## ENIGMA 2000 NEWSLETTER


http://www.enigma2000.org.uk


During the Cold War Britain's 'Y' Service continued unabated within its Empire. Most Military airfields had this facility as did some Embassies. Intercept officers supplied analysts and linguists with their material; trained at special Language Schools they contributed as much as the others to National Security.

A readable book, 'Secret Classrooms' by Geoffrey Elliott and Harold Shukman outlines the training and postings adequately.

A new ebook, recently published and available via Amazon, 'Special Operator: The rise and fall of a cut price spy' takes one through training, travel and duties of the intercept officer.

Those who have served thus will recognise many facets of the subject in this recommended read.

ISSUE 92
January 2016
http://www.enigma2000.org.uk

## January 2016!

Best wishes to our readers for the forthcoming year.
Members will doubtless be pleased to learn that work continues on an updated Control List; with this occurring slight changes will also be noted within our 'Chart's Section' and to some reports within the newsletter.

Within the Number Station scene over the last two months, the expected shift to lower frequencies for the winter observed with schedules operated by Ivan, S06 using similar frequencies to those used in January and February, E07 using the same frequencies as in past years and still suffering from low audio for much of the time. On the last Sunday of November the 1800 Z E07 transmitted a message of 1645 F groups, somewhat longer than usual and with a total transmit time of about 19 minutes.

HM01 from Cuba remains variable in signal strength and as we have gone into the second week of December there have been days when nothing heard on 11,635 and 11,462 on Saturdays, Tuesdays and Thursdays when these frequencies are expected to be active in the UK morning. Also noted the same six 5 Fs being used for several days at the end of November and into December.

Morse stations:- The M51 variant "FAV22" continues at high levels of activity on 6,825 and 3,881 , including over the weekend of $14^{\text {th }}$ and $15^{\text {th }}$ of November, the days following the tragic events in Paris on the $13^{\text {th }}$.

Mystery CW beacon:- I don't know what this is, probably nothing to do with the espionage trade, but comes under the general heading of "weird" First noted at the end of October:-
31-Oct-15, Thursday:- 1626 UTC, $10,237 \mathrm{kHz}$, point something, I think, a slow Morse transmission, found while tuning around with the receiver in the AM mode, at first assumed it was one of those Single Letter Transmission clusters but upon switching to CW discovered it wasn't. It was sending, "JO62SK common and precious JO62SK 5W dipole..."

What is that all about? I thought at first that it must be a beacon in the 30 metre amateur band then realised that this is nowhere near 30 metres Whatever it is, it has been heard every day throughout November and December, at least in daylight hours, becomes weak towards sunset and is inaudible in the hours of darkness. If the "JO62SK" is an amateur radio QTH locator I guess that puts it well into mainland Europe, and if it is using just five watts it is doing well. Often up to an indicated S 7 or so and at its strongest can be received on the little E5 portable with the whip antenna. Difficult to fathom the meaning of, "Common and precious", though.

## Possible New Number Station [V28]

There is a possible new numbers station (or maybe 2) out of Asia that has periodically been reported on a few different lists for the last few weeks.
The station appears to be Korean language. It uses both an OM and YL voice. The schedule seen so far is roughly 3277 kHz , AM mode, at 1330 UTC.
I have a bad video of the station here, there are two audio dropouts as I did not realize the audio was being muted when I clicked away from the window. The station is extremely weak at my location, so I used a Japanese remote to record.
https://www.youtube.com/watch?v=qVjzCn9QuCA
Possibly connected, and not yet reported as near as I can tell, was a follow on CW station. Unfortunately I did not get a recording of this station although I did hear the last minute or so of it. The station may have started within a minute of the end of the voice station. The station appears to be CW, 4 f , cut numbers, about 20 WPM.

What I copied at the end (conditions were not great, as I was not on a remote at the time, but rather on my receiver with the weak signal). (?) are characters I am not sure about, fades or noise possibly causing me to hear the wrong thing so I have replaced them with (?) instead of my guess.

## 54 T766 DN6U D7DA 4643

73ND 3D3N 34DD U64(?) (?)N46
UDU4 54D4 7DD5 663T 6DT5
D4T7 764N DU74 T457 7NA6
(?)DUUTTU3
AR K

## Thanks T!



Those of you who read the front cover will have read the title 'Special Operator: The rise and fall of a cut price spy' which is a new ebook, recently published and available via Amazon for your 'Kindle, Tablet, iPad' or whatever.
I was fortunate in being asked to read the draft and given the subject matter I jumped at the honour. A well written work it takes one through training, travel and duties of the intercept officer and places the reader in the set room. For those of us of a certain age the descriptive writing conjoured up the unique smell of valves [tubes] running efficiently and hot, the warmth of the set cases and so on.
Extremely humorous and equally informative the author takes the reader on a trip around certain parts of the globe where Great Britain had signals units that were employed in the collection of SIGINT, its analysis and ultimate contribution into what has evolved today as the world's greatest intelligence machine.
Members of ENIGMA2000 and other like groups will often be told that Morse is obsolete but in this book you will discover within the first few pages that wireless interception of Morse signals [!] is still carried out; the author making reference to the various modes used with 'illicit' transmissions which come from Europe, China, Cuba, Russia etc. An excellent read for the Number Station enthusiast available from Amazon on both sides of the Atlantic.

## Morse Stations

All frequencies listed in kHz. 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.

## Morse - Number Stations

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

## November 2015:

| 5320 | 1800z | 03 Nov | '197' $34530=$ | 56673... | ...LG $02691==$ | Good. Ends 1809z (Note 1) | HFD/JkC | TUE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1800z | 05 Nov | '197' $56830=$ | 10524... | ...LG $48460==$ | Ends 1808z (Note 2) | AB/JkC | THU |
|  | 1800z | 10 Nov | '197' $46730=$ | 26264.. | ...LG $03830=$ = | Weak. Ends 1809z | JkC | TUE |
|  | 1800z | 12 Nov | '197' $50530=$ | 23233 .. | ...LG $38353=$ = | Good. Ends 1809z | JkC | THU |
|  | 1800z | 17 Nov | '197' $92630=$ | 34961... | ...LG $63709=$ = | Fair. Ends 1810z (Note 3) | JkC | TUE |
|  | 1800z | 19 Nov | '197' $23430==$ | 22954... | ...LG $25676=$ = | Fair, Ends 1808z | JkC | THU |
|  | 1800z | 24 Nov | '197' $38930=$ | 85200 .. | ...LG $15432=$ = | Good, fast. Error in grp24 | BR/JkC | TUE |
| 4490 | 2000z | 03 Nov | '197' $46130=$ | 99135... | ...LG $49003==$ | Strong, Fast. Excellent CW. Perfect sending! | BR | TUE |
|  | 2000z | 05 Nov | '197' $18630==$ | 95518... | ...LG 17873 = | Fair, fast . Excellent CW | BR/JkC | THU |
|  | 2000z | 10 Nov | '197' $13130==$ | 44961... | ...LG $73031=$ = | Good, med-fast. | BR/HFD/JkC | TUE |
|  | 2000z | 12 Nov | '197' $09030=$ | 73061... | ...LG $21840=$ = | Strong, fast. Numerous errors | BR | THU |
|  | 2000z | 17 Nov | '197' $80730=$ | 46655... | ...LG $49530=$ = | Fair. Ends 2010z | JkC | TUE |
|  | 2000z | 19 Nov | '197' $65430=$ | 55943... | ...LG $14926=$ = | Strong, Fast. | BR | THU |
|  | 2000z | 24 Nov | '197' $80330=$ | 53343 .. | ...LG $11265=$ = | Good. Ends 1805z | JkC | TUE |
|  | 2000z | 26 Nov | '197' $72930=$ | 62777... | ...LG $30621=$ = | Fair > Weak, fast. Poor copy | BR | THU |
| 5465 | 0700z | 01 Nov | '197' $11330=$ | 53920... | ...LG $58792==$ | Weak, fast. Excellent CW. | BR | SUN |
|  | 0700z | 08 Nov | '197' $25530==$ | 33968... | ...LG $53 \ldots==$ | Fair, v.fast. Breaking sig in places inc. LG | BR | SUN |
|  | 0700z | 15 Nov | '197' $83730==$ | 82033... | ...LG $28683==$ | Weak, v.fast. Speed increased during call-up | BR | SUN |
|  | 0700z | 22 Nov | '197' $99330=$ | 51693... | ...LG $94458=$ | Good, fast. Three repeat errors noted | BR | SUN |
|  | 0700z | 29 Nov | '197' $88730==$ | 20324... | ...LG $71428=$ | Weak < Good, fast. Error on grp01 | BR | SUN |
| 5810 | 1500z | 07 Nov | '197' $14630=$ | 96587... | ...LG 94523 = = | Fair. Ends 1510z 29 grps sent | E.SMITH/HFD/JkC | SAT |
|  | 1500z | 14 Nov | '197' $13430==$ | 92219... | ...LG $30755=$ | Good, fast. Poor copy due to XJT QRM | BR | SAT |
|  | 1500 z | 21 Nov | '197' $44430=$ | . . . .... | ...LG $02635=$ = | Fair, fast. Swamped by XJT signal HF | BR | SAT |
|  | 1500z | 28 Nov | Extreme QRM fro | XJT transı | ssion. No copy |  | BR | SAT |

(Note 1) Reusing groups again. GR 21-30 here are the same as GR 21-30 M01 2000z 01 Oct 2015 (JkC)
(Note 2) Reusing groups again. GR1-10 are GR21-30 from 26/06/14, 2000z, and GR 11-20 are almost exactly the same as GR1-10 M01 01/10/15, 1800z. (JkC)
(Note 3) Too poor for full transcript, but GR1-20 appear to be the same as GR11-30 of M01 15/04/2014 (JkC)

## December 2015:

| 4490 | 2000z | 01 Dec | '197' $11330==$ | 06351... | ...LG $65904=$ = | Weak. Ends 2009z (Note 4) | JkC | TUE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2000z | 03 Dec | '197' $74030==$ | 52634... | ...LG $08633=$ = | Good - No errors / V.Weak | BR/JkC | THU |
|  | 2000z | 08 Dec | '197' $00530==$ |  | .LG | Weak > V.Weak, med-fast. Mostly unreadable | BR | TUE |
|  | 2000z | 10 Dec | '197' $37730=$ | 28393... | ...LG $14926=$ = | Fair, fast. Only one DK sent at end of msg | BR | THU |
|  | 2000z | 15 Dec | '197' $74230==$ | 27771... | ...LG $53160=$ = | Fair, fast. Only 29 grps sent | BR | TUE |
|  | 2000z | 17 Dec | '197' $98730=$ | 22954... | ...LG $98604=$ = | Weak > Strong, Fast. Strong sig during msg | BR | THU |
|  | 2000z | 22 Dec | '197' | 9 | ...LG $88587==$ | Weak, irregular. Poor copy due to QSB | BR/JkC | TUE |
|  | 2000z | 24 Dec | '197' $80330==$ | 89129... | ..LG $05906==$ | Weak, med-fast. | BR/JkC | THU |
|  | 2000z | 29 Dec | '197' $14630==$ | 62397... | ...LG $65071=$ = | Fair, med-fast. Numerous errors noted | BR | TUE |
|  | 2000z | 31 Dec | NRH |  |  |  | BR | THU |
| 5320 | 1800z | 01 Dec | '197' $34330==$ | 59535... | ...LG $65071==$ | Weak, fast. Error in grp 15 | BR | TUE |
|  | 1800z | 03 Dec | '197' $20530==$ | 19189... | ...LG $33.41==$ | Weak, fast. Copy difficult at times | BR | THU |
|  | 1800z | 08 Dec | '197' $83430==$ | 28495... | ...LG $81505=$ = | Fair > Weak, med-fast. Poor copy at times | BR | TUE |
|  | 1800z | 10 Dec | '197' $18630==$ | 46735... | ...LG $43641=$ = | Fair, fast. Error in grp16 | BR | THU |
|  | 1800z | 17 Dec | '197' $50530==$ | $27.09 . .$. | ...LG $12514=$ = | Fair > Weak, Fast. Irregular with pauses | BR | THU |
|  | 1802z | 22 Dec | '197' $18330==$ | 55943... | ...LG $24851=$ = | Fair, fast. Late call-up. Error in grp29 | BR | TUE |
|  | 1800z | 24 Dec | '197' $61830==$ | 12776 .. | ..LG $11939==$ | Fair. Ends 1811z | AB/JkC | THU |
|  | 1800z | 29 Dec | '197' $25830==$ | 06351... | ...LG. $6619==$ | Weak, slow. Poor copy. Errors noted | BR | TUE |
|  | 1800z | 31 Dec | NRH |  |  |  | BR/JkC | THU |
| 5465 | 0700z | 06 Dec | '197' $24130==$ | 86183... | ...LG $49475=$ | Weak, fast. Grp05 sent once only | BR | SUN |
|  | 0700z | 13 Dec | '197' $36730==$ | 57368... | ...LG 82462 = = | Fair, fast. Irregular with many pauses | BR | SUN |
|  | 0700z | 20 Dec | '197' $36930==$ | 07157... | ...LG $02626=$ = | Fair, fast. Corrected error grp23 | BR | SUN |
|  | 0703z | 27 Dec | '197' $63730==$ | 88481... | ...LG $55134=$ = | Late start. Numerous errors (Note 5) | JkC | SUN |
| 5810 | 1500 z | 12 Dec | '197' $08330=$ | 63601... | ...LG $50672=$ | Fair, fast. Copy difficult at times | BR/Schorschi | SAT |
|  | 1503 z | 19 Dec | '197' $50630==$ | 21523... | ...LG 83. . $3==$ | Fair, fast. Late start. Numerous errors | BR | SAT |
|  | 1500z | 26 Dec | '197' $11930==$ | 54820... | ...LG $06755=$ = | Weak / Fair, fast. Several errors noted | BR | SAT |

(Note 4) Again reusing groups GR1-10 equal M01b GR1-10, 19/06/14, GR11-12 are GR31-32 of the same M01b, and GR21-30 are the almost same as GR2130 M01b 05/05/14 (JkC)
(Note 5) Re-using M01b groups - GR1-22 are GR 11-32 of M01b 05 May 2014 (JkC)

## M01 5320kHz 1800z 05 Nov15

197 (R4m) $56856830 \quad 30==$

1052431132064947138301915
4352463035502547008649003
0115043586958220137214057
2178486041470880416001162
4933894430285591126545215 7246023061344917845548460 = =
$568 \quad 568 \quad 3030 \quad 000$

Courtesy AB/JkC

M01a (formerly end of month TXs, now random) No Reports

M01b
November 2015:


December 2015:


11 De

## M01 4490Hz 2000z 17 Nov15

$197(\mathrm{R} 4 \mathrm{~m}) \quad 8078073030==$

4665560982021741065475594
4776604715294582614583545
0696433277560973819029370
1005311031684525984565651
2066511307662750341503600
7570289725058591753149530
$=$
$807807 \quad 3030 \quad 000$

Courtesy JkC

## M01 4490Hz 2000z 01 Dec15

197 (R4m) $1131133030==$

0653125664244028600247320 8944924521726788365350467 6239735680903605990692248 8682761063526009443909691 7111986607454145061101485 3321212543107948393165904 = =
$1131133030 \quad 000$

Courtesy JkC


M01b 2435//3520kHz 1910z 07 Dec15 $853(\mathrm{R} 4 \mathrm{~m}) 691691 \quad 5454==$

3532208807170535861403490 8469854562046484310858047 7465527683628516780531339 5724261799709663432613390 5340708279060348363757445 9807165899739235807357855 9664302660617774187048822 9309431116971480553251712 6505593468915380829274384 9270741952565983719960106 $38253908715025192315==$
$6916915454 \quad 000$
Courtesy JkC

## M01c

No reports

M03 III ICW, some CW

| 4505 | 1320-1323z | 02 Nov | $543 / 00=000$ | V.Weak | BR/HFD | MON |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1320-1323z | 04 Nov | $543 / 00=0000$ | Good | E.SMITH/JkC | WED |
|  | 1320-1323z | 11 Nov | $543 / 00=0000$ | Unreadable / Fair | E.SMITH/JkC | WED |
|  | 1320-1338z | 23 Nov | $541 / 36==82175$ | ... $85125=000$ Weak | JkC | MON |
|  | 1320-1323z | 02 Dec | $543 / 00=000$ | Fair | JkC | WED |
|  | 1320-1323z | 07 Dec | $543 / 00=0000$ | Good/Fair | AB/E.SMITH/JkC | MON |
|  | 1320-1323z | 09 Dec | $543 / 00==000$ | Fair | AB/JkC | WED |
|  | 1320z | 14 Dec | $543 / 00==000$ | (VVV at 1314 UTC) | AB | MON |
| 4828 | 1320-1335z | 05 Nov | $430 / 30=52050$ | .. $50898=0000$ Fair | HFD/JkC/JPL | THU |
|  | 1320-1334z | 08 Nov | $430 / 30=52050$ | 22297 ..... $9042250898==000$ | E.SMITH | SUN |
|  | 1320-1323z | 12 Nov | $437 / 00==000$ |  | E.SMITH/JkC | THU |
|  | 1320-1323z | 03 Dec | $437 / 00=000$ | Fair / Good | AB/BR/JkC | THU |
|  | 1320-1337z | 13 Dec | $432 / 33==3444$ | ... $70856=000$ Fair | JkC | SUN |
|  | 1320-1323z | 17 Dec | $437 / 00==000$ | Fair (VVV at 1312 UTC) | AB/JkC | THU |
|  | 1320-1323z | 31 Dec | $437 / 00=000$ | Weak | AB/JkC | THU |

## Comparison between POL FSK \& M03 messages 1305z \& 1320z 05 November

|  | POL FSK |  |
| :---: | :---: | :---: |
| 4505 kHz | $1305 \mathrm{z} \quad 05$ Nov15 |  |

04370437043704370437 8888888888
5205022297751330368398465 7588903954098826862614500 5798952090474421738021452
Another stutter gı 2508404028522758312676468 4493627237799845684409749 3516051355600079042250898
We susp featured 00034 (

8888888888
0003400034

## MORSE M03

4828 kHz 1320z 05 Nov15
$437 / 30(\mathrm{R} 3 \mathrm{~m})==$
5205022297751330368398465 7588903954098826862614500 5798952090474421738021452 2508404028522758312676468 4493627237799845684409749 3516051355600079042250898
Msg length + 4
ead of 00037). ] $=437 / 30($ R5 $)=$
(single group repeat)
$=000$

| from Jim (JkC). | 520502229775133 | 03683 | 98465 | additional |
| :---: | :---: | :---: | :---: | :---: |
|  | 758890395409882 | 68626 | 14500 |  |
|  | 579895209047442 | 17380 | 21452 |  |
|  | 250840402852275 | 83126 | 76468 |  |
| $\therefore$ | 449362723779984 | 56844 | 09749 |  |
| $\begin{aligned} & \text { (Msg length + } 4 \\ & \text { ead of 00037). 1 } \end{aligned}$ | 351605135560007 | 90422 | 50898 | ie example ct count of |
|  | $\begin{aligned} & =437 / 30(R 5)= \\ & (\text { single group repeat }) \\ & =000 \end{aligned}$ |  |  |  |
|  |  | our | Jk |  |

Courtesy JkC



## M08a XVIII ICW / CW, some MCW

The Internet Gremlins conspired to prevent the September \& October M08a report \& logs from appearing in the last newsletter, so we are pleased to include them here, along with the latest report \& logs for November \& December below. Our apologies for the delay.

## Report for Sept / Oct 2015:- AnonUS

M08a continued with its usual three daily schedules. During part of October a very loud hum was present which at times drowned out the Morse. Presumably this was some sort of transmitter problem.

As always, the weekend schedules when present used the same call-ups every time which has been the same for quite some time now. HM01 was present, audible in LSB mode on several occasions either mixing with the Morse or in place of the Morse traffic. Quite frequently a carrier (or transmitter hum) was heard but there was no Morse transmitted.

On several occasions all three call-ups ended with the same digit, whereas usually it is a mix of 1 and 2 . Interestingly, when we do the analysis of spacings between the numbers the middle digit of the second and third call-ups is the same. Review of previous months' logs showed this to always be the case. The same phenomenon appears sometimes even if the last digits are not the same.

## September 2015:

| 7554 | 2000z | 01 Sep | [71831 8426107582 ] |  | AnonUS | TUE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2000z | 02 Sep | Brief carrier but no M |  | AnonUS | WED |
|  | 2000z | 03 Sep | [31422 44741 67172] |  | AnonUS | THU |
|  | 2000z | 04 Sep | [06241 10562 32001] |  | AnonUS | FRI |
|  | 2000z | 05 Sep | [18262 22501 35022] | Usual weekend call-ups | AnonUS | SAT |
|  | 2000z | 06 Sep | Noisy carrier but no | orse | AnonUS | SUN |
|  | 2000z | 07 Sep | Noisy carrier but no M | orse | AnonUS | MON |
|  | 2000z | 08 Sep | [83772 06101 10432] |  | AnonUS | TUE |
|  | 2000z | 10 Sep | [78262 8250105022 ] |  | AnonUS | THU |
|  | 2000z | 13 Sep | [18262 2250135022 ] | Usual weekend call-ups | AnonUS | SUN |
|  | 2000z | 14 Sep | Carrier but no Morse |  | AnonUS | MON |
|  | 2000z | 15 Sep | [75811 88242 02662] |  | AnonUS | TUE |
|  | 2000z | 16 Sep | Up late in progress |  | AnonUS | WED |
|  | 2000z | 17 Sep | [3123144661 56082] |  | AnonUS | THU |
|  | 2000z | 19 Sep | [18262 2250135022 ] | Usual weekend call-ups | AnonUS | SAT |
|  | 2000z | 20 Sep | [18262 2250135022 ] | Up late but started with the usual weekend call-ups | AnonUS | SUN |
|  | 2000z | 21 Sep | Carrier but no Morse | $y 2005 z$ | AnonUS | MON |
|  | 2000z | 22 Sep | [65642 78071 82302] |  | AnonUS | TUE |
|  | 2000z | 25 Sep | [06351 10682 23011] | Came up first at 1948z with $\mathbf{1 2 3 4 5} \mathbf{6 7 8 9 0}$ repeated for 3 minutes | AnonUS | FRI |
|  | 2000z | 26 Sep | $\text { [18262 } 2250135022 \text { ] }$ | Up late in progress ending 2042 z with AR AR AR SK followed immediately by a repeat of the call-ups | AnonUS | SAT |
|  | 2000z | 29 Sep | Up late, too weak to cop |  | AnonUS | TUE |
| 8009 | 2300z | 02 Sep | [20611 32041 45462] |  | AnonUS | WED |
|  | 2300z | 05 Sep | Up late in progress |  | AnonUS | SAT |
|  | 2300z | 07 Sep | [44011 67432 71761] |  | AnonUS | MON |
|  | 2300z | 09 Sep | Weak noisy carrier but | no Morse | AnonUS | WED |
|  | 2300z | 14 Sep | [00281 23521 36842] |  | AnonUS | MON |
|  | 2300z | 16 Sep | [1771221141 34462] |  | AnonUS | WED |
|  | 2300z | 19 Sep | [18262 2250135022 ] | Usual weekend call-ups | AnonUS | SAT |
|  | 2300z | 21 Sep | [4885152272 65611] |  | AnonUS | MON |
|  | 2300z | 30 Sep | Noisy carrier only |  | AnonUS | WED |
| 8095 | 1400z | 14 Sep | [3738148021 52351] | All three call-ups end with 1 | AnonUS | MON |
|  | 1400z | 15 Sep | [60872 73201 85532] |  | AnonUS | TUE |
|  | 1400z | 16 Sep | [16451 20782 33111] |  | AnonUS | WED |
|  | 1400z | 17 Sep | [30211 43542 55061] |  | AnonUS | THU |
|  | 1400z | 18 Sep | Up late in progress |  | AnonUS | FRI |
| 8096 | 1400z | 01 Sep | [65702 77221 81552] |  | AnonUS | TUE |
|  | 1400z | 02 Sep | [31521 44052 67371] |  | AnonUS | WED |
|  | 1400z | 03 Sep | [-- -- 33681 46112] | Came up late in progress | AnonUS | THU |
|  | 1400z | 04 Sep | [32652 43302 58322] | All 3 call-ups end in 2 | AnonUS | FRI |


|  | 1400z | 05 Sep | [18262 2250135022 ] | Usual weekend call-ups | AnonUS | SAT |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1400z | 06 Sep |  |  | AnonUS | SUN |
|  | 1400z | 07 Sep | Noisy carrier but no Morse$\text { [84532 } 07861 \text { 11282] }$ |  | AnonUS | MON |
|  | 1400z | 08 Sep | [75041 88462 02702] |  | AnonUS | TUE |
|  | 1400z | 10 Sep | $\begin{aligned} & {[648227725181572]} \\ & {[---------30531]} \end{aligned}$ | Up very late in progress, only the last call-up transmitted | AnonUS | THU |
|  | 1400z | 11 Sep |  |  | AnonUS | FRI |
|  | 1400z | 12 Sep | Carrier only |  | AnonUS | SAT |
|  | 1400z | 13 Sep | [18262 22501 35022] | Usual weekend call-ups | AnonUS | SUN |
|  | 1400z | 19 Sep | [18262 22501 35022] | Usual weekend call-ups | AnonUS | SAT |
|  | 1400z | 20 Sep | [18262 22501 35022] | Up late but started with the usual weekend call-ups | AnonUS | SUN |
|  | 1400z | 21 Sep | [71071 04402 17731] |  | AnonUS | MON |
|  | 1400z | 22 Sep | [42801 65222 78651] |  | AnonUS | TUE |
|  | 1400z | 23 Sep | [74182 87511 01842] |  | AnonUS | WED |
|  | 1400z | 25 Sep | Brief transmitter check | but no Morse | AnonUS | FRI |
|  | 1400z | 27 Sep | [12345 67890] Repe | ed continually | AnonUS | SUN |
|  | 1400 z | 28 Sep | [24682 36022 40341] |  | AnonUS | MON |
|  | 1400z | 30 Sep | [-----72131----- ] | Very weak, only second call-up was audible | AnonUS | WED |
| 8135 | 2300z | 01 Sep | [28651 31071 44312] |  | AnonUS | TUE |
|  | 2300z | 04 Sep | [78701 84722 06251] |  | AnonUS | FRI |
|  | 2300z | 08 Sep | [31582 44821 58041] |  | AnonUS | TUE |
|  | 2300z | 10 Sep | [06851 18681 23612] |  | AnonUS | THU |
|  | 2300z | 11 Sep | [51022 72652 86672] | All call-ups end in 2 | AnonUS | FRI |
|  | 2300z | 13 Sep | [18262 22501 35022] | Usual weekend call-ups | AnonUS | SUN |
|  | 2300z | 15 Sep | [21032 3446147782 ] |  | AnonUS | TUE |
|  | 2300z | 17 Sep | [--281----------] | Up late, just at the end of the first call-up | AnonUS | THU |
|  | 2300z | 18 Sep | [3174144162 57501] |  | AnonUS | FRI |
|  | 2300z | 22 Sep | [27482 31711 44242] |  | AnonUS | TUE |
|  | 2300z | 24 Sep | [31451 44772 67212] |  | AnonUS | THU |
|  | 2300z | 25 Sep | [60821 72241 05572] |  | AnonUS | FRI |
|  | 2300z | 27 Sep | Noisy carrier only |  | AnonUS | SUN |
|  | 2300z | 29 Sep | [85622 08141 12471] | Weak, almost drowned out by hum from transmitter | AnonUS | TUE |
| Octob | 015: |  |  |  |  |  |
| 7554 | 2000z | 01 Oct | Too weak to copy |  | AnonUS | THU |
|  | 2000z | 02 Oct | Carrier only |  | AnonUS | FRI |
|  | 2000z | 03 Oct | Carrier only |  | AnonUS | SAT |
|  | 2000z | 04 Oct | Carrier only |  | AnonUS | SUN |
|  | 2000z | 05 Oct | Carrier only |  | AnonUS | MON |
|  | 2000z | 06 Oct | [88312 02641 16762] |  | AnonUS | TUE |
|  | 2000z | 07 Oct | [61362 74681 87021] |  | AnonUS | WED |
|  | 2000z | 09 Oct | Carrier only |  | AnonUS | FRI |
|  | 2000z | 13 Oct | [53842 75672 80602] | All three call-ups end with 2 | AnonUS | TUE |
|  | 2000z | 14 Oct | Carrier only |  | AnonUS | WED |
|  | 2000z | 15 Oct | [31061 43301 56622] |  | AnonUS | THU |
|  | 2000z | 16 Oct | [5123263022 77082] | All call-ups end in 2 | AnonUS | FRI |
|  | 2000z | 19 Oct | [1167133001 46432] |  | AnonUS | MON |
|  | 2000z | 20 Oct | [47462 51701 64132] |  | AnonUS | TUE |
|  | 2000z | 21 Oct | Carrier only |  | AnonUS | WED |
|  | 2000z | 22 Oct | [81661 14082 27322] |  | AnonUS | THU |
|  | 2000z | 24 Oct | Carrier only |  | AnonUS | SAT |
|  | 2000z | 25 Oct | [18262 22501 35022] | Usual weekend call-ups | AnonUS | SUN |
|  | 2000z | 27 Oct | [31832 44261 57582] |  | AnonUS | TUE |
|  | 2000z | 31 Oct | [18262 2250135022 ] | Usual weekend call-ups | AnonUS | SAT |
| 8009 | 2300z | 03 Oct | Carrier only |  | AnonUS | SAT |
|  | 2300z | 05 Oct | [6153184862 06342] | Weak HM01 audible in the background | AnonUS | MON |
|  | 2300z | 07 Oct | [16481 30712 43241] | Faint HM01 in the background | AnonUS | WED |
|  | 2300z | 12 Oct | Morse present but hum | and HM01 mixing made it unreadable | AnonUS | MON |
|  | 2300z | 14 Oct | Morse present but unre | adable due to transmitter hum | AnonUS | WED |
|  | 2300z | 19 Oct | [85831------- --] | Up late already transmitting the first call-up | AnonUS | MON |
|  | 2300z | 21 Oct | Carrier and HM01 with | [74029 5140783053824590156387106$]$ | AnonUS | WED |
|  | 2300z | 24 Oct | 14740514078305282 | 4590156387106 only | AnonUS | SAT |
|  | 2300z | 26 Oct | [6211175432 08761] |  | AnonUS | MON |
|  | 2300z | 28 Oct | [67681 71122 04441] |  | AnonUS | WED |
| 8096 | 1400z | 02 Oct | Carrier only |  | AnonUS | FRI |
|  | 1400z | 03 Oct | Carrier only |  | AnonUS | SAT |
|  | 1400z | 04 Oct | [18262 22501 35022] | Usual weekend call-ups | AnonUS | SUN |
|  | 1400z | 06 Oct | [65661 78082 82322] |  | AnonUS | TUE |
|  | 1400z | 07 Oct | [88372 02701 15131] |  | AnonUS | WED |
|  | 1400z | 08 Oct | Carrier only |  | AnonUS | THU |
|  | 1400z | 09 Oct | Carrier only |  | AnonUS | FRI |
|  | 1400z | 12 Oct | [65121 78451 82872] |  | AnonUS | MON |
|  | 1400z | 13 Oct | [61232 74651 87082] | Very weak with loud hum | AnonUS | TUE |
|  | 1400z | 14 Oct | Carrier only |  | AnonUS | WED |
|  | 1400z | 15 Oct | [---------- 58081] | Did not come up until just before the third message was transmitted | AnonUS | THU |
|  | 1400z | 16 Oct | [55012 78342 82661] |  | AnonUS | FRI |
|  | 1400z | 19 Oct | [33661 4610260421 ] |  | AnonUS | MON |
|  | 1400z | 20 Oct | [47042 51471 64702] |  | AnonUS | TUE |
|  | 1400z | 21 Oct | [---------------] | Up late in progress | AnonUS | WED |
|  | 1400z | 22 Oct | [05621 18051 21372] |  | AnonUS | THU |


|  | 1400z | 23 Oct | Up late in progress |  | AnonUS | FRI |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1400z | 24 Oct | Carrier only |  | AnonUS | SAT |
|  | 1400z | 25 Oct | [18262 22501 35022] | Usual weekend call-ups | AnonUS | SUN |
|  | 1400z | 28 Oct | [21531 43061 56382] |  | AnonUS | WED |
|  | 1400z | 30 Oct | Up late in progress |  | AnonUS | FRI |
|  | 1400z | 31 Oct | Carrier only |  | AnonUS | SAT |
| 8135 | 2300z | 01 Oct | [51131 64052 77181] |  | AnonUS | THU |
|  | 2300z | 02 Oct | Carrier only |  | AnonUS | FRI |
|  | 2300z | 04 Oct | [18262 22501 35022] | Usual weekend call-ups | AnonUS | SUN |
|  | 2300z | 06 Oct | [35132 48561 52881] |  | AnonUS | TUE |
|  | 2300z | 08 Oct | Barely audible Morse |  | AnonUS | THU |
|  | 2300z | 09 Oct | Carrier only |  | AnonUS | FRI |
|  | 2300z | 13 Oct | [133--28---33---] | Hum louder than the Morse again | AnonUS | TUE |
|  | 2300z | 15 Oct | [4538-58-- -620--] | Extremely weak | AnonUS | THU |
|  | 2300z | 20 Oct | [86871 00212 13531] |  | AnonUS | TUE |
|  | 2300z | 22 Oct | HM01 in LSB mode wi | ith [74029 51407830538245901563 87106] | AnonUS | THU |
|  | 2300z | 23 Oct | [6344276771 88102] | HM01 strong also with [74029 51407830538245901563 87106] audible in LSB mode | AnonUS | FRI |
|  | 2300z | 25 Oct | [18262 2250135022 ] | Usual weekend call-ups <br> HM01 also with 147405140783052824590156387106 | AnonUS | SUN |
|  | 2300z | 25 Oct | [55322 78652 82071] |  | AnonUS | TUE |
|  | 2300z | 29 Oct | [32742 45161 58502] |  | AnonUS | THU |
|  | 2300z | 30 Oct | [6535188672 02111] |  | AnonUS | FRI |

## Report for Nov/ Dec 2015:- AnonUS

M08a continued on its usual times and frequencies during November/December, there seem to have been more technical difficulties than usual with various hums, missing transmissions and late starts. Additionally the usual weekend call-ups of 182622250135022 put in several mid-week appearances and even mixed with the regular transmissions on occasionally.

Events of note:
Monday 16 Nov the 1400 z transmitter came up early with the weekend call-up transmission in progress, (curious because the weekend call-ups hadn't been heard on the previous two days).

At 2000 z on the same day the call-up 6262 was heard but most likely the transmitter was switched on half way through the first dash in 8 " $\mathrm{G}^{\prime \prime}$ making it sound like 6 " R ".

At 2300 z the Morse sounded like a continuous tone probably due to two Morse transmissions at once.
On 26 Nov at 2300 z the usual weekend call-ups were heard on a Thursday.
On 10 Dec at $1400 z$ the usual weekend call-ups were heard on a Thursday.
On 22 Dec at 1400 z all three call-ups ended with a 2 which is unusual.

## November 2015:

| 7554 | 2000z | 07 Nov | [18262 22501 35022] Usual weekend call-ups | AnonUS | SAT |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2000z | 08 Nov | Carrier only | AnonUS | SUN |
|  | 2000z | 10 Nov | [40681 53022 65341] | AnonUS | TUE |
|  | 2000z | 16 Nov | Came up with call-ups 62622250135022 before going in to 18262 Repeated 5 times. | AnonUS | MON |
|  |  |  | Presume the first 6 heard was in fact half of the first dash in $8(\mathrm{G})$ making it sound like $6(\mathrm{R})$. Again these are the usual weekend call-ups |  |  |
|  | 2000z | 17 Nov | [52032 6546178782 ] | AnonUS | TUE |
|  | 2000z | 18 Nov | Up late in progress | AnonUS | WED |
|  | 2000z | 20 Nov | Hum present but no Morse except for possibly two very short dots | AnonUS | FRI |
|  | 2000z | 21 Nov | [18262 22501 35022] Usual weekend call-ups | AnonUS | SAT |
|  | 2000z | 24 Nov | Missed call-ups | AnonUS | TUE |
|  | 2000z | 28 Nov | Hum present but no Morse | AnonUS | SAT |
|  | 2000z | 29 Nov | Hum present but no Morse | AnonUS | SUN |
| 8009 | 2300z | 16 Nov | Again almost a continuous tone Suspect they left the weekend call-ups active and mixed the Monday call-ups on top | AnonUS | MON |
|  |  |  |  |  |  |
|  | 2300z | 18 Nov | [7332286651 08181] | AnonUS | WED |
|  | 2300z | 21 Nov | [18262 22501 35022] Usual weekend call-ups | AnonUS | SAT |
|  | 2300z | 23 Nov | Hum only | AnonUS | MON |
|  | 2300z | 28 Nov | Hum present but no Morse | AnonUS | SAT |
|  | 2300z | 30 Nov | [7341285831 08261] | AnonUS | MON |
| 8095 | 1345z (IP) |  | With $\mathbf{1 2 3 4 5} \mathbf{6 7 8 9 0}$ repeated then [85031 0835211781 ] at 1400 z (Unsure of the date between 02 Nov \& 05 Nov) Another transmission between 02Nov \& 05 Nov with call-ups [01062 14401 27732] |  |  |
| 8096 | 1400z | 06 Nov | [4717151402 63832] | AnonUS | FRI |
|  | 1400z | 08 Nov | Carrier only | AnonUS | SUN |
|  | 1400z | 09 Nov | Carrier only | AnonUS | MON |
|  | 1400z | 10 Nov | [33552--------] Came up late right at the end of the first call-up | AnonUS | TUE |
|  | 1400z | 11 Nov | Carrier only | AnonUS | WED |
|  | 1400z | 12 Nov | Carrier only | AnonUS | THU |
|  | 1400z | 13 Nov | Up late in progress | AnonUS | FRI |
|  | 1400z | 16 Nov | At 1357 z a second M08a is added causing the signal to become an almost continuous tone. | AnonUS | MON |
|  |  |  |  |  |  |
|  |  |  | Looks like they left the weekend call-ups running and then probably added the Monday message on top. |  |  |
|  | 1400z | 17 Nov | Up late in progress | AnonUS | TUE |


|  | 1400z | 18 Nov | [33571 56812 60332] | AnonUS | WED |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1400z | 19 Nov | Up late in progress | AnonUS | THU |
|  | 1400z | 20 Nov | Loud hum still present, possibly some Morse underneath it but hard to tell for sure | AnonUS | FRI |
|  | 1400z | 23 Nov | Hum Only | AnonUS | MON |
|  | 1400z | 24 Nov | Loud hum again, possible Morse underneath but impossible to say for sure | AnonUS | TUE |
|  | 1400z | 25 Nov | [13182 26411 32532] | AnonUS | WED |
|  | 1400z | 26 Nov | Hum only | AnonUS | THU |
|  | 1400z | 27 Nov | [84361 07602 11032] | AnonUS | FRI |
|  | 1400z | 28 Nov | Hum present but no Morse | AnonUS | SAT |
|  | 1400z | 29 Nov | Hum present but no Morse | AnonUS | SUN |
|  | 1400z | 30 Nov | [28651 32072 45311] | AnonUS | MON |
| 8135 | 2300z | 01 Nov | [18262 22501 35022] Usual weekend call-ups | AnonUS | SUN |
|  | 2300z | 07 Nov | [18262 22501 35022] Usual weekend call-ups | AnonUS | SAT |
|  | 2300z | 10 Nov | $\begin{gathered} {\left[7427186602 \text { 00032] } \begin{array}{l} \text { Up first with HM01 } 324333223153876614324808043331 \\ \text { before switching to Morse } \end{array}\right.} \end{gathered}$ | AnonUS | TUE |
|  | 2300z | 12 Nov | [03802 18021 22342] | AnonUS | WED |
|  | 2300z | 13 Nov | [52012 65331 78761] 1khZ tome makes copy very difficult | AnonUS | FRI |
|  | 2300z | 17 Nov | [12271 25512 38831] | AnonUS | TUE |
|  | 2300z | 20 Nov | Hum present but no Morse | AnonUS | FRI |
|  | 2300z | 24 Nov | [42652 55081 67412] | AnonUS | TUE |
|  | 2300z | 26 Nov | [18262 22501 35022] Slow Morse due to these being the usual weekend call-ups | AnonUS | THU |
|  | 2300z | 27 Nov | [34701 47132 51552] | AnonUS | FRI |
|  | 2300z | 29 Nov | Hum present but no Morse | AnonUS | SUN |
| December 2015: |  |  |  |  |  |
| 7554 | 2000z | 01 Dec | [7718180512 03842] | AnonUS | TUE |
|  | 2000z | 02 Dec | Hum present but no Morse | AnonUS | WED |
|  | 2000z | 03 Dec | Up late in progress | AnonUS | THU |
|  | 2000z | 04 Dec | Hum present but no Morse | AnonUS | FRI |
|  | 2000z | 10 Dec | [85311 06041 20372] | AnonUS | THU |
|  | 2000z | 13 Dec | Usual weekend call-ups | AnonUS | SUN |
|  | 2000z | 15 Dec |  | AnonUS | TUE |
|  | 2000z | 18 Dec | [6154284871 07202] | AnonUS | FRI |
|  | 2000z | 24 Dec | [63212 75641 88062] | AnonUS | THU |
|  | 2000z | 25 Dec | [77862 8120104532$]$ | AnonUS | FRI |
|  | 2000z | 27 Dec | Usual weekend call-ups | AnonUS | SUN |
|  | 2000z | 27 Dec |  | AnonUS | TUE |
|  | 2000z | 31 Dec | [78681 82011 04342] | AnonUS | THU |
| 8009 | 2300z | 02 Dec | Hum present but no Morse | AnonUS | WED |
|  | 2300z | 07 Dec | [62301 8304106362 ] | AnonUS | MON |
|  | 2300z | 16 Dec | Up late in progress | AnonUS | WED |
|  | 2300z | 19 Dec | Usual weekend call-ups | AnonUS | SAT |
|  | 2300z | 21 Dec | Up late in progress | AnonUS | MON |
|  | 2300z | 28 Dec | [78612 02041 15372] | AnonUS | MON |
|  | 2300z | 30 Dec | [48381 52622 65151] | AnonUS | WED |
| 8096 | 1400z | 01 Dec | [6114274471 87802] | AnonUS | TUE |
|  | 1400z | 02 Dec | [14142 3747141712 ] | AnonUS | WED |
|  | 1400z | 03 Dec | [81652 03071 16311] | AnonUS | THU |
|  | 1400z | 04 Dec | Up late in progress | AnonUS | FRI |
|  | 1400z | 07 Dec | Hum present but no Morse | AnonUS | MON |
|  | 1400z | 10 Dec | [18262 2250135022 ] Up late with usual weekend call-ups two days early | AnonUS | THU |
|  | 1400z | 11 Dec | [--------01812] Up late, very weak. Not $100 \%$ sure of the one call-up transmitted | AnonUS | FRI |
|  | 1400z | 13 Dec | Usual weekend call-ups | AnonUS | SUN |
|  | 1400z | 16 Dec |  | AnonUS | WED |
|  | 1400z | 17 Dec | Hum only, no Morse | AnonUS | THU |
|  | 1400z | 18 Dec | Hum only, no Morse | AnonUS | FRI |
|  | 1400z | 21 Dec | [37772 41201 54532] | AnonUS | MON |
|  | 1400z | 22 Dec | All call-ups end in 2 | AnonUS | TUE |
|  | 1400z | 23 Dec |  | AnonUS | WED |
|  | 1400z | 25 Dec | [12501 25022 38352] | AnonUS | FRI |
|  | 1400z | 27 Dec | Usual weekend call-ups. TX restarted at 1434 z with the same call-ups | AnonUS | SUN |
|  | 1400z | 28 Dec |  | AnonUS | MON |
|  | 1400z | 30 Dec | [----------25302] | AnonUS | WED |
|  | 1400z | 31 Dec | [--------- 07611] Up very late in progress | AnonUS | THU |
| 8135 | 2300z | 03 Dec | Hum present but no Morse | AnonUS | THU |
|  | 2300z | 05 Dec | [57532 61061 74381] | AnonUS | FRI |
|  | 2300z | 10 Dec | Up late in progress | AnonUS | THU |
|  | 2300z | 11 Dec | [24602 3703241451 ] | AnonUS | FRI |
|  | 2300z | 15 Dec | [3328156512 60841] | AnonUS | TUE |
|  | 2300z | 17 Dec | [66202 70521 83852] | AnonUS | THU |
|  | 2300z | 18 Dec | Up late in progress | AnonUS | FRI |
|  | 2300z | 22 Dec | [88822 02241 15672] | AnonUS | TUE |
|  | 2300z | 25 Dec | [43721 56142 60471] | AnonUS | FRI |
|  | 2300z | 27 Dec | Usual weekend call-ups | AnonUS | SUN |
|  | 2300z | 29 Dec |  | AnonUS | TUE |
|  | 2300z | 31 Dec |  | AnonUS | THU |

