## ENIGMA 2000 NEWSLETTER  <br> http://www.enigma2000.org.uk <br> 



Optical communication .... A possibility with relevance to Espionage?
Read more inside

## ISSUE 86 January 2015

Before we proceed an apology for the lateness of this issue - yours truly being taken ill over Christmas with problems with my dominant arm and fingers being paralysed. I must add it hasn't been much fun typing with one finger of the left hand and must thank certain members for their assistance.

## IMAGE ON FIRST PAGE:

We start this issue with an excellent piece on a little known STASI communications device and his testing of such over a greater range than it was ever intended to work over. You will agree this piece, penned by Karsten is excellent. Any grammatical errors are mine.

## The Stasi infrared radio Zeiss JO-4.02

The Stasi infrared transceiver Zeiss JO-4.02 is a very rare collectors item. A limited number of devices were produced in the 1980s, mainly for the East German Stasi. The JO-4.02 provided covert communication over a distance of few kilometres.

There is little information available from Internet sources. I was lucky to get a pair of these devices in spring 2014. This gave me a chance to examine the JO-4.02 in more detail and to do some communication tests to find out the capabilities of this covert infrared radio.

## Technical data

- modulation:
- emitter:
- operating wavelength:

A3 - amplitude modulation
infrared LED type VQ120C
$940 \mathrm{~nm}(317 \mathrm{THz})$

- output power: <1mW
- detector: phototransistor SP211
- Cassegrain reflectors with:
- aperture: 130 mm
- beam width: 3.1 mrad
- IR filter coating on both mirrors
- integrated finder scope
- communication range: $5 \mathrm{~km} @ 5 \mathrm{~km}$ visual range (10dB SNR)
- daylight operation
- supply voltage: battery)
- supply current:
4.5 V (integrated battery compartment for 3 x AA alkaline

app. 120 mA
- full duplex operation
- tone signal
- connector for tape recorder
- fine adjustment screws for azimuth and elevation
- standard 3/8-16 UNC thread
- size and weight: $\quad 33 \times 26 \times 13 \mathrm{~cm}-6 \mathrm{~kg}$


## Description of the device

The mirrors work as Cassegrain sytems. In the receiving system the parabolic primary mirror reflects the incoming light to a hyperbolic secondary mirror. The reflected light of the secondary mirror then goes to a hole in the centre of the primary mirror to the detector. In the transmitting system the optical path goes from the infrared led in the opposite direction. The choice of Cassegrain systems permits a very compact construction. As a result the JO-4.02 fits into a small inconspicuous leather bag. There are no manufacturer marks on the device, except for a serial number.

The optical beam width is $3.1 \mathrm{mrad}=0.18^{\circ}$ only which means that at a distance of 1 km the beam diameter is 3.1 m and at a distance of 10 km the beam diameter is 31 m . The device contains an integrated finder scope which has a circular recticle in the ocular for finding and making adjustments with respect to the other station. The diameter of the recticle corresponds with the beam width.


The image shows the two identical Cassegrain systems. The transmitter is located to the left and the receiver to the right. The secondary mirrors are held in place by a "spider support". On the top edge between the primary mirrors the objective lens of the integrated finder scope can be seen. There is a movable sunshade to protect the receiver from direct sun radiation.

The optics was manufactured by Zeiss Jena and are of excellent quality. The mirrors have an infrared filter coating ensuring the reflection of infrared in the main and to a lesser extent dark red light only.

All components are perfectly adjusted to each other by the manufacturer. The operator can be sure that a target which he can see in the middle of the circular recticle is also in the line of view of transmitter and receiver.

The JO-4.02 is carried in a relatively small leather bag. The bag contains the main device with the optical systems and includes a small bag for microphone and accessories (cleaning cloth, small cleaning brush and cable for external power supply).


The microphone has a volume control with an integrated on/off-switch on the left side. There is a large mode selector on the front of the microphone. The following modes can be selected:

- full duplex receive and transmission of the microphone signal
- receive only
- full duplex receive and transmission of a tape recorder signal


The signal tone key ("RUF" = "call") is located in the middle. Four LEDs form a level indicator for the transmitted signal. The microphone is completely filled with electronics. The schematic of the device is not available but most probably the PCBs in the microphone contain the microphone amplifier, signal tone generation and level indicator circuit.

