | 361245 | Peter | M266 |
| 20111024 | Mon 0941-0944 | 10372 | 431625 | Alex | New style, M267 |
| 20111025 | Tue 0843-0844 | 13420 | 534216 | Alex | Very weak, M268 |
| 20111026 | Wed 0907-0909 | 16116 | 134265 | Alex | New style (carrier till 0912), M269 |
| 20111027 | Thu 0753-0756 | 12126 | 521634 | Alex | Very strong, M270 |
| 20111028 | Fri 0741-0744 | 12213 | 615243 | Alex | Very strong, M271 |
| 20111028 | Fri 0823-0825 | 16153 | 153624 | RNGB | I. p., R |
| 20111028 | Fri 0844-0849 | 10653 | 356412 | Alex | New style, M272 |
| 20111031 | Mon 1354-1401 | 16115 | 215346 | Ian | Strong, R |

[^0]As promised, many things happened, next time there will be more. Till then I say as usual "Auf Wiedersehen" and "Good-bye"
Jochen Schäfer, KopfE2Kde and X06 Teamkopf in Marburg, the main QTH of last October's spy happening

## VOICE STATIONS

## PoSW's E06 logs to start:

First + Third Thursdays in the Month 2030 UTC Schedule:-
1-Sept-11:- $5,186 \mathrm{kHz}$, calling " 891 ", DK/GC "246 2461515 ". Came complete with the distortion on audio peaks often noted in the past. Faint music heard off and on during the call-up, not sure if this was on E06's signal or something else on exactly the same frequency because later on there was the sound of a weak carrier being swept manually as though someone was swinging a VFO, might have been a UK CCF station taking exception to Ivan's presence in this part of the short-wave spectrum.

15-Sept-11:- $5,186 \mathrm{kHz}$, started approx. 25 seconds before the half-hour, " 891 " and "246 2461515 ", as last time. Strong signal but still had the distortion.

Friday 2130 UTC Schedule:-
2-Sept-11:- $5,197 \mathrm{kHz}$, call " 634 ", DK/GC "124 1241515 ", good signal, no sign of the distortion noted on yesterday's 2030 z sending.
16-Sept-11:- $5,197 \mathrm{kHz}$, " 634 " and "124 1241515 ", and the distortion is back.
21-Oct-11:- $5,197 \mathrm{kHz}$, calling " 634 ", DK/GC "728 72815 15", good signal, no distortion.

## RNGB's Sept/Oct 2011 logs:

E06 Sept log:

| Thurs | 01/09 | 06.00 | 14835 | '354' 00000 |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 20.30 | 5186 | '891' 2461513245245361092827365 18420..... 65745 |
| Fri | 02/09 | 21.30 | 5197 | '634' $124156475646352172634657458675 . \ldots . .56378$ |
| Sat | 03/09 | 00.30 | 6874 | '759' $146309122169707072359723568459 . \ldots . .12112$ |
| Sun | 11/09 | 00.30 | 6874 | '759' $861321685267933253720586956634 . \ldots$. (tx broke at 96647)..... |
| Wed | 14/09 | 19.19 | 4523 | '829' 00000 |
|  |  | 20.20 | 3892 | '829' 00000 |
| Thurs | 15/09 | 06.00 | 14825 | '354' 987 $16105436717701228257353 . \ldots . .18733$ |
| Fri | 16/09 | 06.00 | 14830 | '354' $98716105436717701228257353 . \ldots .18733$ |
| Sat | 17/09 | 00.30 | 6874 | '759' $462310202011102976212123987671 . . . .31770$ |
| Fri | 23/09 | 06.00 | 14830 | '354' $98716105436717701228257353 . . . .18733$ |
| Sun | 25/09 | 00.30 | 6874 | ‘759' $284308534799550663143591673130 . \ldots . .11750$ |
| E06 Oc |  |  |  |  |
| Sat | 01/10 | 00.30 | 6797 | ‘759’ 2613017725637075088539930 10036..... 76468 |
| Thurs | 06/10 | 06.00 | 16320 | '18'6698123 433470787982244 12626..... 51243 |
|  |  | 20.30 | 5186 | '891' $246150892113479532761420843152 . \ldots . .43729$ |
| Fri | 07/10 | 06.00 | 16320 | '186' $69812343347078798224412626 \ldots . . .51243$ |
|  |  | 21.30 | 5197 | '634' 7281513878924310843278321 24568..... 57326 |
| Sun | 09/10 | 00.30 | 6797 | '759' $486317369859990249940203293843 . . . .63973$ |
| Wed | 12/10 | 19.19 | 4523 | '829' 00000 |
|  |  | 20.19 | 3892 | '829' 00000 |
| Sun | 16/10 | 00.30 | 6797 | ‘759' $620310589138747369710060887737 . . . .48966$ |
| Thurs | 20/10 | 20.30 | 5186 | '891' $246150892113479532761420843152 . . . .43729$ |
| Fri | 21/10 | 06.00 | 16320 | '186' $40511160931991684611028598 . \ldots .75712$ |
| Sat | 29/10 | 00.30 | 6797 | '759' $824305175912054205941390534789 . . . .35139$ |

## Other's logs:

## September:

| 5179 kHz 0130z | 03/09[759 1463091221 ... 1211214630 00000(f)] 0139z Very strong | (9m24s) | Spectre ,PLdn | SAT |
| :---: | :---: | :---: | :---: | :---: |
| 0130z | 04/09[7591463091221 .. 1211214630 00000(f)] 0139z Weak | (9m24s) | Spectre, PLdn | SUN |
| 0130z | 10/09[759 8613216852 ... 6274586132 00000(f)] 0140z Strong, QSB2 | (9m43s) | Spectre, FR | SAT |
| 0130z | 11/09 NRH |  | PLdn | SUN |
| 0130z | 17/09[759 4623102020 ... 3177046231 00000(f)] 0040z Fair, QRM3 | (9m37s) | Spectre,gtr | SAT |
| 0130z | 18/09[759 4623102020 ...] Weak, QRM3, QSB to nil | PLdn | SUN |  |
| 0130z | 24/09[759 $2843085347 \ldots 117502843000000$ (f)] 0139z Very strong | (9m26s) | Spectre | SAT |
| 0130z | 25/09[759 2843085347 ... 1175028430 00000] 0139z Very strong | (9m26s) | PLdn | SUN |
| 5186kHz 2030z | 01/09[891 2461513245 ... 6574524615 00000(s)] Strong |  | PLdn, H-FD | THU |
| 2030z | 15/09[891 $2461513245 \ldots 657452641500000$ (s)] | (7m07s) | Spectre, FR | THU |
|  | 89124615 <br> 13245245661092827365124209128514562289159021978235 <br> 1218908766145639098765745 <br> 2461500000 |  |  |  |
| 5197 kHz 2130 z | 02/09[634 1241564756 .. 5637812415 00000(s)] 2138z Strong | (7m30s) | Spectre | FRI |
| 2130z | 16/09[634 1241564756 ... $563781241500000(\mathrm{~s})$ ] 2137z Strong with audio distortion. | (7m01s) | Spectre ,PLdn | FRI |
|  | E06 5197kHz 2130z 02/09 Transcript: |  |  |  |
|  | 63412415 <br> 64756463521726346574586754615236453109998987609899 2536416253465745768456378 |  |  |  |

0030 z 04/09[759 $1463091221 \ldots 1211214630$ 00000(f)] 0039z Weak, QRM3/4
0030z 10/09[759 $8613216852 \ldots 6274586132$ 00000(f)] 0040z Strong, RTTYQRM2

E06 6874/5179kHz 0030/0130z 03/09 Transcript:
75914630
91221697070723597235684590268349303098472439654488 07518897413234258352564042642099145202745971082449 31766206202218671099191719239724654504699676512112 1463000000 Courtesy Spectre

| (9m24s) | Spectre | SUN |
| :--- | :--- | :--- |
| (9m43s) | Spectre PLdn, FR | SAT |


|  | Fanis, PLdn | SUN |
| :--- | :--- | :--- |
| (9m37s) | Spectre ,PLdn | SAT |


| (9m37s) | PLdn | SUN |
| :--- | :--- | :--- |
| $(9 \mathrm{~m} 26 \mathrm{~s})$ | Spectre ,PLdn | SAT |
|  | ADB, PLdn | SUN |

H-FD

FR

FR
FRI

## October 2011

5122kHz 0130z
0130z
0130z 0130z
0130z
0130z
0130z

5132kHz 0130z

5186kHz2030z 2030z
$0130 z$
$0130 z$
$0130 z$
$0130 z$
$0130 z$
$0130 z$
$02 / 10[7592613017725 \ldots 764682613000000(f)] 0140 z$ Fair, noisy
$08 / 10[7594863173698 \ldots 723754863100000(f)] 0140 z$ Very strong
$09 / 10[7594863173698 \ldots 723754863100000(f)] 0140 z$ Very strong
$15 / 10[7596203105981 \ldots 489666203100000(f)] 0140 z$ Very strong
$16 / 10[7596203105981 \ldots 489666203100000(f)] 0140 z$ Very strong
$29 / 10[7598243051759 \ldots 351398243000000(f)] 0139 z$ Fair QRN2 QSB2
$30 / 10[7598243051759 \ldots 351398243000000(f)] 0139 z$ Strong
23/10[759 $2103450213 \ldots 055482103400000(f)] 0140 z$ Fair QRN2 QSB2
26/10[891 $2461508921 \ldots 437292461500000(\mathrm{~s})]$ 2037z Strong
$20 / 10[8912461508921 \ldots 437292461500000(\mathrm{~s})]$ Strong, delivery different. 20/10[891 2461508921 ... 4372924615 00000(s)] Strong, delivery different.

05436717701228257353428914629710488987644242460944 55639031532845458820556044428159934195477577075264 03550843157842775637907648047287160643716472527387 94500640336458264150496070375140161982020997935493 89794069701975559038479140648022335144745219522706 51873419587368370407941629870383617570891369565008 03280416442303903345615818944104488685325960132851 87866913149585294660564292611523423600272534874944 53444974827795559434376129219591280722440268528318 95720733111885926306239098148593268866257737976591 69158807627445089633845648324349325400179642121871 83373552176824709133142741594575016231945923265903 62160544762283699216023664079835817606213290295295 49693091994372106653564645001015624913475222905940 80264710901181166870806975478280349360606462429944 06059161900146264215429929137345169773044330478654 $1873398716100000 \quad$ Courtesy FR

| (9m27s) | Spectre PLdn | SUN |
| :--- | :--- | :--- |
| $(9 \mathrm{~m} 36 \mathrm{~s})$ | Spectre PLdn | SAT |
| $(9 \mathrm{~m} 36 \mathrm{~s})$ | Spectre PLdn | SUN |
| $(9 \mathrm{~m} 38 \mathrm{~s})$ | Spectre PLdn | SAT |
| $(9 \mathrm{~m} 38 \mathrm{~s})$ | Spectre PLdn | SUN |
|  | Spectre | SAT |
| $(9 \mathrm{~m} 26 \mathrm{~s})$ | PLdn | SUN |
|  |  |  |
|  | Spectre | SUN |
|  |  |  |
| $(7 \mathrm{~m} 05 \mathrm{~s})$ | Spectre PLdn | THU |
| $(5 \mathrm{~m} 37 \mathrm{~s})$ | Spectre FR, PLdn | THU |


| (5m37s) | PLdn |
| :--- | :--- |
|  | Spectre |
|  | (10m06s) |
| Spectre FR, PLdn |  |

$5197 \mathrm{kHz} 2130 \mathrm{z} \quad 07 / 10[6347281513878 \ldots 573267281500000(\mathrm{~s})] 2137 \mathrm{z}$ Fair QRN3 QSB2
2130 z 21/10[6347281513878 ...5732672815 00000(s)]

Spectre
(10m06s) Spectre FR, PLdn

| $(9 m 36 s)$ | Spectre, PLdn | SAT |
| :--- | :--- | :--- |
| $(9 m 36 s)$ | Spectre, PLdn | SUN |

## 75948631

73698599902499402032938434354257973483915980778478
29610483025265032468651443740772824939871299262937
57240263695872772375163422194239559045698339117212
63973
4863100000
Courtesy Spectre
$0030 \mathrm{z} \quad 15 / 10[7596203105981 \ldots 489666203100000(\mathrm{f})] 0040 \mathrm{z}$ Very strong

| $(9 m 38 s)$ | Spectre, PLdn | SAT |
| :--- | :--- | :--- |
| $(9 m 38 s)$ | Spectre, PLdn | SUN |

> 75962031 05891387473697100608877375579473923318031235129352 42887507906933018595114218075183328790885680130106 89135926766208745049992827653972578224611890231757 48966 6203100000 Courtesy Spectre

5122kHz XJT QRM5 5122 kHz not heard
(10m06s) Fanis, Spectre SAT (10m06s) Spectre, PLdn SUN

## 75921034

50213763705641834231925606238086648303281798115248
85181208349398584025297773202314318243230793423627
63843664907654980893475890460025589266711990085916
44190456857460305548
$2103400000 \quad$ Courtesy Spectre
(9m38s) Spectre, PLdn SUN

6797/5122kHz 0030/0130z 29/10 Transcript:
75982430
51759120542059413905347894234678153840395642501711 12820562486019975939692490730972460840595398101919 51736688790691343839131896302350220142418910735139 8243000000

0030z 30/10[759 $8243051759 \ldots 3513982430$ 00000(f)] 0039z Fair, QRM2
(9m26s) PLdn SUN

## E07 [1B]

## PoSW's logs to start:

E07 English transmissions in the UK evening time use the same frequencies as in any given month in the past few years. With the end of British Summer Time on the last weekend of October is expected to move by one hour UTC so still appears at the same local time - how convenient!

## Sunday + Wednesday Schedule:-

4-Sept-11, Sunday:- 1700 UTC, 12,223 kHz, "201 201201 000".
1720 UTC, $11,062 \mathrm{kHz}$, second sending, S9+ signal.
11-Sept-11, Sunday:- 1700 UTC, 12,223 kHz, "201 201201 000".
1720 UTC, $11,062 \mathrm{kHz}$, second sending, difficult to hear, clearer towards the end of the transmission.
14-Sept-11, Wednesday:- 1700 UTC, $12,223 \mathrm{kHz}$, calling "201 201201 1", so a full message sent three times! DK/GC " 226 68" x 2 . S9+ signal with good audio.
1720 UTC, $11,062 \mathrm{kHz}$, second sending, good signal.
1740 UTC, $10,116 \mathrm{kHz}$, third sending inside the 30 metre amateur band with CW in full flow.
28-Sept-11, Wednesday:- 1700 UTC, $12,223 \mathrm{kHz}$ and 1720 UTC, $11,062 \mathrm{kHz}$, "201 201201000 ", S9+ signal with excellent modulation on both transmissions.

2-Oct-11, Sunday:- 1700 UTC, $11,454 \mathrm{kHz}$, moving lower in frequency as the hours of daylight grow shorter, "441 441441000 ". strong "XJT" on HF side removed by using the receiver in LSB mode.
1720 UTC, $9,428 \mathrm{kHz}$, presumed to be the second sending, flattened by strong BC station,
no complaints please, this is inside the 31 metre broadcast band after all! Carrier went off 1722 and 28 seconds UTC.

Monday + Wednesday Schedule:-
7-Sept-11, Wednesday:- 1900 UTC, $12,108 \mathrm{kHz}$ " 172172172000 ". S9 signal with good audio.
1920 UTC, $10,708 \mathrm{kHz}$, second sending, also a good signal.
12-Sept-11 Monday:- 1900 UTC, $12,108 \mathrm{kHz}$, "172 172172000 ", S9+ with excellent audio!
1920 UTC, $10,708 \mathrm{kHz}$, second sending, also a very good signal.
28-Sept-11, Wednesday:- 1900 UTC, $12,108 \mathrm{kHz}$ and 1920 UTC, $10,708 \mathrm{kHz}$, both good signals, "172 172172 000".
3-Oct-11, Monday:- 1920 UTC, 9,243 kHz, second sending of October's schedule, "229 229229000 ", S9+, good audio.

5-Oct-11, Wednesday:- 1900 UTC, 10,243 kHz, "229 229229 000", S9+, good audio
1920 UTC, $9,243 \mathrm{kHz}$ second sending, excellent signal.
17-Oct-11, Monday:- 1904 UTC, $10,243 \mathrm{kHz}$, first sending in progress with a full message.
Signal weaker and audio lower than in recent times.
1920 UTC, 9,243 kHz, "229 229229 1", DK/GC "422 34" x 2, deep QSB and modulation somewhat low.
1940 UTC, $7,943 \mathrm{kHz}$, third sending, low audio.
Thursday Schedule:-
1-Sept-11:- 2010 UTC, $9,387 \mathrm{kHz}$, "358 358358000 ", S9+ signal with excellent audio.
2030 UTC, $7,526 \mathrm{kHz}$, second sending, also a good signal
15-Sept-11:- 2010 UTC, $9,387 \mathrm{kHz}$ and 2030 UTC, $7,526 \mathrm{kHz}$, both good signals, "358 358358000 ".

22-Sept-11:- 2030 UTC, 7,526 kHz, "358 358358 000", much weaker than last week.
6-Oct-11:- 2010 UTC, 7,516 kHz, "584 584584 1", DK/GC "507 44" x 2.
2030 UTC, $5,836 \mathrm{kHz}$, second sending.
2050 UTC, $4,497 \mathrm{kHz}$, third sending, all three good signals.

Wednesday E07a SSB Schedule:-
7-Sept-11:- 2000 UTC, that's 9 post meridian in this here United Kingdom, 8,173 kHz, "147 147147000 ". Strong SSB signal.
2020 UTC, $7,473 \mathrm{kHz}$, second sending, also strong.
14-Sept-11:- 2000 UTC, 8,173 kHz, "147 147147 000", very strong signal.
28-Sept-11:- 2000 UTC, $8,173 \mathrm{kHz}$, "147 147147132027 ", so a full message with three transmissions, then. DK/GC " 576 55" x 2, strong signal. 2020 UTC, $7,473 \mathrm{kHz}$, second sending, heterodyne from the carrier of a strong broadcaster on $7,475 \mathrm{kHz}$. 2040 UTC, $5,773 \mathrm{kHz}$, third sending, strong signal.

5-Oct-11:- October sees, as in previous years, the expected change of frequencies from those used throughout the spring and summer months:2000 UTC, 5,864 kHz, "815 8158151 65552", DK/GC "750 85" x 2, S9+ SSB signal. 2020 UTC, $5,164 \mathrm{kHz}$ second sending, strong signal, must be beamed in my direction! 2040 UTC, $4,564 \mathrm{kHz}$, third sending, strong signal over-riding an "XJT".

12-Oct-11:- 2020 UTC, 5,164 kHz, "815 $815815000 "$.
RNGB's Sept/Oct 2011 logs:

| E07 Sept log: |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Thurs | 01/09 | 07.00 | 6893 | '841' 000 |
| Sun | 11/09 | 17.00 | 12223 | '210’ 000 |
| Mon | 12/09 | 19.00 | 12108 | '172' 000 |
| Wed | 14/09 | 20.00 | 8173 | '147’ 000 |
| Mon | 19/09 | 19.00 | 12108 | '172' 000 |
| Tues | 20/09 | 07.20 | 7493 | '841' 000 |
| Wed | 21/09 | 20.00 | 8173 | '147' 000 |
| Sun | 25/09 | 17.00 | 12223 | '201' 000 |
| Thurs | 29/09 | 07.00 | 6893 | '841' 000 |
| Thurs | 29/09 | 20.10 | 9387 | '358' 5074473076844530662235404 |
| E07 Oct log: |  |  |  |  |
| Mon | 03/10 | 19.20 | 9243 | '229’ 000 |
| Tues | 04/10 | 07.20 | 6982 | '795' 000 |
| Wed | 05/10 | 18.00 | 10243 | '229’ 000 |
| Thurs | 06/10 | 07.20 | 6982 | '795'000 |
|  |  | 20.10 | 7516 | '584' 15074473076844530662235404 |
| Mon | 10/10 | 19.00 | 10243 | '229' 14223477553225684389604693 |
| Tues | 11/10 | 07.00 | 5782 | '795’ 000 |
| Sun | 16/10 | 17.00 | 11454 | '441' 000 |
| Tues | 18/10 | 07.20 | 6982 | '795’ 000 |
| Wed | 19/10 | 20.00 | 5864 | '815' 000 |
| Mon | 24/10 | 19.40 | 7943 | '229' 17582046263445647188475624 |


| $5884 \mathrm{kHz2050z}$ | 29/09[358 3583581 ... 000] 2057z QSA2 OM |
| :---: | :---: |
| 6893 kHz 0700z | 01/09[841 000] Fair |
| 0700z | 06/09[841 841841 000] |
| 0700z | 08/09[hardly audible] QRM dig sta |
| 0700z | 13/09[841 841841 000] 0702z Fair STANAGQRM4 QSB3 |
| 0700z | 20/09[841 ...] Mostly obviated by XJT |
| 0700z | 22/09 [841 841841 000] 0702z Fair QRN2 QSB2 |
| 0700z | 27/09[841 000] Fair, QRM2 |
| 7493kHz 0720z | 01/09[841 000] Fair |
| 0720z | 06/09[841 841841 000] |
| 0720z | 08/09[841 841841 000] |
| 0720z | 13/09[841 000] Fair |
| 0720z | 20/09[841 000] Fair, QRM2/3 |
| 0720z | 22/09[841 000] Fair, noisy |
| 0720z | 27/09[841 000] Fair, QRM2 |
| 7526kHz 2030z | 01/09[358 000] 2033z Strong |
| 2030z | 08/09[358 358358 000] 2032z QSA2 QRM1 OM |
| 2030z | 15/09[358 358358 000] 2032z QSA3 |
| 2030z | 29/09[358 3583581 ... 000] 2037z QSA2 OM |
| 9387 kHz 2010 z | 01/09[358 358358 000] 2012z Fair QRN2 QSB2 |
| 2010z | 08/09[358 358358 000] 2012z QSA2 QRM BC OM |
| 2010z | 29/09[358 3583581 ... 000] 2017z QSA3 OM |
| 10116kHz1740z | 14/09[201 12266887163 ... 10574000 000] 1748z Fair QRN2 QSB2 |
| 1740z | 18/09[201 122668 ?????] Strong carrier, very low audio, noisy * |
| 10708kHz 1920z | 05/09[172 000] 1922z Fair |
| 1920z | 07/09[172 000] Strong |
| 1920z | 12/09[172 000] Fair |
| 1920z | 14/09[172 000] Weak, QRM2 |
| 1920z | 19/09[172 000] Strong, QRM2 |
| 1920z | 21/09[172 000] Fair, QRM3/4 |
| 1920z | 26/09[172 000] Weak |
| 1920z | 28/09[172 000] Good audio |
| $11062 \mathrm{kHz} \mathrm{1720z}$ | 04/09[201 000] Fair/Strong |
| 1720z | 07/09[201 000] Strong |
| 1720z | 11/09 Noise only |
| 1720z | 14/09[201 12266887163 ... 10574000 000]Fair, good audio |
| 1720z | 18/09[201 122668 ?????] Strong carrier, very low audio, noisy |
| 1720z | 25/09[201 000] Weak |
| 1720z | 28/09[201 000] Fair |
| $12108 \mathrm{kHz} \mathrm{1900z}$ | 05/09[172 000] 1902z Weak, QRM2/3 |
| 1900z | 07/09[172 000] Fair, local QRM3 |
| 1900z | 12/09[172 000] Fair |
| 1900z | 14/09[172 000] QRM4/5 |
| 1900z | 19/09[172 000] Strong |
| 1900z | 21/09[172 000] Strong |
| 1900z | 26/09[172 000] Weak |
| 1900z | 28/09[172 172172 000] |
| 12223kHz 1700z | 04/09[201 201201 000] |
| 1700z | 07/09[201 000] Fair |
| 1700z | 11/09[201 000] Weak audio, strong carrier |
| 1700z | 14/09[201 12266887163 ... 10574000 000]Fair, QRM3 at end |
| 1700z | 18/09[201 122668 ?????] Strong carrier, very low audio, noisy |
| 1700z | 25/09[201 000] Weak and noisy |
| 1700z | 28/09[201 000] Fair |


|  | Fanis | THU |
| :---: | :---: | :---: |
| (2m13s) | PLdn, H-FD | THU |
|  | FN | TUE |
|  | FN | THU |
|  | Spectre | TUE |
|  | PLdn | TUE |
|  | Spectre | THU |
| (2m13s) | PLdn | TUE |
| (2m13s) | PLdn, H-FD | THU |
|  | FN | TUE |
|  | FN | THU |
| (2m13s) | Spectre, PLdn | TUE |
| (2m13s) | PLdn | TUE |
| (2m13s) | Spectre, PLdn | THU |
| (2m13s) | PLdn | TUE |
|  | F, H-FD, Spectre | THU |
|  | Fanis | THU |
|  | Fanis | THU |
|  | Fanis | THU |
|  | Spectre, H-FD | THU |
|  | Fanis, HJH | THU |
|  | Fanis | THU |
|  | Spectre, PLdn | WED |
|  | FR, mndbs | SUN |
| (2m13s) | PLdn, FN, H-FD | MON |
| (2m13s) | Fanis, Spectre | WED |
| (2m13s) | PLdn, HJH,Fanis | MON |
| (2m13s) | PLdn | WED |
| (2m13s) | Spectre | MON |
| (2m13s) | Spectre, AE | WED |
| (2m14s) | PLdn | MON |
|  | Spectre HJH, FN | WED |
| (2m13s) | PLdn, FN, H-FD | SUN |
| (2m13s) | PLdn | WED |
| (2m13s) | PLdn | SUN |
| (9m22s) | Spectre | WED |
|  | FR, mndbs | SUN |
| (2m13s) | Spectre | SUN |
| (2m13s) | Spectre, FN | WED |
| (2m13s) | Spectre, FN, H-FD | MON |
| (2m13s) | PLdn | WED |
| (2m13s) | Spectre | MON |
| (2m13s) | PLdn | WED |
| (2m13s) | Spectre | MON |
| (2m13s) | Spectre | WED |
| (2m14s) | PLdn | MON |
|  | FN, Spectre | WED |
|  | FN, PLdn | SUN |
| (2m13s) | PLdn | WED |
| (2m13s) | FR, PLdn | SUN |
| (9m22s) | Spectre | WED |
|  | FR, mndbs | SUN |
| (2m13s) | Spectre | SUN |
| (2m13s) | Spectre, FN | WED |

October 2011

| 4497kHz2050z | 06/10[584 15074473076 ... 55585000 000] 2057z Fair QRN3 QSB2 |
| :---: | :---: |
| $5782 \mathrm{kHz0700z}$ | 11/10[795 000]Fair, noisy |
| 0700z | 23/10[795 000]Fair, noisy |
| 5836kHz 2030z | 06/10[584 15074473076 ... 55585000 000] 2037z Fair BCQRM3 QSB2 |
| 2030z | 20/10[584 584584 000] 2032z Weak QRN2 QSB3 |
| $6982 \mathrm{kHz0720z}$ | 11/10[795 000]Fair, noisy |
| 0720z | 25/10[795 000]Fair, very noisy |


|  | Spectre | THU |
| :--- | :--- | :--- |
| (2m13s) | PLdn | TUE |
| $(2 m 13 s)$ | PLdn | TUE |
|  | Spectre | THU |
|  | Spectre | THU |
|  |  |  |
| $(2 m 13 s)$ | PLdn | TUE |
| $(2 m 13 s)$ | MalcF, PLdn | TUE |

E07 7516/5836/4497kHz 2010/2030/2050z 06/10 Transcript:
584150744
73076844530662235404856891912710528793752524928836 52550471142136130347962198318777105676045692491689 81954880318042950674193703275880704345651966956771 75854953697826446909095732756029479026594028581521 79167630551227255585 000000

Courtesy Spectre

2010z
2010z

7943kHz1940z
1940z
1940z
8123kHz1740z
1740z

9243kHz1920z
1920z
1920z
1920z

9423kHz1720z
1720z
1720z
1720z

20/10 [584 584584 000] 2012z Weak QRN2 QSB3

10243kHz1900z
1900z
1900z
1900z

|  | Spectre <br> FR,AIK | THU |
| :--- | :--- | :--- |
|  |  | THU |
|  | Spectre, HJH, PLdn | MON |
|  | Spectre | WED |
|  | Spectre,HJH,FN | MON |
|  |  |  |
|  | FR | SUN |
|  | FR | SUN |
|  |  |  |
|  | Spectre | WED |
|  | Spectre | MON |
|  | Spectre | WED |
|  | Spectre | MON |
|  |  |  |
| (2m13s) | PLdn, FN | SUN |
| $(10 \mathrm{~m} 11 \mathrm{~s})$ | PLdn | WED |
| (2m13s) | PLdn | WED |
|  | FR | SUN |

10/10[229 14223477553 ... 76338000 000] 1946z Fair QRN2 QSB2 12/10[229 14223477553 ... 76338000 000] 1946z Weak QRN2 QSB2 17/10[229 14223477553 ... 76338000 000] 1946z Weak QRN3 QSB4

23/10[441 17234160735 ... 45677000 000] Strong 30/10[441 $11277610582 \ldots 76051000$ 000] Very strong signal, weak noise

05/10[229 229229000$]$ 1922z Fair QRN2 QSB2
10/10[229 14223477553 ... 76338000 000] 1926z Fair QRN2 QSB2
12/10[229 14223477553 ... 76338000 000] 1926z Weak QRN2 QSB2
17/10[229 14223477553 ... 76338000 000] 1926z Weak QRN3 QSB4

| 02/10[441 | $000]$ |
| :--- | :--- |
| $12 / 10$ | Strong, BCcasional characters, BCQRM4 |
| $19 / 10$ | Strong, BCQRM4, odd characters only |
| $23 / 10[441$ | $17234160735 \ldots .45677000000]$ Strong |

THU
Spectr

MON
WED MON

```
05/10[229 229 229 000] 1902z Fair QRN2 QSB2 Spectre, FN WED
10/10[229 1 422 3477553 ... 76338000 000] 1906z Fair QRN2 QSB2 Spectre, FN, PLdn MON
12/10[229 1 422 3477553 ... 76338000 000] 1906z Fair QRN2 QSB2 Spectre, PLdn WED
17/10[229 1 422 3477553 ... 76338000 000] 1906z Weak QRN3 QSB4 Spectre, FN, PLdn MON
```

E07 10243/9243/7943kHz 1900/1920/1940z 10/12/17/10 Transcript:

## 229142234

77553225684389604693554222202882348812037653079418 99520054724873795075776650774843246409385310864026 53329384982736950583018395108942484869821911743891 91572096720659376338
000000
Courtesy Spectre

11454kHz1700z
1700z
1700z
1700z

```
02/10[441 000] Fair
12/10[44150376 33419 ... 19857 000 000] Strong
19/10[441 000] Strong, QRN2
23/10[441 1723 4160735 ... 45677 000 000] Strong
```

(2m13s) FN, PLd
(10m11s) PLdn
(2m13s) PLdn
FR, PLdn
441172346
6073562744596657585845081
196227639138977024755275
096644960576598352366763
05827323757116326782729 075097663455126893934753 150327085195192945248752 1033945033802360809544789 03044798702503301864 0035831804562859384396085 0035831804562859384396085

441112776
1058292448367510201177541
0372600841647360274468968
6037502079321221828887777
9989070191284038103998507
575966417053935903591804
834 ?8 12283786640049302434
7692493702042720002640037
4427409494438276210566377
1666329207487436200015307
7323671542121655818851115 3249963656353541821883119 048408080290075430793651 02517263876052544138506 025622699217825038485042 9025622699217825038485042 09300108582977874
$76051000000 \quad$ Courtesy FR

E07a
September:

| 5773kHz2040z | 28/09[147 1320275765594543 ... 70464000 000] Very strong |
| :---: | :---: |
| 7437 kHz 0430 z | 01/09[411 000]Strong |
| 0430z | 08/09[411 000]Strong |
| 0430z | 15/09[411 000] Very strong |
| 0430z | 22/09[411 000] Strong |
| 0430z | 29/09[411 1320275765594543 ... 70464000 000] Strong |
| 7473kHz 2020z | 07/09[147 000]Strong |
| 2020z | 14/09[147 000]Very strong |
| 2020z | 21/09[147 000] Very strong |
| 2020z | 28/09[147 1320275765594543 ... 70464000 000] Strong, BCQRM3/4 |
| $8137 \mathrm{kHz} \mathrm{0450z}$ | 01/09[411 000]Strong |
| 0450z | 08/09[411 000]Strong |
| 0450z | 15/09[411 000] Very strong |
| 0450z | 22/09[411 000] Strong, localQRM3 |
| 0450z | 29/09[411 1320275765594543 ... 70464000 000] Strong |
| 8173kHz 2000z | 07/09[147 000]Strong |
| 2000z | 14/09[147 000]Very strong |
| 2000z | 21/09[147 000]Very strong |
| 2000z | 28/09[147 1320275765594543 ... 70464000 000] Very strong |


| $(7 \mathrm{~m} 05 \mathrm{~s})$ | PLdn, Spectre | WED |
| :--- | :--- | :--- |
|  |  |  |
| $(2 \mathrm{~m} 13 \mathrm{~s})$ | Hans, PLdn | THU |
| $(2 \mathrm{~m} 13 \mathrm{~s})$ | BR, PLdn | THU |
| $(2 \mathrm{~m} 13 \mathrm{~s})$ | Spectre | THU |
| $(2 \mathrm{~m} 13 \mathrm{~s})$ | Spectre | THU |
| $(7 \mathrm{~m} 05 \mathrm{~s})$ | PLdn | THU |
|  |  |  |
| $(2 \mathrm{~m} 13 \mathrm{~s})$ | Spectre | WED |
| $(2 \mathrm{~m} 13 \mathrm{~s})$ | PLdn | WED |
| $(2 \mathrm{~m} 13 \mathrm{~s})$ | Spectre | WED |
| $(7 \mathrm{~m} 05 \mathrm{~s})$ | Spectre, FN | WED |
|  |  |  |
| $(2 \mathrm{~m} 13 \mathrm{~s})$ | PLdn | THU |
| $(2 \mathrm{~m} 13 \mathrm{~s})$ | BR, PLdn | THU |
| $(2 \mathrm{~m} 13 \mathrm{~s})$ | Spectre | THU |
| $(2 \mathrm{~m} 13 \mathrm{~s})$ | Spectre | THU |
| $(7 \mathrm{~m} 05 \mathrm{~s})$ | PLdn | THU |
| $(2 \mathrm{~m} 13 \mathrm{~s})$ | Spectre |  |
| $(2 \mathrm{~m} 13 \mathrm{~s})$ | PLdn | WED |
| $(2 \mathrm{~m} 13 \mathrm{~s})$ | Spectre | WED |
| $(7 \mathrm{~m} 05 \mathrm{~s})$ | Spectre, FN, RNGB | WED |

E07a 8173/7473/5773kHz 2000/2020/2040z 28/09 Transcript:

## 14713202757655

94543589255764568624969517916054599324937433437820 97300655764600237200483474368036113858471378617743 02350742534929171867454478203249125625241378617743 60572392470969849204620032508885552437703924409506 83477011731786881869246626783663498911055439583168 0986446908596286459770464 000000 Courtesy Spectre

| 4564kHz2040z | 05/10[815 $1655527508542255 \ldots 49167000$ 000]Very strong, XJTQRM2 |
| :---: | :---: |
| 2040z | 26/10[815 1655527508542255 ... 49167000 000] 2049z Strong RTTYQRM3 QSB2 |
| $5146 \mathrm{kHz0430z}$ | 06/10[188 1655527508542255 .. 49167000 000]Very strong |
| 0430z | 13/10[188 000]Very strong |
| 0430z | 20/10[185 000]Very strong |
| 0430z | 27/10[188 $1655527508542255 \ldots 49167000$ 000]Very strong |
| $5164 \mathrm{kHz2020z}$ | 05/10[815 $1655527508542255 \ldots 49167000$ 000]Very strong |
| 2020z | 12/10[815 000] Fair |
| 2020z | 19/10[815 000] Strong |
| 2020z | 26/10 [815 1655527508542255 ... 49167000 000] 2029z Strong STANAGQRM3 QSB2 |
| 5846 kHz 0450 z | 06/10[188 1655527508542255 .. 49167000 000]Very strong |
| 0450z | 13/10[188 000]Very strong |
| 0450z | 20/10[185 000]Very strong |
| 0450z | 27/10[188 $1655527508542255 \ldots 49167000$ 000]Very strong |
| $5864 \mathrm{kHz2000z}$ | 05/10[815 $1655527508542255 \ldots 49167000$ 000]Very strong |
| 2000z | 12/10[815 000] Fair |
| 2000z | 19/10[815 000] Strong |
| 2000z | 26/10[815 1655527508542255 ... 49167000 000] 2009z Strong QRN2 QSB2 |


| (9m32s) | PLdn, Spectre | WED |
| :--- | :--- | :--- |
|  | Spectre | WED |
| (9m32s) | PLdn, Spectre | THU |
| (2m13s) | PLdn, FN, Spectre | THU |
| (2m13s) | PLdn, Spectre | THU |
| (9m31s) | PLdn | THU |
|  |  |  |
| (9m32s) | PLdn | WED |
| (2m13s) | PLdn | WED |
| (2m13s) | PLdn | WED |
|  | Spectre | WED |
| (9m32s) | PLdn | THU |
| $(2 m 13 s)$ | PLdn, FN | THU |
| $(2 m 13 s)$ | PLdn | THU |
| $(9 m 31 s)$ | PLdn | THU |
|  |  |  |
| $(9 m 32 s)$ | PLdn, RNGB | WED |
| $(2 m 13 s)$ | PLdn | WED |
| $(2 m 13 s)$ | PLdn | WED |
|  | Spectre | WED |

E07a 5864/5164/4564kHz 2000/2020/2040z 05/26/10 Transcript:
81516555275085
42255318066349988413910005075146878829989892986780
94594292653298620313769268822479056197893806900275
53469171332901825210931413165437027162254296559326
02464276259674788386613577143338552591785568163069
32404461471353064054076833875134935911752115407005
32404461471353064054076833875134935911752115407005
33120283220105826632355964999947738170201279467854
20031356084892693662817612822946215784769485748583
39443452615143035660869796247314236317010108677645
$000000 \quad$ Courtesy Spectre
$6846 \mathrm{kHz0510z} \quad 06 / 10[1881655527508542255 \ldots 49167000000]$ Very strong
0450z
$\begin{array}{ll}(9 m 32 s) & \text { PLdn } \\ (9 m 31 s) & \text { PLdn }\end{array}$