## Call-up Number Sequence Analysis

Analysis of call-up spacings. (Spacing between the $1^{\text {st }}, 2^{\text {nd }}, 3^{\text {rd }}$ and $4^{\text {th }}$ digits of the call-ups). Example 43561668817832221323423
As with previous observations the M08a call-ups follow a pattern between the three numbers. (See Issue 81 - Mar 2014 for full details)

## Call-up Analysis (Sept Oct)

| 65702772218155211234323 | 17712211413446211333332 | 53842756728060221347032 |
| :---: | :---: | :---: |
| 71831842610758211333332 | 30211435425506111323432 | 133-- 28--- 33-- 1154 ?? ?? |
| 28651310714431211223323 | 31231446615608211324332 | 31061433015662211233332 |
| 31521440526737112334332 | 31741441625750111333423 | 4538-58---620-- 1133 ?? ?? |
| 20611320414546211233432 | 48851522726561111333423 | 55012783428266121333332 |
| ---- 3368146112 -1 $-3-4$ | 42801652227865121333423 | 51232630227708211247086 |
| 31422447416717212333323 | 65642780718230222333332 | 33661461026042112334332 |
| 32652433025832211157042 | 27482317114424211333423 | 11671330014643221233423 |
| 06241105623200112323423 | 74182875110184211334322 | 47042514716470211334332 |
| 78701847220625111621423 | 31451447726721212333423 | 47462517016413211333333 |
| 44011674327176121334323 | 06351106822301111333332 | 86871002121353111333332 |
| 75041884620270211334323 | 60821722410557212233323 | 05621180512137211323332 |
| 83772061011043211333323 | 24682360224034111233332 | 81661140822732221333323 |
| 31582448215804111343132 | 85622081411247111334323 | 63442767718810211323332 |
| 64822772518157211333332 | 51131640527718111338123 | 62111754320876112333323 |
|  | 61531848620634221323437 | 31832442615758211333332 |
| 06851186812361211347032 | 65661780828232211333323 | 55322786528207121333332 |
| 51022726528667221146032 | 88312026411676211243132 | 21531430615638221234332 |
| 37381480215235111136333 | 35132485615288111334332 | 67681711220444112334332 |
| 00281235213684221333332 | 88372027011513111334323 | 32742451615850211333423 |
| 60872732018553211323323 | 61362746818702111333323 | 65351886720211121333423 |
|  | 16481307124324121333423 |  |
| 21032344614778211334332 | 65121784518287211333432 | Courtesy AnonUS |
| 16451207823311111333332 | 61232746518708211334323 |  |

## Call-up Analysis (Nov Dec)

The usual pattern continues with the call-ups. The main anomaly is where all three call-ups end with the same digit in which case the sequence between the numbers is unusual, although there is one instance where the unusual sequence is seen but the last digits are different. These instances are followed with a $*$ in the column.

| 85031 | 08352 | 11781 | 11 | 32 | 34 | 23 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 01062 | 14401 | 27732 | 11 | 33 | 43 | 33 |  |
| 52032 | 65461 | 78782 | 11 | 33 | 43 | 32 |  |
| 12271 | 25512 | 38831 | 11 | 33 | 33 | 32 |  |
| 33571 | 56812 | 60332 | 21 | 33 | 34 | 32 |  |
| 73322 | 86651 | 08181 | 11 | 32 | 34 | 33 |  |
| 42652 | 55081 | 67412 | 11 | 32 | 34 | 32 |  |
| 13182 | 26411 | 32532 | 11 | 35 | 31 | 22 |  |
| 84361 | 07602 | 11032 | 11 | 33 | 33 | 33 |  |
| 34701 | 47132 | 51552 | 11 | 33 | 34 | 32 |  |
| 73412 | 85831 | 08261 | 11 | 23 | 43 | 23 |  |
| 61142 | 74471 | 87802 | 11 | 33 | 34 | 32 |  |
| 77181 | 80512 | 03842 | 11 | 23 | 43 | 23 |  |
| 14142 | 37471 | 41712 | 21 | 33 | 33 | 33 |  |
|  |  |  |  |  |  |  |  |

$$
\begin{array}{lllllll}
\hline 81652 & 03071 & 16311 & 11 & 23 & 33 & 23 \\
57532 & 61061 & 74381 & 11 & 33 & 43 & 32 \\
62301 & 83041 & 06362 & 21 & 13 & 63 & 42 \\
85311 & 06041 & 20372 & 12 & 13 & 63 & 33 \\
24602 & 37032 & 41451 & 11 & 33 & 34 & 32 \\
04772 & 17101 & 21432 & 11 & 33 & 33 & 23 \\
33281 & 56512 & 60841 & 21 & 33 & 33 & 23 \\
21301 & 34622 & 40642 & 11 & 35 & 30 & 22 * \\
66202 & 70521 & 83852 & 11 & 33 & 33 & 23 \\
61542 & 84871 & 07202 & 21 & 33 & 33 & 32 \\
37772 & 41201 & 54532 & 11 & 33 & 43 & 23 \\
42772 & 53412 & 68432 & 11 & 15 & 60 & 32 \\
88822 & 02241 & 15672 & 11 & 33 & 34 & 23 \\
60112 & 73541 & 06862 & 12 & 33 & 43 & 32
\end{array}
$$

| 63212 | 75641 | 88062 | 11 | 23 | 43 | 32 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 12501 | 25022 | 38352 | 11 | 33 | 43 | 23 |
| 77862 | 81201 | 04532 | 11 | 33 | 33 | 33 |
| 43721 | 56142 | 60471 | 11 | 33 | 33 | 23 |
| 35252 | 46502 | 50821 | 11 | 13 | 33 | 42 |
| 78612 | 02041 | 15372 | 21 | 33 | 33 | 33 |
| 68642 | 72071 | 85402 | 11 | 33 | 34 | 32 |
| 12171 | 34811 | 47242 | 21 | 23 | 73 | 33 |
| 48381 | 52622 | 65151 | 11 | 33 | 34 | 33 |
| 78681 | 82011 | 04342 | 11 | 32 | 33 | 23 |
| 83042 | 06361 | 10602 | 11 | 33 | 33 | 23 |

Courtesy AnonUS

M12 IB ICW, some MCW / CW, short 0 . Reuses many freqs year on year.
New ID's may be only for the month/sched shown, but not necessarily unknown. The reason for their reuse, some after long periods of time, is unknown.
Brian's (BR) logs previously shown under the Charts Section will, from this issue, be incorporated into the logs below.
Following a long period of decline in M12 schedules, there now appears to be a fair amount of new activity, including a new daily 2000 z ID 463 that ran through November to Mid-December, but now appears to have ceased.. It is difficult not to associate this increased activity with the ongoing situation in Ukraine \& the more recent involvement of Russia in the Syrian civil war

One interesting new schedule is ID 975 with a December transmission at $2210 / 30 / 50 \mathrm{z}$ on Monday \& Thursday. ID 975 has an interesting history. First logged as an evening sched in 2008 with almost identical frequencies, (ending .. 81 rather than ..37), changing in February 2009 to appear as an XPA data transmission. Nothing then was heard of the ID until July 272011 where it was used to send an unprecedented 1291 grp msg . Quite an event. It had not been reported again until now.

Technical errors on transmissions, which was a frequent problem at times in recent months, now seem to have almost disappeared, although Edd (E.SMITH), did note that the message count was sent as 4 dashes, (instead of one dot 4 dashes), on both the 1900 z ID $257 \&$ the 2000z ID 463 call-ups on 11 November. This would seem to be a shortening of the character - which does appear to have been the problem before.

Jim (JkC) logged ID 124 transmission on 10 November at 1940 z on 8116 kHz indicating a 1900/20/40z schedule which would appear to have been an error as it was expected at 1930/1950/2010z - but failed to appear in that slot. However, the following week all was back to normal. It is possible that the schedule was temporarily changed for some reason - but an error would seem more likely.

## European M12 Logs

## November 2015: New scheds in bold type

| 4617/5317/--- | 0530/0550/0610z | 02 Nov | 638000 |  |  |  |  |  | HFD/JkC | MON |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0530/0550/0610 | 09 Nov | 638000 |  |  |  |  |  | BR | MON |
|  | 0530/0550/0610z | 16 Nov | 638000 |  |  |  |  |  | E.SMITH | MON |
|  | 0530/0550/0610z | 23 Nov | 638000 |  |  |  |  |  | E.SMITH | MON |
|  | 0530/0550/0601z | 30 Nov | 638000 Good |  |  |  |  |  | E.SMITH/JkC | MON |
| 5429/4629/4029 | 2200/20/40z | 04 Nov | 4601 (9079 165) | 94076 | 45817 ... 42315 | 66833 | 000 | Fair | HFD/JkC | WED |
|  | 2200/20/40z | 11 Nov | 460000 Fair |  |  |  |  |  | JkC | WED |
|  | 2200/20/40z | 18 Nov | 460000 Good |  |  |  |  |  | JkC | WED |
|  | 2200/20/40z | 25 Nov | 4601 (9722 183) | 24943 | 14186 ... 61533 | 50617 | 000 | Fair/V.Weak | JkC | WED |
| $\begin{aligned} & 5884 \\ & 5884 / 6884 /--- \end{aligned}$ | 0730z | 05 Nov | 888000 |  |  |  |  |  | E.SMITH | THU |
|  | 0730/0750/0810z | 12 Nov | 888000 |  |  |  |  |  | E.SMITH/HFD/JkC | THU |
|  | 0730/0750/0810z | 19 Nov | 888000 |  |  |  |  |  | E. SMITH | THU |
|  | 0730/0750/0810z | 26 Nov | 888000 |  |  |  |  |  | E.SMITH | THU |
| $\begin{array}{r} 5737 / 4537 \\ 6937 / 5737 / 4537 \end{array}$ | 2233(IP)/2250z | 19 Nov | 9751 (9255 72) | 77015 | 40293.... 77787 | 32693 | 000 | Good*** | JkC | THU |
|  | 2210/30/50z | 23 Nov | 975000 Good |  |  |  |  |  | JkC | MON |
|  | 2210/30/50z | 26 Nov | 975000 |  |  |  |  |  | BR | THU |
|  | 2210/30/50z | 30 Nov | 9751 (6054 65) | 32294 | 60146 ... 62498 | 93117 | 000 | Fair/V.Weak | JkC | MON |
| 7637/9137/10237 | 0600/20/40z | 07 Nov | 6121 (9079 165) |  |  |  |  |  | BR | SAT |
|  | 0600/20/40z | 14 Nov | 612000 |  |  |  |  |  | E.SMITH | SAT |
|  | 0600/20/40z | 21 Nov | 612000 |  |  |  |  |  | E.SMITH/HFD | SAT |
|  | 0600/20/40z | 28 Nov | 6121 (9722 183) | 24943 | 14186.... 61533 | 50617 | 000 |  | AB/E.SMITH | SAT |
| 8047/6802/5788 | 2000/20/40z | 01 Nov | 4631 (3432 85) |  |  |  |  |  | BR | SUN |
|  | 1800/20/40z | 02 Nov | 4631 (7506 142) | 44225 | 55000 ... 18095 | 55658 | 000 | Fair | JkC | MON |
|  | 2000/20/40z | 02 Nov | 4631 (5537 74) | 64910 | 83200 ... 07349 | 15908 | 000 | Good | JkC | MON |
|  | 2000/20/40z | 03 Nov | 4631 (470 180) | 17628 | 71368 ... 20158 | 60046 | 000 | Fair | JkC | TUE |
|  | 1900/20/40z | 04 Nov | 4631 (6379 131) | 93969 | 53509 ... 61410 | 67803 | 000 | Fair | HFD/JkC | WED |
|  | 2000/20/40z | 04 Nov | 4631 (470 180) | 17628 | 71368 ... 20158 | 60046 | 000 | Fair (Rpt of Tue) | JkC | WED |
|  | 2000/20/40z | 05 Nov | 4631 (7045 86) | 76513 | 96960 ... 42425 | 50162 | 000 |  | AB/JkC | THU |
|  | 2000/20/40z | 06 Nov | 4631 (604 185) | 31235 | 03806 ... 30274 | 67414 | 000 | Weak | JkC | FRI |
|  | 2000/20/40z | 07 Nov | 4631 (604 185) | 31235 | 03806 ... 30274 | 67414 | 000 | Fair (Rpt of Fri) | JkC | SAT |
|  | 1800/20/40z | 09 Nov | 4631 (3328 144) | 16300 | 78020 ... 58056 | 03377 | 000 | NRH/ Weak/Fair | JkC | MON |
|  | 2000/20/40z | 09 Nov | 4631 (2493 84) | 16932 | 90706 ... 73082 | 82841 | 000 | Fair | JkC | MON |
|  | 2000/20/40z | 10 Nov | 4631 (9109 90) | 10848 | 91426 ... 74532 | 56075 | 000 | Weak/Fair | JkC | TUE |
|  | 1900/20/40z | 11 Nov | 4631 (1345 138) | 66574 | 04035 ... 33147 | 57592 | 000 | Weak | E.SMITH | WED |
|  | 2000/20/40z | 11 Nov | 4631 (8355 87) | 10751 | 92167 ... 24772 | 66274 | 000 | Weak / V.Weak | E.SMITH | WED |
|  | 2000/20/40z | 12 Nov | 4631 (3..1 .6) |  |  |  |  | Weak | BR | THU |
|  | 2000/20/40z | 13 Nov | 4631 (7948 78) | 96014 | 50702 ... 26736 | 55278 | 000 | Fair | JkC | FRI |
|  | 2000/20/40z | 14 Nov | 4631 (2177 69) | 87560 | 99942 ... 66464 | 16328 | 000 |  | BR/E.SMITH | SAT |
|  | 2000/20/40z | 15 Nov | 4631 (5699 85) |  |  |  |  |  | BR | SUN |
|  | 1800/20/40z | 16 Nov | 4631 (9171 146) | 04549 | 93152.... 27535 | 22099 | 000 | Fair | JkC | MON |
|  | 2000/20/40z | 16 Nov | 4631 (529 98) | 22682 | 94541.... 50419 | 93262 | 000 | Fair/Good | JkC | MON |
|  | 2000/20/40z | 17 Nov | 4631 (52998) | 22682 | 94541 ... 50419 | 93262 | 000 | Fair/Good/Fair | JkC | TUE |
|  | 1900/20/40z | 18 Nov | 4631 (7801 132) | 71155 | 43593.... 47781 | 44274 | 000 | Weak/Fair/Good | JkC | WED |
|  | 2000/20/40z | 18 Nov | 4631 (3539 72) | 70708 | 35674 ... 48101 | 01738 | 000 | Weak/V.Weak | JkC | WED |
|  | 2000/20/40z | 20 Nov | 4631 (200 161) | 99013 | 45826 ... 73963 | 18836 | 000 | Fair/Fair/Good | JkC | FRI |
|  | 2000/20/40z | 21 Nov | 4631 (200 161) | 99013 | 45826 ... 73963 | 18836 | 000 | V.Weak/Weak/Str | E.SMITH | SAT |
|  | 2000/20/40z | 22 Nov | 4631 (9624 65) |  |  |  |  |  |  |  |
|  | 1800/20/40z | 23 Nov | 4631 (2081 142) | 85273 | 13930 ... 97603 | 41289 | 000 | Fair/V.Weak | JkC | MON |
|  | 2000/20/40z | 23 Nov | 4631 (8213 84) | 85504 | 54454 ... 42168 | 83677 | 000 | Fair/V.Weak | E.SMITH/JkC | MON |
|  | 2000/20/40z | 24 Nov | 4631 (5610 81) | 10490 | 36790.... 83200 | 21494 | 000 | Fair | JkC | TUE |
|  | 1900/20/40z | 25 Nov | 4631 (3987 137) | 52173 | 94848.... 39523 | 48222 | 000 | Fair/V.Weak | JkC | WED |
|  | 2000/20/40z | 25 Nov | 4631 (8831 69) | 38963 | 56347 ... 24763 | 07679 | 000 | Fair/V.Weak | JkC | WED |
|  | 2000/20/40z | 26 Nov | 4631 (173 86) |  |  |  |  |  | BR | THU |
|  | 2000/20/40z | 27 Nov | 4631 (8033 82) |  |  |  |  |  | BR | FRI |
|  | 2000/20/40z | 28 Nov | 4631 (323766) | 26003 | 53168 ... 35539 | 24466 | 000 | V.Weak | E.SMITH | SAT |
|  | 2000/20/40z | 29 Nov | 4631 (3908 84) |  |  |  |  |  | BR | SUN |
|  | 1800/20/40z | 30 Nov | 4631 (6869 144) | 42268 | 65660 .... 93432 | 73443 | 000 | Fair/V.Weak | JkC | MON |
|  | 2000/20/40z | 30 Nov | 4631 (6142 63) | 86390 | 35625 ... 52941 | 67673 | 000 | Fair/Fair/Good | JkC | MON |
| 9162/8062/7462 | 1310/30/50z | 05 Nov | 1041 (2992 129) | 87867 | 94886 ... 01710 | 92701 | 000 | Fair | HFD/JkC | THU |
|  | 1310/30/50z | 07 Nov | 1041 (2992 129) |  |  |  |  |  | BR | SAT |
|  | 1310/30/50z | 12 Nov | 104000 |  |  |  |  |  | E.SMITH/JkC | THU |
|  | 1310/30/50z | 19 Nov | 1041 (864 177) | 45608 | 55406 ... 84953 | 13481 | 000 | Fair/V.Weak | E.SMITHJkC | THU |
|  | 1310/30/50z | 21 Nov | 1041 (864 177) |  |  |  |  |  | BR | SAT |
|  | 1310/30/50z | 26 Nov | 1041 (6481 159) |  |  |  |  |  | BR | THU |
| 9176/7931/6904 | 1900/20/40z | 02 Nov | 2571 (4989 80) |  |  |  |  |  | BR | MON |
|  | 1800/20/40z | 04 Nov | 2571 (845 84) | 42918 | 01484 ... 56838 | 22534 | 000 | Fair | HFD/JkC | WED |
|  | 1900/20/40z | 09 Nov | 2571 (436 111) | 00990 | 15785 ... 93354 | 40208 | 000 | Fair | JkC | MON |
|  | 1800/20/40z | 11 Nov | 2571 (3530 152) | 09996 | 23543 ... 54360 | 63830 | 000 | Strong/Weak | E.SMITH | WED |




| $0710 / 30 / 50 \mathrm{z}$ | 16 Dec | 458000 | BR |
| :--- | :--- | :--- | :--- |
| $0710 / 30 / 50 \mathrm{z}$ | 23 Dec | 458000 | BR |
| $0710 / 30 / 50 \mathrm{z}$ | 30 Dec | 458000 | BR |



M14 IA MCW / ICW / MCWCC, short 0

## November 2015:

Plenty of activity with some transmissions appearing to be out of schedule, numerous breakdowns \& restarts noted by Jim (JkC), on the $8167 \mathrm{kHz} \& 10423 \mathrm{kHz}$ transmissions. Jim remarks that this has the feel of a training net.

Jim has tried unsuccessfully to find the other sending of the 1600 z , having tried $3-6 \mathrm{MHz}$ at $1500 / 1530 / 1630 / 1700 \mathrm{z}$ with no luck at all. If other Morse monitors could help with this, any reports would be welcome.

The 1820 z schedule switched from 20 to 15 grps in November, then to 22 grps for December. Jim notes that the groups sent were very unimaginative, as can be seen from his transcripts reproduced below.

(Note 1) This appears to be the same message, also caught in progress (by JPL on the Siberia remote), on 04 June 2014. Freq is the same, (JkC)
(Note 2) Tx broke at 1337 z (GR14), returned to call-up for 2 minutes, continued from GR09 (JkC)
(Note 3) Tx broke at GR 47, returned to call-up for 2 minutes the continued from GR43 (JkC)
(Note 4) Found I/P. Tx broke at 1310 z (GR27), returned to call-up for 2 minutes, continued from GR23. See transcript (JkC)
(Note 5) Tx broke at GR 19, returned to call-up for 2 minutes the continued from GR15 (JkC)

## December 2015:

| 4512 | 1600-1603z | 01 Dec | 475 | 00000 | Good | No repeat found |  |  | JkC | TUE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1600-1604z | 15 Dec | 475 | 00000 | Fair |  |  |  | E.SMITH/JkC | TUE |
| 4636 | 1820-1829z | 08 Dec | 186 | (144 22) | ) $=1234$ | 5 ... 0100514422 | 00000 | Good | AB/JkC | TUE |
|  | 1820-1829z | 22 Dec | 186 | (144 22) | ) $=1234$ | [.. 0100014422 | 00000 | Good | JkC | TUE |



## M14 18041kHz 0500z 04 Nov 15

$952(\mathrm{R} 4 \mathrm{~m}) 4764765050==$
43935161837680844364668053995223518210368483098627 35703563663537130051328207388442300597234801242504 41173953774472878369822241071579142757127838154234 88067652449048744103070342283066925349924824078978 79810678279305199088249633838878739363797783545689 $==$

476476505000000
Courtesy JkC

## M14 $\quad 10423 \mathrm{kHz} \quad 1308 z \quad 10$ Nov 15

$058(\mathrm{R} 4 \mathrm{~m}) 7697695252==$
11427145855193502546803064463128736111010431863334 77891470989547875296199517596669285747688503117597 46755496230143133180073483971956217719004121191855 38731321927416778489029291721863906724110952089285 90792945683382052875917527721550264209651065309590 $2952544344==$

769769525200000
Courtesy JkC

| M14 4636kHz 1820z 24 Nov 15 |  |  |  |
| :---: | :---: | :---: | :---: |
| 186 (R4m) $1331331515==$ |  |  |  |
| 1234556565323218901245456 |  |  |  |
| 1235612334656567878009876 |  |  |  |
| 1345676890659917676589078$==$ |  |  |  |
| 133133151500000 |  |  |  |
| Courtesy JkC |  |  |  |


| M14 | $\mathbf{4 6 3 6 k H z}$ | $\mathbf{1 8 2 0 z}$ | $\mathbf{0 8}$ Dec $\mathbf{1 5}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 186 | $(\mathrm{R} 4 \mathrm{~m})$ | 142 | 142 | 22 | $22==$ |
| 12345 | 23456 | 34567 | 45678 | 00110 |  |
| 44512 | 32324 | 54321 | 65432 | 76123 |  |
| 12333 | 65432 | 65651 | 89897 | 01451 |  |
| 01234 | 01235 | 56711 | 01567 | 01929 |  |
| 10201 | 01005 | $==$ |  |  |  |
| 142 | 142 | 22 | 22 | 00000 |  |

Transcripts of the November \& December 1820z transmissions, showing obviously contrived groups construction as compared with the two msgs above.

## M23 O ICW

No Reports

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

## November 2015:

| 5410 | 1530-1545z | 23 Nov | 801 | $(527$ 69) $=71584$ | ... $05343=52769$ | 00000 | Fair |  | JkC | MON |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8116 | 1500-1515z | 23 Nov | 801 | $(52769)=71584$ | $4 \ldots 05343=52769$ | 00000 | Fair |  | JkC | MON |
| 9470 | 1406 (IP) - 1415 | 23 Nov | [IP] | $(52769)=$ | ...LG $05343=52769$ | 00000 | Fair | 24wpm | JkC | MON |
| 10212 | 1336-1346z | 19 Nov | 215 | $(30786)=$.. ... L | LG $58942=30786$ | 00000 | Good | (No repeat found) | JkC | THU |

## December 2015:

| 9412 | 1330-1343z | 01 Dec | 534 | $(98271)=54516 \ldots 84162=98271$ | 00000 | Good |  | JkC | TUE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10212 | 1330-1343z | 03 Dec | 534 | $(98271)=54516 \ldots 84162=98271$ | 00000 | Good |  | JkC | THU |
|  | 1330-1344z | 10 Dec | 980 | $(56473)=93255 \ldots 70876=56473$ | 00000 | Good |  | JkC | THU |
|  | 1330-1344z | 24 Dec | 980 | $(25377)=54855 \ldots . .91865=25377$ | 00000 | Good |  | JkC/RNGB | THU |
| 10463 | 1343 (IP) - 1345z | 22 Dec | [IP\} | 25377 ...LG 91865 = 25377 | 00000 | Good |  | JkC | TUE |
| 10473 | 1330-1344z | 08 Dec | 980 | $(56473)=93255 \ldots 70876=56473$ | 00000 | Good | 24 wpm | AB/JkC | TUE |
| 11487 | 1306 (IP) - 1313z | 01 Dec | [IP] | (892 71) ...LG $84162=98271$ | 00000 | Good | 24wpm | JkC | TUE |
| 12093 | 1300-1313z | 03 Dec | 534 | $(98271)=54516 \ldots 84162=98271$ | 00000 | Good | 24wpm | JkC | THU |
|  | 1300-1314z | 10 Dec | 980 | $(56473)=93255 \ldots 70876=56473$ | 00000 | Good |  | JkC | THU |
|  | 1300-1314z | 24 Dec | 980 | $(25377)=54855 \ldots 91865=25377$ | 00000 | Good |  | AB/JkC/RNGB | THU |

## M24 9470/8116/5410kHz $1400 / 1500 / 1530 z \quad 23$ Nov 15 <br> 801 (R4m) $5275276969=$ <br> 71584974135161041894933769930973168836138765349634 09900433599179040517236975828587217163118325762228 35280483879073991951894784757422139683817861082501 46668433207306428064868583720204044365380147156196 30876135347276113298853013831393415057214293968491 56086617383577844046825813610008268451815801991376 $432401190006087746978631690551312009726805343==$ <br> 527527696900000

Courtesy JkC

## M24 10473kHz 1330z 08 Dec 15

## 980 (R4m) $5645647373==$

93255006143494724244334079030343598461262414691565 92325248170760532613849716836543241818019366464143 76581850991491503084791565951105502028428306659652 84073595705860859645094198300108416175537132394506 76531144985497392839958618569164823172422244885542 18878625952999554026493202631863083765227042791679 72515542919970477237812312778243183070705421919963 $808138149370876==$

564564737300000
Courtesy JkC

## M24 Activity on 10775 kHz

Some unscheduled activity from M24 was noted by both Jim (JkC) \& Ary (AB) in late December on 10775 kHz using the ID 975 . Jim thought this had the feel of training transmissions, confirmed by Richard (RNGB) who reports that ID 975 is very common in the Family 1a training nets \& that the frequency of 10775 kHz is also much used.

```
10755 1234(IP)-1235z 22 Dec I/P ... LG 43999 = 000 3000000] Good JkC TUE
    In progress. (Each group sent twice) .. 50798 68528 86234 42404 68609 53755 56982 72432 33203 94201 43999 = 000 000 30 30 00000
    Jim notes that the grps above are reproduced as grps15-25 of the later msg.
10755 1300-1418z 22 Dec 975 45678 000 30=83625 ...11157 = 000 30 00000 Good
JkC
TUE
975 975 975 45678 (R4m) 000 000 30 30== (each group twice)
83625 92883 20091 68941 8776961037 12172 27770 75371 18074
43411 31911 12638 36278 50798 68528 86234 42404 68609 53755
5698272432 33203 94201 43999 52441 37532 16205 38301 11157
== 000000 (1309z)
975 (R4m) 000 000 30 30==
Repeats message up to GR15, then long tone (simulated failure?) (1317z)
975 (R4m) 000 000 30 30==
Repeats message up to GR 19, ends abruptly (1324z)
12345 67890 (1325z) (R19m) (silence - 1344z)
975975 975 45678 (R4m) (1348z) 000 000 30 30==
Repeats message
975 (R4m) (1358z)
Repeats message up to GR22, ends abruptly
975975 975 45678 (R4m) (1406z)
Repeats message to GR02, then long tone
975 (R4m)
Repeats message to GR5, ends abruptly (1418z) (silence)
1048z 24 Dec 805 UTC: 975 (R4) 12345 12345 [Long Tone] 8362592883 .... 180744341131911 AB THU
\(10755 \mathrm{kHz}, 24-12-2015,1048\) UTC, ends at 1106 UTC
97597597512345 (R) long tone
8362592883 stops, then 180744341131911
97587597512345 (R)
97597597500000 (R)
975975975 (R4)
```

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

No logs received. Last heard with the SD84 message on 06 \& 07 May 2015.

Morse Stations - Not Number Related

M51 XIX

|  |  | Ceased at 1229z for the regular M51a structured Morse lessons, then re-commenced <br> immediately the lessons ended at 1316z.. |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1304-1530z+ | 22 Dec | Continuous grps - Mostly 5-ltr, but with occasional 5-number or 5-puncuation chars <br> Started immediately after the M51a FAV22 sign-off at 1304z | BR | TUE |
| $1308-1530 \mathrm{z}+$ | 23 Dec | Continuous grps - Mostly 5-ltr, but with occasional 5-number or 5-puncuation chars <br> Started immediately after the M51a FAV22 sign-off at 1308z | BR | WED |

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

## 3881//6825

| 1230-1216z | 21 Dec | Lundi-Leçon | 11-1/1 Codé | 11-1/2 Clair, | 11-1/3 Co | 11-1/4 Clair (420 grps/hr) | BR | MON |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1715-1800z** | 21 Dec | Lundi-Leçon | 01-1/1 Codé | 01-1/2 Clair, | 01-1/3 Codé, | 01-1/4 Clair (420 grps/hr) | BR | MON |
| 1230-1304z | 22 Dec | Mardi-Leçon | 12-1/1 Codé | 12-1/2 Clair, | 12-1/3 Codé, | 12-1/4 Clair (600 grps/hr) | BR | TUE |
| 1230-1308z | 230 ct | Mercredi- Leçon | 13-1/1 Codé, | 13-1/2 Clair, | 13-1/3 Codé, | 13-1/4 Clair (720 grps/hr) | BR | WED |
| 1715-1801z* | 23 Dec | Lundi-Leçon | 01-1/1 Codé | 01-1/2 Clair | 01-1/3 Codé | 01-1/4 Clair (420 grps/hr) | BR | WE |

* Appear to be random unscheduled lessons - Day used was incorrect for 23 Dec.


## M89 O

This is a summary of activity from the M89 stations. To be read in conjunction with JPL's logs which can now be found in the charts section.
On one exchange monitored 03 December on 8006 kHz , the operator sent 'QSY 23', (Change frequency to 23), which JPL was able to pick up the change to 8017 kHz confirming that 23 (presumably Ch23), is 8017 kHz .

The ALSK call suffered some round slip problems over December. The round slip should be sent as V DKSL (x3) DE ALSK (x2)
On 08 December the call was reversed as logged by JPL on $3821 / / 5644 \mathrm{kHz}$ at 1910 z when it was sending V ALSK (x3) DE DKSL (x2)
Then on 09 \& 12 December JPL logged the station on both the $3821 / / 5644 \mathrm{kHz} \& 9131 / / 10947 \mathrm{kHz}$ respectively sending V DUBT?TU (x3) DE DU6 (x2) with the letters B \& T are being sent as BT. On the 13 December the error had been corrected.

## Operator Chat from M89

Op. chat \& traffic reported on the following freqs. (KHz) (See JPL's full logs for details).

| 3333 | 5047 | 5454 | 6579 | 8006 | 9123 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 3358 | 5088 | 5462 | 6666 | 8017 |  |
| 3747 | 5119 | 5474 | 6680 | 8030 |  |
| 3787 | 5120 | 5555 | 6775 | 8047 | 10169 |
| 3811 | 5240 | 5560 | 6781 | 8063 | 10171 |
| 3821 | 5293 | 5566 | 6818 | 8064 | 10708 |
| 3860 | 5373 | 5624 | 6834 | 8067 | 10721 |
| 3870 | 5421 | 5644 | 6836 | 8079 | 10786 |
|  | 5442 | 5734 | 6855 | 8175 | 10919 |
| 4444 | 5450 |  |  | 8176 |  |
|  |  |  | 7777 |  |  |

New Scheds for November \& December 2015:

| $\underline{3642 / / 5320}$ | New pairing on known freqs |
| :--- | :--- |
| $\underline{\mathbf{3 7 6 7 / / 3 7 8 7 / / 4 5 3 2}}$ | New freqs for this Round Slip |
| $\underline{4131 / / 4886}$ | New // for this Round Slip |
| $\underline{4131 / / 4880}$ | New // for this Round Slip |
| $\underline{3777 / 4532 / 6793 / 8060}$ | Using all four freqs |
| $\underline{4532 / / 6793 / / 8060}$ | Using all three freqs |
| $\underline{4542 / / \mathrm{NRH}}$ | New freq for this Round Slip |

From logs submitted from JPL

| First heard 05 Dec | V DKG6 (x3) DE 3A7D (x2) |
| :--- | :--- |
| First Heard 13 Dec | V M8JF (x3) DE RIS9 (x2) |
| First heard 12 Nov | V JKDJ (x3) DE SLBC (x2) |
| First Heard 26 Dec | V JKDJ (x3) DE SLBC (x2 |
| First heard 02 Nov | V M8JF (x3) DE RIS9 (x2) |
| First heard 01 Nov | V M8JF (x3) DE RIS9 (x2) |
| First heard 24 Nov | V M8JF (x3) DE RIS9 (x2) |


| Freq in KHz | Call Slip |
| :---: | :---: |
| 3300//NRH | V MW3D (x3) DE 2SLC (x2) |
| 3642//NRH | V DKG6 (x3) DE 3A7D (x2) |
| 3642//5320//4532 | V DKG6 (x3) DE 3A7D (x2) |
| 3642//7602 | V DKG6 (x3) DE 3A7D (x2) |
| 3777//4532 | V M8JF (x3) DE RIS9 (x2) |
| 3777//4532//6793//8060 |  |
|  | V M8JF (x3) DE RIS9 (x2) |
| 3821//5644 | V DKSL (x3) DE ALSK V (x2) |
| 3767//3787 | V M8JF (x3) DE RIS9 (x2) |
| 4131//NRH | V JKDJ (x3) DE SLBC (x2) |
| 4131//4880 | V JKDJ (x3) DE SLBC (x2) |
| 4131//4886 | V JKDJ (x3) DE SLBC (x2) |
| 4225//NRH | V 7NPE (x3) DE QV5B (x2) |
| 4225//5500 | V 7NPE (x3) DE QV5B (x2) |
| 4532//NRH | V M8JF (x3) DE RIS9 (x2) |
| 4542//NRH | V M8JF (x3) DE RIS9 (x2) |
| 4532//6793//8060 | V M8JF (x3) DE RIS9 (x2) |
| 4720//NRH | VVV WNF (x3) DE FXM (x2) |


| Freq in kHz | Call Slip |
| :--- | :--- |
| $4860 / / 6840$ | VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? |
| 5177//NRH | V JKDJ (x3) DE SLBC (x2) |
| $5500 / / \mathrm{NRH}$ | V 7NPE (x3) DE QV5B (x2) |
| $5588 / / \mathrm{NRH}$ | V MW3D (x3) DE 2SLC (x2) |
| $5644 / / \mathrm{NRH}$ | V DKSL (x3) DE ALSK (x2) |
| $5801 / / \mathrm{NRH}$ | V DKG6 (x3) DE 3A7D (x2) |
| $5801 / / 10180$ | V DKG6 (x3) DE 3A7D (x2) |
| $6421 / / 9131$ | V DKSL (x3) DE ALSK (x2) |
| $6775 / / \mathrm{NRH}$ | V SD2Y (x3) DE CV6K (x2) |
| $6793 / / 8060$ | V M8JF (x3) DE RIS9 (x2) |
| $6840 / / 10640$ | VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K |
| $8060 / / \mathrm{NRH}$ | V M8JF (x3) DE RIS9 (x2) |
| $8110 / / \mathrm{NRH}$ | V 7NPE (x3) DE QV5B (x2) |
| $9131 / / \mathrm{NRH}$ | V DKSL (x3) DE ALSK (x2) |
| $9131 / / 10947$ | V DKSL (x3) DE ALSK (x2) |
| $10180 / / \mathrm{NRH}$ | V DKG6 (x3) DE 3A7D (x2) |
|  |  |



| M89 5644kHz 1353-1355z 24 Nov 2015 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| V DKSL (x3) DE ALSK (x2) (IP - Cont'd) |  |  |  |  |  |
| (Remote tuner Siberia)] |  |  |  |  |  |
| SVC GA (IP - Machine sent - 1353z) <br> NR 46245 RMKS 3507 TO 6.3/6792394 <br> FM .FM FM 8243082402 <br> FM 2092.. 24350782443051. <br> FM 1990196214501 <br> FM BT ... 5078 <br> FM 364 AR <br> FM .. 4 6792394..3.. <br> FM 8243082402 <br> FM 2092782435078246430510 <br> FM.. 7201 III .... QSL ? (1355Z) <br> (Return to R/S - 1355z) |  |  |  |  |  |
| Courtesy JPL |  |  |  |  |  |

M95 O XSV, XSV70, XSV85

## M95 Morse Logs

Transmission on 5555 kHz on 10 Nov would seem to indicate that XSV, XSV70 XSV85, \& the 05 transmission are all related and therefore should all be logged as M95. Also included as M95, (previously thought to be M89), are the transmissions with the call QV5B. The reason for including QV5B is that some time ago, while listening to the beginning of M95, while the operator was in voice, the QV5B round slip could clearly be heard in the background so must be related.

| 4225 | 2313z | 27 Dec | V 7NPE (x3) DE QV5B (x2) (IP - Cont'd) | (Remote tuner Hong Kong) | JPL | SUN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1230z | 28 Dec | V 7NPE (x3) DE QV5B (x2) (IP - Cont'd) | (Remote tuner Hong Kong) | JPL | MON |
|  | 1241z | 31 Dec | V 7NPE (x3) DE QV5B (x2) (IP - Cont'd) | (Remote tuner Hong Kong) | JPL | THU |
| 5500 | 1702z | 13 Dec | V 7NPE (x3) DE QV5B (x2) (IP - Cont'd) | (Remote tuner Hong Kong) | JPL | SUN |
|  | 1508z | 14 Dec | V 7NPE (x3) DE QV5B (x2) (IP - Cont'd) | (Remote tuner Hong Kong) | JPL | MO |



| M95 8073kHz 0001z 16 Nov 2015 |  |
| :--- | :--- |
| Initial call-up in voice USB 0001z Male operator |  |
| Chinese digital 4+4 QPSK 75/3000 LSB ( 0001z) |  |
| V BNGC (x3) DE XSV85 (x2) |  |
| Switched to CW - Cont'd - Hand sent - 0004z |  |
| HR MSG GA (0005z) |  |
| NR 0974 CK 94 35 1116 0654 BT |  |
| TA6 3U6 3AN TAU 773 357 373 4T4 NN3 435 |  |
| 3DT TTU 4DT 4D6 TA7 773 TAD 773 356 4A7 |  |
| NN3 445 3DU 4DT 4D6 TAN 773 TUT 773 TU3 |  |
| 773 356 4T7 NN3 434 3DT TTA N34 TTA ND4 |  |
| TT5 4DT 4D6 TUA 773 TUU 773 35U 4A7 NN3 |  |
| 434 3DT TTA N34 TTA ND4 TT5 4DT 4D6 TU4 |  |
| 773 TU5 773 35U 4A7 NN3 435 466 3DT TTU |  |
| 4DT 4D6 TU6 773 TU7 773 35U 4A7 NN3 445 |  |
| 3DU 4DT 4D6 TUN N34 T33 773 356 4T4 NN3 |  |
| 445 3DU 4DT 4D6 AR |  |
| MSG AGN (0010z) |  |
| NR 0974 CK 94 35 1116 0654 BT |  |
| TA6 3U6 3AN TAU 773 |  |
| (Cont'd repeat message - 0011z) |  |


| M95 8073kHz 1129z 23 Nov 2015 |
| :--- | :--- |
| Initial call-up in voice USB 1129z Male operator |
| Chinese digital 4+4 QPSK 75/3000 LSB (1130z) |
| V BNGC (x3) DE XSV85 (x2) |
| Switched to CW - Cont'd - Hand sent - 1139z |
| HR MSGS GA PSE CY (1140z) |
| NR 09 CK 29 EEEEE |
| NR 0989 CK 19 EEEEEEE |
| NR 0989 CK 297 35 1123 1646 BT BT |
| TE .. 3AN 3U7 TAU 773 TA7 773 356 (Cont'd - 1142z) |
| AR AR (1156z) |
| AGN AGN |
| NR 0989 CK 297 35 1123 1646 BT (1157z) |
| TU3 3.3AN 3U7 TAU 773 TA7 773 356 (Cont'd - 1157z) |
| AR (1214z) |
| 7G GA |
| NR 0989 CK 297 EEEEEEE |
| BT EEEEE |
| NR 0990 CK $84333 E E E E$ |
| NR 0990 CK 48 35 EEEEE |
| NR 0990 CK 48 35 12 EEEEEEE |
| NR 0990 CK 48 35 1123 1649 BT |
| TAA N5U TU3 N53 TAD 47T TTA 746 7T5 TT3 |
| (Cont'd - 1216z) |
|  |

Marker Beacons (MX MXI)

| 3168.5 | 2106z | 08 Dec | MX | CW Beacon "L" |  | AB | TUE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3335 | 1806z | 08 Dec | MX | CW Beacon "V" |  | AB | TUE |
|  | 2207z | 18 Dec | MX | CW Beacon "V" |  | BR | FRI |
| 3594.7 | 0321z | 20 Nov | MXI | CW Beacon "D" | Sevastopol | BR | FRI |
| 3593.8 | 2221z | 03 Dec | MXI | CW Beacon "P" | Kaliningrad | BR | THU |
| 3593.9 | 2232z | 03 Dec | MXI | CW Beacon "S" | Sevoromorsk | BR | THU |
| 3594 | 2208z | 23 Dec | MXI | CW Beacon "C" | Moscow | BR | WED |
| 3658 | 2110z | 07 Dec | MX | CW Beacon "V " | //3335//3658//5055.5 kHz | AB | MON |
|  | 2210z | 18 Dec | MX | CW Beacon "V" |  | BR | FRI |
| 4557.7 | 2215z | 18 Dec | MXI | CW Beacon "D" | Sevastopol | BR | FRI |
| 4557.9 | 0245z | 28 Dec | MXI | CW Beacon "S" | Sevoromorsk | BR | MON |
| 5055.5 | 2110z | 07 Dec | MX | CW Beacon "V" | //3335//3658//5055.5 kHz | AB | MON |
| 5153.7 | 0325z | 20 Nov | MXI | CW Beacon "D" | Sevastopol | BR | FRI |
| 5153.8 | 1734z | 29 Dec | MXI | CW Beacon "P" | Kaliningrad | BR | TUE |
| 5154 | 2241z | 03 Dec | MXI | CW Beacon "C" | Moscow | BR | THU |
| 5156.8 | 0257z | 28 Dec | MX | CW Beacon "L" | (Fast) | BR | MON |
| 7508.7 | 1534z | 21 Nov | MXI | CW Beacon "D" | Sevastopol | BR | SAT |
| 8494.7 | 0607z | 20 Dec | MXI | CW Beacon "D" | Sevastopol | BR | SUN |
| 8494.8 | 1532z | 21 Nov | MXI | CW Beacon "P" |  | BR | SAT |
| 8494.9 | 1530 z | 21 Nov | MXI | CW Beacon "S" | Sevoromorsk | BR | SAT |
| 8497.8 | 1529z | 21Nov | MX | CW Beacon "L" | St Petersburg | BR | SAT |
| 10871.7 | 1526z | 21 Nov | MXI | CW Beacon "D" | Sevastopol | BR | SAT |
| 10871.9 | 1527z | 21 Nov | MXI | CW Beacon "S" | Sevoromorsk | BR | SAT |
| 10872 | 1527z | 21 Nov | MXI | CW Beacon "C" | Moscow | BR | SAT |
| 12044 | 1239z | 23 Dec | MX | CW Beacon "C" |  | AB | WED |
| 13527.7 | 1524z | 21 Nov | MXI | CW Beacon "D" | Sevastopol | BR | SAT |
| 13527.9 | $1524 z$ | 21 Nov | MXI | CW Beacon "S" | Sevoromorsk | BR | SAT |


| 21 Nov | MXI CW Beacon "C" | Moscow |  |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
| 21 Nov | MXI CW Beacon "D" | Sevastopol |  |
| 21 Nov | MXI CW Beacon "S" | Sevoromorsk |  |
| 21 Nov | MXI CW Beacon "C" | Moscow |  |

## Oddities

## 4524kHz Marker

| 4524 | (Continuous) | 23 Nov | With strong signal in Germany since 22 Nov (sometimes with breaks) |  | Jochen <br> BR | MONSUN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0307z | 20 Dec | Active with intermittent tone | Good |  |  |
| $\underline{5292 k H z}$ Marker |  |  |  |  |  |  |
| 5292 | 2140z | 29 Dec | 'D' Channel Marker With D | h of 'D' shortened | BR | TUE |

## S28 'The Buzzer'

A parallel transmission on 6998 kHz appeared in addition to the regular 4625 kHz channel during October. Ary (AB) tells us it first appeared on 15 October \& although not always evident, due to propagation, is still active on this freq \& can often be heard in the UK if you listen at the right times.