A high impedance ( 1000 ohm ) ear phone is attached to the microphone. A tape recorder can be connected to a 5pin DIN socket near the cables to record the received signal or to transmit pre-recorded messages. There is an additional SMA-plug which can be used for external power supply. The power supply cable ends in an E10 lightbulb socket. So it was possible to attach it to a 4.5 V flashlight instead of the lamp.

A sunshade and metal cover can be easily removed. A large printed circuit board can be seen in the centre of the device. It has cutouts for the finder scope and the adjustment mechanism of receiver and transmitter path.


The PCB shows no manufacturer marks. The receiver parts are located on the left side. A Russian KP303 dualgate-FET is used in the first stage of the receiver. An East German SF118D transistor in a metal case acts as the driver for the infrared LED (right side, next to the yellow/black wires).


Al electronic parts except the dual gate-FET in the first receiver stage and the electrolytic capacitors (Tesla) were produced in East Germany. There is one interesting exception: a 14 -pin Centronics plug was used as microphone connector. This connector was manufactured by Amphenol.

The transmitting LED VQ120 and the phototransistor SP211 are very tiny as the photo clearly shows. Both were developed for the use in punched-tape readers which required a very close spacing of the photo sensors. They are mounted in-hole and have a diameter of 1.5 mm only. This small diameter helped to keep the focal length of the mirror system short to achieve the desired narrow beam width of 3.1 mrad .

The LED and phototransistor look identical. There are no identifying marks on either component so one has to be careful not to mix them.


## Communication tests

$1^{\text {st }}$ test $-2 \mathrm{~km}-17^{\text {th }}$ July $2014\left(28^{\circ} \mathrm{C}\right.$, sunshine)
This was the initial test. The test started at 13:00 UTC. There were heavy scintillations in the air. We started with a distance of 600 m and increased it in different steps up to 2 km . At 600 m the signals were much too strong. The receiver was heavily overdriven. The aperture of the receiver should be reduced for such short distances.

Signals were impressive over 2 km with excellent signal-noise-ratio (SNR). Pointing to the target was very easy because it could be seen even with the naked eye and was excellent in the finder scope.
$2^{\text {nd }}$ test $-5 \mathrm{~km}-8^{\text {th }}$ August $2014\left(30^{\circ} \mathrm{C}\right.$, sunshine, light wind $)$
The test started 13:45 UTC. We observed extreme air scintillations. In addition there was a lot of dust in the air because some harvesters operated nearby. With $10 x 50$ binoculars it was nearly impossible to see the persons at the other station. It was even worse in the finder scope of the JO-4.02. Finding the target was not difficult anyway because we made some photographs in the days before and used trees as referencing landmarks.

Signal strength was medium. There was much flutter on the modulation. Later we found out that a power line which was 300 m away crossed the field of view. Maybe the movement of the wires caused the modulation problems.
$3^{\text {rd }}$ test $-10 \mathrm{~km}-19^{\text {th }}$ August $2014\left(19^{\circ} \mathrm{C}\right.$, sunshine, very windy)
The test started at 13:00 UTC. Visual range was 25 km . The wind turned out to be a problem because one of the tripods was not strong enough to withstand the gusts. There was no chance to see the other station with binoculars. Even with a spotting scope at $50 x$ it was very difficult because of the air scintillations.

The following series of photographs was taken with a Canon EOS-600D at different focal lengths. It was taken two days after the test in the early morning and gives an impression on the path. My location was my office in the $3^{\text {rd }}$ floor of an office building.


The other crew had severe problems with a harvester which passed very close several times and produced a lot of noise and dust. Sometimes they could not understand the audio due to the environmental noise.

Communication was kept up for 20 minutes without problems. The SNR app. 10dB so there was not much system reserve for larger distances on that day. The test was very successful because regardless the adverse conditions we reached the double of the nominal communication range.