THU THU

E11[III]
Sept/Oct

| $4909 \mathrm{kHz} \mathrm{1445z}$ | 30/09 [287/00] repeated until 1448z | Pertti | SAT |
| :---: | :---: | :---: | :---: |
| 1445z | 08/10 [287/00] | Fritz | SAT |
| 0900z | 22/10 [248/00] | Fox | SAT |
| 1445z | 22/10 [287/00] Weak | RNGB | SAT |
| $5463 \mathrm{kHz1855z}$ | 16/09 [262/00] 1858z Very strong | Danix | FRI |
| 1855z | 23/09 [262/00] Strong | RNGB | FRI |
| 1855z | 28/10 [262/00] Good | RNGB | FRI |
| 5737 kHz 1240 z | 11/10 [349/00] Weak | RNGB | TUE |
| 1240z | 25/10 [349/00] 1243z Weak QRN3 QSB3 | Spectre | TUE |
| 5855 kHz 0600 z | 17/10 [262/00] | RNGB | MON |
| 6304 kHz 0450 z | 05/09 [416/00] 0453z Very strong | Danix | MON |
| 0450z | 10/10 [416/00] | Danix | MON |
| 0450z | 31/10 [416/00] Very strong signal, almost no noise | Fox | MON |
| $6433 \mathrm{kHz} \mathrm{1050z}$ | 09/10 [127/00] Weak | RNGB | SUN |
| 1050z | 23/10 [127/00] 1053z Very Weak QRN3 QSB3 | Spectre | SUN |
| 1050z | 24/10 [127/00] Fair | RNGB | MON |
| 1050z | 30/10 [127/00] Weak/medium signal, strong noise | Fox | MON |
| 6814 kHz 0820 z | 15/09 [438/00] Good | RNGB | THU |
| 0820z | 29/09 [438/00] Good | RNGB | THU |
| 0820z | 06/10 [438/00] Good | RNGB | THU |
| 0820z | 20/10 [438/00] Good | RNGB | THU |
| 0820z | 27/10 [438/00 ] | GD | THU |
| $7449 \mathrm{kHz1045z}$ | 27/09 [469/00] Strong signal, weak/moderate noise | Fox | TUE |
| 1045z | 11/10 [469/00] | RNGB, Fritz | TUE |
| 1045z | 19/10 [469/00] | RNGB | WED |
| 1045z | 25/10 [469/00] 1048z Weak QRN2 QSB2 | Spectre | TUE |
| 1045z | 26/10 [469/00] Very strong signal, weak noise | Fox | WED |
| 8800kHz0930z | 07/09 [270/00] Very strong signal, weak noise | Hans | WED |
| 0930z | 14/09 [270/00] | RNGB | WED |
| 0930z | 21/09 [270/00] | RNGB | WED |
| 0930z | 05/10 [270/00] | Fritz | WED |
| 0930z | 06/10 [270/00] | RNGB | THU |
| 0930z | 26/10 [270/00] | RNGB, Fox | WED |
| $9371 \mathrm{kHz1730z}$ | 15/09 [416/00] | Fox | THU |
| 1730z | 29/09 [416/00] | RNGB | THU |
| 1730z | 20/10 [416/00] | RNGB | THU |
| 1730z | 27/10 [416/00] Strong QSB2, Out 1732z | Douglas | THU |
| 9399kHz0900z | 07/09 [534/00] Very strong signal, weak noise | Hans | WED |
| 0900z | 21/09 [534/00] | RNGB | WED |
| 0900z | 19/10 [534/00] | RNGB | WED |
| 0900z | 24/10 [534/00] Fair | RNGB | MON |
| 0900z | 26/10 [534/00] | RNGB | WED |
| $10221 \mathrm{kHz0710z}$ | 02/09 [633/00] | RNGB | FRI |
| 0710z | 09/09 [633/00] Weak | Hans | FRI |
| 0710z | 13/09 [633/00] | RNGB | TUE |
| 0710z | 20/09 [633/00] | RNGB | TUE |
| 0710z | 23/09 [633/00] | RNGB | FRI |
| 0710z | 04/10 [633/00] | RNGB | TUE |
| 0710z | 11/10 [633/00] | RNGB | TUE |
| 0710z | 24/10 [633/00] | RNGB | TUE |
| 10690kHz 0830z | 11/09 [649/00] | RNGB | MON |
| 0830z | 03/10 [649/00] | RNGB | MON |
| 0830z | 13/10 [649/00] | RNGB | THU |
| 0830z | 24/10 [649/00] | RNGB | MON |
| 0830z | 27/10[649/00] | GD | THU |
| 10800kHz 0645z | 22/09 [517/00] Good | RNGB | THU |
| 0645z | 27/09 [517/00] Weak | RNGB | TUE |
| 0645z | 11/10 [517/00] | RNGB | TUE |
| 0645z | 13/10 [517/00] | RNGB | THU |
| 0645z | 18/10 [517/00] | RNGB | TUE |
| 14575kHz 0745z | 18/10 [335/00] | Philip | TUE |
| 0745z | 20/10 [335/00] | RNGB | THU |
| 0745z | 27/10 [335/00] | Philip | TUE |


| 15915kHz 0545z | 02/09 [348/00] | RNGB | FRI |
| :---: | :---: | :---: | :---: |
| 1540z | 12/09 [228/00] V. weak | RNGB | MON |
| 1155z | 14/09 [718/00] 1158z QSA2 YL | Fanis | WED |
| 1540z | 19/09 [228/00] | RNGB | MON |
| 1540z | 25/09 [228/00] | RNGB | SUN |
| 1540z | 26/09 [228/00] Good | RNGB | MON |
| 1155z | 28/09 [718/00] Fair | RNGB | WED |
| 1540z | 03/10 [228/00] Strong | RNGB | MON |
| 1540z | 10/10 [228/00] Good | RNGB | MON |
| 0545z | 12/10 [348/00] Weak | RNGB | WED |
| 1155z | 13/10 [718/00] | RNGB | THU |
| 1540z | 16/10 [228/00] | RNGB | SUN |
| 1155z | 19/10 [718/00] | RNGB | WED |
| $1155 z$ | 26/10 [718/00] 1158z Fair QRB3 QSB2 | Spectre | WED |
| E11a |  |  |  |
| Sept/Oct |  |  |  |
| 4909kHz 1445z | 17/09 [287/37 0571400055 84346.....75152] Weak | RNGB, Danix | SAT |
| 0900z | 29/10 [243/34 00135359422200472264 33143....58289] Weak | RNGB, Danix | SAT |
| 1445z | 29/10 [280/38 48129767182834369838 98504....09058] Weak | Alex, Spectre | SAT |
| 243/34 Attention <br> 00135359422200472264331432070138589137580607231399 <br> 52353893905664712898747213884153651712062940926825 <br> 75391400564423703283289232145779346077611814839231 <br> 20447916103012758289 <br> Out <br> Courtesy Spectre |  |  |  |
| 5092 kHz 0630 z | 02/09 [121/26 A 4466659536 .... 21999] 0638z Weak/Fair QSB3 | Hans | FRI |
| 5463 kHz 1855 z | 30/09 [262/30 8916818693 12163.....] | RNGB | FRI |
| $5737 \mathrm{kHz} \mathrm{1240z}$ | 04/10 [348/30 43122.....] | Fritz | TUE |
| 1240z | 09/10 [348/30 43122 73895.....] Very weak | RNGB | SUN |
| 5855 kHz 0600 z | 26/09 [262/30 89168186931216394078 94281....63777] Fair, Out 0609z | RNGB | MON |
| $6304 \mathrm{kHzz} \mathrm{0450z}$ | 19/09 [414/30 A 87240067854421429661 ... 17029] | Danix | MON |
| 0450z | 03/10 [412/33...] 0459z Fair | Danix | MON |
| $6433 \mathrm{kHz} \mathrm{1050z}$ | 25/09 [126/32 $0515118912832145554744624 . \ldots . .80720]$ V. Strong | Danix | SUN |
| 1050z | 16/10 [128/33 39266838556523072067 66256.....60210] Weak | RNGB | SUN |
| $6814 \mathrm{kHz} \mathrm{0820z}$ | 13/10 [439/33 83168808409894815286 12474....21419] | RNGB | THU |
| 7449kHz 1045z | 21/09 [466?/34 04428042768123106128 47904.....77219] Fair | RNGB | WED |
| 1045z | 05/10 [469/38 63692593974408334122 16678....41377] Fair | RNGB | WED |
| $8800 \mathrm{kHz} \mathrm{0930z}$ | 19/10 [273/37 85870575265918386497 86784.....37340] | RNGB | WED |
| $9371 \mathrm{kHz} \mathrm{1730z}$ | 22/09 [414/30 872400678544214 29661.....17029] Good, but heavy QRM | RNGB | THU |
| $9399 \mathrm{kHz} \mathrm{0900z}$ | 12/09 [533/30 32485309560842711418 01499....] V.weak | RNGB | MON |
| 0900z | 14/09 [533/30 32485 etc] Good | RNGB | WED |
| 0900z | 03/10 [535/37 61832762201075081658 88270..... 07751] 0910z Strong | Hans, RNGB | MON |
| 0900z | 05/10 [535/37 61832.....] Repeat of Monday | Fritz | WED |
| 10221 kHz 0710 z | 27/09 [636/37 04935426667342835461 30257....45865] Fair | RNGB | TUE |
| 0710z | 18/10 [639/38 03281406503951636017 24052.... 36911] Good | RNGB, Douglas | TUE |
| 10690kHz 0830z | 20/10 [644/35 73460577405939055285 88317....44749] Good, Out 0840z | RNGB | THU |
| 10800 kHz 0645 z | 13/09 [515/37 78333171149393140526 18657....10239] Weak | RNGB | TUE |
| 0645z | 15/09 [515/37 78333 etc] | RNGB | THU |
| 0645z | 04/10 [511/30 05754936023225344455 36374.....38178] Fair, Out 0655z | RNGB | TUE |
| 12153kHz1600z | 08/09 [641/20 A 4477073711 .... 86121] 1607z Fair/Strong LQ-audio | Hans | THU |
| 1600 z | 12/09 [641/22 82665597093812568749 34532.....45820] Good | RNGB | MON |
| 1600z | 19/09 [641/20 97565439350587792386 69446.....14740] Good | RNGB | MON |
| 1600z | 29/09 [640/28 60089214309538394707 67564.....16805] | RNGB | THU |
| 1600z | 03/10 [641/20 16463948801275768026 66047.....30056] Good | RNGB | MON |
| 1600z | 06/10 [649/20 64780089122615094556 78870.....50915] Good | RNGB | THU |
| 1600z | 10/10 [640/28 24043889111055730867 23859.....68886\} | RNGB | MON |
| 1600z | 13/10 [642/23 76028316621140332200 83636....80483] | RNGB | THU |
| 1600z | 17/10 [647/20 01483127005832554673 17470....26034] | RNGB | MON |
| 1600z | 20/10 [641/20 74246217500063404412 31995.....29668] | RNGB | THU |
| 1600z | 24/10 [641/20 82316432971651974794 48778.....89765] Good | RNGB | MON |
| 1600z | 27/10 [641/20 50255919941335687721 93420.....00855] Good | RNGB | THU |
| 1600z | 31/10 [641/20 68555667744940624745 84019.....27630] Good | RNGB | MON |


| $13375 \mathrm{kHzz} \mathrm{1400z}$ | 04/10 [988/10 $6323631890168721531505457 . . . .40890]$ Good, Out 1405z | RNGB | TUE |
| :---: | :---: | :---: | :---: |
| 1400 z | 08/10 [983/10 08930405749044505182 33341.....07310] Good | RNGB | SAT |
| 1400z | 11/10 [982/10 60627141594429114432 30351.....39915] Good | RNGB, Danix | TUE |
| 1400z | 18/10 [987/10 25314330352863863704 91620....06710] Strong, Out 1405z | RNGB | TUE |
| 1400z | 22/10 [981/10 64318903897681615563 38792.....21357] Good | RNGB | SAT |
| 1400z | 25/10 [987/10 85454222102181674902 42328.....37678] Good | RNGB | TUE |
| 1400z | 29/10 [983/10 62002815366686536477 14068....09485] Strong | RNGB | SAT |
| $14575 \mathrm{kHz} \mathrm{0745z}$ | 11/10 [335/33 629500445448374 ....23215\} Out 0754z | Philip | TUE |
| 0745z | 13/10 [335/33 $6295004454483744430470044 \ldots . .23215]$ | RNGB | THU |
| 15915kHz 1540z | 05/09 [224/33 A 168120729651504 ... 2535520264 57336]1550z Strong | Danix | MON |
| 1155z | 05/10 [719/36 64130366890282675305 78428....16031] Good | RNGB | WED |
| 1540z | 17/10 [227/36 $7631262277202433314672000 \ldots . .21015]$ Good | RNGB | MON |

## $\underline{E 17 z}$

## September:

| 12930kHz 0810z | 01/09[674] | H-FD | THU |
| :---: | :---: | :---: | :---: |
| 0810z | 08/09[674 8195 85643] QRM dig sta | FN | THU |
| 0810z | 22/09[674 91355225556717155615422754221913500000 ] | RNGB, Spectre, AB | THU |
| $14260 \mathrm{kHz} \mathrm{0800z}$ | 01/09[674 819585643842785226925875 65463] | GD, H-FD | THU |
| 0800z | 08/09[674 819585643 ] | FN | THU |
| 0800z | 22/09[674 91355225556717155615422754221913500000 ] | RNGB, Spectre,AB | THU |
| October: |  |  |  |
| 12930kHz0810z | 20/10[674 8015 13845] | FN | THU |
| 14260kHz0801z | 13/10[674903565092 04735884659425835402903500000 ]0805z QSA3-4 | JO | THU |
| 0800z | 20/10[674801 5 13845] | FN | THU |
| 0800z | 27/10[674 801513845824676726129245 23215] | GD | THU |

## E22

A rare appearance, also heard by Ary an hour earlier.
15020 kHz 1305 z 19/10[BN3]
GN
WED

E23 [ XI ] Frequencies and Times. All SSB [From AnonUK]
Since December 2004 skeds have become erratic, and may not stick to correct weeks. Some voice transmissions have been heard in week 2
Week 1 Usually starts on the first Monday of the Month, but there have been variations to this.
Times are not rigid, has been known to start as early as Hour +52 [Tnx AnonUK]. Week 2 was M04 Not heard since September 2000

|  | Week 1 |  | Week2 |  | Week 3 |  |  | Week 4 |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Time | Freq | Time | Freq | Time | Freq | Time | Freq |  |
| Monday | 0957 | 6507 |  |  | 0757 | 4832 | 0757 | 5340 |  |
|  | 1157 | 8188 |  |  | 0957 | 6200 | 0957 | 8188 |  |
|  | 1257 | 5340 |  |  | 1157 | 8188 | 1157 | 7250 |  |
|  |  |  |  |  | 1257 | 6507 |  |  |  |
| Wednesday | 0957 | 6507 |  |  | 0757 | 4832 | 0757 | 5340 |  |
|  | 1157 | 8188 |  |  | 0957 | 6200 | 0957 | 8188 |  |
|  | 1257 | 5340 |  | 1157 | 8188 | 1157 | 7250 |  |  |

## E25[0]

Some new E2K members are "in the vicinity" and can also cover 9450 kHz and 6140 kHz with good results. These are excellent news since it is nice to have other experienced DXers available, and be more confident that we are not missing any E25 transmissions. The usual E25 oddities keep going on, like computer sounds and inconsistencies during message delivery (the pre-recorded YL voice can have a chaotic tempo which can lead even an "experienced" E25 listener to madness LOL!). Also, I am pretty sure that at least one transmission on 6140 kHz was in LSB instead of USB or AM, but this time the channel was relatively unoccupied from other users. Regarding message structure peculiarities, Agent 555 received some messages with a missing or erroneous "date" group.

## September 2011

| 6140 kHz 0854 z | 01/09 Carrier off-freq with WinXP startup sound (1m40s) | MG | FRI |
| :---: | :---: | :---: | :---: |
| 6140 kHz 0811 z | 03/09 Music slow playback (36s). Also at 0814z (1m9s), normal tempo at 0817z (38s) | MG | SAT |
| 0838z | 03/09[804 4878342069902004089920823025919996013420 4311] clicks at 0834z, YL " 80 ..." at 0836z, 1000 Hz tone, YL, digi QRM, EOM EO...EOT | MG | SAT |
| 6140 kHz 0841 z | 04/09[169 7048882045705676335903491975061912347616804 (as of 03/09)]0852z YL | MG | SUN |
| 0956z | 04/09[570 88531065519054686450935730640361575 67]1001z 1000 Hz tone, YL EOT, over "Informatik Radio", "57..." repeated, Mx3 | MG | SUN |
| 1028z | 04/09[675 79] YL, Mx3, Rx3, EOM EOT, then same TX again, QRN |  |  |
| 9450 kHz 1243 z | 04/09[555 4090811195503204732195478787816423948778 9550]1248z ALM, YL sl. faster, AM, V. Strong | MG | SUN |



| G | MON |
| :---: | :---: |
| MG | MON |
| MG | MON |
| MG | TUE |
| MG | TUE |
| MG | TUE |
| MG | TUE |
| MG | WED |
| MG | WED |
| MG | WED |
| MG | THU |
| MG | THU |
| MG | SAT |
| MG | SUN |
| MG | SUN |
| MG | SUN |
| MG | MON |
| MG | MON |
| MG | MON |
| MG | MON |
| MG | MON |
| MG, AE | MON |
| MG | TUE |
| MG | TUE |
| MG | TUE |
| Danix | TUE |
| AE | TUE |
| MG | WED |
| MG | WED |
| MG | WED |
| MG | THU |
| MG | THU |
| MG | FRI |
| MG | FRI |
| MG | SUN |
| MG | SUN |
| MG | SUN |
| MG | MON |
| Fanis | MON |
| MG | MON |
| AE | MON |
| MG | TUE |
| MG | TUE |
| MG | TUE |
| MG | WED |
| MG | WED |
| MG | WED |
| MG | THU |
| MG | THU |
| MG | SAT |
| MG | SAT |

6140 kHz 1115 z
$9450 \mathrm{kHz} 1315 z$
6140 kHz 1032 z
1117z
9450 kHz 1314 z

6140 kHz 0800 z 0829z

0931z
0959z
1031z
$9450 \mathrm{kHz} \mathrm{1315z}$
$6140 \mathrm{kHz} \mathrm{1000z}$
6140 kHz 0806 z

6140 kHz 0758 z 0830z

6140 kHz 0759 z
0828z
0845z
0944z
9450 kHz 1317 z

6140kHz 0814
0828z
0843z
0930z
0945z
9450 kHz 1230z 1315z

6140 kHz 0800 z

0814z
0845z
0930z
1046z
9450 kHz 1230z

6140 kHz 0800 z 0830z

0845z
0930z
1044z
6140 kHz 1114 z
13/10 YL chaotic 78, 7, 88, 77, EOM, R, M, Win sounds etc 1119 z vy brief sounds, QRT 1127 z 6140 kHz 0845 z

6140 kHz 0845 z
0849z
1042z
9450 kHz 1200 z
6140 kHz 0845 z
1042z
03/10[880 $\underline{0441} 411154927333585533315774941751365467 \underline{0441] 1120 z}$ YL EOM, carrier 1m30s, AM, Strong

07/10[116 1187111103113608491532835679031838258877521 4697]0812 YL off-freq, EOM, AM, Strong, QSB3, low audio

08/10[360 116118 (as of 07/10)]0807z YL 360118116 then 360 Mx 2116118 then 118, AM 08/10 Carrier off freq 0827z, music, AM, QRT 0849z

09/10[360 $451125102111404513800421985153088720 \underline{2510}$ 3102]0803z i.p, YL, WinXP sounds, AM, carrier left up till next TX, WinXP sounds
09/10[1405143 $\underline{2510} 6315891590267366430420738588441562159431$ 2510]0835z 140 once at 0821z, tone, YL, EOM only, AM, carrier QRT 0836z
09/10[169 0124823083080395486551663372187493414290 1493]0850z YL, AM, carrier QRT 0909z
09/10[350 2531151071805805671683087859 1510]0953z IO, YL, AM
09/10[7887809295 2060351091420132 3510]1324z carrier up 1311z, YL
10/10[185 34295520193997303860068739388616 1097]0819z tone, YL, EOM, AM, carrier 10/10[140 (as of 09/10)]0836z tone, YL, AM, carrier 10/10[169 (as of 09/10)]0850 tone, YL, AM, carrier finally QRT
10/10[1335202 26466689474194659421875168710830 4498]0935z, YL, AM, carrier 10/10[355 17]0953z IO, YL, erratic WinXP sounds, Mx3, Rx3, EOM EOT, QRT 0956z, AM 10/10[555 2241221132615577221364637938784559709159 3261]1239z, ALM, YL, AM 10/10[785 3]1319z YL, AM digi QRM1 (usual for 9450 AM)

11/10[360 553165506070756305128024848033965456036315806550 4607]0805z YL, AM, Carrier till next TX
11/10[187 77]0818z YL, Mx3, Rx3, EOM, AM, QRT 0820z
11/10[8045984 $\underline{0420} 12199981721034382891 \underline{0420} 8390162$ 5]0851z YL, AM, carrier, 11/10[133 (as of 10/10)]0935z YL, EOM, AM, carrier QRT 0944z
11/10[128 87642961856007853208723868175670865431078610306147756188 $59728560] 1053 \mathrm{z} \mathrm{YL}, \mathrm{Mx} 2,972$ instead of 5972, AM 11/10[555 (as of 10/10)]1240z ALM, YL, EOM, ALM EOT WinXP shutdown sound and QRT, AM, V. Strong

12/10[364 7]0804z YL, pauses of varying duration, AM, 0809z Win sounds, QRT 0812z 12/10[140 $2437 \underline{6210} 756713159325131777280590 \underline{6210]}$ YL, tempo slow-down, pause, carrier left till next TX, Win sounds, AM
12/10[804 (as of 11/10) 1625 (as of 11/10)]0853z YL, 1 rptd, Mx3, EOM 12/10[135 5253 54]0937z YL, 128 twice at 0939z, QRT, AM 12/10[128 (as of 11/10)]1051z YL, tempo slows down, WinXP sounds, EOM, AM

14/10 090480284503 EOM 90 etc YL, Win sounds, chaotic, 0848z slower tempo, QRT 0853z
15/10 random numbers, YL, chaotic, AM
15/10[804 108578303381960691138624125865890635969157957830 0431]0855z YL, initially random numbers, EOM 804, AM
15/10[128 10643961548069855388499058672198861611233938982921966120 5871 5480]1049z YL EOM EOT 31
15/10 carrier, WinXP shutdown sound then QRT at 1310z, AM, V. Strong
$\begin{array}{ll}0845 z & \text { 16/10[806 7] WinXP sounds, YL, Mx2 } \\ 0900 z & 16 / 10[11161018310411171814367\end{array}$ 16/10[128 (as of 15/10)] 1047 z YL, EOM only

| MG | MON |
| :--- | :---: |
| MG | MON |
|  |  |
| MG | TUE |
| MG | TUE |
| MG | TUE |
| Fanis | TUE |
| AE | TUE |
|  |  |
| MG | WED |
|  |  |
| MG | WED |
| MG | WED |
| MG | WED |
| MG | WED |
| MG, Fanis | WED |
| MG | THU |

SUN
MG TUE

MG
MG SUN

MG SUN
MG
MG
6140kHz 0901z

SUN
MON
TUE
TUE
TUE
TUE
TUE
WED
WED
WED
WED
WED
THU
FRI
SAT
SAT
SAT
SAT
SUN
SUN

| $6140 \mathrm{kHz} \mathrm{1028z}$ | 19/10[672 8427202406447846313429793391675 83]1034z YL, 67 rptd, Mx3, EOM only |  | MG |  | WED |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 9450 kHz 1245 z | 19/10[440 9101300154103480822959671165300673405410$] 1251 z$ YL, pauses, EOM, WinXP shutdown sound, AM, Very Strong, slight digi QRM |  | MG |  | WED |
| 9450 kHz 1245 z | 20/10[440 (as of 19/10)]1250z carrier 1235z, YL, pauses, missing numbers, no EOM EOT, carrier QRT 1301z |  | MG |  | THU |
| 1244z | 20/10 no EOM EOT, YL, Good |  | AE |  | THU |
| 1245z | 20/10[440 ... recorded]1250z QSA2 YL |  | Fanis |  | THU |
| 1315z | 20/10[785 778845 6]1321z carrier up 1302z, YL, WinXP shutdown sound |  | MG |  | THU |
| $1315 z$ | 20/10[785 ... recorded]1320z QSA3 YL about 5db stronger, need to check again for propagation | Fanis | THU |  |  |
| 6140 kHz 0915 z | 23/10[169 NO MSG]0918z YL, WinXP sounds, pauses, then calling 950 |  | MG |  | SUN |
| 0918z | 23/10[950 41213201226090605124192484623377045297805676 2260]0923z YL |  | MG |  | SUN |
| 1031z | 23/10[675 84]1034z YL, Mx3, Rx3, EOM |  | MG |  | SUN |
| $9450 \mathrm{kHz} \mathrm{1229z}$ | 23/10[555 9753321131212583783838475323167654946323 3121]1237z carrier 1207z, ALM, YL, EOM, carrier up till next TX, WinXP sounds |  | MG |  | SUN |
| 1228z | 23/10 Very Strong signal in Israel |  | AIK |  | SUN |
| 1315z | 23/10[780 26052021443158143838733780999938375976966537 4431]1319z YL |  | MG |  | SUN |
| 1313z | 23/10 Very Strong |  | AIK |  | SUN |
| 6140 kHz 0914 z | 24/10[955 14]0917z YL, WinXP sounds, AM, slight digi QRM |  | MG |  | MON |
| $9450 \mathrm{kHz} \mathrm{1229z}$ | 24/10[555 (as of 23/10)] 1237 z carrier 1224 z , <br> ALM, YL, EOM only, carrier QRT 1239z after WinXP sounds, AM |  | MG, AE |  | MON |
| 1314z | 24/10[780 (as of 23/10)]1319z carrier up 1312z, YL, AM |  | MG, AE |  | MON |
| $6140 \mathrm{kHz} \mathrm{0818z}$ | 27/10[014 10535120345742944516807419805120 1290]0822z YL, EOM only |  | MG |  | THU |
| 0841z | 27/10[162 78]0845z YL, Mx3, Rx3, EOM |  | MG |  | THU |
| 6140 kHz 0927 z | 28/10[135 56]0932z YL, Mx3, WinXP logoff sound, AM |  | MG |  | FRI |
| 9450 kHz 1317 z | 31/10[785 107884568 9]1324z carrier 1258z, YL, 7 rptd, EOM EOT |  | MG |  | MON |

Many thanks to everybody shared their loggings and comments. PS: male anon, excellent job! I am looking forward to a further cooperation!

## G06[1A]

## PoSW's logs to start:

The second + fourth Thursdays in the month 1830 UTC schedule continues together with a sending at 1930 UTC on the following Friday, always with $15 \times 5 F$ groups, and the first + second Mondays in the month $1700+1800$ UTC schedule is still running.

Thursday 1830 UTC Schedule:-
8-Sept-11:- $5,934 \mathrm{kHz}$, seasonal change of frequency from
$6,887 \mathrm{kHz}$ used in the summer months to a spot inside the 49 metre broadcast band with the inevitable interference. Appeared to be a faulty call-up, long periods of silence, heard " 579 " after 1832 z , went into 5 Fs just before 1834 z . 5 F message proceeded as normal, ended after 1836 z with " 249249 151500000 ".

22-Sept-11:- $5,934 \mathrm{kHz}$, call " 579 ", DK/GC "249 2491515 ", side band splash from BC station not too severe. Started approx. 35 seconds before the half hour.

13-Oct-11:- $5,934 \mathrm{kHz}$, started 50 second early, call " 579 ", DK/GC "362 3621515 ", with the usual BC QRM.
Friday 1930 UTC Schedule:-
9-Sept-11:- $5,442 \mathrm{kHz}$, the expected seasonal change from $5,943 \mathrm{kHz}$ of the past few months
which is too close for comfort to a strong signal from the Voice of the Islamic Republic of Iran. Reception on 5,442 much better, strong signal, best copy of any G06 for a long time! Call "947", DK/GC "732 73215 15"

23-Sept-11:- $5,442 \mathrm{kHz}$, "947" and "732 7321515 " again. Started approx. 30 seconds before the half hour.
14-Oct-11:- $5,442 \mathrm{kHz}$, call "947", DK/GC "632 63215 15".
28-Oct-11:- $5,442 \mathrm{kHz}$, a late start this evening, just a plain carrier until around 1935 UTC, then call " 947 " and DK/GC " 6326321515 ", as on the $14^{\text {th }}$. Good signal with no interference.

First + Second Mondays in the Month $1700+1800$ UTC Schedule:-
3-Oct-11:- 1700 UTC, $4,457 \mathrm{kHz}$, "439 43943900000 ". Stopped after 1703 z so may have started early.
1800 UTC, $4,864 \mathrm{kHz}$, second sending, started 20 seconds before the hour, S9 signal.
10-Oct-11:- 1700 UTC, $4,457 \mathrm{kHz}$, "439 43943900000 ". Was still on at 1708 z calling numbers 1 to 9 in German. 1800 UTC, $4,864 \mathrm{kHz}$, second sending.

## Others' logs:

September:

| $4457 \mathrm{kHz1700z}$ | $05 / 09[439: 0]$ | H-FD |
| :---: | :---: | :---: |
| 1700 z | $12 / 09[43900000(\mathrm{~s})]$ Strong | Hans |
| 4864 kHz 1800 z | $05 / 09[439: 0]$ | H-FD |
| 1800 z | $12 / 09[43943943900000] 1803 \mathrm{z}$ QSA1 QRM2 YL |  |
|  | Counting 1700z 123456789 per AG | Fanis, Hans |

If you look at the numbers they are clearly predictable in the beginning and then start to become randomized at around 68798/79809/08685.

$$
\begin{aligned}
& 13243-24354=11111 \\
& 24354-35465=11111 \\
& 35465-46576=11111 \\
& 46576-57687=11111 \\
& 57687-68798=11111 \\
& 68798-79809=11011 \\
& 79809-08685=71124 \\
& 08685-79684=70999 \\
& 79684-57531=22153 \\
& 57531-68472=10941 \\
& 68472-48631=19841 \\
& 48631-10921=37710 \\
& 10921-02378=8543 \\
& 02378-17456=15078
\end{aligned}
$$

It's almost like the numbers that were transmitted were from a Linear RNG that was cranking up but wasn't seeded sufficiently until 68798/79809(start)/08685.

| $\begin{array}{r} 5934 \mathrm{kHz} 1930 \mathrm{z} \\ 1830 \mathrm{z} \end{array}$ | 08/09[579 ...] BCQRM |  | HJH <br> HJH, FR | THU <br> THU |
| :---: | :---: | :---: | :---: | :---: |
|  | 22/09[579 2491512292 ... 4792724915 00000] Audio fair, BCQRM |  |  |  |
|  | $\begin{aligned} & 57924915 \\ & 12490928323874938754675469122198230437834875118235 \\ & 7148542543691467843147925 \\ & 00000 \quad \text { Coutesy Fox [Dif characters fm HJH noted] } \end{aligned}$ |  |  |  |
| 6778 kHz 0800 z | 12/09 [215 00000(s)] Strong |  | Hans | MON |
| October 2011: |  |  |  |  |
| 4457 kHz 1700 z | 03/10[439 439439 00000] |  | FN, Spectre | MON |
| $4864 \mathrm{kHz1800z}$ | 03/10[439 00000] Strong signal, weak/moderate noise |  | FR, FN, HJH , Spe | MON |
| 5442kHz1930z | 14/10[947 6321513568 .. 3759863515 00000(s)] 1936z Strong | (6m21s) | HJH, FR, PLdn | FRI |
|  | 94763215 1356893472410895736428493 1746508540278561473827594 2548793710957324618737598 $00000 \quad$ Courtesy FR |  |  |  |
| 1935z | 28/10[947 6321513568 ... $375986321500000(\mathrm{~s})$ ] ends 1942z Strong | (7m01s) | PLdn | FRI |
| $5864 \mathrm{kHz1200z}$ | 12/10[439 439439 00000] |  | FN | WED |
| $5934 \mathrm{kHz1830z}$ | 13/10[579 3621512453 ... 726273621500000 (s)] | (6m39s) | PLdn | THU |
| 1830z | 27/10[579 3621512453 ... 726273621500000 (s)] | (6m39s) | PLdn, FR | THU |
| $6774 \mathrm{kHz0800z}$ | 03/10[215 215215 222222] |  | FN | MON |
| G07 (IB) |  |  |  |  |
| 16271kHz0843z | 31/10 i/p 000000 at 0850z Strong |  | Danix | MON |
| G11[III] |  |  |  |  |
| September/October log: |  |  |  |  |
| 5815kHz1325z | 02/09 [296/31 A 5307395804 .... 24609] 1334z Weak |  | Hans | FRI |
| 1755z | 06/09 [270/00] Very strong signal |  | Fox | TUE |
| 1755z | 11/09 [270/00] Ende 1758z |  | PLondon | SUN |
| 1755z | 13/09 [270/00] |  | Gary, Fanis | TUE |
| 1755z | 20/09 [270/37 $0087680464369298584846743 . . . .56090]$ Ende 1806z |  | RNGB | TUE |
| 1755z | 25/09 [270/37 00876 etc $\}$ repeat of Tuesday |  | RNGB, PLondon | SUN |
| 1755z | 27/09 [270/00] Ende 1758z Strong | (3m22s) | PLondon, RNGB | TUE |
| 1325z | 01/10 [299/00] 1328z Weak QRN3 QSB2 |  | Spectre | SAT |
| 1755z | 04/10 [270/00] Good |  | RNGB | TUE |


| 1755z | 11/10 [276/37 82281145733369693989 36317....04517] Strong |  | RNGB, Danix | TUE |
| :---: | :---: | :---: | :---: | :---: |
| 1755z | 16/10 [276/37 82281.....] repeat of Tuesday |  | RNGB | SUN |
| 1755z | 18/10 [270/00] Good |  | RNGB | TUE |
| 1325z | 21/10 [299/35 $5530554463274379809639082 . . . .71495]$ V. Strong |  | Fox | FRI |
| 1325z | 22/10 [299/95 Achtung 55325 ... 71495 Ende] 1335z Weak QRN3 QSB2 |  | Spectre | SAT |
| 1755z | 23/10 [270/00] |  | RNGB | SUN |
| 1324z | 28/10 [299/00] Weak, Ende 1327z |  | Douglas | FRI |
| $1755 z$ | 30/10 [270/00] Very strong signal, moderate noise |  | Fox | SUN |
| $6433 \mathrm{kHz2000z}$ | 09/09 [262/00] Very strong signal, weak noise |  | Hans | FRI |
| 2000z | 11/09 [262/00] Ende 2003z |  | PLondon | SUN |
| 2000z | 16/09 [262/00] Strong |  | RNGB | FRI |
| 2000z | 18/09 [262/00] Ende 2003z Very strong | (3m19s) | PLondon, RNGB | SUN |
| 2000z | 23/09 [262/00] Very strong signal, weak noise |  | Fox | FRI |
| 2000z | 25/09 [262/00] Strong |  | RNGB, PLondon | SUN |
| 2000z | 02/10 [262/00] |  | RNGB | SUN |
| 2000z | 07/10 [262/00] 2003z Strong QRN3 QSB2 |  | Spectre | FRI |
| 2000z | 09/10 [262/00] Good |  | RNGB | SUN |
| 2000z | 16/10 [263/31 37954461365578873216 06706.....71020] Good |  | RNGB | SUN |
| 2000z | 21/10 [262/00] 2003z Fair QRN2 QSB2 |  | Spectre | FRI |
| 2000z | 23/10 [262/00] 2003z Fair QRN2 QSB2 |  | Spectre | SUN |
| 2000z | 26/10 [262/00] 2003z Fair QRM3 QSB3 |  | Spectre | SAT |
| 2000z | 28/10 [262/00] Strong |  | RNGB | FRI |
| 7317 kHz 0940z | 12/09 [275/00] |  | RNGB | MON |
| 0940z | 26/09 [272/30 32993078480277208857 83774.....05786] Good |  | RNGB | MON |
| 0940z | 03/10 [278/30 26970456447442259845 15985..... 61773] 0949z Strong |  | Hans, RNGB | MON |
| 0940z | 24/10 [275/00] 0943z Fair QRN2 QSB2 |  | Spectre | MON |
| 0940z | 31/10 [275/00] Very strong signal, weak noise |  | Fox | MON |

Starting with RNGB's S06 report for both months and then onto others' logs.
S06
RNGB's logs
S06 September log:

| Thurs | 1st | 19.05 | 5127 | '349' 00000 |
| :---: | :---: | :---: | :---: | :---: |
| Mon | 12th | 19.00 | 5784 | '349' 00000 |
|  |  | 20.15 | 11460 | '207' 00000 |
|  |  | 21.15 | 9175 | '207’ 00000 |
| Weds | 14th | 18.00 | 5735 | '471' 00000 |
| Sat | 17th | 16.05 | 7612 | '134' 00000 |
|  |  | 19.00 | 6791 | '703' 00000 |
|  |  | 19.00 | 4787 | '837' 00000 |
|  |  | 20.00 | 3819 | '837' 00000 |
|  |  | 20.00 | 5848 | '703' 00000 |
| Mon | 19th | 19.00 | 5784 | '349' 00000 |
| Weds | 21st | 18.05 | 5070 | '471' 00000 |
| Thurs | 22nd | 19.05 | 5127 | '349' 00000 |
| Sat | 24th | 19.30 | 5787 | '366' 00000 |

## S06s September log:

| Monday |  |  |  |
| :---: | :---: | :---: | :---: |
| 5th/12th | 1200/1210 | 9145/11460 | '831' 465773574745014551048743532242681320575 |
| 19th/26th |  |  | '831' 92452924528842822641425581545 |
| 5th/12th | 1600/1610 | 8040/6830 | '176' 20454855418844861693541005785 |
| 19th/26th |  |  | '176' 83256886720333867264879718672 |
| Tuesday |  |  |  |
| 6th/13th | 0600/0610 | 14080/12355 | '438' 265780745154548583351285508411735845175 |
| 20th/27th |  |  | '438' 9056815457416785202851416452683957 |
| 6th/13th | 0700/0715 | 5760/6930 | '374' 9506567235978393251578521385577859 |
| 20th/27th |  |  | '374'952625645 1132555240244445275745392 |
| 6th/13th | 0800/0810 | 11635/10420 | '352' 9706467742982673608735464345602554 |
| 20th/27th |  |  | '352' 960707113915751640885474598342663593815 |
| 6th/13th | 1230/1240 | ? /5805 | '278' 90155703355491250554440129565 |
| 20th/27th |  |  | No reports |
| 6th/13th | 1500/1510 | 6464/7242 | ‘537’ 9046727510185825594924319887804031 |
| 20th/27th |  |  | ‘537' 2896782354673019277565632389723016 |
| Wednesday |  |  |  |
| 7th/14th | 0530/0540 | 10835/12170 | '153' 8476547658559274554218295144715594 |
| 21st/28th |  |  | '153' 9286817253452810989673512290545620 |
| 7th/14th | 0730/0740 | 7335/11830 | '745' 9836549654505551122982248844548490 |
| 21st/28th |  |  | '745' 9126455943234274369485584845329715 |
| 7th/14th | 0820/0830 | 7605/9255 | '471' 90358955668307435750425345505 |
| 21st/28th |  |  | '471' 2536546043545582459103045028555599 |
| 7th/14th | 0840/0850 | 9480/11040 | '328' 5146910527245629442279556584835595 |
| 21st/28th |  |  | '328' 5796989923981514610940459834216532 |
| 7th/14th | 1000/1010 | 13365/14505 | '729' 84151234794665462214506144544 |
| 21st/28th |  |  | '729'584684482 4506354481462597209443533 |


| Wednesday continued |  |  |  |
| :---: | :---: | :---: | :---: |
| 7th/14th | 1200/1210 | 7120/6415 | '481' |
| 21st/28th |  |  | '481’ 26954664775877087555642824013 |
| 7th/14th | 1230/1240 | 7620/8105 | '967' 80156127754458327525706862057 |
| 21st/28th |  |  | '967' No reports |
| 7th/14th | 1900/1910 | 9220/8270 | '371’ 98657357474501455104874353224 |
| 21st/28th |  |  | '371' 96859805773151421363525773368 |
| Thursday |  |  |  |
| 1st/8th | 0800/0810 E17z | 14260/12930 | ‘674’ 81958564384278522692587565463 |
| 15th/22nd |  |  | '674’ 91355225556717155615422754221 |
| 1st/8th | 0900/0910 | 12952/13565 | '167' 84354851659417638558890034461 |
| 15th/22nd |  |  | '167' 93253994510944931640533926532 |
| 1st/8th | 1200/1210 | 12560/13065 | '425' 8736880604660775538570505519217746 |
| 15th/22nd |  |  | '425’ 816727477754399520842642685452283865855 |
| 1st/8th | 1230/1240 | 8650/7385 | '314' 562793689597505165541668309456168533856 |
| 15th/22nd |  |  | '314' No reports |
| 1st/8th | 1400/1410 | 5320/4845 | '624’ No reports |
| Friday |  |  |  |
| 2nd/9th | 0600/0610 | 6340/5470 | '934' 2516123347622524574450035065827515 |
| 16th/23rd |  |  | '934' 2856541466694140521886957812695679 |
| 2nd/9th | 0600/0610 | 7795/8695 | '196' 42753369225785662349257730105 |
| 16th/23rd |  |  | '196' 24052924528842822641425581545 |
| 2nd/9th | 0930/0940 | 12140/13515 | '516’ 982728963046215545542458946459590540545 |
| 16th/23rd |  |  | '516' 4276716253467781902985615678288019 |
| Saturday |  |  |  |
| 3rd | 1200/1210 | 10350/8520 | ‘254’ 8706622425819544525153554784528125 |

This months repeated group sendings in BOLD

| Weds | 14/09/2011 | 19.00 | 9220 | '371' 986573574745014551048743532242681320575 |
| :---: | :---: | :---: | :---: | :---: |
| Monday | 12/09/2011 | 12.10 | 11460 | '831' 465773574745014551048743532242681320575 |
| Friday | 16/09/2011 | 06.10 | 8695 | '196' 24052924528842822641425581545 |
| Monday | 19/09/2011 | 12.00 | 9145 | '831' 92452924528842822641425581545 |
| Friday | 07/05/2010 | 06.00 | 8340 | '934' 26052924528842822641425581545 |
| Weds | 01/12/2010 | 12.00 | 7030 | '481' 97252924528842822641425581545 |
| Weds | 01/09/2010 | 05.30 | 10835 | '153' 4876292452884282264142558154574167 |
| Thursday | 23/09/2010 | 12.00 | 12560 | '425' 9016292452884282264142558154574167 |
| Tuesday | 14/06/2011 | 15.10 | 7744 | '537' 9126292452884282264142558154574167 |
| Monday | 19/09/2011 | 16.00 | 8040 | '176' 83256886720333867264879718672 |
| Tuesday | 21/12/2010 | 08.00 | 5810 | '418' 96256886720333867264879718672 |
| Tuesday | 20/09/2011 | 06.00 | 14080 | '438' 9056815457416785202851416452683957 |
| Friday | 26/08/2011 | 06.00 | 7845 | '196' 42358154574167852028514164525 |
| Friday | 16/09/2011 | 06.00 | 6340 | '934' 2856541466694140521886957812695679 |
| Thursday | 01/04/2010 E17z | 08.00 | 14260 | '674' 20855414666941405213869578126 |
| Thursday | 04/03/2010 | 09.10 | 12310 | '167' 80955414666941405218869578126 |
| Thursday | 18/08/2011 E17z | 08.00 | 16780 | '674' 91855414666941405218869578126 |
| Tuesday | 21/12/2010 | 08.10 | 10265 | '352' 4896541466694140521886957812665351 |
| Tuesday | 12/07/2011 | 12.30 | 7650 | '278' 4596541466694140521886957812665351 |
| Tuesday | 03/08/2010 | 08.00 | 14373 | '352' 840654156669414052188695781266535120575 |

## S06 October log:

| Saturday | 01/10 | 19.30 | 5787 | '366' 00000 |
| :---: | :---: | :---: | :---: | :---: |
| Tuesday | 04/10 | 17.59 | 5891 | '286' 00000 |
| Weds | 05/10 | 20.00 | 5413 | '134' 5623887812819440090140626 26945.... 07782 |
| Saturday | 08/10 | 16.05 | 7612 | '134' $562388781281944009014062626945 . \ldots . .07782$ |
| Monday | 10/10 | 19.00 | 5784 | '349' 00000 |
|  |  | 20.15 | 9245 | '621' $485928647636138161901753864481 . . . .03431$ |
|  |  | 21.15 | 7760 | '621' $485928647636138161901753864481 \ldots . .03431$ |
| Tuesday | 11/10 | 18.01 | 5890 | '286' 00000 |
| Weds | 12/10 | 20.00 | 5406 | '134' $562388781281944009014062626945 . . . .07782$ |
| Saturday | 15/10 | 16.05 | 7612 | '134' $562388781281944009014062626945 . \ldots . .07782$ |
|  |  | 19.35 | 4618 | '366' 00000 |
|  |  | 20.30 | 6791 | '703' 00000 |
| Monday | 17/10 | 19.00 | 5784 | '349' 00000 |
| Thursday | 20/10 | 19.05 | 5127 | '349' 00000 |
| Saturday | 22/10 | 16.05 | 7612 | '134' 562388781281944009014062626945 .... 07782 |
|  |  | 19.30 | 5787 | '366' 00000 |
| Monday | 24/10 | 19.05 | 5127 | '349' 00000 |
| Thursday | 27/10 | 19.00 | 5784 | '349' 00000 |
| Monday | 31/10 | 09.30 | 18654 | '? ' ? 62 last group 62257 |

Note: The long running Saturday 1600 broadcast only seems to send messages during October, with a repeat on Wednesday evening. The rest of the year it sends nulls.