We have received a number of reports of the two transmissions:-

| (Continuous) | 02 Nov |  | E.SMITH | MON |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 1710 z | 02 Nov | Strong signal 4625 kHz .6998 kHz strong - slightly weaker than 4625 kHz | AB | MON |  |
|  | 2050 z | 22 Nov | Strong signal 4625 kHz .6998 kHz Strong -slightly weaker than 4625 kHz | GH | Jochen | SUN |
|  | (Continuous) | 22 Nov | Stronger signal on 4625 kHz | SUN |  |  |
|  | 2020 z | 23 Nov | Strong signal 4625 kHz .6998 kHz much quieter | MON |  |  |
| 4625 | 2000 z | 24 Nov | Active again on 4625 kHz USB. Nothing on 6998 kHz. Good signal | GH | TUE |  |

Message Logs (from Schorschi)

| 6998 | 1235z | 26 Oct | [MDZhB MDZhB ... priyom] | Weak | Schorschi | MON |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1415z | 26 Oct | [MDZhB MDZhB 86581 WEYYOGENEIk 65301038 priyom] | Fair | Schorschi | MON |
|  | 1540z | 28 Oct | [MDZhB MDZhB 63926 LEFOChIMIJ 52268089 MDZhB MDZhB 63926 LEFOChIMIJ 52268089 priyom] [MDZhB MDZhB 02336 NESchOWKA 83025191 MDZhB MDZhB 02336 NESchOWKA 83025191 priyom] |  |  | MON |
|  | 1550z | 28 Oct |  |  |  | MON |
|  | 1234z | 01 Nov | [MDZhB MDZhB 76567 BERILI? ?? ... priyom] | Weak | Schorschi | SUN |
|  | 1236z | 01 Nov | [MDZhB MDZhB 94 ?7 ScERIJ 3724 ?5 ?8 ... priyom] | Weak | Schorschi | SUN |
|  | 1421z | 16 Nov | [MDZhB MDZhB 10527 BEY?ERDIE 41056119 MDZhB MDZhB 10527 BEY?ERDIE 41056119 priyom] |  |  | MON |
|  | 1227 z | 29 Nov | [MDZhB ... priyom] | Weak | Schorschi | SUN |
| 4625 | 1431z | 13 Dec | [MDZhB MDZhB 47700 AD??TA?IJ 07539030 MDZhB MDZhB 47700 AD??TA?IJ 07539030 priyom] [MDZhB MDZhB 42484 UDOBNYeKr 64618101 MDZhB MDZhB 42484 UDOBNYeKr 64618101 priyom] |  |  | SUN |
|  | 1542z | 13 Dec |  |  |  | SUN |



Contributors:

## E06 November/December 2015 log:

```
First/Third Thursday of month 2030z 4836kHz
05/11 '321' 72820
    14259226763278232782767238940912215743266407090235
    38085595431231974238366641225618841733119808912250
    7282000000
03/12 '321' 569 20 14259 ... 12250569 20 00000] 2036z Old message repeat
```


## Friday following First / Third Thursday $2130 \mathrm{z} \quad 4760 \mathrm{kHz}$

```
06/11 The E06 man just (2130Z) on 4760 as German Fräulein G06 with "Vier Sieben Zwo". - Hans-Friedrich ‘472’ 72820 14259............... 1225072820 00000] 2137z (same old message but G06 not E06) 04/12 '472’ 6132014259.
``` \(\qquad\)
``` \(22507282000000]\) 2136z
```

First /Third Thursday (repeats Friday) 0600z $\mathbf{1 8 2 8 5 k H z} \quad \mathbf{0 7 0 0 z} \quad 20140 \mathrm{kHz}$
$05 / 11$ \& '507’ 3981247394976918598194444460820866730621059276466664463318076210232794115950106031954680744847109717761491 19/11 1191528152541955489166861745660433494263988206832935469239402922490503974189054653871084404371020585 7458752823105578405261058455955021930030725302719560961051819405456551807679109866979822713701821443 1835908452693126479018982035596762084150246962581892957090818072663532727598133593663137948816259982 0082148001953549693791634376364820518843608133872914344762289790158457018924590342967523033901797495 6307825220735176010329280352438460349969987422297324079451343176515377291061800198342773497373361743 5396609455513887149939812400000

E06: Stutter 44444 in the 4th group of the message. This also occurred for this ID on 01/11/12 (NL 74, p. 36). Although the text of the messages does not match, both messages are 124 groups long, and DKs are similar. Coincidence? I'm not big on coincidences. Thanks JkC

## 0600z 14575kHz 0700z 17420kHz

03/12 \& '923' 4871051823087950580996807996603695619720030430006854213573537426413027812381341118197057977497833393536459 $17 / 12 \quad 6380028539894769085858603133425133108761884354995400819343443705846495002026219268773564005119548619$ 7879498967414756292943307784428385202061864348758077814170450627706611481202472027230335564013003131 7075106832765639406661775060710536461159129634210893377769825396472061455053760397895004505404128000 6220652280078688680486123290521620943797118828359826612285892189174725418647393949059875616551862134 0245130577307178787075450487105400000 ] 0721z

Other transmissions:

| 13367 kHz | 1505z | 02/11 '759 '32061 26393...... 226753206100000 ] 1519z | JkC | MON See transcript |
| :---: | :---: | :---: | :---: | :---: |
| 16287 kHz | 1605z | 02/11 '759' $3206126393 . \ldots . . .226753206100000] 1619 z$ | JkC | MON |
|  |  | epeated next day. Used 16293 for 1605z sending |  |  |

02/11 1505z 13367kHz $\quad 1605 z \quad 16287 \mathrm{kHz}$
'759' 320612639357939611498498970115852483288878141006372406470019391328254519863876055662500939819862665682228 2164053501472131466705825503458130083269212139956900421042181704455946772930797955000523394651761367 1328075320938453268105999336272876573332851133652920061144231705045725990530170151230867156021117333 226753206100000

02/11

## $1800 \mathrm{z} \quad 5930 \mathrm{kHz} \quad 1830 \mathrm{z} \quad 4496 \mathrm{kHz}$

' 910 ’ 834578695213790147043906843041796010105820640508946925309841327459732048125462932573627536406897917903065 5983297432161425403474395201634120559738074909329364956165420483640560274801375079348283494959670679 7320210758451058421814137479192492030809515299437069148451571351773619396358354548245 8345700000

Following day 1830 z repeat after having tuned up on 4496 khz then moved to 4022 khz for message sending.
$1800 \mathrm{kHz} \quad 6792 \mathrm{kHz}$
$1830 \mathrm{z} \quad 4496 \mathrm{kHz}$
' 910 ’ 245679768163306641838911525323331487655691696663020098943264267356881549281589755456244455606783536700635 3083249862540278878001549321900343294853782320259267198567372430623167557900163525174428999887476581 8454097946405029311391506659340431122040381777268220941992429242474816348342846255529667023262991973 593638511960309051318281610138213252456700000

07/12 '910’ 873612312322400899052297990925926918240314020055664656072588565471323545129918261118310961181328681676528 9232211275501221060298350594708010799231032863438712443823748989139762903927427194004528946605138397 2300835771497260312577919642644965529053337854882569243639345805045123539984613571620780620537542566 822718736100000 ] 1815z JkC MON

14/12 '910’ 452668974160598362017991247499582353923522361612596030744368639705947054440916528964464875204378554823913 8622807617753660187216755458450415882407440281369243257896470096912151546529356912634173774837865708 1850910847271137089674982104143517380981675705066954086214488798786062119358689055065152129866386271 8488249843045160390539404767974526600000
$1800 \mathrm{kHz} 5930 \mathrm{kHz} \quad 1830 \mathrm{kHz} 4022 \mathrm{kHz}$
'910’ 24567 97681...... 2132524567 00000] 1846z QSA4 QRM1 QSB1 '910' 87361 23123...... 8227187361 00000] 1815z QSA3 QRM1 QSB1 ‘910’ 45266 89741...... 7679745266 00000] 1816z QSA4 QRM1 QSB1

## PoSW noted the following:

First + Third Thursdays in the Month 2030 UTC - purely nominal- start:-
19-Nov-15:- $4,836 \mathrm{kHz}$, started about one minute before the half-hour as is often the case with these schedules, call " 321 ", DK/GC " 5695692020 ", the 5Fs used on many previous occasions, "14259 $226763278232782 \ldots .$. ".

3-Dec-15:- 4,836 kHz, started at 2028 UTC, "321" and "569 5692020 " again.
Friday Schedule Following First + Third Thursdays in the Month:-
6-Nov-15:- 4,760 kHz, something a bit unusual this evening, came up with the G06 YL German language voice. Presumably an error on someone's part unless this has significance for the intended recipients. Calling "Vier sieben zwo" - that'll be " 472 ", then, I think this has happened on one or possibly two occasions in the past. DK/GC "728 7282020 ", the 5Fs the ever popular, "14259 22676 32782.....", S9 signal.

20-Nov-15:- $4,760 \mathrm{kHz}$, started well before the half hour but at least came up with the E06 English voice this evening, " 472 ", decode key " 569 569 ", group count " 2020 ", 5 Fs same as those heard in German last time.

4-Dec-15:- $4,760 \mathrm{kHz}$, started just over two minutes before the half-hour, call "613 6132020 " and the 5 Fs , " 14259 22676....".
First + Third Thursdays in the Month 0600 (?) + 0700 UTC Schedule:-
3-Dec-15:- 0706 UTC, $17,420 \mathrm{kHz}$, transmission in progress, S8, ended before 0722 UTC with, "487 48710510500000 ".
4-Dec-15, Friday:- 0700 UTC, $17,420 \mathrm{kHz}$, the expected repeat on the following day, call " 923 ". Much weaker than on Thursday, S3 to S4 at best. Also had a tune around after 0600 Z searching for the first sending but nothing found.

## E07

PoSW writes, Continues to follow predictable schedules, low levels of audio continues to make for difficult copy at times. As expected moved by one hour in November so as to appear at the same local time as in the summer months.

Sunday + Wednesday Schedule, 1800 UTC Start:-
1-Nov-15, Sunday:- 1800 UTC, $8,153 \mathrm{kHz}$, "184 184184000 ", S9 with better than usual audio.
1820 UTC, $6,853 \mathrm{kHz}$, second sending, over 59 .
4-Nov-15, Wednesday:- 1800 UTC, $8,153 \mathrm{kHz}$, "184 184184000 ", over S9, audio low but readable.
8-Nov-15, Sunday:- 1800 UTC, $8,153 \mathrm{kHz}$, "184 1841841 ", DK/GC " 24461 " (?), deep QSB at the end of the call-up routine.
1820 UTC, $6,853 \mathrm{kHz}$, second sending, weak signal down in the noise, unreadable.
1840 UTC, $5,453 \mathrm{kHz}$, third sending, weak signal with low audio, difficult copy.
15-Nov-15, Sunday:- 1800 UTC, $8,153 \mathrm{kHz}$, "184 184184000 ", S9 with good audio.
1820 UTC, $6,853 \mathrm{kHz}$, second sending, much weaker, S 6 to S 7 at best.
18-Nov-15, Wednesday:- 1800 UTC, $8,153 \mathrm{kHz}$, "184 $184184000 "$, S9, low audio.
22-Nov-15, Sunday:- 1800 UTC, $8,153 \mathrm{kHz}$, "184 184184000 ", S9 with better than usual audio.
1820 UTC, $6,853 \mathrm{kHz}$, second sender, weaker signal, S7.
29-Nov-15, Sunday:- 1820 UTC, $6,853 \mathrm{kHz}$, second sending of a "full message", the 1800 Z sending on 8,153 was too weak to copy, " 1841841841 ", DK/GC "880 164" x 2, a longer than usual message, total transmission time 19 minutes. S9 carrier, audio low but readable.
1840 UTC, $5,453 \mathrm{kHz}$, third sending, peaking S9 with deep QSB and low audio.
2-Dec-15, Wednesday:- 1800 UTC, $7,464 \mathrm{kHz}$, moving lower in frequency for December, "485485485 1", low audio and a broadcast station on 7,465 making further copy a problem. Carrier went off at 1819 Z so presumably the same long message as on Sunday.
1820 UTC, $5,864 \mathrm{kHz}$, second sending, again unreadable due to low audio and a BC station 1 kHz higher.
1840 UTC, $4,564 \mathrm{kHz}$, third sending, Over S 9 with deep fading, again low audio making copy difficult.
Monday + Wednesday Schedule, 2000 UTC Start:-
2-Nov-15, Monday:- 2000 UTC, $7,724 \mathrm{kHz}$, "798 $798798000 "$, S9 carrier, audio low but readable.
2020 UTC, $6,924 \mathrm{kHz}$, second sending, also with distinctly low audio.
4-Nov-15, Wednesday:- 2000 UTC, $7,724 \mathrm{kHz}$, and 2020 UTC, $6,924 \mathrm{kHz}$, "798 798798 000".
11-Nov-15, Wednesday:- 2000 UTC, $7,724 \mathrm{kHz}$, very weak signal, unreadable, only detectable by using SSB mode and adjusting for a beat note with the only just discernible carrier - which went off just before 2002:30s UTC, so "No Message" again.
2020 UTC, $6,924 \mathrm{kHz}$, eight hundred lower and a much stronger signal, "798 798798000 ", peaking S9 although with deep QSB.
23-Nov-15, Monday:- 2000 UTC, $7,724 \mathrm{kHz}$, still an extremely weak signal, carrier off just before 2002:30s.
2020 UTC, $6,924 \mathrm{kHz}$, in complete contrast an S9 signal with reasonable audio, "798 798798000 ".
2-Dec-15, Wednesday:- 2000 UTC, $7,478 \mathrm{kHz}$, should be the first sending of this schedule in the month of December, very weak signal, unreadable, carrier went off before 2002:30s UTC.
2020 UTC, $6,778 \mathrm{kHz}$, second sending stronger, audio low, "472 472472000 ".
Thursday Schedule, 2110 UTC Start:-
5-Nov-15:- 2110 UTC, $6,777 \mathrm{kHz}$, weak signal, difficult copy, carrier went off just before 2112:30s. So "no message".
2130 UTC, $5,449 \mathrm{kHz}$, "744 744744000 ", much better copy, slight interference from the SSB station formerly known as RAF VOLMET on the HF side.

12-Nov-15:- 2110 UTC, $6,777 \mathrm{kHz}$, weak signal and low audio, unreadable.
2130 UTC, $5,449 \mathrm{kHz}$, "744 744744000 ", S9 carrier, audio low.

26-Nov-15:- 2110 UTC, $6,777 \mathrm{kHz}$, S9 for a change although audio low, "744 744744000 ".
2130 UTC, $5,449 \mathrm{kHz}$, second sending, over S9.
3-Dec-15:- 2110 UTC, $6,777 \mathrm{kHz}$, very low audio, strong "XJT" on frequency, unreadable, carrier went off just before 2112:30s UTC. 2130 UTC, $5,449 \mathrm{kHz}$, "744 744744000 ", carrier over S9, audio low but readable.

## Onto other's logs, with repition:

Sunday/Wednesday

| November 2015 |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{1 8 0 0 z}$ | $\mathbf{8 1 5 3 k H z}$ | $\mathbf{1 8 2 0 z}$ | $\mathbf{6 8 5 3} \mathbf{k H z}$ | $\mathbf{1 8 4 0 z}$ | $\mathbf{5 4 5 3} \mathbf{k H z}$ |
|  |  |  |  |  |  |
| $01 / 11$ | 184000 |  |  | Strong |  |
| $04 / 11$ | 184000 |  | Strong |  |  |
| $11 / 11$ | $18412446166300 \ldots 61530000$ |  | Weak |  |  |

184124461
66300195950992632820191946607494234017506269948760
732586247168287295159614839333937868793787.9275458

47474072621183852752662103773718100045105170540695
13193296590885691723504610783731230220921296567262
04413778706521905627361927330463954436411783837276
55444381069349683607340338641311204064350229895761
61530
Courtesy JkC

| $18 / 11$ | 184000 |  |
| :--- | :--- | :--- |
| $184188016445645 \ldots 73128000000$ | Strong |  |
| $25 / 11$ |  | Weak |
| Very weak and unworkable in some UK areas |  |  |

[^0]29/11
1841 unworkable
Weak

December 2015

| $\mathbf{1 8 0 0 z}$ | $\mathbf{7 4 6 4 k H z}$ |  | $\mathbf{1 8 2 0 z}$ | $\mathbf{5 8 6 4} \mathbf{k H z}$ | $\mathbf{1 8 4 0 z}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $02 / 12$ | $4851 \ldots$ | [Repeat of Monday 30/11] |  |  |  |
| $09 / 12$ | 485000 |  | Weak, unworkable |  |  |
| $13 / 12$ | 485000 | [1800z open carrier, no modulation] | Very weak |  |  |
| $16 / 12$ | 485000 | [1800z Carrier only, no discernible audio] | Fair |  |  |
| $20 / 12$ | Carrier only |  | Weak |  |  |
| $27 / 12$ | 485000 |  | Fair |  |  |

## Monday/Wednesday

2000 z 77241 Hz

| $02 / 11$ | 798000 | Fair |
| :--- | :--- | :--- |
| $04 / 11$ | 798000 | Fair |
| $11 / 11$ | 798000 | Fair |
| $18 / 11$ | 798000 | Strong |
| $23 / 11$ | 798000 | Weak |

## December 2015

| 2000z | 7478kHz |  | 2020z | 6778kHz | 2040z | 5278kHz |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 02/12 |  | 472000 |  | [2000z NRH] |  |  | Weak |
| 07/12 |  | Weak | ier only, |  |  |  | Unwo |
| 14/12 |  | 47211 | 4802638 | 54764000000 |  |  | Weak |

472113648
02638441840907028224681217409796092454625090878253 69540064200123387982375716137155293188398801886670 26960846945056793769709729268912001120677422438254 98480859435307713109868649611712166332398709356687 9837137213663474666390096015432814954764
000000 Courtesy JkC

## Wednesday/Saturday

## November 2015

$0700 \mathrm{l} \quad 10112 \mathrm{kHz} \quad 0720 \mathrm{z} \quad 11112 \mathrm{kHz} \quad 0740 \mathrm{z} \quad 12112 \mathrm{kHz}$

11/11
111112610361108 ... 14591000000

111126103
61108506452972563751157666514159625084472068877038
77971228935799937879844822569130816418129806921695
20490522022210818890100015784700603772061988585239
94335904657544629173122881874874888543391615201214
56083818148179920565845132091985431693082350939034
25281289732599300090127899004587164861594111273041
23786269855150609653711808092394430085147770918131
62642222726423454207388493766537323302825146375268
37641777914132841371116620493694616871854401947610
97552207580212942730954443846371946385715510068575
$499538144114591000000 \quad$ Courtesy ES
14/11 111112610361108 ... 14591000000
8/11 -1111394 5576631-17774000000
Fair/Strong

111139455
6631554770429116373413599816710491915203942740691
02195027229743283388014945037331657485847318928176
52521186120118123153773566543830303817091733344327
93469056251965470635545104000811058154066073284828
76469795685126889248433209442469266471173008372543
0965042088573290340117774
000000
Courtesy Edd

21/11 $11113945576631 \ldots 17774000000$
25/11 11113945576631 ... 17774000000

28/11 $11113945576631 \ldots 17774000000$

## Thursday

November 2015

| $\mathbf{2 1 1 0 z}$ | $\mathbf{6 7 7 7} \mathbf{k H z}$ | $\mathbf{2 1 3 0 z}$ | $\mathbf{5 4 4 9} \mathbf{k H z}$ | $\mathbf{2 1 5 0 z}$ | $\mathbf{4 4 8 3} \mathbf{k H z}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $05 / 11$ | 744000 | $[2110 \mathrm{zXJTQRM}]$ |  | Fair |  |
| $12 / 11$ | 744000 | $[2110 \mathrm{z}$ Strong carrier, no discernible audio] | Fair |  |  |
| $19 / 11$ | Null Message, carrier only |  | Unworkable |  |  |
| $26 / 11$ | 744000 | $[2110 \mathrm{z}$ carrier only] | Fair |  |  |

December 2015

Wednesday
November 2015

| $\mathbf{2 1 0 0 z}$ | $\mathbf{5 8 7 7} \mathbf{k H z}$ | $\mathbf{2 1 2 0 z} \quad \mathbf{5 2 7 7} \mathbf{k H z}$ | $\mathbf{2 1 2 0 z}$ | $\mathbf{4 5 7 7} \mathbf{k H z}$ |
| :--- | :--- | :---: | :---: | :---: |
| $04 / 11$ | $82511938956496506592 \ldots 17521000000$ |  |  |  |
| $11 / 11$ | 825000 | Very strong |  |  |
| $18 / 11$ | 825000 | Strong |  |  |
| $25 / 11$ | $82511767371047979147 \ldots 38555000000$ | Very strong |  |  |

825117673710479
79147599645898753690666960591418988021306014543701
21169217725615794707526497867720313686940307412107
0527418916473954089013901588884576830089413653568 09288856169214236205423876883279900126338215799708 13212374351795786050524750178663250546424139254775 33674427955399203074950285410339311145370740076697 83539682595386512999790206427726068834654587938421析 38421 131742230974631338489068518941653071454938555 000000

## December 2015

| $02 / 11$ | $82511767371047979147 \ldots 38555000000$ |  |
| :--- | :--- | :--- |
| $09 / 12$ | 825000 | $[2100 \mathrm{z}$ weak, unworkable] |

825111602751671
98360443211335762360409949766633293566319038602090
56541663170223289219052114214885050583638904947279
21198297980002644611337256695749167429502102588845
38189821530149293310412482762655989606910288502582
40073120804114830166834255407945044117459996387520
57585531246278039189555554645806156602163584442867
95580300939723347133794199475718841449744318058168
51548
000000 Courtesy JkC

| $23 / 12$ | 825000 |
| :--- | :--- |
| $30 / 12$ | 825000 |

Thursday

## November 2015



## December 2015

| $03 / 11$ | $18911767371047979147 \ldots 38555000000$ |  |
| :--- | :--- | :--- |
| $10 / 12$ | 189000 |  |
| $17 / 12$ | $18911160275167198360 \ldots 51548000000$ | Extremely strong |
| $24 / 12$ | 189000 | Very strong strong |
| $31 / 12$ | Very strong |  |

## Friday

## November 2015

$1610 \mathrm{z} \quad 138 \mathrm{kHz} \quad 1630 \mathrm{z} \quad 7538 \mathrm{kHz} \quad 1650 \mathrm{z} \quad 6838 \mathrm{kHz}$

## December 2015

| $\mathbf{1 6 1 0 z}$ | $\mathbf{5 8 8 7} \mathbf{k H z}$ | $\mathbf{1 6 3 0 z}$ | $\mathbf{5 3 8 7} \mathbf{k H z}$ | $\mathbf{1 6 5 0 z}$ | $\mathbf{6 8 3 8 k H z}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $04 / 12$ | 830000 |  | Strong |  |  |
| $11 / 12$ | $83011707784848346613 \ldots 25229000000$ | Fair |  |  |  |

830117077848483
6613479495933945768015057400024017016351173227244 95532993018875244902790057796062218749087753077965 6738755643942166624125912059169684624851850143780 1834644301721686486299684434314435746013403594607 1794780848589218004171722190275932131058385662434 17947808485892180041717221902759321310583856624346
0498364924008298873078051044886445340397679986939
86318872413169587372653088301107322083657032845273
43224595292004352266701561146135813585643845522477
17977671725229
000000 Courtesy JkC

| $18 / 12$ | 830000 |
| :--- | :--- |
| $25 / 12$ | 830000 |

## Saturday

November 2015


December 2015

| 0900z | 11121 kHz | 0920z | 12221 kHz | 0940z | 13421 kHz |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 05/12 |  | 124000 |  |  |  | Fair |
| 11/12 |  | 1241170778484 | 46613 ... 25229000000 |  |  | Fair |
| 19/12 |  | 124000 |  |  |  | Very strong |
| 26/12 |  | 124000 |  |  |  | Weak |

## PoSW's E07 a intercepts

Saturday Schedule, 0900 UTC Start:-
14-Nov-15:- 0900 UTC, $11,553 \mathrm{kHz}$, "515 515 515 167460 " for a full message this morning, DK/GC " 607249 " x 2 , strong signal, S9 for most of the time.
0920 UTC, $12,153 \mathrm{kHz}$, second sending, also S 9 .
$0940 \mathrm{UTC}, 13,553 \mathrm{kHz}$, third sending even stronger, over S 9 at times.

21-Nov-15:- 0900 UTC, $11,553 \mathrm{kHz}, \mathrm{S} 7$, and 0920 UTC, $12,153 \mathrm{kHz}$, peaking S9, " 515515515000 ".

28-Nov-15:- 0900 UTC, $11,553 \mathrm{kHz}, ~ " 515515515000$ ", S7
$0920 \mathrm{UTC}, 12,153 \mathrm{kHz}$, second sending, peaking S 9

5-Dec-15:- 0900 UTC, $11,121 \mathrm{kHz}$, "124 124124000 ", strong signal, over S 9 at times.
0920 UTC, $12,221 \mathrm{kHz}$, second sending, slightly weaker
12-Dec-15:- 0900 UTC, $11,121 \mathrm{kHz}$, a "full message", "124 124124117077 ", DK/GC "8484 83" x 2, S7.
0920 UTC, $12,221 \mathrm{kHz}$, second sending, slightly weaker, S6.
0940 UTC, $13,421 \mathrm{kHz}$, third sending, also S6.

Wednesday Schedule, 2100 UTC Start:-
11-Nov-15:- 2100 UTC, $5,877 \mathrm{kHz}$, " $825825825000 "$, S9+ SSB signal.
2120 UTC, $5,277 \mathrm{kHz}$, second sending, also $\mathrm{S} 9+$.
18-Nov-15:- 2100 UTC, $5,877 \mathrm{kHz}$, and 2120 UTC, $5,277 \mathrm{kHz}$, both S9+, "825 825825000 ".
2-Dec-15:- $2100 \mathrm{UTC}, 5,877 \mathrm{kHz}$, a "full message" this evening, "825 825825117673 ", DK/GC " 710479 " x 2 . Much weaker than on past occasions, an indicated S 6 at best.

2120 UTC, $5,277 \mathrm{kHz}$, second sending, stronger signal peaking over S9. 2140 UTC, $4,577 \mathrm{kHz}$, third sending, the strongest, S9+.

## E11 log Nov/Dec

| 4505 kHz | 1605z | 08/11 [232/00] Out 1608z QSA3 QRM1 QSB1 | JkC | SUN |
| :---: | :---: | :---: | :---: | :---: |
|  | 1605z | 10/11 [232/00] Out 1608z QSA4 QRM1 QSB1 | JkC, RNGB | TUE |
|  | 1605z | 15/11 [232/00] Out 1608z S9 | Malc | SUN |
|  | 1605z | 24/11 [232/00] | RNGB | TUE |
|  | 1605z | 28/11 [232/00] Out 1608z S9 | Malc | SUN |
|  | 1605z | 01/12 [232/00] | RNGB | TUE |
|  | 1605z | 08/12 [232/00] Out 1608z S8 | Malc | TUE |
|  | 1605z | 10/12 [232/00] S9 | Brixmis | THU |
|  | 1605z | 13/12 [232/00] Out 1608z QSA4 QRM1 QSB1 | JkC | SUN |
|  | 1605z | 29/12 [232/00] Out 1608z QSA3 QRM1 QSB1 | JkC | TUE |
| 5082 kHz | 1730z | 12/11 [416/00] Out 1730z S7 | Malc | THU |
|  | 0450z | 16/11 [416/00] Out 0453z | Ed Smith | MON |
|  | 1730z | 19/11 [416/00] Out 1540z QSA4 QRM2 QSB2 | JkC | THU |
|  | 0450z | 23/11 [416/00] Out 0458z | Ed Smith | MON |
|  | 0450z | 30/11 [416/00] Out 0452z | Ed Smith | MON |
|  | 1730z | 03/12 [416/00] | Malc | THU |
|  | 1730z | 17/12 [416/00] Out 1733z S7 | Malc | THU |
|  | 1730z | 24/12 [416/00] | RNGB | THU |
| 5409 kHz | 1530z | 05/11 [262/00] Out 1533z S6 | Malc | THU |
|  | 1530z | 03/12 [262/00] | Brixmis, Malc | THU |
|  | 1530z | 10/12 [262/00] Out 1533z S9 | Malc | THU |
| 5779 kHz | 0315z | 04/11 [253/00] Out 0318z QSA3 QRM1 QSB1 | JkC | WED |
|  | 0315z | 05/11 [253/00] Very strong | PLondon | THU |
|  | 0315z | 18/11 [253/00] Out 0318z Fair, QSB3 | PLondon | WED |
|  | 0315z | 19/11 [253/00] Out 0318z | Ed Smith | THU |
|  | 0315z | 26/11 [253/00] Out 0318z Very strong | PLondon | THU |
|  | 0315z | 03/11 [253/00] Out 0318z Very strong | PLondon | THU |
|  | 0315z | 17/12 [253/00] Very strong | PLondon | THU |
| 6304 kHz | 2000z | 13/11 [576/00] Fair | RNGB | FRI |
|  | 2000z | 20/11 [576/00] Out 2003z QSA3 QRM1 QSB1 | JkC | FRI |
|  | 2000z | 04/12 [576/00] Out2003z QSA4 QRM1 QSB1 | JkC | FRI |
|  | 2000z | 18/12 [576/00] Out 2003z S2 | Malc | FRI |
| 7840 kHz | 0645z | 05/11 [517/00] Out 0648z | Ed Smith | THU |
|  | 0645z | 12/11 [517/00] Out 0648z QSA4 QRM1 QSB1 | JkC | THU |
|  | 0645z | 17/11 [517/00] | Ed Smith | TUE |
|  | 0645z | 19/11 [517/00] Out 0648z | Ed Smith | THU |
|  | 0645z | 03/12 [517/00] Out 0648z | Ed Smith | THU |
| 7984 kHz | 1205 z | 23/12 [469/00] Out 1208z S2 | Malc | WED |
|  | 1205z | 29/12 [469/00] Fair | RNGB | TUE |
| 9443 kHz | 1705z | 04/11 [392/00] Out 1708z S7 | Malc, JkC | WED |
|  | 1705z | 07/11 [392/00] Weak | RNGB | SAT |
|  | 1705z | 25/11 [392/00] Out 1708z S1 | Malc | WED |
|  | 1705z | 02/12 [392/00] Out 1708z QSA4 QRM2 QSB1 | JkC | WED |
|  | 1705z | 05/12 [392/00] Out 1708z S3 | Malc, Ed Smith | SAT |
|  | 1705z | 09/12 [392/00] Out 1708z S2 | Malc | WED |
|  | 1705z | 12/12 [392/00] Out 1705z S2 | Malc | SAT |
|  | 1705z | 23/12 [392/00] | RNGB | WED |
|  | 1705z | 26/12 [392/00] Out 1708z S9+10 | Malc | SAT |
| 9446 kHz | 0830z | 06/11 [649/00] Good | RNGB | FRI |
|  | 0900z | 09/11 [534/00] Out 0903z S5 | Malc | MON |
|  | 0900z | 11/11 [534/00] Out 0903z S5 | Malc | WED |
|  | 0830z | 16/11 [649/00] | Ed Smith | MON |
|  | 0900z | 16/11 [534/00] | Ed Smith | MON |
|  | 0900z | 25/11 [534/00] Out 0903z S4 | Malc | WED |
|  | 0830z | 27/11 [649/00] Good | RNGB | THU |
|  | 0830z | 30/11 [649/00] Strong | RNGB | MON |
|  | 0900z | 30/11 [534/00] Good | RNGB | MON |
|  | 0900z | 02/12 [534/00] Out 0903z | Ed Smith | WED |
|  | 0900z | 07/12 [534/00] Fair | RNGB | MON |
|  | 0830z | 14/12 [649/00] Out 0833z S3 | Malc | MON |
|  | 0900z | 14/12 [534/00] Out 0903z S2 | Malc | MON |
|  | 0900z | 16/12 [534/00] Out 0903z S3 | Malc | WED |
|  | 0830z | 18/12 [649/00] Out 0833z S7 | Malc | FRI |
|  | 0830z | 21/12 [649/00] Good | RNGB | MON |
|  | 0900z | 21/12 [534/00] Good, some QRM | RNGB | MON |
|  | 0900z | 23/12 [534/00] Out 0903z S2 | Malc | WED |
|  | 0830z | 28/12 [649/00] Good | RNGB | MON |
| 9950 kHz | 0930z | 04/11 [270/00] | RNGB | WED |


|  | 0930z | 11/11 [270/00] Out 0933z | Ed Smith | WED |
| :---: | :---: | :---: | :---: | :---: |
|  | 0930z | 12/11 [270/00] Out 0933z S3 | Malc, RNGB | THU |
|  | 0930z | 25/11 [270/00] Out 0933z S4 | Malc | WED |
|  | 0930z | 26/11 [270/00] Good | RNGB | THU |
|  | 0930z | 02/12 [270/00] Out 0933z | Ed Smith | WED |
|  | 0930z | 03/12 [270/00] Good | RNGB | THU |
|  | 0930z | 10/12 [270/00] Out 0933z S4 | Malc | THU |
|  | 0930z | 16/12 [270/00] Out 0933z S4 | Malc | WED |
|  | 0930z | 17/12 [270/00] Out 0933z S3 | Malc | THU |
|  | 0930z | 23/12 [270/00] Out 0933z S3 | Malc | WED |
| 10125 kHz 08 | 0820z | 02/11 [438/00] Out 0823z S5 | Malc | MON |
|  | 0820z | 05/11 [438/00] | RNGB | THU |
|  | 0820z | 16/11 [438/00] | Ed Smith | MON |
|  | 0820z | 26/11 [438/00] Good | RNGB | THU |
|  | 0820z | 30/11 [438/00] Good | RNGB | MON |
|  | 0820z | 10/12 [438/00] Out 0823z S5 | Malc | THU |
| 10213 kHz 0 | 0745z | 02/11 [262/00] Out 0748z S5 | Malc | MON |
|  | 0745z | 09/11 [262/00] Out 0748z S5 | Malc | MON |
|  | 0745z | 23/11 [262/00] | Brixmis | MON |
|  | 0745z | 30/11 [262/00] | RNGB, Malc | MON |
| 10429 kHz 0 | 0805z | 04/11 [311/00] Out 0808z | Ed Smith, Malc | WED |
|  | 0805z | 08/11 [311/00] Out 0808z S5 | Malc, Ed Smith | SUN |
|  | 0805z | 11/11 [311/00] Out 0808z S6 | Malc, RNGB | WED |
|  | 0805z | 15/11 [311/00] | RNGB | SUN |
|  | 0805z | 25/11 [311/00] Out 0808z S5 | Malc | WED |
|  | 0805z | $28 / 11$ [311/00] Out 0808z S4 | Malc | SUN |
|  | 0805z | 06/12 [311/00] Out 0808z | Ed Smith | SUN |
|  | 0805z | 16/12 [311/00] Out 0808z S7 | Malc | WED |
|  | 0805z | 23/12 [311/00] Out 0808z S5 | Malc | WED |
|  | 0805z | 27/12 [311/00] Out 0808z S4 | Malc | SUN |
| 10448kHz 1 | $1625 z$ | 04/11 [972/00] | Brixmis, Malc | WED |
|  | 1625 z | 08/11 [972/00] Out 1628z QSA4 QRM1 QSB1 | JkC | MON |
|  | 1625z | 11/11 [972/00] Out 1628z S7 | Malc | WED |
|  | $1625 z$ | 15/11 [972/00] Out 1628z S9 | Malc, Gary H | SUN |
|  | $1625 z$ | 18/11 [972/00] Out 1628z QSA2 QRM1 QSB1 | JkC | WED |
|  | 1625z | 22/11 [972/00] | Brixmis | SUN |
|  | 1625 z | 02/12 [972/00] | Gary H, JkC | WED |
|  | $1625 z$ | 13/12 [972/00] Out 1628z QSA3 QRM1 QSB2 | JkC | SUN |
|  | $1625 z$ | 16/12 [972/00] Out 1628z S2 | Malc | WED |
|  | $1625 z$ | 30/12 [972/00] Out 1628z QSA2 QRM1 QSB1 | JkC | WED |
| 10800 kHz 07 | 0710z | 03/11 [633/00] Out 0713z S6 | Malc, RNGB | TUE |
|  | 0710z | 13/11 [633/00] Out 0713z | Ed Smith | FRI |
|  | 0710z | 24/11 [633/00] | RNGB | TUE |
|  | 0710z | 08/12 [633/00] Out 0713z S4 | Malc | TUE |
|  | 0710z | 22/12 [633/00] Out 0713z S2 | Malc | TUE |
| 11100 kHz | 1205z | 03/11 [469/00] Out 1208z S9 | Malc | TUE |
|  | 1205 z | 04/11 [469/00] | Malc, JkC | WED |
|  | 1205 z | 10/11 [469/00] Out 1208z S9 | Malc, JkC | TUE |
|  | 1205z | 11/11 [469/00] Out 1208z S5 | Malc | WED |
|  | 1205 z | 17/11 [469/00] | Ed Smith | TUE |
|  | 1205 z | 01/12 [469/00] Out 1208z | Ed Smith | TUE |
|  | 1205 z | 02/12 [469/00] | JkC, Ed Smith | WED |
| 11107 kHz 2 | 2005 z | 05/12 [363/00] Out 2008z S2 | Malc, Ed Smith | SAT |
| 12153 kHz 10 | 1045z | 10/11 [576/00] Good | RNGB | TUE |
|  | 1045z | 17/11 [576/00] | Ed Smith | TUE |
|  | 1045z | 01/12 [576/00] Fair | RNGB | TUE |
|  | 1045z | 22/12 [576/00] Strong | RNGB | TUE |
|  | 1045z | 29/12 [576/00] Good | RNGB | TUE |
| 12924 kHz 0 | 0710z | 05/11 [491/00] | RNGB | THU |
|  | 0710z | 12/11 [491/00] Out 0713z QSA3 QRM2 QSB1 | JkC | THU |
|  | 0710z | 19/11 [491/00] | Ed Smith | THU |
|  | 0710z | 21/11 [491/00] | Brixmis | SAT |
|  | 0710z | 03/12 [491/00] | RNGB | THU |
| 13046 kHz 0 | 0600z | 02/11 [181/00] | JkC | MON |
|  | 0600z | 06/11 [181/00] Out 0603z QSA4 QRM1 QSB1 | JkC | FRI |
|  | 0600z | 13/11 [181/00] Out 0603z | Ed Smith | FRI |
|  | 0600z | 16/11 [181/00] | Ed Smith | MON |
|  | 0600z | 20/11 [181/00] Out 0603z | Ed Smith | FRI |
|  | 0600z | 30/11 [181/00] Out 0603z | Ed Smith | MON |
| 14666 kHz 1 | 1345z | 10/11 [911/00] | Malc | TUE |
|  | 1345 z | 17/11 [911/00] Out 1348z QSA4 QRM1 QSB1 | JkC, Ed Smith | TUE |
|  | 1345z | 21/11 [911/00] | HFD | SAT |


| 1345z | 24/11 [911/00] | Gary H | TUE |
| :---: | :---: | :---: | :---: |
| 1345z | 08/12 [911/00] Out 1348z S5 | Malc | TUE |
| 1345z | 12/12 [911/00] Out 1348z S9 | Malc | SAT |
| 1345z | 23/12 [911/00] | Gary H | TUE |
| 1345z | 26/12 [911/00] Out 1348z S6 | Malc | SAT |
| $15632 \mathrm{kHz} \mathrm{1540z}$ | 01/11 [228/00] Out 1343z QSA3 QRM1 QSB1 | JkC | SUN |
| 1540z | 09/11 [228/00] Out 1543z S2 | Malc | MON |
| 1540 z | 15/11 [228/00] Out 1543z S3 | Malc | SUN |
| 1540z | 16/11 [228/00] | Gary H | MON |
| 1540z | 23/11 [228/00] Out 1543z QSA2 QRM1 QSB1 | JkC | MON |
| 1540z | 07/12 [228/00] Out 1543z QSA3 QRM2 QSB1 | JkC | MON |
| 1540z | 12/12 [228/00] Out 1543z S2 | Malc | SUN |
| $16112 \mathrm{kHz} \mathrm{0745z}$ | 03/11 [335/00] Out 0748z S9 | Malc | TUE |
| 0730z | 08/11 [352/00] | Ed Smith | SUN |
| 0745z | 17/11 [335/00] Weak | RNGB | TUE |
| 0730z | 20/11 [352/00] Out 0733z | Ed Smith | FRI |
| 0745z | 23/11 [335/00] Very weak | Brixmis | TUE |
| 0745z | 26/11 [335/00] Out 0748z S2 | Malc | THU |
| 0745z | 01/12 [335/00] Weak | RNGB | TUE |
| 0730z | 04/12 [352/00] Out 0733z | Ed Smith | FRI |
| 0730z | 06/12 [352/00] Out 0733z | Ed Smith | SUN |
| 0745z | 08/12 [335/00] Out 0748z S2 | Malc | TUE |
| 0745z | 17/12 [335/00] Out 0748z S2 | Malc | THU |
| $18030 \mathrm{kHz} \mathrm{1300z}$ | 03/11 [133/00] Out 1303z S7 QRM Russian Mil | Malc, | TUE |
| 1300z | 04/11 [133/00] | Malc, JkC | WED |
| 1300 z | 17/11 [133/00] Out 1303z QSA2 QRM3 QSB1 | JkC | TUE |
| 1300z | 24/11 [133/00] | Malc | TUE |
| 1300z | 25/11 [133/00] Strong | RNGB | WED |
| 1300 z | 01/12 [133/00] Fair | RNGB | TUE |
| 1300z | 02/12 [133/00] | JkC | WED |
| 1300z | 08/12 [133/00] Out 1303z S2 | Malc | TUE |
| 1300z | 22/12 [133/00] Out 1303z S7 | Malc | TUE |
| 1300z | 23/12 [133/00] Out 1303z S4 | Malc | WED |
| 1300z | 30/12 [133/00] | Gary H | WED |