The test started at 13:30 UT. The target was at the foot of an old tower. Conditions were very bad. The visual range was changed from 15 to 20 km so it was sometimes impossible to see the target with the naked eye.

Even using the spotting scope with high magnification no details could be seen. The image shows the target few days before at excellent visual conditions. The mountains in the background are 80 km away.

My location was close to a street. There were no remarkable landmarks except some trees. Adjusting the devices to each other took some time. We used powerful LED flashlights in the strobe mode to mark our locations.


Signal strength and SNR were low but we managed to establish communication for 15 minutes. Even during periods of drizzling rain the signal was audible.
$5^{5^{\text {th }}}$ test $-14 \mathrm{~km}-17^{\text {th }}$ September $2013-\left(22^{\circ} \mathrm{C}\right.$, clear $)$
This time we wanted to test at dawn. The visual range was 35 km so conditions were very good. The signal strength was excellent with really good SNR. There seemed to be much reserve and we think that a distance of $20 . .25 \mathrm{~km}$ was possible at that time.

We also tested a home build light transceiver which is based on simple and cheap electronics and uses a $8 / 500$ photo objective for the transmitter and a $90 / 1250 \mathrm{~mm}$ Maksutov telescope for the receiver. It uses a SFH4550 infrared LED ( 850 nm ) which has considerably more power than the VQ120 in the JO-4.02.
This resulted in very good signal reports.


The author onerating the .IO-4.02
$\underline{5^{\text {th }} \text { test }-14 \mathrm{~km}-17^{\text {th }} \text { September } 2013-\left(22^{\circ} \mathrm{C} \text {, clear }\right)}$
This time we wanted to test at dawn. The visual range was 35 km so conditions were very good. The signal strength was excellent with really good SNR. There seemed to be much reserve and we think that a distance of $20 . .25 \mathrm{~km}$ was possible at that time.

We also tested a home build light transceiver which is based on simple and cheap electronics and uses a $8 / 500$ photo objective for the transmitter and a $90 / 1250 \mathrm{~mm}$ Maksutov telescope for the receiver. It uses a SFH4550 infrared LED (850nm) which has considerably more power than the VQ120 in the JO-4.02. This resulted in very good signal reports.

## Conclusions

The infrared transceiver Zeiss JO-4.02 proved to be very reliable. Even under very bad conditions (scintillations, direct sunlight, dust, drizzling rain, haze) communication was reliable. When it was possible to see the target with binoculars it was always possible to establish two way communication. The optical system is excellent and the operation of the device straightforward.

Concerning its operational parameters it represents the state of the art of the 1980s.
The manufacturer's data for the communication range is very conservative. Under good conditions this range can be considerably bettered. There are reports from another group which achieved 38 km with the JO-4.02 at high altitude under perfect visual conditions.

The JO-4.02 was extensively used for covert communication between East Berlin and West Berlin. There are reports that it was also used at the border between East and West Germany.

The narrow beam width and the low transmit power made communication very secure because it was almost impossible to detect transmissions by chance.

Author:
Karsten Hansky - DL3HRT
WWW: dl3hrt.darc.de
E-Mail: dl3hrt@darc.de

## Julian Moss G4ILO

Some of you may have noticed that the HF propagation Chart featured on the website has disappeared from our website. Sadly, Julian Moss, G4ILO, who maintained the data \& code for this feature lost his courageous battle against a brain tumour that he had been fighting since 2011.

The HF Propagation application was one of a number of programs that Julian had written \& made available freely for the radio community, in the true spirit of the hobby. Julian was an excellent example of someone who represented all that was good about amateur radio, writing numerous programs for the radio community \& making them freely available to all.