S06s continues sending 2 messages a month, except for the first Saturday of the month, which sends same message for 2 months (albeit just once a month!). The beginning of October found ID 425 sending nulls followed by the fourth week of October with IDs 352 and 328 ID 418 has not been heard recently so may have changed time/day/frequency? (Used to be Tuesday at 0800/10)

S06s October log:

| Monday |  |  |  |
| :---: | :---: | :---: | :---: |
| 3rd/10th | 1200/1210 | 9145/11460 | '831' 92052036555885574895772490465 |
| 17th/24th |  |  | '831' 97254483929831409656412295721 |
| 3rd/10th | 1600/1610 | 8040/6830 | '176' 98055546358078654701520425743 |
| 17th/24th |  |  | '176' 92457483221109209764536289021 |


| day |  |  |  |
| :---: | :---: | :---: | :---: |
| 4th/111th | 0600/0610 | 14080/12355 | '438' 5206845756280955616450624454455155 |
| 18th/25th |  |  | '438' 2956142558154574167852028514164526 |
| 4th/11th | 0700/0715 | 5760/6930 | '374' 96854374609623248154756393588 |
| 18th/25th |  |  | '374' 89656753478964231657845500322 |
| 4th/11th | 0800/0810 | 11635/10420 | '352' 4906566577469337481964254453453978 |
| 18th |  |  | '352' 8016774539077534221664419000356423 |
| 25th | 0800/10/20/30/40/50 | 9345/10182/10620/11 | 165/11825/12245 '352' 00000 |
| 4th/11th | 1230/1240 | ?/5805 | '278' |
| 18th/25th |  |  | '278' 90450433958909725333561522700 |
| 4th/11th | 1500/1510 | 6464/7242 | '537' 2016661215898286558532187093455980 |
| 18th/25th |  |  | '537' 2086336922578555253925773010551622 |


| Wednesday |  |  |  |
| :---: | :---: | :---: | :---: |
| 5th/12th | 0530/0540 | 10835/12170 | '153' 8096535505527860492597554472935776 |
| 19th/26th |  |  | '153' 9076945152285479505535297522554951 |
| 5th/12th | 0730/0740 | 7335/11830 | '745' Not heard |
| 19th/26th |  |  | '745'910 6346821745555122409951544798065 |
| 5th/12th | 0820/0830 | 7605/9255 | '471' 80359935551813805427115195777 |
| 19th/26th |  |  | '471' 82054099514557325755128581948 |
| 5th/12th | 0840/0850 | 9480/11040 | '328' |
| 19th |  |  | '328' 5076762943653655994545952966545518 |
| 26th | 0840/50/00/10/20/30 | 9635/10576/11440/11 | 875/12165/12647 '328' 00000 |
| 5th/12th | 1000/1010 | 13365/14505 | '729' 8056451951858757460546675668957973 |
| 19th/26th |  |  | '729' 48652016329076546054556252562 |
| 5th/12th | 1200/1210 | 7120/6415 | '481’ 920577145 |
| 19th/26th |  |  | '481' 27059922877544048165644751269 |
| 5th/12th | 1230/1240 | 7620/8105 | '967' 802549471736652647158270 68187? |
| 19th/26th |  |  | '967' |
| 5th/12th | 1900/1910 | 9220/8270 | '371’ 90457515125504533286126563676 |
| 19th/26th |  |  | '371' 5906991354895041100144414224657855 |

Thursday


| Saturday |  |  |  |
| :--- | :--- | :--- | :--- |
| 1st | $1200 / 1210$ | $10350 / 8520$ | '254' 8706622425819544525153554784528125 |

This months repeated group sendings in BOLD

| Tuesday | 18/10/2011 | 15.00 | 6464 | '537' 2086336922578555253925773010551622 |
| :---: | :---: | :---: | :---: | :---: |
| Friday | 02/09/2011 | 06.00 | 7795 | '196' 42753369225785662349257730105 |
| Weds | 19/10/2011 | 07.30 | 7335 | '745' 9106346821745555122409951544798065 |
| Tuesday | 21/06/2011 | 08.00 | 7245 | '418' 26953468217455551224099514557 |
| Thursday | 27/01/2011 | 14.00 | 5320 | '624' 87053468217455551224099514557 |
| Tuesday | 14/12/2010 | 12.40 | 6770 | '278' 4356346821745555122409951455798045 |
| Weds | 15/12/2010 | 12.00 | 7030 | '481' 2576346821745555122409951455798045 |
| Tuesday | 04/01/2011 | 15.00 | 5070 | '537' 49683468217455551224099514557980459567271514 |
| Weds | 19/10/2011 | 10.00 | 13365 | '729’ 48652016329076546054556252562 |
| Tuesday | 04/01/2011 | 12.30 | 5810 | '278' 43952016329076567054556252562 |
| Tuesday | 21/06/2011 | 08.00 | 14373 | '352' 8716201632907656705455625256263207 |


| Tuesday | 07/12/2010 | 15.00 | 5070 | ‘537' 94682016329076567054556252562632072106563450 |
| :---: | :---: | :---: | :---: | :---: |
| Tuesday | 16/08/2011 | 08.00 | 14373 | '352' 4706201632907657605445625256312076 |
| Thursday | 24/03/2011 | 14.00 | 5320 | ‘624’978520163 2907657605455326263098065 |
| Weds | 26/10/2011 | 12.00 | 7120 | '481' 27059922877544048165644751269 |
| Thursday | 04/08/2011 | 09.00 | 12952 | '167' 95089922877544048165644751269031765884255499 |
| Wed | 15/12/2010 | 12.40 | 6420 | '967' 283599228775440481656557 -5823? |
| Friday | 21/01/2011 | 06.00 | 5460 | '934' 86759922877544048165655751269 |
| Thursday | 24/03/2011 | 09.00 | 12952 | '167' 94859922877544048165655751269 |
| Weds | 13/04/2011 | 19.00 | 9220 | '371' 98059922877544048165655751269 |
| Tuesday | 01/02/2011 | 12.30 | 5810 | '278' 4156992287754404816565575126903176 |
| Tuesday | 27/04/2010 | 08.00 | 11635 | '352' 8679992287754404816565575126903176588425549972223 |

Others' logs:
S06 [1A]
September log:

| $5070 \mathrm{kHz1805z}$ | 21/09[471 00000]OM, Fair | AE | WED |
| :---: | :---: | :---: | :---: |
| 5127 kHz 1905 z | 08/09[349 ... 00000 1908z QSA2 QRM4 OM | Fanis | THU |
| 1900z | 15/09[349 00000] Gd audio | HJH | THU |
| 1900z | 22/09[349 00000] | HJH, FR | THU |
| 5735kHz1800z | 07/09[471 ... $0000001804 z$ QSA2 QRM2 OM | Fanis | WED |
| 1800z | 28/09 [471 00000] 1804z Strong QRN2 QSB2 | Spectre | WED |
| 5783kHz1900z | 05/09[349 0000 1904z QSA3 QRM2 OM | Fanis | MON |
| 1900z | 12/09[349 00000] Good audio | HJH | MON |
| 7612kHz1605z | 03/09[134:0] | H-FD | SAT |
| 1605z | 10/09[134 00000] Strong signal, strong noise, some bleeding | FR, Danix, Spectre | SAT |
| 1605z | 24/09[134 00000] Fair audio, QRM in b/g | HJH | SAT |

S06 October 2011:

5127kHz1905z 1905z 1905z

5132kHz1905z

5406kHz2000z

5735kHz1800z

5782kHz1930z
5784 kHz 1900 z

6783kHz1820z
$7612 \mathrm{kHz} 1605 z$

7612kHz1605z

| 06/10[349 00000] 1908z Fair QRN3 QSB2 | Spectre | THU |
| :---: | :---: | :---: |
| 20/10[349 00000] Good Audio | HJH, FR | THU |
| 24/10[349 00000] 1908z Fair QRN3 QSB2 | Spectre | MON |
| 03/10[349 349349 000000] | FN | MON |
| 12/10[134 56238 5F message ending 5623800000 ] | PPA | WED |
| 05/10[471 471471 00000] | FN, Spectre | WED |
| 01/10[366 00000] 1934z Weak QRN3 QSB2 | Spectre | SAT |
| 27/10 [349 34934900000 349...] STRONG 00000 1903z | AIK, SpectreTHU |  |
| 12/10[632 00000] Very strong | Mndbs | WED |
| 08/10[134 5623885852 ... 56238 00000] Strong | Spectre, FR | SAT |

13456238
8585281944009014062626945 7625608010940217014430556 4993250311987423215772402 7648329667006390164675785 1848355025448120240271963 18116348137484953042246028 541097931594600807896689 54109793159478256 0742750586077825623800000 Courtesy FR

13456238
8781281944009014062626945 7925608010940217014430556 4993250311987423215772402 7648329667006390164675785 1889355025448120240271963 0116348137484953042246028 5410979315946008078966891 07427505860778200000 (Repeat from 08/10)

Courtesy FR

15/10[134 LG 5678256256238 38]weak QRM3, QRN3 00000 1615z JDA, FN SAT

## S06c

 October:| 4628kHz 1935z | 10/09 [366 00000] Medium/strong signal, strong noise | FR, Danix, Spectre | SAT |
| :---: | :---: | :---: | :---: |
| 4845kHz1410z | 29/09[624 624624 00000] | FN | THU |
| $5320 \mathrm{kHz1400z}$ | 29/09[624 624624 00000] | FN | THU |
| 5760 kHz 0700z | 13/09[374 95065672359783932515785213855 77859] Weak/Fair | Hans, Spectre | TUE |
| 0700z | 20/09[374 952 6256451132555240244445275745392952600000 (s)] 0705z Weak QRN2 QSB2 | Spectre | TUE |
| 0700z | 27/09[374 952 6256451132555240244445276745392 00000] Weak, noisy signal | FR | TUE |
| $5805 \mathrm{kHz1240z}$ | 06/09 [278901557033 554912505544401295659015 00000(s)] 1245z Weak QRN2 QSB2 | Spectre, FN | TUE |
| 6340 kHz 0600 z | 02/09[934 25161233476225245744500350658 27515] Weak | Hans | FRI |
| 1010z | 13/09[893 52465889505857548848989959245 58154] Weak | Hans | TUE |
|  | Was a Saturday sked, looks like it has moved to Tuesday. Poor audio quality. |  |  |
| 6415kHz1210z | 07/09[481 9025 12515] | FN, Fanis | WED |
| 1210z | 28/09 [481 269546647758770875556428240132695 00000(s)] 1215z Weak QRN2 QSB2 | Spectre, Fanis | WED |
| 6464kHz1500z | 06/09[537 904672751 ] | FN, Fanis | TUE |
| 1500z | 27/09[537 2896782354673019277565632389723016 00000] Very strong signal, weak noise | FR, FN, Fanis | TUE |
| $6830 \mathrm{kHz1610z}$ | 05/09[176 204548554$]$ | FN | MON |
| 1610z | 26/09[176 83256886720333867364879718672 00000] Medium/strong signal, strong noise | FR | MON |
| $6839 \mathrm{kHz1610z}$ | 12/09[176 204548554188448616935410 05785] Fair/Strong | Hans | MON |
| 6930 kHz 0715 z | 27/09[374952625645 1132555240244445276745392 00000] Weak/medium noisy signal | FR | TUE |
| $7120 \mathrm{kHz1200z}$ | 07/09[481 9025 12515] | FN, Fanis | WED |
| 1200z | 28/09[481 $26954664775877087555642824013269500000(\mathrm{~s})$ ] 1205z Weak HAMQRM3 QSB3 | Spectre, Fanis | WED |
| 7242kHz1510z | 06/09[537 904672751 ] | FN | TUE |
| 1510z | 13/09[537 ... 0000000 1515z QSA2 QRM3 YL | Fanis | TUE |
| 7245kHz1510z | 27/09[537 2896782354673019277565632389723016 00000] Very strong signal, weak noise | FR, FN | TUE |
| 7335kHz0730z | 07/09[745 9836549654505551122982248844548490 00000] Weak, high QRM | FR, FN | WED |
| 0730z | 28/09[742 91264559432342743694855848453297159126 00000(s)] 0735z Weak QRN2 QSB2 | Spectre | WED |
| $7385 \mathrm{kHz1240z}$ | 08/09[143 5627936895975051655416683094561685338565627 00000(s)] 1246z Weak | SpectreFN, Fanis | THU |
| $7605 \mathrm{kHz0820z}$ | 07/09[471903589556 98307435750425345505 00000] Strong, weakQRM | FR, FN, Fanis | WED |
| 7620kHz1230z | 07/09[967 8015 61277] weak signal | FN | WED |
| 1230z | 14/09[967 801561277544583275257068620578015 00000(s)] 1235z Weak QRN3 QSB3 | Spectre | WED |
| 8040kHz1600z | 05/09[176 204548554$]$ | FN | MON |
| 1600z | 19/09[176 ... $000000001605 z$ QSA1 YL | Fanis | MON |
| 1600z | 26/09[176 83256886720333867364879718672 00000] Very strong signal, minor fading | FR | MON |
| 8105kHz1240z | 07/09[967 8015 61277] | FN, Fanis | WED |
| 1240 z | 14/09[967 801561277544583275257068620578015 00000(s)] 1245z Weak QRN3 QSB3 | Spectre | WED |
| $8270 \mathrm{kHz} \mathrm{1910z}$ | 07/09[371 986573574645014551048743532249865 00000(s)] 1915z Fair QRN2 QSB2 | Spectre | WED |
| 1910z | 14/09[371 $98657357464501455104874353224986500000(\mathrm{~s})$ ] 1915z Fair QRN3 QSB2 | Spectre | WED |
| 1910z | 21/09[3719689685 98057731514213635257733689689685500000$]$ YL, Strong | AE | WED |
| 1910z | 28/09 [371968598057 $73151421363525773368968500000(\mathrm{~s})$ ] 1915z Fair QRN2 QSB2 | Spectre, FN | WED |
| $8520 \mathrm{kHz1210z}$ | 03/09[254 87066224258195445251535547845 28125] 1215z Very strong | Danix | SAT |
| 8650kHz1230z | 08/09[314 x8x 78 xxxx ] | FN, Fanis | THU |
| 8695kHz 0610z | 02/09[196 427533692257856623492577 30105] Weak | Hans | FRI |
| 9145kHz1200z | 05/09[831 4657735747450145510487435322426813205854657 00000(s)] 1206z Weak QRN2 QSB2 | Spectre,FN,Fanis | MON |
| 1202z | 12/09[831 ... 0000 1207z QSA2 YL | Fanis | MON |
| 1200z | 19/09[831 ... 00000000 1205z QSA1 YL | Fanis | MON |
| 9220 kHz 1900 z | 07/09[371986573574 645014551048743532249865 00000(s)] 1905z Fair QRN2 QSB2 | Spectre | WED |
| 1900z | 14/09[371 98657357464501455104874353224986500000 (s)] 1905z Fair QRN3 QSB2 | Spectre | WED |
| 1900z | 21/09[3719689685 98057731514213635257733689689685500000$]$ YL, Strong | AE | WED |
| 1900z | 28/09[371968598057 731514213635257733689685 00000(s)] 1905z Fair QRN2 QSB2 | Spectre, FN | WED |


| 9255kHz0830z | 07/09[471 90358955698307435750425345505 00000] Very strong, weak QRM | FR, FN, Spectre | WED |
| :---: | :---: | :---: | :---: |
| $9480 \mathrm{kHz0840z}$ | 07/09[328 514691052 ] | FN | WED |
| 0840z | 28/09[328 57969899239815146109404598342165325796 00000(s)] 0845z Fair QRN2 QSB2 | Spectre | WED |
| 10350kHz1200z | 03/09[254 87066224258195445251535547845 28125] 1205z Fair XJTQRM4 | Danix | SAT |
| 10420kHz 0810z | 13/09[352 $9706467742982673608735464345602556970600000(\mathrm{~s})$ ] 0815z Fair QRN3 QSB2 | Spectre | TUE |
| 0810z | 27/09[352 960707113915751640885474598342663593815 00000] Very strong signal | FR | TUE |
| 10835kHz0530z | 07/09[153 8476547658559274554218295144715594 00000] Strong, QRM | FR | WED |
| 11040kHz0850z | 07/09[328 514691052 ] | FN | WED |
| 0850z | 28/09[328 $5796989923981514610940459834216532579600000(s)]$ 0855z Fair QRN2 QSB2 | Spectre | WED |
| 11460kHz 1210z | 05/09[831 4657735747450145510487435322426813205854657 00000(s)] 1216z Weak QRN2 QSB2 | Spectre, FN, Fanis | MON |
| 1210z | 12/09[831 4657735747450145510487435322426813 20575] Weak | Hans, Fanis | MON |
| 11635kHz 0800z | 13/09[352 $9706467742982673608735464345602556970600000(\mathrm{~s})$ ] 0805z Fair QRN3 QSB2 | Spectre | TUE |
| 0800z | 20/09[352 $960707113915751640885474598342663593815960700000(\mathrm{~s})$ ] 0806z Weak QRN2 QSB2 | Spectre | TUE |
| 0800z | 27/09[352 96070711391575164088547459834266359381500000$]$ Very strong signal | FR | TUE |
| 11830kHz0740z | 07/09[745 9836549654505551122982248844548490 00000] Strong | FR, FN | WED |
| 0740z | 28/09[742912 64559432342743694855848453297159126 00000(s)] 0745z Weak QRN2 QSB2 | Spectre | WED |
| 12140kHz0930z | 02/09[516 9827289630462155455424589464595905 40545] V.strong | Hans | FRI |
| 0930z | 09/09[516 9827289630462155455424589464595905405459827 00000(s)] 0936z Fair QRN2 QSB2 | Spectre, Fanis | FRI |
| 0930z | 16/09[516 4276716253467781902985615678988019 00000] Very strong signal, QRM2 | FR | THU |
| 0930z | 23/09[516 42767162534677819029856156782880194276 00000(s)] 0935z Fair QRN3 QSB2 | Spectre | FRI |
| 12170kHz0540z | 07/09[ 07/09[153 8476547658559274554218295144715594 00000]Weak/fair QRM | FR | WED |
| 12355kHz 0610z | 20/09[438 $9056815457416785202851416452683957905600000(\mathrm{~s})$ ] 0615z Weak QRN2 QSB2 | Spectre | TUE |
| 0610z | 27/09[384 9056815457416385202851416452603959 00000] Weak/medium noisy signal | FR | TUE |
| 12560kHz1200z | 08/09[425 873688060 ] | FN, Fanis | THU |
| 1200z | 29/09[426 00000] repeated until 1204z 425? | GN | THU |
| 12952 kHz 0900 z | 08/09[167 843548516594176385588900344618435 00000(s)] 0905z Fair | Spectre, FN | THU |
| 13065kHz1214z | 01/09 Missed call up, ends at 121500000 Strong local QRM S4 | GN | THU |
| 1210z | 08/09[425 873688060 ] | FN, Fanis | THU |
| 1211z | 29/09[426 00000] repeated until 1211z 425? | GN | THU |
| 13365kHz1000z | 07/09[729 84151234794665462214506144544 00000] Strong, strongQRM | FR, FN | WED |
| 1000z | 21/09[729 584 6844824506354481462597209443533584600000 (s)] 1005z Fair QRN3 QSB2 | Spectre | WED |
| 1000z | 28/09[729 584 68448245063544814625972094435335846 00000(s)] 1005z Fair QRN2 QSB2 | Spectre, Fanis | WED |
| 13515kHz0942z | 02/09[516982728963 046215545542458946459590540545982700000$] 0945 z$ QSA5 | JO | FRI |
| 0940z | 09/09[516 9827289630462155455424589464595905 40545]Fair | Hans, Spectre | FRI |
| 0940z | 16/09[516 4276716253467781902985615678988019 00000] Strong signal, strong noise | FR | THU |
| 0940z | 23/09[516 42767162534677819029856156782880194276 00000(s)] 0945z Weak QRN3 QSB2 | Spectre | FRI |
| 13565kHz0910z | 08/09[167 843548516594176385588900344618435 00000(s)] 0915z Fair | Spectre, FN | THU |
| 14080 kHz 0600 z | 13/09[438 2657805451545485833512855084115368451352657 00000(s)] 0606z Fair QRN2 QSB2 | Spectre | TUE |
| 0600z | 27/09[384 9056815457416385202851416452603959 00000] Very weak, noisy signal | FR | TUE |
| 14505kHz1010z | 07/09[729 84151234794665462214506144544 00000] Strong, strongQRM | FR, FN | WED |
| 1010z | 21/09[729 584 6844824506354481462597209443533584600000 (s)] 1015z Fair QRN3 QSB2 | Spectre | WED |
| 1010z | 28/09[729 584 64448245063544814625972094435335846 00000(s)] 1015z Weak QRN2 QSB2 | Spectre, Fanis | WED |

## October 2011:



S06s 14505kHz 1010z 26/10 Strong Signal From A Web SDR © Spectre 2011

| 4845kHz1410z | 06/10[624 901546062686729747839685304859015 00000(s)] 1415z Weak QRN3 QSB2 | Spectre | THU |
| :---: | :---: | :---: | :---: |
| 1410 z | 13/10[624 9015 46062] | FN | THU |
| $5320 \mathrm{kHz1400z}$ | 06/10[624 901546062686729747839685304859015 00000(s)] 1405z Weak QRN2 QSB2 | Spectre | THU |
| 1400 z | 13/10[624 9015 46062] | FN | THU |
| $5760 \mathrm{kHz0700z}$ | 04/10[37496854374629523 244134756396588 00000] Weak signal, very strong noise | FR | TUE |
| 0700z | 11/10[374 968543746 ] | FN | TUE |
| 0700z | 18/10[374 743743 743... 89675... LG 896896 55] FAIR QSB3 00000 0705z | JDA | MON |
| $5805 \mathrm{kHz1240z}$ | 25/10[782 904504339589057253335615227009045 00000(s)] 1245z Weak QRN3 QSB3 | Spectre | TUE |
| $6415 \mathrm{kHz1210z}$ | 05/10[481 920577145 ] weak signal | FN | WED |
| $6464 \mathrm{kHz1500z}$ | 11/10[537 2016 66121] QRM dig. sta | FN | TUE |
| $6830 \mathrm{kHz1610z}$ | 03/10[176 $98055546358078654708520425743980500000(\mathrm{~s})$ ] 1615z Fair QRN2 QSB2 | Spectre | MON |
| $6840 \mathrm{kHz1610z}$ | 03/10[176 98055546358078654701520425743 00000] Very strong, weak/moderate noise | FR, FN | MON |
| $6930 \mathrm{kHz0715z}$ | 04/10[374 96854374629523244134756396588 00000] Med/Strong, very strong noise | FR | TUE |
| 0715z | 11/10[374 968543746 ] | FN | TUE |
| $7120 \mathrm{kHz1200z}$ | 05/10[481 920577145 ] weak signal | FN | WED |
| $7242 \mathrm{kHz1510z}$ | 11/10[537 2016 66121] Slight BCQRM | FN | TUE |
| $7260 \mathrm{kHz1230z}$ | 19/10[967 8135 99578] | FN | WED |
| $7335 \mathrm{kHz0730z}$ | 19/10[745 910634682 ] | FN | WED |
| $7385 \mathrm{kHz1240z}$ | 13/10[314 5926 46215] | FN | THU |
| $7605 \mathrm{kHz0820z}$ | 12/10[471 8035 99355] | FN | WED |
| $7620 \mathrm{kHz1230z}$ | 05/10[967 8025 49471] | FN | WED |
| 7795kHz0700z | 14/10[196 807546570 ] | FN | FRI |
| 0659z | 21/10[196 40357823919276456632909012390 00000] Very strong signal, weak noise | FR | FRI |
| 8040kHz1600z | 03/10[176 98055546358078654701520425743 00000] Very strong | FR, FN, Spectre | MON |
| 8105kHz1240z | 05/10[967 8025 49471] weak signal, QRM | FN | WED |
| 1240z | 19/10[967813 599578 ] | FN | WED |
| $8270 \mathrm{kHz} \mathrm{1910z}$ | 05/10[371 $90457515125504533286126563676904500000(\mathrm{~s})$ ] 1915z Fair QRN3 QSB2 | Spectre | WED |
| 1910z | 12/10[371 90457515125504533286126563676904500000 (s)] 1915z Fair QRN2 QSB2 | Spectre, FN | WED |
| 1910z | 26/10[37159069913548950 $41100144414224657855590600000(\mathrm{~s})$ ] 1915z Fair QRN2 QSB2 | Spectre | WED |
| 8650kHz1230z | 13/10[314 5926 46215] | FN | THU |
| 8695kHz0710z | 14/10[196 807546570 ] | FN | FRI |
| 0709z | 21/10[196 40357823919276456632909012390 00000] Very strong signal, weak noise | FR | FRI |
| 9145kHz1200z | 03/10[831 9205 20365] | FN | MON |
| 1200z | 24/10[831 972544839298314096564122957219725 00000(s)] 1205z Weak QRN2 QSB2 | Spectre | MON |
| $9220 \mathrm{kHz} \mathrm{1900z}$ | 05/10[371 $90457515125504533286126563676904500000(\mathrm{~s})$ ] 1905z Fair QRN3 QSB2 | Spectre | WED |
| 1900z | 12/10[371 90457515125504533286126563676904500000 (s)] 1905z Fair QRN2 QSB2 | Spectre, mndbs | WED |
| 1900z | 26/10[371 59069913548950411001444142246578555906 00000(s)] 1905z Fair QRN2 QSB2 | Spectre, FN,HJH | WED |
| 9255kHz0830z | 12/10[471 8035 99355] | FN | WED |
| $9480 \mathrm{kHz0840z}$ | 12/10[328 9056 06453] | FN | WED |
| 10420kHz0810z | 04/10[352 4906566577469337481964254453453978 00000] Medium signal, strong noise | FR, FN | TUE |
| 11040kHz0850z | 12/10[328 9056 06453] | FN | WED |
| 11460kHz1210z | 03/10[831 9205 20365] | FN | MON |
| 1210z | 24/10[831 972544839298314096564122957219725 00000(s)] 1215z Fair XJTQRM3 QSB2 | Spectre | MON |
| 11635kHz0800z | 04/10[352 4906566577469337481964254453453978 00000] Very strong signal, weak noise | FR, FN | TUE |
| 11830kHz0740z | 19/10[745 910634682 ] | FN | WED |
| 12140 kHz 0930 z | 14/10[516 438743443 ] | FN | FRI |
| 12355kHz0610z | 04/10[438 520684575628095561645062445445515500000$]$ Very strong, weak noise | FR | TUE |
| 0610z | 11/10[438 5206 84575] | FN | TUE |
| 12952kHz0900z | 13/10[167 930584170$]$ | FN | THU |


| $13365 \mathrm{kHz} \mathrm{1000z}$ | 05/10[729 8056451951858757460546675668957973805600000 (s)] 1005z Weak QRN3 QSB2 | Spectre, FN | WED |
| :---: | :---: | :---: | :---: |
| 1000z | 12/10[729 $8056451951858757460546675668957973805600000(\mathrm{~s})$ ] 1005z Very Weak QRN3 QSB2 | Spectre | WED |
| 1000z | 26/10[729 486520163290765460545562525624865 00000(s)] 1005z Strong QRN2 QSB2 | Spectre | WED |
| 13515kHz0940z | 14/10[516 438743443 ] | FN | FRI |
| 13565kHz0910z | 13/10[167 930584170 ] | FN | THU |
| 14080kHz0600z | 04/10[438 5206845756280955616450624454455155 00000] Strong, very strong noise | FR | TUE |
| 0600z | 11/10[438 520684575 ] | FN | TUE |
| 14210kHz1251z | 27/10[ i/p 429 00000] Good signal S8 | GN | THU |
| 14505kHz1010z | 05/10[729 $8056451951858757460546675668957973805600000(\mathrm{~s})$ ] 1015z Very Weak QRN3 QSB2 | Spectre, FN | WED |
| 1010z | 12/10[729 $8056451951858757460546675668957973805600000(\mathrm{~s})$ ] 1015z Fair QRN2 QSB2 | Spectre | WED |
| 1010z | 19/10[729 + msg text] | IW | WED |
| 1010z | 26/10[729 486520163290765460545562525624865 00000(s)] 1015z Strong QRN2 QSB2 | Spectre | WED |
| 17478kHz1400z | 20/10[826 9035142601 61566] | FN | THU |

## PoSW's S06 logs:

I thought this report was going to be the usual list of four minutes worth of "00000 - no message", but Ivan surprised us on the first Saturday of October by sending a full message. Seasonal changes of frequencies as we move into autumn.

Saturday 1600 or 1605 UTC Schedule:-
3-Sept-11:- 1605 UTC, $7,612 \mathrm{kHz}$, "134 13413400000 ", strong signal peaking S9.
10-Sept-11:- 1605 UTC, $7,612 \mathrm{kHz}$, "134 13413400000 ". Carrier up 1544 z , tone at 1551 z , single Russian " 134 " just after 1555 z .
24-Sept-11:- 1605 UTC, $7,612 \mathrm{kHz}$, "134 13413400000 ", weak swept frequency jammer presumably aimed at a nearby broadcast station rather than S06.

1-Oct-11:- 1600 UTC, $8,162 \mathrm{kHz}$ - "on the hour" start for a change and a "full message".
Somewhat unusual these days, I think the last such transmission I logged was in
back in May. Calling "134", DK/GC "562 56238 38". Good signal.
8-Oct-11:- 1605 UTC, 7,612 kHz, "134" and "562 56238 38" again.
15-Oct-11:- 1605 UTC, $7,612 \mathrm{kHz}$, " 134 " and "562 5623838 " continues.
22-Oct-11:- 1605 UTC, $7,612 \mathrm{kHz}$, " 134 " and " 5625623838 ", so no change there, perhaps the message hasn't got through yet. Come on, agent 134 , do try and keep up!

Saturday 1930 or 1935 UTC Schedule:-
3-Sept-11:- 1935 UTC, 4,628 kHz, "366 36636600000 ". Weak signal. Heard in May, June, July and August at $1935 \mathrm{z}, 6,922 \mathrm{kHz}$ or at $1930 \mathrm{z}, 7,718$ kHz . Was heard at 1935 z on $4,628 \mathrm{kHz}$ in March and April of this year.

17-Sept 11:- 1935 UTC, $4,636 \mathrm{kHz}, 8 \mathrm{kHz}$ higher than when heard on the third. "366 36636600000 ". Weak signal
24-Sept-11:- 1930 UTC, $5,787 \mathrm{kHz}$, "366 36636600000 ". Good signal, much stronger than when heard on the lower frequency 1935 z slot earlier in the month.

1-Oct-11:- 1930 UTC, $5,787 \mathrm{kHz}$, "366 $36636600000 "$, peaking S9.
8-Oct-11:- 1930 UTC, $5,787 \mathrm{kHz}$, "366 36636600000 ".
15-Oct-11:- 1935 UTC, $4,618 \mathrm{kHz}$ - this five minute offset start-up moves around a bit in frequency! - "366 366366 00000" Over-riding local QRM from TV sets, I suppose. I think the neighbours are all watching "Big Brother Strictly Come Dancing Celebrity X- Factor", or some such appalling old crap.

Saturday $1900+2000$ UTC Schedule:-
3-Sept-11:- 1900 UTC, $6,791 \mathrm{kHz}$, "703 70370300000 ". S9+ signal over-riding a weaker
"XJT".
2000 UTC, $5,848 \mathrm{kHz}$, second sending, again S9+ and again over-riding an "XJT" - weird or what? In the summer months heard at 1900 z on 10,178 kHz and at 2000 z on $9,065 \mathrm{kHz}$

- that's nine zero six five and not 7,718 as I typed in error last time.

17-Sept-11:- 1900 UTC, $6,791 \mathrm{kHz}$ and 2000 UTC, $5,848 \mathrm{kHz}$, "703 70370300000 ", both with "XJT" underneath.
I lost track of this schedule in October, on Saturday the $1^{\text {st }}$ couldn't find a transmission at 1900 UTC or at 2000 UTC, that is 8 pm and 9 pm in the the UK, still summertime until the last weekend in this month. However, on Saturday the $15^{\text {th }}$ found the second sending at 2130 UTC, 10.30 pm British summertime having shifted by an hour and a half:-

15-Sept-10:- 2130 UTC, $5,848 \mathrm{kHz}$, "703 70370300000 ". S9 signal over-riding an "XJT". Presumably the first sending would have been on at 2030z, 9.30 pm on $6,791 \mathrm{kHz}$.

And here's a funny thing; this schedule was logged in March of this year at these times,
on the $5^{\text {th }}$ and $19^{\text {th }}$ of that month, similar frequencies, call " 703 ", 8.30 pm and 9.30 pm in what was then the UK winter.

14-Sept-11:- 1800 UTC, $5,735 \mathrm{kHz}$, "471 47147100000 ", peaking S9, much stronger than last time. 21-Sept-11:- 1805 UTC, $5,070 \mathrm{kHz}$, "471 47147100000 ", alternative time and frequency.
Good signal, S9 with deep QSB.
28-Sept-11:- 1800 UTC, $5,735 \mathrm{kHz}$, "471 47147100000 ", S9 signal.
5-Oct-11:- 1800 UTC, $5,735 \mathrm{kHz}$, "471 $47147100000 "$, S9.
19-Oct-11:- 1805 UTC, $5,070 \mathrm{kHz}$, "471 47147100000 ".
Monday + Thursday 1900 or 1905 UTC Schedule:-
1-Sept-11, Thursday:- 1905 UTC, $5,127 \mathrm{kHz}$, "349 34934900000 ", strong signal.
8-Sept-11, Thursday:- 1905 UTC, $5,127 \mathrm{kHz}$, "349 34934900000 ".
12-Sept-11, Monday:- 1900 UTC, 5,784 kHz, "349 349349 00000", S9+.
15-Sept-11, Thursday:- 1905 UTC, 5,127 kHz, "349 349349 00000", S9+.
29-Sept-11, Thursday:- 1900 UTC, 5,789 kHz, "349 34934900000 ".
10-Oct-11, Monday:- 1900 UTC, 5,784 kHz, "349 34934900000 ".
13-Oct-11, Thursday:- 1900 UTC, $5,784 \mathrm{kHz}$, "349 34934900000 ", S9+ signal.
17-Oct-11, Monday:- 1900 UTC, 5,784 kHz, "349 349349 00000", S9+ again.
Second + Fourth Mondays in the Month Schedule:-
12-Sept-11:- 2015 UTC, $11,460 \mathrm{kHz}$, "207 20720700000 ". Weak signal.
2115 UTC, 2115 kHz , second sending, very weak signal, carrier noted on 9,175 just after 2100 z .
26-Sept-11:- 2015 UTC, $11,460 \mathrm{kHz}$, very weak signal, presumed to be the 2015 z first sending of the fourth Monday in the month schedule, unreadable.
2115 UTC, $9,175 \mathrm{kHz}$, "207 20720700000 ", very weak, only just readable. Had a rapid flutter on the signal which suggests some kind of auroral disturbance. A check on Shannon
VOLMET on 5,505 and RAF VOLMET on 5,450 showed the same kind of effect.
10-Oct-11:- 2015 UTC, $9,245 \mathrm{kHz}$, calling " 621 " for a full message! Somewhat unusual these days, the Saturday 1600 z S06 also currently in this mode! DK/GC "485 48592 92".
Weak signal and became weaker as the transmission progressed. Ended just before $2035 z$ with DKDK GCGC and rapid "00000".
2120 UTC, $7,760 \mathrm{kHz}$, second sending, not found until about five minutes into the transmission, very weak signal.
11-Oct-11, Tuesday:- 2021 UTC, $9,242 \mathrm{kHz}$, suddenly remembered a "full message" means a repeat on the following day! Missed the start, 3 kHz lower than yesterday and a much stronger signal, S6 to S7.
2115 UTC, $7,760 \mathrm{kHz}$, second sending of " 621 " and "485 4859292 ". Also a much stronger signal than yesterday, around S7. Strange how propagation can change so much in just 24 hours.

24-Oct-11:- 2015 UTC, $9,240 \mathrm{kHz}$, very weak signal of some kind presumed to be the first sending.
2115 UTC, $7,760 \mathrm{kHz}$, second sending, slightly stronger than the above - but only just! Could just about hear the " 621 " call-up.
$25-O c t-11$, Tuesday:- 2028 UTC, $9,230 \mathrm{kHz}$, next day repeat in progress, much stronger signal than yesterday, S7 to S8, ended before 2035 z with " 485 485929200000 ",
2115 UTC, $7,760 \mathrm{kHz}$, call " 621 ", DK/GC "485 4859292 ", again much stronger than yesterday's sending.
Wednesday 2000 or 2005 UTC Schedule:-
This is a repeat sending of the "full message" transmitted on Saturdays at 1600 or 1605 UTC, not sure if it runs if Saturday's sending is the more usual four minutes of "no message".
12-Oct-11:- 2000 UTC, $5,406 \mathrm{kHz}$, call "134", DK/GC "562 5623838 ", as on Saturdays in October.
26-Oct-11:- 2010 UTC, $4,492 \mathrm{kHz}$, transmission in progress, must be alternative start-up time
of $2005 z$, not found until about five minutes into the transmission. Local QRM making copy difficult. Ended after $2015 z$ with " 5625623838 00000".

## S11a[III]

September/October log:

| 4909kHz1355z | 05/09 [254/00] 1358z Very strong | Danix | MON |
| :---: | :---: | :---: | :---: |
| 1355z | 03/10 [254/32 V 579357940934342 ... 98014] 1405z Very strong | Danix | MON |
| $5815 \mathrm{kHz} \mathrm{1020z}$ | 05/10 [228/32 47237.....] | Fritz | WED |
| 1020z | 08/10 [228/32 47237] | Fritz | SAT |
| 1020z | 26/10 [221/00] Medium/strong signal, very strong noise | Fox | WED |
| 7317kHz0915z | 02/09 [484/00] Strong | Hans | FRI |
| 0915z | 09/09 [485/38 V 6906004950 .... 19808] 0927z Strong | Hans | FRI |
| 0915z | 14/10 [484/00] | Danix | FRI |
| 0915z | 18/10 [484/00] Fair | RNGB | TUE |
| 0915z | 25/10 [485/35 49867231336756422958 79090.....11750] Good | RNGB | TUE |


| $9960 \mathrm{kHz1020z}$ | 02/09 [426/00] Strong | Hans, RNGB | FRI |
| :---: | :---: | :---: | :---: |
| 1020z | 13/09 [426/00] 1022z QSA1 QRM1 YL | Fanis | TUE |
| 1020z | 20/09 [421/36 59121973933993543782 11428.....82367] Fair | RNGB | TUE |
| 1020z | 27/09 [426/00] | RNGB | TUE |
| 1020z | 11/10 [424/35 46926133373135020967 02744.....80285] Good | RNGB | TUE |
| 1020z | 21/10 [426/00] Very strong signal, moderate/strong noise | Fox | FRI |
| 1020z | 25/10 [426/00] 1023z Weak QRN2 QSB2 | Spectre | TUE |
| 15915kHz 1540z | 24/10 [228/00] Strong | RNGB | MON |
| 16112kHz 1015z | 12/09 [471/37 44299...?] V.weak | RNGB | MON |
| 1015z | 26/09 [475/00] Good | RNGB | MON |
| 1014z | 03/10 [475/00] | RNGB | MON |
| 1015z | 13/10 [471/38 49292467189334687355 32081.....81455] Fair | RNGB | THU |
| 1015z | 24/10 [475/00] Good | RNGB | MON |
| 1015z | 31/10 [475/00] Very strong signal, moderate noise, | Fox | MON |

S21 [XIV]
September:
4454 kHz 1843 z 06/09[4542803238383 ... 1731428032000$] 1854 \mathrm{z}$ Weak QRN3 QSB3 Tpectre, mndbs

> 38383621276773382939055316693198569920189344575256 52535060260820574881358687632491205839047736541058 179658947236530934721990752831238186235868156768436 3396217314 $280 / 32000$ ends at 1854z Courtesy Mndbs

Carrier remains, at 1855 z short 1.5 k tone followed shortly by musical notes then carrier drops

| 4454 kHz 1842 z | 08/09[454 2803238383 ... 1731428032 000] 1853z Weak QRN3 QSB2 | Spectre, HJH | THU |
| :---: | :---: | :---: | :---: |
| 1842z | 13/09 unworkable signal | HJH | TUE |
| 1842z | 15/09[454...] 1854z QSA2 QRM3 OM | Fanis | THU |
| 1842z | 27/09[454 2803238383 ... 17314000 ] very strong signal, weak/moderate noise | FR | TUE |
|  | 45428032 |  |  |
|  | 3838362127677338293905531 |  |  |
|  | 6693198569920189344575276 |  |  |
|  | 5253506026082057488135868 |  |  |
|  | 7632491205839047736541058 |  |  |
|  | 1796589472365309347219907 |  |  |
|  | 5283123818623586815676843 |  |  |
|  | 3396217314000 Courtesy FR |  |  |
| 4854kHz1842z | 06/09[454 2803238383 ] | FN | TUE |
| 1842z | 15/09[454 2803238383383836212767733 .... 17314] V.strong | Hans, FR, Fanis | THU |
| October 2011: |  |  |  |
| $4454 \mathrm{kHz1842z}$ | 04/10[454 443 34] weak, QRM | FN | TUE |
| 1842z | 11/10[454 ....] Audio difficult | HJH | TUE |
| 1842z | 18/10 Audio weak with background hash. Signal unworkable | HJH | TUE |
| 4854kHz1842z | 04/10[454 443 34] weak, QRM | FN | TUE |
| 1842z | 20/10[454 ??? ?? ?????] Medium signal strength, very strong noise, bleeding | FR | THU |

## S28

## September:



October:
(Reception reports, no messages, only channel marker.)
Here, Spectre reports on the Harmonics discovered in mid-September and provides a spectral image


This harmonic was found on very similar frequencies last year:
http://www.youtube.com/watch?v=D4_iIH8ww8o\&feature=mfu_in_order\&list=UL

4582 kHz 0010 z 4562kHz 2255z 4562 kHz 2034 z 4562 kHz 2155 z

4666kHz 1512z 4666kHz 1927z 4666 kHz 1944z 4666kHz 0018z

4667 kHz 2031 z 4667kHz 2334z 4667 kHz 0046 z 4667kHz 2246z 4667 kHz 2159 z 4667 kHz 2055 z 4667kHz 2257z 4667 kHz 1957z $4667 \mathrm{kHz} 2134 z$ 4667 kHz 2156 z 4667 kHz 2046 z 4667kHz 2217z 4667 kHz 0002 z 4667 kHz 2020 z 4667kHz 2040z 4667 kHz 2230 z 4667kHz 0105z 4667kHz 2237z $4667 \mathrm{kHz} 2013 z$ 4667kHz 2039z 4667 kHz 2200 z 4667 kHz 1945z 4667kHz 2134z 4667 kHz 0008z 4667 kHz 2253 z 4667 kHz 2035 z 4667kHz 2156z
$4668 \mathrm{KHz} \mathrm{1929z}$ 4668kHz 1946z

4708 kHz 1513z 4708 kHz 1926z

4709kHz 2030z
4709 kHz 2335 z 4709kHz 0047z 4709kHz 2247z 4709kHz 2204z 4709kHz 2056z 4709 kHz 1945z 4709kHz 2258z 4709 kHz 1958z

29/10 [Harmonic] Weak RTTYQRM3 QSB3 29/10 [Harmonic] Very Weak RTTYQRM3 QSB4 30/10 [Harmonic] Very Weak RTTYQRM3 QSB3 31/10 [Harmonic] Very Weak RTTYQRM3 QSB3

06/10 [Harmonic] Very Weak QRN2 QSB3
06/10 [Harmonic] Weak QRN3 QSB3
07/10 [Harmonic] Weak QRN3 QSB3
08/10 [Harmonic] Very Weak QRN3 QSB3
30/09 [Harmonic] Weak QRN2 QSB2
01/10 [Harmonic] Fair QRN3 QSB3
02/10 [Harmonic] Fair QRN3 QSB3
03/10 [Harmonic] Very Weak QRN2 QSB2 04/10 [Harmonic] Very Weak QRN3 QSB3 05/10 [Harmonic] Very Weak QRN2 QSB3 09/10 [Harmonic] Weak QRN3 QSB3 10/10 [Harmonic] Very Weak QRN3 QSB3 11/10 [Harmonic] Very Weak QRN3 QSB3 12/10 [Harmonic] Very Weak QRN3 QSB3 13/10 [Harmonic] Very Weak QRN3 QSB2 14/10 [Harmonic] Very Weak QRN3 QSB3 15/10 [Harmonic] Very Weak QRN3 QSB2 15/10 [Harmonic] Very Weak QRN3 QSB3 16/10 [Harmonic] Very Weak QRN3 QSB4 20/10 [Harmonic] Weak QRN2 QSB3 22/10 [Harmonic] Weak QRN3 QSB3 22/10 [Harmonic] Fair QRN3 QSB2 23/10 [Harmonic] Fair QRN2 QSB2 25/10 [Harmonic] Fair QRN2 QSB3 26/10 [Harmonic] Weak QRN3 QSB3 27/10 [Harmonic] Weak QRN3 QSB3 28/10 [Harmonic] Weak QRN3 QSB3 29/10 [Harmonic] Fair QRN3 QSB3 29/10 [Harmonic\} Weak QRN3 QSB4 30/10 [Harmonic] Weak QRN3 QSB3 31/10 [Harmonic] Weak QRN3 QSB3