## E11a $\log$ Nov/Dec



| 10429 kHz 0805 z | 18/11 [315/3186770 461403769001973047469692237807 38050..... 15847 65396] Out 0814z | Ed Smith | WED |
| :---: | :---: | :---: | :---: |
| 0805z | 09/12 [315/34 50346.............27019] | Malc | WED |
| 0805z | 12/12 [315/24 50346.....etc] Repeat of Wednesday S7 | Malc | SUN |
| 10448kHz 1625z | 25/11 [978/36 696184527058743033551439796814 75474......89825] Out 1635z | JkC, Malc | WED |
| 1625z | 29/11 [978/36 69618.....etc] Repeat of Wednesday | Malc | SUN |
| 1625z | 23/12 [972/32 71990...........24253] Out 1634z S8 | Malc | WED |
| 1625z | 27/12 [972/32 71990 ....etc] S9 Repeat of Wednesday | Malc | SUN |
| 10800kHz 0710z | 17/11 [633/34 $99507413505030216951210397907855685 \ldots . .09014$ 46820] Very weak | RNGB, Ed Smith | TUE |
| 0710z | 20/11 [633/34 99507.....etc] Repeat of Tuesday | Ed Smith | FRI |
| 0710z | 01/12 [631/39 888155411290238709680492333177714181 19596..... 19419 38510] Out 0721z | RNGB | TUE |
| $11100 \mathrm{kHz} \mathrm{1205z}$ | 24/11 [461/33 $48968976757660596713959517315128944 . . . . . .60769$ 12654] Out 1214z | Ed Smith | TUE |
| 1205z | 25/11 [461/33 48968.....etc] Repeat of Tuesday | RNGB | WED |
| 1205z | 08/12 [465/36 $4298552090079453801745802931276110973165 \ldots . .7572199199]$ | JkC, Malc | TUE |
| $12153 \mathrm{kHz} \mathrm{1045z}$ | 24/11 [571/36 $0336004667511520887288330369108275456224 \ldots \ldots .66581$ 41791] Good | RNGB | TUE |
| 1045z | 08/12 [574/36 92135............45508] | Malc | TUE |
| 13046 kHz 0600 z | 23/11 [181/37 9895772023 ...... 26585 58546] Out 0610z | Ed Smith | MON |
| 0600z | 04/12 [185/31 09672051262989078021189164316992648 12550...... 91053 27136] Out 0609z | Ed Smith | FRI |
| 0600z | 07/12 [185/31 09672.....etc] Repeat of Friday | Ary | MON |
| 14666kHz 1345z | 03/11 [910/34 710004559680229708341844677874 87622.... 19398 26741] Out 1355z | JkC | TUE |
| 1345z | 07/11 [910/34 71000 ... etc] Repeat of Tuesday | JkC | SAT |
| 1345z | 01/12 [912/34 17006963846890722526790605838844718 .... 06159 37264] Weak signal | JkC, Malc, Brixmis | TUE |
| 1345z | 05/12 [912/34 17006.....etc] Repeat of Tuesday | Malc | SAT |
| $15632 \mathrm{kHz} \mathrm{1540z}$ | 02/11 [225/38 339072546109807469411518037907 70658..... 79166 49297] Out 1550z | JkC, Malc | MON |
| 1540z | 08/11 [225/38 33907......etc] Repeat of Monday | JkC, Malc | SUN |
| $16112 \mathrm{kHz} \mathrm{0745z}$ | 12/11 [335/30 $2873207476653078992268031412604572787877 \ldots \ldots .3705195250]$ | JkC, Malc | THU |
| 0745z | 15/11 [354/36 $9815565995236117270475407616744587787007 \ldots . . .69334$ 28422] | RNGB | SUN |
| 0745z | 27/12 [353/38 $0191854866408457890323530867120712183930 \ldots \ldots . .83333$ 72675] Out 0740z | JkC | SUN |
| $18030 \mathrm{kHz} \mathrm{1300z}$ | 11/11 [138/34 $73778455912975585448448767292903066 \ldots . .59078$ 27551] | RNGB, Malc | WED |
| 1300z | 16/12 [136/33 50686.............06700] Out 1309z S6 QRM9 | Malc | WED |

Credits: RNGB, Malc, Ed Smith, Ary, JkC


Additional transmission
$10635 \mathrm{kHz} 1541 \mathrm{z} \quad 16 / 11[\mathrm{I} / \mathrm{P} \ldots 274(\mathrm{R} 3 \mathrm{~m}) 8635092342 \ldots] 1545 \mathrm{z}$ QSA4 QRM1 QSB 1
JkC
MON
E17z 10635kHz 1541z 16/11
27486350
92342192088904891458961801502400178984585401492142
22025 (Tx stopped during repeat of GR11, carrier remained -1544 z )
(Carrier off - 1545z)
(NFH-1555z) Courtesy JkC

Testing
9400 kHz 1015 z 12/12 Tone i.p. over BC, 1020z music "An Execution Of A Dead Man" by Omar Khairat, 1033z tone, QRT 1035z, AM QSA5 MG SAT

## then

9600 kHz 1035 z 12/12 Carrier QSA5, QRT 1036z, AM QSA5, MG SAT
9600 kHz 1105 z 12/12 Tone, carrier, song with audio breaks QRT 1115z, AM QSA5, MG SAT
YouTube link for the song by Omar Khairat - An Execution Of A Dead Man
https://www.youtube.com/watch?v=THwiaO2wXCA
A fitting soundtrack for the supposed purposes of the stations we monitor ;-)

## E25a

9450 kHz 1215 z
28/11[8305] 1221z "Entra Omri", YL, ended with "Message EOM EOT", AM QSA5,
MG
SAT
9450kHz1215z 16/12[830 7] 1222z Msg Msg Msg"windows-dong-sound" EoM EoT 1 Weak Schorschi WED

## G06

PoSW sets the mood for Go6 activity: The expected seasonal change of frequencies, moving lower, observed in the last months of 2015:-
Second + Fourth Thursdays in the Month 1830 UTC Schedule:-
26-Nov-15:- $4,519 \mathrm{kHz}$, started about a minute and a half before the half-hour, as is often the case with this schedule, the 1830 Z start time being purely nominal, same for the 1930 Z Friday transmission. Calling " 271 ", DK/GC "271 2712020 ", the Decode Key, or whatever it is, the same as the call-up this evening. 5Fs one of those messages used many times over the past couple of years or so, "14259 2267632782 32782......". Strong signal, well over S9, enough to over-ride local interference and an "XJT" churning away on a close frequency.

10-Dec-15:- $4,519 \mathrm{kHz}$, started over a minute before the half-hour, " 271 " and "271 2712020 " again, same " $1425922676 \ldots$. etcetera, etcetera," again.
Friday 1930 UTC Schedule Following the Second + Fourth Thursdays:-
13-Nov-15:- $4,792 \mathrm{kHz}$, started well before the half hour, call " 436 ", signal much weaker than usual, coupled with local interference made copy difficult. DK/GC "720 720 (?) 2020.

27-Nov-15:- $4,792 \mathrm{kHz}$, no problems here, well over S9 throughout, started about a minute and a half before 1930Z, call " 436 ", DK/GC " 27127120 20", same well-used message as yesterday's 1830 Z sending, ends, "....... 7331198089 12250".

11-Dec-15:- 4,792 kHz, S9 signal, "436" and "271 2712020 " and 5Fs as on 27-Nov.
First + Second Mondays in the Month $1700+1800$ UTC Schedule:-
2-Nov-15:- 1700 UTC, $3,728 \mathrm{kHz}$, "248 24824800000 ", peaking S9.
1800 UTC, $4,484 \mathrm{kHz}$, second sending, S9 with QSB. Same frequencies used in the first two months of 2015.
9-Nov-15:- 1700 UTC, $3,728 \mathrm{kHz}$, "248 24824800000 ". Started before the hour, in progress
when tuned in a few seconds before 1700Z, stopped 1703:30s.
1800 UTC, $4,484 \mathrm{kHz}$, started 35 s before the hour, second sending, over S9.
7-Dec-15:- 1702:45s UTC, tuned in late expecting to hear the call-up but was just in time to catch the DK/GC, early start then, " 1111118888 ", weak signal on a noisy frequency, into 5 Fs in the slow, languid style which is a feature of this schedule.
1758 UTC, $4,484 \mathrm{kHz}$, call-up already started when tuned in two minutes before the hour, call " 248 ", DK/GC " 1111118888 ", seems a bit contrived, "91299 96449 14155... ".

14-Dec-15:- 1658 and 45 seconds UTC, $3,728 \mathrm{kHz}$, started about a minute and a quarter before the hour, " 248 " and " 1111118888 " again, S 7 competing with local RF noise.
1759 UTC, call-up in progress when tuned in, $4,484 \mathrm{kHz}$, second sending with an S9 signal

## Other's observations:

Monday
November 2015
$1700 \mathrm{z} \quad 3728 \mathrm{kHz} \quad 1800 \mathrm{z} \quad 4484 \mathrm{kHz}$
02/11 $24800000 \quad$ Fair

## December 2015

0800z 5320 kHz

| $07 / 12$ | 32900000 | Weak |
| :--- | :---: | :---: |
| $21 / 12$ | 32900000 | Weak |
| $\mathbf{1 7 0 0 z}$ | $\mathbf{3 7 2 8 k H z}$ | $\mathbf{1 8 0 0 z} \quad \mathbf{4 4 8 4 k H z}$ |
| $07 / 11$ | 3728 kHz | early start 1658 z |
| $07 / 11$ | 4484 kHz Test: 111222226111222221754 z |  |

[4484 07-12-2015 1757 G06 USB 3 minutes early]
248 (R) 11188
$91299964491415531592447882835133228349851947039917-$
23866744358244889934232542812782262359506355867337
98494642912842561634382239217831817472382217752294
41535724483687438227228988243717598679392946589248 -
$72983968577178649477279714227396229227188624116533-$
523699654498876689574972178276689227323428438 13144-
24622131288342976285643214641749721565775984833327
15941459934363512297237342446579267465451253284149
8736599256419712596699383356436682762228
1118800000
Errors after group 10, 20, 30, 40, 50 and 60 . These groups were not repeated
but went right into the next group. Courtesy $A B$

## December 2015

07/12 [1800z 2mins early] Fair

On both Tx every 10th group, up to GR60, were not repeated, running straight into the following group with no gap. Groups 70 and 80 repeated as normal.

14/12
2481118891299 ... 602081118800000
[1800z 2mins early
Fair

Wednesday
November 2015

| $\mathbf{1 1 5 7 z}$ | $\mathbf{4 9 4 6 k H z}$ | $\mathbf{1 3 0 0 z}$ |
| :--- | :--- | :--- |
| $04 / 11$ | 24800000 | 4051 kHz |
|  |  | Weak |

December 2015
09/12 $2481118891299 \ldots 602081118800000$ Weak

## Thursday

## November 2015

$1300 \mathrm{z} \quad 4460 \mathrm{kHz}$

| 05/11 | 32900000 | Weak |
| :--- | :--- | :--- |
| $19 / 11$ | 32900000 | Weak |

1830z $\quad 4519 \mathrm{kHz}$
26/11 --- $2712014259 \ldots 122522172000000$

7120
14259226763278232782767238942912215743266407290235
38085595431231974238366641225618841733119828912252
2712000000 Courtesy Ary

## December 2015

| $10 / 12$ | 111 Test? Training? |
| :--- | :--- |
| $10 / 12$ | $2712014259 \ldots 122502712000000$ |

## Friday [was E06]

## November 2015

2130z 4760 kHz
06/11 $4727282014259 \ldots 122507282000000$ (same old msg but G06 not E06)

| $13 / 11$ | $4367202045456 \ldots 98388000000$ | New message |
| :--- | :--- | :--- |
| $27 / 11$ | $4362712014259 \ldots 1225227120000000$ | Very strong |

## December 2015

## S06 and S06s

Before we move on to RNGB's coverage of these stations we insert PoSW's log of these stations and his observations:
The known regular S06 Russian Man schedules have, in the last two months of 2015, used the same frequencies which were employed in January and February.

Weekly Saturday 1600 or 1605 UTC Schedule:-
7-Nov-15:- 1605 UTC, $5,073 \mathrm{kHz}$, "491491491 00000 ", up to S9. This frequency used in the first months of this year, expect a 1600 Z transmission to be on 6,778 , plus or minus a few kHz .

14-Nov-15:- 1600 UTC, $6,778 \mathrm{kHz}$ - as expected, then. "49149149100000", very strong signal, well over S9 for most of the four minutes transmission time. Weaker CW station a couple of kHz lower sending well-spaced letters, may have been in an alphabet other than the Western because I am sure I heard a "four dash" Morse character several times.

21-Nov-15:- 1605 UTC, $5,073 \mathrm{kHz}$, "491 49149100000 ", strong signal, over S9.
5-Dec-15:- 1605 UTC, 5,073 kHz, "491 491491 00000", S9.
12-Dec-15:- 1605 UTC, $5,073 \mathrm{kHz}$, "491 $49149100000 "$, over S9.
First + Third Saturdays in the Month $2000+2100$ UTC Schedule:-
7-Nov-15:- 2000 UTC, $4,057 \mathrm{kHz}$, "738 73873800000 ", weak signal, difficult copy mainly due to local interference from "consumer electronics". Similar frequency used in January and February, second sending back then was inside the CW portion of the 80 metre amateur band. 2100 UTC, $3,522 \mathrm{kHz}$, second sending, weak signal, several strong amateur CW stations on close frequencies.

21-Nov-15:- 2000 UTC, $4,057 \mathrm{kHz}$, "738 73873800000 ", much stronger than on the $7^{\text {th }}$, over-riding a weaker "XJT" on the same frequency.
2100 UTC, $3,522 \mathrm{kHz}$, second sending, also much stronger than last time, S9 or over, many CW stations on close frequencies, the letters "TEST" much in evidence, looks like a weekend contest.

5-Dec-15:- 2000 UTC, $4,057 \mathrm{kHz}$, "738 73873800000 ", swamped by the "XJT" churning away on the same frequency, very strong this evening. 2100 UTC, $3,532 \mathrm{kHz}$, second sending 10 higher than on past two occasions, clear of the strongest of the amateur CW which was closer to 3,522 , looks like another 80 metre contest.

First + Third Fridays in the Month $2000+2100$ UTC Schedule:-
6-Nov-15:- 2000 UTC, $7,897 \mathrm{kHz}$, "392 39239200000 ", weak signal with, as always, local QRM. In keeping with the other S06 schedules, this frequency used in January and February of 2015 , second sending was on $5,821 \mathrm{kHz}$.
2100 UTC, $5,821 \mathrm{kHz}$ so no surprises there, second sending stronger, up to S8.
20-Nov-15:- 2000 UTC, $7,897 \mathrm{kHz}$, "392 39239200000 ", much stronger signal than last time, over S9, strong enough to over-ride local interference. 2100 UTC, $5,821 \mathrm{kHz}$, second sending, S7 to S8.

4-Dec-15:- This schedule has form for moving backwards or forwards by one hour for reasons not connected with the seasonal spring / autumn changing of the clocks, and this turned out to be the case in December:- 2000 UTC, $5,831 \mathrm{kHz}$, expected it to be on 7,897 , plus or minus, at this time, upon finding no trace checked out the expected frequency for 2100 . "394 39439400000 ", strength S 7 , presumably the $7,897 \mathrm{kHz}$ transmission was on at 1900 UTC.

## S06s YL

A small selection of those schedules with stronger signals in the UK:-
Monday Schedule, $0900+0910$ UTC, call " 872 ":-
2-Nov-15:- 0900 UTC, $14,675 \mathrm{kHz}$, DK/GC "413 413 5 5", "46062 68672974783968530485 ", weak signal.
0910 UTC, $12,830 \mathrm{kHz}$, second sending, slightly stronger although only S 4 at best.
30-Nov-15:- 0900 UTC, $14,675 \mathrm{kHz}$, " 87287287200000 ", "no message", not so common with S06s as it is with other number stations, weak signal. 0910 UTC, $12,830 \mathrm{kHz}$, must have started early, second sending in progress when tuned in about 10s before 0910, stopped just after 0913Z. Very weak signal.

7-Dec-15:- 0900 UTC, $14,675 \mathrm{kHz}$, DK/GC, "496 49655 ", "34140 78386914948296331670 ", weak signal at first but came up to S5 after a couple of minutes.
0910 UTC, $12,830 \mathrm{kHz}$, second sending, weak signal, difficult copy.
Wednesday Schedule, $1000+1010$ UTC, call "729":-
4-Nov-15:- 1000 UTC, $12,365 \mathrm{kHz}$, DK/GC "548 54866 ", "30588 3934437296274784498674328 ", over S9.
1010 UTC, $14,280 \mathrm{kHz}$, second sending inside the 20 metre amateur band, very strong S9+.
11-Nov-15:- 1000 UTC, $12,365 \mathrm{kHz}$, same DK/GC and 5Fs as on the $4^{\text {th }}$, much weaker signal, S5 at best.
1010 UTC, $14,280 \mathrm{kHz}$, second sending, on the same frequency as a QSO between an SP3
station, very strong signal, and a G station in Welwyn which I could just about hear, probably by means of a greatly attenuated ground-wave signal.

2-Dec-15:- 1000 UTC, $12,365 \mathrm{kHz}$, DK/GC "531 53166 ", "30702 8895989831420978847534075 ", over S9.
1010 UTC, $14,280 \mathrm{kHz}$, second sending, S9+.
Thursday Schedule, $0900+0910$ UTC, call " 167 ":-
5-Nov-15:- 0900 UTC, $12,952 \mathrm{kHz}$, DK/GC "938 938 5 5", "73990 $62184628190432062718 "$, S9+ signal.
0910 UTC, $13,565 \mathrm{kHz}$, second sending, also S9+.

12-Nov-15:- 0900 UTC, $12,952 \mathrm{kHz}$, "938 9385 " and 5Fs same as last week, S7.
0910 UTC, $13,565 \mathrm{kHz}$, second sending, also about S 7 .
19-Nov-15:- 0900 UTC, $12,952 \mathrm{kHz}$, DK/GC "925 92588 ", "92325 $36615364914958841061833544330943400 "$, S7 to S8
0910 UTC, $13,565 \mathrm{kHz}$, second sending, stronger signal, over S9 at times.
26-Nov-15:- 0900 UTC, $12,952 \mathrm{kHz}$, DK/GC and 5 Fs same as on the $19^{\text {th }}, \mathrm{S} 9+$, very strong signal. 0910 UTC, $13,565 \mathrm{kHz}$, second sending, also S9+.

3-Dec-15:- 0900 UTC, $12,952 \mathrm{kHz}$, DK/GC "204 2045 5", 5Fs, "37596 836638935330950 37014", S9+ 0910 UTC, $13,565 \mathrm{kHz}$, S9+ again.

10-Dec-15:- 0900 UTC, $12,952 \mathrm{kHz}$, "204 20455 " and same 5 Fs as on the $3^{\text {rd }}, \mathrm{S} 9+$
0910 UTC, $13,565 \mathrm{kHz}$, second sending, also S9+.
Thursday Schedule, $1200+1210$ UTC, call " 425 ":-
3-Dec-15:- 1200 UTC, $12,155 \mathrm{kHz}$, DK/GC "817 $81766 "$, "54027 $93793325673000613060348304 "$, S7.
1210 UTC, $10,920 \mathrm{kHz}$, second sending, slightly weaker signal.
10-Dec-15:- 1200 UTC, $12,155 \mathrm{kHz}$, and 1210 UTC, $10,920 \mathrm{kHz}$, both S9+, " 81781766 " and same 5Fs as last week.
Friday Schedule, $0930+0940$ UTC, call " 516 ":-
6-Nov-15:- 0930 UTC, $11,780 \mathrm{kHz}$, DK/GC "902 90277 ", "46062 686729447839685304859663252537 ", S9+, very strong signal.
0940 UTC, $12,570 \mathrm{kHz}$, second sending, also S9+.
13-Nov-15:- 0940 UTC, $12,570 \mathrm{kHz}$, missed 0930 Z sending, DK/GC and 5 Fs same as on the $6^{\text {th }}$, S9+.
27-Nov-15:- 0930 UTC, 11,780 kHz, DK/GC "230 23077 ", "92971 $304904648133987373934894430643 "$, S9. 0940 UTC, $12,570 \mathrm{kHz}$, second sending, S9+.

4-Dec-15:- 0930 UTC, 11,780 kHz, DK/GC "402 4027 7", "46062 6867297478396853048596632 52537", S9. 0940 UTC, $12,570 \mathrm{kHz}$, second sending, S 7 to S 9 .

11-Dec-15:- 0930 UTC, $11,780 \mathrm{kHz}$, and 0940 UTC, $12,570 \mathrm{kHz}$, both S9, "402 4027 7" and 5Fs as last time.

## RNGB's excellent coverage:

## S06 log November



[^1]S06s November log:
Sunday

1st
8th/15th
22nd/29th

| Monday |  |  |  |
| :---: | :---: | :---: | :---: |
| 2nd/9th | 0830/40 | 8057/8530 | '371' 2506217675367211834810223690341412 |
| 16th/23rd |  |  | '371' 40650939476911751559291897067 |
| 2nd/9th | 0900/10 | 14675/12830 | '872' 41354606268672974783968530485 |
| 16th/23rd |  |  | '872' 41050140515003243576058338229 |
| 2nd/9th | 1300/10 | 8420/10635 | '831' 20955240163919926991460074248 |
| 16th/23rd |  |  | '831' 2456111716438582707061232253553718 |
| Tuesday |  |  |  |
| 3rd/10th | 0600/10 | 16145/14240 | '438'267533367 37555333009149033701 |
| 17th/24th |  |  | '438' 562788620580697167374537574401059723521 |
| 3rd/10th | 0700/15 | 5250/6320 | '374' 91858949931900483663653432140 |
| 17th/24th |  |  | '374' 2596395341722815636478912324717099 |
| 3rd/10th | 0730/40 | 7410/11537 | '427' 5306460626867297478396853048596632 |
| 17th/24th |  |  | '427' 83654298794184473747415408531 |
| 3rd/10th | 0800/10 | 11945/13195 | '352' 964721767536721183481022369034141255678 |
| 17th/24th |  |  | '352' 9746545455012899477835744887494031 |
| 3rd/10th | 1000/10 | 6440/5660 | '893' 46050589950387458472301389758 |
| 17th/24th |  |  | '893' 264589758523437962842432 ????? |
| 3rd/10th | 1100/10 | 5035/5975 | '754' 96285289950387458472301389758523437962842432 |
| 17th/24th |  |  | '754' 2016637291216570835637285261909043 |
| 3rd/10th | 1500/10 | 6845/9170 | '537' 90683379613577745264664779302535162561656069 |
| 17th/24th |  |  | '537' 4286749305113863518637280603463413 |
| Wednesday |  |  |  |
| 4th/11th | 0530/40 | 7425/9069 | '464' 98358856989617257577715995225 |
| 18th/25th |  |  | '464' 29756382217354956134536283081 |
| 4th/11th | 0730/40 | 7335/11830 | '745' 29688270706123225368828084116537187892734694 |
| 18th/25th |  |  | '745'9186340313343037536349063969835454 |
| 14th/21st | 0820/30 | 8417/9262 | '471' 9506337961357774526466477930253516 |
| 28th |  |  | '471' 26858032832229373038893439698 |
| 4th/11th | 1000/10 | 12365/14280 | '729'5486305883934437296274784498674328 |
| 18th/25th |  |  | '729' 83653662832225308674998048995 |
| Thursday |  |  |  |
| 5th/12th (E17z) | 0800/10 | 11170/9820 | ‘674’ 98053626051624857345183031226 |
| 19th/26th |  |  | '674' 93583739137446865258920333244390543584337259 |
| 5th/12th | 0900/10 | 12952/13565 | '167' 93857399062184628190432062718 |
| 19th/26th |  |  | '167'925892325 36615364914958841061833544330943400 |
| 5th/12th | 0900/10 | 5765/6315 | '624' 90857363255263389015271163782 |
| 19th/26th |  |  | '624' 985711394303073145084498488324230037018 |
| 5th/12th | 0930/40 | 8812/9540 | '314' 2956893603271902517437289451263825 |
| 19th/26th |  |  | '314'95763151423800 35288858924423433666 |
| 5th/12th | 1200/10 | 12155/10920 | '425' 8706628195263802633611536486009706 |
| 19th/26th |  |  | '425'9316993514219130821337253677147802 |
| Friday |  |  |  |
| 6th/13th | 0930/40 | 11780/12570 | '516' 902746062686729447839685304859663252537 |
| 20th/27th |  |  | '516' No reports |
| Saturday |  |  |  |
| 7th | 1200/10 | 8680/8260 | '254' 8096887853034030193335848444643403 |

Thanks to RNGB, JkC, Ed Smith, Malc, HFD

## S06 $\log$ December

 21565157467282546154 (very weak \} HK remote uner

| Fridays (1st \& 3rd) |  |  | 1900z | 7897 kHz | 2000z | 5831 kHz | (frequencies may vary slightly) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 04/12 |  | '392' 00000 |  |  |  |  |  |
| Saturdays (1st/2nd/3rd and 4th) |  |  | 1600z | 6778 kHz or | 1605z | 5073kHz |  |
| 05/12 | 1605z | '491' 00000 |  |  |  |  |  |
| 19/12 | 1605z | '491' 00000 |  |  |  |  |  |
| 26/12 | 1605 z | '491' 00000 |  |  |  |  |  |
| Saturdays (1st/3rd) |  |  | 1900z | 4057 kHz | 2000z | 3532 kHz | (frequencies may vary slightly) |
| 05/12 |  | ${ }^{\prime} 738$ ' 00000 |  |  |  |  |  |
| 19/12 |  | '738' 00000 |  |  |  |  |  |

S06s December log:

## Sunday

| 6th/13th | 0630/40 | 13470/16515 | '524' 8316111716438582707061232253688280 |
| :---: | :---: | :---: | :---: |
| 20th/27th |  |  | '524' 8796205341116043494376381607048834 |
| Monday |  |  |  |
| 7th/14th | 0830/40 | 8057/8530 | '371' 84657190983981240354811534694 |
| 21st/28th |  |  | '371' 8546093947691175155929189706758604 |
| 7th/14th | 0900/10 | 14675/12830 | '872' 49653414078386914948296331670 |
| 21st/28th |  |  | '872' 5016950511380871909839812403548115 |
| 7th/14th | 1300/10 | 8420/10635 | '831' 97653712643003408948333238868 |
| 21st/28th |  |  | '831' 96759611110544980036890945279 |
| Tuesday |  |  |  |
| 1st/8th | 0600/10 | 16145/14240 | '438' 96758032832229433064770233713 |
| 15th/22nd |  |  | ' 438 ' No reports |
| $1 \mathrm{st} / 8$ th | 0700/15 | 5250/6320 | '374' 20153803447619333673755533300 |
| 15th/22nd |  |  | '374' 89658074486200847064222761736 |
| $1 \mathrm{st} / 8$ th | 0730/40 | 7410/11537 | '427' 8516886205806961732745375744010597 |
| 15th/22nd |  |  | '427' 86350939476911751559291897067 |
| $1 \mathrm{st} / 8$ th | 0800/10 | 11945/13195 | '352' 8196337961357774526466477930253516 |
| 15th/22nd |  |  | '352' 8746160705012899477240427595611171 |
| 1st/8th | 1000/10 | 6440/5660 | '893' 20651117164385827070612322536 |
| 15th/22nd |  |  | '893' 24753679353038763421500934140 |
| 1st/8th | 1100/10 | 5035/5975 | '754' 26184606268672974783968530485966325253741736 |
| 15th/22nd |  |  | '754' 9216356212139730832874363453937126 |
| $1 \mathrm{st} / 8$ th | 1500/10 | 6845/9170 | '537' 46083190048366356343284048436814803076233400 |
| 15th/22nd |  |  | '537' 8196480753034931283314723890540337 |
| Wednesday |  |  |  |
| 2nd/9th | 0530/40 | 7425/9069 | '464' 27959232536615364914958841061 |
| 16th.23rd |  |  | '464' No reports |
| 2nd/9th | 0820/30 | 8417/9262 | '471' 80953190048366365343284048346 |
| 16th/23rd |  |  | '471' 5296337961357774526466477930298835 |
| 2nd/9th | 0830/40 | 7335/11830 | '745' 2016444753032236034454454400838453 |
| 16th/23rd |  |  | '745' 2986014051500324357605835454592883 |
| 2nd/9th | 1000/10 | 12365/14280 | '729' 5316307028895989831420978847534075 |
| 16th/23rd |  |  | '729'563883086 62060831383976018969840088345042868 |


| Thursday |  |  |  |
| :---: | :---: | :---: | :---: |
| 3rd/10th (E17z) | 0800/10 | 11170/9820 | ‘674’ 80253939435083425713278537331 |
| 17th/24th |  |  | '674' 92584639933972301729330250111292508583732062 |
| 3rd/10th | 0900/10 | 5765/6315 | '624' 90158232436958394234807633739 |
| 17th/24th |  |  | '624' 91053953417228156364789732347 |
| 3rd/10th | 0900/10 | 12952/13565 | '167' 20453759683663893533095037014 |
| 17th/24th |  |  | '167' 24588862058069617327453757440105972352147660 |
| 3rd/10th | 0930/40 | 8812/9540 | '314' 5726363303147133619371373790885958 |
| 17th/24th |  |  | ' 314 ' 562788146578569883546186169458074486200 |
| $3 \mathrm{rd} / 10$ th | 1200/10 | 12155/10920 | ' 425 ' 8176540279379332567300613060348304 |
| 17th/24th |  |  | ' 425 ' 8716406147724940678179762181641997 |
| Friday |  |  |  |
| 4th/11th | 0930/40 | 11780/12570 | ' 516 ' 402746062686729747839685304859663252537 |
| 18th/25th |  |  | ' 516 ' 240746062686729747839685304859663252537 |
| Saturday |  |  |  |
| 5th | 1200/10 | 8680/8260 | '254' No reports |

Of note is the Friday message which was the same all month but with a different 3 figure group!
The early morning Friday transmissions appear to have ended.
Thanks to RNGB, JkC, Ed Smith, Malc, HFD


Credits: RNGB, Malc, Ed Smith, Ary, JkC

## V02a

V02a continues to hang on with one appearence during the 2 month period. As always it requires LSB mode to be able to understand the numbers.

## Sunday

November 2015

| $\mathbf{0 1 0 0 z}$ | $\mathbf{1 8 0 7 4 k H z}$ | $\mathbf{0 1 2 0 z}$ | $\mathbf{1 5 8 7 4} \mathbf{k H z}$ | $\mathbf{0 1 4 0 z}$ | $\mathbf{1 4 3 7 4} \mathbf{k H z}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $08 / 11$ | 883000 |  |  | Weak |  |
| $15 / 11$ | 883 ??? ?? ????? $\ldots 5810741230000000$ | Very weak |  |  |  |
| $29 / 11$ | Test tones only |  | Weak |  |  |

## December 2015

12137 kHz

661661661149273
5430518875489849301210530
3350182738749144310481150
4832380034283289739410107
4930343808723235331385970
8853490303919115980391733
4755482108322393331980409
0849183135527349749345484
5574575323205912928801899
1998733341588940382323047
9331391372418023133030717
9345474541398934183780373
4102871483778703933959012
2493374321221853251882492
7839299502331132073347232
$18219413171220 \quad 000000$
Courtesy DanAr

| $13 / 12$ | 661000 |  |
| :--- | :--- | :--- |
| $20 / 12$ | 6611 |  |
| $27 / 12$ | 661000 | Wery weak signal |

## V21

Babbler signals continue to be weak at my location however, he was heard several times. As expected, the transmissions switched by an hour to 1400 z when the clocks changed at the beginning of November. All transmissions were of the usual counting type with nothing much of note happening.
Events of note.
On $6 / 12$ on 5637 kHz he repeated 71-80 and also missed numbers in some of the other counts. He also counted to 100 which is unusual.
Both Babblers were present on Christmas Say. The operator on 5637 kHz was quite erratic in the numbers he counted to.
On to the logs.
V21 6529 kHz 1400 z 1/11 [30 1020503030 END] SUN
V21 6529 kHz 1400z 14/11 [In progress 40, 30 END]
V21 6529 kHz 1400z 15/11 Present but not copied.
V2 16529 kHz 1400z 21/11 Present but too weak to copy.
V21 $5637 \mathrm{kHz} 1400 \mathrm{z} 25 / 11$ [40, 50, 50, 40, 50, 32, 46, 40, 50, 50, 50, 60, 50, 32, 50, 50, 32, 50, 50, 26 END]
V21 $5637 \mathrm{kHz} 1400 \mathrm{z} 27 / 11[\ldots 40,60,60,30,60,60,50,60,60,50,60,60,30,60,30,40,40,40,40,40,40,30,40,40,40 \ldots .$.$] Found in$ progress, still in progress at 1430 z .
V21 $6529 \mathrm{kHz} 1400 \mathrm{z} 5 / 12[20,30$, ??, $20,20,10,10,20,10,10,30,20,50,10,10,20,10,20,10,10 \ldots$..becomes too weak to copy.]
V21 $5637 \mathrm{kHz} 1400 \mathrm{z} 6 / 12$ [100, (repeats $71-80$ ), 100 (skips 30 ), 44 , 102 , (skips 60 ), restarts at 16 counting to 23 . END]
V21 $6529 \mathrm{kHz} 1407 \mathrm{z} 12 / 12[\ldots .30,10,10,10,10,20,30,40,30,10,20,20,10,20,10,30,30,20,60,30,20,20,30,30,10,20,40,10,10,20$, $20,10,10,10,20,10,20 \ldots .$. ]
V21 6529 kHz 1400z 20/12 Weak, several counts to 30 heard.
V21 $5637 \mathrm{kHz} 1405 \mathrm{z} 20 / 12$ [...62, 72, 4, 52 END] Found in progress, off at 1414 z .
V21 $6529 \mathrm{kHz} 1410 \mathrm{z} 25 / 12$ [60, 60.....] FRI
V21 $5637 \mathrm{kHz} 1415 \mathrm{z} 25 / 12$ [....22, 62 , restarts at 15 counting to $22,78,38,4,52,32$ END]
V21 $6529 \mathrm{kHz} 1400 \mathrm{z} 29 / 12$ Started too weak to copy then 60, 60, 20 END]
V21 $6529 \mathrm{kHz} 1400 \mathrm{z} 30 / 12$ present but weak one count from 1 to 10 heard

## $\underline{V}$

## $\underline{\mathrm{V} 28}$

This station came to notice thanks to Token!. The description in ECL26 is thanks to his ongoing observations and logs.
V28 is active on more than one frequency in the 1330 UTC time period. I have seen up to three frequencies in use at one time, all apparently live and all with a different YL voice. Several times prior to finding the other frequencies I thought I might have heard voices in the background on the original V28 freq of 3277 kHz.

This multi channel operation was first pointed out, as far as I know, by Asian listeners.
While each of the transmitters observed so far is fairly stable in operation, the exact frequency chosen each day is variable. The "other" frequencies appear even more variable than the 3277 kHz outlet. The 3277 kHz frequency is typically just under 3277 kHz , often within 0.2 kHz of 3277 kHz (generally appearing between 3276.8 and 3277.2 kHz ). The other frequencies vary wildly in daily frequency selection, with variations of several kHz common day-to-day. There is a frequency around 3045 kHz (so far 3039.17 to 3054.65 kHz seen there) and another around 3690 kHz (so far 3687.12 to 3692.33 kHz seen there).

The audio on 3277 kHz has improved greatly since the first time I heard this station.
Possibly live announcers also on $3039 / 3045 / 3690 \mathrm{kHz}[+/-10 \mathrm{kHz}]$ around the 1330 z transmission time $[+/-10 \mathrm{mins}]$
V28 logs, all YL voices:
3276.91 kHz AM 1330z 29 November 2015 (remote tuner Japan) Token SUN 3276.89 kHz AM 1330z 30 November 2015 (remote tuner Japan) Token MON 3276.91 kHz AM 1330z 01 December 2015 (remote tuner Japan) Token TUE 3276.91 kHz AM 1330z 05 December 2015 (remote tuner Japan) Token SAT
3276.88 kHz AM 1335z 06 December 2015 (remote tuner Japan) Token SUN 3276.90 kHz AM 1330z 07 December 2015 (remote tuner Japan) Token MON 3277 kHz AM 1330z 09 December 2015 (remote tuner Japan) Token WED 3689 kHz AM 1330z 09 December 2015 (remote tuner Japan) Token WED 3276.94 kHz AM 1330z 10 December 2015 (remote tuner Japan) Token THU 3691.81 kHz AM 1332z 10 December 2015 (remote tuner Japan) Token THU 3054.65 kHz AM 1330z 11 December 2015 (remote tuner Japan) Token FRI 3276.94 kHz AM 1330z 11 December 2015 (remote tuner Japan) Token FRI 3687.12 kHz AM 1330z 11 December 2015 (remote tuner Japan) Token FRI 3039.17 kHz AM 1339z 12 December 2015 (remote tuner Japan) Token SAT 3276.86 kHz AM 1330z 12 December 2015 (remote tuner Japan) Token SAT 3691.39 kHz AM 1330z 12 December 2015 (remote tuner Japan) Token SAT
3054.61 kHz AM 1335z 13 December 2015 (remote tuner Japan) Token SUN 3276.88 kHz AM 1330z 13 December 2015 (remote tuner Japan) Token SUN 3692.33 kHz AM 1330z 13 December 2015 (remote tuner Japan) Token SUN

The trend seems to be that the upper freq (around 3690 kHz ) and the middle freq, 3277 kHz , both start at 1330 z . the lower freq (around 3045 kHz ) often starts a bit later than those two.

Message lengths are most often 8 to 10 minutes long, except on the lowest freq, those tend to be a bit shorter.
On December 8, 2015, there was no transmission I am aware of on 3277 kHz , and I did search. A South Korean listener reportedly heard transmissions on 3052 kHz and 3689 kHz that day. This was the first time I heard about other frequencies in use.

Two recordings linked here. The first is a complete version of the basic 3277 kHz message, beginning to end. The next is a transmission with background audio. I have no idea what the background audio is, but it sounded interesting to me.

Complete transmission on 3277 kHz, Dec 01, 2015, 1330z:
http://www.tokenradio.net/Radio/SharedFiles/AudTfer/V28_3277_AM_01122015_1330_JPN_rem.mp3
Transmission with background audio on 3277 kHz , Dec 05, 2015, starts 1331z:
http://www.tokenradio.net/Radio/SharedFiles/AudTfer/V28 3277 AM $05122015 \quad 1331$ JPN rem.mp3
December 2015 continued:
V28 is still active on multiple frequencies form about 1330 to about 1342 UTC daily (see note at bottom concerning no activity on Jan 01 and 02 ). I have seen as many as 4 frequencies active at one time, but more typically there are only 3 active at one time, with a 4 th coming on air after one of the first 3 finish. All frequencies except for 3277 kHz are still extremely variable on a day to day basis.

Some transmitters used by this station have notable features.
For example the transmitter used for the approximate 3690 kHz transmission typically drifts down in frequency throughout the transmission, with the largest drift in the first minute or so of transmission. And this station often suffers from very poor audio.