More information about Julian can be found in his obituary from the RSGB;

## http://rsgb.org/main/blog/news/silent-keys/2014/10/28/julian-moss-g4ilo-24-october-2014/

## Short annual review - the report from E2Kde and the X06 team

Hallo liebe Freunde und Kollegen der deutschen Branche und des X06 Teams (Hello dear friends and colleagues of the German Branch and the X06 team),
2014 is history now. It was the year of the $10^{\text {th }}$ jubileum of E2Kde, the German Branch of ENIGMA2000. In March, exactly 10 years after it was founded, the production of the ARTE contribution was running in my home, which was transmitted in summer on the French-German TV channel (see EN83 and the English translation in the 'Files' section),

In this year, E2Kde delivered our main group with logs, especially by tiNG, Elmar and Karsten, sometimes also by Daniel, our "vice-Kopf" (I didn't log very much this year, but next year will come more). Also some logs of other E2K members were confirmed by E2Kde members. This is the main function of E2Kde from begin on, and we will continue this work in the best sense of E2K. 2014 we also heard about the death of Fritz Nusser in Switzerland, which is also a big lost for E2Kde, where Fritz was member of for some years, before he went back to E2K. Anyway, we look forward to the future of both E2K and E2Kde.

Also the X06 team works fine. We have members of different numbers station groups, and the co-operation is great. We are glad to have important representatives of E2K in our lines like Ian, our digi desk manager, Richard and me from the E2K staff. Ary belongs to our team too, who is also E2K member. Also we are grateful for tiNG's X06 logs, which we get through private email correspondance with me. Our team consists in members from Europe, America and Australia, so that we have a kind of X06 "broadband" logs from several parts of the world. We are still grateful for every log from E2K members, for example through emails via group.

At the end here are the X06 logs for the last 2 months as usual.
X06 Mazielka (1C) logs section

| Date | Day UTC | Freq | Scale | Monitor | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 20141102 | Sun 1327-1332 | 16115 | 215346 | Danix/PL | R |
| 20141107 | Fri 1013-1017 | 9158 | 361245 | Ary/NL | New frequency, G |
| 20141111 | Tue 0758-0801 | 13420 | 534216 | Ary | M964 |
| 20141111 | Tue 1025-1029 | 16317 | 612534 | Danix | Alert 2.1 M965 |
| 20141111 | Tue 1030-1032 | 17520 | 612534 | Danix | 2.2 New frequency, G |
| 20111118 | Tue 0800 | 15989 | 125643 | RNGB | I. p., new freq, missed end time, |
| 20141120 | Thu 0729-0855 | 20720 | 123456 | Danix, Elmar | X06c, S9+50 |
| 20141120 | Thu 0749-0750 | 18523 | 325614 | Danix | Weaker than $\mathrm{X06c}$, new freq, R |
| 20141120 | Thu 0855-10xx | 23070 | 123456 | Danix | X06c, S9+50 (ending after 1000) |
| 20141120 | Thu 1308 | 19405 | 352416 | Antonio/IT | M966 |
| 20141124 | Mon 0838-0945 | 16485 | 123456 | Avare/RU | Very long X06c |
| 20141124 | Mon 0945-1001 | 20720 | 123456 | Avare | X06c (moved from 16485 kHz ) |
| 20141124 | Mon 1457-1610 | 6940 | 123456 | Danix | X 06 c , ending with a long tone |
| 20141125 | Tue 0814-0816 | 13420 | 534216 | Danix | M967 |
| 20141125 | Tue 1135 | 18524 | 325614 | Peter | S9 on SDR Twente, new freq, R |
| 20141126 | Wed 0806-0824 | 12126 | 521634 | Danix | R |
| 20141126 | Wed 0908-0927 | 13419 | 465132 | Danix | M968 |
| 20141126 | Wed 0931 | 12134 | 134265 | Danix | Ending after 0950, G |
| 20141126 | Wed 0949 | 12122 | 165324 | Danix | 30 secs - on top of CROWD36, G |
| 20141128 | Fri 1502-1510 | 9076 | 215346 | Danix | M969 |
| 20141202 | Tue 0814 | 15989 | 125643 | Danix | Only 30 secs, G |
| 20141202 | Tue 1000 | 15836 | 165423 | Eric/US | New freq, G |
| 20141210 | Wed 0834-0841 | 13369 | 412356 | RNGB | Rarer scale i. p., G |
| 20141212 | Fri 1415 | 16116 | 215346 | Antonio/IT | G |
| 20141214 | Sun 1136-1138 | 15710 | 261453 | Danix | G |
| 20141218 | Thu 0701-0709 | 17468 | 436512 | RNGB | M970 |
| 20141218 | Thu 0712-0715 | 19511 | 314265 | RNGB | I. p., G |
| 20141218 | Thu 1239 | 18575 | 352416 | MCO/US | Alert 2.1 M971 |
| 20141218 | Thu 1245 | 13951 | 352416 | Ary | 2.2 New freq (behind E007), G |
| 20141221 | Sun 1314 | 14595 | 452163 | MCO | R |
| 20141222 | Mon 1203-1214 | 17463 | 256134 | tiNG | I. p., M972 |
| 20141222 | Mon 1330 | 17471 | 216354 | Antonio | G |
| 20141223 | Tue 1023-1032 | 17520 | 612534 | tiNG | I. p., strong QRM, G |
| 20141224 | Wed 0838-0844 | 13369 | 412356 | RNGB | I. p., M973 |
| 20141225 | Thu 0855 | 16153 | 153624 | Antonio | M974 |
| 20141225 | Thu 1558-1608 | 13441 | 123456 | Danix,Avare | X 06 c |
| 20141225 | Thu 1607-1612 | 11561 | 263145 | Danix,Avare | G |
| 20141125 | Thu 1609-1616 | 11125 | 216354 | Danix,Avare | Alert 2.1 M975 |
| 20141225 | Thu 1613-1618 | 9327 | 123456 | Danix,Avare | X06c |
| 20141225 | Thu 1616-1623 | 9351 | 216354 | Danix,Avare | 2.2 G |
| 20141225 | Thu 1618-1620 | 9127 | 564213 | Danix,Avare | Alert 2.1 G (Serdolik66 at 1621) |
| 20141225 | Thu 1620-1625 | 10535 | 564213 | Danix,Avare | 2.2 M 976 |
| 20141226 | Fri 1005-1009 | 15828 | 256134 | RNGB | Alert 2.1 I. p., M977 |
| 20141226 | Fri 1009-1017 | 19611 | 256134 | RNGB | 2.2 M 978 |
| 20141228 | Sun 1735 | 8170 | 145632 | Antonio | G |
| 20141229 | Mon 1231 | 14650 | 215346 | MCO | G |

```
20141231 Wed 1200-1208 18660 621543 Danix Alert 3.1 G
20141231 Wed 1220-1232 15878 621543 Danix 3.2 G
20141231 Wed 1233-1235 12167 621543 Danix 3.3 M979
20141231 Wed 1500-1504 12207 215346 Danix R
I wish you a happy new year and all the best. "Auf Wiedersehen" and "Good-bye"
Jochen Schäfer, KopfE2Kde, Numbers- and X06 Teamkopf
```