17/10 [Harmonic] Fair QRN2 QSB2 24/10 [Harmonic] Very Weak QRN3 QSB3

06/10 [Harmonic] Very Weak QRN2 QSB3 06/10 [Harmonic] Fair QRN3 QSB3

30/09 [Harmonic] Fair QRN2 QSB2
01/10 [Harmonic] Weak QRN3 QSB2 02/10 [Harmonic] Very Weak QRN3 QSB3 03/10 [Harmonic] Very Weak QRN2 QSB2 04/10 [Harmonic] Very Weak QRN3 QSB3 05/10 [Harmonic] Very Weak QRN2 QSB3 07/10 [Harmonic] Very Weak QRN3 QSB3 09/10 [Harmonic] Very Weak QRN3 QSB3 10/10 [Harmonic] Very Weak QRN3 QSB3

| Spectre | SAT |
| :---: | :---: |
| Spectre | SAT |
| Spectre | SUN |
| Spectre | MON |
| Spectre | THU |
| Spectre | THU |
| Spectre | FRI |
| Spectre | SAT |
| Spectre | FRI |
| Spectre | SAT |
| Spectre | SUN |
| Spectre | MON |
| Spectre | TUE |
| Spectre | WED |
| Spectre | SUN |
| Spectre | MON |
| Spectre | TUE |
| Spectre | WED |
| Spectre | THU |
| Spectre | FRI |
| Spectre | SAT |
| Spectre | SAT |
| Spectre | SUN |
| Spectre | THU |
| Spectre | SAT |
| Spectre | SAT |
| Spectre | SUN |
| Spectre | TUE |
| Spectre | WED |
| Spectre | THU |
| Spectre | FRI |
| Spectre | SAT |
| Spectre | SAT |
| Spectre | SUN |
| Spectre | MON |
| Spectre | MON |
| Spectre | MON |
| Spectre | THU |
| Spectre | THU |
| Spectre | FRI |
| Spectre | SAT |
| Spectre | SUN |
| Spectre | MON |
| Spectre | TUE |
| Spectre | WED |
| Spectre | FRI |
| Spectre | SUN |
| Spectre | MON |

4709 kHz 2135 z 4709kHz 2157z 4709kHz 2047z 4709kHz 2218z 4709 kHz 0003 z 4709kHz 2021z 4709kHz 2041z 4709 kHz 0107 z 4709kHz 2238z 4709 kHz 1947 z 4709 kHz 2040 z 4709kHz 2201z 4709 kHz 1946 z 4709kHz 2137z 4709kHz 0007z 4709kHz 2254z 4709kHz 2036z 4709kHz 2157z

4710kHz 2012z

11/10 [Harmonic] Very Weak QRN3 QSB3 12/10 [Harmonic] Very Weak QRN3 QSB3 13/10 [Harmonic] Very Weak QRN3 QSB3 14/10 [Harmonic] Very Weak QRN3 QSB3 15/10 [Harmonic] Very Weak QRN3 QSB3 15/10 [Harmonic] Very Weak QRN3 QSB3 16/10 [Harmonic] Very Weak QRN4 QSB4 22/10 [Harmonic] Very Weak QRN3 QSB3 22/10 [Harmonic] Weak QRN3 QSB2 24/10 [Harmonic] Very Weak QRN4 QSB3 25/10 [Harmonic] Weak QRN2 QSB2 26/10 [Harmonic] Very Weak QRN3 QSB4 27/10 [Harmonic] Very Weak QRN3 QSB3 28/10 [Harmonic] Very Weak QRN3 QSB3 29/10 [Harmonic] Very Weak QRN3 QSB3 29/10 [Harmonic] Very Weak QRN3 QSB4 30/10 [Harmonic] Very Weak QRN3 QSB3 31/10 [Harmonic] Very Weak QRN3 QSB3

23/10 [Harmonic] Weak QRN2 QSB3
7/10 [Harmonic] Weak QRN2 QSB2

Spectre
TUE
Spectre WED
Spectre THU Spectre FRI Spectre SAT Spectre SAT Spectre SUN Spectre SAT Spectre SAT Spectre MON
Spectre TUE Spectre WED
Spectre THU
Spectre FRI
Spectre SAT
Spectre SAT
Spectre SUN
Spectre MON

Spectre SUN

Spectre

## S30

September:
3756kHz1648z
09/09[8S1Shch 59132 PODSTRUZhKA 77363663 (R2)] 1649z Very strong

| Danix | FRI |
| :--- | :--- |
| Danix | SAT |
| Danix | SAT |

5448kHz1001z
10/09[The Pip] Strong QSB3
10/09[The Pip] Very strong

## S32

S32 (All heard in UK)

| 3828 kHz 0056 z | 02/10 [Channel Marker, Heard In UK] Fair QRN3 QSB2 | Spectre | SUN |
| :---: | :---: | :---: | :---: |
| 2254z | 03/10 [Channel Marker, Heard In UK] Weak QRN3 QSB2 | Spectre | MON |
| 2210z | 06/10 [Channel Marker, Heard In UK] Fair QRN3 QSB2 | Spectre | THU |
| 2222z | 07/10 [Channel Marker, Heard In UK] Weak QRN3 QSB2 | Spectre | FRI |
| 0056z | 14/10 [Channel Marker, Heard In UK] Fair QRN3 QSB2 | Spectre | SUN |
| 2114z | 16/10 [Channel Marker, Heard In UK] Very Weak QRN3 QSB3 | Spectre | SUN |
| 1933z | 17/10 [Channel Marker, Heard In UK] Very Weak QRN3 QSB3 | Spectre | MON |
| 2304z | 20/10 [Channel Marker, Heard In UK] Weak QRN3 QSB3 | Spectre | THU |
| 0043z | 22/10 [Channel Marker, Heard In UK] Weak QRN3 QSB2 | Spectre | SAT |
| 2239z | 22/10 [Channel Marker, Heard In UK] Weak QRN3 QSB2 | Spectre | SAT |
| 2020z | 23/10 [Channel Marker, Heard In UK] Weak QRN3 QSB3 | Spectre | SUN |
| 1949z | 24/10 [Channel Marker, Heard In UK] Very Weak QRN3 QSB3 | Spectre | MON |
| 2041z | 25/10 [Channel Marker, Heard In UK] Weak QRN3 QSB3 | Spectre | TUE |
| 2202z | 26/10 [Channel Marker, Heard In UK] Very Weak QRN3 QSB3 | Spectre | WED |
| 1951z | 27/10 [Channel Marker, Heard In UK] Weak QRN3 QSB3 | Spectre | THU |
| 2138z | 28/10 [Channel Marker, Heard In UK] Very Weak QRN3 QSB3 | Spectre | FRI |
| 0012z | 29/10 [Channel Marker, Heard In UK] Very Weak QRN3 QSB3 | Spectre | SAT |
| 0109z | 30/10 [Channel Marker, Heard In UK] Very Weak QRN3 QSB3 | Spectre | SUN |
| 2158z | 31/10 [Channel Marker, Heard In UK] Very Weak QRN3 QSB3 | Spectre | MON |

## V02a [XVIII] <br> PoSW's logs

Becoming a stronger signal as we loose daylight on the final approach through autumn towards winter. The 0800 UTC sending usually significantly weaker signal than the 0700 UTC.
3-Sept-11, Saturday:- 0700 UTC, $5,883 \mathrm{kHz}$, "Atencion, 784613255251351 ". Signal strength S7 to S8.
0800 UTC, $5,898 \mathrm{kHz}$, "78461 32552 51351", as earlier, S5.
4-Sept-11, Sunday:- 0701 UTC, $5,883 \mathrm{kHz}$, nothing heard until approx. 1 minute past the hour. "Atencion, 800718387118331 ", S7 to S8 with good audio. On a related theme, Radio Havana, Cuba noted in English at about 0645 z on two frequencies in the 49 metre broadcast band, 6,060 and 6,150 kHz , both with strong signals, finished with music just before the hour.

10-Sept-11, Saturday:- 0700 UTC, $5,883 \mathrm{kHz}$, "Atencion, 546727385128001 ". Good signal, started exactly on the hour.
11-Sept-11, Sunday:- 0700 UTC, $5,883 \mathrm{kHz}$, "Atencion, 777621447285882 ".
17-Sept-11, Saturday:- 0700 UTC, $5,883 \mathrm{kHz}$, "Atencion, 6380165322 20182". Good signal peaking S9, the DRM broadcaster on the LF side also very strong this morning.
0800 UTC, $5,883 \mathrm{kHz}$ - started up on the wrong frequency with, "Atencion, 638016532220182 " as at 0700 z but much weaker. Transmission continued on 5,883 until 0807 z when it went off and came up on the correct frequency $5,898 \mathrm{kHz}$.

18-Sept-11, Sunday:- 0700 UTC, $5,883 \mathrm{kHz}$ just a weak carrier on 5,883 , no voice heard.
24-Sept-11, Saturday:- 0700 UTC, $5,883 \mathrm{kHz}$, "Atencion, 116515612151742 ", peaking S9 with deep QSB. May have started early, " 11651 " repeated and into 5Fs after 0702z.
0759 UTC - started early - 5,898 kHz, "11651 5612151742 " as earlier. Strength S5.

25-Sept-11, Sunday:- 0700 UTC, nothing heard on $5,883 \mathrm{kHz}$ but there was a carrier with no voice on 5,898 , frequency used for the 0800 z sending. Had gone when checked again at $0716 z$, still nothing on 5,883 .

2-Oct-11, Sunday:- 0659 UTC, $5,883 \mathrm{kHz}$, early start again, "Atencion, 0015178141 62762".
S9 signal with excellent audio.
8-Oct-11, Saturday:- 0700 UTC, $5,883 \mathrm{kHz}$, "Atencion, $100713631238661 "$. Strong signal
during call-up but went off for about a second and was distinctly weaker when it returned.
Call-up in progress when tuned in about 30 seconds before the hour.
0800 UTC, $5,898 \mathrm{kHz}$, early start again, "10071 3631238661 ". Peaking over S8 with good audio; if there was a transmitter fault earlier they must have got inside the TX with a soldering iron and fixed it!

9-Oct-11, Sunday:- 0659 UTC - early start continues $-5,883 \mathrm{kHz}$, "Atencion, 056217868206781 ". Very strong signal peaking over S9, best reception of V02a since last winter; strong
enough to be received on the legendary three quid DM-906 multi-band radio from the local
"Superdrug" store, the DRM on the LF side much weaker than usual.
0759 UTC, $5,898 \mathrm{kHz}$, "05621 78682 06781" again, also a good signal, S8.

15-Oct-11, Saturday:- 0659 UTC, $5,883 \mathrm{kHz}$, "Atencion, 104728752178862 ", strong signal on the S-meter but audio sounded low. 0759 UTC, $5,898 \mathrm{kHz}$, "10472 87521 78862", as earlier.

16-Oct-11, Sunday:- 0659 UTC - early starts continue - $5,883 \mathrm{kHz}$, "Atencion, 8115285711
85352 ". S9 signal, depth of modulation much better than yesterday. The DRM broadcast signal on the LF side very strong this morning.
0759 UTC, $5,898 \mathrm{kHz}$, "81152 8571185352 ", S8, good audio.
22-Oct-11, Saturday:- 0659 UTC, $5,883 \mathrm{kHz}$, "Atencion, $333124108205572 "$. S9 signal.
Thought this was going to fire up on the wrong frequency, there was a strong carrier on $5,898 \mathrm{kHz}$ - the frequency used for the 0800 z sending - for a few minutes just before the hour
0759 UTC, $5,898 \mathrm{kHz}$, something a bit different this morning, the 0800 z sending did not have the same call-up 5Fs as the 0700 z ; for some time both transmissions have started up with the same routine. "Atencion, 1065167821 35781".

23-Oct-11, Sunday:- 0700 UTC, $5,883 \mathrm{kHz}$, "Atencion, 725825233156052 ", call-up under way when tuned in just before the hour, into 5Fs 0702z. S9 carrier, audio low.
0800 UTC, $5,883 \mathrm{kHz}$, on the wrong frequency, not entirely unknown with V02a! "72582 5233156052 ", same as earlier. Into 5Fs 0802z. Had a quick tune around to see what else was on and upon returning to this part of the spectrum at around 0806 z found the Señorita from Havana had shifted to the correct frequency, $5,898 \mathrm{kHz}$.

Others' Logs:
September log:

| 4028kHz0129z | 02/09[i/p] weak | gil | FRI |
| :---: | :---: | :---: | :---: |
| 0206z | 02/09[i/p] weak, I caught late expected 5417 switched to 40280208 z | gil | FRI |
| 0112z | 16/09[...] vweak | gil | FRI |
| 417kHz0208z | 02/09[i/p] fair switched from 4028 | gil | FRI |
| $5417 \mathrm{kHz0220z}$ | 09/09[] fair | gil | TUE |
| 5883kHz0701z | 04/09[A80071 83871 18331] fair | gil | SUN |
| 0732z | 15/09[...] fair | gil | THU |
| 0700z | 20/09[A33482 57111 74261] strong | gil | TUE |
| 0700z | 22/09[A13231 31411 56712] strong | gil | THU |
| 0700z | 24/09[A 1165156121 51742] Strong QSB3 | Hans | SAT |
| 0700z | 26/09[] strong, started as SK01 then V02a i/p | gil | MON |
| 0800z | 30/09[A11182 28002 07312] strong | gil | FRI |
| 5898 kHz 0800 z | 02/09[A03142 8111140222$]$ Fair/Strong QSB3 | Hans | FRI |
| 0800z | 04/09[A80071 83871 18331] fair | gil | SUN |
| 0800z | 05/09[A73472 85271 15552] fair | gil | MON |
| 0800z | 19/09[A26742 13642 05731] strong | gil | MON |
| 0800z | 22/09[A13231 31411 56712] strong | gil | THU |
| 0707z | $25 / 09[\ldots]$ strong expected 5883, late start, stuck on the digit "uno" repeating then a few chars of M08a back to repeating uno then off | gil | SUN |
| 0800z | 25/09[A78551 44482 47451] strong | gil | SUN |
| 0800z | 26/09[A88822 43862 80002] strong | gil | MON |
| 6768 kHz 0102 z | 03/09[i/p] fair | gil | SAT |
| 0202z | 10/09[] fair | gil | SAT |
| 0428z | 12/09[] fair | gil | MON |
| 0111z | 24/09[...] strong | gil | SAT |
| 6785kHz0129z | 17/09 i/p [..........,24442] Strong, not on the usual frequency | SC | SAT |
| $6855 \mathrm{kHz0312z}$ | 05/09[.87142.] fair | gil | MON |
| 12180kHz1900z | 06/09[] LSB, fair | SC, gil | TUE |
| 1900z | 22/09 i/p | SC | THU |
| 13380kHz 2000z | 01/09[38001 88861 83482] strong | SC | THU |
| 2000z | 06/09[A48532 13812 28871] strong | SC | TUE |
| 2000z | 15/09 i/p Strong | SC | THU |
| 2000z | 22/09 i/p | SC | THU |

## October log:

| 4174 kHz 0324 z | 17/10[] fair | gil | MON |
| :---: | :---: | :---: | :---: |
| $5417 \mathrm{kHz0212z}$ | 07/10[i/p] fair | gil | FRI |
| 0225z | 21/10[] fair | gil | FRI |
| 5883kHz0715z | 01/10[...] strong | gil | SAT |
| 0700z | 02/10[A00151 78141 62762] strong | gil | SUN |
| 0700z | 06/10[A44562 67762 35632] strong | gil | THU |
| 0709z | 08/10[i/p] fair V02a mixing with SK01 | gil | SAT |
| 0700z | 13/10[A75631 75451 58341] fair | gil | THU |
| 0712z | 15/10[] fair | gil | SAT |
| 0700z | 25/10[A50142 1825112872 LG 22804] | DanAr | TUE |
| 5898kHz0800z | 01/10[A74201 70052 28782] strong | gil | SAT |
| 0800z | 15/10[A10472 87521 78862] fair | gil | SAT |
| $6768 \mathrm{kHz0104z}$ | 01/10[...] weak | gil | SAT |
| 0428z | 03/10[] fair | gil | SUN |
| 6855 kHz 0304z | 03/10[] fair | gil | SUN |
| 0324z | 17/10[] fair | gil | MON |
| 9153kHz0702z | 21/10[] fair gil FRI caught late expected M08a | gil | FRI |
| 12180 kHz 1936 z | 20/10[] fair | gil | THU |
| 13380kHz2000z | 20/10[A17632,34242,53812] strong | SC | THU |

## V07 [ IB ]

T writes:
Intercepts, May to mid October, 2011
Starting in May, 2011, I heard for the first time from my location NS V07. This is a station that for one reason or another I have never been able to hear at my home location.
Another California listener on the RadioReference forum heard the station first (May 08, 2011), and I heard it the next week (May 15, 2011). So far I have only heard it on Sunday mornings.

May, 2011
15/05/2011, 0520, 12182 kHz, USB, V07, YL SS 5f, Callup 511, ID 279, 47 grps
July, 2011
10/07/2011, 0720, 12182 kHz, USB, V07, YL SS 5f, Callup 512, ID 283, 77 grps
17/07/2011, 0720, 12182 kHz, USB, V07, YL SS 5f, Callup 512, Null msg
24/07/2011, 0720, 12182 kHz, USB, V07, YL SS 5f, Callup 512, ID 222, 69 grps
24/07/2011, 0740, 10282 kHz, USB, V07, YL SS 5f, tuned in progress
31/07/2011, 0700, 13582 kHz, USB, V07, YL SS 5f, Callup 512, Null msg
31/07/2011, 0720, 12182 kHz, USB, V07, YL SS 5f, Callup 512, Null msg
August, 2011
07/08/2011, 0500, 14823 kHz, USB, V07, YL SS 5f, tuned in progress
07/08/2011, 0520, 13423 kHz, USB, V07, YL SS 5f, Callup 845, ID 625, 83 grps
07/08/2011, 0540, 11523 kHz, USB, V07, YL SS 5f, Callup 845, ID 625, 83 grps 14/08/2011, 0500, 14823 kHz, USB, V07, YL SS 5f, Callup 845, Null msg 14/08/2011, 0520, 13423 kHz, USB, V07, YL SS 5f, Callup 845, Null msg 21/08/2011, 0500, 14823 kHz, USB, V07, YL SS 5f, Callup 845, ID 711, 71 grps 21/08/2011, 0520, 13423 kHz, USB, V07, YL SS 5f, Callup 845, ID 711, 71 grps 21/08/2011, 0540, 11523 kHz, USB, V07, YL SS 5f, Callup 845, ID 711, 71 grps 28/08/2011, 0500, 14823 kHz, USB, V07, YL SS 5f, Callup 845, Null msg 28/08/2011, 0520, 13423 kHz, USB, V07, YL SS 5f, Callup 845, Null msg

September, 2011
18/09/2011, 0320, 14637 kHz, USB, V07, YL SS 5f, Tuned in progress
18/09/2011, 0340, 12137 kHz , USB, V07, YL SS 5f, Tuned in progress
25/09/2011, 0340, 16037 kHz, USB, V07, YL SS 5f, Callup 661, ID 111, 75 grps
25/09/2011, 0320, 14637 kHz, USB, V07, YL SS 5f, Callup 661, ID 111, 75 grps
25/09/2011, $0340,12137 \mathrm{kHz}$, USB, V07, YL SS 5f, Callup 661, ID 111, 75 grps
October, 2011
09/10/2011, 0100, 18074 kHz, USB, V07, YL SS 5f, Tuned to in progress
09/10/2011, 0120, 15874 kHz, USB, V07, YL SS 5f, Tuned to in progress
09/10/2011, 0140, 14374 kHz, USB, V07, YL SS 5f, Callup 883, ID 852, 89 grps
The station was also received by another listener in a few time slots that I did not receive, particularly before I started looking closely at the station. These receptions fill a couple of holes in the table below, including the month of June, since I did not receive it at all that month.

Table
V07 Observations May to October of 2011.
http://token radio.home.mchsi.com/V07 Obs Table V1.jpg

## Observations

As I said in previous posts, it looks as if V07 has changed habits a bit.
Without doubt it is still V07, the voice, format, actions are all consistent.
But the habits have apparently changed from the time it was regularly reported in Europe until now. Pardon me if I repeat some of the things that have changed, and point out a few things I may not have mentioned or known before.

In the past V07 was best heard, or at least most often reported as "strong" in Europe. It is now heard and very strong in the western United States and in the Northern Pacific Rim, specifically Japan.

In the past V07 was normally reported in AM mode, now it is seemingly in USB exclusively.
While many people thought V07 might be transmitted from a European location in the past it now appears to be more probable in maybe Asiatic Russia or possibly even Pacific Russia.
While a DF cut from a single location is not a good data point the station appears to be on a bearing of about 335 from me, again supporting far eastern Russia, if in Russia at all.

In the past V07 was heard two days a week, it is now only a single day per week.
In the past V07 started the hour at a low frequency and moved up in frequency as the hour went on. It now starts high and shifts lower as the hour progresses.
In the past V07 operated in the 0600 hour slot year round, adjusting its frequencies to compromise for propagation changes across the year. It now changes hour of operation almost monthly and still changes frequency.
So far it has transmitted in the odd hours between 0100 and 0700 , never using the even hours.
Have I looked at minutia too closely? Or does the station really, in other people's opinions, appear to have shifted a significant number of habits?
T!
Mojave Desert, California, USA
V13 [0]
September:
$9725 \mathrm{kHz0600z}$ 20/09 V13 USB New Star. Flute tune, followed by coded messages Ary MON

## October:

| $7580 \mathrm{kHz1300z}$ | $14 / 10$ | T |
| ---: | :--- | :--- |
| 13200 kHz 1300 z | $28 / 10$ good sigs, ending 1345 z | RNGB |

V24
6215kHz1510z 27/10 (carrier remained on)
AG
THU

## V30

No reports

## POLYTONES

In keeping with Ian's efforts to bring a no cost polytone decoder to the listener's armoury [have you seen the sky-high senseless prices of other products?] we take pleasure in illustrating the excellent product from Ian's 'Rivet':

Rivet (Build 5) by Ian Wraith
21:32:33 Loading file C:\Scan320\WaveFiles\11576_092211_1900.wav
21:32:35 XPA High Start Tone Found ( 1270 Hz )
21:34:05 High sync tone found at position 1323085
21:34:05 Symbol timing found at position 1325610
Block Sync
4444444444
Block Sync
542542542154254254215425425421
Block Sync
4444444444
Block Sync
6
Message Start
005830011303647199815058337335554400529178894550587688783741438490423389081
099705356874502138820443710948460433976922510443609546204661728829103871959
818997933157684523153883506154239592962869178871456246938610215800240585623
054735561381111945654144900303844371210170491868341820749179117868377467509
09028891659064412388
Block Sync
069387639417174581540860649406285298348302013800166970195689294214052196372
094096997819002085831173848520281313030363112257413308462460363070306534319
199142726694914033076409468682000875515273921305577786117855052016800585884
62382543309340196673471964404934730
21:34:18 XPA Decode Complete
21:34:57 WAV file loaded and analysis complete.

Rivet 7 works just as well and recently faultlessly decoded the XPA b usually very long message 5762kHz 0440z 11/10 $79910072300795 \ldots 04452$, this sonogram [above] illustrating the length, note the end time value 637 s - or 10 m 37 s .

XPA2 is a similar output with only one Block Sync to be seen and Rivet easily converts those tones to numerals as well:


Rivet (Build 7) by Ian Wraith
8:06:27 AM Loading file D: \scan320\WaveFiles\6992_101811_1930.wav
8:06:37 AM XPA2 Start Tones Found (correcting by 20 Hz )
8:08:13 AM Symbol timing found at position 1354658
UNID 988 Hz at 1374091
06160000010000010140
8:08:13 AM XPA2 Decode Complete
Please note that Ian has now provided a 20bd reader for XPA in 'Rivet Build 8,' and very good it is too.
[Thanks Ian]

## More XPA

10bd unless stated otherwise.
An XPA2 was found by Daniel, Argentina on 12127 kHz :
$12127 \mathrm{kHz} 1110 \mathrm{z} 01 / 10[094190014536232$ 03643]
DanAr
Following that intercept up I entered the wrong time into my automated system and intercepted:
XPA [Believed to be a split freq sending]
Note third admin group starts with 00 on 10/10

| $12127 \mathrm{kHz1410z}$ | 02/10[253 1052790010936289 51414] Strong | 10bd | (3m32s) | PLdn | SUN |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1410z | 08/10[253104277 0014801468 12630] Very strong | 20bd |  | PLdn | SAT |
| 1410z | 10/10[253 1082690014900245 45233] Strong, QRM2 | 10bd | (3m57s) | PLdn | MON |
| 1410z | 11/10[253108733 0011200395 05721] Very strong | 20bd | (2m48s) | PLdn | TUE |
| 1410z | 15/10 [253 1024950014452265 17054] Fair | 10bd | (3m54s) | PLdn | SAT |
| 14696kHz1400z | 17/10[253 103218 nnnnn 54327 50000] Very strong - poor recording | 20bd |  | PLdn | MON |
| 12127 kHz 1410 z | 17/10[253 103218 nnnnn 54327 50000] Very strong - poor recording | 20bd |  | PLdn | MON |
| 14696kHz1400z | 20/10[253103421 001354866406466 ] | 20bd |  | RNGB | THU |
| 12127 kHz 1410 z | 20/10[253 103421001354866406466 ] | 20bd |  | RNGB | THU |
| 14503kHz1500z | 20/10[831 103421001354866406466 ] | 20bd |  | RNGB | THU |
| 10337kHz1523z | 20/10 progress at 1523 ends with 06446 | 20bd |  | RNGB | THU |
| $16324 \mathrm{kHz1300z}$ | 11/10[253 108733001120039505721 ] | 20bd |  | RNGB | TUE |
| 13368kHz1310z | 11/10[253 108733001120039505721 ] | 20bd |  | RNGB | TUE |
| 10736kHz1320z | 11/10[253 108733001120039505721 ] | 20bd |  | RNGB | TUE |
| 14503 kHz 1500 z | 19/10[831 1079030014306223 31233] |  |  | IW | WED |

and by Rivet :
Block Sync
4444444444
Block Sync
831831831183183183118318318311
Block Sync
4444444444
Block Sync
6
Message Start
0790300143062237379428033446686252914036348235275484207 03554078071964097674
9211518041799970754164549543129889179952403259092991558 72967221980364428538
2732350516153960767412434997330020773444528295003254474
59310198113344324726
1699274387063532186437563950826265221533460789446913089
74963849568826722813
95032909108179346102
Block Sync
6530297434349880758448844405024892334720829468920215444 26398392424287830007
0691730388885840911713984342158532712693182379557233682 47193328345823129560
4429284498906087330794123124716679324519730867028765401 79350731047852384365
7598588223586593569972719574841278020654423412271384955 00660784799132860573
89504701441898250532
Block Sync
27294448831885960516002724871084573349697422537660712379 9157290565555967015672561
2188731233

## XPA2

September:
Sun/Mon/Wed

6802 kHz 0101 z
6802 kHz 0100 z
$6802 \mathrm{kHz0100z}$

11/09[02969 0008563916 00272] Strong 19/09[09645 0013973798 73207] Very strong 28/09[00851 0017492987 70550] Very strong

Tue/Thu
8068kHz1930z 6846kHz1950z 5846 kHz 2010 z

8068kHz1930z
6846kHz1950z 5846kHz2010z

8068kHz1930z 6846kHz1950z 5846kHz2010z

8068kHz1930z 6846kHz1950z 5846kHz2010z

8068kHz1930z 6846kHz1950z 5846kHz2010z

8068kHz 1930z 6846kHz 1950z 5846 kHz 2010 z

8068kHz1930z
6846kHz1950z 5846kHz2010z

8068kHz1930z 6846kHz1950z 5846kHz2010z

8068kHz1930z 6846kHz1950z 5846kHz2010z

01/09[01790 0000100000 10140] Very strong 01/09[01790 0000100000 10140] Very strong 01/09[01790 0000100000 10140] Very strong

06/09[00573 0019744099 00463] Very strong 06/09[00573 0019744099 00463] Strong 06/09[00573 0019744099 00463] Very strong

08/09[00573 0019744099 00463] Very strong 08/09[00573 0019744099 00463] Very strong 08/09[00573 0019744099 00463] Very strong

13/09[01790 0000100000 10140] Very strong 13/09[01790 0000100000 10140] Very strong 13/09[01790 0000100000 10140] Very strong

15/09[01790 0000100000 10140] Very strong 15/09[01790 0000100000 10140] Very strong 15/09[01790 0000100000 10140] Very strong

20/09[00922 0017505815 60017] Very strong 20/09[00922 0017505815 60017] Very strong 20/09[00922 0017505815 60017] Very strong

22/09[00212 0014968252 66551] Very strong 22/09[00212 0014968252 66551] Very strong

27/09[01791 0000100000 10140] Very strong 27/09[01791 0000100000 10140] Very strong 27/09[01791 0000100000 10140] Very strong 29/09[06160 0000100000 10140] Very strong 29/09[06160 0000100000 10140] Very strong 29/09[06160 0000100000 10140] Very strong

22/09[00212 0014968252 66551] Very strong (Some distortion present - poss local QRM)

| $(3 m 16 s)$ | GN | SUN |
| :--- | :--- | :--- |
| $(3 m 58 s)$ | PLdn | MON |
| $(4 m 23 s)$ | PLdn | WED |


| (2m11s) | PLdn | THU |
| :---: | :---: | :---: |
| (2m11s) | PLdn | THU |
| (2m11s) | PLdn | THU |
| (4m42s) | PLdn | TUE |
| (4m42s) | PLdn | THU |
| (4m42s) | PLdn | TUE |
| (4m42s) | PLdn | THU |
| (4m42s) | PLdn | THU |
| (4m42s) | PLdn | THU |
| (2m11s) | PLdn | TUE |
| (2m11s) | PLdn | TUE |
| (2m11s) | PLdn | TUE |
| (2m11s) | BR, Gert | THU |
| (2m11s) | BR, Gert | THU |
| (2m11s) | BR, Gert | THU |
| (4m24s) | PLdn | TUE |
| (4m24s) | PLdn | TUE |
| (4m24s) | PLdn | TUE |
| (4m05s) | PLdn | THU |
| (4m05s) | PLdn | THU |
| (4m05s) | PLdn | THU |
| (2m11s) | PLdn | TUE |
| (2m11s) | PLdn | TUE |
| (2m11s) | PLdn | TUE |
| (2m11s) | PLdn | THU |
| (2m11s) | PLdn | THU |
| (2m11s) | PLdn | THU |

## October 2011:

Daily [mid-month cessation]

| 14696 kHz 1400 z | $12 / 10[06433001237891203444]$ Very strong | $(3 \mathrm{~m} 22 \mathrm{~s})$ | PLdn | WED |
| :--- | :--- | :--- | :--- | :--- |
| 12127 kHz 1410 z | $12 / 10[06433001237891203444]$ Very strong | $(3 \mathrm{~m} 22 \mathrm{~s})$ | PLdn | WED |

Sun/Mon/Tue/Wed

| $6983 \mathrm{kHz} \mathrm{0100z}$ | $10 / 10$ Strong - mistuned |
| :--- | :--- |
| $5743 \mathrm{kHz} \mathrm{0100z}$ | $10 / 10$ Strong - mistuned |
| $5162 \mathrm{kHz} \mathrm{0100z}$ | $10 / 10$ Strong - mistuned |
|  |  |
| 6983 kHz 0100 z | $18 / 10$ Strong - mistuned |
| $5743 \mathrm{kHz0110z}$ | $18 / 10$ Strong - mistuned |
| 5162 kHz 0120 z | $18 / 10$ Strong - mistuned |


| (2m50s) | PLdn | MON |
| :--- | :--- | :--- |
| $(2 \mathrm{~m} 50 \mathrm{~s})$ | PLdn | MON |
| $(2 \mathrm{~m} 50 \mathrm{~s})$ | PLdn | MON |
|  |  |  |
| (3m48s) | PLdn | TUE |
| (3m48s) | PLdn | TUE |
| $(3 m 48 s)$ | PLdn | TUE |

Frequencies corrected:

| 6982 kHz 0100 z | $26 / 10[00768000947979201504]$ Very strong |
| :--- | :--- |
| 5742 kHz 0110 z | $26 / 10[00768000947979201504]$ Very strong |
| 5161 kHz 0120 z | $26 / 10[00768000947979201504]$ Very strong |
|  |  |
| 14538 kHz 1520 z | $04 / 10[00995000615164102116]$ Very strong |
| 13538 kHz 1540 z | $04 / 10[00995000615164102116]$ Fair |
| 14538 kHz 1520 z | $11 / 10[01813000010000010140]$ Strong |
| 13538 kHz 1540 z | $11 / 10[01813000010000010140]$ Strong |
|  |  |
| 14538 kHz 1520 z | $16 / 10[003340007920170$ LG11666] 1523z Very strong |
| 13538 kHz 1540 z | $16 / 10[003340007920170$ LG11666] 1543z Very strong |
| 14358 kHz 1520 z | $23 / 10[004180009387180$ 15263]Very strong |


| (3m23s) | PLdn | WED |
| :--- | :--- | :--- |
| (3m23s) | PLdn | WED |
| $(3 \mathrm{~m} 23 \mathrm{~s})$ | PLdn | WED |
|  |  |  |
| (2m57s) | PLdn | TUE |
| $(2 \mathrm{~m} 57 \mathrm{~s})$ | PLdn | TUE |
| $(2 \mathrm{~m} 11 \mathrm{~s})$ | PLdn | TUE |
| $(2 \mathrm{~m} 11 \mathrm{~s})$ | PLdn | TUE |
|  | Danix | SUN |
|  | Danix | SUN |
| $(3 m 22 s)$ | PLdn | SUN |

Tue/Thu

5092kHz2010z
6992 kHz 1930 z
5892kHz 1950z 5092kHz 2010z

6992kHz1930z
5892kHz1950z 5092kHz2010z

6992kHz1930z 5892kHz1950z 5092kHz2010z

6992kHz1930z
5892kHz1950z 5092kHz2010z

6992kHz1930z 5892kHz1950z 5092 kHz 2010 z

6992kHz1930z
5892kHz1950z 5092kHz2010z

1930/1950z NRH, searched
04/10[00678 0013310507 57523] Very strong, not on expected fre
06/10[00678 0013310507 57523] Very strong 06/10[00678 0013310507 57523] Very strong 06/10[00678 0013310507 57523] Very strong

11/10[06160 0000100000 10140] Very strong 11/10[06160 0000100000 10140] Very strong 11/10[06160 0000100000 10140] Very strong

13/10[06160 0000100000 10140] Very strong 13/10[06160 0000100000 10140] Very strong 13/10[06160 0000100000 10140] Very strong

18/10[06160 0000100000 10140] Very strong 18/10[06160 0000100000 10140] Very strong 18/10[06160 0000100000 10140] Very strong

20/10[08567 0000100000 10140] Very strong 20/10[08567 0000100000 10140] Very strong 20/10[08567 0000100000 10140] Very strong

25/10[06160 0000100000 10140] Very strong 25/10[06160 0000100000 10140] Very strong 25/10[06160 0000100000 10140] Very strong

6992kHz1930z 5892kHz1950z 5092kHz2010z

27/10[06160 0000100000 10140] Very strong 27/10[06160 0000100000 10140] Very strong 27/10[06160 0000100000 10140] Very strong

| (3m54s) | PLdn | TUE |
| :---: | :---: | :---: |
| (3m54s) | H-FD, PLdn | THU |
| (3m54s) | H-FD, PLdn | THU |
| (3m54s) | H-FD, PLdn | THU |
| (2m11s) | PLdn | TUE |
| (2m11s) | PLdn | TUE |
| (2m11s) | PLdn | TUE |
| (2m11s) | PLdn | THU |
| (2m11s) | PLdn | THU |
| (2m11s) | PLdn | THU |
| (2m11s) | PLdn | TUE |
| (2m11s) | PLdn | TUE |
| (2m11s) | PLdn | TUE |
| (2m11s) | PLdn | THU |
| (2m11s) | PLdn | THU |
| (2m11s) | PLdn | THU |
| (2m11s) | PLdn | TUE |
| (2m11s) | PLdn | TUE |
| (2m11s) | PLdn | TUE |
| (2m11s) | PLdn | THU |
| (2m11s) | PLdn | THU |
| (2m11s) | PLdn | THU |

Tue

7735 kHz 0300 z 6967 kHz 0310 z 5742 kHz 0320 z
$11 / 10$ Very strong - mistuned
$11 / 10$ Very strong - mistuned
$11 / 10$ Very strong - mistuned

| $(3 \mathrm{~m} 37 \mathrm{~s})$ | PLdn |
| :--- | :--- |
| $(3 \mathrm{~m} 37 \mathrm{~s})$ | PLdn |
| $(3 \mathrm{~m} 37 \mathrm{~s})$ | PLdn |

TUE TUE TUE
by Rivet:
0505800039972219431893234516037235512641071831305467612
74852909113440896790
5162879374015295692929153941385081448913018719754310878
62004301802153327261
369854039375887726815864175934375648309262527613106239317346

## Noise Stations

## XC [Crackle]



Not heard for some considerable time this came to notice whilst tuning for M01 on the same freq

Looking at the sonogram on the previous page it is easy to see the random nature of this signal.
A new sound sample has been placed on Group in the Files section.

## $\underline{\text { XM }}$

6940kHz0043z 6940kHz0225z 6940kHz1846z 6940kHz2142z

6940kHz1433z 6940kHz1800z
$6940 \mathrm{kHz0005z}$ 6940kHz0200z

27/10[Backwards Music Station] Fair QRN3 QSB2 27/10[Backwards Music Station] Fair QRN3 QSB2 27/10[Backwards Music Station] Fair QRN3 QSB2 27/10[Backwards Music Station] Fair QRN3 QSB2

28/10[Backwards Music Station] Weak QRN3 QSB2 28/10[Backwards Music Station] Fair QRN3 QSB2

29/10[Backwards Music Station] Fair QRN3 QSB2
29/10[Backwards Music Station QRT] 0203z Fair QRN3 QSB2

| Spectre | THU |
| :--- | :--- |
| Spectre | THU |
| Spectre | THU |
| Spectre | THU |
|  |  |
| Spectre | FRI |
| Spectre | FRI |
|  |  |
| Spectre | SAT |
| Spectre | SAT |



| $6940 \mathrm{kHz} \mathrm{0043z}$ | 27/10 [Backwards Music Station] Fair QRN3 QSB2 | Spectre | THU |
| :---: | :---: | :---: | :---: |
| 0225z | 27/10 [Backwards Music Station] Fair QRN3 QSB2 | Spectre | THU |
| 1846z | 27/10 [Backwards Music Station] Fair QRN3 QSB2 | Spectre | THU |
| 2142z | 27/10 [Backwards Music Station] Fair QRN3 QSB2 | Spectre | THU |
| 1433z | 28/10 [Backwards Music Station] Weak QRN3 QSB2 | Spectre | FRI |
| 1800z | 28/10 [Backwards Music Station] Fair QRN3 QSB2 | Spectre | FRI |
| 0005z | 29/10 [Backwards Music Station] Fair QRN3 QSB2 | Spectre | SAT |
| 0200z | 29/10 [Backwards Music Station QRT] 0203z Fair QRN3 QSB2 | Spectre | SAT |

## XSL

## September

| $6250 \mathrm{kHz1300z}$ | $29 / 09$ USB About S1, not strong after sunrise | Zack | THU |
| :--- | :--- | :--- | :--- |
| $8313 \mathrm{kHz1300z}$ | $29 / 09$ USB About S3 here | Zack |  |
| $8588 \mathrm{kHz1300z}$ | $29 / 09$ USB About S3 here | Zack |  |
| $8703 \mathrm{kHz1949z}$ | $09 / 09$ [I.P.Japanese Slot Machine] Weak QRN3 QSB3 |  |  |
| (Note: heard across Europe and UK.) | Spectre | THU |  |

## October

| $6417.5 \mathrm{kHz} \mathrm{1927z}$ | 12/10 [tfc and idling periods] | FN | WED |
| :---: | :---: | :---: | :---: |
| 6445.5 kHz 1925 z | 12/10 [tfc] | FN | WED |
| 8313.5 kHz 1928 z | 12/10 [tfc] | FN | WED |
| 6250kHz2058z | 16/10[Japanese Slot Machine] Very Weak QRN3 QSB3 | Spectre | SUN |
| 6250kHz1936z | 17/10[Japanese Slot Machine] Weak QRN3 QSB3 | Spectre | MON |
| $6250 \mathrm{kHz2006z}$ | 23/10[Japanese Slot Machine] Weak QRN2 QSB3 | Spectre | SUN |
| $6250 \mathrm{kHz1933z}$ | 24/10[Japanese Slot machine] Very Weak QRN3 QSB3 | Spectre | MON |
| $6250 \mathrm{kHz2042z}$ | 25/10[Japanese Slot Machine] Weak QRN2 QSB3 | Spectre | TUE |
| 6250 kHz 2203 z | 26/10[Japanese Slot Machine] Very Weak QRN3 QSB3 | Spectre | WED |
| $6417 \mathrm{kHz2055z}$ | 16/10[Japanese Slot Machine] Very Weak QRN3 QSB3 | Spectre | SUN |
| 6417 kHz 1935 z | 17/10[Japanese Slot Machine] Weak QRN3 QSB2 | Spectre | MON |
| $6417 \mathrm{kHz2005z}$ | 23/10[Japanese Slot Machine] Very Weak QRN2 QSB3 | Spectre | SUN |
| 6417 kHz 1932 z | 24/10[Japanese Slot Machine] Very Weak QRN3 QSB3 | Spectre | MON |
| 6417 kHz 2141 z | 25/10[Japanese Slot Machine] Weak QRN3 QSB3 | Spectre | TUE |
| 6417 kHz 2204 z | 26/10[Japanese Slot Machine] Weak QRN3 QSB3 | Spectre | WED |
| 6445kHz2056z | 16/10[Japanese Slot Machine] Very Weak QRN3 QSB3 | Spectre | SUN |
| 6445kHz1936z | 17/10[Japanese Slot Machine] Weak QRN3 QSB3 | Spectre | MON |
| 6445kHz2004z | 23/10[Japanese Slot Machine] Weak QRN2 QSB4 | Spectre | SUN |
| 6445kHz2044z | 25/10[Japanese Slot Machine] Weak QRN3 QSB3 | Spectre | TUE |
| $6445 \mathrm{kHz2205z}$ | 26/10[Japanese Slot Machine] Very Weak QRN3 QSB3 | Spectre | WED |

## Digital, Incursions and Unexplained Signals

In this months column we are going to take a closer look at one of the modes mentioned last time. The mode is commonly called CROWD36 and is believed to be used by the Russian diplomatic service. I suspected that there were some regular schedules for this mode and am pleased to announce that since I requested help from the group that a couple have been identified. These are as follows ..

| Frequency (in KHz) | Start Time | Days |
| :--- | :--- | :--- |
| 14651 | $06: 45$ | Daily |
| 14656 | $13: 00$ | Weekdays Only |

Note that the timing of these transmissions is variable by anything up to 10 minutes before or after the times listed above. The transmissions always consist of an initial burst of CROWD36 lasting around a second followed a minute or so later by the main transmission which can last anything between 2 minutes and 20 minutes depending on the length of the message being sent. The sending of the main message doesn't always go smoothly. Several times I have seen what appear to be technical problems with transmissions ending prematurely, suddenly moving frequency by 5 KHz and stopping for for anything between a second and a minute before restarting.

I have been busy for the last couple of months trying to add CROWD36 decoding to the Rivet software decoder. Progress has been much slower than I initially expected partly due to the fact that much of the information about CROWD36 both online and in books is sadly out of date. Initially I had been working on the understanding that the system had 36 possible tones but that 4 of these (tones $1,12,24$ and 36 ) weren't used. If you look at a audio spectral analysis of an old CROWD36 audio sample such as the one overleaf ..


You can clearly seeing two (tones 12 and 24) of the missing tones. However an audio spectrum analysis of a recent CROWD36 recording ..