The transmitter used for the approximate 3050 kHz transmission typically drifts up in frequency for the entire transmission, with the worst drift in the first couple minutes. Further, this transmitter has a stability issue, and the carrier wavers noticeably, resulting in a "warbly", or unsteady, sound to the voice.

The transmitter used on the approximate 3150 kHz transmission was very wide audio. This transmitter also often drops carrier between words or groups of words, almost as if it has a manual PTT switch and the operator unkeys sometimes.

The transmitter used for the 3277 kHz transmission appears reasonably steady and has decent audio, however it is always just a little off 3277 kHz (typically 3277 $\mathrm{kHz}+/-0.25 \mathrm{kHz}$, most often slightly below 3277 kHz ).

For all frequencies except 3277 kHz it is not unheard of for the transmitter to come on air on one frequency and the change a few kHz to another frequency. This is not drift, but rather the operator actually changing frequency. Most often it happens before audio starts, but sometimes it happens during the message. This is not common, but does happen occasionally. So far the only transmitter / frequency I have not seen do this (change frequency without leaving the air) is 3277 kHz .

An OM voice is sometimes heard during transmitter setup with test counts, but typically the messages are YL voice. Recently an OM voice has been periodically sending messages, not just test counts, on the approximate 3050 kHz or 3150 kHz transmissions.

Notice in my loggings I say "variable groups kk/yl" I have heard what appears to be $2 \mathrm{f}, 3 \mathrm{f}$, and 5 f groups, along with words/names. But not being a Chinese speaker I am unsure if the 2 f and 3 f groups are distinct groups or if they are 5 f in $2 / 3$ format. The Korean and Japanese listeners seem to be reporting 2 f and 3 f only, no 5 f.

On January 01 and 02 no transmissions were found in the 3000 kHz to 3800 kHz range from 1330 to 1345 UTC. I do not know if this signifies anything at all, but it is possible either a frequency or time shift has taken place.

T!
Mojave Desert, California, USA

V28 logs, Dec 14 to Dec 31, 2015:
Dec 14, 2015
3047.1 kHz AM 1336z 14/12/2015 [variable groups kk/yl ends 1339] (remote tuner Japan) Token MON
3276.87 kHz AM 1330z 14/12/2015 [variable groups kk/yl ends 1339] (remote tuner Japan) Token MON
3693.83 kHz AM 1330z 14/12/2015 [variable groups kk/yl ends 1339 started on 3698.85 before changing frequency] (remote tuner Japan) Token MON

Dec 15, 2015
3063.75 kHz AM 1335z 15/12/2015 [variable groups kk/yl ends 1339] (remote tuner Japan) Token TUE 3156.8 kHz AM 1332z 15/12/2015 [variable groups kk/yl ends 1342] (remote tuner Japan) Token TUE 3276.87 kHz AM 1330z 15/12/2015 [variable groups kk/yl ends 1339] (remote tuner Japan) Token TUE 3689.0 kHz AM 1330z 15/12/2015 [variable groups kk/yl ends 1339] (remote tuner Japan) Token TUE

Dec 16, 2015
3054.65 kHz AM 1332z 16/12/2015 [variable groups kk/yl ends 1342] (remote tuner Japan) Token WED 3116.88 kHz AM 1339z 16/12/2015 [variable groups kk/yl ends 1342] (remote tuner Japan) Token WED 3276.87 kHz AM 1330z 16/12/2015 [variable groups kk/yl ends 1340] (remote tuner Japan) Token WED 3689.8 kHz AM 1330z 16/12/2015 [variable groups kk/yl ends 1339] (remote tuner Japan) Token WED

Dec 17, 2015
3048.75 kHz AM 1332z 17/12/2015 [variable groups kk/yl ends 1339] (remote tuner Japan) Token THU
3128.52 kHz AM 1330z 17/12/2015 [variable groups kk/yl ends 1336] (remote tuner Japan) Token THU 3276.96 kHz AM 1338z 17/12/2015 [variable groups kk/yl ends 1341] (remote tuner Japan) Token THU 3691.08 kHz AM 1329z 17/12/2015 [variable groups kk/yl ends 1337] (remote tuner Japan) Token THU

Dec 18, 2015
3276.85 kHz AM 1329z 18/12/2015 [variable groups kk/yl ends 1340] (remote tuner Japan) Token FRI 3691.01 kHz AM 1330z 18/12/2015 [variable groups kk/yl ends 1340] (remote tuner Japan) Token FRI An SK listener reports 3051 kHz was active during this time, but I did not hear / see it

Dec 19, 2015
3051.76 kHz AM 1333z 19/12/015 [variable groups kk/yl ends 1340] (remote tuner Japan) Token SAT 3156.39 kHz AM 1340z 19/12/2015 [variable groups kk/yl ends 1345] (remote tuner Japan) Token SAT 3276.86 kHz AM 1330z 19/12/2015 [variable groups kk/yl ends 1340] (remote tuner Japan) Token SAT 3689.33 kHz AM 1330z 19/12/2015 [variable groups kk/yl ends 1339] (remote tuner Japan) Token SAT

Dec 20, 2015
3048.71 kHz AM 1333z 20/12/2015 [variable groups kk/yl ends 1338] (remote tuner Japan) Token SUN 3276.96 kHz AM 1340z 20/12/2015 [variable groups kk/yl ends 1342] (remote tuner Japan) Token SUN 3689.34 kHz AM 1331z 20/12/2015 [variable groups kk/yl ends 1339] (remote tuner Japan) Token SUN

Dec 21, 2015
3048.47 kHz AM 1338z 21/12/2015 [variable groups kk/yl ends 1348] (remote tuner Japan) Token MON $3156.54 \mathrm{kHz} \mathrm{AM} \mathrm{1330z} 21 / 12 / 2015$ [variable groups kk/yl ends 1340] (remote tuner Japan) Token MON 3276.95 kHz AM 1330z 21/12/2015 [variable groups kk/yl ends 1340] (remote tuner Japan) Token MON 3682.2 kHz AM 1331z 21/12/2015 [variable groups kk/yl ends 1341] (remote tuner Japan) Token MON

Dec 22, 2015
3039.86 kHz AM 1332z 22/12/2015 [variable groups kk/yl ends 1341] (remote tuner Japan) Token TUE 3276.92 kHz AM 1331z 22/12/2015 [variable groups kk/yl ends 1342] (remote tuner Japan) Token TUE 3690.2 kHz AM 1331z 22/12/2015 [variable groups kk/yl ends 1341] (remote tuner Japan) Token TUE

Dec 23, 2015
3051.55 kHz AM 1331z 23/12/2015 [variable groups kk/yl ends 1336] (remote tuner Japan) Token WED 3276.96 kHz AM 1330z 23/12/2015 [variable groups kk/yl ends 1340] (remote tuner Japan) Token WED 3689.2 kHz AM 1329z 23/12/2015 [variable groups kk/yl ends 1336] (remote tuner Japan) Token WED

Dec 24, 2015
3156.46 kHz AM 1331z 24/12/2015 [variable groups kk/yl ends 1339] (remote tuner Japan) Token THU 3276.92 kHz AM 1330z 24/12/2015 [variable groups kk/yl ends 1339] (remote tuner Japan) Token THU 3690.38 kHz AM 1329z 24/12/2015 [variable groups kk/yl ends 1339] (remote tuner Japan) Token THU

Dec 25, 2015
$3149.99 \mathrm{kHz} \mathrm{AM} \mathrm{1337z}$ 25/12/2015 [variable groups kk/OM ends 1338] (remote tuner Japan) Token FRI 3276.92 kHz AM 1330z 25/12/2015 [variable groups kk/yl ends 1339] (remote tuner Japan) Token FRI 3688.33 kHz AM 1331z 25/12/2015 [variable groups kk/yl ends 1339] (remote tuner Japan) Token FRI

Dec 26, 2015
Was not at the radio gear, did not try to RX and no idea if a transmission was sent.
Dec 27, 2015
$3140.97 \mathrm{kHz} \mathrm{AM} \mathrm{1332z}$ 27/12/2015 [variable groups kk/OM ends 1340] (remote tuner Japan) Token SUN 3276.85 kHz AM 1335z 27/12/2015 [variable groups kk/yl ends 1340] (remote tuner Japan) Token SUN

Dec 28, 2015
3047.11 kHz AM 1331z 28/12/2015 [variable groups kk/yl ends 1338] (remote tuner Japan) Token MON 3146.26 kHz AM 1330z 28/12/2015 [variable groups kk/yl ends 1340] (remote tuner Japan) Token MON 3276.88 kHz AM 1330z 28/12/2015 [variable groups kk/yl ends 1340] (remote tuner Japan) Token MON $3688.57 \mathrm{kHz} \mathrm{AM} \mathrm{1330z}$ 28/12/2015 [variable groups kk/yl ends 1339] (remote tuner Japan) Token MON

Dec 29, 2015
3142.24 kHz AM 1335z 29/12/2015 [variable groups kk/OM ends 1342] (remote tuner Japan) Token TUE
3159.4 kHz AM 1332z 29/12/2015 [variable groups kk/yl ends 1340] (remote tuner Japan) Token TUE
3695.8 kHz AM 1331z 29/12/2015 [variable groups kk/yl ends 1338] (remote tuner Japan) Token TUE

Dec 30, 2015
3049.53 kHz AM 1332z 30/12/2015 [variable groups kk/yl ends 1338] (remote tuner Japan) Token WED 3141.65 kHz AM 1330z 30/12/2015 [variable groups kk/yl ends 1340] (remote tuner Japan) Token WED
$3276.83 \mathrm{kHz} \mathrm{AM} \mathrm{1330z} 30 / 12 / 2015$ [variable groups kk/yl ends 1340] (remote tuner Japan) Token WED

Dec 31, 2015
3063.45 kHz AM 1339z 31/12/2015 [variable groups kk/yl ends 1342, started on 3032 kHz , shifted up to 3044 kHz , then settled on 3062.45 kHz (remote tuner Japan) Token THU
3145.73 kHz AM 1330z 31/12/2015 [variable groups kk/OM ends 1341] (remote tuner Japan) Token THU
3276.83 kHz AM 1330z 31/12/2015 [variable groups kk/yl ends 1340] (remote tuner Japan) Token THU
3690.1 kHz AM 1331z 31/12/2015 [variable groups kk/yl ends 1342] (remote tuner Japan) Token THU

X06 Mazielka (1c) logs section

| Date | Day UTC | Freq | Scale | Monitor | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 20151101 | Sun 1318-1329 | 14595 | 452163 | Peter/UK | Alert 2 (G66, good and strong) 1 |
| 20151101 | Sun 1330-1341 | 13481 | 452163 | Peter | 2.2 |
| 20151102 | Mon 0804-0806 | 14825 | 641523 | Antonio/IT, Peter | Alert 4 |
| 20151102 | Mon 0809-0813 | 17511 | 641523 | Peter | 4.2 |
| 20151102 | Mon 0827-0830 | 18750 | 641523 | Peter | 4.3 |
| 20151102 | Mon 0906-0907 | 12152 | 641523 | Peter | 4.4 |
| 20151102 | Mon 1654-1658 | 10270 | 532614 | Jim/US | I. P., G4 |
| 20151103 | Tue 0853-0900 | 12157 | 165423 | Peter | G12 |
| 20151103 | Tue 0926-0947 | 15687 | 154263 | Peter, RNGB | G7 |
| 20151103 | Tue 1137-1144 | 17454 | 325614 | Peter | G392 |
| 20151103 | Tue 0909-0910 | 18206 | 246531 | Antonio | G16 |
| 20151105 | Thu 0701-0710 | 17468 | 436512 | Peter, RNGB | G44 |
| 20151105 | Thu 0709-0717 | 19511 | 314265 | Peter | G380 |
| 20151105 | Thu 1226-1242 | 19405 | 352416 | Peter | G43 |
| 20151106 | Fri 0631-0632 | 16320 | 241563 | André/FR | G50 |
| 20151106 | Fri 0923-0924 | 14570 | 324615 | Peter | Fair, G2 |
| 20151106 | Fri 0938-0946 | 18197 | 645321 | Peter | Alert 2 (G57) 1 Very good and clear |
| 20151106 | Fri 0941-0948 | 18245 | 132456 | Peter | S1, R |
| 20151106 | Fri 1002-1006 | 14547 | 645321 | Peter | 2.2 Weak |
| 20151106 | Fri 1011-1013 | 12215 | 361245 | Peter | Weak, G53 |
| 20151106 | Fri 1309-1310 | 14828 | 1--6-- | Schorschi | X06b without carrier, S9(1) |
| 20151108 | Sun 1741-1743 | 9163 | 145632 | Danix | G135 |
| 20151109 | Mon 0919-0924 | 16117 | 463125 | Peter | Alert 5 (G77) 1 Very good and clear |
| 20151109 | Mon 0926-0936 | 13517 | 463125 | Peter | 5.2 Weak |
| 20151109 | Mon 0941-0950 | 12224 | 463125 | Peter | 5.3 Weak |
| 20151109 | Mon 1007-1010 | 16117 | 463125 | Peter | 5.4 Very good |
| 20151109 | Mon 1012-1013 | 19235 | 463125 | Peter | 5.5 Good |
| 20151109 | Mon 1252 | 12177 | 364152 | Peter | Fair, G73 |
| 20151111 | Wed 0755-0800 | 14655 | 164253 | Danix | G395 (Serdolik at 0745) |
| 20151111 | Wed 1143-1157 | 15878 | 621543 | Danix | alert 2 (G102) 1 |
| 20151111 | Wed 1157-1201 | 18660 | 621543 | Danix | 2.2 |
| 20151112 | Thu 1521-1546 | 14812 | 263145 | Danix | S3-8 with short breaks, G111(2) |
| 20151112 | Thu 1650-1652 | 9106 | 564213 | Danix | G118 |
| 20151116 | Mon 0831-0845 | 14377 | 432516 | Antonio, <br> Danix | G341 |
| 20151117 | Tue 0850-0917 | 12157 | 165423 | Danix, Peter | Fair to poor in UK, G151 |
| 20151117 | Tue 0930-0932 | 18206 | 246531 | Danix, Peter | Strong in UK, G153 |
| 20151118 | Wed 1505-1509 | 14547 | 645321 | Danix | Alert 2 (R) 1 Full TX |
| 20151118 | Wed 1512 | 9041 | 645321 | Danix | 2.2 Shortie (only 14 secs) |
| 20151119 | Thu 0845-1023 | 9475 | 246135 | Schorschi, |  |

```
20151119 Thu 1034 13475 246135 Schorschi 3.2 S9
```

20151119 Thu 1104-1145 17465246135 Danix,
EdwardSmith 3.3
20151119 Thu 1233-1255 14720241563 Antonio R
20151123 Mon 0930-0934 16117463125 Antonio Alert8 (parallel TXs, poor, G222) 1
20151123 Mon 0930-0934 16318463125 Antonio 8.2
20151123 Mon 1024-1033 14860542136 André
20151126 Thu 1515-1516 10214263145 Schorschi
20151126 Thu 1625-1630 9123564213 Schorschi
20151126 Thu 1838-1839 7705564213 Ary/NL
20151126 Thu 1844-1851 6986361245 Danix
20151126 Thu 1954-1958 6986361245 Danix
20151127 Fri 123714827123456 Antonio
20151127 Fri 1958-2003 4542361245 Danix
20151129 Sun 0807-0809 14847351264 Danix
20151129 Sun 0813-0819 14947351264 Danix
20151129 Sun 17158153 1--6-- Schorschi
20151201 Tue 0752-0800 13524125643 Antonio
20151201 Tue 1341-1346 16188325614 Danix,
Antonio
20151202 Wed 072414761 1--6-- Danix
20151202 Wed 0922-0930 14405256341 Antonio
20151202 Wed 1107-1115 16115215346 Peter
20151202 Wed 1210-1223 16320111222 Danix, Jim
20151202 Wed 1500-1512 12150256341 Danix, Jim
20151202 Wed 1512-1524 12208256341 Peter
20151203 Thu 1716-1720 19511314265 Peter
20151203 Thu 1219-1220 9041645321 Danix
20151203 Thu 1220-1230 9354645321 Danix
20151203 Thu 1257-1309 13940645321 Antonio
20151204 Fri 1007-1014 12215361245 Schorschi
20151204 Fri 1020-1022 20837645321 Schorschi
20151204 Fri 1023-1025 18197645321 Schorschi
20151207 Mon 0750-0756 14825641523 Peter
20151207 Mon 0757-0800 17511641523 Peter
20151207 Mon 0805-0810 13452165324 Danix
20151209 Wed 1628-1634 9485 246135 Jim
20151210 Thu 0844-0859 16324521634 Antonio
20151210 Thu 1252-1301 15676231654 Antonio
20151210 Thu 1321-1356 9174231654 Antonio
20151210 Thu 1501-1514 11467231654 Danix
20151211 Fri 074615084123456 Schorschi
20151211 Fri 0848-0900 15160123456 Antonio
20151211 Fri 0903-0904 12055123456 Antonio
20151211 Fri 140913884 1--6-- Ary
20151211 Fri 15365887 1--6-- Schorschi
20151212 Sat 0939-0946 14650215346 Danix
20151212 Sat 1025-1035 16115215346 André
20151214 Mon 0810-0813 14871156234 André
20151214 Mon 1006-1033 12224463125 Peter,
Schorschi
20151214 Mon 1033-1041 16118463125 Peter
20151214 Mon 1043-1048 13517463125 Peter
20151214 Mon 1226-1235 15676231654 Schorschi
20151215 Tue 0751-0801 13524125643 Schorschi
20151218 Fri 1334-1336 8180241563 Antonio
20151220 Sun 1356-1401 13538 2121-2 Schorschi
20151220 Sun 1430-1458 14538 2121-2 Schorschi,
Danix
20151220 Sun 16597464 1--6-- Schorschi
20151222 Tue 123714538 1--6-- Schorschi
20151223 Wed 0800-0805 18177164253 Danix
R
S9, G256
S9+20, G263
I. p., G263
${ }_{\mathrm{R}}$.
R
Comeback, R
Short X06c with OFDM before
Alert 2 (r) 1
2.2
X06b before E07, S1
I. p., G317
G392
X06b before XPA2
I. P., G311
G25
X06b, QSA4 in the US
Alert 2 (G311) 1 QSA4 in the US
2.2 S 1
Fair to good, G380
Alert 3 (R) 1
3.2
3.3 I. p.
S9, G53
Alert 2 (G57 and S9) 1
2.2
Alert 2 (G5 and S1) 1
Aler
2.2
G1
I. p., fair, R
I. P., G116
Alert 2 (R, both monitored i. p.) 1
2.2
Comeback, R(3)
X06c with S 1
X 06 c with S 1
Another X06c i. p.
Another $\mathrm{X06c}$ i. p
Next $\mathrm{X06c}$ i. p .
Short X06b before XPA2 (only 3x)
x06b with S9 before E07
Alert 2 (R) 1
2.2
G68
Alert 3 (G77) 1 Good (UK), S9 (DE)
3.2 Good
3.3 Stronger than the others
3.3 Stronger
I. p., S9, R
I. P., S9, R
I. P., S9, G383
G187
X06b with $59+20$ after failed XPA2
X06b on XPA2 freq(4)
Fair X06b before E07
X06b before XPA2, S9 (again @ 1243)
New group, G402

1) Comeback: 1313-1314 with more power or another antenna
2) $\quad * 1521: 20-1522: 07 \mathrm{UTC}, 14812 \mathrm{kHz}, 263145$, sig strength: S8

* 1522:29-1529:48 UTC, $14812 \mathrm{kHz}, 263145$, sig strength: S6
* 1530:00-1546:28 UTC, $14812 \mathrm{kHz}, 263145$, sig strength: S3-5
* 1531:17-1531:38 UTC, $14812 \mathrm{kHz}, 263145$, sig strength: S7
(simultaneously with the weaker one)

3) Very strong Russian navy $T 600$ modem on 11468 kHz during TX
4) Scale changed after a few rounds into "1--6--"

Thanks Jochen and Team, excellent report!

Wednesday/Saturday

## November 2015

$0700 \mathrm{z} \quad 11409 \mathrm{kHz} \quad 0720 \mathrm{z} \quad 13509 \mathrm{kHz}$

04/11 45610798200225102986201
07/11 R3 Blackout, all slots NRH
$14 / 11 \quad 45600009017000010000010140$
18/11 456108118001733234232030
21/11 456108118001733234232030
25/11
28/11
456109363001837517741232
456109363001837517741232

December 2015
$0700 \mathrm{z} \quad 7756 \mathrm{kHz} \quad 0720 \mathrm{z} \quad 9056 \mathrm{kH}$

02/12 70600003270000010000010140
05/12 70600007398000010000010140
09/12 706102626001614750504030

12/12 706102626001614570504030
16/12 70600006891000010000010140
19/12
23/12

30/12
70600002942000010000010140

0740z 14609kHz
Very strong

Strong
Extremely strong
Very strong

Very strong
Very strong
Very strong

0740z 10656kHz

Strong, noisy
Very strong
Very strong
Fair
Strong
Fair
Very weak, unworkable
Very strong
Very strong

## XPA e

## Tuesday/Thursday

## November 2015

$1900 \mathrm{z} \quad 8123 \mathrm{kHz}$

03/11

05/11

10/11
12/11
17/11

1920z $\quad 7523 \mathrm{kHz}$
8123 kHz
158101114002173568252211

158101114002173568252211
1581 duration 4m26s last grp 77346
158103536001957443577346
158108757002390989845237

Message

15800006040000010000010140

15800001044000010000010140
$1940 \mathrm{z} \quad 6823 \mathrm{kHz}$

| $[1920 / 1940 z$ Very weak, unworkable] | Fair, QSB3 |
| :--- | :--- |
| $[1920 / 1940 z$ Very weak, unworkable] | Weak, QSB3/4 |
|  | Weak, unworkable |
| $[1900 z$ XJTQRM4/5] | Weak |
| $[1900 / 1940 z$ weak, unworkable] | Fair, local QRM3 |
| $[1900 z$ XJTQRM5 1920z Very weak. both unworkable] | Fery weak. unworkable |
|  | Fair, QSB3 |
|  | Weak |

## December 2015

| 1900z | 8164kHz | 1920z 7364 kHz | 1940 z 5864kHz |  |
| :---: | :---: | :---: | :---: | :---: |
| 01/12 |  | 138106397002353168610422 [192 | 1920/1940z unworkable] | Fair |
| 03/12 |  | 1900z NRH, 1920z QRM5 1940z BCQ | BCQRM5 | Unworkable |
| 08/12 |  | NRH all slots |  | Poor condx |
| 10/12 |  | NRH |  | Poor condx |
| 15/12 |  | 138000 (07874) 000010000010140 | $40 \quad$ [1920z/40z BCQRM5 unworkable] | Very weak, noisy |
| 17/12 |  | Unworkable [1900z NRH, 1940z BC | BCQRM5] | Extremely weak, noisy |
| 22/12 |  | 1900/1920z NRH. poor condx 1940z | 940 z Just audible under BCStn | Unworkable |
| 23/12 |  | Poor condx |  | NRH |
| 29/12 |  | 13800001001000010000010140 | [1920z/40z BCQRM5 unworkable] | Very weak, noisy |
| $31 / 12$ |  | 13800003348000010000010140 | [1920z/40z BCQRM5 unworkable] | Weak |

XPA2 m
Sunday/Tuesday
November 2015
$1300 \mathrm{z} 18238 \mathrm{kHz} \quad 1320 \mathrm{z} \quad 16238 \mathrm{kHz} \quad 1340 \mathrm{z} \quad 14438 \mathrm{kHz}$

| $01 / 11$ | 04574000010000010140 |  |
| :--- | :--- | :--- |
| $03 / 11$ | 08317000010000010140 |  |
| $08 / 11$ | 04812001333667916135 |  |
| $10 / 11$ | 04812001333667916135 | [1340z Weak, QSB4] |
| $15 / 11$ | 09570000010000010140 | Very strong |
| $17 / 11$ | 03228000010000010140 | Very strong |
| $22 / 11$ | 01834000010000010140 | Very strong |
| $24 / 11$ | 06954000010000010140 | Very strong |
| $29 / 11$ | 05594000753808737211 | Extremely strong |

December 2015


1300z sending $08 / 12 \ldots 1 \mathrm{~m} 09$ s

| 1300z | 14538 kHz (1320z 13538 kHz | 1340z 12138kHz |  |
| :---: | :---: | :---: | :---: |
| 01/12 | 05594000753808737211 |  | Weak |
| 06/12 | 09177000010000010140 |  | Very strong |
| 08/12 | 01619000010000010140 | [1300z Loss of signal after 1m09s] | Very strong |
| 13/12 | 00147000977141651026 | [1340z BCQRM2+Het] | Extremely strong |
| 20/12 | 04183000010000010140 | [1320z Loss of carrier] | Fair |
| 22/12 | 08393000010000010140 | [1900z Weak, QRM4] | Fair |
| 27/12 | 03846000673741523137 |  | Very strong |
| 29/12 | 03846000673741523137 |  | Extremely strong |

$\underline{X P A 2 p}$
Monday/Wednesday
November 2015

| 0800z | 16073 kHz | 0820z | 14973 kHz | 0840z | 14373 kHz |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 02/11 |  | 0208900067938 | 27237 |  |  | Extremely strong |
| 04/11 |  | 0208900067938 | 27237 |  |  | Extremely strong |
| 09/11 |  | 045850000100000 | 10140 |  |  | Very strong |
| 11/11 |  | 034340000100000 | 10140 |  |  | Very strong |
| 16/11 |  | 09513001551055 | 11724 |  |  | Extremely strong |
| 18/11 |  | 09153001551055 | 11724 |  |  | Fair, QSB3/4 |
| 23/11 |  | 07170000010000 | 10140 |  |  | Very strong |
| 25/11 |  | 038790000100000 | 10140 |  |  | Extremely strong |
| 30/11 |  | 04262000010000 | 10140 |  |  | Very strong |

December 2015

| $\mathbf{0 8 0 0 z}$ | $\mathbf{1 5 8 6 1 k H z}$ | $\mathbf{0 8 2 0 z} \mathbf{1 4 7 6 1 \mathbf { k H z }}$ | $\mathbf{0 8 4 0 z}$ | $\mathbf{1 3 5 6 1 k H z}$ |
| :--- | :--- | :--- | :--- | :--- |
| $02 / 12$ | 04262000914669904251 |  | Extremely strong |  |
| $07 / 12$ | 04207000010000010140 |  | Extremely strong |  |
| $09 / 12$ | 03230000010000010140 |  | Strong |  |
| $14 / 12$ | 06471001075739251016 | Very strong |  |  |
| $16 / 12$ | 06471001075739251016 | Very strong |  |  |
| $21 / 12$ | 08141000010000010140 |  | Strong |  |
| $23 / 12$ | 09306000010000010140 |  | Strong |  |
| $28 / 12$ | 07532001237957425467 | Very strong |  |  |
| $30 / 12$ | 07532001237957425467 | Very strong |  |  |

## XPA2 r

Friday/Saturday
November 2015
1400z 17462kHz 1420z 16114kHz
$1440 \mathrm{z} \quad 14828 \mathrm{kHz}$
08301000010000010140

| [R3 Blackout, 1400/1420z unworkable] | Very strong |
| :--- | :---: |
|  | Very strong |
| Very strong |  |
| Very strong |  |
| Very strong |  |
| Very strong |  |
| Very strong |  |

December 2015

| $\mathbf{1 4 0 0 z}$ | $\mathbf{1 5 9 6 7 k H z}$ | $\mathbf{1 4 2 0 z} \quad \mathbf{1 3 8 8 4 k H z}$ | $\mathbf{1 4 4 0 z}$ | $\mathbf{1 2 2 1 7 k H z}$ |
| :--- | :--- | :--- | :--- | :--- |
| $04 / 12$ | 07894000898071346240 |  | Strong, QSB3 |  |
| $05 / 12$ | 07894000898071346240 |  | Very strong |  |
| $11 / 12$ | 02587000773311462116 | $[1420 \mathrm{z}$ Weak] | Fair, QSB2 |  |

18/12 $02575000010000010140 \quad$ Fair
19/12 $07659000010000010140 \quad$ Extremely strong

25/12 07719001216762815065

## HM01

HM01 continued on the expected times and frequencies and closed out the year with the callup numbers not incrementing as has happened four times over the previous two months.
The Cubans provided a little excitement for us on $4 / 12$. The 1600 z transmission started as normal and with the same callups that had been sent for the previous several days. At 16:11z the transmission stopped mid-RDFT. There was then one round of callups [1707153765 7235931576 81683 48864] followed by a pause then 17170 (the first 2 and 3 digits of the first callup) then back into RDFT. The RDFT sounded slightly different than usual as there was a slight "warble" following the lead in tones. At the end of the RDFT the lead in tones restarted and the transmission continued to repeat without callups. The contents of the RDFT transmission was a 936 byte file with the name ppp2.txt. The full contents of this file are as follows:
esto es una prueba de tx con mto de yvc....saludos esto es una prueba de tx con mto de yvc....saludos esto es una prueba de tx con mto de yvc....saludos esto es una prueba de tx con mto de yvc....saludos esto es una prueba de tx con mto de yvc....saludos esto es una prueba de tx con mto de yvc....saludos esto es una prueba de tx con mto de yvc....saludos esto es una prueba de tx con mto de yvc....saludos esto es una prueba de tx con mto de yvc....saludos esto es una prueba de tx con mto de yvc....saludos esto es una prueba de tx con mto de yvc....saludos esto es una prueba de tx con mto de yvc.....saludos esto es una prueba de tx con mto de yvc....saludos esto es una prueba de tx con mto de yvc....saludos esto es una prueba de tx con mto de yvc....saludos esto es una prueba de tx con mto de yvc....saludos esto es una prueba de tx con mto de yvc....saludos esto es una prueba de tx con mto de yvc....saludos

We translated this initially as "this is a test transmission with mto de yvc....greetings"
We had no idea who mto or yve might be although our spanish consultant has since confirmed that mto is a common abbreviation for "maintenance". So another possible - and plausible - reading is . "This is a test transmission with/by maintenance, this is yvc.....greetings." This transmission continued to mix in with the regular HM01 schedules for the rest of the day. This is the third message we have managed to decode with this one being easiest as it was sent as plain text and just needed to be opened in any text viewer.

Other items of note.
On $3 / 11$ all new callups were seen at 1800 z (we missed the earlier transmission or it may not have been present). It turns out that these were the same callups transmitted

On $19 / 3$. These callups remained in place for another 6 days but then they all changed again at 2100 z on $10 / 11$. It should be noted that on return several of these callups were present on $2 / 11$ the day before the callups changed and that those callups had incremented +1 . It seems very plausible that what happened here was a computer failure and that the backup computer that had last been used on 19/3 was put in its place, especially considering that on $2 / 11$ the early transmission was not present and on $10 / 11$ the day started with the same callups as the previous day but had switched by 2100 z .

2/11 1800z callups [32432 3223153875614313688767788 ]
10/11 2100z callups[32433 3223153876614324808043331 ]
On 13/12 there was a few seconds of guitar music before the HM01 was heard.
Several "F1*" files were also transmiited over the period with 50833223.F1C, 50846143.F1C, 50228168.F1C, 50041707.F1C, 50673142.F1C, 50024880.F1C, 50830758.F1C, 36231860.F1G, 50242603.F1C. As usual file names with F1C extensions start with 50 and seem to favor even numbers as their third digit. Files with F1G start with 36.

On to the logs
HM01 11435kHz 1600z 1/11 [32431 48838538746143136886 67787] New callup position 4, 61431 = ???????? (see 10/11 for likely file name). HM01 11435kHz 1600z 2/11 [324323223153875614313688767788] New callup position 2, $32231=$ ???????? (see 10/11 for likely file name). HM01 11635kHz 1800z 3/11 [85760 10606353665767323835 14033] All new callups since yesterday. $85760=54628576 . \mathrm{TXT}$, $10606=$ $63771060 . \mathrm{TXT}, 35366=77483536 . \mathrm{TXT}, 57673=85245767 . \mathrm{TXT}, 23835=17632383 . \mathrm{TXT}, 14033=81211403 . \mathrm{TXT}$, TUE * Interesting see $19 / 3$

## Other's logs:

November 2015

| 10715kHz2200z | 02/11[32432 32231538756143136887 67788] QSA3 | DanAR | MON |
| :---: | :---: | :---: | :---: |
| 2200z | 06/11[85760 10606353665767323835 14033] QSA3 | DanAR | FRI |
| 2200 z | 08/11[85760 10606353665767323835 14033] QSA3 | DanAR | SUN |
| 2200z | 09/11[85760 10606353665767323835 14033] QSA2 | DanAR | MON |
| 2200z | 11/11[32434 3223253877614334808143331$]$ QSA3 | DanAR | WED |
| 2200z | 13/11[32436 32234538796143548083 43333] QSA2 | DanAR | FRI |
| 16180kHz2100z | 05/11[85760 10606353665767323835 14033] QSA2 | DanAR | THU |
| 17480kHz2200z | 10/11[32433 3223153876614324808043331$]$ QSA3 | DanAR | TUE |
| 2200z | 12/11[32435 32233538786143448082 43332] QSA3 | DanAR | THU |
| 2200z | 14/11[32436 32234538796143548083 43333] QSA3 | DanAR | SAT |
| December 2015 |  |  |  |
| 10715kHz2200z | 02/12 (17071 53765723593157681683 48864) QSA2 | DanAR | WED |
| 2200z | 04/12 (1707153765 723593157681683 48864) QSA2 | DanAR | FRI |
| 2200z | 06/12 (17071 53765723593157681683 48864) QSA3 | DanAR | SUN |
| 2200z | 07/12 (1707153765 723593157681683 48864) QSA2 QRN3 | DanAR | MON |
| 2200 z | 09/12 (????? ????? ????? ????? 5260507588 ) QSA2 <br> -Mixed audio- | DanAR | WED |
| 2200z | 13/12 (31426 55721320361860252608 28661) QSA3 | DanAR | SUN |
| 2200z | 14/12 (31427 55722320371860352609 28662) QSA2 | DanAR | MON |
| 2200z | 16/12 (31429 55724320391860571111 28664) QSA2 | DanAR | WED |
| 16180 kHz 2100 z | 05/12 (17071 53765723593157681683 48864) QSA2 | DanAR | SAT |
| 2100z | 17/12 (26031 55725882411860671112 28665) QSA2 | DanAR | THU |
| 17480kHz2200z | 01/12 (17071 53765723593157681683 48864) QSA3 | DanAR | TUE |
| 2200z | 03/12 (1707153765 723593157681683 48864) QSA3 | DanAR | THU |
| 2200z | 08/12 (31423 4880732033646585260507588$)$ QSA3 | DanAR | TUE |
|  | -Mixed audio- |  |  |
| 2200z | 10/12 (31423 4880732033646585260507588$)$ QSA3 | DanAR | THU |
| 2200z | 15/12 (3142855723 320381860471111 28663) QSA3 | DanAR | TUE |

With HM01 reception in the US and the Argentine PoSW posts his logs from England:
Somewhat variable reception from Cuba in the last two months of 2015. Starts up a couple of minutes before the hour, pauses for a break at around twenty minutes past, goes into call-up mode at about twenty-eight minutes past.

2-Nov-15, Monday:- 0758 UTC, just after, $9,065 \mathrm{kHz}$, "32431 4883853874614313688667787 ", S9 with the usual fading up and down, data noises started at $0801: 45 \mathrm{~s}$ UTC.
0858 and 20s UTC, $9,240 \mathrm{kHz}, 5 \mathrm{Fs}$ as earlier, S 8 to S 9 .
3-Nov-15, Tuesday:- 0758 UTC, just after, $11,635 \mathrm{kHz}$, "32432 3223153875614313688767788 . S9 with QSB, no sign of a transmission one hour earlier on $13,435 \mathrm{kHz}$.
0858:20s UTC, $11,462 \mathrm{kHz}$, 5 Fs as earlier, up to S 9 .
4-Nov-15, Wednesday:- 0700 UTC, $9,330 \mathrm{kHz}$, very weak signal of some kind, unable to confirm as HM01.
5-Nov-15, Thursday:- 0800 UTC, $11,635 \mathrm{kHz}$, another "too weak to confirm", propagation must have changed from two days ago when this frequency gave a good signal.

6-Nov-15, Friday:- 0736 UTC, $9,330 \mathrm{kHz}$, transmission in progress, S9 with QSB, propagation must have improved dramatically over the course of half an hour or so because this was too weak to copy at the start-up around 0700Z. Heard 5F groups, "57673 2383514033857601060635366 ".

9-Nov-15, Monday:- no sign of HM01 on $9,330 \mathrm{kHz}$ when checked at 0700 Z .
11-Nov-15, Wednesday:- nothing identifiable as HM 01 on 9,330 at 0700 Z or on 9,065 at 0800 Z .
12-Nov-15, Thursday:- 0858 UTC, $11,462 \mathrm{kHz}$, very weak signal, unreadable.
14-Nov-15, Saturday:- 0908 UTC, $11,462 \mathrm{kHz}$, transmission in progress, best copy from HM01 for over a week. Over S9, slight interference from a weak FSK/RTTY type signal on a close frequency. Heard 5Fs, "32436 3223453879614354808343333 ".
0959 UTC, $12,180 \mathrm{kHz}$, unusual for this frequency to be heard with an S9 signal as it was this morning, call-up in progress when tuned in, 5 Fs as earlier, data at $1001: 25 \mathrm{~s}$ UTC.

15-Nov-15, Sunday:- 0858 UTC, $9,240 \mathrm{kHz}$, "32436 3223453879614354808343333 ", same as heard yesterday, S6 to S7.
16-Nov-15, Monday:- 0810 UTC, $9,065 \mathrm{kHz}$, transmission in progress, 5 Fs the same as the past two days, S 8 to S9. Stopped for a breather around 0819Z, call-up started again exactly
at 0828 , data at $0831: 20$ s UTC.
17-Nov-15, Tuesday:- 0830 UTC, $11,635 \mathrm{kHz}$, very weak signal, unreadable, and 0900 UTC,
$11,462 \mathrm{kHz}$, also very weak and unreadable but the FSK/RTTY signal close to 11,462 and normally too weak to be of concern was S9.
18-Nov-15, Wednesday:- 0729 UTC, $9,330 \mathrm{kHz}$, very weak signal of some kind, looks like propagation has taken a dive again.
19- Nov-15, Thursday:- 0828 UTC, $11,635 \mathrm{kHz}$, the ionosphere bounces back, S9 signal, "25521 32237723526143848086 43336", data at 0831:20s UTC.

The 0900 Z transmission on 11,462 was too weak to copy.
22-Nov-15, Sunday:- 0928 UTC, just before, $9,240 \mathrm{kHz}$, "25524 5376172355315724808948861 ", peaking S9.
25-Nov-15, Wednesday:- 0728 UTC minus ten seconds, $9,330 \mathrm{kHz}$, "25527 5376472358315758168248863 ", S9 with the usual fading up and down, data at 0731:10s UTC.

27-Nov-15, Thursday:- 0858 UTC, minus 20 seconds approx, $9,240 \mathrm{kHz}$, "17071 5376572359315768168348864 ", S8 with deep fading, data just after 0901 UTC.

29-Nov-15, Sunday:- 0828 UTC -20s, $9,065 \mathrm{kHz}$, "17071 5376572359315768168348864 ",
unchanged from Thursday, peaking S 9
2-Dec-15, Wednesday:- 0828 UTC, $9,065 \mathrm{kHz}$, call-up after the break had started when tuned in, "17071 5376572359315768168348864 , 5 Fs stuck in a rut, over S 9 at times

3-Dec-15, Thursday:- 0936 UTC, $11,462 \mathrm{kHz}$, transmission in progress, peaking S9, a dramatic improvement from the start at around 0900 Z when it was too weak to be copied. Heard 5Fs, "17071 5376572359315768168348864 ", - again.

6-Dec-15, Sunday:- 0858 UTC, $9,240 \mathrm{kHz}$, call-up routine in progress when tuned in, "1707153765 723593157681683 48864", still.
7-Dec-15, Monday:- 0858 UTC, minus 25s approx, $9,240 \mathrm{kHz}$, "17071 5376572359315758168348864 ", so again no change. Up to S9, data noise started about 5 seconds before 0901 Z .

10-Dec-15, Thursday:- no sign of HM01 on 11,635 when checked just after 0800 Z , or on 11,462 at around 0900 Z .
11-Dec-15, Friday:- no sign of HM01 on 9,330 after 0700 Z or on 9,065 at 0800 Z - but there was no problem with the 0900 Z transmission:0858 UTC, $9,240 \mathrm{kHz}$, surprised to find call-up in progress since there was nothing heard earlier, "31423 4880732033646585260507588 ", changed since I last monitored HM01, S8 with deep QSB, data at 0900:55s UTC.