## Morse Station Roundup

## Morse - Number Stations

UNID We start the logs with a couple of unidentified transmissions using a format very similar to the M01 group of stations. All we can be fairly sure of is that they are of Russian origin, \& most likely military - possibly connected to the ongoing situation in Ukraine.

M01 Transmissions continue as normal, (if normal is the right word for this unpredictable station), although suffering from weak reception at times here in the UK which often makes messages difficult to copy \& to identify errors sent.

We have received many good logs of the M01b transmissions again this time, although still struggling with the poor strength of these signals.
In addition we have a good report of an M01a transmission on 26 November, along with number of fine M01c intercepts that were all logged within an hour of each other on 04 November - all caught by Jim (JkC). Well done Jim!

M03 Activity from M03 continues to be steady, although, once again many of the transmissions are very weak both in UK and Western Europe. However, all known scheds are continuing as usual.

M08a AnonUS gives us his comprehensive round-up \& analysis of the output from the Cuban numbers. Thanks to AnonUS for his hard work on this!
M12 Changes \& adjustments continue to be made following on from the small changes first reported in October. Since the daylight saving changeover the rate of change increased, with many of the regular scheds - unchanged for many years, appearing one hour later, while several other schedules have changed ID, frequency or have ceased completely.

Several new schedules have been logged over the last few months - congratulations \& many thanks to those monitors involved. Of particular note is a $0020 / 0040 / 0100 \mathrm{z}$ schedule reported by Token (T!). This is not intended for Western European ears where it is completely inaudible. Reception in the USA \& via the Hong Kong online tuner is however strong.