Shows no missing tones. This made matching tone numbers to a published CROWD36 alphabet very difficult and none of the text recovered from my experimental decoders made any sense. Enlightenment came in the form of an excellent post to the UDXF mailing list by Leif Dehio who pointed out that the version of CROWD36 in use now only uses 34 tones each spaced 40 Hz apart. When I changed the program to take this into account I started to see a more sensible output as I will show you later.


One other problem I am having with CROWD36 is the changing frequency of the synchronisation tones. These are important as Rivet uses them to calibrate itself so it can cope with the receiver not being exactly tuned to a CROWD36 broadcast. So it looks for the synchronisation tones ( shown above in a Spectrogram) and measures the frequency of the high one and uses this to decide which audio frequency maps to which tone. However as I have examined more broadcasts I have found that this high synchronisation tone can be almost any tone from tone 23 to tone 32. Being even a single tone out makes a huge difference to decoded output of the program. As an example if I decode a brief start burst that comes before each transmission. If I decide the high sync tone is tone 31 the message decodes as ..

BABABABABABABABABABABABABABAF<*22>YXSQJCTUQ<fs>)+9

## EXMQ FQHLNKDCBOYGUIAS<*10><fs>2+1

(incidentally group member GN has pointed out that Guias is Portugese for guide although we have yet to work if this word appearing is just chance)
but if I decide the high sync tone is tone 32 it decodes as ..

## RPRPRPRPRPRPRPRPRPRPRPRPRPRP<fs> :29Щ<*10> <br> FLQM<*22>UNZKWYQB<fs>Щ<Is><*22><*30>I <br> RNCTLHPOGMVUBQ

However it is meant to decode the header is interesting since it is exactly the same in each CROWD36 message I have received so far. I had expected it would contain at least some message information (e.g the length of the message or date) so was surprised. The information in the header is repeated many times at the start and end of the main message also. Its possible that the CROWD36 schedules I have found so far all belong to the same circuit so all have the same header. I am looking for more regular CROWD36 schedules to see if I can find any with a different header. I was hoping these headers would contain the 11177 , 11166 and 11144 identifiers that commonly appear in Russian Diplomatic communications however I have yet to see them in any of the messages I have looked at so far.

Yet another mystery of CROWD36 is how little actual message there appears in each transmission. It appears 80\% or so of the message consists either of what is in the header repeating or other what appear to be meaningless phrases repeating. It has been suggested that this is related to the fact that all (or perhaps some) CROWD36 transmissions are ARQ (Automatic Repeat reQuest). In this mode of transmission you would have one frequency being used by Moscow Centre to send the message to an embassy and at the same time the embassy transmits back to Moscow Centre on a different frequency. The embassy modem error checks the incoming data received from Moscow Centre and if it finds an error transmits a request for the bad data to be retransmitted. From time to time listeners come across CROWD36 stations which appear to idle for long periods. Its possible these are the embassy side frequencies of the radio link.

Just to complicate things a little further there is another (possibly newer) CROWD36 variant around which starts the transmission using CROWD36 MFSK but then the transmission changes and uses the much more modern OFDM (Orthagonal Frequency Division Modulation) to pass data at a higher speed before returning to CROWD36 MFSK at the end of the transmission. You can see the transition between MFSK and OFDM in the spectrogram overleaf ..


I have yet to find any fixed schedules for the this mode yet however (if you haven't come across OFDM don't worry I will be explaining the basics of it in a future desk report).

In addition it appears the name CROWD36 is a misnomer as several experienced monitors report that the mode should be called Serdolik 34 tone MFSK where Serdolik is the Russian name of the communications system. However even though I know its incorrect I'm going to stick with calling it CROWD36 for now to avoid confusion. If we make progress with decoding it and it looks like the mode will be of interest to E2K members I shall consult with the groups moderators regarding renaming it.

I had hoped that this desk report would be reporting progress with CROWD36 explaining the basics contents of the messages being transmitted and how the latest version of Rivet would allow all interested members to monitor this mode. Sadly this isn't the case but I remain convinced that much of the content of CROWD36 messages can be decoded in theory. We need however to understand the tone to alphabet mapping system in use by the variants of the mode in use now and probably the error correction method in use as well. To do this we need more traffic to examine and for that we need to find more regular schedules. I would urge all interested members to post their CROWD36 logs to the mailing list so we can work on this as a group.

## PoSW's Items of interest in the media:-

There's a riot going on; well, there was in London a few weeks back. Some of us were surprised that there hadn't been one before, but this particular fracas started with a passenger in a cab in the Tottenham district of north London being shot by the police, he was suspected of being armed, said to have connections with the wonderful world of drug dealing, a growth industry in the UK, and events just spiralled from there. The police in full riot gear seemed just content to stand on one side and let the rioters burn and loot to their hearts content for quite some time. Interesting how all sorts of rumours start to circulate in these situations.


Croydon burns! View of the riot from PLdn's shack window.
One story was that the army were going to be brought in; it was even stated, completely falsely, that trucks full of soldiers had been seen parked up side streets waiting for the order to be given to get stuck in.
If the Government were to deploy the army in this kind of situation it would instantly change the public's view on the armed forces. In Britain, the army is held in high regard partly because unlike in most Continental European countries, it has never been deployed against the civilian population setting aside the special case of Northern Ireland and the events during a dock strike in the late 1940's when the then Labour Government used conscript soldiers to break the strike; but they were only used as manual labour to unload strike-bound cargoes of foodstuffs, not to defeat striking workers with rifle-butt and bayonet.

What is reported to be true is that the Government have procured a couple of water-cannon vehicles which are snugly holed up somewhere in the Greater London area ready to be wheeled out in the event of more trouble, which will be a first for the UK mainland.
It has also been said that under the provisions of one or other of the treaties with the European Union which successive UK administrations have signed, the government have the option to request riot police to be brought in from other member countries. If that were to happen, rioters would no doubt notice the difference between British police officers, still recognisable as Sir Robert Peel's "Civilians in uniform", and the para-military Gendarmes of the Napoleonic system of mainland Europe.

While the fall-out from the riots was still all around, I noted that the opportunity was taken to quietly release one of the Members of Parliament from his short stay in prison where he had been sent following his conviction for falsifying his expenses. Another of their number was let out a few weeks later. The Metro newspaper of 21-September had a short item headlined, "Expenses fiddling minister is freed" and says, "Former environment minister Elliot Morley was released from jail yesterday after serving a quarter of his sentence for parliamentary expenses fraud. The 59 year old had been jailed for 16 months for fiddling $£ 30,000$ in claims."

Great to see that at least some of the New Labour mob get a little bit of comeuppance!
They had such a low opinion of us ordinary Brits that they wanted us all to be photographed, fingerprinted, our DNA put on file and be required to carry a smart chip identity card at all times. The general view of the Labour party with regard to the common people is that we are all guilty of something, its just that we haven't been tried and convicted for it yet and so we must all be treated as criminals. I bet old Elliot was always "on message" and would have been able to come up with a dozen different reasons why we must all be made to carry our ID cards upon pain of a $£ 1,000$ fine if we didn't. And lo, it came to pass that Elliot saw the inside of a prison before any of us! I hope that now he has a criminal record he will most definitely be an "ex-member" of Parliament and that he will be disqualified from taking up lucritive employment on the board of any of the companies with close links to Government projects, as so many of them have done.
By the way, it was not made clear if Convict Morley was made to repay the 30 grand he obtained by fraud; if he didn't than he has got himself the cost of a fairly decent new car!

Nazi war criminals - is there one living down your street? If there is, he must be getting on in years! Nevertheless, they are still being sought, according to a piece in the Metro of 6-October. "Death camp suspects in new inquiry" is the headline, "Prosecutors have reopened hundreds of dormant investigations into Nazi death-camp guards. The move by German lawyers follows the conviction of John Demjanjuk, a guard at Sobibor camp, without direct evidence he had taken part in a specific killing. Kurt Schrimm, of the German prosecutors' office, said up to 1,000 suspects could de involved in a new investigation. Demjanjuk, 91, was imprisoned for five years in May for helping to kill 28,000 Jews at the camp in Poland during World War II. He has been released to await an appeal".
A bit late in the day to go after these old geezers, I would have thought. The question is, why weren't they brought to justice at some time in the past sixty years?
I suspect that the answer is that for most of that time the Soviet Union was regarded as a threat and these former Nazi types were keen to take up a career killing communists. Some of the most despicable individuals were from countries such as Latvia, Lithuania, Estonia and Ukraine and fought for the Nazi regime on the Eastern Front. After the war, considerable numbers of them were allowed to settle in the United Kingdom. With the beginning of the Cold War it was thought that a third world war with Soviet Russia would break out by about 1949, and who better to fight against Russia than those who had been fighting them from 1941 to 1945. Britain's Foreign Secretary of the time, Ernest Bevin, is said to have hated Russians, Communists and Jews in no particular order and believed that the 1917 Russian Revolution was a Jewish plot to undermine the British Empire. He is said to have personally welcomed many ex-Nazis to the UK, thanked them for having killed so many Russians and expressed the hope that they would soon have the opportunity to kill many more on behalf of His Majesty's Government. He was a Labour Party politician, by the way.

Spy story with a difference:- we don't usually associate Mongolia with the world of spying but a short piece in the "i" newspaper, a condensed version of the more weighty Independent of 30 -July under the heading of "Espionage" said, "UK to extradite spy master to Germany. A Mongolian spy chief has lost his appeal against extradition from the UK to Germany. Bat Khurts is said to have been involved in the abduction from Germany of Enkhbat Damiran, who was being sought in connection with the murder of a Mongolian government official."

Another one bites the dust:- the overthrow of the Gaddafi regime in Libya and the reported death of the Colonel is being regarded as the end of Nato's efforts in that country.

Prime Minister Cameron is feeling pleased with himself and his popularity will no doubt soar in this here United Kingdom if, as has been suggested, oil production in Libya resumes its former level. Both Britain and France as the main participants in the enterprise are expecting pay-back in the form of lots of Libyan oil. There is talk that the cost of petrol in the UK could come down by five pence a litre. Yeah, right!
Others have predicted that far from being over, the trouble in Libya is only just beginning as the various factions fight amongst themselves for control of that country. Having effectively backed one side in a Libyan civil war, Britain and France might soon have to decide who they are going to support with their air power in the next round of fighting.

At least poor old Gaddafi is out of it all, the one time "Godfather of terror" who had apparently been rehabilitated and reconciled with the West before the recent unpleasantness began - didn't he receive a visit from Mr Tony Blair not so long ago? I am sure that a lot of people in high places in the UK are relieved that Gaddafi is dead. The last thing they wanted was the Colonel standing in the dock of an international court telling the world about all the deals for weaponry and equipment to suppress his own people sold to him by what he thought were his new friends in the West.

Thanks Peter, your Items of Interest has been missed.

## Now onto other news items

## Security | 22.10.2011

## Suspected Russian spies arrested in Germany

http://www.dw-world.de/dw/article/0,,15479857,00.html
Federal prosecutors say two people were arrested
Special police units in Germany have arrested two suspected spies who are believed to have been active for 20 years. The married couple are said to have worked for the Russian Foreign Intelligence Service.

Germany's federal prosecutor's office has revealed that special police units on Tuesday arrested two people on suspicion of operating as spies in Germany for an unspecified foreign intelligence service.

It has since been confirmed that the two people - a married couple - were working for the Russian Foreign Intelligence Service (SVR) and had been active in Germany for more than 20 years.

Two weekly German news magazines, Spiegel and Focus, reported Saturday that the woman of the couple was arrested in Marburg, in the state of Hesse, while listening to coded news via a radio receiver. Her husband was arrested in the town of Balingen in the state of Baden-Württemberg.

## American trail

Anna Chapman, suspected Russian spyAnna Chapman was arrested in the US on charges of conspiracy in 2010
According to the reports, the two entered Germany via Mexico with false papers in 1990 and spent years sending coded messages to Russian Intelligence using a shortwave receiver.

If the date is correct, it would mean they began their activity in the last years of the Soviet-era KGB internal security agency.
The KGB was remodeled after the fall of the communist regime as the Federal Security Service (FSB). Unlike the FSB, the SVR deals in international - and often industrial - espionage.

The man in this case is a mechanical engineer who is said to have worked for a supplier of spare parts for cars and spied on the company.
The two were reportedly exposed last year when the American Federal Bureau of Investigation broke a network of SVR agents and arrested at least one other Russian spy, with whom the German pair had apparently had contact.

## Industrial espionage

A 2010 federal intelligence report suggested Russia and China had the biggest active spy networks in Germany, though they focus on industrial, rather than state, espionage.

Russia's SVR runs an estimated 13,000 agents and is active in economic areas, science and technology, the report says.
The SVR is thought to focus on gathering information about propulsion systems, satellites, sensors and communication technology.
On Wednesday, the unnamed pair appeared at Germany's Federal Supreme Court and were remanded in custody.
They deny the charges.
Author: Zulfikar Abbany (dpa, AP)
Editor: Ben Knight
http://www.dw-world.de/dw/article/0,,15479857,00.html
From Peter Staal, tnx Peter

Published: 23 October, 2011, 01:52
Edited: 24 October, 2011, 20:23
The German Federal Police have arrested a married couple on suspicion of spying for Russia's foreign intelligence service for over two decades, according to reports in the German media.

The Federal Prosecutor's Office says the two were arrested on Tuesday by the GSG-9 special operations team, an elite division of the German police.
The pair were arrested separately, with one being picked up in the city of Baligen in Baden-Wuerttemberg state in the south-west of the country, while the other was detained in Marburg in the state of Hesse, which is to the west of central Germany.

Police reportedly walked in on the woman while she was listening to encoded radio transmissions.
The German news weekly, Der Spiegel, said that according to the authorities the man and the woman - referred to only as Andreas A. and Heidrun A. - had been working in Germany as Russian spies since the days when the KGB, the Soviet Union's spy agency, was operating in the country during the Cold War.

According to documents the couple both hail from South America, the man from Argentina and the woman from Peru, although both had Austrian passports.
However, inquiries made by German authorities in South America confirmed that the passport data had been falsified.
The couple allegedly moved to West Germany in 1988. Apparently, Andreas A. and Heidrun A. have been working all across Europe, with Germany serving as their base. It is thought they could have been playing a linking role between other agents and Moscow, media reports suggest. Also, according to Der Spiegel, Andreas A. speaks with a Russian accent, though he claims he knows only German, English and Spanish. Both have denied all charges.

It is not known what the alleged spies' target was, Der Spiegel says.
It is the first time undercover foreign agents have been found in Germany since the county was reunified in 1990, Der Spiegel stresses.
Police began investigating the couple after a Russian spy ring was uncovered in the United States last year.
http://rt.com/news/german-police-russian-spies-505/

## Cold-War Style Spying

Russian Couple's Arrest Could Mar Diplomatic Ties
By Holger Stark
German investigators have arrested two suspected Russian undercover agents -- a married couple believed to have been spying on Germany for over two decades. The case could hurt relations between Germany and Russia.
Info
For reasons of data protection and privacy, your IP address will only be stored if you are a registered user of Facebook and you are currently logged in to the service. For more detailed information, please click on the "i" symbol.

It was still dark when a unit of German police commandos burst into a family home in the western town of Marburg at 06.30 a.m. last Tuesday. Heidrun A. was sitting in her study in front of a wireless transmitter that was receiving encoded messages on a shortwave frequency and was hooked up by cable to a computer.

The sudden appearance of armed officers in balaclavas must have been quite a shock -- the woman fell off her chair and pulled out the connecting cable between the receiver and the computer, thereby interrupting the recording of conspiratorial messages coming from the radio, accompanied by a special identification tune.

The Marburg arrest is the culmination of a secret, weeks-long effort by German security authorities to hunt down suspected Russian agents. It was an operation straight out of the annals of the Cold War. Heidrun A., 45, and her husband Andreas, 51, are suspected of having spent over 20 years as undercover agents spying on Germany for Moscow. Last Wednesday, both were brought before a judge and remanded in custody. Both deny the charges.

The spy thriller could hurt relations between Germany and Russia. This is the first arrest of illegal Russian agents in Germany since reunification in 1990. The use of this category of spy is particularly sensitive and expensive.
"Illegals" practice a high art of spycraft. These weren't standard agents masquerading as diplomats operating from an embassy and immune from prosecution. The worst such diplomatic spies have to fear is expulsion from Germany. But the married couple recently arrested can expect a long jail sentence. A spectacular trial resulting in a conviction could lead to a marked cooling in diplomatic relations between the two countries.

## Spying During Berlin Wall Era

Officially, Chancellor Angela Merkel likes to stress that German-Russian relations are excellent. "They have broadened in recent years, and some haven't kept up," she said last year. Russian President Dmitry Medvedev has gushed that "Germany is our key country."

That obviously also applies to secret service activity. The German Federal Prosecutor's Office and the Federal Office for the Protection of the Constitution, which is Germany's domestic intelligence service, say the undercover operation by the married couple from Marburg began before the fall of the Berlin Wall in 1989, in the days of the Soviet KGB.

In 1988, Andreas A. moved to Germany, a young man who said he was born in Argentina and raised in Austria and who wanted to study in Germany. In 1990 he married his partner, Heidrun, who presented a similar CV -- born in Peru, Austrian citizen.

Andreas studied engineering and plastics technology in Aachen. The couple soon had a daughter. In 1998, after he had completed his studies, Andreas joined an auto components manufacturer. He changed jobs several times and the family moved to North Rhine-Westphalia and then to Rhineland-Palatinate. Early this year Andreas joined a company in the southwestern town of Balingen as a project manager. Sometimes he commuted the 360-kilometer distance to Marburg, sometimes he spent weeknights in an apartment close to his work. Police arrested him in that apartment. He seemed to be living the ordinary, inconspicuous life of an employee who has to commute long distances to and from work.

His life was as unspectacular, in fact, as that of Anna Chapman, who has more in common with Andreas and Heidrun A. than would seem apparent at first sight. The photogenic Russian with red-dyed hair was part of a spying ring of 11 illegal agents uncovered in the US in June 2010. Some of the Russians had spent over a decade working for the SWR Russian Foreign Intelligence Service, the successor organization to the KGB. Their headquarters had been especially interested in reports about US foreign policy. The agents communicated with messages written in invisible ink and coded statements such as, "Tell him Uncle Paul loves him," and "He will know it is wonderful to be Santa Claus in May."

According to an encrypted message from Russia retrieved by US officials, one agent was told: "You were sent to the USA for long-term service trip. Your education, bank accounts, car, house, etc. -- all these serve one goal: Fulfill your main mission, i.e. to search and develop ties in policymaking circles in US and send intels (intelligence reports) to C(enter)."

A few days before the FBI pounced in the summer of 2010, a Russian intelligence officer defected to the US. He was believed to have been working for the CIA since 1999: Alexander Poteyev, one of the officers handling the team of agents on the US east coast. Poteyev is believed to have betrayed Chapman and Co: a Moscow court has sentenced him in absentia to 25 years in jail. He didn't just offer the Americans information on the 11 agents but also gave them deep insight into the workings of Moscow's "Illegals" program -- including the rumor that a similar group of agents was also operating in Europe.

The longer German counter-intelligence agents spent looking at the Chapman case and at further information, the clearer the picture became. They concluded, based on radio messages to Germany, that at least one, and perhaps several Russian spy couples were living in Germany. In late summer the trail of clues led them to the Marburg home of Andreas and Heidrun A.

## Incriminating Evidence

Time seemed to be running out for the investigators. Andreas had already resigned from his job, sold his car and was packing up to leave Germany, saying he could earn more money abroad. The German authorities suspected that the couple wanted to make a getaway, and that the SWR headquarters might have known that the agents were close to being caught.

It is not clear if Heidrun and Andreas A., as with Chapman and her colleagues, focused on foreign policy. Alongside the agent radio which they both regularly received, another incriminating fact is the false information on their Austrian passports. Inquiries in Argentina and Peru showed that the places of birth listed were not correct. In addition, Andreas A., who said his hobbies were travel, walking and deep sea fishing, speaks with a detectable Russian accent, although, according to his own information, he only speaks German, Spanish and English.

Experts believe it is possible that the couple used Germany as a base but operated elsewhere in Europe. Another theory is that they were in contact with other agents and acted as a relay station for information to Moscow.

During the investigation, specialists from the Federal Criminal Police Office (BKA) used a mobile X-ray laboratory to locate cavities possibly used to hoard secret documents: Even a tennis racket was X-rayed.
'An Interesting and Bright Life'
The case could go down in legal history. Under German law, it is only punishable to work for a foreign intelligence agency against Germany. The question is, whether, in the context of the European Union, Germany's interests would be damaged by an agent using Germany as a base to operate in a nearby country. For the federal prosecutor, this will determine whether the case will end in failure or be a big success, like the Anna Chapman case.

In the high-profile Chapman case, the FBI could not prove that the Russian and her agent friends were involved in spying. Instead they were charged with money laundering and conspiracy. But after the arrest, the Kremlin admitted they were Russian citizens. In true Cold-War style, the agents were exchanged for four alleged CIA spies who had spent years in Russian prisons.

After their return Vladimir Putin lauded the risk that they had undertaken. "Just imagine ... You have to master a foreign language as your own, think and speak it and fulfill tasks in the interest of the motherland for many years without counting on diplomatic immunity," he said.

Speaking about the spies arrested in America, Putin made a promise which will also be of interest to Andreas and Heidrun A.: "I am sure that they will have an interesting and bright life."

## From E2k

There was some speculation that due to the reported time of the Marburg raid the transmission involved was M12.

The transmission in question is a 0340/0400/0420z sched, ID 876, that transmits on Tue and repeats Thu with the same details.
The raid was on Tue 18th Oct at 0630 local (0420z).
The transmission on that date, and on the following Thu was a null msg, so there would have been no msg in progress at any time that day, if this was the correct transmission.

However, interestingly the msg for the previous week, Tue 11, was 289 Grps - a longer than usual msg that resulted in the times of the following transmissions being extended, while the msg for the week following the raid, Tue 25th was a large, though not unprecedented 335 Grps.

Thanks BR.

## Her Majesty's Government Communications Centre




## What moskennt

## Senior Software Engineer

$632.600-[61.300+$ ES,000 welcume pachaye



Server Engineer - Corporate ICT Salary 426,500 - 132.600







Senior Systems Engineer $02.800-141.300$










## Graduate Software Engineer

124,000 +55,000 welconse package
 maer sive mekel


Her Majesty's Government Communications Centre (HMGCC) is a small group tasked to provide electronics and software to support the communication needs of the British Government. It is closely linked with the Foreign \& Commonwealth Office and the British intelligence community and I'm joining the dots..

## Intelligence Analysts

It's Intelligence Analysts now for our redundant bankers, engineers, teachers, minicab drivers etc etc to contemplate.

Usual conditions apply: Must be British and say nothing
[Tnx E]

## HELP US UNLOCK THEIR SECRETS

Computer Network Forensics and IT Security Exploitation roles - $£ 27,250-£ 36,311$
At M15, our Digital Infelligence team is playing an increasingly central role in countering threats from terrorism to espionage. Our Digital Intelligence specialists work closely with our investigative teams leveraging their knowledge of computer security systems and networks, and gathering, analysing and interpreting digital data To piece together complex intelligence pictures, to help progress high-profile operations. You'll need sound knowledge of current technologies and a good understanding of present technical threats, as well as the kind of inquiring, analytical mind that will help us develop our capabilities to remain at the forefront of innovation and stay one step ahead of those posing a threat to national security.

## To find oul more and apply, visit

www.mi5.gov.uk/careers/itiobs
Discretion is vital. You should not discuss your application, other than with a partner or a close family member.


## Belter of an advert this.

'Everyone uses IT including terrorists' says it all.
This advert was part of a full page advertising extravaganza [see end of NL] that adequately described this post and duties, complete with the day of a IT operative.

Good cash too although you do have to be British and keep it battened!

## Here's three for our American cousins:

## Job Category: DEF - Defense/Intelligence/Geopoltcl

Req ID: 209905
Able to obtain security clearance? Top Secret SCI
Currently possess security clearance? Top Secret SCI
Location: Beale AFB, CA
\% Travel:
Relocation: No
Requirements: The SIGINT Fusion Analyst provides operational support and situational awareness to Distributed Ground System mission crews on current activities through database research and metadata analysis through various tools and techniques and monitors SIGINT analysis and reporting throughout the DoD. The SIGINT Fusion Analyst facilitates cross-cueing of multiple national level assets within the intelligence community through direct chat with both consumers and producers. The SIGINT Fusion Analyst also develops post mission analysis for future target trends and long term trend analysis against set target bases. The analyst will provide expertise necessary to assist in the development and documentation of operational checklists, procedures, and training requirements and may be required to educate and demonstrate new methodologies and instruct on the use of advanced applications. Selected candidate will be working with DGS-2 crews at Beale AFB, California

EDUCATION/REQUIRED SKILLS: Successful candidate must have an Associates degree in liberal arts or science (or related fields) and 4 years of related experience. (4 years of related experience can be used in lieu of associates) The successful candidate should be a Graduate of a US military intelligence AFSC/MOS/NEC awarding course. Minimum of 4+ years of experience in the Intelligence field at a tactical or strategic operational level. Working knowledge of the national and tactical intelligence infrastructure available to DoD. Experience using SIPRNET and NSANET. Working knowledge of Analyst Notebook, or equivalent nodal analysis tool, Pathfinder and AMHS (M3). Must be capable of working independently and with demonstrated working knowledge of the intelligence processes including but not limited to: the Intelligence Cycle, Collection Management Cycle and the analysis techniques and applicable signals intelligence traffic analysis procedures for performing metadata analysis. Full knowledge of intelligence oversight and security guidelines. Must have and maintain a TOP SECRET/SCI clearance with Special Background Investigation (SBI) and attain SI, TK, G, and HCS access. Must be willing to sign a Non-Disclosure Statement. Shift work required.

DESIRED SKILLS: Experience performing SIGINT analysis and fusion to provide actionable intelligence to warfighters. Military tactical and especially OIF/OEF deployed experience. Working knowledge of GSM, INMARSAT, PSTN, all pertinent databases (BANYAN, GLOBALREACH, CULTWEAVE, etc.), ANB and net reconstruction techniques, M3, ANCHORY, PATHFINDER, NSA net and administrative offices with whom we work (oversight and compliance, Policy, Reporting Policy, and Guidance, etc.). Expert knowledge of CRITIC procedures. Working knowledge of signal propagation, a definite plus. Proficient with Microsoft Office.
SAIC is a FORTUNE $500 ®$ scientific, engineering, and technology applications company that uses its deep domain knowledge to solve problems of vital importance to the nation and the world, in national security, energy and the environment, critical infrastructure, and health. For more information, visit www.saic.com. SAIC: From Science to Solutions® ${ }^{\circledR}$

## SIGINT Intelligence Analyst

Permanent
Our client is seeking an Expert Intelligence Analyst for their Fort Meade location. Candidates who are both qualified and interested are encouraged to apply online today.

Qualifications:

- At least five (5) years experience shall have been at the executive level (GS-15, O-5 or above), with management or command responsibilities.
- Experience shall include end-to-end SIGINT processes, generating requirements, collection management, and intelligence analysis. Previous participation in -big picture- activities such as mission development, systems development, project management, staff action management, and strategic planning is required.
- Excellent communication and reporting skills are a must.
- Experience with the usage of SIGINT database repositories and analytic tools to include, in-depth understanding of the SIGINT Collection/Collection Management architecture and data flow.
- Experience with Multi-INT analysis, fusion and report intelligence data.
- Experience in performing analysis/fusion of collection intelligence data.
- Experience providing guidance to intelligence analysts
- Experience in strategic planning, production management, customer support.
- Ability to liaison/collaborate/network with internal and external organizations.
- Experience in the operational planning and building of strategies and concepts of operation on high priority intelligence issues.

The candidate shall have extensive experience in two or more of the following areas:

- SIGINT Development (SIGDEV) experience in dialing analysis.
- Digital Network Intelligence (DNI)
- Dialed Number Recognition (DNR)
- SIGINT Geospatial Analysis (SGA)
- Developing and maintain Very Large Databases (VLDB) containing Multi-Level Security (MLS) Multi-INT data, sourcing and classification markings
- Developing Data Visualization of Intelligence Data containing MLS markings and sources.
- Operations Research tools and techniques to analyze processes to identify strengths, weaknesses and vulnerabilities of entities as determined by the government.


## SIGINT Fusion Analyst III Job

SAIC - Kandahar, Afghanistan (Afghanistan)
Job Description
SIGINT Fusion Analyst III Full Time Regular posted 9/16/2011
Job Category: DEF - Defense/Intelligence/Geopoltcl
Req ID: 209447
Able to obtain security clearance? Top Secret/SCI w/ CI Polygraph
Currently possess security clearance? Top Secret SCI
Location: Kandahar,
\% Travel: 50
Relocation: No
Requirements: PRIMARY RESPONSIBILITIES: This position provides expert knowledge related to accomplishing SIGINT processing, exploitation and dissemination (PED) and intelligence fusion functions, and associated Tactics, Techniques and Procedures (TTPs) supporting a customer at a deployed location in the CENTCOM theater of operations. Responsibilities include providing real-time tactical exploitation of SIGINT data fused with wide-area motion imagery and high definition motion imagery in both electro-optical and infrared modes. Create tailored intelligence products to support the operational customer from multiple SIGINT and geo-spatial information sources. Work as an integral member of a cross-disciplinary intelligence exploitation cell at a deployed location.

Candidate will work in a fast-paced deployed environment providing real-time operational support to the warfighter. Must have the ability and desire to deploy and to support extended work week and shift work.

REQUIRED EDUCATION AND SKILLS: Bachelors degree and/or equivalent military training and 6+ years of related experience are required. Must have formal service training as a SIGINT analyst as well as familiarity and working knowledge of state-of-the-art ISR applications, tools and systems. Working knowledge and experience with national, operational, and tactical intelligence infrastructure available to DoD is required. Must be proficient in the use of tools common to the Signals intelligence community. Must have working knowledge and recent demonstrated experience performing SIGINT analysis and cross-cueing activities to provide actionable intelligence to the warfighter.

Must have a TS/SCI clearance, with the ability to obtain a Full Scope Poly.
DESIRED SKILLS: Recent experience in U.S. Central Commands Area of Responsibility is preferred. Military tactical, OIF / OEF deployed experience is a plus. Experience with multi-INT processing, exploitation, and dissemination (PED) missions (to include DCGS) is a plus. Experience drafting and presenting tailored intelligence products is desired. Experience with ArcGIS, FalconView or other geospatial information system tools is preferred. Familiarity with Special Operations intelligence requirements is desired.
Company Description
SAIC is a FORTUNE $500 ®$ scientific, engineering, and technology applications company that uses its deep domain knowledge to solve problems of vital importance to the nation and the world, in national security, energy and the environment, critical infrastructure, and health. The company's approximately 43,000 employees serve customers in the U.S. Department of Defense, the intelligence community, the U.S. Department of Homeland Security, other U.S. Government civil agencies and selected commercial markets. SAIC had annual revenues of $\$ 10.85$ billion for its fiscal year ended January 31, 2010.

## More careers at MI5 - one size fits all!

From intelligence officers to analysts and you can bet that also includes:
Carpenters/Multi-traders
Computer and Network Forensic Specialists
Enterprise Application Architect
Enterprise Infrastructure Architect
Intelligence Analyst (Data Analysis)
Foreign Language Analysts
[Arabic, Bengali/ Sylheti, Pakistani Pashto, Pakistani Punjabi with Pothwari, Somali and Kurdish Sorani soon to be followed by Russian and Mandarin].

Up and coming jobs are listed as:
Intelligence Officers
Intelligence Analyst (Data Analysis)
Foreign Language Analysts
IT Security Exploitation Officers
Computer and Network Forensic Specialists
Vehicle Technicians
Enterprise Architects - Applications or Infrastructure
These are mostly graduate oriented and apply the gobshut rule.
If you read some the 'day in the life of...' you'll see some of the jobs are flexitime.

Of course if you're as motivated as BBC's Spooks Tariq Masood you'll leave the secure environ of the UK Grand Lodge go home, log on and find your equipment compromised.
With some urgency you'll leave your gaff, smartish like, and whilst hailing a sherbet dab [cab] you'll be bumped into and suffer a type of attack that Georgi Markov could only marvel at - although there was reference to a poisoned umbrella in the storyline between two Russian something or the others.


Point out an error here too. The Russian target Ilya Gavrik turns up in a diplomatic car. Unfortunately the VRM read 217Dnnn. The diplomatic series 215 to 217D is actually for the Netherlands; the Russia Federation using the series 248-252Dnnn. We do languages at E2k as well.

And, like those who feature in the 'day in the life of...' my name's not Karen either $\qquad$
The same advert appeared again, same newspaper, same day different date.
This time though the ad suggests'From Data Aanlysis to IT Security.'
The day before the BBC had their act right together with the US 'apparently' rogue CIA wallah using a diplomatic car with the VRM 459D638. The lovely Ruth checks it via the DVLA and it comes back as 'no trace.' I looked my listing up and true enough - no trace.

The storyline was fairly decent with disgruntled Muslims, one spying for MI5 [spying is forbidden within the Q'uran, it's kufr] who eventually carries a bomb vest into Trafalgar Square.
No worry, C019 are there - as is that rank female operative 'Erin' - and we see a dot of laser light on our bombers forehead. For a minute I thought it was a bindi, I know not as target was Muslim faith[Courtesy of Lata Mangeshkar in Abimaaan: ‘de hai hai teri bindiya rey'] anyway, there’s the sound of a silenced shot and our man collapses in the arms of two plainclothes types as another steps forward and disarms the vest with one snip of his cutters, 4 " diagonal.

Thrilling stuff - is BBC’s Spooks is good entertainment but true to life? Of course not!

## Coming soon!! The very same afternoon.

## Foreign Language Analysts indeed.

It's all there in the advert, nothing more, nothing less.

For those who wish to know there are 28 letters in the Arabic alphabet, that shewn on the face of the brick being the second, 'Baa.'

Good advert, reminded me of the opening sequence to BBC's 1974 Tinker Tailor...... except that was a sequence involving the Matryoshka doll rather than building bricks. [Thanks E]


## More Intelligence Officers

Really pushing the boat on this. This ad taken from a Students’ Mag.
Usual stuff - Need a degree and a bit of grey matter, gift of the gab, loyalty and the ability to keep your gob shut

## English Language Analysts

This one's a little different indeed - not a foreign language and looks very interesting indeed.

Tinkerbell 2 indeed!
Keepit quiet!!!
[Thanks E]


## Not a job!



## If it looks suspicious say something to our staff or the police

This looks like the latest attempt to scare us shitless. '...say something to our staff or the police’
They've forgotten something; the only time you ever see a policeman is when you don't want one and have you tried finding TfL staff? You only ever see them as they whizz past driving a tube or they're forming a picket outside a tube station when it's shut courtesy of the union dinosaur leader. [Da chairman Kruschev - I vill shut de undergrunt vailvay tomorrow and ruin de country because I'm simples].

Of course it could be that someone had uncovered a credible but unconfirmed threat [as the US did in the run up to $9 / 11$ anniversary] or more likely this is the start of a very long and most boring campaign to get everyone in an anti-terror role for nothing.

I actually put a mirror under my bike yesterday to see if I had been gifted with a Capganolo seven speed terror bomb I'm that paranoid about terror thanks to crap adeverts like this and especially with that paragon of truth and honour, Tony Blair, running around warning us about the threat from Iran.

Of course this could also be about reducing a terror threat to the 2012 Olympics in London that most Britons don't want and which Londoners have paid for with little chance of going to see them. Thanks Seb Coe - a bloke who got his peerage 'cause he could run fast.

And to avoid a transport cock-up Londoners have to work from home and not use the travel system. Most underground users are capable of LUG Rugby at the best of times.......

What about the shutting roads off except for Olympic traffic!!! Most immediate terror will come from disgruntled Londoners methinks as they tell Seb Coe and his prickish clones what they think of them.

So, remember if you're in London 'Keep 'em peeled.'

## Shayler, 'Tunworth' and Gaddafi, anyone?:

## UK 'traded intelligence with Libya'

http://www.thisislondon.co.uk/standard/article-23983784-uk-traded-intelligence-with-libya.do
The British security service traded information with Libya in return for intelligence extracted from terror suspects under interrogation in Libyan prisons, documents discovered in Tripoli appear to indicate.

MI5 handed over details on British-based Libyans opposed to the regime of Muammar Gaddafi, which said it had seen an MI5 paper marked "UK/Libya eyes only secret".

Britain was rewarded in turn with updates on the disclosures made by suspected terrorists being questioned in Libya, the latest cache of documents indicates.
The papers, discovered by Human Rights Watch, follow others that were found in the Tripoli offices of former head of Libyan intelligence Musa Kusa, indicating the close co-operation between British intelligence and the deposed Gaddafi regime.

They also show how the CIA worked with the regime of the now fugitive dictator on the rendition of terror suspects, one of whom was reported to be Abu Munthir, previously the deputy of a man described as al Qaida's number three, Abdul Hadi.

The letters are said to show that the CIA arranged the delivery of Mr Munthir to Libya but that Britain provided the intelligence tip-off.
The Foreign Office said it could not comment on intelligence matters.
The Old Bailey heard during a trial in 2006 that Mr Munthir had discussed a plot to stage multiple bomb attacks on the UK with al Qaida terrorist Omar Khyam.
Khyam was alleged to have been on a 10-day trip to see Mr Munthir in a northern tribal area of Pakistan near Kohat.
He and four other members of his terror cell were jailed for life in April 2007 but it is not clear what happened to Mr Munthir.
As the deadline for Gaddafi's surrender nears, rebel fighters are continuing to step up pressure on him.
Negotiations held over the peaceful handover of a loyalist area have failed, they said.
Abdullah Kanshil, a rebel negotiator outside the town of Bani Walid, said fighters were waiting for the green light to launch a final assault.
Pro-Gaddafi forces have been given a deadline of Saturday to surrender in their strongholds of the old regime or face an attack.
Meanwhile it has emerged that Britain was threatened by the Gaddafi regime that there would be "dire consequences" for UK-Libya relations if Lockerbie bomber Abdelbaset al-Megrahi died in his Scottish jail cell.

The extent of lobbying by the Libyan government leading up to Megrahi's release in August 2009 was laid bare after confidential documents were discovered by reporters in the abandoned British embassy building in Tripoli.

In one, senior Foreign Office official Robert Dixon wrote to Foreign Secretary David Miliband in January 2009 that Gaddafi wanted Megrahi to return to Libya "at all costs".
"Libyan officials and ministers have warned of dire consequences for the UK-Libya relationship and UK commercial operations in Libya in the event of Megrahi's death in custody," he wrote.
He added: "We believe Libya might seek to exact vengeance."
Megrahi - the only person convicted of the 1988 Lockerbie bombing - was released on compassionate grounds after the Scottish government was told he had only three months to live. He is still alive today.

After a review of the paperwork in the case, Cabinet Secretary Sir Gus O'Donnell said in February that British ministers in the last Labour government believed Megrahi's release would be the "best outcome" as they feared that UK interests in Libya would be damaged if he was allowed to die in a Scottish jail.

The Ministry of Defence said British forces had hit a series of command and control installations on Saturday as they continued to monitor areas around Sirte and Waddan where Gaddafi loyalists were active.

Major General Nick Pope, Chief of the Defence Staff's communications officer, said: "South-west of Waddan, Tornado GR4s struck eight military command and control installations on Saturday morning, scoring direct hits on all the targets with Paveway guided bombs.
"At the same time, another formation of Tornados struck nine weapons and ammunition stores near to Sirte, again scoring direct hits on all nine targets." http://www.thisislondon.co.uk/standard/article-23983784-uk-traded-intelligence-with-libya.do

Shayler, 'Tunworth' and Gaddafi : Shayler went to prison for blowing the whistle on this assassination plan whilst the Crown denied such allegations. Now we're dropping tons of bombs on the place to remove Gadaffi. Strange old world, and HMG actually got their wish.
Two things Gadaffi did right : keeping rival tribes apart and keeping aQIM out of Libya ---- now watch it all go crook.

## Libya inquiry to look at MI6 torture claims

Nicholas Cecil, Chief Political Correspondent Nicholas Cecil, Chief Political Correspondent
5 Sep 2011
http://www.thisislondon.co.uk/standard/article-23983981-libya-inquiry-to-look-at-mi6-torture-claims.do
An inquiry into Britain's intelligence services will examine claims they helped to send a terror suspect back to Libya where he was allegedly tortured.
David Cameron was set to tell MPs that the Gibson Inquiry into the UK's involvement with detainees in overseas counter-terrorism operations should look into the case of Abdel Hakim Belhadj.

Mr Belhadj, who founded the Libyan Islamic Fighting Group, was reportedly flown back from Asia to Tripoli in 2004 where he was jailed for seven years and tortured. He is understood also to be known as Abu Abd Allah Sadiq.

A secret letter has been discovered in an abandoned building in Tripoli which was previously used by Gaddafi's intelligence service headed by Musa Kusa who was feared by the regime's critics as the "envoy of death".

Believed to have been written by a former senior MI6 counter-terrorism officer, it says: "I congratulate you on the safe arrival of Abu Abd Allah Sadiq."
Mr Belhadj, now a rebel commander in Tripoli, has demanded an apology from London and Washington.
The letter said the intelligence about Abu Abd Allah "was British" even though "I know I did not pay for the air cargo".
It is understood the Foreign Secretary would have been involved in deciding Britain's role in such sensitive cases.
Jack Straw, who was Foreign Secretary at the time, urged Sir Peter Gibson's inquiry to look into the claims. He said: "At no stage did I ever authorise or turn a blind eye to unlawful practices by the Secret Intelligence Service in relation to torture, rendition or any other matter. To the very best of my knowledge it did not take place."

MI6 chief Sir John Sawers has denied his officers engage in torture or break the law on rendition or other issues.
But there were also claims that Britain was involved in the rendition of a terror suspect known as Abu Munthir.
Tory MP Andrew Tyrie, chairman of the all-party parliamentary group on extraordinary rendition, believes the UK has been "complicit" in the ill-treatment of terror suspects.
"For over six years, I have been trying to get to the truth about Britain's complicity in the kidnap and torture of detainees. Allegations keep on coming. Each must be investigated by the Gibson Inquiry."

He cast doubt, however, on whether the inquiry would reveal the truth, criticising decisions not to appoint an investigator, not to look at the transfer of detainees in theatre and saying it should engage more with victims.
http://www.thisislondon.co.uk/standard/article-23983981-libya-inquiry-to-look-at-mi6-torture-claims.do

## Terror suspect in London ban 'vows to come back and plot'

Nicholas Cecil, Chief Political Correspondent Nicholas Cecil, Chief Political Correspondent
5 Sep 2011
http://www.thisislondon.co.uk/standard/article-23983972-terror-suspect-in-london-ban-vows-to-come-back-and-plot.do
A terror suspect banned from London told how he wants to resume plotting when he returns to the capital, once anti-terror laws are watered down.
Known as BM, he could be back in London months before the Olympics under the Government's decision to drop powers to relocate individuals deemed a national danger.

He has appealed against his ban from the capital, though his lawyers admitted at the High Court that he is "committed to terrorism, in particular to terrorism in Pakistan".

The court heard that he wants to go to Pakistan "to take part in, or assist others to take part in, terrorist acts". He was also said to want to help finance terrorism there, or go under cover in the UK in order to do so.

Labour attacked Home Secretary Theresa May after tabling an amendment to block the reforms in the Terrorism Prevention and Investigation Measures Bill, which was being debated by MPs today.

Shadow home secretary Yvette Cooper said Mrs May was "playing Londoners for fools", adding: "She is still persisting with dangerous weakening of counterterrorism measures which will allow more serious suspected terrorists to remain in the capital."