## Data

FSK POL 15915kHz 1325z 01/11[0221 (R5) 00000 (R10)]1326z QSA4Associated E11 = 228/00 JkC JUN
JkC

FSK POL 15915kHz 1325z 02/11[0221 (R5) 88888 (R2) 33907 ... 4929788888 (R2) 00042 (R2)]1526z QSA3 Associated E11 = 225/38
SK POL $15915 \mathrm{kHz} 1330 z 02 / 11[0221$
FSK POL 15915kHz 1330z 02/11[0221 (R5) 88888 (R2) 33907 ... 4929788888 (R2) 00042 (R2)]1531z QSA3 JkC MON

FSK POL 5831kHz 0300z 04/11[Too weak for decode]0301z QSA2 Associated E11 = 253/00 JkC WED
FSK POL 5831kHz 0305z 04/11[Too weak for decode]0306z QSA2 QRM1 QSB1 JkC WED
FSK POL 4828kHz 1305z 04/11[0457 (R5) 00000 (R10)]1306z QSA4 Associated M03 = 543/00 JkC WED
FSK POL 4828kHz 1310z 04/11[0457 (R5) 00000 (R10)]1311z QSA4 QRM1 QSB1 JkC

FSK POL 4505kHz 1305z 05/11[0437 (R5) 88888 (R2) FG 52050 ... LG 5089888888 (R2) 00034 (R2)]1306z QSA4 QRM1 QSB1 JkC THU

Associated M03 = 430/30 See transcript
FSK POL 4505kHz 1310z 05/11[0437 (R5) 88888 (R2) FG 52050 ... LG 5089888888 (R2) 00034 (R2)]1311z QSA4 QRM1 QSB1 JkC THU

Transcripts
FSK POL 4505 kHz 1305z 05/11
0437 (R5)
8888888888
52050222977513303683984657588903954098826862614500
57989520904744217380214522508404028522758312676468
44936272377998456844097493516051355600079042250898
8888888888
0003400034

FSK POL 9179kHz 1610z 07/11[0877 (R5) 00000 (R10)]1611z QSA4Associated S11a = 831/00 JkC SAT
FSK POL 9179 kHz 1615 z 07/11[0877 (R5) 00000 (R10)] $1616 z$ QSA4
FSK POL 15915kHz 1525z 08/11[0221 (R5) 88888 (R2) 33907 ... 4929788888 (R2) 00042 (R2)]1526z QSA4 QRM1 QSB1
Associated E11 = 225/38 Repeat of 02/11/15
FSK POL 15915kHz 1530z 08/11[0221 (R5) 88888 (R2) 33907 ... 4929788888 (R2) 00042 (R2)]1531z QSA4 QRM1 QSB1
JkC
FSK POL $15915 \mathrm{kHz} 1525 \mathrm{z} 09 / 11[0221$ (R5) 00000 (R10)]1526z QSA3 QRM1 QSB1
Associated E11 = 228/00
FSK POL 15915kHz 1530z 09/11[0221 (R5) 00000 (R10)]1531z QSA3 QRM1 QSB1
FSK POL 9179 kHz 1610z 10/11[Too weak for decode]1611z QSA3 QRM2 QSB1

Associated E11 $=335 / 30$ See transcript
FSK POL 16388kHz 0735z 12/11[0433 (R5) 88888 (R2) FG 28732 ... LG 9525088888 (R2) 00034 (R2)]0636z QSA3 QRM1 QSB1 JkC

FSK POL 16388kHz 0730z/0735 12/11
0433 (R5)
8888888888
28732074766530789922680314126045727878779614534718
12376078037037430915888891944428083753567775038639
36120671119962888991441349424667228689893705195250
8888888888
0003400034

FSK POL 6836kHz 0800z 12/11[0434 (R5) 88888 (R2) FG 87587 ... LG 4172888888 (R2) 00041 (R2)]0801z QSA4 QRM1 QSB1 JkC

Associated E11 $=430 / 37$ See transcript
FSK POL 6836kHz 0805z 12/11[0434 (R5) 88888 (R2) FG 87587 ... LG 4172888888 (R2) 00041 (R2)]0806z QSA4 QRM1 QSB1 JkC

FSK POL 6836kHz 0800z/0805z 12/11
0434 (R5)
8888888888
87587873237768110309320210645178535537367990125028
55209711841054120347855397388456713960678838742334
60830003348712425191430637628745013407907179352998
10975010371543127996473345606941728
8888888888
0004100041

FSK POL 12630kHz 1000z 12/11[0765 (R5) 00000 (R10)]1001z QSA4 QRM1 QSB1 JkC THU
Associated S11a = 475/00
FSK POL 12630kHz 1005z 12/11[0765 (R5) 00000 (R10)] $1005 z$ QSA4 QRM1 QSB1
FSK POL 15915 kHz 1525 z 16/11[0221 (R5) 00000 (R10)] $1526 z$ QSA4 QRM1 QSB1
FSK POL 15915kHz 1530z 16/11[0221 (R5) 00000 (R10)] 1531 z QSA4 QRM1 QSB1
JkC

FSK POL 9179kHz 1610z 21/11[0877 (R5) 88888 (R2) FG 52780 ... LG 9296988888 (R2) 00037 (R2)]1611z QSA4 QRM1 QSB1 JkC
Jk
FSK POL 9179kHz 1615z 21/11[0877 (R5) 88888 (R2) FG 52780 ... LG 9296988888 (R2) 00037 (R2)]1616z QSA4 QRM1 QSB1 JkC MON

FSK POL 9179kHz 1610z/1615z 21/11
0877 (R5)
8888888888
52780427656126961506123490783718456719301126794044
49133202796208642839791368462868963260931279314023
12726104356149548627514507559280311057181931615493
006444698492969
8888888888
0003700037

FSK POL 4828kHz 1305z 23/11[NRH] $1306 z$
FSK POL 4828kHz 1310z 23/11[NRH] 1311 z

SK POL 15915kHz 1525z 23/11[Too weak for decode]1526z QSA2 QRM1 QSB1

## December 2015

FSK POL 9176kHz 1610z 01/12[0877 (R5) 00000 (R10)]1611z QSA3 QRM2 QSB1

FSK POL 4828kHz 1305z 07/12[0547 (R5) 00000 (R10)]1306z QSA3 QRM2 QSB1
JkC MON
Associated M03 = 543/00
FSK POL 4828kHz 1310z 07/12[0547 (R5) 00000 (R10)]1311z QSA3 QRM2 QSB1
JkC MON

FSK POL 15915kHz 1525z 07/12[0221 (R5) 00000 (R10)]1526z QSA4 QRM1 QSB1
Associated E11 $=228 / 00$ Rimini remote
FSK POL 15915kHz 1530z 07/12[0221 (R5) 00000 (R10)]1531z QSA4 QRM1 QSB1
$\qquad$ MON

JkC MON

FSK POL 9179kHz 1610z 08/12[Too weak for decode)]1611z QSA2 QRM1 QSB1 JkC TUE

## Associated S11a = 831/00

FSK POL 9179 kHz 1615z 08/12[Too weak for decode)]1616z QSA2 QRM1 QSB1
JkC TUE

FSK POL 4828kHz 1305z 09/12[0547 (R5) 00000 (R10)]1306z QSA3 QRM1 QSB1
Associated M03 = 543/00
FSK POL 4828kHz 1310z 09/12[0547 (R5) 00000 (R10)]1311z QSA3 QRM1 QSB1
FSK POL 9179kHz 1610z 15/12[Too weak for decode]1611z QSA3 QRM3 QSB1
Associated S11a = 839
FSK POL 9179kHz 1615z 15/12[Too weak for decode]1616z QSA3 QRM3 QSB1
JkC
TUE

FSK POL 4828kHz 1305z 17/12[0437 (R5) 00000 (R10)]1306z QSA3 QRM1 QSB1
Associated M03 = 437/00
FSK POL 4828kHz 1310z 17/12[0437 (R5) 00000 (R10)]1311z QSA3 QRM1 QSB1

FSK POL $10641 \mathrm{kHz} 1150 \mathrm{z} 22 / 12[\mathrm{NRH}] 1151 \mathrm{z}$ WED JkC WED

Associated E11 = NRH
FSK POL $10641 \mathrm{kHz} 1155 \mathrm{z} 22 / 12[\mathrm{NRH}] 1156 \mathrm{z}$
JkC TUE

FSK POL 17531kHz 1250z 09/12[Too weak for decode] 1251 z QSA2 QRM1 QSB1 JkC WED
Associated E11 = 133/00
FSK POL 17531kHz 1255z 09/12[Too weak for decode]1256z QSA2 QRM1 QSB1
JkC
WED
FSK POL 9179kHz 1610z 22/12[Too weak for decode]1611z QSA2 QRM2 QSB1
JkC
TUE
Associated S11a = 831/00
FSK POL 9179 kHz 1615z 22/12[Too weak for decode]1616z QSA2 QRM2 QSB1

TUE

> Many thanks to all contributors to Morse, Voice and Data sections as well as other items such as newpieces

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

Successful "Gizzajob" applicant:- From the "Around the world in 10 stories" column of the I newspaper of 9-December, a short item with the headline, "'The model' to lead Mossad", which says, "A spy master with a reputation for activating and managing secret agents all over the world has been appointed head of Mossad by Prime Minister Benjamin Netanyahu.
Yossi Cohen, 54, who has served in the spy agency for more than 30 years and has been the Prime Minister's national security adviser for the past two years, was likened by the Israeli press yesterday to a character from Ian Fleming. It is a comparison seemingly aided by his nickname - 'the Model', given for his dapper appearance."

And from the same column comes a story from Japan, headlined, "Air of secrecy over launch of anti-terror unit", by Mari Yamaguchi in Tokyo, "Japan launched a new counter-terrorism unit in an air of secrecy yesterday, with journalists only allowed to photograph its 24 members from behind to protect their identity.
The country is expanding its international espionage work after being shocked by the deaths of five Japanese citizens at the hands of Islamic militants this year, and ahead of a G7 summit in Japan next year and the Tokyo games in 2020.
The new unit includes staff from the foreign and defence ministries, the National Police Agency and the Cabinet Intelligence and Research Office. Japan has no institute to train intelligence agents, so they will have to learn on the job."

Uncle Sam needs our spies, according to an item in The Times of 30 -October, under the headline, "We need British spies to keep world safe, US says", written by Deborah Haynes, Defence Editor, Washington, which says:- "The ability of the United States to thwart terrorist attacks anywhere in the world would suffer if Britain placed overly stringent curbs on the digital powers of its spy agencies, a series of serving and former officials have warned.
Key figures from the National Security Agency (NSA), Central Intelligence Agency (CIA) and the office of the chief intelligence adviser to President Obama described Britain as a unique and indispensable partner in intelligence. Information shared by British spies had helped the US to disrupt international terrorist activity, they added.
'The UK is indispensable to our efforts,' said Andrew Hallman, a deputy director at the CIA. 'They are such critical partners. The special relationship is very important to what we do.'
US spy chiefs are watching to see how Britain shapes the first major piece of legislation covering intelligence gathering to be put before Parliament since the revelations by Edward Snowden, the former NSA contractor, about bulk US and UK surveillance capabilities.

The Investigatory Powers Bill, due to be tabled next week, will replace an outdated series of laws that sanction the collection and analysis of large amounts of communications data by British spies and the police. Such tools are regarded by the intelligence agencies as crucial to locate threats and identify suspects but by human rights groups as an unjustifiably intrusive invasion of on-line privacy.

Robert Litt is legal adviser to James Clapper, the director of national intelligence. Speaking to The Times at his offices in McLean, Virginia, he said that new constraints on Britain's digital spying powers 'would have an impact on the flow of information from the UK to the US and that would have an effect on US intelligence capabilities.'
Britain and the US have enjoyed a uniquely close relationship since the Second World War. The NSA was created in 1952 to perform the same kind of code-making and code-breaking role as the British spies of Bletchley Park - the precursor to GCHQ.
Chris Inglis, former deputy director at the NSA, said that there had been times when a tip-off from a UK intelligence officer had changed the course of a US counter-terrorism operation.
Mike Rogers, the former Republican chairman of the permanent select committee at the US Congress, said that Britain's ability to exploit bulk data and use other digital powers to uncover terrorist activity was 'hugely important to the safety and national defence of Europe as well as the United States'. He added: 'When you start taking some of your best players off the field, guess what? You are going to start loosing games. That is what I worry about when we restrict the good guys and empower the bad guys'."

Arson about in Moscow:- the I newspaper of 10-November carried a story written by Andrew Osborne headlined, "Artist sets fire to secret police HQ", which says:- "One of Russia's most radical political performance artists faces up to three years in jail after setting fire to the headquarters of the FSB security service, the successor to the Soviet-era KGB secret police.
Police detained Pyotr Pavlensky early yesterday morning after he doused the main entrance of the building - a symbol of Communist - era repression which also houses the notorious Lubyanka prison - with petrol and started a fire. Footage posted on a video-sharing website from Pavlensky's account showed him standing in front of the vast neo-baroque building holding a petrol can as the fire raged behind him.
It also showed the 31 year-old being detained by police, who later said they had opened a criminal case against him for suspected vandalism, a charge that carries a jail term of up to three years.
In a message accompanying the video, Pavlensky called his performance 'The Threat', saying it was meant to draw attention to what he called the terror tactics used by the FSB, which was briefly run by Vladimir Putin before he became president.
Pavlensky has carried out other extreme 'performances', which he says are designed to poke holes in the Kremlin's propaganda machine. In November 2013 he nailed his scrotum to Red Square, a gesture he described as a metaphor for the political apathy of Russian society. In 2012 he sewed his lips together to protest against the jailing of the punk band Pussy Riot. He was briefly detained in 2014 after slicing off part of his earlobe."

Moving swiftly on from "setting alight" to "satellite", an illustration of which appeared in a piece in The Times of 6-November with the headline, "Five Eyes network on constant search for terror threats, written by Michael Evans and Tom Coghlan which says, "The intelligence agencies of the US and Britain mount round-the-clock eavesdropping to try to pre-empt terrorist attacks.
GCHQ, based in Cheltenham but with a crucial listening station in Cyprus, and the huge National Security Agency organisation at Fort Meade in Maryland have super-computers that trawl communications for key words to alert analysts to bomb plots.
The two nations are the main players in the so-called 'Five Eyes' intelligence network, which also includes Canada, Australia and New Zealand. Set up in the 1940s, in effect the network offers a near-global series of linked listening stations.
Above them in low or high orbit are spy satellites with sensors that can pick up signal intelligence or collect imagery such as sudden bursts of heat from a missile launch or explosion. Both GCHQ and NSA have huge antennae which scoop up the data from the global orbiting satellites and feed it into rows of the most advanced computers in the world, which pick out key words.
The current network of American signals intelligence satellites are code-named Magnum. Their receiving dishes are about 100 metres in diameter. Britain has to rely on American satellites because the only attempt to build a UK-designed satellite, code-named Zircon, had to be abandoned when the top-secret programme was leaked to the New Statesman.
Ever since the rise of Islamic State, the interlinked agencies have been focusing on any attempt by the militants to make contact by mobile phone, Skype, e-mail, text or internet chat rooms.

Although Isis, like al-Qaeda, has learnt to be aware of America's global network of intelligence satellites, individual operatives have been caught out by using their mobile phones, and have been killed in drone strikes. Isis leaders rarely make the mistake of giving away their locations by picking up their phones. But they do use communications for propaganda reasons which can be intercepted. It's clear Isis has been eager to convince the world that it was responsible for the attack on the plane over the Sinai Peninsular.

The message that was intercepted by GCHQ and the NSA was probably deliberately planted to prove to the Americans and British that Isis operatives were behind the plot.
The NSA dwarfs GCHQ in size, manpower and technological capability. But GCHQ has always proved itself a valuable intelligence partner. Its sites at Akrotiri and Dhekalia have played a key role in the past in scooping up crucial intelligence on terrorist plots. British analysts also have a reputation for being among the most expert in the world in fitting intelligence jigsaw components into a meaningful picture."

And to go with this item there is a colour illustration of a satellite with its large solar panels, positioned over a large part of the Earth's Northern Hemisphere, indications as to the locations of Fort Meade, GCHQ and Cyprus and with Egypt, Sinai, Syria and Iraq prominently highlighted.

Point to ponder:- "The only thing we have to fear is fear itself" (Franklin Delano Roosevelt, 32nd President of the United States).

## Thanks Peter.

## Spectre's news section:

## The Guardian 23/10/2015

## MI5 and MI6 cover-up of Cambridge spy ring laid bare in archive papers

Agencies engaged in frantic attempts to prevent information about Kim Philby and other spies from being disclosed to public and even to US government
MI5 and MI6 engaged in a massive effort to cover up the activities of the notorious Cambridge spy ring and avoid hugely embarrassing prosecutions, newly released papers reveal.

The scale of the efforts to smother the unprecedented spy scandal emerges from more than 400 top-secret documents which have been released at the National Archives after being suppressed for more than 50 years.

They show in detail how MI5 and MI6, backed up by senior Foreign Office officials, engaged in frantic attempts to prevent any information about Moscow's "magnificent five" spies - Kim Philby, Guy Burgess, Donald Maclean, Sir Anthony Blunt and John Cairncross - from being disclosed to the British public and even to the US government.

The five were contemporaries at Cambridge University in the 1930s, and were attracted to communism mainly because of the Wall Street crash and in opposition to appeasers in the British and other governments during the rise of Hitler. Burgess was at the centre of the ring, all of whom had Soviet controllers based in London.

The files reveal how Philby - a high-ranking British intelligence officer who became a double agent and ultimately defected to Russia - was protected by his MI6 superiors to the end, and how, in episodes rich in irony, Blunt helped MI5 officers investigate Burgess.

Burgess and Maclean fled to France on 25 May 1951 after a tipoff from Philby that the net was closing in on Maclean. The files show how, as the top MI6 man in Washington, Philby was kept closely informed by his bosses in London about the investigation into his fellow spy.

Many years later, the Foreign Office was still deeply worried about the potentially damaging fallout. "We certainly don't want either [Burgess and Maclean] to return" an FO official told his boss, Sir Harold Caccia, in 1962.

One problem was the lack of hard evidence against the two men and the difficulty in prosecuting them if they returned to Britain. The FO told Sir Patrick Reilly, the British ambassador in Moscow: "Defection is not, of course, a crime in English law." One frustrated, unidentified member of the cabinet said Burgess should be warned that if he returned to the UK "he might face a prosecution for homosexuality".

Soon after the escape, Philby told nervous MI5 officers that Burgess had an "incredibly wide range of acquaintances". They included Maynard Keynes, Victor Rothschild, EM Forster, WH Auden, Stephen Spender and Somerset Maugham. The files, many of which are heavily redacted, show they also included Clarissa Churchill, the prime minister's niece, who knew Burgess from her work in the wartime FO.

MI5 intercepted a letter Burgess wrote to her from Moscow in 1956. He said he had written earlier but never posted the letter for fear of embarrassing her. He was writing again to "congratulate you on your marriage" - to Anthony Eden, the foreign secretary.

An increasingly worried MI5 turned to Blunt for help, asking him to write to Burgess pleading with him not to return to Britain.
Burgess was anxious to visit his ailing mother - their warm relationship is reflected in a telegram he wrote in June 1951, apparently sent from Rome, which appears in the files. "Terribly sorry for my silence," it read. "Am now embarking on long Mediterranean holiday. Do forgive. All love. Guy Boy."

MI5 told FO officials worried because of the lack of hard evidence: "We have taken steps to have the idea conveyed to Burgess that if he thinks he could come to this country with impunity he is gravely misinformed."

The result was Blunt's letter to Burgess, dated 27 February 1959, a letter inspired by MI5 but which also served Blunt's interest. "What the outcome of the trial would be is of course a matter of speculation, but on the way the whole story would be raked up again and many of your friends would certainly be called as witnesses, and mud slung in all directions," Blunt wrote.

He added: "As regards myself, I should certainly have to resign one of my jobs and might well lose the other."
In a covering note to the FO, Courtenay Young told the FO: "The job from which Blunt would have to resign is presumably that of surveyor of the Queen's pictures, the other of course refers to his position as director of Courthaulds Institute."

The letter appears to have dismayed Burgess - he had originally recruited Blunt as a spy, and Blunt had got Burgess a job in MI5 when he worked for the security service during the war.

In dissembling perfected by years of betrayal, Philby had earlier distanced himself from Burgess. He told his MI6 superiors he remembered that Burgess "possessed a sunlamp, which he used seldom, if ever, for its normal purpose." Philby added: "On one occasion Burgess mentioned to me that he possessed a camera."

But the government wanted to shove the whole spy affair under the carpet, the files make clear. "If we want to avoid embarrassment, the best course would be to let him slip away," Sir William Strang, the FO's most senior official, told his Whitehall colleagues in December 1952, referring to Philby.
"You should burn this letter after you have read it," the FO told their ambassadors abroad as they described growing suspicions about the Cambridge spies. "I think we should be careful of what we pass on to the Americans," Sir Roger Makins, a senior FO official, told his colleagues. "If the results of this case became public," he wrote, referring to Maclean's post as head of the FO's American department, "it would cause a sensation in the US."

MI5 had suspected Philby - codenamed Peach in the files - ever since he was questioned by the barrister Helenus "Buster" Milmo in November 1951. By 1955 it had gathered what it considered to be convincing evidence against Philby. A contemporary FO file notes that MI6 was engaged in "intensive lobbying"on Philby's behalf.

Sir John Sinclair, the head of MI6, hit back at MI5. "It is entirely contrary to the English tradition for a man to have to prove his innocence even when the prosecution is in possession of hard facts," he wrote. "In a case where the prosecution has nothing but suspicion to go upon, there is even less reason for him, even if he were able to do so, to prove his innocence."

Cairncross, who was forced to resign from the Treasury after notes were discovered in Burgess's flat after the escape, confessed to MI5 in 1964 when he was applying for a job in the US. The files reveal the FO's concern about "publicity" if the UK sought deportation proceeedings. No action was taken against him.

An added cause of potential embarrassment, the FO said, was Cairncross's brother Alec's position as chief economic adviser to the government. The government would be seen as employing "someone whose brother was a self-confessed communist spy", noted the cabinet secretary Sir Burke Trend in a minute on 6 March 1964.

Blunt secretly confessed in 1964 after new evidence emerged against him. The Queen was told but he was allowed to keep his post as surveyor of the Queen's pictures until he was outed as a wartime Soviet agent in 1979.

Burgess died in Moscow in 1963; Maclean died there in 1983. Philby was given a job with the Observer and Economist in Beirut. After he was offered immunity from prosecution in 1963 by his old MI6 friend Nicholas Elliott, if he would return to London and confess, he hurriedly left on board a Soviet ship. He died in Moscow in 1988.

## The Mirror 01/11/2015

China 'using sexy 'honeytrap' women to seduce former MI6 spies into giving up British secrets'
One source claimed the women offer the spies "great sex" and get secrets through "pillow talk"
China is allegedly using 'honeytraps' to get top secret info from British intelligence officials.
They are reportedly deploying "hundreds of beautiful women" who lure ex-MI6 officers into bed.
Intelligence chiefs have told Prime Minister David Cameron that spies from the Far East powerhouse pose a bigger threat to national security than the Islamic State.
A top secret MI6 memo claims Chinese spies are "aggressively" targeting members officials and their families.

It claims there's a particular focus on former officials with ongoing business or social interests in mainland China and Hong Kong.
But the highly classified documents warns other former officials could be targeted.
Our source told the Daily Star : "The Chinese spy network has hundreds of beautiful women who tempt lonely men into bed, offer them great sex then engage in pillow talk. If that doesn't work they will also use blackmail."

Sources claim the Chinese Foreign Intelligence Service is also using cybercrime in a bid to steal secrets.
MI5 allegedly believes the cyber attacks against British companies originate from a secret cell within China's People's Liberation Army, known as Unit 61398.
The unit is thought to be staffed by hundreds of English-speaking computer experts who steal info from western powers.
The Chinese government denies the unit's existence and refutes all allegations that it is involved in cyber espionage.

## CNN 03/11/2015

MI6 recruits spies on Mumsnet: Do mothers make the best secret agents?
British spy agency MI6 are trying to redress gender imbalance by recruiting on Mumsnet
Mumsnet claim that mothers have a skill set particularly suited to espionage
London (CNN)Forget sharp suits, expensive cocktails, gambling problems and one night stands. Maybe mothers are better spies than James Bond?
A new job advertisement by British spy agency MI6 on the parenting website Mumsnet suggests just this.
The post seeks Intelligence Officers to join its team in London and stresses the importance of qualities including "creativity, insight, curiosity, empathy and intuition."

Successful applicants will be British, have a "wide range of life experience," and could be deployed overseas. The post also warns applicants to be "aware of the importance of discretion."

Jane Gentle, a spokeswoman for Mumsnet, told CNN: "The advert has had a great reaction from our users. We've actually had more applications for this than we have had for any of our other job adverts."
"Mums possess logical and analytical skills, but they also use intuition, empathy and emotional intelligence on a daily basis, which is why MI6 is so keen to recruit them as spies," Gentle added.
"Us mums have to have eyes in the back of our heads to watch over our kids."
MI6 were contacted by CNN, but they have yet to comment.
Users of the Mumsnet forum had mixed reactions to the job advert.
One poster, "Kippersmum," wrote on the Mumsnet forum: "I'm wondering how I would blend into the background whilst trailing an array of school bags, swimming kits \& a guitar behind me? I'd be hopeless doing espionage on the school run :)".
"KingJoffreyLikesJaffaCakes" was more confident. "I could be a spy," she wrote. "I think I'd be really good. I'm very good at sitting quietly yet taking everything in. And I can remember conversations word for word."
"Can't drive though," she added.
The advert comes after a Parliamentary commission, led by MP Hazel Blears, warned that UK intelligence agencies are disadvantaged by being made up largely of men from similar backgrounds.

Currently, women make up only around one third of those agencies -- and the Intelligence and Security Committee recommended that intelligence services recruit through Mumsnet.

Blears said in a press release in March: "Diversity will therefore result in better intelligence analysis and a better response to the range of threats that we face to our national security."

Maurice Parsons, Secretary of the Association of Security Consultants firm in Britain, told CNN: "The spy business is very male-dominated. I think it's right that we encourage more women to get involved with MI6.
"In fact, mothers have access to all sorts of information that no one else gets when they stand around the school gates."
MI6 were not only looking for spies in the online community. They also placed adverts for Business Support Officers and Technology Specialists on the Mumsnet website.

## The Telegraph 16/11/2015

## Britain to hire 2,000 new spies at MI5, MI6 and GCHQ in wake of the Paris terror attacks

The number of spies will rise by 15 per cent in what is expected to be the biggest expansion of the security services since the $7 / 7$ terror attacks in London in July 2005

An additional 2,000 spies will be hired at MI5, MI6 and GCHQ to fight those "who would destroy us and our values" in the wake of the Paris terror attacks, David Cameron has said.
The number of spies will rise by 15 per cent in what is expected to be the biggest expansion of the security services since the $7 / 7$ terror attacks in London in July 2005.

The Prime Minister will also say that the budget for security at foreign airports should double $£ 18$ million a year after a Russian passenger plane was apparently destroyed by a bomb earlier this month.
Mr Cameron said: "Our intelligence agencies work round the clock behind the scenes and as the threat has grown so they too have risen to the challenge.
"Much of what they do cannot be seen by us or talked about but their courageous and determined efforts allow us to go about our daily life.
"This is a generational struggle that demands we provide more manpower to combat those who would destroy us and our values."
The new cash for the security and intelligence agencies to provide for an extra 1,900 officers - an increase of 15 per cent - at MI5, MI6 and GCHQ to respond to the increasing international terrorist threat, more cyber-attacks and other global risks. The three agencies currently have a staff of around 12,700 .

Extra aviation security experts will be deployed to provide regular assessments of security at airports around the world, with the capacity to 'surge' as necessary in response to the Russian her attack as part of a "step change" in Britain's approach to airport security.

There are just currently 20 Government aviation security liaison officers of whom eight are based overseas.
The Prime Minister said: "We will also step up our efforts on aviation security, helping countries around the world to put in place the tightest security measures possible so that we can continue to enjoy places like Egypt and Tunisia and continue with our way of life we hold so dear.
"Economic security goes hand-in-hand with national security. Since 2010 we have taken the tough decisions necessary to restore our economic strength and we now have one of the fastest growing developed economies.
"That means we can now invest more in our national security and I am determined to prioritise the resources we need to combat the terrorist threat because protecting the British people is my number one duty as Prime Minister."
The National Security Council will meet on Tuesday to discuss the Government's policy on aviation security.
The Prime Minister has ordered a rapid review of security at a number of airports around the world in the wake of the Sinai disaster with aviation specialists expected to conduct assessments over the next two months at locations in the Middle East and North Africa in particular.

Additional security measures were put in place by the UK and US at a number of potentially vulnerable airports over the past year, and these will now be reviewed to check whether they go far enough.

Britain will also offer more advice, training and equipment for other countries to increase security at airports in vulnerable countries and increased research into screening technology and to detect new threats.

The airport security assessments are likely to focus on the nature and scale of the threat and the measures in place to reduce vulnerabilities, for example passenger screening; physical security at the airport and hold baggage and freight screening.

## The Atlantic 16/11/2015

## The Double Life of John le Carré

How a con-artist father and treason in MI6 created the bard of the Cold War
Every writer is a kind of spy, ghosting through life in the service of an alien power. He lurks, he snoops, he eavesdrops, he jots his jottings, he thinks his treacherous thoughts. But not every spy is a writer. Kim Philby, for example, the Soviet double agent who spent a perfidiously productive decade in the highest echelons of Cold War British intelligence, was also responsible for some appalling prose. "Her political views are Socialistic, but like the majority of the wealthy class, she has an almost ineradicable tendency towards a definite form of philistinism." This is Philby, secret totalitarian, summarizing for his Moscow controllers the ideological impurities of his (at this point) unsuspecting wife, Aileen. "She believes in upbringing, the British navy, personal freedom, democracy, the constitutional system, honor, etc." The single literary touch here is an accident: that supremely horrible and languid etc., following the word honor and trailing off into an abyss of contempt.

Philby is one of the two enormous, duplicitous presences-or anti-presences-hanging over Adam Sisman's new John le Carré: The Biography. The other is its subject's father, Ronnie. Philby was a snake, whereas with Ronnie you reach for adjectives like Falstaffian or Rabelaisian, his monstrous vitality seeming to emanate from some artistic over-realm. But both men were double-sided, truth-inverting, charismatic, untainted by empathy, profoundly destructive, and finally incomprehensible. Between them, they form the reason you will find le Carre's novels in the mystery section of your local bookstore.

John le Carré, one of England's greatest novelists, author of The Spy Who Came In From the Cold and creator of the character George Smiley, was born David Cornwell in 1931 in Poole, England. He was 2 when his father - who was always either booming or busting, expanding and contracting to the rhythm of his own dodginess-got 15 months for fraud and other charges. "He could put a hand on your shoulder and the other in your pocket and both gestures would be equally sincere," David's brother Tony once said. He also molested his own children. "When he came home sozzled," we read in John le Carré, "Ronnie would sometimes climb on to David's bed, pawing and fondling him, while David feigned sleep." (Sisman, perhaps taking his cue from le Carré himself, passes swiftly on from this fact, which might have been the cornerstone of another kind of biography.)

In the manner of many a sociopath, Ronnie was a sentimentalist, too, lachrymose and Kipling-quoting. "Love your old man?" he would ask. Away at boarding school during the Second World War, David felt that his father-who at the time was down in London skimming the cream off the black market-was in need of a cover story. "David quietly let it be known," writes Sisman, "that Ronnie had joined the secret service, was being trained for an important mission and would soon be parachuted into Germany. Unknown to him, his father was peddling similar stories to his cronies in London."

The boys' mother had left, so there was just Ronnie, with his huge, fragrantly oiled head and his well-groomed hands and his alternating waves of neglect and stifling overinvolvement. It's not an unfamiliar story, almost a writerly genesis myth: that of the boy who cultivates extrasensory powers of observation and interpretation, who sharpens his surveillance skills while watching, in fright, his unpredictable father. John le Carré leaves us in no doubt that it was Ronnieenlarged chaotic patriarch, drunken groper, devourer-who primordially displaced his son from life's center and pushed him out into the flickering zones of the novelist and the spy.

School, in the best English tradition, was hell. Many years later, le Carré remembered his headmaster at St. Andrews thusly: "I always knew when he was going to beat me because he became dreadfully slow in his movements, like a man moving through water. He would stand up, put down his pipe and stare at me in dull confusion." Is it the clogged, distorted energy of the sadist with the pipe that so shocks us, or the traumatic deceleration of the memory itself? To relieve the pressure, David faked sickness, impressively counterfeiting first an epileptic seizure and then the symptoms of a hernia-so precisely that he actually underwent an operation. (An eerie parallel arises here to the tragic story of Aileen Philby, who, as her husband's crimes deepened, began to seriously injure herself and make herself ill.) Le Carré writes of his school days with undiminished boyish loathing-so much so that it feels not reductive but oddly satisfying, like justice, to imagine his Cold War novels as a prolonged and incredibly sophisticated act of vengeance upon the Establishment that had tormented him.

David Cornwell, who would one day join MI6 (foreign intelligence), seems to have started working in earnest for MI5 (domestic intelligence) around 1953, while studying at Oxford. The British double agents Guy Burgess and Donald Maclean had recently defected to Moscow, and although their friend and fellow traitor Kim

Philby was not yet officially exposed, it was, in le Carrés words, "witch-hunt time." We might call this the Philby Effect: Still at large, although under suspicion, he had unzipped the psyche of British intelligence. The Americans had been duped, too-Philby and James Jesus Angleton, the CIA's future head of counterintelligence, were regular lunch buddies in Washington, D.C.-but it was the English upon whom he wreaked real havoc, because it was his Englishness that had enabled and preserved him.* Philby was clubbable and perfectly mannered; he had a sense of humor, that useful English substitute for emotion. The idea of his being crooked was simply impossible, and friends in the service rallied round to debunk it.

With Philby you were in negativeland, the silvery counterworld of the thing that you know but don't want to know that you know-in other words, you were in what would later become the fictional atmosphere of John le Carré. When Smiley reflects upon the treachery-personal and professional-of his colleague Bill Haydon in Tinker, Tailor, Soldier, Spy, le Carré writes, "He knew, of course. He had always known ... All of them had tacitly shared that unexpressed halfknowledge which was like an illness they hoped would go away if it was never owned to, never diagnosed."

Taking the pen name John le Carré (he doesn't remember where from), Cornwell began to write while still working in intelligence. The Spy Who Came In From the Cold, in 1963, was the breakthrough: a thriller with the purity of an existential fable, and a best seller. (Its success enabled him to retire from the service.)The cold in the book is actual-October winds and chilly rooms-but it is also metaphysical, infernal: It kills love. The British spy Alec Leamas returns to London from Berlin, his network of agents on the other side of the Wall having been destroyed by his opposite number, Mundt. He is summoned into the aura of his superior, the man known only as Control, a desiccated omniscience fussing over an electric heater. Control shakes Leamas's hand "rather carefully, like a doctor feeling the bones," and then tells him, "I want you to stay out in the cold a little longer." A trap is being set for Mundt. Leamas is instructed to drift, detach, descend, burn out, become useless, until Moscow-convinced at last of his disaffection-makes its inevitable approach to turn him. He is to become a double agent. His cover will be no cover at all: total exposure to the slow wrath of society, and its cold war upon the lonely.

The Berlin Wall of The Spy Who Came In From the Cold, le Carré would later write, was somehow his own wall: his burden, his blockage. "Staring at the Wall was like staring at frustration itself, and it touched an anger in me ... A disgusting gesture of history coincided with some desperate mechanism inside myself." But of course it was no coincidence: Although le Carré has written plenty of excellent novels post-perestroika, it was his particular genius as a novelist—what Kipling would have called his "daemon"-that transformed the theater of the Cold War into his own beautifully resonating symbolic structure. The muffled violence, the bleak streets, the human data so refined as to be almost beyond perception-hypervigilance is part of the psychology of the abuse victim, as is dissociation. Standard spy stuff. Control discusses with Leamas the sensation of seeing one's agent get shot: "a sickening jolt like a blow on a numb body."

And in the middle of it all is the spymaster Smiley, as much priest as agent, dense with subterranean knowledge, blinking, suffering, doughily pliable and razorsharp. His wife cheats on him; his colleagues at the Circus, le Carré's fictional version of British intelligence, corral him with a bruising, bullying affability. Quietly goes Smiley: memory spy, an artist of recollection, traveling back into the files, back into the memory banks of frazzled ex-Circus types such as Connie Sachs, back into his own mind, to find the truth of what is happening around him.

This backwards movement, in its own way a therapeutic operation, is a le Carré signature. "I strain and stretch ... I shove with every muscle of my imagination as deep as I dare into the heavy shadows of my own pre-history." Thus reflects Magnus Pym, the Philby-like double man at the heart of 1986's A Perfect Spy. Pym's father, Rick, is Ronnie-like - tremendous, larcenous, overflowing all boundaries. And as resistant to the truth as to a drug: "His face ... acquired the dreamy expression that overcame it at the approach of a direct question." It's le Carré's lodestone novel: his two great liars, in one book.

We learn from John le Carré that the Quest for Karla trilogy - the sequence of novels covering the almost mystical battle between Smiley and his KGB nemesis, Karla-was originally conceived as a much larger, Balzacian cycle. It's easy to see how this might have been done: The lore and liturgy of the Circus feels limitless, and the character of Smiley is nearly prophetic. Smiley's Britain is on the wane, "a poor island with scarcely a voice that would carry across the water." In Smiley's People he orders a taxi from a private firm - not because he needs a taxi, but because he wants to quiz the driver about a fare he picked up the day before. After concluding the interview, Smiley blandly directs the cabbie, "You can tell your firm I didn't turn up." "Tell 'em what I bloody like, can't I?" comes the response. A snarl, a micro-wobble of the class system: This is 1970s London, with punk rock around the corner, and the deference of the proletariat can no longer be assumed.

I have sometimes reflected," Sisman writes a bit ruefully in his introduction to the biography, "that my unintended role has been to spoil a fund of good stories." And indeed his investigations - conducted with the cooperation of le Carré himself, who is 84 -take on now and again the character of a punctilious field officer's debriefing of a wayward agent. At one point, querying the location of a le Carré anecdote from the early 1950s, he proudly out-fact-checks the fact-checkers at The New Yorker. The anecdote concerns a rendezvous, in an Austrian saloon, with a Czech airman who has information to sell. Le Carré and a colleague enter the bar and order a couple of beers. When le Carré picks up a pool cue and leans over to make a shot, his gun falls out of his waistband with a clang. "Abort," says his colleague, between sips of his pint. (Le Carré was a great writer but a mediocre spy-Philby through the looking glass.)

Writing involves betrayal, and le Carré-after his fashion and to our lasting benefit-double-crossed his own people. His Cold War novels were psychic microfilms of an Establishment hollowed out by deceit, denial, and inadequacy. They outraged his fellow spies. "I deplore and hate everything he has done and said against the intelligence services" was the verdict of one former colleague, late in life, on the le Carré opus. And Sisman also gives us this: "\&\#8201;'You bastard!' a middleaged intelligence officer, once his colleague, yelled down the room at him, as they assembled for a diplomatic dinner in Washington. 'You utter bastard.' \& 88201 ;' But what else could he have done, this damaged son, this malingering schoolboy, this doubtful servant of a shrinking empire - this spiritual exile, onto whose numb body the blows had fallen-what else could he have done but make his report?

## Ara News 08/12/2015

## ISIS beheads five Russians on charges of spying

The radical group of Islamic State (ISIS) has reportedly beheaded five Russian nationals accused of spying against the ISIS self-declared caliphate, informed sources reported on Tuesday.

This comes only one week after another Russian national was beheaded on the same charges, according to a video released by ISIS
Khasiev Magomid, 24, was a Chechen national who had entered the ISIS-held territory under the name of "Haroun" by order from the Russian intelligence. Magomid was beheaded in a chilling video last Wednesday by a Russian member of ISIS identified as Anatoly Zemlyanka.

However, the identities of the five Russians executed on Tuesday remained unknown.
"Leadership of the Islamic State tries to capture all Russian and Chechen spies who have infiltrated into the caliphate's territory, that's why today's operation (execution of the five Russians) was kept confidential," an ISIS-linked media worker in Raqqa told ARA News, on the condition of anonymity for security concerns.
"The five Russian spies were beheaded after providing information on an organized network of spies sent by the enemies of the caliphate to gain security information," the source said. "Their identities were not uncovered because the Islamic State's leadership tries to pursue other members of this network before they escape."

## Kiev Post 17/12/2015

The murky story of Oleh Muzhchyl: Russian spy or Ukrainian patriot?
Some knew him as a wise, brilliant Buddhist teacher, others as a legendary Ukrainian patriot ready to die for his fellow countrymen.
If the Security Service of Ukraine (SBU) is to be believed, 50-year-old Oleh Muzhchyl -- killed by SBU counter-terrorism agents in a raid on Dec. 9 -- was actually a mole working for Russian intelligence who had managed to fool everyone for almost two decades.

The SBU said Muzhchyl was a terrorism suspect planning attacks in Kyiv and other cities. It said Muzhchyl shot one officer dead and wounded another before he was shot and killed in Kyiv's Obolon neighborhood.
Muzhchyl used the name Serhiy Amirov on Facebook and went by the nickname Lesnik (ranger). The Donetsk native had spent years in the ultranationalist group "Tryzub," a co-founder of the Right Sector nationalist group. Throughout Russia's war in eastern Ukraine, Muzhchyl led a reconnaissance unit in Donetsk Oblast for Right Sector and gained notoriety for his ruthless anti-Russian sentiment.

But after the dramatic shootout on Dec. 9, some are wondering if it was all an act.
A debate has erupted between those who take the SBU at its word and believe Muzhchyl was working for Russian intelligence, and those who believe there is more to the story - that he was no Russian terrorist, but a Ukrainian one, and it was simply more convenient for authorities to say they had killed a Russian saboteur plotting against them than to say they'd been forced to kill one of their own.

## Fighting Russians

For those who knew Muzhchyl and fought alongside him, the version of events offered by the SBU is hard to believe: This "Russian saboteur" had a known track record of fighting against Russian forces in eastern Ukraine, of calling on fellow fighters to take the war to Russian territory and fight back, and of criticizing current authorities in Kyiv for being too "pro-Russian."

Maria, a friend of Muzhchyl's since the early 2000s, is one of those who doubts the SBU's story. She requested anonymity out of fear that her comments could get her in trouble at the university where she works.
"He could have been anything - just not a Russian saboteur," Maria told the Kyiv Post. "I'm absolutely certain of it. Of everyone I know who knew him, nobody believes that he was working for Russia."

Infiltrating Right Sector?
The official narrative on Muchzhyl begs the question: could Russian security services really be so good as to have infiltrated Right Sector and convinced hundreds of Ukrainian fighters that Muzhchyl was the real deal?

SBU spokeswoman Olena Hitlyanska thinks so.
On her Facebook page, she compared Muzhchyl and the other Russian suspects in the group to pro-Russian attackers who had earlier been arrested after bringing explosives to Kyiv to carry out bombings.

Investigators suspect Muzhchyl and his crew of acting as puppets for the Russian security services in much the same way, with the main evidence against him being the fact that he had "repeatedly traveled out of the country using fake passports," including a trip to Russia last fall, she said.

Two named Lesnik?

After an outcry from many Ukrainian activists who accused the SBU of having killed a Ukrainian patriot, Hitlyanska said the outrage was misplaced, that there were in fact two men by the nickname Lesnik. One of them is a hero in Ukraine's east and the other, the one killed in Kyiv, a mole for the Russian security services.

When the real Lesnik first appeared, "the Russian security services decided not to waste time and to make an information clone with the aim of discrediting (the real Lesnik) .... It seems to me, the Russians created the second Lesnik," she wrote.

Those who knew Muzhchyl were not so quick to buy into Hitlyanska's version of events. Nor was Mykola Malomuzh, who headed Ukraine's Foreign Intelligence Service in 2005-2010.

## Radical nationalist

Malomuzh said it was unlikely that Muzhchyl was a Russian agent, and that the SBU had not yet provided any evidence that he was. SBU spokeswoman Hitlyanska was not immediately available for a response.
"There is no special service in Russia that would have allowed him to conduct operations against Russia" that would have killed Russians, Malomuzh said, in reference to Muzhchyl's appeals to fellow fighters to carry out attacks in Russia's Rostov Oblast.

Muzhchyl was known in Ukraine's security services since the 1990s, long before the EuroMaidan Revolution.
"We have known him for years," Malomuzh said. "He was always a member of radical nationalist groups that were operating on the edge of the law or flat out breaking it. We recognized him as a person with patriotic but extremist views, who was prepared to commit extremist acts and was able to protect his interests using force."