Technical problems are still appearing on some transmissions, missing or clipped characters \& even restarts being noted during the two-minute call-up sequences..

M14 We have received a good number of logs this time, with many reports of strong signals on many of the transmissions. In the last newsletter, we reported on several transmissions containing procedural errors in the message format, \& this continues as Thomas (tiNG) notes that two messages sent on $11 \& 25$ November were missing the standard $==$ separators at the start $\&$ end of the message. Since the 2 nd transmission was a repeat of the previous message, it is likely that the errors contained in the first transmission went uncorrected before re-transmission.

M23 No reports of any activity from M23 since the brief appearance of the '200' call on 15 July 2014.
M24 Some interesting consecutive repeat sendings logged by Jim ( JkC ) during November by Jim ( JkC ), who then went on to find some even more extensive repeats over a number of frequencies during the first half of December, the first set also being logged by Spectre. Nothing matching these was heard for the remainder of December. Were these test transmissions or priority traffic?

M94 Token reports that no transmissions have been heard from M94 now since November 2013, so it looks we have lost another CW station. The voice sister station, V24 continues to transmit messages, although these are much reduced when compared to previous activity.

M97 Continues its irregular pattern of transmissions. Last heard over three consecutive days 08-10 October, the station went silent again until November when two three day transmissions in November were sent, with one three day \& one four day noted in mid-December The message is still SD84, in use since August 2013.

## Morse Stations - Not Number related

M51a The daily Morse lessons continue as usual with 5 fig grps \& plain text, always a good way to sharpen up your Morse skills, (including á \& è) !

M89 Once again there appear to be fewer changes to the call-signs \& frequencies this time round with transmissions remaining steady. Jean-Paul notes some interesting use of three \& four simultaneous frequency use, where night day freq sets have been combined.

## Beacons \& Oddities

An end of year round-up of beacons \& oddities with particular interest in the following stations submitted by members:-
20 Min Spectre takes a closer look at the 'Twenty Minute Idler' following its rediscovery on 5305 kHz . We can also report this station is also back Idler on 4301 kHz .

XSL We have a set of XSL current frequencies logged by Ary (AB) in November.
S32 Following a discussion a UK amateur radio forum that the 'Squeaky Wheel' was due to a malfunctioning Inskip transmitter, now resolved, it appears the group were referring to another signal, as S32 continues as usual on its known frequency.

## 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

## UNID CW

Two reports of stations using the same format - similar to M01 - but using single groups. Most likely Russian military.

## UNID 1

Thomas, (tiNG) logged this station on the evening of 04 Nov.
53412048 (IP) - 2055z (repeated at 2145z) 04 Nov14
IP... $6663334053==000$
tiNG
TUE

Thomas writes;
At 2048 z I tuned into 5341 kHz and caught a transmission of single 5 f groups keyed very clean at a moderate speed. Emission was pure CW (A1A emission designator), very clean in audio. The transmission has been in progress when tuning in. At 2050z I copied (with one ear only as there were some more things for me to do) "340 $53=9959974924 \ldots$. ."

According to my notes I made a few minutes before this was the repetition of the message. The transmission ended at 2055 z with three very long daaah daaah daaah. At 2115 z I could copy the following:

```
999340 52= 340 53=
9959974928917762144735871
6007890173108019210995259
8229242532225672912028418
7422096144170213144774334
9422956541836516728474196
4537023796 936171093987107
0421364550664452031910537
2336076310693020191079633
8375502099871846015039531
772885508066633
= 34053
```

```
995997492891776 21447 35871
```

995997492891776 21447 35871
6007890173108019210995259
6007890173108019210995259
8229242532225672912028418
8229242532225672912028418
7422096144170213144774334
7422096144170213144774334
9422956541 }83651672847419
9422956541 }83651672847419
4537023796936171093987107
4537023796936171093987107
042136455066945 2031910537
042136455066945 2031910537
2336076310693020191079633
2336076310693020191079633
8375502099871846015039531
8375502099871846015039531
7728855080 66633
7728855080 66633
= 340 53 0 0 0
= 340 53 0 0 0
(long zero daaaah daaaaah daaaah)

```
(long zero daaaah daaaaah daaaah)
```

Transmission ended at 2125 z . Then silence for 30 seconds. Then a carrier came up for 90 seconds, ended at 2128 z . After that the frequency stayed silent before the carrier came up again at 2136 z until 2138 z when it went off. At 2140 z some F1A (emission - frequency keyed) Morse rubbish has been sent. I could not recognize any intelligible kind of letters or numbers. To me it seems the operator was playing with his keyer pad like a little kid.