She highlighted the case of BM, a 38-year-old British national. Born in Sheffield and father of five young children, he had been living in Ilford but was banned from London, on the orders of Mrs May, to stop him allegedly channelling funds to his brothers in Pakistan.

BM is said to maintain contacts through his family with individuals in Pakistan who "represent a threat to UK national security".

Seeking to overturn the ban, he highlighted the Government's plans to ditch relocation powers as lending weight to his claim that his forced relocation was excessive.

The security services and police are understood to have concerns over the change to anti-terror laws. Mrs May has responded to a backlash by proposing a new Bill which will allow relocation powers to be used in exceptional circumstances.

A Home Office spokesman said: "National security is the primary duty of government and we will not put the public at risk.
"Our absolute priority is to prosecute and convict suspected terrorists in open court. The new system will provide effective powers for dealing with the risk posed by individuals we can neither prosecute nor deport.
"We have always said there may be exceptional circumstances where it could be necessary to seek parliamentary approval for additional restrictive measures."
Anti-terrorism experts say suspects will need far greater, costly surveillance which will not fully eliminate the additional risk they pose from not being relocated. http://www.thisislondon.co.uk/standard/article-23983972-terror-suspect-in-london-ban-vows-to-come-back-and-plot.do

## Stolen information worth $£ 300 \mathrm{~m}$ recovered by GCHQ

Details stolen from more than a million credit cards across Europe, worth an estimated $£ 300$ million, have been recovered by the GCHQ spy agency, The Daily Telegraph can disclose.
By Duncan Gardham, Security Correspondent
12:58AM BST 05 Sep 2011
http://www.telegraph.co.uk/news/uknews/8741142/Stolen-information-worth-300m-recovered-by-GCHQ.html
William Hague, the Foreign Secretary, said the agency had joined forces with the Serious and Organised Crime Agency to obtain the information as part of the ongoing cyber war against foreign states and criminals.

A team of experts at GCHQ is understood to be working with the military to develop internet tools to strike back if states attack infrastructure such as water supplies, electricity and banking

Mr Hague is seeking to agree new rules for cyberspace with China and Russia in order to put an end to such attacks.

He said Britain was under attack over the internet from states and criminals determined to steal secrets and that he wanted to establish new "norms of behaviour in cyberspace."

He is hoping to set up a new Geneva-style convention to govern cyberspace in the same way that a conventional battlefield has rules.
A conference in London in November, to which both China and Russia have been invited, will try to agree "appropriate behaviour" in cyberspace in order to protect "democratic ideals".

Mr Hague spoke ahead of the launch of the government's new cyber strategy next week which will encourage private sector firms to get together and admit where they have been hacked in order to prevent further attacks, sources said.

Despite numerous suggestions elsewhere, Mr Hague was keen not to single out China and Russia as Britain's biggest adversaries in cyberspace, but he admitted that there are "grades of friendship" with foreign countries.

In the first interview by a Foreign Secretary at GCHQ in Gloucestershire, Mr Hague said that Britain was good at leading international co-operation, but added: "We are, and will remain, the most advanced country at protecting itself against cyber attacks. That is our first concern."
http://www.telegraph.co.uk/news/uknews/8741142/Stolen-information-worth-300m-recovered-by-GCHQ.html

## Hackers steal SSL certificates for CIA, MI6, Mossad

By Gregg Keizer | Framingham | Monday, 5 September, 2011
http://computerworld.co.nz/news.nsf/security/hackers-steal-ssl-certificates-for-cia-mi6-mossad
The tally of digital certificates stolen from a Dutch company in July has exploded to more than 500, including ones for intelligence services like the CIA, the UK's MI6 and Israel's Mossad, a Mozilla developer said on Sunday.

The confirmed count of fraudulently-issued SSL (secure socket layer) certificates now stands at 531, said Gervase Markham, a Mozilla developer who is part of the team that has been working to modify Firefox to blocks all sites signed with the purloined certificates.

Among the affected domains, said Markham, are those for the CIA, MI6, Mossad, Microsoft, Yahoo, Skype, Facebook, Twitter and Microsoft's Windows Update service.
"Now that someone (presumably from Iran) has obtained a legit HTTPS cert for CIA.gov, I wonder if the US gov will pay attention to this mess," Christopher Soghoian, a Washington DC-based researcher noted for his work on online privacy, said in a tweet Saturday.

Soghoian was referring to assumptions by many experts that Iranian hackers, perhaps supported by that country's government, were behind the attack.
Google has pointed fingers at Iran, saying that attacks using an ill-gotten certificate for google.com had targeted Iranian users. All the certificates were issued by DigiNotar, a Dutch issuing firm that last week admitted its network had been hacked in July. The company claimed that it had revoked all the fraudulent certificates, but then realized it had overlooked one that could be used to impersonate any Google service, including Gmail. DigiNotar went public only after users reported their findings to Google.

Criminals or governments could use the stolen certificates to conduct "man-in-the-middle" attacks, tricking users into thinking they were at a legitimate site when in fact their communications were being secretly intercepted.

Google and Mozilla said this weekend that they would permanently block all the digital certificates issued by DigiNotar, including those used by the Dutch government. Their decisions come less than a week after Google, Mozilla and Microsoft all revoked more than 200 SSL (secure socket layer) certificates for use in their browsers, but left untouched hundreds more, many of which were used by the Dutch government to secure its websites. "Based on the findings and decision of the Dutch government, as well as conversations with other browser makers, we have decided to reject all of the Certificate Authorities operated by DigiNotar," Heather Adkins, an information security manager for Google, said in a Saturday blog post .

Johnathan Nightingale, director of Firefox engineering, echoed that late on Friday . "All DigiNotar certificates will be untrusted by Mozilla products," said Nightingale, who also said that the Dutch government had reversed its position of last week -- when it had asked browser makers to exempt its DigiNotar certificates. "The Dutch government has since audited DigiNotar's performance and rescinded this assessment," Nightingale said. "This is not a temporary suspension, it is a complete removal from our trusted root program." On Saturday, Piet Hein Donner, the Netherlands's Minister of the Interior, said the government could not guarantee the security of its websites because of the DigiNotar hack, and told citizens not to log into its sites until new certificates had been obtained from other sources.

The DigiNotar breach is being audited by Fox-IT, which told the Dutch government that it was likely certificates for its sites had been fraudulently acquired by hackers. Several security researchers said the move by browser makers puts an end to DigiNotar's certificate business. "Effectively a death sentence for DigiNotar," said Jeremiah Grossman, CTO of WhiteHat Security, in a Friday tweet . Mozilla was scathing in its criticism of DigiNotar. Nightingale ticked off the missteps that led Mozilla to permanently block all sites signed with the company's certificates, including DigiNotar's failure to notify browser vendors in July and its inability to tell how many certificates had been illegally obtained. "[And] the attack is not theoretical," Nightingale added. "We have received multiple reports of these certificates being used in the wild." Markham went into greater detail on the hack and its ramifications. "

It has now emerged that DigiNotar had not noticed the full extent of the compromise," said Markham in a Saturday post to his personal blog . "The attackers had managed to hide the traces of the misissuance -- perhaps by corrupting log files."

Because the Google certificate that prompted DigiNotar to acknowledge the intrusion was obtained before most of the others, Markham speculated that there had actually been two separate attacks, perhaps by different groups. "It is at least possible (but entirely speculative) that an initial competent attacker has had access to [DigiNotar's] systems for an unknown amount of time, and a second attacker gained access more recently and their less-subtle, bull-in-a-china shop approach in issuing the [hundreds of] certificates triggered the alarms," he said. Last week,

Helsinki-based antivirus company F-Secure said it had found signs that DigiNotar's network had been compromised as early as May 2009 . Mozilla will update Firefox 6 and Firefox 3.6 on Tuesday to permanently block all DigiNotar-issued certificates, including those used by the Dutch government. On Saturday Google updated Chrome to do the same.
http://computerworld.co.nz/news.nsf/security/hackers-steal-ssl-certificates-for-cia-mi6-mossad

## Tinker, tailor and Flash-Bang Smiley

Matthew Dunn
The Times and The Sunday Times (Times Newspapers Limited.)
Sunday, September 11, 2011
For more than 100 years the Secret Intelligence Service (MI6) has been not only a secret organisation but also an invisible one.
To many the only evidence that it exists is its fortress headquarters in Vauxhall Cross, south London.
When I was in MI6 the organisation was still almost mythical and was talked about only in fiction, retrospective non-fiction and media conjecture. But during the Libyan conflict we are seeing, perhaps for the first time, open discussion about its operations.
In March an MI6 operative and his SAS protection team were captured in Libya. William Hague, the foreign secretary, described the operative as a "diplomat". Nobody bought that description and I suspect Hague knew they wouldn't.

In the past week the discovery of MI6 documents in the Libyan intelligence headquarters has raised many questions about what kind of support Colonel Muammar Gadaffi may have received from MI6 and, in turn, whether British intelligence was supplying his regime with information that could have led to the torture of terrorist suspects.
Historically, while the media and public could have speculated as much as they liked about such issues, the government would have always provided a "no comment" in relation to MI6 and its activities. But last Monday David Cameron publicly stated that he wants an investigation into the allegations about MI6's relationship with Gadaffi.
Aside from Libya, during the past year MI6 has been visible in the Chilcot inquiry into the Iraq war and the unsolved death of Gareth Williams, a junior desk officer.

Sir John Sawers, chief of the service, has given a public speech and some former senior officers, notably Sir Mark Allen, whose name was prominent in the Libyan documents, have had details about their careers printed in the media. There appears to be a three-way courting process taking place between MI6, the government and the public.
Everyone is "pushing the envelope" a little to see how far openness can be reached. Even if the detail of its work is still largely secret, MI6 is no longer invisible. The service's escalating profile is a symptom of the threats the government wants it to combat and of a subtle change in its role. Since 9/11 MI6 has been thrown full force at Al-Qaeda, the Taliban and every other terrorist organisation and has operated deep behind enemy lines in Iraq, Afghanistan, Libya and elsewhere.

While it continues to target long-established threats using traditional spy tradecraft, a part of the organisation is now being deployed in a quasi-paramilitary role in the current theatres of war. That role can let in some degree of limelight without catastrophic consequences, providing that limelight is shone after the specific action.
Traditional covert espionage operations are different - they have a beginning but often their end may not come for years or even decades. Such work must have no limelight. That brand of spying flourished during the cold war. MI6 knew that the guns and glory approach to espionage, which the Special Operations Executive had revelled in during the second world war as it "set Europe ablaze" at Churchill's request, had no place in a theatre requiring the covert recruitment and running of foreign agents to spy on the Russians.

During this period MI6 conducted operations that were extremely complex, sometimes painfully protracted, subtle and dangerous, yet which rarely needed weapons. The KGB and East Germany's Stasi were professional opponents who also understood the merits of traditional espionage techniques over paramilitary actions. Neither side benefited by pulling out a handgun.
The tradecraft they deployed is brilliantly captured in John le Carré's Tinker, Tailor, Soldier, Spy (published in 1974) and the eagerly anticipated movie of the same name. Le Carré, aka David Cornwell, was an MI6 officer in the 1960s and was tasked against the threat from the Soviet Union. His early novels are an accurate reflection of what it was like to work in MI6 at that time.

The situation is very different now. Agents must be as comfortable in the flash-bang environment of Libya as in the chess game of a cold war. An MI6 officer must be able to infiltrate hostile territories, hide among and interact with local populations, obtain time-sensitive secret intelligence, guide in foreign troops and missiles, expertly advise rebel commanders and supply opposition groups with technical support and basics such as food, guns, cash and medicine. A single MI6 operative working in the back streets of Tripoli can be more valuable than 10,000 British troops on Libyan soil.
That may seem a provocative statement but the officer's worth lies in knowing how to obtain secrets and those secrets will expertly inform decisions about what needs to be done in Libya.
Putting soldiers on the ground is usually a last resort because they would be there to fight or to be in a policing role and are illequipped to gather strategic intelligence.
By contrast, putting an MI6 operative on the ground may well be a first resort and can often avoid the unnecessary deployment of troops. The men and women who carry out these roles will have endured an extremely tough selection process to join MI6.

Many will have come straight from university, although over the past decade MI6 has been increasingly recruiting individuals who have other life experiences beyond their university degree. Successful applicants may come with backgrounds in business, law, financial services and academia among others.
All will be highly intelligent, lateral thinkers and typically they will be supremely self-confident, but not arrogant, and have a gregarious personality. A key quality is selfreliance.

While all MI6 operatives are team players, an officer in the field is typically working alone. He has to make rapid decisions on his own and rarely has access to the high-tech support or gadgetry that is displayed in the movies.

The reality of spycraft must also impinge on the desire for greater clarity about the work of MI6.
When there are calls for the service to be more transparent about its operations, a key argument used to defend its secrecy is that it is accountable to parliament and British law. This is true, but it must also be pointed out that if there were greater transparency, many MI6 operations would not only fail but people could die.

The foreign agents who work for MI6 put their lives in the hands of the intelligence officers who are running them. Some come from countries where spying is punishable by execution.
They are extremely brave men and women who are risking everything for us and in return they have to know they are in safe hands and that everything about them remains a steel-wrapped secret.
Without that in place, they will no longer work for MI6 and we will be blind to current and future threats. The relationship between an MI6 officer and his or her agents is often misrepresented in the spy thriller genre. Agents are sometimes portrayed as pawns who can be sacrificed for the greater good or if they are deemed to be no longer of use.
The reality is wholly different. The bond between an officer and an agent is the closest there can be. It is intense and emotional. MI6 officers will often think of their agents as their family and will be as loyal to good agents as they are to Her Majesty's government.
However, MI6 does sometimes have to interact with undesirable people. That is the nature of the secret world and the work that needs to be done within it.
Everything MI6 does is conducted for a specific reason and with a clear objective. And if that means sitting down with a repulsive individual and calling him "my friend" to get something from him, then so be it. The revelations that MI6 worked closely with Gadaffi and his regime at a time when the West wanted him to "come in from the cold", halt his weapons programme and assist with combating Libyan Al-Qaeda members is not particularly surprising.

What is startling is how brilliant an MI6 initiative it was and how cleverly the result was achieved. The thornier issue of whether MI6 gave the names of some Britishbased Libyan terrorists to Gadaffi's security service will no doubt be examined. But it must be remembered that throughout its existence MI6 has been consistent that torture is unproductive as well as morally wrong and it has always judged its overseas counterparts by that belief.

I understand the desire to make MI6 more visible but it is vital that its field operatives are kept in the shadows. This is important so that when they hang up their combat boots after the wars are over, they can re-enter the traditional world of espionage without fear that they have been compromised. That is critical because traditional espionage will continue to target lethal, rogue states that have the capacity to start a global war.

The Times and The Sunday Times (Times Newspapers Limited.)

## Spooks is rubbish and it's nothing like being a real spy, says John le Carré

## By Simon Cable

Last updated at 3:21 PM on 17th September 2011
http://www.dailymail.co.uk/tvshowbiz/article-2037536/John-le-Carr--BBCs-Spooks-c-p-like-real-spy.html
Having worked for MI6 and written some of the most celebrated thrillers of the genre, John le Carrés views on modern spy drama must carry some weight.
And they won't make happy reading for the cast and crew of Spooks.
The veteran novelist, 79 , has described the popular series as 'c**p'.
He told the Daily Mail: 'If you have lived in that world, you know that it is stupid.
'I mean, if you were a professional dancer and you saw a stupid series about dancing you would just turn it off, wouldn't you?
'I don't watch Spooks. It's $c^{* *}$ p. I'm sorry. I have been in that world for almost half a century and once in it, you get a notion of what constrains you and what doesn't.
'The idea that people just go around shooting and killing people and so on is crazy.'
After studying at Oxford University, le Carré taught at Eton for two years, before joining the Foreign Office in 1959, serving first in Bonn and then in Hamburg where he 'worked behind a desk' as part of his job for MI6 during the Cold War era.

It was then that he started to write and it was the international success of his third novel, The Spy Who Came In From The Cold, that saw him leave the service to write full-time.

Le Carre, whose real name is David John Moore Cornwell, has gone on to write more than 20 novels which have been translated into 36 languages.
Much of his work is based upon his experiences working for MI6. In 1990, he won the prestigious Helmerich Award for his contribution to literature.
'For me it was life. It was the only life I knew when I started writing,' he added.
'If I was working at sea, I would have written about the navy. But that was my reality during my most formative years and to see it sadly traduced and made comedic or turned into a kind of bus ride of fast cars and fast women is just junk.'

His 1974 best-seller Tinker, Tailor, Soldier, Spy has now been made into a film.
It stars Gary Oldman as fictional British Intelligence Officer George Smiley, a role originally made famous by Alec Guinness in the BBC’s 1979 mini-series. It tells the story of Smiley's hunt for a mole within MI6.

Before filming began, screenwriters suggested updating the storyline and setting it in the modern-era, rather than the 1970s.
But le Carré insisted that nothing should be changed and is said to have constantly advised producers during filming to ensure that it remained faithful to his original work.

He has now praised the big-screen adaption, saying: 'Gary Oldman brought something to the part from the beginning which was never going to be possible with Alec Guinness.
'You couldn't really imagine Alec Guinness having a sex life in a word. You couldn't imagine a kiss on the screen with Alec, not one that you believed in.
'Whereas Oldman has quite obviously a male sexuality which he represses like all his other feeling in this story on the screen.
'I think the air of solitude and frustration which he is able to convey is something that really does take me back to the novel that I wrote 37 years ago.'
The final series of Spooks begins on Sunday. [This last series was a belter]
Telling the story of a group of MI5 officers, it has been running since 2002 and has been a huge hit with viewers, winning a Bafta for best drama series in 2003 .
http://www.dailymail.co.uk/tvshowbiz/article-2037536/John-le-Carr--BBCs-Spooks-c-p-like-real-spy.html
I wonder if John le Carré is aware that nowadays boring books by old duffers don't drag in the viewers. No violence, no view - John le Carre's books sell to the literate, sadly TV appeals to more of the moronic masses too. Simples Mr Esterhase......
[Thanks E]

Chart 1
M23 $\log$ September 2011

| Date | Freq | // | Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 02 | 5345 |  |  |  |  |  |  | 1800 |  |
| 03 | 5345 |  |  |  |  |  |  |  | 1800 |
| 04 | 5345 |  | 1600 |  |  |  |  |  |  |
| 05 | 5345 |  |  | 1600 |  |  |  |  |  |
| 05 | 5345 |  |  | 1800 |  |  |  |  |  |
| 06 | 5345 |  |  |  | 1600 |  |  |  |  |
| 07 | 12279 |  |  |  |  | 0730 |  |  |  |
| 07 | 5345 |  |  |  |  | 1600 |  |  |  |
| 07 | 5345 |  |  |  |  | 1800 | 1800 |  |  |
| 08 | 5345 | 8030 |  |  |  |  |  |  |  |
| 13 | 5345 | 8030 |  | 1600 |  |  |  |  |  |
| 13 | 5345 | 8030 |  | 1800 |  |  |  |  |  |
| 20 | 5345 | 4980 |  |  | 0630 |  |  |  |  |
| 20 | 5345 | 4980 |  |  | 0730 |  |  |  |  |
| 20 | 5345 | 4980 |  |  | 0830 |  |  |  |  |
| 20 | 5345 | 4980 |  |  | 1600 |  |  |  |  |
| 20 | 5345 | 4980 |  |  | 1700 |  |  |  |  |
| 20 | 5345 | 4980 |  |  | 1800 |  |  |  |  |
| 21 | 5345 | 4980 |  |  |  | 0630 |  |  |  |
| 21 | 5345 | 4980 |  |  |  | 0730 |  |  |  |
| 21 | 5345 | 4980 |  |  |  | 0830 |  |  |  |
| 21 | 5345 | 4980 |  |  |  | 1600 |  |  |  |
| 21 | 5345 | 4980 |  |  |  | 1700 |  |  |  |
| 21 | 5345 | 4980 |  |  |  | 1800 |  |  |  |
| 22 | 5345 | 4980 |  |  |  |  | 0630 |  |  |
| 22 | 5345 | 4980 |  |  |  |  | 0730 |  |  |
| 22 | 5345 | 4980 |  |  |  |  | 0830 |  |  |


| 5345 kHz | 1600z | 15/09[246 246 246(R)] |
| :---: | :---: | :---: |
| 5345 kHz | 1700z | 15/09[246 $246246(\mathrm{R})$ ] |
| 5345 kHz | 1600z | 19/09[246246246(R) = $3131=0651905403 \ldots 4858617877$ 054] 1626z Very strong |
| 5345 kHz | 1700z | 19/09[246246246(R) = $3232=3419706803 \ldots 70484031812158] 1727 z$ Very strong |
| 5345 kHz | 1800z | 19/09[246246246(R)=3131=57070 13809 .. 114651823935580$] 1826 z$ Very strong |
| 5345 kHz | 1600z | 20/09[246(R15) $=3131=0651905403 \ldots 3045071030$ BT IMI IMI BT $3131 \mathrm{BT} 06519 \ldots 054] 1626 \mathrm{z}$ |
| 5345 kHz | 1700z | $20 / 09[246($ R15 ) $=3232=3419706803 \ldots 3086071479$ BT IMI IMI BT 3232 BT $34197 \ldots 79 \mathrm{w}] 1726 \mathrm{z}$ |
| 5345 kHz | 1800z | $20 / 09[246($ R15 ) $=3131=5707013806 \ldots 6083132257$ BT IMI IMI BT 3131 BT 57070 ...35589] 1626z |
| 5345 kHz | 0629z | $21 / 09[246($ R15 ) $=3131=0651905403 \ldots 3045071030$ BT IMI IMI BT $3131 \mathrm{BT} 06519 \ldots 054] 0656 z$ |
| 4980 kHz | 0729z | $21 / 09[246($ R15 ) $=3232=3419706803 \ldots 3086071479$ BT IMI IMI BT 3232 BT $34197 \ldots 215 t] 0756 z$ |
| 5345 kHz | 0831z | 21/09[246(R15) = $3131=5707013806 \ldots 6083132257$ BT IMI IMI BT 3131 BT $57070 \ldots 3558 \mathrm{o}$ ] 0856z |
| 5345 kHz | 1600z | $21 / 09[246($ R15 ) $=3131=0651905403 \ldots 3045071030$ BT IMI IMI BT 3131 BT $06519 \ldots 054] 1626 z$ |
| 5345 kHz | 1700z | $21 / 09[246($ R15 ) $=3232=3419706803 \ldots 3086071479$ BT IMI IMI BT 3232 BT $34197 \ldots 215 \mathrm{~T}] 1726 \mathrm{z}$ |
| 5345 kHz | 1800z | $21 / 09[246(\mathrm{R} 15)=3131=5707013806 \ldots 6083132257$ BT IMI IMI BT 3131 BT 57070 ..35580] 1826z |
| 5345 kHz | 0629z | $22 / 09[246($ R15 ) $=3131=0651905403 \ldots 3045071030$ BT IMI IMI BT 3131 BT $06519 \ldots 054] 0656 z$ |
| 5345 kHz | 0729z | $22 / 09[246($ R15 ) $=3232=3419706803 \ldots 3086071479$ BT IMI IMI BT 3232 BT $34197 \ldots 215 \mathrm{n}] 0756 \mathrm{z}$ |
| 5345 kHz | 0829z | $22 / 09[246($ R15 ) $=3131=5707013806 \ldots 6083132257$ BT IMI IMI BT 3131 BT $57070 \ldots 3558 \mathrm{o}$ ] 0856z |

Chart 2
M23 October Activity Chart

| Freq | // | 14 | 15 | 16 | 17 | 18 | 19 | 20 | Time | Stn | Additional |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5345 | 4951 | FRI | SAT | SUN | MON | TUE | WED | THU | Fin | ID | Comments |
|  |  |  |  |  |  |  |  | 0618 |  |  | Blip |
|  |  |  | 0834 |  |  |  |  |  |  |  | Blip |
|  |  |  | Off Watch |  |  | 0859 | 0859 |  |  |  | Blip |
|  |  |  |  | 0936 |  |  |  |  |  |  | Blip |
|  |  |  |  | 0940 |  |  |  |  |  |  | Blip |
|  |  |  |  |  |  | 0959 | 0959 |  |  |  | Blip |
|  |  |  |  | 1003 |  |  |  |  |  |  | Blip |
|  |  |  |  | 1025 | 1025 | 1025 | 1025 |  |  |  | Blip |
|  |  |  |  | 1029 | 1029 | 1029 | 1029 |  |  | 246 | 15 mins |
|  |  |  |  |  |  | 1059 |  |  |  |  | Blip |
|  |  |  |  | 1125 | 1125 | 1125 | 1125 |  |  |  | Blip |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | 1129 | 1129 | 1129 |  |  | 246 | 15 mins |
|  |  |  | 1130 |  |  |  |  |  |  | 246 | In progress |
|  |  |  | 1159 | 1159 | 1159 | 1159 | 1159 |  |  |  | Blip |
|  |  |  | 1259 | 1259 | 1259 | 1259 | 1259 |  |  |  | Blip |
|  |  |  |  |  | 1338 |  |  |  |  |  | Blip |
|  |  | 1359 | 1359 | 1359 | 1359 | 1359 |  |  |  |  | Blip |
|  |  | 1414 |  | 1415 | 1415 |  |  |  |  |  | Blip |
|  |  | 1419 | 1419 | 1419 | 1419 |  |  |  |  | 246 | 15 mins |
|  |  |  | 1459 |  | 1459 | 1459 | 1459 |  |  |  | Blip |
|  |  | 1514 | 1515 | 1515 | 1515 |  |  |  |  |  | Blip |
|  |  | 1519 | 1519 | 1519 | 1519 |  |  |  |  | 246 | 15 mins |
|  |  |  |  |  | 1559 | 1559 |  |  |  |  | Blip |
|  |  |  |  |  | 1659 | 1659 |  |  |  |  | Blip |
|  |  |  |  |  | 1714 |  |  |  |  |  | Blip |
|  |  |  |  |  | 1759 |  |  |  |  |  | Blip |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | FRI | SAT | SUN | MON | TUE | WED | THU |  |  |  |


| $5345 \mathrm{kHz} \quad 1130 \mathrm{z}$ | $15 / 10[\mathrm{i} / \mathrm{p} 246(\mathrm{R})] 1136 \mathrm{z}$ Very strong $/ / 4951 \mathrm{kHz}$ |  |
| :--- | :--- | :--- |
|  |  |  |
| $5345 \mathrm{kHz} \quad 1029 \mathrm{z}$ | $16 / 10[246(\mathrm{R})] 1051 \mathrm{z}$ Very strong $/ / 4951 \mathrm{kHz}$ |  |
| $5345 \mathrm{kHz} \quad 1129 \mathrm{z}$ | $16 / 10[246(\mathrm{R})] 1051 \mathrm{z}$ Very strong $/ / 4951 \mathrm{kHz}$ |  |
| $5345 \mathrm{kHz} \quad 1419 \mathrm{z}$ | $16 / 10[246(\mathrm{R})] 1442 \mathrm{z}$ Very strong $/ / 4951 \mathrm{kHz}$ |  |
| $5345 \mathrm{kHz} \quad 1519 \mathrm{z}$ | $16 / 10[246(\mathrm{R})] 1542 \mathrm{z}$ Very strong $/ / 4951 \mathrm{kHz}$ |  |
|  |  |  |
| $5345 \mathrm{kHz} \quad 1029 \mathrm{z}$ | $17 / 10[246(\mathrm{R})] 1051 \mathrm{z}$ Very strong $/ / 4951 \mathrm{kHz}$ |  |
| $5345 \mathrm{kHz} \quad 1129 \mathrm{z}$ | $17 / 10[246(\mathrm{R})] 1051 \mathrm{z}$ Very strong $/ / 4951 \mathrm{kHz}$ |  |
| $5345 \mathrm{kHz} \quad 1419 \mathrm{z}$ | $17 / 10[246(\mathrm{R})] 1434 \mathrm{z}$ Very strong $/ / 4951 \mathrm{kHz}$ |  |
| $5345 \mathrm{kHz} \quad 1519 \mathrm{z}$ | $17 / 10[246(\mathrm{R})] 1534 \mathrm{z}$ Very strong $/ / 4951 \mathrm{kHz}$ |  |
|  |  |  |
| $5345 \mathrm{kHz} \quad 1029 \mathrm{z}$ | $18 / 10[246(\mathrm{R})] 1051 \mathrm{z}$ Very strong $/ / 4951 \mathrm{kHz}$ |  |
| $5345 \mathrm{kHz} \quad 1129 \mathrm{z}$ | $18 / 10[246(\mathrm{R})] 1051 \mathrm{z}$ Very strong $/ / 4951 \mathrm{kHz}$ |  |
|  |  |  |
| $5345 \mathrm{kHz} \quad 1029 \mathrm{z}$ | $19 / 10[246(\mathrm{R})] 1044 \mathrm{z}$ Very strong $/ / 4951 \mathrm{kHz}$ |  |
| $5345 \mathrm{kHz} \quad 1129 \mathrm{z}$ | $19 / 10[246(\mathrm{R})] 1144 \mathrm{z}$ Very strong $/ / 4951 \mathrm{kHz}$ |  |
|  |  |  |

Sun: 16 Mon: 17 Tue: 18 Wed: 19 Thu: 20 Fri: $14 \& 28$

## Chart 3

## M23 Known Frequencies

## Recently Active

| 4030 | 6806 | 9069 | 11000 | 13400 |
| :---: | :---: | :---: | :---: | :---: |
| 4980 | 6937 | 9120 | 11170 | 13417 |
| 4951 | 6961 | 9125/8 | 11422 | 13454 |
|  | 6961 | 9143 | 11429/30 |  |
|  |  | 9218 | 11442 |  |
|  |  | 9245 |  |  |
|  |  | 9750 |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| 5182 | 7542 |  |  |  |
| 5345 | 7785 |  |  |  |
| 5450 | 7920 |  |  |  |
| 5665 |  |  |  |  |
| 5670 |  |  | 12170 | 14450 |
| 5760 |  |  | 12200 | 14600 |
| 5914 |  | 10000 | 12220 | 14710 |
|  |  | 10551 | 12279 |  |
|  |  | 10650 | 12700 |  |
|  |  | 10708 |  |  |
|  |  | 10780 |  |  |
|  |  | 10916 |  |  |
|  | 8030 |  |  |  |
|  | 8150 |  |  |  |
|  | 8810 |  |  |  |

## M23 Charts

## Chart1, headed September 2011:

Shews the schedules that took place. Dates from $2^{\text {nd }}$ to $13^{\text {th }}$ being taken from the NL whilst those from $20^{\text {th }}$ to $22^{\text {nd }}$ inclusive are my own intercepts

## Chart 2, headed October Activity Chart:

This is shewing activity from Friday $14^{\text {th }}$ to Thursday $20^{\text {th }}$ inclusive. This is detailed in order to try and understand the working of the group. In this instance the regular procedural transmissions for null messages, the blip/tones used, rather than actual message transmissions.

Chart 3:

A list of frequencies used by M23. These have been extracted from back numbers of the Newsletter.

## Comment:

My searched range at present is 4000 to 6000 kHz with the last used frequencies guarded from 0700 to 2200 z .
RDF bearings have been taken and I am waiting for one other to complete the triangulation

Any comments or information from members is always welcome
73
Derek, G3LKO

I have been gathering information regarding E06's Sat/Sun 0030/0130z transmissions. I have been looking through the old E2K newsletters for the information.
As far as I can see, the first known log of this schedule is Sun $24 / 05 / 20090030 \mathrm{z} 8099 \mathrm{kHz}$, so all information is from that date to the present transmission.
I have been focusing my attention to the code key, group count and first group of all transmissions to date. Some interesting factors have come to light.

Firstly, known group counts for this schedule are $30,31,32,33,34,36,38,40,41,42,43$ and 48 . No group counts have ever been logged for 44 and 46 , but they should exist. I have also noticed that in relation to the group count, the code key has a combination of numbers that are related to the group count. See below.

There has been a total of 14 messages with 30 groups. Possible code key combinations include these figures $0,1,2,4,6$ and 8 .
There has been a total of 40 messages with 31 groups. Possible code key combinations include these figures $0,2,4,6$ and 8 .
There has been a total of 23 messages with 32 groups. Possible code key combinations include these figures $0,1,2,4,6$ and 8 .
There has been a total of 1 message with 33 groups. Code key for this message 218.
There has been a total of 12 messages with 34 groups. Possible code key combinations include these figures $0,1,2,4,6$ and 8 .
There has been a total of 12 messages with 36 groups. Possible code key combinations include these figures $0,1,2,4$ and 8 .
There has been a total of 8 messages with 38 groups. Possible code key combinations include these figures $1,2,4$ and 6 .
There has been a total of 3 messages with 40 groups. Possible code key combinations include these figures 1,2,3,6 and 8 .
There has been a total of 3 messages with 41 groups. Possible code key combinations include these figures $0,2,3,6$ and 8 .
There has been a total of 4 messages with 42 groups. Possible code key combinations include these figures 1,3,6 and 8 .
There has been a total of 1 message with 43 groups. Code key for this message 108.
There has been a total of 1 messages with 48 groups. Code key for this message 306.
Total known messages logged 122 messages.

E06 0030/0130/0230z Schedule Code Key Combination Analysis From 24/05/2009 To 08/10/2011


Haven't you noticed it yet? In all messages the figures 5,7 and 9 have not appeared in either the code key or group count. So if this information is true, the id 759 may not actually be just an agent id, but have some other purpose in relation to the message.

There has been some repeat code keys used in other messages, and there has been some repeat first groups in messages also.
Possible code key sequence from a 30 group message.

| 12430 | 21430 | 41230 | 61230 | 81230 |
| :--- | :--- | :--- | :--- | :--- |
| 12630 | 21630 | 41630 | 61430 | 81430 |
| 12830 | 21830 | 41830 | 61830 | 81630 |
| 14230 | 24130 | 42130 | 62130 | 82130 |
| 14630 | 24630 | 42630 | 62430 | 82430 |
| 14830 | 24830 | 42830 | 62830 | 82630 |
| 16230 | 26130 | 46130 | 64130 | 84130 |
| 16430 | 26430 | 46230 | 64230 | 84230 |
| 16830 | 26830 | 46830 | 64830 | 84630 |
| 18230 | 28130 | 48130 | 68130 | 86130 |
| 18430 | 28430 | 48230 | 68230 | 86230 |
| 18630 | 28630 | 48630 | 68430 | 86430 |

I never really thought that the id was of any real importance, until I started looking at all of the message headings. It is obvious these messages are mathematically worked out. And each item appears to be of importance, and are related to each other. If an item of the message was wrong, then it would be impossible to decode properly.

I am still looking into the code key, and it appears it is possible to work out the whole code key sequence given a few simple rules.
For example:

A total of 60 combinations can be used per group count, given the rule figures $0,3,5,7$ and 9 can not be used in the code key sequence in a 30 group message and each figure can only be used once in the code key.

Here are a few sample messages with a 30 group message.
Sat 15/08/2009 0030z 7981kHz 7592163071514
Sat 04/09/2010 0030z 6874kHz 7591683091512
Sat 19/02/2011 0130z 5846kHz 7594163039165
As you can see, the code key sequences 216,168 and 416 all appear in my predicted number sequence. Given the simple rule that $0,3,5,7$ and 9 can not be used, and each figure can only be used once in the code key.

So when a message has a different group count, that would mean there will be another 60 possible code key sequences.

E06 0030/0130/0230z Schedule Group Count Analysis From 24/05/2009 To 08/10/2011


I think that finding the code key sequence is kind of a starting block to trying to decode these messages. The question is how do they apply the code key to the actual message, I still think they use a list of numbers that is used to decode the message into actual text. I think the code key is a reference number to the actual number sets, so that means an E06 75931 group message will have 60 possible number sets or lists to decode the message. I don't think the call id is actually an agent id, I think the call could possibly be an issue number for the one time pad. So the one time pad 759 , will always follow the rules that the numbers 5,7 and 9 including the group count are always not included in the code key. So each one time pad with a different issue number will have a completely different collection of number sets, however the same rules will apply to each one time pad. This could mean that more than one individual could have the one time pad with the issue number 759. Maybe this is why 759 has never went on holiday, in the 2 and a half years the schedule has been running.

## Comparing E06 with S06

Here is another example with some different factors:
When I first worked out the possible code key combinations for the E06 0030/0130/0230z schedule. I originally thought that the group count could not occupy the same numbers which appear in the call id. But after receiving a recent S 06 message, I could see that the group count did infact have a repeat figure in relation to the call id.

For example:
S06 7760kHz 2115z 10/10 [621 4859286476 ... 0343148592 000000]
As you can see the call id 621 shares the same figure 2 in the group count 92.

| 03492 | 30492 | 40392 | 50392 | 70392 | 80392 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 03592 | 30592 | 40592 | 50492 | 70492 | 80492 |
| 03792 | 30792 | 40792 | 50792 | 70592 | 80592 |
| 03892 | 30892 | 40892 | 50892 | 70892 | 80792 |
| 04392 | 34092 | 43092 | 53092 | 73092 | 83092 |
| 04592 | 34592 | 43592 | 53492 | 73492 | 83492 |
| 04792 | 34792 | 43792 | 53792 | 73592 | 83592 |
| 04892 | 34892 | 43892 | 53892 | 73892 | 83792 |
| 05392 | 35092 | 45092 | 54092 | 74092 | 84092 |
| 05492 | 35492 | 45392 | 54392 | 74392 | 84392 |
| 05792 | 35792 | 45792 | 54792 | 74592 | 84592 |
| 05892 | 35892 | 45892 | 54892 | 74892 | 84792 |
| 07392 | 37092 | 47092 | 57092 | 75092 | 85092 |
| 07492 | 37492 | 47392 | 57392 | 75392 | 85392 |
| 07592 | 37592 | 47592 | 57492 | 75492 | 85492 |
| 07992 | 37892 | 47892 | 57892 | 75892 | 85792 |
| 08392 | 38092 | 48092 | 58092 | 78092 | 87092 |
| 08492 | 38492 | 48392 | 58392 | 78392 | 87392 |
| 08592 | 38592 | 48592 | 58492 | 78492 | 87492 |
| 08792 | 38792 | 48792 | 58792 | 78592 | 87592 |

Here are the results:
Possible number combinations on a 92 group message, sharing at least 1 figure from the call id.
A total of 120 code key combinations can be worked out, given the simple rules of 2,1,6 and 9 are not included in the code key and each figure can only be used once.
So when the group count has the same figures as the call id, a greater number of combinations can be made. This is because there are only 4 figures not to be included in the code key where as E06's 75930 group message had 5 figures not to be included in the code key, given a total of only just 60 combinations.

E06 Message detail investigated

E06 0030/0130/0230z Schedule First Group Analysis From 24/05/2009 To 08/10/2011


| Sat 06/02/2010 | 0130 z | 5846 kHz | 7592613000410 |
| :--- | :--- | :--- | :--- |
| Sat 03/04/2010 | 0030 z | 6918 kHz | 7594103200410 |
| Sat 01/05/2010 | 0030 z | 8099 kHz | 7591463200410 |
|  |  |  |  |
| Sat 21/08/2010 | 0030 z | 7981 kHz | 7593264023661 |
| Sat $17 / 10 / 2010$ | 0030 z | 6797 kHz | 7592183623661 |
|  |  |  |  |
| Sat 12/12/2009 | 0130 z | 5796 kHz | 7591423258712 |
| Sat 06/03/2010 | 0130 z | 5879 kHz | 7598034158712 |

I have come across some repeated first groups in some of the messages, indicating that these messages are the same.
Notice the code keys and group counts are different, but the first groups are the same.
As far as the first group goes, I don't see many common patterns given that all figures from 0 to 9 are used. However there are a few exceptions.

| Sat 03/10/2009 | $0030 z$ | 6797 kHz | 7592483125676 |
| :--- | :--- | :--- | :--- |
| Sat 28/11/2009 | 0130 z | 5837 kHz | 7594063125632 |
| Sat 27/03/2010 | 0130 z | 5879 kHz | 7594283625683 |

Notice the 256 combination in the first group.

| Sat 25/07/2009 | 0030 z | 9061 kHz | 7596843255664 |
| :--- | :--- | :--- | :--- |
| Sat 10/07/2010 | 0030 z | 9061 kHz | 7591023455688 |
|  |  |  |  |
| And 556 in this one. |  |  |  |
|  |  |  |  |
| Sat 23/10/2010 | 0030 z | 6797 kHz | 7594213880193 |
| Sat 15/01/2011 | 0130 z | 5783 kHz | 7598613280153 |
|  |  |  |  |
| And lastly 801. |  |  |  |

## Message Priority.

By looking at the bar chart "E06 0030/0130/0230z Schedule Code Key Combination Analysis", you can clearly see the priority of the message.
. Because only one message was sent with a 33 group count, while all the other messages appear to be of standard priority. So if you have a greater code key combination means the message is of a higher priority than others.

This means in the E06 0030/0130/0230z schedule, all group counts that have these figures 33, 35, 37, 39, 44, 45, 47, 49 and 50. Should have a higher priority than other standard messages.

For example.
75933 only has 4 factors not to include in the code key. These factors are $3,5,7$ and 9 . Total possible code key combinations 120 .
But a normal priority message will have 5 factors not to include in the code key.
For example.
75931 has 5 factors not to include in the code key. These factors are 1,3,5,7 and 9. Total possible code key combinations 60 .
Remember the greater amount of factors there are, the smaller the code key combination will be. Meaning the lesser amount of code key combinations there are, the greater chances the message will be able to be decoded.

## How the messages can be worked out.

Work out the code key combinations by not including the call id from the group count.
For example:
759 31, the figures $1,3,5,7$ and 9 are not to be included in the code key. So that leaves the figures $0,2,4,6$ and 8 can be used in the code key. And each figure can only be used once.

024
246
486 E.t.c.
In the case 759 31, there should be a total 60 possible code key combinations. And a total of 60 number sets also.
If it is possible to work out the code key combinations by using the call id and group count then it is also possible to work out the number set for the message, by using the call id with the code key.

Here is how it is done.

Take the call id 759, and the code key 486 for example.

Divide the call id from the code key. 759/486 $=1.5617283$
As you will know already, the possible total combinations for a 5 figure system are from 0 to 99999.
But if you run a simple computer program which will count from 0 to 99999 , it will count from 0 to 99999 in steps of 1 .
So what we need to do, to produce a number set for a message is to create a computer program that will also count from 0 to 99999 but with the step of 1.5617283 , so the computer program will not just count from 1,2,3,4,5 e.t.c.

Here is a simple computer program written in the old style BASIC language. Any old computer from the 1980's with BASIC as it's first language will run the program. However I wrote this simple program on a Windows PC based program called Just Basic, this program can be downloaded from the internet for free.

Here is the program:
10 rem number set generator
20 rem id divided by code key
30 for $\mathrm{n}=0$ to 10000
40 let $\mathrm{n}=\mathrm{n}+1.5645284$ :rem place your answer here
50 print " 0 ";n,n+10000,n+20000,n+30000,n+40000,n+50000,n+60000,n+70000,n+80000,n+90000
60 next n
When you run this simple program, it will start producing the number set for the id 759 with the code key 486.
The program will produce a total of 80000 possible combinations. If the code key has a smaller value, the calculation will be much higher, that means the possible combinations will be much less.