Declared war on Kyiv
According to Muzhchyl's acquaintances, he had become increasingly angry at the government in recent months and, in a series of manifestos published online, had called for Ukrainian fighters to declare war against authorities in Kyiv.
"It's convenient to portray him as a Russian saboteur, not as a radical patriot fighting against his own government," Malomuzh said.
According to Alexander Valov, a Russian citizen who fought for Ukraine with the Azov Battalion, the three "Russian saboteurs" detained in the SBU operation were volunteers who fought in the east - they just happened to have Russian passports.

The SBU, in its official statement on the incident, failed to mention that the Russian suspects had actually fought on behalf of Ukraine.

Artyom Skoropadksy, the official spokesman for Right Sector, told Ukrainian media on Dec. 11 that Muzhchyl had in fact been a member of Right Sector until Aug. 31, when he publicly declared he was leaving the group. Since then, Skoropadsky said, the group had not had "even the slightest interaction with him, nor did he with us."

According to Muzhchyl's friends in Right Sector, he left the group because he felt they were not being radical enough; he believed they should be attacking not only Russian forces in the east, but also government officials in Kyiv who may be under the influence of the Kremlin.

He was also highly critical of Dmytro Yarosh's leadership of Right Sector, a fact which led to some friction between Muzhchyl and fellow members. In a statement published on Dec. 11, Yarosh said he could not comment on whether or not Muzhchyl was under the control of Russian intelligence -- but he did recall several times when Muzhchyl seemed to have sabotaged operations against Russian forces in the east.

After being sent to attack a group of Russian forces along with other members of the group, Yarosh said, Muzhchyl, who was in charge of the group, "disappeared somewhere. The operation wasn't completed."

Buddhism school
In addition to being a radical nationalist, Muzhchyl was also the founder of a school of Buddhism in Volnovakha, Donetsk Oblast, and by all accounts, he was a devout Buddhist and devoted teacher.

Alex Kulminsky, one of his former students, said while he could not comment on Muzhchil's political views as of late, he never had any reason to suspect his teacher of having ties to Russia.
"I know for sure he didn't have any ties at least with official Russian authorities or services and agents. He always considered them enemies. I learned about his nationalistic position at a time when most modern patriots were still changing their diapers every half an hour," he said.

As for accusations that Muzhchyl was actually a Russian agent, Kulminsky said that nowadays "everyone who goes against the official position is accused of having bonds (with Russia)."

## Avenging death

Judging by statements made by Muzhchyl's friends after his death, the Ukrainian authorities have their own internal enemies to contend with in addition to Russian saboteurs.

In a statement published on the social media pages of the ultranationalist group UPA, or the Ukrainian Insurgent Army, members of the group warned family members of Alfa - the SBU's counterterrorism unit - to flee so that they wouldn't be caught in the crossfire when UPA members avenge Muzhchyl's death.

Describing Ukrainian President Petro Poroshenko and the current Ukrainian authorities as "the henchmen and spies of Putin," the group claimed responsibility for the bombing of a Roshen candy shop in Kharkiv on Dec. 9 - and they promised to carry out many more such attacks. Poroshenko is the owner of Roshen, the nation's largest confectionary.
"Our arsenal is much bigger than what was shown. But it's not meant for Ukrainians...only for enemies. For (state-owned Russian) Sberbank branches, embassies, all Russian companies and the scum working for Russia in Ukrainian power structures and the SBU and Defense Ministry. They know who they are, let them wait for it," the statement said.

Despite such threats against the Ukrainian authorities, the SBU has maintained that Muzhchyl was a Russian plant - a claim that the pro-Kremlin and pro-separatist media have delighted in.

Separatist-friendly media analyst Anatoly Shariy, who gained fame for his video analysis and criticism of the new Ukrainian authorities, seemed to rejoice in Muzhchyl's death in comments published on various separatist media sites.
"The funniest thing," he said, "is that this piece of crap, once gloating in the death of a Russian fighter, has now died as a Russian spy. That's symbolic."

## RT 20/12/2015

## 320 foreign spies and agents exposed in Russia in 2015 - Putin

Foreign intelligence services are increasing their activity in Russia, President Vladimir Putin said stressing that the country is ready to provide an adequate response to the challenge.
Russian counterespionage services have "exposed 320 personnel and agents of secret services of foreign states as well as their accomplices," the Russian President said as he spoke to the Russian secret and security services on their professional holiday.
"We see that intelligence services of some countries are intensifying their efforts... focused on Russia," Putin said expressing confidence that Russian security services "are ready to provide an adequate response to this challenge."

The president stressed that he expects that Russia's security services will also efficiently fight corruption and economic crime within as well as protecting the country's borders. He emphasized that state security services should coordinate their work with the military "to boost the capabilities of our [Russian] armed forces."
"We see how efficiently our pilots and intelligence specialists are working [in Syria], how well they coordinate their actions... The [Russian] army, fleet and aviation are using the most advanced weapons [there]," he said stressing that it "is hardly all of our [Russia's] capabilities."
"We are far from using all the means we have there. We do have additional means. And we will use them if required," Putin said, as quoted by RIA Novosti.
In his speech, Putin stressed that terrorists had openly declared war on the whole international community and their actions are a direct threat to Russia. He also said that Russian security services have prevented more than 30 terrorist crimes and called for special attention to be devoted to neutralizing terrorist recruiters and emissaries seeking to involve young people in terrorist activities.

The Russian security services include but are not limited to the Federal Security Service (FSB), Foreign Intelligence Service (SVR), Chief Intelligence Directorate (GRU), Border Guard Service (FPS), Federal Guard Service of the Russian Federation (FSO) and Federal Drug Control Service (FSKN).

## National Security Agency's targeting of Israeli leaders also swept up the content of private conversations with U.S. lawmakers

President Barack Obama announced two years ago he would curtail eavesdropping on friendly heads of state after the world learned the reach of long-secret U.S. surveillance programs.

But behind the scenes, the White House decided to keep certain allies under close watch, current and former U.S. officials said. Topping the list was Israeli Prime Minister Benjamin Netanyahu.
The U.S., pursuing a nuclear arms agreement with Iran at the time, captured communications between Mr. Netanyahu and his aides that inflamed mistrust between the two countries and planted a political minefield at home when Mr. Netanyahu later took his campaign against the deal to Capitol Hill.

The National Security Agency's targeting of Israeli leaders and officials also swept up the contents of some of their private conversations with U.S. lawmakers and American-Jewish groups. That raised fears-an "Oh-s-moment," one senior U.S. official said-that the executive branch would be accused of spying on Congress.

White House officials believed the intercepted information could be valuable to counter Mr. Netanyahu's campaign. They also recognized that asking for it was politically risky. So, wary of a paper trail stemming from a request, the White House let the NSA decide what to share and what to withhold, officials said. "We didn't say, 'Do it,'" a senior U.S. official said.
"We didn't say, 'Don't do it.' "
Stepped-up NSA eavesdropping revealed to the White House how Mr. Netanyahu and his advisers had leaked details of the U.S.-Iran negotiations-learned through Israeli spying operations-to undermine the talks; coordinated talking points with Jewish-American groups against the deal; and asked undecided lawmakers what it would take to win their votes, according to current and former officials familiar with the intercepts.

Before former NSA contractor Edward Snowden exposed much of the agency's spying operations in 2013, there was little worry in the administration about the monitoring of friendly heads of state because it was such a closely held secret. After the revelations and a White House review, Mr. Obama announced in a January 2014 speech he would curb such eavesdropping.

In closed-door debate, the Obama administration weighed which allied leaders belonged on a so-called protected list, shielding them from NSA snooping. French President François Hollande, German Chancellor Angela Merkel and other North Atlantic Treaty Organization leaders made the list, but the administration permitted the NSA to target the leaders' top advisers, current and former U.S. officials said. Other allies were excluded from the protected list, including Recep Tayyip Erdogan, president of NATO ally Turkey, which allowed the NSA to spy on their communications at the discretion of top officials.

Privately, Mr. Obama maintained the monitoring of Mr. Netanyahu on the grounds that it served a "compelling national security purpose," according to current and former U.S. officials. Mr. Obama mentioned the exception in his speech but kept secret the leaders it would apply to.

Israeli, German and French government officials declined to comment on NSA activities. Turkish officials didn't respond to requests Tuesday for comment. The Office of the Director of National Intelligence and the NSA declined to comment on communications provided to the White House.

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The White House stopped directly monitoring the private communications of German Chancellor Angela Merkel but authorized the National Security Agency to eavesdrop on her top advisers.

This account, stretching over two terms of the Obama administration, is based on interviews with more than two dozen current and former U.S. intelligence and administration officials and reveals for the first time the extent of American spying on the Israeli prime minister.

## Taking office

After Mr. Obama's 2008 presidential election, U.S. intelligence officials gave his national-security team a one-page questionnaire on priorities. Included on the form was a box directing intelligence agencies to focus on "leadership intentions," a category that relies on electronic spying to monitor world leaders.

The NSA was so proficient at monitoring heads of state that it was common for the agency to deliver a visiting leader's talking points to the president in advance. "Who's going to look at that box and say, 'No, I don't want to know what world leaders are saying,'" a former Obama administration official said.

In early intelligence briefings, Mr. Obama and his top advisers were told what U.S. spy agencies thought of world leaders, including Mr. Netanyahu, who at the time headed the opposition Likud party.

Michael Hayden, who led the NSA and the Central Intelligence Agency during the George W. Bush administration, described the intelligence relationship between the U.S. and Israel as "the most combustible mixture of intimacy and caution that we have."

The NSA helped Israel expand its electronic spy apparatus-known as signals intelligence-in the late 1970s. The arrangement gave Israel access to the communications of its regional enemies, information shared with the U.S. Israel's spy chiefs later suspected the NSA was tapping into their systems.

When Mr. Obama took office, the NSA and its Israeli counterpart, Unit 8200, worked together against shared threats, including a campaign to sabotage centrifuges for Iran's nuclear program. At the same time, the U.S. and Israeli intelligence agencies targeted one another, stoking tensions.
"Intelligence professionals have a saying: There are no friendly intelligence services," said Mike Rogers, former Republican chairman of the House Intelligence Committee.

Early in the Obama presidency, for example, Unit 8200 gave the NSA a hacking tool the NSA later discovered also told Israel how the Americans used it. It wasn't the only time the NSA caught Unit 8200 poking around restricted U.S. networks. Israel would say intrusions were accidental, one former U.S. official said, and the NSA would respond, "Don't worry. We make mistakes, too."

In 2011 and 2012, the aims of Messrs. Netanyahu and Obama diverged over Iran. Mr. Netanyahu prepared for a possible strike against an Iranian nuclear facility, as Mr. Obama pursued secret talks with Tehran without telling Israel
Convinced Mr. Netanyahu would attack Iran without warning the White House, U.S. spy agencies ramped up their surveillance, with the assent of Democratic and Republican lawmakers serving on congressional intelligence committees.

By 2013, U.S. intelligence agencies determined Mr. Netanyahu wasn't going to strike Iran. But they had another reason to keep watch. The White House wanted to know if Israel had learned of the secret negotiations. U.S. officials feared Iran would bolt the talks and pursue an atomic bomb if news leaked.

The NSA had, in some cases, spent decades placing electronic implants in networks around the world to collect phone calls, text messages and emails. Removing them or turning them off in the wake of the Snowden revelations would make it difficult, if not impossible, to re-establish access in the future, U.S. intelligence officials warned the White House.

Instead of removing the implants, Mr. Obama decided to shut off the NSA's monitoring of phone numbers and email addresses of certain allied leaders-a move that could be reversed by the president or his successor.

There was little debate over Israel. "Going dark on Bibi? Of course we wouldn't do that," a senior U.S. official said, using Mr. Netanyahu's nickname.
One tool was a cyber implant in Israeli networks that gave the NSA access to communications within the Israeli prime minister's office.
Given the appetite for information about Mr. Netanyahu's intentions during the U.S.-Iran negotiations, the NSA tried to send updates to U.S. policy makers quickly, often in less than six hours after a notable communication was intercepted, a former official said.

Emerging deal
NSA intercepts convinced the White House last year that Israel was spying on negotiations under way in Europe. Israeli officials later denied targeting U.S. negotiators, saying they had won access to U.S. positions by spying only on the Iranians.

By late 2014, White House officials knew Mr. Netanyahu wanted to block the emerging nuclear deal but didn't know how.
On Jan. 8, John Boehner, then the Republican House Speaker, and incoming Republican Senate Majority Leader Mitch McConnell agreed on a plan. They would invite Mr. Netanyahu to deliver a speech to a joint session of Congress. A day later, Mr. Boehner called Ron Dermer, the Israeli ambassador, to get Mr. Netanyahu's agreement.

Despite NSA surveillance, Obama administration officials said they were caught off guard when Mr. Boehner announced the invitation on Jan. 21.
Soon after, Israel's lobbying campaign against the deal went into full swing on Capitol Hill, and it didn't take long for administration and intelligence officials to realize the NSA was sweeping up the content of conversations with lawmakers.

The message to the NSA from the White House amounted to: "You decide" what to deliver, a former intelligence official said.
NSA rules governing intercepted communications "to, from or about" Americans date back to the Cold War and require obscuring the identities of U.S. individuals and U.S. corporations. An American is identified only as a "U.S. person" in intelligence reports; a U.S. corporation is identified only as a "U.S. organization." Senior U.S. officials can ask for names if needed to understand the intelligence information.

The rules were tightened in the early 1990s to require that intelligence agencies inform congressional committees when a lawmaker's name was revealed to the executive branch in summaries of intercepted communications.

A 2011 NSA directive said direct communications between foreign intelligence targets and members of Congress should be destroyed when they are intercepted. But the NSA director can issue a waiver if he determines the communications contain "significant foreign intelligence."

The NSA has leeway to collect and disseminate intercepted communications involving U.S. lawmakers if, for example, foreign ambassadors send messages to their foreign ministries that recount their private meetings or phone calls with members of Congress, current and former officials said.
"Either way, we got the same information," a former official said, citing detailed reports prepared by the Israelis after exchanges with lawmakers.
During Israel's lobbying campaign in the months before the deal cleared Congress in September, the NSA removed the names of lawmakers from intelligence reports and weeded out personal information. The agency kept out "trash talk," officials said, such as personal attacks on the executive branch.

Administration and intelligence officials said the White House didn't ask the NSA to identify any lawmakers during this period.
"From what I can tell, we haven't had a problem with how incidental collection has been handled concerning lawmakers," said Rep. Adam Schiff, a California Democrat and the ranking member of the House Permanent Select Committee on Intelligence. He declined to comment on any specific communications between lawmakers and Israel.

The NSA reports allowed administration officials to peer inside Israeli efforts to turn Congress against the deal. Mr. Dermer was described as coaching unnamed U.S. organizations-which officials could tell from the context were Jewish-American groups-on lines of argument to use with lawmakers, and Israeli officials were reported pressing lawmakers to oppose the deal.
"These allegations are total nonsense," said a spokesman for the Embassy of Israel in Washington.
A U.S. intelligence official familiar with the intercepts said Israel's pitch to undecided lawmakers often included such questions as: "How can we get your vote? What's it going to take?"

NSA intelligence reports helped the White House figure out which Israeli government officials had leaked information from confidential U.S. briefings. When confronted by the U.S., Israel denied passing on the briefing materials.

The agency's goal was "to give us an accurate illustrative picture of what [the Israelis] were doing," a senior U.S. official said.
Just before Mr. Netanyahu's address to Congress in March, the NSA swept up Israeli messages that raised alarms at the White House: Mr. Netanyahu's office wanted details from Israeli intelligence officials about the latest U.S. positions in the Iran talks, U.S. officials said.

A day before the speech, Secretary of State John Kerry made an unusual disclosure. Speaking to reporters in Switzerland, Mr. Kerry said he was concerned Mr. Netanyahu would divulge "selective details of the ongoing negotiations."

The State Department said Mr. Kerry was responding to Israeli media reports that Mr. Netanyahu wanted to use his speech to make sure U.S. lawmakers knew the terms of the Iran deal.

Intelligence officials said the media reports allowed the U.S. to put Mr. Netanyahu on notice without revealing they already knew his thinking. The prime minister mentioned no secrets during his speech to Congress.

In the final months of the campaign, NSA intercepts yielded few surprises. Officials said the information reaffirmed what they heard directly from lawmakers and Israeli officials opposed to Mr. Netanyahu's campaign - that the prime minister was focused on building opposition among Democratic lawmakers.

The NSA intercepts, however, revealed one surprise. Mr. Netanyahu and some of his allies voiced confidence they could win enough votes.

## Thanks Spectre

## Chart Section Index

1. Logging Abbreviations Explained
2. Number Systems
3. Prediction Chart
4. M01 Schedule
5. M12 Yearly Round Up
6. Family III
7. G06
8. HM01 Schedule
9. XPA c, e and XPA2 m, r Schedules
10. XPA2 p Schedule
January 2016

## 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] HM [Hybrid Mode: Voice/Data] 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 unk 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.

Other details about stations can be found in the ENIGMA Control List available from Group files or sent when you joined.

European Numbers sytems:

| 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 and totally in keeping with German armed forces The numbers in question are:

| 2 ZWEI | pronounced as TSWO |
| :--- | :--- |
| 5 FUNF | pronounced as FUNUF, poss hrd as a fast TUNIS |
|  |  |
| 9 NEUN | pronounced by some as NEUGEN |

A peculiar pronunciation of three DREI, has crept into G11 transmissions, heard as 'ZYNCE' the ' Y ' as in eye.

## Numeral Systems used on selected Slavic Stations [those discontinued in italics]

|  | Actual <br> Polish[S11] | S11a Cherta | S11 Kreska | S10d | S17c |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | zero | nul | zero | Nula* | Nula* |  |
| 1 | jedynka | adinka | yezinka | Jeden^ | Jeden^ | Notes on Numeral Systems used on selected Slavic Stations: |
| 2 | dwójka | dvoyka | dvonta | dva | dva | * Nula heard as 'nul' |
| 3 | trójka | troyka | troika | tri ' | tri ' |  |
| 4 | cztery | chetyorka | chidiri | shytri | shytri | $\wedge$ Jeden heard as 'Yedinar' |
| 5 | pi ${ }^{1}$ tka | petyorka | peyonta | pyet | pyet | 'Tri heard as 'she' |
| 6 | szeœæ | shest | shes | shest | shest | $\sim$ Osoom often heard as 'bossoom' or 'Vossoom.' |
| 7 | siedem | syem | sedm | sedoom | sedoom |  |
| 8 | osiem | vosyem | osem | Osoom~ | Osoom~ |  |
| 9 | dziewie, c' | dyevyet | prunka | devyet | devyet |  |

## 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 |
|  | - | 1 | $r$ | $r$ | $\varepsilon$ | 0 | 7 | $\vee$ | $\wedge$ | 9 |

[Particular attn to Yi/Yao pse].

| 0 | Ling | Zero |
| :--- | :--- | :--- |
| 1 | $\mathrm{Yi} / \mathrm{Yao}$ | One (It appears there is a radio version of Yao. On the telephone it is pronounced Yi; also heard in V16) |
| 2 | Er | Two |
| 3 | San | Three |
| 4 | Si | Four (The number four in Chinese is always unlucky, because it sounds the same as the word for death which is also pronounced 'Si' but <br> with a different tone). |
| 5 | Wu | Five |
| 6 | Liu | Six |
| 7 | Qi | Seven |
| 8 | Ba | Eight |
| 9 | Jiu | Nine |

Shi Ten

## Ba One Hundred

Wan
One Thousand

Chinese numeral construction:
For example:
San Three

San Shi Thirty. In English they are saying Three and Ten.
San Shi Jiu Thirty Nine. In English they are saying Three, Ten and Nine.
San Bai Three Hundred. In English they are saying Three and One Hundred.
San Wan Three Thousand. In English they are saying Three and One Thousand.

| $\begin{aligned} & G \\ & 0 \\ & \sum \end{aligned}$ | $\begin{gathered} 0 \\ 5 \\ \underset{1}{2} \end{gathered}$ | $\begin{aligned} & 0 \\ & 0 \\ & 3 \\ & 3 \end{aligned}$ | $\underset{\underset{H}{\mid}}{\underset{\sim}{3}}$ | $\begin{array}{\|l\|l} \hline \text { Hy } \\ \text { Hy } \end{array}$ | $\begin{gathered} + \\ \tilde{\sigma} \\ \sim \end{gathered}$ | $\begin{aligned} & \text { G } \\ & \text { u } \end{aligned}$ | UTC | wk | Stn | Fam | $\begin{array}{lll} \operatorname{Jan} \\ \mathrm{kHz}, & \text { ID, } & \\ \hline \end{array}$ | $\begin{array}{lll} \mathrm{Feb} \\ \mathrm{kHz}, \quad \text { ID, } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | x | 0100/0120/0140 |  | V07 | 01B | $\begin{aligned} & 16037 / 14637 / 12137 \\ & 661 \end{aligned}$ | $\begin{aligned} & 18368 / 16268 / 13968 \\ & 329 \end{aligned}$ |
|  |  | X | X |  |  |  | 0315 |  | E11 | 03 | $\begin{gathered} 5779 \\ 253 / 00 \end{gathered}$ | $\begin{gathered} 5779 \\ 253 / 00 \end{gathered}$ |
| X | X | X | X | x |  |  | 0400 |  | S06 | 01A | $\begin{aligned} & 15721 \\ & 480 \end{aligned}$ | $\begin{aligned} & 15721 \\ & 480 \end{aligned}$ |
| X |  |  |  |  |  |  | 0450 |  | E11 | 03 | $\begin{gathered} 5082 \\ 416 / 00 \end{gathered}$ | $\begin{gathered} 5082 \\ 416 / 00 \end{gathered}$ |
|  | x |  |  | x |  |  | 0455 |  | S11A | 03 | $\begin{gathered} 4828 \\ 321 / 00 \end{gathered}$ | $\begin{gathered} 4828 \\ 321 / 00 \end{gathered}$ |
| X |  | x |  | X |  | X | 0500 |  | HMO 1 | 18 | 5855 | 5855 |
|  | x |  | X |  | X |  | 0500 |  | HMO1 | 18 | 11462 | 11462 |
|  |  | X |  |  |  |  | 0530/0540 |  | S 06 S | 01A | $\begin{aligned} & 7425 / 9069 \\ & 464 \end{aligned}$ | $\begin{aligned} & 7425 / 9069 \\ & 464 \end{aligned}$ |
|  |  |  | x |  |  |  | 0530/0550/0610 |  | E07A | 01B | $\begin{aligned} & 5111 / 5811 / 6911 \\ & 189 \end{aligned}$ | $\begin{aligned} & \text { 5111/ 5811/ } 6911 \\ & 189 \end{aligned}$ |
| X |  |  |  |  |  |  | 0530/0550/0610 |  | M12 | 01B | 4457/ 5157/ 417, search | $\begin{aligned} & 4617 / 5317 / 5817 \\ & 638 \end{aligned}$ |
|  |  | X |  | X |  |  | 0545 |  | E11 | 03 |  |  |
| x |  | x |  | x |  | x | 0600 |  | HM0 1 | 18 | 10345 | 10345 |
|  | x |  | x |  | x |  | 0600 |  | HM01 | 18 | 14375 | 14375 |
| $\mathbf{x}$ |  |  |  | $\mathbf{x}$ |  |  | 0600/0610 |  | E11A | 03 | $\begin{aligned} & 13046 \\ & 181 / 00 \end{aligned}$ | $\begin{aligned} & 13046 \\ & 181 / 00 \end{aligned}$ |
|  | x |  |  |  |  |  | 0600/0610 |  | S 06 S | 01A | $\begin{aligned} & 16145 / 14240 \\ & 438 \end{aligned}$ | $\begin{aligned} & 16145 / 14240 \\ & 438 \end{aligned}$ |
|  |  |  |  |  | x |  | 0600/0620/0640 |  | M12 | 01B | $5839 / 7439$ 842, search | $\begin{aligned} & 7637 / 9137 / 10237 \\ & 612 \end{aligned}$ |
|  |  |  | x | x |  |  | 0600/0700 | 1/3 | E06 | 01B | $\begin{aligned} & 13960 / 16350 \\ & 139 \end{aligned}$ | $\begin{aligned} & 17470 / 20085 \\ & 702 \end{aligned}$ |
|  |  |  |  |  |  | x | 0600/0700 |  | M14 | 01A | $\begin{aligned} & 5947 / 6767 \\ & 382 \end{aligned}$ | $\begin{aligned} & 5947 / 6767 \\ & 382 \end{aligned}$ |
|  |  |  |  |  |  | X | 0630/0640 |  | S 06 S | 01A | $\begin{aligned} & 13470 / 16515 \\ & 524 \end{aligned}$ | $\begin{aligned} & 13470 / 16515 \\ & 524 \end{aligned}$ |
|  | x |  | x |  |  |  | 0645 |  | E11 | 03 | $\begin{gathered} 7840 \\ 517 / 00 \end{gathered}$ | $\begin{gathered} 7840 \\ 517 / 00 \end{gathered}$ |
| x |  | X |  | X |  | X | 0700 |  | HM0 1 | 18 | 9330 | 9330 |
|  | x |  | X |  | X |  | 0700 |  | HM01 | 18 | 13435 | 13435 |
|  |  |  |  |  |  | x | 0700 |  | M01 | 01B | $\begin{aligned} & 5465 \\ & 197 \end{aligned}$ | $\begin{gathered} 5465 \\ 197 \end{gathered}$ |
|  |  |  |  | x |  |  | 0700/0710 |  | S 06 S | 01A | $\begin{aligned} & 7150 / 8215 \\ & 169 \end{aligned}$ | $\begin{aligned} & 7150 / 8215 \\ & 169 \end{aligned}$ |
|  | x |  |  |  |  |  | 0700/0710(15) |  | S 06 S | 01A | $\begin{aligned} & 5250 / 6320 \\ & 374 \end{aligned}$ | $\begin{aligned} & 5250 / 6320 \\ & 374 \end{aligned}$ |
|  |  | x |  |  | x |  | 0700/0720/0740 |  | E07 | 01B | search | search |
|  |  |  |  | X |  |  | 0700/0720/0740 |  | M12 | 01B | $\begin{aligned} & 9138 / 10538 / 12138 \\ & 138 \end{aligned}$ | $\begin{aligned} & 9338 / 10638 / 12138 \\ & 238 \end{aligned}$ |
|  |  | x |  |  | x |  | 0700/0720/0740 |  | XPAc | 01B | 9109/10909/12209 | 11409/13509/14609 |


| $\begin{aligned} & \Sigma \\ & 0 \\ & \Sigma \end{aligned}$ | $\underset{\substack{0 \\ \underset{H}{2}}}{ }$ | $\begin{aligned} & 0 \\ & 0 \\ & 1 \\ & 3 \end{aligned}$ |  | $\begin{aligned} & \text {-H } \\ & \text { Hy } \\ & \text { Hy } \end{aligned}$ | $\begin{aligned} & + \\ & \tilde{\sigma} \\ & \sim \end{aligned}$ |  | UTC | wk | Stn | Fam | $\begin{array}{lll} \mathrm{Jan} & \\ \mathrm{kHz}, & \text { ID, } & \\ \hline \end{array}$ | $\begin{array}{lll} \mathrm{Feb} \\ \mathrm{kHz}, & \text { ID, } & \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | X |  |  | x |  |  | 0710 |  | E11 | 03 | $\begin{aligned} & 10800 \\ & 633 / 00 \end{aligned}$ | $\begin{aligned} & 10800 \\ & 633 / 00 \end{aligned}$ |
|  |  |  | $\mathbf{x}$ |  | x |  | 0710 |  | E11 | 03 | $\begin{aligned} & 12924 \\ & 491 / 00 \end{aligned}$ | $\begin{aligned} & 12924 \\ & 491 / 00 \end{aligned}$ |
|  |  |  |  | x |  | X | 0730 |  | E11 | 03 | $\begin{aligned} & 16112 \\ & 352 / 00 \end{aligned}$ | $\begin{aligned} & 16112 \\ & 352 / 00 \end{aligned}$ |
|  | x |  |  |  |  |  | 0730/0740 |  | S 065 | 01A | $\begin{aligned} & 7410 / 11532 \\ & 427 \end{aligned}$ | $\begin{aligned} & 7410 / 11532 \\ & 427 \end{aligned}$ |
|  |  |  | X |  |  |  | 0730/0750/0810 |  | M12 | 01B | 5284/ 5784/ 277, search | $\begin{aligned} & \text { 5884/ 6884/ } \\ & 888, \text { search } \end{aligned}$ |
| X |  |  |  |  |  |  | 0745 |  | E11 | 03 | $\begin{aligned} & 10213 \\ & 262 / 00 \end{aligned}$ | $\begin{aligned} & 10213 \\ & 262 / 00 \end{aligned}$ |
|  | X |  | X |  |  |  | 0745 |  | E11 | 03 | $\begin{aligned} & 16112 \\ & 335 / 00 \end{aligned}$ | $\begin{aligned} & 16112 \\ & 335 / 00 \end{aligned}$ |
| x |  |  |  |  |  |  | 0800 | 1/3 | G0 6 | 01A | $\begin{aligned} & 5320 \\ & 329 \end{aligned}$ | $\begin{aligned} & 5320 \\ & 329 \end{aligned}$ |
| X |  | X |  | X |  | x | 0800 |  | HM01 | 18 | 9065 | 9065 |
|  | X |  | X |  | X |  | 0800 |  | HM01 | 18 | 10635 | 10635 |
|  |  |  | X |  |  |  | 0800/0810 |  | E17Z | 01A | $\begin{aligned} & 11170,9820 \\ & 674 \end{aligned}$ | $\begin{aligned} & 11170,9820 \\ & 674 \end{aligned}$ |
|  | x |  |  |  |  |  | 0800/0810 |  | S06S | 01A | $\begin{aligned} & 11945 / 13195 \\ & 352 \end{aligned}$ | $\begin{aligned} & 11945 / 13195 \\ & 352 \end{aligned}$ |
| x |  | x |  |  |  |  | 0800/0820/0840 |  | M12 | 01B | $\begin{aligned} & 14736 / 13536 / 12136 \\ & 751 \end{aligned}$ | $\begin{aligned} & 17427 / 15827 / 14527 \\ & 485 \end{aligned}$ |
| X |  | X |  |  |  |  | 0800/0820/0840 |  | XPA2p | 01B | 15978/14978/14378 | 15983/14783/13883 |
|  |  |  |  |  | x |  | 0800/0900 |  | M14 | 01A | $\begin{aligned} & 5430 / 5561 \\ & 171 \end{aligned}$ | $\begin{aligned} & 5430 / 5561 \\ & 171 \end{aligned}$ |
|  |  | X |  |  |  | x | 0805 |  | E11 | 03 | $\begin{aligned} & 10429 \\ & 311 / 00 \end{aligned}$ | $\begin{aligned} & 10429 \\ & 311 / 00 \end{aligned}$ |
| x |  |  | x |  |  |  | 0820 |  | E11 | 03 | $\begin{aligned} & 10125 \\ & 438 / 00 \end{aligned}$ | $\begin{aligned} & 10125 \\ & 438 / 00 \end{aligned}$ |
|  |  | x |  |  |  |  | 0820/0830 |  | S 06 S | 01A | $\begin{aligned} & 8417 / 9262 \\ & 471 \end{aligned}$ | $\begin{array}{\|l} 8417 / 9262 \\ 471 \end{array}$ |
| X |  |  |  | x |  |  | 0830 |  | E11 | 03 | $\begin{gathered} 9446 \\ 649 / 00 \end{gathered}$ | $\begin{gathered} 9446 \\ 649 / 00 \end{gathered}$ |
| x |  |  |  |  |  |  | 0830/0840 |  | S 065 | 01A | $\begin{aligned} & 8057 / 8530 \\ & 371 \end{aligned}$ | $\begin{aligned} & 8057 / 8530 \\ & 371 \end{aligned}$ |
|  |  | x |  |  |  |  | 0830/0840 |  | S 065 | 01A | $\begin{aligned} & 7335 / 11830 \\ & 745 \end{aligned}$ | $\begin{aligned} & 7335 / 11830 \\ & 745 \end{aligned}$ |
|  |  |  | X | x |  |  | 0830/0930 |  | S 065 | 01A | $\begin{aligned} & 16227 / \\ & 842, \text { search } \end{aligned}$ | $\begin{aligned} & 17440 / 15614 \\ & 842 \end{aligned}$ |
| x |  | x |  |  |  |  | 0900 |  | E11 | 03 | $\begin{gathered} 9446 \\ 534 / 00 \end{gathered}$ | $\begin{gathered} 9446 \\ 534 / 00 \end{gathered}$ |
| X |  | X |  | X |  | x | 0900 |  | HM01 | 18 | 9240 | 9240 |
|  | X |  | X |  | X |  | 0900 |  | HM01 | 18 | 11462 | 11462 |
| x |  |  |  |  |  |  | 0900/0910 |  | S06S | 01A | $\begin{aligned} & 14675 / 12830 \\ & 872 \end{aligned}$ | $\begin{aligned} & 14675 / 12830 \\ & 872 \end{aligned}$ |
|  |  |  | x |  |  |  | 0900/0910 |  | S 065 | 01A | $\begin{aligned} & 12952 / 13565 \\ & 167 \end{aligned}$ | $\begin{aligned} & 12952 / 13565 \\ & 167 \end{aligned}$ |
|  |  |  | X |  |  |  | 0900/0910 |  | S 065 | 01A | $\begin{aligned} & 5765 / 6315 \\ & 624 \end{aligned}$ | $\begin{aligned} & 5765 / 6315 \\ & 624 \end{aligned}$ |
|  |  |  |  |  | X |  | 0900/0920/0940 |  | E07A | 01B | $\begin{aligned} & 11123 / 12123 / 13423 \\ & 114 \end{aligned}$ | $\begin{aligned} & 11053 / 12153 / 13553 \\ & 015 \end{aligned}$ |
|  | X |  |  | x |  |  | 0915 |  | S11A | 03 | $\begin{gathered} 7504 \\ 484 / 00 \\ \hline \end{gathered}$ | $\begin{gathered} 7504 \\ 484 / 00 \\ \hline \end{gathered}$ |


| $\begin{aligned} & E \\ & 0 \\ & \Sigma \end{aligned}$ | $\underset{\substack{0 \\ \underset{1}{2} \\ \hline}}{ }$ | $\begin{aligned} & 0 \\ & 0 \\ & 3 \end{aligned}$ | $\underset{\underset{y}{c}}{\underset{y}{3}}$ | $\begin{array}{\|l\|} \hline-1 \\ y \\ \text { ras } \end{array}$ | $\begin{aligned} & + \\ & \sim \\ & \sim \\ & 0 \end{aligned}$ | $\begin{array}{\|c\|} \hline \\ J \\ \sim \\ \sim \end{array}$ | UTC | wk | Stn | Fam | $\begin{array}{lll} \mathrm{Jan} & \\ \mathrm{kHz}, & \text { ID, } & \\ \hline \end{array}$ | $\begin{array}{lll} \mathrm{Feb} \\ \mathrm{kHz}, & \text { ID, ... } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | X | X |  |  |  | 0930 |  | E11 | 03 | $\begin{gathered} 9950 \\ 270 / 00 \end{gathered}$ | $\begin{gathered} 9950 \\ 270 / 00 \end{gathered}$ |
|  |  |  | X |  |  |  | 0930/0940 |  | S 06 S | 01A | $\begin{aligned} & 8812 / 9540 \\ & 314 \end{aligned}$ | $\begin{aligned} & 8812 / 9540 \\ & 314 \end{aligned}$ |
|  |  |  |  | x |  |  | 0930/0940 |  | S06S | 01A | $\begin{aligned} & 11780 / 12570 \\ & 516 \\ & 9445 / 10195 \text { search } \end{aligned}$ | $\begin{aligned} & 11780 / 12570 \\ & 516 \\ & 9445 / 10195 \text { search } \end{aligned}$ |
| x |  | x |  | x |  | x | 1000 |  | HMO 1 | 18 | 5855/9155 | 5855/ 9155 |
|  | X |  | X |  | X |  | 1000 |  | HM0 1 | 18 | 11635/12180 | 11635/12180 |
|  | x |  |  |  |  |  | 1000/1010 |  | S 06 S | 01A | $\begin{aligned} & 6440 / 5660 \\ & 893 \end{aligned}$ | $\begin{aligned} & 6440 / 5660 \\ & 893 \end{aligned}$ |
|  |  | x |  |  |  |  | $1000 / 1010$ |  | S06S | 01A | $\begin{aligned} & 12365 / 14280 \\ & 729 \end{aligned}$ | $\begin{aligned} & 12365 / 14280 \\ & 729 \end{aligned}$ |
|  |  |  | x |  |  | X | 1010/1030/1050 |  | M12 | 01B | $\begin{aligned} & 13369 / 14669 / 15969 \\ & 369 \end{aligned}$ | $\begin{aligned} & 13569 / 14869 / 16269 \\ & 582 \end{aligned}$ |
| X |  |  | X |  |  |  | 1015 |  | S11A | 03 | $\begin{aligned} & 12530 \\ & 475 / 00 \end{aligned}$ | $\begin{aligned} & 12530 \\ & 475 / 00 \end{aligned}$ |
|  | x |  |  | x |  |  | 1020 |  | S11A | 03 | $\begin{gathered} 9610 \\ 426 / 00 \end{gathered}$ | $\begin{gathered} 9610 \\ 426 / 00 \end{gathered}$ |
|  | x |  |  |  |  |  | 1045 |  | E11 | 03 | $\begin{aligned} & 12153 \\ & 576 / 00 \end{aligned}$ | $\begin{aligned} & 12153 \\ & 576 / 00 \end{aligned}$ |
|  | x |  |  |  |  |  | 1100/1110 |  | S06S | 01A | $\begin{aligned} & 5035 / 5975 \\ & 754 \end{aligned}$ | $\begin{aligned} & 5035 / 5975 \\ & 754 \end{aligned}$ |
| X |  |  |  |  |  |  | 1100/1120/1140 |  | M12 | 01B | $\begin{aligned} & 12205 / 13559 / 14728 \\ & 973, \text { check } \end{aligned}$ | $\begin{aligned} & 12205 / 13559 / 14728 \\ & 973 \end{aligned}$ |
|  |  | x |  |  |  |  | 1200 | ? | G06 | 01A | $\begin{gathered} 4946 \\ 248 \end{gathered}$ | $\begin{gathered} 4946 \\ 248 \end{gathered}$ |
|  |  |  | X |  |  |  | 1200/1210 |  | S 065 | 01A | $\begin{aligned} & 12155 / 10920 \\ & 425 \end{aligned}$ | $\begin{aligned} & 12155 / 10920 \\ & 425 \end{aligned}$ |
|  |  |  |  |  | X |  | 1200/1210 |  | S 065 | 01A | $\begin{aligned} & 8680 / 8260 \\ & 254 \end{aligned}$ | $\begin{aligned} & 8680 / 8260 \\ & 254 \end{aligned}$ |
|  | X | X |  |  |  |  | 1205 |  | E11 | 03 | $\begin{aligned} & 11100 \\ & 469 / 00 \end{aligned}$ | $\begin{aligned} & 11100 \\ & 469 / 00 \end{aligned}$ |
|  | X | x |  |  |  |  | 1300 |  | E11 | 03 | $\begin{aligned} & 18030 \\ & 133 / 00 \end{aligned}$ | $\begin{aligned} & 18030 \\ & 133 / 00 \end{aligned}$ |
|  |  | x |  |  |  |  | 1300 | ? | G06 | 01A | $\begin{aligned} & 4051 \\ & 248 \end{aligned}$ | $\begin{gathered} 4051 \\ 248 \end{gathered}$ |
|  |  |  | X |  |  |  | 1300 |  | G0 6 | 01A | $\begin{aligned} & 4460 \\ & 329 \end{aligned}$ | $\begin{aligned} & 4460 \\ & 329 \end{aligned}$ |
| x |  |  |  |  |  |  | 1300/1310 |  | S 06 S | 01A | $\begin{aligned} & 8420 / 10635 \\ & 831 \end{aligned}$ | $\begin{aligned} & 8420 / 10635 \\ & 831 \end{aligned}$ |
|  |  |  |  |  | x |  | 1300/1310/1320 |  | M42C | 01C | 10526/16142/14674 | 19441/17456/15817 |
|  | x |  |  |  |  | x | 1300/1320/1340 |  | XPA2m | 01B | 16138/14438/13438 |  |
|  |  |  | X |  | X |  | 1310/1330/1350 |  | M12 | 01B | $\begin{aligned} & 7692 / 6792 / \\ & 678, \text { search } \end{aligned}$ | $\begin{aligned} & 9162 / 8062 / 7462 \\ & 104 \end{aligned}$ |
| X |  | x |  |  |  |  | 1320 |  | M03 | 03 | $\begin{gathered} 4505 \\ 543 / 00 \end{gathered}$ | $\begin{gathered} 4505 \\ 543 / 00 \end{gathered}$ |
|  |  |  | X |  |  | X | 1320 |  | M03 | 03 | 4828 $4505 ?$ <br> $437 / 00$  | 4828 $\mathbf{4 5 0 5}$ ? <br> $437 / 00$  |
|  | $\mathbf{x}$ |  |  |  |  |  | 1345 |  | E11 | 03 | $\begin{aligned} & 14666 \\ & 911 / 00 \end{aligned}$ | $\begin{aligned} & 14666 \\ & 911 / 00 \end{aligned}$ |
|  |  |  |  | X | X |  | 1400/1420/1440 |  | XPA2r | 01B | 16167/14664/13924 | 18667/17419/16212 |
|  |  |  |  |  | X |  | 1500 |  | M01 | 14 | $\begin{gathered} 5810 \\ 197 \end{gathered}$ | $\begin{aligned} & 5810 \\ & 197 \end{aligned}$ |



| $\begin{aligned} & \square \\ & 0 \\ & \Sigma \\ & \hline \end{aligned}$ | $\begin{array}{\|c\|} \hline 0 \\ \underset{H}{2} \end{array}$ | $\begin{aligned} & 0 \\ & 0 \\ & 3 \end{aligned}$ | $$ | $\begin{array}{\|l\|} -H \\ \text { H } \\ \text { H } \end{array}$ | $\begin{aligned} & 4 \\ & \pi \\ & \sigma \\ & 0 \end{aligned}$ |  | UTC | wk | Stn | Fam | $\begin{array}{ll} \mathrm{Jan} & \\ \mathrm{kHz}, \quad \text { ID, ... } \end{array}$ | $\begin{array}{lll} \mathrm{Feb} \\ \mathrm{kHz}, & \text { ID, } . . . \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | x |  | x |  |  |  | 1925 |  | E11 | 03 | 551/00, search | 551/00, search |
|  |  |  |  | x |  |  | 1930 | 2 / 4 | G06 | 01A | $\begin{gathered} 4792 \\ 436 \end{gathered}$ | $\begin{gathered} 4792 \\ 436 \end{gathered}$ |
|  | x |  |  |  |  |  | 1930/1950/2010 |  | M12 | 01B | $\begin{aligned} & 10343 / 9264 / 8116 \\ & 124 \end{aligned}$ | $\begin{aligned} & 10343 / 9264 / 8116 \\ & 124 \end{aligned}$ |
|  |  | x |  |  |  |  | 1930/1950/2010 |  | M12 | 01B | $\begin{aligned} & 11435 / 10598 / 9327 \\ & 938 \end{aligned}$ | $\begin{aligned} & 11435 / 10598 / 9327 \\ & 938 \end{aligned}$ |
|  |  | x |  | x |  |  | 1955 |  | S11A | 03 | $\begin{gathered} 5815 \\ 371 / 00 \end{gathered}$ | $\begin{gathered} 5815 \\ 371 / 00 \end{gathered}$ |
|  |  |  |  | x |  |  | 2000 |  | E11 | 03 | $\begin{gathered} 6304 \\ 576 / 00 \end{gathered}$ | $\begin{gathered} 6304 \\ 576 / 00 \end{gathered}$ |
|  | x |  | x |  |  |  | 2000 |  | M01 | 14 | $\begin{gathered} 4490 \\ 197 \end{gathered}$ | $\begin{gathered} 4490 \\ 197 \end{gathered}$ |
|  |  |  | x |  |  |  | 2000/2010/2020 |  | M42C | 01C | 5793/4538/3827 | 6796/5205/ 4030 |
| x |  | x |  |  |  |  | 2000/2020/2040 |  | E07 | 01B | $\begin{aligned} & \text { 6982/ 5882/ } 5182 \\ & 988 \end{aligned}$ | $\begin{aligned} & 7724 / 6924 / 5824 \\ & 798 \end{aligned}$ |
| x | x | x | x | x | x | x | 2000/2020/2040 |  | M12 | 01B | $\begin{aligned} & 8047 / 6802 / 5788 \\ & 463 \end{aligned}$ | $\begin{aligned} & 8047 / 6802 / 5788 \\ & 463 \end{aligned}$ |
|  | x |  |  |  |  | x | 2000/2020/2040 |  | XPA2m | 01B |  |  |
|  |  |  |  |  | x |  | 2000/2100 | 1/3 | S06 | 01A | $\begin{aligned} & 4047 / 3522 \\ & 738 \end{aligned}$ | $\begin{aligned} & 4047 / 3522 \\ & 738 \end{aligned}$ |
|  |  |  |  | x |  |  | 2002 |  | M01B | 14 | $\begin{aligned} & 2653,3197 \\ & 866 \end{aligned}$ | $\begin{aligned} & 2653,3197 \\ & 866 \end{aligned}$ |
|  |  |  |  |  | x | x | 2005 |  | E11 | 03 | $\begin{aligned} & 11107 \\ & 363 / 00 \end{aligned}$ | $\begin{aligned} & 11107 \\ & 363 / 00 \end{aligned}$ |
| x |  |  |  |  |  |  | 2015 |  | M01B | 14 | $\begin{aligned} & 2427,3205 \\ & 375 \end{aligned}$ | $\begin{aligned} & 2427,3205 \\ & 375 \end{aligned}$ |
|  |  |  | x |  |  |  | 2030 | 1/3 | E06 | 01A | $\begin{aligned} & 4836 \\ & 321 \end{aligned}$ | $\begin{aligned} & 4836 \\ & 321 \end{aligned}$ |
|  |  |  | x |  |  |  | 2042 |  | M01B | 14 | $\begin{aligned} & 2485,3160 \\ & 382 \end{aligned}$ | $\begin{aligned} & 2485,3160 \\ & 382 \end{aligned}$ |
| x |  | x |  | x |  | x | 2100 |  | HM0 1 | 18 | 11635 | 11635 |
|  | x |  | x |  | x |  | 2100 |  | HM0 1 | 18 | 16180 | 16180 |
|  |  | x |  |  |  |  | 2100/2120/2140 |  | E07A | 01A | $\begin{aligned} & 5877 / 5277 / 4577 \\ & 825 \end{aligned}$ | $\begin{aligned} & 5877 / 5277 / 4577 \\ & 825 \end{aligned}$ |
|  |  |  |  | x |  |  | 2110 |  | M01B | 14 | $\begin{aligned} & 2405,3180 \\ & 610 \end{aligned}$ | $\begin{aligned} & 2405,3180 \\ & 610 \end{aligned}$ |
|  |  |  | x |  |  |  | 2110/2130/2150 |  | E07 | 01B | $\begin{aligned} & 6777 / 5449 / 4483 \\ & 774 \end{aligned}$ | $\begin{aligned} & 6777 / 5449 / 4483 \\ & 774 \end{aligned}$ |
|  |  |  |  | x |  |  | 2130 | 1/3 | E06 | 01A | $\begin{aligned} & 4760 \\ & 472 \end{aligned}$ | $\begin{aligned} & 4760 \\ & 472 \end{aligned}$ |
| x |  | x |  | x |  | x | 2200 |  | HM0 1 | 18 | 10715 | 10715 |
|  | x |  | x |  | x |  | 2200 |  | HM0 1 | 18 | 17480 | 17480 |
|  |  | x |  |  |  |  | 2200/2220/2240 |  | M12 | 01B | $\begin{aligned} & 5361 / 4461 / \\ & 340, \text { search } \end{aligned}$ | $\begin{aligned} & 5429 / 4629 / 4029 \\ & 460 \end{aligned}$ |
| x |  | x |  | x |  | x | 2300 |  | HM01 | 18 | 11530 | 11530 |
|  | x |  | x |  | x |  | 2300 |  | HM01 | 18 | 17540 | 17540 |

## M01 FREQUENCY LIST

## Frequencies may vary by a few $\mathbf{k H z}$

JAN FEB NOV DEC M01/1 197

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

MAR APRIL SEPT OCT
M01/2
463

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

MAY JUNE JULY AUG M01/3 025

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


| ime UTC |  |  | Freq kHz |  |  | ID | M | T | W | T | F | S | S |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jan |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0530 | 0550 | 0610 | 4457 | 5157 | --- | 417 | X |  |  |  |  |  |  |
| 0600 | 0620 | 0640 | 5838 | 7438 | --- | 842 |  |  |  |  |  | X |  |
| 0730 | 0750 | 0810 | 5284 | 5784 | -- | 277 |  |  |  | X |  |  |  |
| 1010 | 1030 | 1050 | 13369 | 14669 | 15964 | 369 |  |  |  | X |  |  | X |
| 1900 | 1920 | 1940 | 9176 | 7931 | 6904 | 257 | X |  |  | X |  |  |  |
| 2200 | 2220 | 2240 | 5361 | 4461 | 4061 | 340 |  |  | X |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Feb |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0530 | 0550 | 0610 | 4617 | 5317 | --- | 638 | X |  |  |  |  |  |  |
| 0600 | 0620 | 0640 | 7637 | 9137 | 10237 | 612 |  |  |  |  |  | X |  |
| 0730 | 0750 | 0810 | 5884 | 6884 | --- | 888 |  |  |  | X |  |  |  |
| 1010 | 1030 | 1050 | 13569 | 14869 | 16269 | 582 |  |  |  | X |  |  | X |
| 1310 | 1330 | 1350 | 9162 | 8062 | --- | 104 |  |  |  | X |  | X |  |
| 1800 | 1820 | 1840 | 10343 | 9264 | 8116 | 124 |  |  |  | X |  |  |  |
| 1900 | 1920 | 1940 | 9176 | 7931 | 6904 | 257 | X |  |  | X |  |  |  |
| 2200 | 2220 | 2240 | 5429 | 4629 | 4029 | 460 |  |  | X |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mar |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0530 | 0550 | 0610 | 5792 | 6992 | -- | 796 | X |  |  |  |  |  |  |
| 0600 | 0620 | 0640 | 8158 | 9258 | 10658 | 126 |  |  |  |  |  | X |  |
| 0730 | 0750 | 0810 | 6784 | 7684 | 8184 | 761 |  |  |  | X |  |  |  |
| 1010 | 1030 | 1050 | 14769 | 16269 | 18169 | 721 |  |  |  | X |  |  | X |
| 1310 | 1330 | 1350 | 12214 | 10814 | 9214 | 282 |  |  |  | X |  | X |  |
| 1800 | 1820 | 1840 | 10343 | 9264 | 8116 | 124 |  |  |  | X |  |  |  |
| 1900 | 1920 | 1940 | 9176 | 7931 | 6904 | 257 | X |  |  | X |  |  |  |
| 2200 | 2220 | 2240 | 5763 | 5163 | 4463 | 714 |  |  | X |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| Time UTC |  |  | Freq kHz |  |  | ID | M | T | W | T | F | S | S |
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| Apr |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0430 | 0450 | 0510 | 5792 | 6992 | --- | 796 | X |  |  |  |  |  |  |
| 0630 | 0650 | 0710 | 7484 | 8084 | --- | 402 |  |  |  | X |  |  |  |
| 1310 | 1330 | 1350 | 14468 | 13568 | 12178 | 451 |  |  |  | X |  | X |  |
| 1800 | 1820 | 1840 | 10343 | 9264 | 8116 | 124 |  |  |  | X |  |  |  |
| 1900 | 1920 | 1940 | 9176 | 7931 | 6904 | 257 | X |  |  |  |  |  |  |
| 2100 | 2120 | 2140 | 6793 | 5893 | 4593 | 785 |  |  | X |  |  |  |  |
| 2110 | 2130 | 2150 | 11469 | 10469 | 9169 | 441 |  |  | X |  |  | X |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| May |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0430 | 0450 | 0510 | 6857 | 7557 | --- | 850 | X |  |  |  |  |  |  |
| 0630 | 0650 | 0710 | 7984 | 9184 | --- | 911 |  |  |  | X |  |  |  |
| 1310 | 1330 | 1350 | 13926 | 12126 | 10926 | 919 |  |  |  | X |  | X |  |
| 1800 | 1820 | 1840 | 10343 | 9264 | 8116 | 124 |  |  |  | X |  |  |  |
| 1900 | 1920 | 1940 | 9176 | 7931 | 6904 | 257 | X |  |  |  |  |  |  |
| 2100 | 2120 | 2140 | 9241 | 7541 | 6841 | 258 |  |  | X |  |  |  |  |
| 2110 | 2130 | 2150 | 14869 | 13569 | 12179 | 851 |  |  | X |  |  | X |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Jun |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0430 | 0450 | 0510 | 6857 | 7557 | --- | 850 | X |  |  |  |  |  |  |
| 0630 | 0650 | 0710 | 7984 | 9184 | -- | 911 |  |  |  | X |  |  |  |
| 1310 | 1330 | 1350 | 13873 | 13373 | 11473 | 834 |  |  |  | X |  | X |  |
| 1800 | 1820 | 1840 | 10343 | 9264 | 8116 | 124 |  |  |  | X |  |  |  |
| 1900 | 1920 | 1940 | 9176 | 7931 | 6904 | 257 | X |  |  |  |  |  |  |
| 2100 | 2120 | 2140 | 9986 | 9086 | 7386 | 903 |  |  | X |  |  |  |  |
| 2110 | 2130 | 2150 | 16269 | 14669 | 13369 | 263 |  |  | X |  |  | X |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| Time UTC |  |  | Freq $\mathbf{k H z}$ |  |  | ID | M | T | W | T | F | S | S |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| July |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0430 | 0450 | 0510 | 6857 | 7557 | -- - | 850 | X |  |  |  |  |  |  |
| 0630 | 0650 | 0710 | 7984 | 9184 | --- | 911 |  |  |  | X |  |  |  |
| 1310 | 1330 | 1350 | 13926 | 12126 | 10926 | 919 |  |  |  | X |  | X |  |
| 1800 | 1820 | 1840 | 10343 | 9264 | 8116 | 124 |  |  |  | X |  |  |  |
| 1900 | 1920 | 1940 | 9176 | 7931 | 6904 | 257 | X |  |  |  |  |  |  |
| 2100 | 2120 | 2140 | 9379 | 7979 | 6879 | 398 |  |  | X |  |  |  |  |
| 2110 | 2130 | 2150 | 14869 | 13569 | 12179 | 851 |  |  | X |  |  | X |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Aug |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0430 | 0450 | 0510 | 5792 | 6992 | --- | 796 | X |  |  |  |  |  |  |
| 0630 | 0650 | 0710 | 7484 | 8184 | --- | 402 |  |  |  | X |  |  |  |
| 1310 | 1330 | 1350 | 14468 | 13568 | 12178 | 451 |  |  |  | X |  | X |  |
| 1800 | 1820 | 1840 | 10343 | 9264 | 8116 | 124 |  |  |  | X |  |  |  |
| 1900 | 1920 | 1940 | 9176 | 7931 | 6904 | 257 | X |  |  |  |  |  |  |
| 2100 | 2120 | 2140 | 8123 | 6923 | 5823 | 198 |  |  | X |  |  |  |  |
| 2110 | 2130 | 2150 | 13369 | 12179 | 10469 | 314 |  |  | X |  |  | X |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0430 | 0450 | 0510 | 5792 | 6992 | --- | 796 | X |  |  |  |  |  |  |
| 0630 | 0650 | 0710 | 6784 | 7684 | 8184 | 761 |  |  |  | X |  |  |  |
| 1310 | 1330 | 1350 | 13873 | 13373 | 11473 | 834 |  |  |  | X |  | X |  |
| 1800 | 1820 | 1840 | 10343 | 9264 | 8116 | 124 |  |  |  | X |  |  |  |
| 1900 | 1920 | 1940 | 9176 | 7931 | 6904 | 257 | X |  |  |  |  |  |  |
| 2100 | 2120 | 2140 | 6793 | 5893 | 4593 | 785 |  |  | X |  |  |  |  |
| 2110 | 2130 | 2150 | 11469 | 10469 | 9169 | 441 |  |  | X |  |  | X |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Repeat schedules were severely reduced from November 2014 by changes to many of the regular schedules. Around $50 \%$ of the regular schedules, unchanged for a number of years were retimed to appear one hour later.

This affected the yearly repeats for most of the year, but since November many more scheds are starting to fall back into the repeat pattern, as can be seen by the table above.

| Time UTC |  |  | Freq $\mathbf{k H z}$ |  |  | ID | M | T | W | T | F | S | S |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Oct |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0430 | 0450 | 0510 | 4617 | 5317 | --- | 638 | X |  |  |  |  |  |  |
| 0630 | 0650 | 0710 | 6784 | 7684 | 8184 | 761 |  |  |  | X |  |  |  |
| 1310 | 1330 | 1350 | 12214 | 10814 | 9214 | 282 |  |  |  | X |  | X |  |
| 2100 | 2120 | 2140 | 5814 | 5214 | 4614 | 826 |  |  | X |  |  |  |  |
| 2110 | 2130 | 2150 | 10269 | 9269 | 7969 | 229 |  |  | X |  |  | X |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Nov |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0530 | 0550 | 0610 | 4617 | 5317 | -- | 638 | X |  |  |  |  |  |  |
| 0600 | 0620 | 0640 | 7637 | 9137 | 10237 | 612 |  |  |  |  |  | X |  |
| 0730 | 0750 | 0810 | 5884 | 6884 | --- | 888 |  |  |  | X |  |  |  |
| 1010 | 1030 | 1050 | 15969 | 17479 | 18169 | 941 |  |  |  | X |  |  |  |
| 1310 | 1330 | 1350 | 9162 | 8062 | --- | 104 |  |  |  | X |  | X |  |
| 1800 | 1820 | 1840 | 8047 | 6802 | 5788 | 463 | X |  |  |  |  |  |  |
| 1800 | 1820 | 1840 | 10343 | 9264 | 8116 | 124 |  |  |  | X |  |  |  |
| 1900 | 1920 | 1940 | 9176 | 7931 | 6904 | 257 | X |  |  |  |  |  |  |
| 1930 | 1950 | 2010 | 10343 | 9264 | 8116 | 124 |  | X |  |  |  |  |  |
| 1930 | 1950 | 2010 | 11435 | 10598 | 9327 | 938 |  |  | X |  |  |  |  |
| 2200 | 2220 | 2240 | 5429 | 4629 | 4029 | 460 |  |  | X |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Dec |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0530 | 0550 | 0610 | 4457 | 5157 | --- | 417 | X |  |  |  |  |  |  |
| 0600 | 0620 | 0640 | 5784 | 7584 | 9184 | 751 |  |  |  |  |  | X |  |
| 0730 | 0750 | 0810 | 5284 | 5784 | 6784 | 277 |  |  |  | X |  |  |  |
| 1010 | 1030 | 1050 | 13569 | 14869 | 16269 | 582 |  |  |  | X |  |  | X |
| 1310 | 1330 | 1350 | 7741 | 6841 | 5741 | 787 |  |  |  |  |  | X |  |
| 1800 | 1820 | 1840 | 8047 | 6802 | 5788 | 463 | X |  |  |  |  |  |  |
| 1800 | 1820 | 1840 | 9176 | 7931 | 6904 | 257 |  |  | X |  |  |  |  |
| 1800 | 1820 | 1840 | 10343 | 9264 | 8116 | 124 |  |  |  | X |  |  |  |
| 1900 | 1920 | 1940 | 9176 | 7931 | 6904 | 257 | X |  |  |  |  |  |  |
| 1930 | 1950 | 2010 | 10343 | 9264 | 8116 | 124 |  | X |  |  |  |  |  |
| 2200 | 2220 | 2240 | 5312 | 4512 | 4012 | 350 |  |  | X |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |


| $\begin{array}{\|l\|} \hline 5 \\ \vdots \\ \hline \end{array}$ | $\begin{array}{\|l\|l\|} \hline 0 \\ \underset{\mu}{3} \\ \hline \end{array}$ | $\begin{array}{\|c\|} 0 \\ 0 \\ 3 \\ \hline \end{array}$ | $\begin{array}{l\|l} \hline \text { 号 } \\ \hline \end{array}$ |  | $\begin{array}{\|l\|} \hline 5 \\ \vdots \\ 0 \\ \hline \end{array}$ | UTC | wk | Stn | Fam | $\begin{array}{llll} \mathrm{Jan} & & \\ \mathrm{kHz}, & \text { ID, } \ldots \\ \hline \end{array}$ | $\begin{array}{\|lll\|} \hline \text { Feb } & & \\ \mathrm{kHz}, & \text { ID, } & \ldots \\ \hline \end{array}$ | $\begin{array}{\|llll} \hline \text { Nov } & & \\ \text { kHz, } & \text { ID, } & \ldots \\ \hline \end{array}$ | $\begin{array}{\|llll} \hline \text { Dec } & & \\ \text { kHz, } & \text { ID, } & \ldots \\ \hline \end{array}$ | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | x | x |  |  | 0315 |  | E11 | 03 | $\begin{gathered} 5779 \\ 253 / 00 \end{gathered}$ | $\begin{gathered} 5779 \\ 253 / 00 \end{gathered}$ | $\begin{gathered} 5779 \\ 253 / 00 \end{gathered}$ | $\begin{gathered} 5779 \\ 253 / 00 \end{gathered}$ | since 01/14, last $\log 12 / 15$ |
| x |  |  |  |  |  | 0450 |  | E11 | 03 | 5082 $416 / 00$ | $\begin{array}{\|c\|} \hline 5082 \\ 416 / 00 \\ \hline \end{array}$ | 5082 $416 / 00$ | 5082 $416 / 00$ | since 02/10, last log 12/15 <br> 2nd transmission Thu $1730 z$ |
|  | x |  |  | x |  | 0455 |  | S11A | 03 | 4828 $321 / 00$ | $\begin{gathered} 4828 \\ 321 / 00 \end{gathered}$ | $\begin{gathered} 4828 \\ 321 / 00 \end{gathered}$ | $\begin{gathered} 4828 \\ 321 / 00 \end{gathered}$ | since 09/14, last $\log 12 / 15$ |
|  |  | x |  | x |  | 0545 |  | E11 | 03 |  |  |  |  | since 06/11, last $\log 09 / 15$ |
| $\mathbf{x}$ |  |  |  | x |  | 0600/0610 |  | E11A | 03 | $\begin{array}{\|l\|} \hline 13046 \\ 181 / 00 \\ \hline \end{array}$ | $\begin{aligned} & 13046 \\ & 181 / 00 \end{aligned}$ | $\begin{aligned} & 13046 \\ & 181 / 00 \end{aligned}$ | $\begin{aligned} & \hline 13046 \\ & 181 / 00 \\ & \hline \end{aligned}$ | since 07/15, last $\log 12 / 15$ |
|  | x |  | x |  |  | 0645 |  | E11 | 03 | $\begin{gathered} 7840 \\ 517 / 00 \\ \hline \end{gathered}$ | $\begin{gathered} 7840 \\ 517 / 00 \end{gathered}$ | $\begin{gathered} 7840 \\ 517 / 00 \end{gathered}$ | $\begin{gathered} 7840 \\ 517 / 00 \end{gathered}$ | since 07/09, last log 12/15 |
|  | x |  |  | x |  | 0710 |  | E11 | 03 | $\begin{aligned} & 10800 \\ & 633 / 00 \end{aligned}$ | $\begin{aligned} & 10800 \\ & 633 / 00 \\ & \hline \end{aligned}$ | $\begin{aligned} & 10800 \\ & 633 / 00 \\ & \hline \end{aligned}$ | $\begin{aligned} & 10800 \\ & 633 / 00 \\ & \hline \end{aligned}$ | since 02/11, last $\log 12 / 15$ |
|  |  |  | x | x |  | 0710 |  | E11 | 03 | $\begin{aligned} & 12924 \\ & 491 / 00 \end{aligned}$ | $\begin{aligned} & \mathbf{1 2 9 2 4} \\ & 491 / 00 \end{aligned}$ | $\begin{aligned} & \mathbf{1 2 9 2 4} \\ & 491 / 00 \end{aligned}$ | $\begin{aligned} & \mathbf{1 2 9 2 4} \\ & 491 / 00 \end{aligned}$ | since 07/15, last $\log 11 / 15$ |
|  |  |  |  | x | x | 0730 |  | E11 | 03 | $\begin{aligned} & 16112 \\ & 352 / 00 \end{aligned}$ | $\begin{aligned} & 16112 \\ & 352 / 00 \end{aligned}$ | $\begin{aligned} & 16112 \\ & 352 / 00 \end{aligned}$ | $\begin{aligned} & 16112 \\ & 352 / 00 \end{aligned}$ | since 04/15, last $\log 12 / 15$ |
| x |  |  |  |  |  | 0745 |  | E11 | 03 | $\begin{aligned} & 10213 \\ & 262 / 00 \end{aligned}$ | $\begin{aligned} & 10213 \\ & 262 / 00 \end{aligned}$ | $\begin{aligned} & 10213 \\ & 262 / 00 \end{aligned}$ | $\begin{aligned} & 10213 \\ & 262 / 00 \end{aligned}$ | since 03/14, last $\log 12 / 15$ <br> 2nd transmission Thu $1530 z$ |
|  | x |  | x |  |  | 0745 |  | E11 | 03 | $\begin{aligned} & 16112 \\ & 335 / 00 \end{aligned}$ | $\begin{aligned} & 16112 \\ & 335 / 00 \end{aligned}$ | $\begin{aligned} & 16112 \\ & 335 / 00 \end{aligned}$ | $\begin{aligned} & 16112 \\ & 335 / 00 \end{aligned}$ | since 10/11, last $\log 12 / 15$ |
|  |  | x |  |  | x | 0805 |  | E11 | 03 | $\begin{aligned} & 10429 \\ & 311 / 00 \end{aligned}$ | $\begin{aligned} & 10429 \\ & 311 / 00 \end{aligned}$ | $\begin{aligned} & 10429 \\ & 311 / 00 \end{aligned}$ | $\begin{aligned} & 10429 \\ & 311 / 00 \end{aligned}$ | since 07/14, last $\log 12 / 15$ |
| x |  |  | x |  |  | 0820 |  | E11 | 03 | $\begin{aligned} & 10125 \\ & 438 / 00 \end{aligned}$ | $\begin{aligned} & 10125 \\ & 438 / 00 \end{aligned}$ | $\begin{aligned} & 10125 \\ & 438 / 00 \end{aligned}$ | $\begin{aligned} & 10125 \\ & 438 / 00 \end{aligned}$ | since 10/09, last $\log 12 / 15$ |
| x |  |  |  | x |  | 0830 |  | E11 | 03 | $\begin{gathered} 9446 \\ 649 / 00 \end{gathered}$ | $\begin{gathered} 9446 \\ 649 / 00 \end{gathered}$ | $\begin{gathered} 9446 \\ 649 / 00 \end{gathered}$ | $\begin{gathered} 9446 \\ 649 / 00 \end{gathered}$ | since 01/10, last $\log 12 / 15$ |
| x |  | x |  |  |  | 0900 |  | E11 | 03 | $\begin{gathered} 9446 \\ 534 / 00 \end{gathered}$ | $\begin{gathered} 9446 \\ 534 / 00 \end{gathered}$ | $\begin{gathered} 9446 \\ 534 / 00 \end{gathered}$ | 9446 $534 / 00$ | since 10/05, last $\log 12 / 15$ |
|  | x |  |  | x |  | 0915 |  | S11A | 03 | $\begin{gathered} 7504 \\ 484 / 00 \end{gathered}$ | $\begin{gathered} 7504 \\ 484 / 00 \end{gathered}$ | $\begin{gathered} 7504 \\ 484 / 00 \\ \hline \end{gathered}$ | $\begin{gathered} 7504 \\ 484 / 00 \end{gathered}$ | since 01/10, last $\log 12 / 15$ |
|  |  | x | x |  |  | 0930 |  | E11 | 03 | $\begin{gathered} 9950 \\ 270 / 00 \end{gathered}$ | $\begin{gathered} 9950 \\ 270 / 00 \end{gathered}$ | $\begin{gathered} 9950 \\ 270 / 00 \end{gathered}$ | $\begin{gathered} 9950 \\ 270 / 00 \end{gathered}$ | since 02/14, last $\log 12 / 15$ |
| x |  |  | x |  |  | 1015 |  | S11A | 03 | $\begin{aligned} & 12530 \\ & 475 / 00 \\ & \hline \end{aligned}$ | $\begin{aligned} & 12530 \\ & 475 / 00 \end{aligned}$ | $\begin{aligned} & 12530 \\ & 475 / 00 \end{aligned}$ | $\begin{aligned} & 12530 \\ & 475 / 00 \end{aligned}$ | since 04/10, last $\log 12 / 15$ |
|  | x |  |  | x |  | 1020 |  | S11A | 03 | 9610 $426 / 00$ | $\begin{gathered} 9610 \\ 426 / 00 \end{gathered}$ | $\begin{gathered} 9610 \\ 426 / 00 \end{gathered}$ | 9610 $426 / 00$ | since $02 / 10$, last $\log 12 / 15$ 2nd transmission Thu 1730 z |
|  | x |  |  |  |  | 1045 |  | E11 | 03 | $\begin{aligned} & 12153 \\ & 576 / 00 \end{aligned}$ | $\begin{aligned} & 12153 \\ & 576 / 00 \end{aligned}$ | $\begin{aligned} & 12153 \\ & 576 / 00 \end{aligned}$ | $\begin{aligned} & 12153 \\ & 576 / 00 \end{aligned}$ | since 01/12, last log 12/15 <br> 2nd transmission Fri 2000 z |
|  | x | x |  |  |  | 1205 |  | E11 | 03 | $\begin{aligned} & 11100 \\ & 469 / 00 \\ & \hline \end{aligned}$ | $\begin{aligned} & 11100 \\ & 469 / 00 \end{aligned}$ | $\begin{aligned} & 11100 \\ & 469 / 00 \end{aligned}$ | $\begin{aligned} & \hline 11100 \\ & 469 / 00 \\ & \hline \end{aligned}$ | since 03/10, last $\log 12 / 15$ |
|  | x | x |  |  |  | 1300 |  | E11 | 03 | $\begin{aligned} & 18030 \\ & 133 / 00 \end{aligned}$ | $\begin{aligned} & 18030 \\ & 133 / 00 \end{aligned}$ | $\begin{aligned} & 18030 \\ & 133 / 00 \end{aligned}$ | $\begin{aligned} & 18030 \\ & 133 / 00 \end{aligned}$ | since 08/13, last $\log 12 / 15$ |
| x |  | x |  |  |  | 1320 |  | M03 | 03 | $\begin{gathered} 4505 \\ 543 / 00 \\ \hline \end{gathered}$ | $\begin{gathered} 4505 \\ 543 / 00 \end{gathered}$ | $\begin{gathered} 4505 \\ 543 / 00 \\ \hline \end{gathered}$ | 4505 $543 / 00$ | since 08/13, last $\log 12 / 15$ |
|  |  |  | x |  | x | 1320 |  | M03 | 03 | 4828 $\mathbf{4 5 0 5}$ <br> $437 / 00$  | 4828 $\mathbf{4 5 0 5}$ ? <br> $437 / 00$  | $\begin{gathered} 4828 \\ 437 / 00 \end{gathered}$ | 4828 $437 / 00$$\quad 4505 ?$ | since 02/11, last $\log 11 / 15$ |
|  | x |  |  |  |  | 1345 |  | E11 | 03 | $\begin{aligned} & 14666 \\ & 911 / 00 \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 14666 \\ & 911 / 00 \end{aligned}$ | $\begin{aligned} & 14666 \\ & 911 / 00 \end{aligned}$ | $\begin{aligned} & 14666 \\ & 911 / 00 \end{aligned}$ | since 10/15, last $\log 12 / 15$ |
|  |  |  | x |  |  | 1530 |  | E11 | 03 | $\begin{gathered} 5409 \\ 262 / 00 \end{gathered}$ | $\begin{gathered} 5409 \\ 262 / 00 \end{gathered}$ | $\begin{gathered} 5409 \\ 262 / 00 \end{gathered}$ | $\begin{gathered} 5409 \\ 262 / 00 \end{gathered}$ | since 06/14, last $\log 12 / 15$ <br> 2nd transmission Mon $0745 z$ |
| x |  |  |  |  | x | 1540 |  | E11 | 03 | $\begin{aligned} & 15632 \\ & 228 / 00 \end{aligned}$ | $\begin{aligned} & 15632 \\ & 228 / 00 \end{aligned}$ | $\begin{aligned} & 15632 \\ & 228 / 00 \end{aligned}$ | $\begin{aligned} & 15632 \\ & 228 / 00 \end{aligned}$ | since 03/11, last $\log 11 / 15$ |
|  |  | x |  |  | $x$ | 1625 |  | E11 | 03 | $\begin{array}{\|l\|} \hline 10448 \\ 978 / 00, \text { check } \\ \hline \end{array}$ | $\begin{aligned} & 10448 \\ & 978 / 00 \end{aligned}$ | $\begin{aligned} & 10448 \\ & 978 / 00 \end{aligned}$ | $\begin{aligned} & 10448 \\ & 978 / 00 \\ & \hline \end{aligned}$ | since 02/15, last $\log 12 / 15$ |
|  |  | x |  | x |  | 1705 |  | E11 | 03 | $\begin{gathered} 9443 \\ 392 / 00 \end{gathered}$ | $\begin{gathered} 9443 \\ 392 / 00 \end{gathered}$ | $\begin{gathered} 9443 \\ 392 / 00 \end{gathered}$ | $\begin{gathered} 9443 \\ 392 / 00 \\ \hline \end{gathered}$ | since 02/14, last $\log 12 / 15$ |
|  |  |  | x |  |  | 1730 |  | E11 | 03 | 5082 $416 / 00$ | $\begin{gathered} \hline 5082 \\ 416 / 00 \\ \hline \end{gathered}$ | 5082 $416 / 00$ | 5082 $416 / 00$ | since 03/10, last $\log 12 / 15$ <br> 2nd transmission Mon 0450z |
|  | x |  | x |  |  | 1925 |  | E11 | 03 | 551/00, search | 551/00, search | 551/00, search | 551/00, search | since 07/15, last $\log 10 / 15$ |
|  |  | x |  | x |  | 1955 |  | S11A | 03 | 5815 $371 / 00$ | $\begin{gathered} 5815 \\ 371 / 00 \end{gathered}$ | $\begin{gathered} 5815 \\ 371 / 00 \end{gathered}$ | 5815 $371 / 00$ | since 02/14, last $\log 12 / 15$ |
|  |  |  |  | x |  | 2000 |  | E11 | 03 | $\begin{gathered} 6304 \\ 576 / 00 \\ \hline \end{gathered}$ | $\begin{gathered} 6304 \\ 576 / 00 \end{gathered}$ | $\begin{gathered} 6304 \\ 576 / 00 \\ \hline \end{gathered}$ | $\begin{array}{\|c} \hline 6304 \\ 576 / 00 \\ \hline \end{array}$ | since 03/12, last $\log 12 / 15$ 2nd transmission Tue 1045 z |
|  |  |  |  | x | x | 2005 |  | E11 | 03 | $\begin{aligned} & 11107 \\ & 363 / 00 \end{aligned}$ | $\begin{aligned} & 11107 \\ & 363 / 00 \end{aligned}$ | $\begin{aligned} & 11107 \\ & 363 / 00 \end{aligned}$ | $\begin{aligned} & 11107 \\ & 363 / 00 \end{aligned}$ | since 03/14, last log 12/15 <br> 2nd transmission Thu 1530 z |


| $\begin{array}{\|c} \hline 5 \\ \vdots \\ \Sigma \end{array}$ | $\left\lvert\, \begin{gathered} 0 \\ \underset{H}{0} \\ \hline \end{gathered}\right.$ | $\begin{array}{\|l} \hline 0 \\ 0 \\ 3 \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline \underset{H}{3} \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline-y_{1} \\ 4 \end{array}$ | $\begin{array}{\|l\|} \hline \begin{array}{c} \pi \\ 0 \\ 0 \end{array} \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline 9 \\ 0 \\ 0 \end{array}$ | UTC | wk | Stn | Fam | $\begin{array}{ll} \mathrm{Jan} \\ \mathrm{kHz}, ~ I D, \\ \hline \end{array}$ | $\begin{array}{ll} \hline \mathrm{Feb} \\ \mathrm{kHz}, ~ I D, \end{array}$ | $\begin{array}{ll} \mathrm{Nov} & \\ \mathrm{kHz}, ~ I D, \\ \hline \end{array}$ | $\begin{array}{llll} \hline \mathrm{Dec} & & \\ \mathrm{kHz}, & \text { ID, } & \ldots \\ \hline \end{array}$ | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| x |  |  |  |  |  |  | 0800 | 1/3 | G0 6 | 01A | $\begin{aligned} & 5320 \\ & 329 \end{aligned}$ | 5320 329 | 5320 329 | 5320 329 | $\begin{aligned} & \text { since } 07 / 10, \text { last } \log 12 / 15 \\ & \text { repeat at Thu } 1300 \mathrm{z} \\ & \hline \end{aligned}$ |
|  |  | x |  |  |  |  | 1200 | ? | G0 6 | 01A | $\begin{gathered} 4946 \\ 248 \end{gathered}$ | $\begin{gathered} 4946 \\ 248 \end{gathered}$ | $\begin{gathered} 4946 \\ 248 \end{gathered}$ | $\begin{gathered} 4946 \\ 248 \\ \hline \end{gathered}$ | $\begin{aligned} & \text { since } 10 / 14, \text { last } \log 11 / 15 \\ & \text { yearly changing frequencies }+ \text { id } \\ & \text { repeat at } 1300 z \end{aligned}$ |
|  |  | x |  |  |  |  | 1300 | ? | G06 | 01A | $\begin{gathered} 4051 \\ 248 \\ \hline \end{gathered}$ | $\begin{array}{r} 4051 \\ 248 \\ \hline \end{array}$ | $\begin{gathered} 4051 \\ 248 \\ \hline \end{gathered}$ | $\begin{array}{r} 4051 \\ 248 \\ \hline \end{array}$ | $\begin{aligned} & \text { since } 10 / 14, \text { last } \log 11 / 15 \\ & \text { yearly changing frequencies }+ \text { id } \\ & \text { repeat from } 1200 z \end{aligned}$ |
|  |  |  | x |  |  |  | 1300 |  | G06 | 01A | $\begin{aligned} & 4460 \\ & 329 \end{aligned}$ | $\begin{aligned} & 4460 \\ & 329 \end{aligned}$ | $\begin{aligned} & 4460 \\ & 329 \end{aligned}$ | $\begin{aligned} & 4460 \\ & 329 \end{aligned}$ | $\begin{aligned} & \text { since 09/11, last } \log 11 / 15 \\ & \text { repeat from Mon } 0800 z \end{aligned}$ |
| x |  |  |  |  |  |  | 1700 | 1/2 | G06 | 01A | $\begin{gathered} 3728 \\ 248 \end{gathered}$ | $\begin{gathered} 3728 \\ 248 \end{gathered}$ | $\begin{gathered} 3728 \\ 248 \end{gathered}$ | $\begin{gathered} 3728 \\ 248 \end{gathered}$ | since 04/10, last $\log 12 / 15$ yearly changing frequencies + id repeat at $1800 z$ |
| x |  |  |  |  |  |  | 1800 | 1/2 | G0 6 | 01A | $\begin{gathered} 4484 \\ 248 \end{gathered}$ | $\begin{gathered} 4484 \\ 248 \end{gathered}$ | $\begin{gathered} 4484 \\ 248 \end{gathered}$ | $\begin{gathered} 4484 \\ 248 \end{gathered}$ | $\begin{aligned} & \text { since } 05 / 09, \text { last } \log 12 / 15 \\ & \text { yearly changing frequencies }+ \text { id } \\ & \text { repeat from } 1700 Z \end{aligned}$ |
|  |  |  | x |  |  |  | 1830 | $2 / 4$ | G06 | 01A | $\begin{aligned} & 4519 \\ & 271 \end{aligned}$ | $\begin{aligned} & 4519 \\ & 271 \end{aligned}$ | $\begin{gathered} 4519 \\ 271 \end{gathered}$ | $\begin{gathered} 4519 \\ 271 \end{gathered}$ | $\begin{aligned} & \text { since 05/01, last log } 12 / 15 \\ & \text { repeat at Fri } 1930 z \end{aligned}$ |
|  |  |  |  | x |  |  | 1930 | 2/4 | G06 | 01A | $\begin{gathered} 4792 \\ 436 \end{gathered}$ | $\begin{gathered} 4792 \\ 436 \end{gathered}$ | $\begin{array}{\|c} \hline 4792 \\ 436 \\ \hline \end{array}$ | $\begin{aligned} \hline 4792 \\ 436 \\ \hline \end{aligned}$ | $\begin{aligned} & \text { since 04/01, last } \log 12 / 15 \\ & \text { repeat from Thu } 1830 z \end{aligned}$ |

Current HM01 Schedules

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

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

|  | 0600/0700 Sched c Wednesday/Saturday USB 10baud |  |  | 1730/1900 Sched e Tuesday / Thursday USB 10baud |  |  |  |  |  | XPA2 Sched r <br> Various Fri/Sat <br> H 00 H+20 $\quad \mathbf{H + 4 0}$ <br> $1400,1900,2100$  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jan | 9108 | 10908 | 12208 | 7891 | 6791 | 5391 | 16138 | 14438 | 13438 | 16167 | 14663 | 13923 |
| Feb | 11409 | 13509 | 14609 | 8123 | 7523 | 6823 | 16338 | 14538 | 13538 | 18667 | 17419 | 16212 |
| Mar | 11409 | 13509 | 14609 | 9362 | 8062 | 7462 | 16138 | 14438 | 13438 | 18667 | 17419 | 16212 |
| Apr | 10359 | 11559 | 13559 | 10943 | 10243 | 9243 | 14538 | 13538 | 12138 | 17462 | 16114 | 14828 |
| May | 10868 | 12168 | 13368 | 10438 | 9938 | 9138 | 14538 | 13538 | 12138 | 17462 | 16114 | 14828 |
| June | 11409 | 13509 | 14609 | 10438 | 9938 | 9138 | 14738 | 13438 | 12138 | 16167 | 14663 | 13923 |
| July | 11409 | 13509 | 14609 | 10943 | 10243 | 9243 | 14538 | 13538 | 12138 | 15967 | 13884 | 12217 |
| Aug | 10868 | 12168 | 13368 | 12187 | 10787 | 9387 | 14738 | 13438 | 12138 | 16167 | 14663 | 13923 |
| Sept | 10359 | 11559 | 13559 | 11576 | 10476 | 9276 | 14538 | 13538 | 12138 | 16167 | 14663 | 13923 |
| Oct | 10868 | 12168 | 13368 | 9362 | 8062 | 7462 | 16338 | 14538 | 13538 | 17462 | 16114 | 14828 |
| Nov | 11409 | 13509 | 14609 | 8123 | 7523 | 6823 | 18238 | 16238 | 14438 | 17462 | 16114 | 14828 |
| Dec | 7756 | 9056 | 10656 | 8164 | 7364 | 5864 | 14538 | 13538 | 12138 | 15967 | 13884 | 12217 |

Notes:
Freqs shown in italics indicate unsure freqs, or en bloc transmissions that are believed to have closed.
XPA c $\quad 0600 / 0700 \mathrm{z}$ schedule appears to be robust with reasonably strong signals into UK
XPA e 1730/1900z schedule E appears robust; sometimes difficult to receive in Great Britain, monitor in Slovenia has good success.
XPA2 m Repetitive frequency triplets, appears robust, generally strong into UK
XPA2 r Schedule appears robust; generally very strong signals to UK
XPA2 $\mathrm{p} \quad$ Six day variable schedule, separate document
Updated 05/09/2015

## XPA2 p Russian Intelligence Multitone Systems [Radiogramma] Transmission Schedules

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

XPA2 $p$

[^2]
## SPECIAL MATTERS

Operation Jallaa: Nil Return

## MESSAGES:

${ }^{\prime}{ }^{\prime}$ '
OK?

## 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

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



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[^0]:    1841880164
    45645262739224644834020158688601186468592098968025 66248150656229020300081474832093815276025553113475 02256375402663358099065960452679390295317710618686 82344436292470950729758748968090807553820554066749 49719916998807074564103094943087254449488668787530 32510682345027101131971439856282486233940412736985 5050665114677857299300179 . 166951093834187966241452 68909712064142658667882179724515725244363280687815 54535648349132709060411727240758059452397628669146 85227822909315791433291576871200391926853291079138 22606968193459309983942102599926613000093951394177 49372024086037585138070057474894546930842076548963 69919895892461250413910660856353876657532884465751 69919895892461250413910660856353876657532884465751 6511602919298918350662252659106911909216573407823 5351602919298918350 83104339361855287518221090389307104997231681878494 138173128
    000000 Courtesy JkC

[^1]:    62328840522711807952310682366907173312792889948284556534145714895474486195200000 ] 1513z

[^2]:    Appears to be a robust schedule
    Strong into UK