Now use a number station broadcast to compare the number sets. In this case we will use the E06 message that was transmitted on 08/10/2011.
Here is the message:
75948631
73698599902499402032938434354257973483915980778478
29610483025265032468651443740772824939871299262937
57240263695872772375163422194239559045698339117212
63973
4863100000
Now here are the results taken from the computer program:
73697599902499402032938434354357972483925980878477
29610483025265032468651433740772825939861299162937
57251263695872872376163412194239559045688339117213
63974
As you can see the results are very close, to the original message. The number set is slightly out by plus or minus 1 figure.
So why can this happen, when the results are so close?
I think the problem lies in the computers processor. How calculations are worked out depends on the processor speed of the computer. It is obvious calculators and computers have different processing speeds, and this effects the output of the calculations. Older computers are much slower so therefore the calculations will be less acurate than more modern computers.

For example:
My mobile phone calculates 759/486 = 1.5617283
My computer calculates 759/486 $=1.5617284$
So to try and get the number set to work as close as I can, I had to tweek the output figure slightly to:

### 1.5645284

Take into account how long number stations have been around, the chances are much older equiptment was used to create the number message system. So the posibility of mechanical calculating equiptment was used to make the original number sets, and this system may have never been replaced. So if this is true, that means the calculations used to create the number sets are not very acurate in relation to our modern computers.

Even if the results of the number set wasn't very acurate, what has been established with this analysis, is the relation between call id, code key, group count and message. And how the number system works.

Here is the big question everyone want's to know.
Can number stations ever be decoded?
And the answer to this is probably not. The reason why these messages can't be broken, is because we don't know how the 5 figure groups are used. My guess is the 5 figure groups, are a reference number to either a single letter, a word, a line or even a paragraph of text.

For example:

| $16002=$ Mary | $26002=$ Mary | $36002=$ Mary | $46002=$ Mary | $56002=$ Mary |
| :--- | :--- | :--- | :--- | :--- |
| $16005=$ Susan | $26005=$ Susan | $36005=$ Susan | $46005=$ Susan | $56005=$ Susan |
| $16007=$ Adam | $26007=$ Adam | $36007=$ Adam | $46007=$ Adam | $56007=$ Adam |

As you can see in the example above, the 5 figure groups represent a single word. However many combinations of the same word may be used, so the other party won't see a pattern in the message. That is why you seldom see many repeat groups in the messages.

It could be possible that paragraphs of text are used for each 5 figure group, so a message with over 100 groups could contain as much data as a large document or even a small book.

But whatever these stations are sending and to whom, still remains a mystery.

## Number set for call id 759 with the code key 486.

Note figures maybe slightly out by plus or minus 1 number.
Total number of combinations are 80000.

| 01.5645284 | 10001.5645 | 20001.5645 | 30001.5645 | 40001.5645 | 50001.5645 | 60001.5645 | 70001.5645 | 80001.5645 | 90001.5645 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 04.1290568 | 10004.1291 | 20004.1291 | 30004.1291 | 40004.1291 | 50004.1291 | 60004.1291 | 70004.1291 | 80004.1291 | 90004.1291 |
| 06.6935852 | 10006.6936 | 20006.6936 | 30006.6936 | 40006.6936 | 50006.6936 | 60006.6936 | 70006.6936 | 80006.6936 | 90006.6936 |
| 09.2581136 | 10009.2581 | 20009.2581 | 30009.2581 | 40009.2581 | 50009.2581 | 60009.2581 | 70009.2581 | 80009.2581 | 90009.2581 |
| 011.822642 | 10011.8226 | 20011.8226 | 30011.8226 | 40011.8226 | 50011.8226 | 60011.8226 | 70011.8226 | 80011.8226 | 90011.8226 |
| 014.3871704 | 10014.3872 | 20014.3872 | 30014.3872 | 40014.3872 | 50014.3872 | 60014.3872 | 70014.3872 | 80014.3872 | 90014.3872 |
| 016.9516988 | 10016.9517 | 20016.9517 | 30016.9517 | 40016.9517 | 50016.9517 | 60016.9517 | 70016.9517 | 80016.9517 | 90016.9517 |
| 019.5162272 | 10019.5162 | 20019.5162 | 30019.5162 | 40019.5162 | 50019.5162 | 60019.5162 | 70019.5162 | 80019.5162 | 90019.5162 |


| 09980.14453 | 19980.1445 | 29980.1445 | 39980.1445 | 49980.1445 | 59980.1445 | 69980.1445 | 79980.1445 | 89980.1445 | 99980.1445 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 09982.70906 | 19982.7091 | 29982.7091 | 39982.7091 | 49982.7091 | 59982.7091 | 69982.7091 | 79982.7091 | 89982.7091 | 99982.7091 |
| 09985.27359 | 19985.2736 | 29985.2736 | 39985.2736 | 49985.2736 | 59985.2736 | 69985.2736 | 79985.2736 | 89985.2736 | 99985.2736 |
| 09987.83812 | 19987.8381 | 29987.8381 | 39987.8381 | 49987.8381 | 59987.8381 | 69987.8381 | 79987.8381 | 89987.8381 | 99987.8381 |
| 09990.40265 | 19990.4026 | 29990.4026 | 39990.4026 | 49990.4026 | 59990.4026 | 69990.4026 | 79990.4026 | 89990.4026 | 99990.4026 |
| 09992.96717 | 19992.9672 | 29992.9672 | 39992.9672 | 49992.9672 | 59992.9672 | 69992.9672 | 79992.9672 | 89992.9672 | 99992.9672 |
| 09995.5317 | 19995.5317 | 29995.5317 | 39995.5317 | 49995.5317 | 59995.5317 | 69995.5317 | 79995.5317 | 89995.5317 | 99995.5317 |
| 09998.09623 | 19998.0962 | 29998.0962 | 39998.0962 | 49998.0962 | 59998.0962 | 69998.0962 | 79998.0962 | 89998.0962 | 99998.0962 |

# Chart Section Index 

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## Logging Abbreviations explained.

The ENIGMA 2000 Standard logging should take this form without any personalised abbreviations:


Repeated: $\quad$ R5m [repeated 5 mins]; R5s[repeated 5seconds], R5x [Repeated 5 times]

## Received signal strength assessment.

Some receivers possess ' $S$ ' meters that give a derived indication of signal strength caused by changes within that receiver. Calibration may, or may not be accurate and the scale, may or may not, be the same as that on other receivers. Some receivers have no meter yet produce acceptable results.

Therefore we prefer the quality of the signal to be assessed by the particular monitor.
Guidance for this can be sought from the Q code:
QSA What is the strength of my signals (or those of...)?
The strength of your signals (or those of...) is...

1) scarcely perceptible.
2) weak.
3) fairly good.
4) good.
5) very good.
[QSA1 S0 to S1; QSA2 S1 to S3; QSA3 S3 to S6; QSA4 S6 to S9; QSA4 S9 and above]
Sooner than put a numerical value we state: Very Weak, Weak, Fair, Strong or Very Strong.

## Noise, Static and Fading.

Again guidance from the Q code:

## Noise:

QRM Are you being interfered with?
I am being interfered with

1) nil
2) slightly
3) moderately
4) severely
5) extremely.

Note: in the sample the monitor has stated QRM2 which means 'slight noise'; had the interference been from a broadcast station you might have read 'BC QRM2' and so on.

Static [Lightning and other atmospheric disturbance]:
QRN Are you troubled by static?
I am troubled by static

1) nil
2) slightly
3) moderately
4) severely
5) extremely.

Fading [Propagational disturbance]
QSB Are my signals fading?
Your signals are fading

1) nil
2) slightly
3) moderately
4) severely
5) extremely.

Note: in the sample the monitor has stated QSB2 which means 'slight fading' where the received signal obviously fades but the message is still intelligible.

The use of QRM1, QRN1 and QSB1 is not expected; if there is no such aberration to the signal it need not be stated.

## Day Abbreviation

Self explanatory: SUN, MON, TUE, WED, THU, FRI, SAT

## Mode used in transmission

Generally the mode of transmission is not stated, being available in the ENIGMA Control List. Should the expected mode change then this can be stated as: CW [Carrier Wave] MCW[Modulated Carrier Wave] ICW [Interrupted Carrier Wave] generally associated with Morse transmission; AM [Amplitude Modulation], LSB [Lower Sideband], USB[Upper Sideband] generally associated with Voice transmission.

## Languages used

The ident of a station generally states the language in use, E [English], G[German] S [Slavic], V[All other languages].

## Non voice stations

M [Morse and TTY] SK [Digital modes] X [Other modes]

Ideally we would like to see logs offered in our standard format allowing the editorial staff to process the results quickly rather than having to manually re-format. Anyone submitting logs should refrain from using their own abbreviations or shortening our abbreviations eg. Su Mo Tu etc.

See a correct example below which is now self explanatory:
V02a 5883kHz 0700z 06/06[A63752 57781 31521] Fair QRN2 end uk PLdn SAT
And the incorrect version:
V2a 5883k 07:00 06/06/2009 A/63752-57781-31521 S3 PLdn SA

## Additional Info:

Own station idents should not be used.
When an unidentifiable station is submitted please supply the obvious details:
Freq, Time start and end, Date, Message content, particularly preamble and message content and ending. Language details are helpful, particularly any strange pronunciations.

## European Number Systems

| English | zero | one | two | three | four | five | six | seven | eight | nine |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Bulgarian | nul | edín | dva | tri | chétiri | pet | shest | sédem | ósem | dévet |
| French | zero | un | deux | trois | quatre | cinq | six | sept | huit | neuf |
| German^ | null | eins | zwei | drei | vier | fünf | sechs | sieben | acht | neun |
| Spanish | cero | uno | dos | tres | cuatro | cinco | seis | siete | ocho | nueve |
| Czech | nula | jeden | dva | tr^i | chtyr^i | pêt | shest | sedm | osm | devêt |
| Polish | zero | jeden | dwa | trzy | cztery | pie,c' | szes'c' | siedem | osiem | dziewie,c' |
| Romanian | zero | unu | doi | trei | patru | cinci | s,ase | s,apte | opt | nouâ |
| Slovak* | nula | jeden | dva | tri | shtyri | pät' | shest' | sedem | osem | devät' |
| *West | nula | jeden | dva | try | shtyry | pet | shest | sedem | ossem | devat |
| *East | nula | jeden | dva | tri | shtyri | pejc | shesc | shedzem | osem | dzevec |
| Serbo-Croat | nula | jèdan | dvâ | trî | chètiri | pêt | shêst | sëdam | ösam | dëve:t |
| Slovene | nula | ena | dva | tri | shtiri | pet | shest | sedem | osem | devet |
| Russian | null | odín | dva | tri | chety're | pyat' | shest' | sem' | vósem' | dévyat' |

$\wedge$ Some German numerals have a radio accent. The numbers in question are:

$$
\begin{aligned}
& 2 \text { ZWEI pronounced by some TXs, as TSWO. } \\
& 5 \text { FUNF some pronounce it as FUNUF poss hrd as a fast TUNIS } \\
& 9 \text { NEUN pronounced by some as NEUGEN. }
\end{aligned}
$$

This is totally in keeping with some German armed forces stations and corresponds to our WUN, FOWER, FIFE, NINER

## Arabic Numerals [E25 and V08]

| English | zero | one | two | three | four | five | six | seven | eight | nine |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Arabic | sifr | wahid | itnien | talata | arba | khamsa | sitta | saba | tamanya | tissa |
|  | $\cdot$ | 1 | $\zeta$ | $r$ | $\varepsilon$ | 0 | 7 | $\vee$ | $\wedge$ | 9 |

## Numeral systems used on selected Slavic Stations [Stations apparently discontinued]

|  | S11a <br> Cherta | S11 <br> Kreska | Actual <br> Polish[S11] | S10d | S17c |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| $\mathbf{0}$ | nul | zero | zero | Nula* | Nula* |  |
| $\mathbf{1}$ | adinka | yezinka | jedynka | Jeden^ | Jeden^ |  |
| $\mathbf{2}$ | dvoyka | dvonta | dwójka | dva | dva |  |
| $\mathbf{3}$ | troyka | troika | trójka | tri ‘ | tri ‘ |  |
| $\mathbf{4}$ | chetyorka | chidiri | cztery | shytri | shytri |  |
| $\mathbf{5}$ | petyorka | peyonta | piątka | pyet | pyet |  |
| $\mathbf{6}$ | shest | shes | sześć | shest | shest |  |
| $\mathbf{7}$ | syem | sedm | siedem | sedoom | sedoom |  |
| $\mathbf{8}$ | vosyem | osem | osiem | Osoom~ | Osoom~ |  |
| $\mathbf{9}$ | dyevyet | prunka | dziewięć | devyet | devyet |  |
|  |  |  |  |  |  |  |




|  | $\underset{\substack{0 \\ \hline \\ \hline}}{\substack{2}}$ | $\begin{aligned} & 0 \\ & 0 \\ & 3 \end{aligned}$ | $\underset{\underset{H}{J}}{\underset{G}{J}}$ | $\begin{aligned} & \text { - H } \\ & \text { Hy } \end{aligned}$ | $\begin{aligned} & \stackrel{\rightharpoonup}{\pi} \\ & 0 \end{aligned}$ |  | UTC | wk | Stn | Fam | Nov <br> kHz , ID, ... | $\begin{array}{lll} \hline \text { Dec } & & \\ \mathrm{kHz}, & \text { ID, } & \ldots \\ \hline \end{array}$ | General Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | x |  |  |  | 1900/1920/1940 |  | M12 | 01B | $\begin{aligned} & 10343 / 9264 / 8116 \\ & 124 \end{aligned}$ | $\begin{aligned} & 10343 / 9264 / 8116 \\ & 124 \end{aligned}$ |  |
|  | x |  | x |  |  |  | 1900/1920/1940 |  | XPA | 01B | 8123/ 7523/6823 | 8164/ 7364/ 5864 |  |
| x |  |  |  |  |  |  | 1910 |  | M01B | 14 | $\begin{aligned} & 2435,3519 \\ & 853 \\ & \hline \end{aligned}$ | $\begin{aligned} & 2435,3519 \\ & 853 \\ & \hline \end{aligned}$ |  |
|  |  | x |  |  |  |  | 1920/2020 | 2 | E06 | 01A | $\begin{aligned} & \text { 4036/ } \\ & 829, \text { search } \end{aligned}$ | $\begin{aligned} & \text { 4036/ } \\ & 829, \text { search } \end{aligned}$ |  |
|  |  | x |  |  |  |  | 1920 | 2/4 | M1 4 | 01A | $\begin{gathered} 4761 \\ 748 \end{gathered}$ | $\begin{gathered} 4761 \\ 748 \end{gathered}$ |  |
|  |  |  |  | x |  |  | 1930 | 2/4 | G06 | 01A | $\begin{gathered} 4792 \\ 436 \end{gathered}$ | $\begin{gathered} 4792 \\ 436 \end{gathered}$ | ```since 04/01, last log 10/11 rpt of Thu 1830Z``` |
|  |  |  |  |  | x |  | 1930 (1935) |  | S06 | 01A | $\begin{aligned} & 3209 / 3842 \\ & 366 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3209 / 3842 \\ & 366 \\ & \hline \end{aligned}$ | changing IDs |
|  |  |  | x |  |  |  | 1932 |  | M01B | 14 | $\begin{aligned} & 2466,3545 \\ & 910 \end{aligned}$ | $\begin{aligned} & 2466,3545 \\ & 910 \end{aligned}$ |  |
|  |  |  |  | x |  | x | 2000 |  | G11 | 03 | $\begin{gathered} 4441 \\ 262 / 00 \\ \hline \end{gathered}$ | $\begin{gathered} 4441 \\ 262 / 00 \\ \hline \end{gathered}$ | since 01/11, last $\log 10 / 11$ |
|  | x |  | x |  |  |  | 2000 |  | M01 | 14 | $\begin{gathered} 4490 \\ 197 \\ \hline \end{gathered}$ | $\begin{gathered} 4490 \\ 197 \\ \hline \end{gathered}$ |  |
| x |  | x |  |  |  |  | 2000/2020/2040 |  | E07 | 01B | $\begin{aligned} & 7724 / 6924 / 5824 \\ & 798 \end{aligned}$ | $\begin{array}{\|l} 7478 / 6778 / 5278 \\ 472 \end{array}$ |  |
| x |  |  | x |  |  |  | 2000/2020/2040 |  | M12 | 01B | $\begin{aligned} & 9176 / 7931 / 6904 \\ & 257 \end{aligned}$ | $\begin{aligned} & 9176 / 7931 / 6904 \\ & 257 \end{aligned}$ |  |
|  |  |  |  | x | x |  | 2000/2100 | 1/3 | M14 | 01A | $\begin{aligned} & 4830 / 4471 \\ & 724 \end{aligned}$ | $\begin{aligned} & 3825 / 4470 \\ & 724 \\ & \hline \end{aligned}$ |  |
|  |  |  |  | x |  |  | 2002 |  | M01B | 14 | $\begin{aligned} & 2655,3197 \\ & 866 \\ & \hline \end{aligned}$ | $\begin{aligned} & 2655,3197 \\ & 866 \\ & \hline \end{aligned}$ |  |
| x |  |  |  |  |  |  | 2015 |  | M01B | 14 | $\begin{aligned} & 2427,3205 \\ & 375 \end{aligned}$ | $\begin{aligned} & 2427,3205 \\ & 375 \end{aligned}$ |  |
|  |  |  | x |  |  |  | 2030 |  | E06 | 01A | $\begin{array}{\|c} 4836 \\ 321 \\ \hline \end{array}$ | $\begin{array}{\|c} 4836 \\ 321 \\ \hline \end{array}$ |  |
|  |  |  | x |  |  |  | 2042 |  | M01B | 14 | $\begin{aligned} & 2485,3160 \\ & 382 \\ & \hline \end{aligned}$ | $\begin{aligned} & 2485,3160 \\ & 382 \\ & \hline \end{aligned}$ |  |
|  |  | x |  |  |  |  | 2100/2120/2140 |  | E07A | 01A | 5864/5164/4564 | 5864/5164/4564 |  |
|  |  |  |  | x |  |  | 2110 |  | M01B | 14 | $\begin{array}{\|ll} \hline 2405, & 3180 \\ 610 \\ \hline \end{array}$ | $\begin{array}{\|ll} \hline 2405, & 3180 \\ 610 \\ \hline \end{array}$ |  |
|  |  |  | x |  |  |  | 2110/2130/2150 |  | E07 | 01B | $\begin{aligned} & 6777 / 5449 / 4483 \\ & 774 \end{aligned}$ | 6777/5449/4483 774 |  |
| x |  |  |  |  |  |  | 2115/2215 | 2/4 | S06 | 01A | $7750 / 5410$ 218, search | 6835/ 5182 632, search |  |
|  |  |  |  | x |  |  | 2130 |  | E06 | 01A | $\begin{array}{r} 4760 \\ 472 \\ \hline \end{array}$ | $\begin{array}{r} 4760 \\ 472 \\ \hline \end{array}$ |  |
|  |  | x |  |  |  |  | 2200/2220/2240 |  | M12 | 01B | $\begin{aligned} & \text { 5429/4629/4029 } \\ & 460 \end{aligned}$ | 5312/ 4512/ 350, search |  |

## M01 M01b M45 Frequency Schedule 2009

M01 Sunday

|  | Jan | Feb | Mar | Apr | May | Jun | Jly | Aug | Sept | Oct | Nov | Dec |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ID | $\mathbf{1 9 7}$ | 197 | 463 | 463 | 025 | 025 | 025 | 025 | 463 | 463 | 197 | 197 |
| $\mathbf{0 7 0 0}$ | 5464 | 5464 | 6508 | 6508 | 6780 | 6780 | 6780 | 6780 | 6508 | 6508 | 5464 | 5464 |

M01b Monday

|  | Jan | Feb | Mar | Apr | May | Jun | Jly | Aug | Sept | Oct | Nov | Dec |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ID |  |  |  | 420 | 364 | 364 | 364 | 364 | 420 | 420 |  |  |
| 1810 |  |  |  | 3535 | 5125 | 5125 | 5125 | 5125 | 3535 | 3535 |  |  |
| $/ /$ |  |  |  | 4590 | 5735 | 5735 | 5735 | 5735 | 4590 | 4590 |  |  |
| ID | 853 | 853 | 420 |  |  |  |  |  |  |  | 853 | 853 |
| 1910 | 2435 | 2435 | 3535 |  |  |  |  |  |  |  | 2435 | 2435 |
| $/ /$ | 3520 | 3520 | 4590 |  |  |  |  |  |  |  | 3520 | 3520 |
| ID |  |  |  | 771 | 858 | 858 | 858 | 858 | 771 | 771 |  |  |
| 1915 |  |  |  | 3644 | 5150 | 5150 | 5150 | 5150 | 3644 | 3644 |  |  |
| // |  |  |  | 4454 | 5475 | 5475 | 5475 | 5475 | 4454 | 4454 |  |  |
| ID |  |  |  | 298 | 729 | 729 | 729 | 729 | 298 | 298 |  |  |
| 2010 |  |  |  | 4991 | 5815 | 5815 | 5815 | 5815 | 4991 | 4991 |  |  |
| // |  |  |  | 5336 | 6769 | 6769 | 6769 | 6769 | 5336 | 5336 |  |  |
| ID | 375 | 375 | 771 |  |  |  |  |  |  |  | 375 | 375 |
| 2015 | 2427 | 2427 | 3644 |  |  |  |  |  |  |  | 2427 | 2427 |
| // | 3205 | 3205 | 4454 |  |  |  |  |  |  |  | 3205 | 3205 |
| ID | 136 | 136 | 298 |  |  |  |  |  |  |  | 136 | 136 |
| 2110 | 4615 | 4615 | 4991 |  |  |  |  |  |  |  | 4615 | 4615 |
| $/ /$ | 5065 | 5065 | 5336 |  |  |  |  |  |  |  | 5065 | 5065 |

M01 Tuesday/Thursday

|  | Jan | Feb | Mar | Apr | May | Jun | Jly | Aug | Sept | Oct | Nov | Dec |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ID | $\mathbf{1 9 7}$ | $\mathbf{1 9 7}$ | 463 | 463 | $\mathbf{0 2 5}$ | $\mathbf{0 2 5}$ | $\mathbf{0 2 5}$ | $\mathbf{0 2 5}$ | 463 | 463 | $\mathbf{1 9 7}$ | $\mathbf{1 9 7}$ |
| $\mathbf{1 8 0 0}$ | 5320 | 5320 | 5474 | 5474 | 5280 | 5280 | 5280 | 5280 | 5474 | 5474 | 5320 | 5320 |
| $\mathbf{2 0 0 0}$ | 4490 | 4490 | 5017 | 5017 | 4905 | 4905 | 4905 | 4905 | 5017 | 5017 | 4490 | 4490 |


| 品 | へ |  | $\sim$ | $\infty$ | 18 | の |  | $\infty$ | § | 체 | N | ¢ |  | F | 9 | 9 | ก | 8 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 苞 | g | O | $\left\|\begin{array}{c} n \\ \hat{N} \\ \infty \\ \infty \end{array}\right\|$ | $\underset{\sim}{\underset{N}{N}}$ | $\begin{gathered} 9 \\ \underset{\sim}{9} \end{gathered}$ | $\begin{aligned} & 0 \\ & 0 \\ & 0 \\ & 0 \\ & \hline \end{aligned}$ |  | 合\| | $\underset{\sim}{\square}$ | $\underset{\sim}{\mathrm{A}}$ |  | $\underset{\sim}{\substack{2}}$ |  | $0$ | $\left\|\begin{array}{c} 0 \\ 0 \\ 0 \end{array}\right\|$ | $\left\|\begin{array}{c} \underset{\sim}{\mathbf{N}} \\ \hline \end{array}\right\|$ | $\hat{G}$ | N | $\begin{aligned} & 0 \\ & 0 \\ & 0 \end{aligned}$ |  |  |
| O | o | $\stackrel{\sim}{N}$ | － | $\underset{\sim}{ \pm}$ | へิ | $\underset{\sim}{\underset{\sim}{2}}$ |  | $\|\overrightarrow{\text { g }}\|$ | $\underset{8}{8}$ | $\underset{m}{f}$ | $\stackrel{8}{4}$ |  |  | $\stackrel{N}{N}$ | 8 | $\underset{\sim}{\mathrm{J}}$ | $\|\underset{y}{\|c\|}\|$ | \％ | $\stackrel{\infty}{\circ}$ |  |  |
|  | $\left\lvert\, \begin{aligned} & \underset{\sim}{2} \\ & \mathbf{O} \end{aligned}\right.$ | $\begin{aligned} & t \\ & 0 \\ & 0 \end{aligned}$ | $\left\lvert\, \begin{gathered} 0 \\ \frac{1}{9} \\ \hline \end{gathered}\right.$ | $\underset{\infty}{9}$ | $\begin{array}{\|c} \hline \\ \hline \\ \hline \end{array}$ | $\left\|\begin{array}{c} 0 \\ \overrightarrow{7} \\ \infty \end{array}\right\|$ |  | $\left\|\begin{array}{l} 0 \\ \underset{\sim}{v} \end{array}\right\|$ | $\left\|\begin{array}{c} \stackrel{*}{*} \\ \underset{\sim}{\sim} \\ \underset{\sigma}{2} \end{array}\right\|$ | $\stackrel{\underset{\sim}{\mathrm{N}}}{\underset{\mathrm{~J}}{2}}$ |  |  |  | $\begin{aligned} & 1 \\ & \hline 6 \end{aligned}$ | $\left\|\begin{array}{c} \underset{\sim}{2} \\ \mathbf{o} \end{array}\right\|$ | $\left\lvert\, \begin{aligned} & 0 \\ & \frac{1}{7} \\ & \infty \end{aligned}\right.$ | $\left\|\begin{array}{l} \infty \\ \infty \\ i n \\ i \end{array}\right\|$ | N্লি | $\begin{aligned} & 1 \\ & \vdots \\ & 1 \end{aligned}$ |  |  |
| 品 | $\mid \stackrel{\rightharpoonup}{\mathrm{y}}$ | $\frac{9}{4}$ | $\stackrel{9}{9}$ | $\begin{gathered} 9 \\ 0 \\ \hline-1 \end{gathered}$ | $\begin{aligned} & o \\ & 9 \\ & \underset{子}{2} \end{aligned}$ | $\begin{aligned} & \stackrel{9}{9} \\ & \underset{-1}{ } \end{aligned}$ |  | $\left.\frac{9}{9} \right\rvert\,$ | $$ | $\stackrel{\substack{9 \\ \underset{\sim}{2} \\ \hline}}{ }$ |  | d |  | $\stackrel{\circ}{9}$ | $\mid \stackrel{\rightharpoonup}{\mathrm{T}}$ | $\stackrel{9}{9}$ | $\stackrel{9}{9}$ | 윽 | $\frac{g}{d}$ |  |  |
| \| | $\left\lvert\, \begin{aligned} & \underset{\alpha}{2} \\ & \mathbf{o} \end{aligned}\right.$ | $\begin{aligned} & n \\ & \end{aligned}$ | $\left\|\begin{array}{c} \mathbf{~} \\ \mathbf{N} \\ \mathbf{N} \end{array}\right\|$ | $\begin{aligned} & \text { 寸 } \\ & \mathbf{N} \\ & \text { On } \end{aligned}$ | $\underset{\sim}{N}$ | $\left\lvert\, \begin{gathered} \text { オે } \\ \underset{\sim}{\alpha} \end{gathered}\right.$ |  | $\left\|\begin{array}{l} 0 \\ \mathbf{N} \\ \mathbf{N} \end{array}\right\|$ | $\left\|\begin{array}{c} \underset{*}{*} \\ \underset{\sim}{\tilde{2}} \\ \underset{\sim}{n} \end{array}\right\|$ | $\begin{gathered} \underset{N}{N} \\ \underset{\sim}{2} \end{gathered}$ | $\begin{aligned} & 0 \\ & \stackrel{0}{7} \end{aligned}$ | R |  | $\stackrel{\rightharpoonup}{\mathrm{N}}$ | \|ö | $\left\|\begin{array}{l} \text { t} \\ \mathbf{N} \\ \text { On } \end{array}\right\|$ | $\left\|\begin{array}{\|c\|} \mathrm{N} \\ \underset{O}{0} \end{array}\right\|$ | on | $\begin{aligned} & n \\ & \infty \\ & \underset{\sim}{n} \end{aligned}$ |  |  |
| 品 | $\begin{aligned} & 8 \\ & \hline 0 \\ & \hline \end{aligned}$ | $\stackrel{\circ}{N}$ | $\left\|\begin{array}{l} \mathbf{N} \\ \underset{N}{2} \end{array}\right\|$ | $\begin{aligned} & 0 \\ & 0 \\ & \infty \\ & \hline \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \\ & \underset{\sim}{2} \end{aligned}$ | $\left\lvert\, \begin{array}{\|c} \mathbf{O} \\ \mathbf{O} \end{array}\right.$ |  | $\left.\left\lvert\, \begin{array}{c} 0 \\ \infty \\ 9 \end{array}\right.\right)$ | 응 | $\begin{gathered} \underset{\sim}{2} \\ \mathbf{N} \end{gathered}$ | － | N |  | － | $\stackrel{8}{\mathbf{O}}$ | $\stackrel{\substack{\mathrm{R} \\ \underset{\sim}{\infty} \\ \hline}}{ }$ | $\mid \stackrel{\rightharpoonup}{N}$ | － | $\begin{gathered} \stackrel{\rightharpoonup}{\lambda} \\ \underset{N}{2} \end{gathered}$ |  |  |
|  | $\left\lvert\, \begin{gathered} \underset{\sim}{2} \\ \infty \\ \infty \end{gathered}\right.$ |  |  | $\begin{gathered} \underset{y}{c} \\ \underset{\sim}{0} \end{gathered}$ | $\begin{aligned} & 0 \\ & \vec{a} \end{aligned}$ | $\begin{gathered} \tilde{m} \\ \underset{\sim}{0} \\ \hline \end{gathered}$ | $\left\|\begin{array}{c} \text { 물 } \\ 0 \\ \text { an } \end{array}\right\|$ |  | 卷 | \} | $\underset{\sim}{\mathrm{N}}$ |  |  | $\begin{aligned} & \grave{\varrho} \\ & \stackrel{\rightharpoonup}{\sigma} \end{aligned}$ | $\left\lvert\, \begin{aligned} & \text { a } \\ & \infty \\ & \infty \end{aligned}\right.$ | $\begin{gathered} \underset{\sim}{\mathbf{n}} \\ \underset{\sim}{0} \\ \hline \end{gathered}$ | $\left\lvert\, \begin{gathered} \underset{\alpha}{c} \\ \underset{\infty}{\infty} \end{gathered}\right.$ | ～n | $\begin{aligned} & n \\ & \hat{o} \\ & \hline \end{aligned}$ |  |  |
| 品 | 曾 | $8$ | $\begin{aligned} & 8 \\ & \\ & \hline \end{aligned}$ | $1 \begin{aligned} & 8 \\ & \hline-\infty \\ & \hline 1 \end{aligned}$ | $\begin{aligned} & 0 \\ & \hline 0 \\ & \hline \end{aligned}$ | $\begin{aligned} & 8 \\ & 0 \\ & 0 \\ & \hline \end{aligned}$ | $\begin{aligned} & \square \\ & 0 \\ & 0 \\ & Z \end{aligned}$ | $\mid \underset{\sim}{\infty}$ | 응 | $\left.\begin{array}{\|c} \underset{\sim}{2} \\ \mathbf{n} \end{array} \right\rvert\,$ | $\begin{aligned} & 8 \\ & 0 \\ & \hline 1 \end{aligned}$ |  |  | $\stackrel{8}{9}$ | \％ | $\begin{gathered} \infty \\ \underset{\sim}{\infty} \\ \hline 1 \end{gathered}$ | $\stackrel{8}{\mathrm{O}}$ | － | － |  |  |
|  | $\left\lvert\, \begin{gathered} \vec{z} \\ \frac{3}{6} \end{gathered}\right.$ |  |  |  |  | $\left\|\begin{array}{l} \mathrm{N} \\ \cdot \mathrm{a} \\ \hline \end{array}\right\|$ | $\left\lvert\, \begin{aligned} & m \\ & \stackrel{\rightharpoonup}{\sim} \\ & \tilde{n} \end{aligned}\right.$ | $\left\|\begin{array}{c} \tau \\ \vdots \\ \vdots \\ \omega \end{array}\right\|$ | $\begin{gathered} n \\ \vdots \\ \vdots \\ \vdots \end{gathered}$ |  |  |  |  |  | $\left\|\begin{array}{c} 0 \\ g \\ z \\ \end{array}\right\|$ |  | $\left\|\begin{array}{l} 1 \\ 0 \\ 0 \\ 3 \end{array}\right\|$ |  |  |  |  |


| Day / <br> Date | Time <br> (UTC) | Freq <br> (kHz) | Time <br> (UTC) | Freq <br> (kHz) | Time <br> (UTC) | Freq <br> (kHz) | ID | Decode <br> Key | Grp <br> No. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |
| Thu 22 | 0340 | 5829 | 0400 | 6929 | 0420 | 8029 | 890 | 305 | 195 |
|  | 1700 | 9176 | 1720 | 7931 | 1740 | 6904 | 257 | 7741 | 50 |
|  | 1700 | 10343 | 1720 | 9264 | 1740 | 8116 | 124 | 7553 | 76 |
|  | 1800 | 10343 | 1820 | 9264 | 1840 | 8116 | 124 | 7423 | 92 |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Fri 23 | 0500 | 9083 | 0520 | 10183 | 0540 | 11083 | 910 | 965 | 72 |
|  | 1600 | 10343 | 1620 | 9264 | 1640 | 8116 | 124 | 2546 | 71 |
|  | 2200 | NH* | 2220 | NH* | 2240 | NH* | 454 |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Sat 24 | 2110 | 11469 | 2130 | 10469 | 2150 | --- | 441 | 000 |  |
|  |  |  |  |  |  |  |  |  |  |
| Sun 25 | 1830 | 15926 | 1850 | 13926 | 1910 | 12126 | 991 | 210 | 125 |
|  |  |  |  |  |  |  |  |  |  |
| Mon 26 | 0500 | $6843^{* *}$ | 0520 | $7943 * *$ | 0540 | --- | 891 | 000 |  |
|  | 1300 | 14372 | 1320 | 13472 | 1340 | 11472 | 344 | 926 | 221 |
|  | 1600 | 12162 | 1620 | 11566 | 1640 | 10711 | 546 | 6448 | 92 |
|  | 1700 | 9176 | 1720 | 7931 | 1740 | 6904 | 257 | 2393 | 71 |
|  | 1800 | 9176 | 1820 | 7931 | 1840 | 6904 | 257 | 641 | 45 |
|  | 1900 | 9176 | 1920 | 7931 | 1940 | 6904 | 257 | 4345 | 59 |
|  |  |  |  |  |  |  |  |  |  |
| Tue 27 | 0340 | 5829 | 0400 | 6929 | 0420 | 8029 | 890 | 148 | 241 |
|  | 1830 | 10343 | 1850 | 9264 | 1910 | 8116 | 124 | 4479 | 70 |
|  |  |  |  |  |  |  |  |  |  |
| Wed 28 | 0500 | $9083 \wedge$ | 0520 | 10183 | 0540 | --- | 910 | 000 |  |
|  | 1500 | 13524 | 1520 | 11524 | 1540 | 10334 | 344 | 926 | 221 |
|  | 1830 | 11435 | 1850 | 10598 | 1910 | 9327 | 938 | 5498 | 51 |
|  | 1830 | 15926 | 1850 | 13926 | 1910 | --- | 911 | 000 |  |
|  | 2100 | 6793 | 2120 | 5893 | 2140 | --- | 785 | 000 |  |
|  | 2110 | $11469 \wedge$ | 2130 | 10469 | 2150 | 9169 | 441 | 000 |  |
|  |  |  |  |  |  |  |  |  |  |


| $\begin{aligned} & \hline \text { Day / } \\ & \text { Date } \\ & \hline \end{aligned}$ | $\begin{gathered} \text { Time } \\ \text { (UTC) } \end{gathered}$ | $\begin{gathered} \text { Freq } \\ \text { (kHz) } \end{gathered}$ | $\begin{gathered} \text { Time } \\ \text { (UTC) } \end{gathered}$ | $\begin{gathered} \text { Freq } \\ \text { (kHz) } \end{gathered}$ | $\begin{gathered} \text { Time } \\ \text { (UTC) } \end{gathered}$ | $\begin{gathered} \text { Freq } \\ \text { (kHz) } \end{gathered}$ | ID | Decode Key | $\begin{aligned} & \hline \text { Grp } \\ & \text { No. } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Thu 15 | 0340 | 5829 | 0400 | 6929 | 0420 | 8029 | 890 | 187 | 273 |
|  | 1700 | 9176 | 1720 | 7931 | 1740 | 6904 | 257 | 6101 | 68 |
|  | 1700 | 10343 | 1720 | 9264 | 1740 | 8116 | 124 | 1092 | 79 |
|  | 1800 | 10343 | 1820 | 9264 | 1840 | 8116 | 124 | 4027 | 40 |
|  | 1900 | 9176 | 1920 | 7931 | 1940 | 6904 | 257 | 5667 | 68 |
| Fri 16 | 0500 | 9083 | 0520 | 10183 | 0540 | --- | 910 | 000 |  |
|  | 1600 | 10343 | 1620 | 9264 | 1640 | 8116 | 124 | 6162 | 98 |
|  | 2200 | 13412 | 2220 | 11512 | 2240 | 10412 | 454 | 797 | 78 |
| Sat 17 | 2110 | 11469 | 2130 | 10469 | 2150 | 9169 | 441 | 842 | 89 |
| Sun 18 | 1830 | 15926 | 1850 | 13926 | 1910 | 12126 | 991 | 358 | 177 |
| Mon 19 | 0500 | 6843** | 0520 | 7943** | 0540 | --- | 891 | 000 |  |
|  | 1600 | 12162 | 1620 | 11566 | 1640 | 10711 | 546 | 2605 | 99 |
|  | 1700 | 9176 | 1720 | 7931 | 1740 | 6904 | 257 | 1409 | 70 |
|  | 1800 | 9176 | 1820 | 7931 | 1840 | 6904 | 257 | 2103 | 45 |
|  | 1900 | 9176 | 1920 | 7931 | 1940 | 6904 | 257 | 5972 | 61 |
|  |  |  |  |  |  |  |  |  |  |
| Tue 20 | 0340 | 5829 | 0400 | 6929 | 0420 | 8029 | 890 | 305 | 195 |
|  | 1830 | 10343 | 1850 | 9264 | 1910 | 8116 | 124 | 7312 | 63 |
| Wed 21 | 0500 | 9083 | 0520 | 10183 | 0540 | 11083 | 910 | 965 | 72 |
|  | 1500 | 13524 | 1520 | 11524 | 1540 | 10334 | 344 | 792 | 133 |
|  | 1830 | 11435 | 1850 | 10598 | 1910 | 9327 | 938 | 4840 | 58 |
|  | 1830 | 15926 | 1850 | 13926 | 1910 | 12126 | 991 | 210 | 125 |
|  | 2100 | 6793 | 2120 | 5893 | 2140 | --- | 785 | 000 |  |
|  | 2110 | 11469 | 2130 | 10469 | 2150 | -- - | 441 | 000 |  |
|  |  |  |  |  |  |  |  |  |  |


| Day／ <br> Date | $\begin{gathered} \text { Time } \\ \text { (UTC) } \end{gathered}$ | $\begin{gathered} \text { Freq } \\ \text { (kHz) } \end{gathered}$ | $\begin{gathered} \text { Time } \\ \text { (UTC) } \end{gathered}$ | Freq $(\mathrm{kHz})$ | $\begin{gathered} \text { Time } \\ \text { (UTC) } \end{gathered}$ | Freq $(\mathbf{k H z})$ | ID | Decode Key | $\begin{aligned} & \text { Grp } \\ & \text { No. } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sat 1 | None | Found |  |  |  |  |  |  |  |
| Sun 2 | None | Found |  |  |  |  |  |  |  |
| Mon 3 | 0500 | 5384＊＊ | 0520 | 6784＊＊ | 0540 | 7984＊＊ | 379 | 676 | 95 |
|  | 1300 | 10804 | 1320 | 9324＾ | 1340 | 7964 | 839 | 712 | 207 |
|  | 1600 | 12162 | 1620 | 11566 | 1640 | 10711 | 546 | 5919 | 100 |
|  | 1700 | 9176 | 1720 | 7931 | 1740 | 6904 | 257 | 6017 | 75 |
|  | 1800 | 9176 | 1820 | 7931 | 1840 | 6904 | 257 | 621 | 56 |
|  | 1900 | 9176 | 1920 | 7931 | 1940 | 6904 | 257 | 1424 | 78 |
| Tue 4 | 0340 | 5872 | 0400 | 6772 | 0420 | －－－ | 876 | 000 |  |
|  | 1830 | 10343 | 1850 | 9264 | 1910 | 8116 | 124 | 5392 | 53 |
| Wed 5 | 0500 | 7832 | 0520 | 9232＾ | 0540 | 10232 | 822 | 789 | 59 |
|  | 1500 | 9223＾ | 1520 | 8193＾ | 1540 | 7463 | 839 | 712 | 207 |
|  | 1700 | 8047 | 1720 | 6802 | 1740 | 5788 | 463 | 9203 | 84 |
|  | 1830 | 12217 | 1850 | 10617 | 1910 | 9317 | 263 | 190 | 183 |
|  | 2100 | 5814 | 2120 | 5214 | 2140 | －－－ | 826 | 000 |  |
|  | 2110 |  | 2130 | 9269 | 2150 | －－－ | 229 | 000 |  |
| Thu 6 | 0340 | 5872 | 0400 | 6772 | 0420 | －－－ | 876 | 000 |  |
|  | 1700 | 9176 | 1720 | 7931 | 1740 | 6904 | 257 | ？？？ | ？？ |
|  | 1700 | 10343 | 1720 | 9264 | 1740 | 8116 | 124 | 3162 | 70 |
|  | 1800 | 10343 | 1820 | 9264 | 1840 | 8116 | 124 | 6720 | 89 |
|  | 1900 | 9176 | 1920 | 7931 | 1940 | 6904 | 257 | 2203 | 42 |
| Fri 7 | 1600 | 10343 | 1620 | 9264 | 1640 | 8116 | 124 | 4566 | 81 |
|  | 2200 |  | 2220 | 10273 | 2240 | －－－ | 922 | 000 |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |


| 気家 |  | $\underset{\sim}{\infty}$ | ¢ | N | $\infty$ | さ ${ }^{\text {O}}$ | $\infty$ | $\mid \underset{\sim}{\infty}$ | \％ | N |  |  | $\hat{O}$ | $\underset{\sim}{\infty}$ | ¢ | $\bigcirc$ |  | ¢ | $\stackrel{\bullet}{\sim}$ | N |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 苞 | $\left\lvert\, \begin{aligned} & 0 \\ & 0 \\ & 0 \end{aligned}\right.$ | $\stackrel{\circ}{7}$ | $\left\|\begin{array}{c} 0 \\ \hline 0 \end{array}\right\|$ |  | $$ | Nan | $\stackrel{\rightharpoonup}{\mathrm{N}}$ | $\left\lvert\, \begin{gathered} \underset{\sim}{*} \\ \underset{\sim}{2} \end{gathered}\right.$ | N | $\stackrel{m}{m}$ | $\underset{\sim}{\underset{\sim}{2}}$ |  | $\left\|\begin{array}{c} 0 \\ m \\ m \end{array}\right\|$ | \％ | $\begin{aligned} & \mathrm{N} \\ & \underset{\sim}{\mathrm{O}} \end{aligned}$ |  |  | $\stackrel{n}{N}$ | $\mid \underset{\sim}{\infty}$ | 呙 |  |
| O | $\underset{\sim}{2}$ | $\mid \underset{N}{\mid}$ | $\stackrel{n}{n}$ | $\underset{\sim}{\infty}$ | ¢ ¢ へ | へ へへ入 | ก | $\left\|\begin{array}{c} 0 \\ \infty \\ \infty \end{array}\right\|$ | $\underset{\infty}{\mathbb{N}}$ | － | \％ | $\stackrel{\rightharpoonup}{n} \mid \underset{\infty}{\infty}$ | $\underset{\sim}{\mathrm{N}}$ | $\left\lvert\, \begin{aligned} & 0 \\ & \infty \\ & \infty \end{aligned}\right.$ | へู | $\underset{\sim}{7}$ |  | N | $\underset{\sim}{\text { a }}$ | $\underset{\sim}{N}$ |  |
|  |  | $\left\|\begin{array}{l} \hat{n} \\ \mid \end{array}\right\|$ | $\begin{aligned} & \stackrel{*}{*} \\ & \stackrel{*}{\&} \\ & \underset{\sim}{\infty} \\ & \hline \end{aligned}$ | $\stackrel{\rightharpoonup}{\mathrm{t}}$ | 뭄 | $\begin{array}{l\|l} \hline \\ \hline 0 & 0 \\ \hline \end{array}$ | Sis | $\left\|\begin{array}{l} N \\ \hat{N} \\ \hat{N} \end{array}\right\|$ | $\left\lvert\, \begin{gathered} \mathbb{N} \\ \mathbf{O} \\ \hline \end{gathered}\right.$ | $\left\lvert\, \begin{aligned} & \tilde{0} \\ & \underset{N}{2} \end{aligned}\right.$ | $\begin{aligned} & \infty \\ & \infty \\ & \stackrel{0}{n} \end{aligned}$ |  | $\left\lvert\, \begin{aligned} & \mathrm{o} \\ & \text { N } \end{aligned}\right.$ | $\begin{aligned} & \mathrm{N} \\ & \hat{\mathrm{~N}} \end{aligned}$ | $\begin{aligned} & 7 \\ & \hline \\ & \hline \end{aligned}$ | $\oplus$ |  | $\begin{aligned} & t \\ & 0 \\ & 0 \end{aligned}$ | $\frac{0}{\square}$ | $\begin{gathered} n \\ \hat{N} \end{gathered}$ |  |
| EO | $\frac{\stackrel{\rightharpoonup}{\mathrm{h}}}{\mathrm{~N}}$ | $\stackrel{9}{9}$ | $\begin{gathered} 9 \\ \stackrel{y}{0} \\ 0 \end{gathered}$ | $\mathfrak{c}$ | 역 |  | $0$ | $\left\lvert\, \begin{gathered} * \\ \stackrel{*}{\tilde{O}} \\ \hline \end{gathered}\right.$ | $\left\lvert\, \begin{gathered} 9 \\ \text { 号 } \\ \hline \end{gathered}\right.$ | $\stackrel{9}{4}$ | $\stackrel{9}{1}$ |  | $\frac{\ln }{2}$ | $\begin{array}{\|l\|} \hline \frac{*}{\tilde{m}} \\ \hline \end{array}$ | $\begin{gathered} 0 \\ \vdots \\ \end{gathered}$ |  |  | $\begin{array}{\|c} \substack{9 \\ 9 \\ \hline} \end{array}$ | $\stackrel{9}{9}$ | $\underset{\sim}{\underset{N}{9}}$ |  |
|  | $\left\lvert\, \begin{aligned} & \text { oj} \\ & 0 \\ & \text { 人j} \end{aligned}\right.$ | $\left\lvert\, \begin{gathered} \hat{0} \\ \hat{0} \\ \hline \end{gathered}\right.$ | $\begin{aligned} & * \\ & \stackrel{*}{*} \\ & \infty \\ & 0 \\ & b \end{aligned}$ | $\mathfrak{i}$ | $\begin{aligned} & 0 \\ & \stackrel{0}{n} \\ & \underset{\sim}{7} \\ & \end{aligned}$ | $\stackrel{\rightharpoonup}{N}$ | $\stackrel{n}{n}$ | $\left\lvert\, \begin{gathered} N \\ \hat{N} \\ \mathbf{N} \end{gathered}\right.$ | $\left\|\begin{array}{c} \underset{\sim}{N} \\ \mid \end{array}\right\|$ | $\left\lvert\, \begin{aligned} & \infty \\ & \underset{\infty}{\infty} \\ & \hline \end{aligned}\right.$ |  | 年 | $\begin{aligned} & \mathbf{o} \\ & 0 \\ & \text { 人} \end{aligned}$ | $\mid \underset{\substack{\mathrm{N}}}{\mathrm{~N}}$ | $\mathfrak{n}$ | $$ |  | $\cdots$ |  | $\begin{gathered} n \\ \\ \end{gathered}$ |  |
| 品 | $\stackrel{\stackrel{\rightharpoonup}{\mathrm{N}}}{ }$ | $\left\|\begin{array}{\|c} \stackrel{\circ}{\mathrm{D}} \\ \underset{\sim}{\infty} \end{array}\right\|$ | $\begin{array}{\|c} 0 \\ N \\ 0 \end{array}$ | $\mathfrak{i}$ | 잇 | $\begin{array}{c\|c} \stackrel{\rightharpoonup}{N} \\ \underset{\sim}{\mathrm{~N}} \\ \hline 1 \\ \hline \end{array}$ | Nol | $\left\|\begin{array}{c} i \\ 2 \\ \vdots \\ \vdots \end{array}\right\|$ | $\left\|\begin{array}{c} 0 \\ N \\ 0 \end{array}\right\|$ | 꾹 | N | $\stackrel{\sim}{\sim}$ | $\stackrel{\sim}{N}$ | $\left\lvert\, \begin{aligned} & \stackrel{*}{2} \\ & \dot{O} \\ & \dot{O} \end{aligned}\right.$ | $\stackrel{O}{N}$ | 슥 |  | 익 | O | $\underset{\sim}{\mathrm{N}}$ |  |
|  | $\left\lvert\, \begin{gathered} 0 \\ 0 \\ 0 \\ 0 \end{gathered}\right.$ | $\begin{array}{\|} \underset{\sim}{N} \\ \end{array}$ | $\begin{aligned} & \stackrel{*}{*} \\ & \stackrel{*}{\infty} \\ & 0_{0} \\ & \end{aligned}$ | $\mathfrak{l}$ | $\left\lvert\, \begin{array}{c\|c} \substack{0 \\ \underset{\sim}{2} \\ \hline} \\ \hline \end{array}\right.$ | $\begin{array}{l\|l\|} 0 & 0 \\ \hat{a} & \stackrel{\rightharpoonup}{n} \end{array}$ | $\begin{aligned} & n \\ & \text { 合 } \end{aligned}$ | $\left\|\begin{array}{c} \mathbb{N} \\ \underset{\sim}{\infty} \\ \hline \end{array}\right\|$ | $\left\|\begin{array}{c} \underset{\sim}{N} \\ \underset{\sim}{2} \end{array}\right\|$ | $\begin{gathered} \underset{\sim}{N} \\ \underset{\sim}{2} \end{gathered}$ |  | $\underset{\sim}{\mathrm{N}} \underset{\sim}{\underset{\sim}{n}}$ | $\begin{aligned} & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | $\left\|\begin{array}{c} \mathbb{N} \\ \underset{\sim}{\infty} \end{array}\right\|$ | $\begin{aligned} & \text { 人 } \\ & \hat{n} \\ & \hat{a} \end{aligned}$ | $\stackrel{\substack{\mid \\ 0 \\ \hline \\ \hline}}{ }$ |  | $\begin{aligned} & 0 \\ & a \\ & a \end{aligned}$ | $\underset{\substack{n \\ \underset{\sim}{2} \\ \hline \\ \hline}}{ }$ | $\begin{aligned} & n \\ & n \\ & 0 \\ & 0 \end{aligned}$ |  |
| $\begin{array}{\|cc} 0 \\ 0 & 0 \\ 0 & 0 \end{array}$ | $\stackrel{9}{7}$ | $\mid \underset{\sim}{\infty}$ | $\begin{array}{\|c} \circ \\ \hline 0 \\ \hline 0 \end{array}$ | $\mathfrak{c}$ |  |  | $\stackrel{8}{\mathbf{O}}$ | $\left\|\begin{array}{c} i \\ \tilde{0} \\ \hline \end{array}\right\|$ | $\left\lvert\, \begin{aligned} & 8 \\ & 0 \\ & 0 \\ & 0 \end{aligned}\right.$ | $\stackrel{8}{9}$ | $\begin{aligned} & 8 \\ & 0 \\ & \end{aligned}$ |  | $\stackrel{0}{7}$ | 范 |  | $\stackrel{\circ}{\circ}$ |  | $0$ | － | $\begin{aligned} & \mathrm{O} \\ & \text { N} \end{aligned}$ |  |
|  | $\left\|\begin{array}{l\|} \infty \\ \vec{\omega} \\ \dot{\omega} \end{array}\right\|$ | $\left\|\begin{array}{c} a \\ \vdots \\ \vdots \\ n \end{array}\right\|$ | $\begin{aligned} & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 2 \end{aligned}$ |  |  |  |  | $\left\lvert\, \begin{aligned} & 7 \\ & \underset{3}{3} \\ & \underset{y}{2} \end{aligned}\right.$ | $\left\lvert\, \begin{aligned} & \tilde{1} \\ & 0 \\ & 3 \\ & 3 \end{aligned}\right.$ |  |  |  |  | $\left\lvert\, \begin{aligned} & n \\ & \underset{F}{z} \\ & \hline \end{aligned}\right.$ |  |  |  |  | － |  |  |


|  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |
| 04 | 899t | †ZI | 9II8 | 0ヶ9I | †976 | 029I | عャ¢0I | 009I | LZ $\mathrm{ld}_{\mathrm{H}}$ |
|  |  |  |  |  |  |  |  |  |  |
| S9 | †978 | LSZ | †069 | 0ャ6I | IE64 | 026I | 9LI6 | 006I |  |
| 68 | E87L | カZI | 9118 | 0ヶ8I | †976 | 0Z8I | ¢ャE0I | 008I |  |
| SL | 0192 | カZI | 9II8 | 0tLI | †976 | 0ZLI | ¢ャ¢0I | 00LI |  |
| 26 | 0982 | LSZ |  |  |  |  |  | EZIW |  |
| 126 | ／6L8E | LSZ | †069 | 0ャLI | IE64 | 0ZLI | 9LI6 | 00LI |  |
|  | 000 | 9L8 | －－－ | 0Zち0 | ZLL9 | 00ヶ0 | ZL8S | 0ヵ¢0 | $0 Z \mathrm{n}$ ¢L |
|  |  |  |  |  |  |  |  |  |  |
|  | 000 | 672 | －－－ | 0SIZ | 6976 | 0¢IZ | 69701 | 01 IZ |  |
| LZI | 9\＆¢ | 978 | †T9t | 0ャIZ | †IZS | 0ZIZ | †I8S | 00IZ |  |
| 69 | 七\＆IE | ع9t | 88LS | 0tLI | 2089 | 0ZLI | Lャ08 | 00LI |  |
| 68I | LEt | 6 68 | E9tL | 0tSI | E6I8 | 0ZSI | とZZ6 | 00SI |  |
|  | 000 | Z 28 | －－－ | 0tS0 | 乙とZ6 | 0ZS0 | 288L | 00S0 | 6I pəM |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  | 000 | 9L8 | －－－ | 0Zャ0 | ZLL9 | 00ヶ0 | ZL8S | 0ヶ¢0 | 8I nL $^{\text {L }}$ |
|  |  |  |  |  |  |  |  |  |  |
| 9t | L0tS | LSZ | †069 | 0t6I | IE64 | 026I | 9LI6 | 006I |  |
| 0S | EL0Z | LSZ | t069 | 0ヶ8I | IE6L | 028I | v92I6 | 008I |  |
| ZL | 七6をt | LSZ | †069 | 0t LI $^{\text {a }}$ | IE64 | 0ZLI | 9LI6 | 00LI |  |
| 64 | 0عZ9 | 9†5 | ITLOI | 0ヶ9I | 99SII | 0Z9I | Z9IZI | 009I |  |
| 68I | LEt | 688 | t964 | 0ヶ¢ I | $\checkmark \checkmark$ ¢ 6 | 0ZEI | ち080I | 00¢I |  |
|  | 000 | 6LE | －－－ | 0tS0 | ＊＊ F L9 | 0ZS0 | ＊＊ヤ8¢S | 00S0 | LI UOW |
|  |  |  |  |  |  |  |  |  |  |
|  | 000 | ع9Z | －－－ | 0I6I | LI90I | 0S8I | LIZZI | 0ع8I | 9I unS |
|  |  |  |  |  |  |  |  |  |  |
| LOI | $9 \downarrow$ ¢ | 672 | $696 \angle$ | 0SIZ | 6976 | 0¢IZ | 6970I | 0IIZ | SI IPS |
|  |  |  |  |  |  |  |  |  |  |
| $\begin{array}{r} \hline \mathbf{o N} \\ \text { dion } \end{array}$ | $\begin{gathered} \text { Кду } \\ \text { әроэәव } \\ \hline \end{gathered}$ | （II | $\begin{gathered} \hline \text { (zHY) } \\ \text { bәa, } \end{gathered}$ | $\begin{gathered} \text { (ОLИ) } \\ \text { әய!L } \end{gathered}$ | $\begin{gathered} \hline \text { (zHy) } \\ \text { bəды } \end{gathered}$ | $\begin{gathered} \text { (OLИ) } \\ \text { әய!L } \end{gathered}$ | $\begin{gathered} \text { (zHY) } \\ \text { bəдыI } \end{gathered}$ | $\begin{gathered} \text { (DLS) } \\ \text { әய!L } \end{gathered}$ |  |

Highlighted cell indicates new or changed loggings
－－－Indicates no $3^{\text {rd }}$ transmission sent as message 000

ID 379 Msgs transmitted in MCW

Family 1A History and November predictions - 7th Nov 2011

| Station Day | time (utc) | $\begin{gathered} 2011 \\ \text { August } \\ \hline \end{gathered}$ | 2011 <br> September | 2011 <br> October | 2011 <br> November | $\begin{gathered} \text { ID } \\ \text { Aug } \end{gathered}$ | $\begin{gathered} \text { ID } \\ \text { Sept } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { ID } \\ & \text { Oct } \end{aligned}$ | $\begin{gathered} \text { ID } \\ \text { Nov } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| G06 mon | 08.00 | 6948 | 6774 | 6774 | 5463 | 215 | 215 | 215 | 215 |
| S06 mon | 09.30 |  |  | 18654 | 18654 |  |  | ? |  |
| G06 mon | 17.00 | 5427 | 4457 | 4457 | 3854 | 439 | 439 | 439 | 439 |
| G06 mon | 18.00 | 4958 | 4864 | 4864 | 4587 | 439 | 439 | 439 | 439 |
| S06 mon | 19.00/05 | 7982/6984 | 5784/5127 | 5784/5127 | 3192/3838 | 349 | 349 | 349 | 349 |
| S06 mon | 20.15 | 13545 | 11460 | 9245 |  | 433 | 207 | 621 |  |
| S06 mon | 21.15 | 11140 | 9175 | 7760 |  | 433 | 207 | 621 |  |
| M14 tues | 16.00 |  |  | 4518 |  |  |  | 913 |  |
| S06 tues | 18.00 |  |  | 5890 |  |  |  | 286 |  |
| M14 tues | 18.20 | 6856 | 5947 | 5947 | 4636 | 163 | 346 | 346 | 186 |
| G06 wed | 12.00 |  | 5864 | 5864 | 4778 | 439 | 439 | 439 | 439 |
| G06 wed | 13.00 |  | 5362 | 5362 | 4039 | 439 | 439 | 439 | 439 |
| S06 wed | 18.00/05 | 6770/5865 | 5735/5070 | 5735/5070 | 3540/3160 | 471 | 471 | 471 | 471 |
| S06 wed | 18.20 |  |  | 6783 |  |  |  | 632 |  |
| M14 wed | 19.20 | 5941 | 5463 | 5463 | 4761 | 417 | 537 | 537 | 748 |
| E06 wed | 19.20 | 5779 | 4523 | 4523 | 4036 | 829 | 829 | 829 | 829 |
| S06 wed | 19.30/05 |  |  |  |  | 366 | 366 | 366 | 366 |
| S06 wed | 20.00/05 |  |  | 5413 |  | 134 | 134 | 134 | 134 |
| E06 wed | 20.20 | 4516 | 3892 | 3892 |  | 829 | 829 | 829 | 829 |
| E06 thur | 05.00 | 13930 | 12210 |  | xxxxx | 210 | 354 | 186 | xxx |
| E06 thur | 06.00 | 15890 | 14830 | 16320 | 16200 | 210 | 354 | 186 | 507 |
| E06 thur | 07.00 | xxxxx | xxxxx | xxxxx | 18200 | xxx | xxx | xxx | 507 |
| S06 thur | 08.30 | 16327 | 18 mhz ? |  |  | 842 | 842 |  |  |
| S06 thur | 09.30 | 13875 | 16311? |  |  | 842 | 842 |  |  |
| G06 thur | 12.00 |  | 4526 | 4526 |  |  | 215 | 215 | 215 |
| G06 thur | 13.00 |  | 4526 | 4526 |  |  | 215 | 215 | 215 |
| G06 thur | 18.30 | 6887 | 5934 | 5934 | 4519 | 842 | 579 | 579 | 271 |
| S06 thur | 19.00/05 | 7982/6984 | 5784/5127 | 5784/5127 | 3192/3838 | 349 | 349 | 349 | 349 |
| E06 thur | 20.30 | 5948 | 5186 | 5186 | 4836 | 724 | 891 | 891 | 321 |
| M14 fri | 18.00 |  |  | 8193 | 6769 |  |  | 269 | 269 |
| G06 fri | 19.30 | 5943 | 5442 | 5442 | 4792 | 218 | 947 | 947 | 436 |
| E06 fri | 21.30 | 5731 | 5197 | 5197 | 4760 | 315 | 634 | 634 | 472 |
| E06 sat | 00.30 | 7981 | 6874 | 6797 | xxxxx | 759 | 759 | 759 | xxx |
| E06 sat | 01.30 | 6953 | 5179 | 5122 | 5837 | 759 | 759 | 759 | 759 |
| E06 sat | 02.30 | xxxxx | xxxxx | xxxxx | 4583 | xxx | xxx | xxx | 759 |
| S06 sat | 16.00/05 | 8157/6983 | 8162/7612 | 8162/7612 | 7728/6788 | 134 | 134 | 134 | 134 |
| S06 sat | 19.00 | 10178 | 6791 | xxxxx | xxxxx | 703 | 703 | 703 | 703 |
| S06 sat | 19.00 | 6943 | 4787 |  | xxxxx | 837 | 837 | 837 | 837 |
| S06 sat | 19.30/35 | 7718/6922 | 5787/4628 | 5787/4628 | 3209/3842 | 366 | 366 | 366 | 366 |
| S06 sat | 20.00 | 5926 | 3819 |  | 3867 | 837 | 837 | 837 | 837 |
| S06 sat | 20.00 | 9065 | 5848 | xxxxx | xxxxx | 703 | 703 | 703 | 703 |
| S06 sat | 20.30 | xxxxx | xxxxx | 6791 | 4859 | xxx | xxx | 703 | 703 |
| S06 sat | 20.00 | xxxxx | xxxxx | xxxxx | 3237 | xxx | xxx | xxx | 837 |
| S06 sat | 21.30 | xxxxx | xxxxx | 5848 | 4024 | xxx | xxx | 703 | 703 |
| E06 sun | 11.20 | 8083 | NH | NH |  | 829 | 829 | 829 | 829 |
| E06 sun | 12.20 | 7363 | NH | NH | 5913 | 829 | 829 | 829 | 829 |

week
every ?
$1 \& 2$
$1 \& 2$
every
$2 \& 4$
2 \& 4
1st
$1 \& 2$
$2 \& 4$
$1 \& 2$
$1 \& 2$
every
2nd
2 \& 4
2
Sat R
Sat R
2
every
every
every
every
every
?

2 \& 4
every
$1 \& 3$
1st
2 \& 4
$1 \& 3$
every
every
every
every
1 \& 3
1 \& 3
every
1 \& 3
$1 \& 3$
! \& 3
$1 \& 3$
$1 \& 3$
Wed R
Wed R

NH = Not heard
SAT R = repeat if there is a message on Saturday
WED R = repeat of 2nd Weds

## E07 Regular Schedules

Monday

|  | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1900 |  |  |  |  | 14812 | 15824 | 14812 | 14378 | 12108 | 10243 |  |  |
| 1920 |  |  |  |  | 13412 | 14624 | 13412 | 13458 | 10708 | 9243 |  |  |
| 1940 |  |  |  |  | 11512 | 13524 | 11512 | 10958 | 9208 | 7943 |  |  |
| 2000 | 6982 |  |  |  |  |  |  |  |  |  | 7724 | 7478 |
| 2020 | 5882 |  |  |  |  |  |  |  |  |  | 6924 | 6778 |
| 2040 | 5182 |  |  |  |  |  |  |  |  |  | 5824 | 5278 |

Tuesday

|  | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 0700 |  |  |  | 6941 | 7978 | 8127 | 8127 | 6941 | 6893 | 5782 |  |  |
| 0720 |  |  |  | 8041 | 9178 | 9327 | 9327 | 8041 | 7493 | 6892 |  |  |
| 0740 |  |  |  | 9241 | 9978 | 10127 | 10127 | 9241 | 8193 | 7582 |  |  |
| 0800 | 5416 | 5867 | 6893 |  |  |  |  |  |  |  | 5867 | 5234 |
| 0820 | 5816 | 6767 | 7493 |  |  |  |  |  |  |  | 6767 | 5734 |
| 0840 | 6916 | 7367 | 8193 |  |  |  |  |  |  |  | 7367 | 6834 |

## Wednesday

|  | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1700 |  |  |  | 12123 | 13388 | 13468 | 13468 | 13388 | 12223 | 11454 |  |  |
| 1720 |  |  |  | 10703 | 12088 | 12141 | 11454 | 12088 | 11062 | 9423 |  |  |
| 1740 |  |  |  | 8123 | 10118 | 10436 | 10126 | 10504 | 10116 | 8123 |  |  |
| 1800 | 6774 | 7697 | 9923 |  |  |  |  |  |  |  | 8183 | 6982 |
| 1820 | 5836 | 6863 | 9068 |  |  |  |  |  |  |  | 6982 | 5836 |
| 1840 | 4893 | 5938 | 7697 |  |  |  |  |  |  |  | 5938 | 4938 |
| 1900 |  |  |  |  | 14812 | 15824 | 14812 | 14378 | 12108 | 10243 |  |  |
| 1920 |  |  |  |  | 13412 | 14624 | 13412 | 13458 | 10708 | 9243 |  |  |
| 1940 |  |  |  |  | 11512 | 13524 | 11512 | 10958 | 9208 | 7943 |  |  |
| 2000 | 6982 |  |  |  |  |  |  |  |  |  | 7724 | 7478 |
| 2020 | 5882 |  |  |  |  |  |  |  |  |  | 6924 | 6778 |
| 2040 | 5182 |  |  |  |  |  |  |  |  |  | 5824 | 5278 |
| 2000 |  |  |  | 8173 | 8173 | 8173 | 8173 | 8173 | 8173 | 5864 |  |  |
| 2020 |  |  |  | 7473 | 7473 | 7473 | 7473 | 7473 | 7473 | 5164 |  |  |
| 2040 |  |  |  | 5773 | 5773 | 5773 | 5773 | 5773 | 5773 | 4564 |  |  |
| 2100 | 5864 | 5864 | 5864 |  |  |  |  |  |  |  | 5864 | 5864 |
| 2120 | 5164 | 5164 | 5164 |  |  |  |  |  |  |  | 5164 | 5164 |
| 2140 | 4564 | 4564 | 4564 |  |  |  |  |  |  |  | 4564 | 4564 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

## Thursday

|  | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 0430 |  |  |  | 7437 | 7437 | 7437 | 7437 | 7437 | 7437 | 5146 |  |  |
| 0450 |  |  |  | 8137 | 8137 | 8137 | 8137 | 8137 | 8137 | 5846 |  |  |
| 0510 |  |  |  | 9137 | 9137 | 9137 | 9137 | 9137 | 9137 | 6846 |  |  |
| 0530 | 5146 | 5146 | 5146 |  |  |  |  |  |  |  | 5146 | 5146 |
| 0550 | 5846 | 5846 | 5846 |  |  |  |  |  |  |  | 5846 | 5846 |
| 0610 | 6846 | 6846 | 6846 |  |  |  |  |  |  |  | 6846 | 6846 |
| 0700 |  |  |  | 6941 | 7978 | 8127 | 8127 | 6941 | 6893 | 5782 |  |  |
| 0720 |  |  |  | 8041 | 9178 | 9327 | 9327 | 8041 | 7493 | 6892 |  |  |
| 0740 |  |  |  | 9241 | 9978 | 10127 | 10127 | 9241 | 8193 | 7582 |  |  |
| 0800 | 5416 | 5867 | 6893 |  |  |  |  |  |  |  | 5867 | 5234 |
| 0820 | 5816 | 6767 | 7493 |  |  |  |  |  |  |  | 6767 | 5734 |
| 0840 | 6916 | 7367 | 8193 |  |  |  |  |  |  |  | 7367 | 6834 |
| 2010 |  |  |  | 9387 | 11539 | 12213 | 11539 | 10753 | 9387 | 7516 |  |  |
| 2030 |  |  |  | 7526 | 10547 | 10714 | 10547 | 9147 | 7526 | 5836 |  |  |
| 2050 |  |  |  | 5884 | $93 * *$ | 9347 | $93^{* *}$ | 7637 | 5884 | 4497 |  |  |
| 2110 | 6777 | 6777 | 7516 |  |  |  |  |  |  |  | 6777 | 6777 |
| 2130 | 5449 | 5449 | 5836 |  |  |  |  |  |  |  | 5449 | 5449 |
| 2150 | 4483 | 4483 | 4497 |  |  |  |  |  |  |  | 4483 | 4483 |

## Sunday

|  | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1700 |  |  |  | 12123 | 13388 | 13468 | 13468 | 13388 | 12223 | 11454 |  |  |
| 1720 |  |  |  | 10703 | 12088 | 12141 | 11454 | 12088 | 11062 | 9423 |  |  |
| 1740 |  |  |  | 8123 | 10118 | 10436 | 10126 | 10118 | 10116 | 8123 |  |  |
| 1800 | 6774 | 7697 | 9923 |  |  |  |  |  |  |  | 8183 | 6982 |
| 1820 | 5836 | 6863 | 9068 |  |  |  |  |  |  |  | 6982 | 5836 |
| 1840 | 4893 | 5938 | 7697 |  |  |  |  |  |  |  | 5938 | 4938 |

The hundredths digit in each frequency trio gives the ID i.e. $677458364893=788$



S06s schedule - amended 7th Nov 2011


Current Cuban Skeds Heard From 0000－0700 UTC
This covers 1900－0200 local EDT in the USA （September－October 2011）

| 务 | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | 9124（SK）0600 | 5883（P） |
|  |  |  |  |  |  |  | 9063（SK）0630 |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 5898（P） | 5800（S） |  |


| ${ }_{2}^{Z}$ | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 6855（P） | 6768（S） | 13380（SK） | 11435（SK） | 5883（P） |
|  |  |  |  | 5800（） | 5117（） | 12180（SK）（？） | 11532（SK）（？） |  |
|  |  |  |  |  | 4174（？） |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  | 6376（） |  | 5898（P） | 5800（S） |  |


| $\underset{y}{1}$ | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 6768（） | 12120（SK） |  | 5883（P） |
|  |  |  |  |  | 5117 （） | 13380（SK） |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  | 6380（） |  | 5898（P） | 5800（S） |  |


| $\begin{aligned} & 0 \\ & 3 \\ & \hline \end{aligned}$ | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | 12120（SK） | 11435（SK） | 5800（SK） |
|  |  |  |  |  |  | 13380（SK） | 11532（SK） |  |
|  |  |  |  |  |  |  | 9063（SK）0600 |  |
|  |  |  |  |  |  |  | 5898（SK）0630 |  |
|  |  |  |  |  |  | 5810（P）（？） | 5810（S）（？） | 9153（P） |


| 号 | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | 13380（SK） | 9124（SK）0600 | 5883（P） |
|  |  |  |  |  |  | 12120（SK） | 9063（SK）0630 |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  | 8009（P） | 8009（S） |  |  |  |
|  |  |  | 9620（） | 10445（P） | 11565（S） | 5898（P） | 5800（S） |  |


| 爻 | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 6768（P） | 5417（S） |  |  | 12120（SK） | 11435（SK） | 5883（P） |
|  |  | 4028（） |  |  |  | 13380（SK） | 11532（SK） |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 5898（P） | 5800（S） | 9153（P） |


| $\underset{~ E ~}{k}$ | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 6768（P） | 5417（S） | 6855（） |  |  | 11435（SK） | 5883（P） |
|  |  |  |  |  |  |  | 11532（SK） |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 5898（P） | 5800（S） |  |

New possible skeds found：
Monday 0300z／6376－6380m M08a
Monday 0400z／4174m V02a
Friday 0100z／4028m V02a
Thanks

| $\underset{\sim}{Z}$ | 0800 | 0900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5898(S) |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  | 10432(P) | 9112(S) | 4478() |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { Z } \\ & \sum_{z}^{0} \end{aligned}$ | 0800 | 0900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
|  | 5898(S) |  |  |  |  |  |  |  |
|  | 8186(SK) | 9063(SK) |  |  |  |  |  |  |
|  |  |  |  |  |  | 8096(P)(?) | 8096(S)(?) |  |
|  |  |  | 7680(?) |  |  | 12116(P) | 12134(S) |  |
|  |  | 10432(P) | 9112(S) |  |  |  |  |  |


|  | 0800 | 0900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5898(S) |  | 8186(SK)1000 |  |  |  |  |  |
|  | 8180(SK) | 8180(SK) | 7890(SK)1030 |  |  |  |  |  |
|  |  | 5947(SK)0900(?) |  |  |  |  |  |  |
|  |  | 5930(SK)0930(?) |  |  |  |  |  |  |
|  |  |  |  |  |  | 12214(P) | 13374(S) |  |


| $\begin{aligned} & 0 \\ & 3 \\ & \hline \end{aligned}$ | 0800 | 0900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5800(SK) | 9040(P) | 9240(S) |  |  |  |  |  |
|  | 8186(SK) | 9063(SK) |  |  |  |  |  |  |
|  |  |  |  |  |  | 8096(P)(?) | 8096(S)(?) |  |
|  |  |  |  |  |  | 10714(P) | 10857(S) |  |
|  | 9063(S) | 9153(?) |  |  |  |  |  |  |


| 寻 | 0800 | 0900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5898(S) |  | 8186(SK)1000 |  |  |  |  |  |
|  | 8180(SK) | 8180(SK) | 7890(SK)1030 |  |  |  |  |  |
|  |  | 5947(SK)0900(?) |  |  |  |  |  |  |
|  |  | 5930(SK)0930(?) |  |  |  | 12116(P) | 12134(S) |  |
|  |  |  |  |  |  |  |  |  |


| $\underset{\sim}{x}$ | 0800 | 0900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5898(S) |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 8096(P)(?) | 8096(S)(?) |  |
|  |  |  |  |  |  | 12214(P) | 13374(S) |  |
|  | 9063(S) | 10432(P) | 9112(S) | 4478() |  |  |  |  |


| E | 0800 | 0900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5898(S) | 9040(P) | 9240(S) |  |  |  |  |  |
|  | 8186(SK) | 9063(SK) |  |  |  |  |  |  |
|  | 5883(SK) | 5947(SK)0900(?) |  |  |  |  |  |  |
|  |  | 5930(SK)0930(?) |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  | 4478() |  |  |  |  |

New skeds found:
Monday 1000z / 7680m M08a
Thanks

| 䂞 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| ${ }_{\text {z }}^{\text {z }}$ | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|  | 6768（SK） |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  | 6785（P） | 7554（S） |  | 7519（P） | 8009（S） |
|  |  |  | 8097（P） | 8097（S） |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 留 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|  | 6768（SK） |  |  | 12180（P） | 13380（S） |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  | 6785（P） | 7554（S） |  | 7526（P） | 8135（S） |
|  |  |  |  |  |  |  |  |  |
| $\stackrel{1}{3}$ | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|  | 6768（SK） |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  | 6785（P） | 7554（S） |  | 7519（P） | 8009（S） |
|  |  |  | 8097（P） | 8097（S） |  | 6932（P） | 6854（S） |  |
|  |  |  |  |  |  |  |  |  |
| 号 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|  | 6768（SK） |  |  | 12180（P） | 13380（S） |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  | 6785（P） | 7554（S） |  | 8009（P） | 8135（S） |
|  |  |  |  |  |  | 6932（P） | 6854（S） |  |
|  |  |  |  |  |  |  |  |  |
| 品 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|  | 6768（SK） |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  | 6785（P） | 7554（S） |  | 7519（P） | 8135（S） |
|  |  |  | 8097（P） | 8097（S） |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| $\stackrel{E}{E}$ | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  | 6785（P） | 7554（S） |  |  |  |
|  |  |  | 8097（P） | 8097（S） |  |  |  |  |

## Notes：

Skeds in MCW mode indicated in shaded cell．
V2a skeds are indicated in italic fonts．
M8a skeds are indicated in normal fonts．
The primary or first sked is indicated with（ P ）．
The secondary，second or repeat sked is indicated with（S）．
All skeds normally begin on the hour．
Frequencies listed as（），denote primary or secondary sked not determined．
Frequencies listed without（），denotes a possible sked．
Skeds with（？）have not been heard in over two months．

## SK01 notes：

At present SK01 seems to be using exclusively RDFT mode．
－－Updated October 31，2011－

## Cuban Desk Contributors：

XPA e [MFSK-20 Russian Intelligence Multitone System] 10 bd

1. 1900z 11576kHz 2. 1920z: 10476kHz 3. 1940z: 9276kHz ID542 Mode: USB [Tue/Thu]

ID/msg/serial no/gc/dk/end grp
01Thu $\quad 542100764000638056271134$ 06Tue $\quad 542100942001759435075744$ 08Thu 542100942001759435075744 13Tue 542100593001599077440225 15Thu 542100593001599077440225 20Tue 542100583001130364734730 22Thu 542100583001130364734730 27Tue $\quad 542100793002091332941067$ 29Thu $\quad 542100793002091332941067$

## XPA e 1900 z Evening schedule

Variable, fair to strong; occasional unusable sendings.

XPA d [MFSK-20 Russian Intelligence Multitone System] 10 bd

1. 1400z: $10267 \mathrm{kHz} 2.1420 \mathrm{z}: 9167 \mathrm{kHz} 3.1440 \mathrm{z}: 7967 \mathrm{kHz}$

ID219 Mode: USB [Sun/Tue]
ID/msg/serial no/gc/dk/end grp 04Sun 21900009459000010000010140 06Tue 21900008265000010000010140 11Sun 21900009459000010000010140 13Tue 21900008265000010000010140 18Sun 21900009947000010000010140 20Tue 21900008266000010000010140 agssin

27Tue 219100186000875947232230
Reasonable strength, some fades otherwise no problems

XPA b [MFSK-20 Russian Intelligence Multitone System] 10bd

1. 0440 z 6928kHz $\quad 2.0500 \mathrm{z}: 8128 \mathrm{kHz} \quad$ 3. $0520 \mathrm{z}: 9328 \mathrm{kHz}$ ID913 Mode: USB [Tue/Thu]

## ID/msg/serial no/gc/dk/end grp

01Thu 913100210008175035222142 06Tue 913100678007737148255223 08Thu 931100312006893261375512 13Tue 913100495009632195593866 15Thu 91300003759000010000010140 20Tue 91300003759000010000010140 22Thu 91300005343000010000010140 27Tue 913100546003615181357501 29Thu 913100546003615181357501

XPA b Schedule
Very strong throughout schedule
October2011
XPA［MFSK－20 Russian Intelligence Multitone System］ 10 bd
1．1900z $9362 \mathrm{kHz} 2.1920 \mathrm{z}: 8062 \mathrm{kHz}$ 3．1940z：7462kHz
ID491 Mode：USB［Tue／Thu］
ID／msg／serial no／gc／dk／end grp

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[^1]XPA［MFSK－20 Russian Intelligence Multitone System］ 10 bd
1．1400z： $8167 \mathrm{kHz} 2.1420 \mathrm{z}: 7467 \mathrm{kHz} 3.1440 \mathrm{z}: 6867 \mathrm{kHz}$
$\stackrel{\rightharpoonup}{\square}$
［2m26s］
［2m26s］
［3m34s］
［2m26s］
04Tue 91700009574000010000010140
11Tue 91700009574000010000010140 16Sun Split freq tx
18Tue 917100758001198723924566 23Sun Split freq tx
25Tue 91700009974000010000010140


[^2]

Strong across the schedule．
＊Note $18 / 10$ as heard during the arrest of two German spies Heidrun and Andreas Anschlang．．Reported as
listening to NS with peculiar musical marker－pc
0440 was 0640 in Berlin；still dark and XPAb only NS with a message being sent at that time．

## SPECIAL MATTERS:

Operation Jallaa:
2

## MESSAGES:

E [sorry for D] Thanks for letter etc. Hope all ok with you. All's well here. Rest in next NL.

## RELEVANT WEBSITES

ENIGMA 2000 Website

Frequency Details can be downloaded from:
More Info on 'oddities' can be found on Brian of Sussex' excellent web pages:
Time zone information:
Encyclopedia of Espionage, Intelligence, and Security

EyeSpyMag!
http://www.enigma2000.org.uk
http://www.cvni.net/radio/
http://www.brogers.dsl.pipex.com/page2.html
http://www.timeanddate.com/library/abbreviations/timezones/
http://www.espionageinfo.com/


## 2012

| January |  |  |  |  |  |  |  |  |  | bru | ruar |  |  |  |  |  |  | arc |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Su M Tu W Th F Sa |  |  |  |  |  |  | Su M Tu W Th F Sa |  |  |  |  |  |  |  | Su M Tu W Th F |  |  |  |  |  |  |  |
|  | 2 | 3 | 4 | 5 | 6 |  |  |  |  |  | 12 | 2 |  |  |  |  |  |  | 1 |  |  |  |
|  | 9 | 10 | 11 | 12 | 131 |  |  | 6 | 7 | 78 | 89 | 910 | 10 |  | 4 | 5 | 6 |  | 8 | 9 |  | 10 |
|  | 16 | 17 | 18 | 19 | 20 |  | 12 | 13 | 14 | 14 | 1516 | 1617 | 7 |  | 11 | 12 | 13 | 14 | 15 | 16 |  | $17$ |
|  | 23 | 24 | 25 | 26 | 27 |  |  | 20 | 21 | 2122 | 2223 | 2324 | 2425 |  | 18 | 19 | 20 | 21 | 2 | 2 |  |  |
| 29 | 30 | 31 |  |  |  |  |  | 27 | 28 | 28 | 29 |  |  |  | 25 | 26 | 27 | 28 | 29 | 93 |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| April |  |  |  |  |  |  | May |  |  |  |  |  |  |  | June |  |  |  |  |  |  |  |
| S M T W Th F Sa |  |  |  |  |  |  | S M T W Th F Sa |  |  |  |  |  |  | Su M Tu W Th F |  |  |  |  |  |  |  |  |
| 1 | 2 | 3 | 4 | 5 | 67 |  |  |  | 1 | 12 | 23 | 3 | 4 |  |  |  |  |  |  |  |  |  |
| 8 | 9 | 10 | 11 | 12 | 13 |  | 6 | 7 | 8 | 89 | 910 | 10 | 1112 |  | 3 | 4 | 5 | 6 | 7 | 8 |  | 9 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 | 13 | 14 | 15 | 1516 | 1617 | 17 | 1819 |  | 10 | 11 | 12 | 13 | 14 | 15 |  |  |
| 22 | 23 | 24 | 25 | 26 | 27 |  |  | 21 | 122 | 222 | 2324 | 2425 | 25 |  | 17 | 18 |  | 20 | 2 | 22 |  |  |
|  |  |  |  |  |  |  | 27 |  | 29 | 2930 | 3031 | 31 |  |  | 24 | 25 | 26 | 27 | 28 |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| July |  |  |  |  |  |  | August |  |  |  |  |  |  |  | September |  |  |  |  |  |  |  |
| Su M Tu W Th F Sa |  |  |  |  |  |  | Su M |  | Tu W Th F Sa |  |  |  |  | Su M Tu W Th |  |  |  |  |  |  | F |  |
|  | 2 | 3 | 4 | 5 | 67 |  |  |  | 1 |  |  |  |  |  |  |  |  |
|  | 9 | 10 | 11 | 12 | 131 |  | 5 | 6 |  |  |  |  |  | 7 | 78 | 89 | 910 | 10 |  | 2 | 3 | 4 | 5 | 6 |  |  |  |
|  | 16 | 17 | 18 | 19 | 20 |  | 12 |  | 14 | 415 | 1516 | 1617 | 18 |  | 9 | 10 | 11 | 12 | 13 |  |  |  |
| 22 | 23 | 24 |  |  |  |  |  |  |  |  | 2223 | 2324 | 2425 |  | 16 | 17 | 18 |  |  |  |  |  |
|  | 30 |  |  |  |  |  |  |  |  |  | 2930 | 3031 |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 30 |  |  |  |  |  |  |  |
| October |  |  |  |  |  |  | November |  |  |  |  |  |  | December |  |  |  |  |  |  |  |  |
| Su M Tu W Th F Sa |  |  |  |  |  |  | Su M Tu W Th F Sa |  |  |  |  |  |  | Su M Tu W Th F |  |  |  |  |  |  |  | Sa |
|  | 1 | 2 | , | 4 | 5 |  |  |  |  |  |  | 12 | 2 |  |  |  |  |  |  |  |  | 1 |
| 7 | 8 | 9 | 10 | 11 | 12 |  | 4 | 5 | 6 | 67 | 78 | 89 | 910 | 10 | 2 | 3 | 4 | 5 | 6 |  |  | 8 |
| 14 | 15 | 16 | 17 | 18 | 19 |  | 11 | 12 | 13 | 114 | 1415 | 1516 | 17 |  | 9 | 10 | 11 | 12 | 13 | 14 |  | 15 |
| 21 | 22 | 23 | 24 | 25 | 26 |  | 18 |  | 20 | 2021 | 2122 | 2223 | 232 |  | 16 | 17 | 18 | 19 | 20 |  |  |  |
|  | 29 | 30 | 31 |  |  |  | 25 |  | 27 | 2728 | 2829 | 2930 |  |  | 23 | 24 |  | 26 | 27 |  |  | 29 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |


[^0]:    * Moved to: 9229, 10239, 10511, 10521, 10542, 10605, 10629, 10656, 10729, 10783, 10816, 10859, 10860, 10870, 10922, 10935, 10936, 10950, 11032, 11061, $11090,11569 \mathrm{kHz}$, all with S9+, time difference approx. 30 seconds, ending 0745 UTC.
    ** Break of 1 minute, between 2025 and 2026 UTC $2^{\text {nd }}$ TX with mixed tones.

[^1]:    XPA e 1900 z Evening schedule
    Fair sendings but gross weak sending on 1900z freq 27／10

[^2]:    XPA d Afternoon schedule
    Split freqs used．［not looked for］．
    Rest of sendings fair．