At $2144 z$ this garbage stopped and at $2145 z$ the same message came up again:
99934053 =
9959974928917762144735871
$60078901731080192109 \ldots \ldots . . . . .$. etc. At around 2150 z the repeat came but I had to turn off my Rx. tiNG

## UNID 2

Monitored by Jim (JkC) on Thu 06 Nov. Similar to M01, but using single groups. Most likely Russian military.

| 7585 | 0626 (IP) - 1632z | 06 Nov | IP ... $91571=35130000$ | Strong Each group once | JkC | THU |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | I/P ..... 669 | 08091 |  |  |  |  |
|  | 9537346487962 | 16993 |  |  |  |  |
|  | 90773328924073 | 81514 |  |  |  |  |

M01/1 XIV MCW, hand (197 sched for Nov - Feb). Will change to M01/2 sched ID 463 for Mar - Apr.
November 2014:


| 5465 | 0700z | 02 Nov | '197' $52130==$ | 54275... | ...LG $67811==$ | Good, ends 0710z | HFD/Spectre/tiNG | SUN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0700z | 09 Nov | '197' $70730==$ | 92196... | ...LG $49639=$ = | Fair, v.fast. Numerous repeat errors | BR | SUN |
|  | 0700z | 16 Nov | '197' $91530=$ |  | ...LG......... = = | Weak sig, only able to catch end of msg | AB/BR | SUN |
|  | 0700z | 23 Nov | '197' $81030=$ | 23767... | ...LG $20694=$ = | Fair > weak, v.fast. Errors noted | BR | SUN |
|  | 0700z | 30 Nov | '197' $35630==$ |  | ...LG $35125=$ | Fair, v.fast. Strong wideband digital QRM | BR | SUN |
| 5810 | 1500z | 01 Nov | '197' $33930=$ | 65043 .. | ...LG $60744=$ | Fair, ends 1510 z ( AB/HFD/JkC/Spectre/tiNG |  | SAT |
|  | 1500z | 08 Nov | '197' $90130=$ | 62332... | ...LG $63024=$ = | V.weak, v.fast. Some figs sent as periods | BR | SAT |
|  | 1500z | 15 Nov | NRH | Freq und | edge of wideban | digital signal, but no sign of any activity | BR | SAT |
|  | 1500z | 22 Nov | '197' $71130==$ | 93015... | ...LG $52381=$ = | Fair, med-fast. Excellent CW. No errors | BR | SAT |
|  | 1500z | 29 Nov | '197' $21730==$ | 37058... | ...LG $01131==$ | Weak, v.fast. Poor copy due to data QRM | BR | SAT |

## December 2014:

| 4490 | 2000z | 02 Dec | '197' | $30430=$ | 27129... | ...LG $12220=$ = | Fair | Spectre | TUE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2000z | 04 Dec | '197' | $81330==$ | 49 . .6... | ...LG $98537=$ = | Weak, med-fast, but hesitant \& spaced | BR | THU |
|  | 2000z | 09 Dec | '197' | 11530 // | 88455... | ...LG 03955 / / | Fair, slow. Repeat grp errors noted | BR | TUE |
|  | 2000z | 11 Dec | '197' | $35730===$ | 28682... | ...LG $35321==$ | $=$ Fair, fast. Good CW. Copy poor at times | BR | THU |
|  | 2000z | 16 Dec | '197' | $02130==$ | 22926... | ...LG $7.220=$ = | Weak, fast. Copy difficult at times | BR/JkC | TUE |
|  | 2000z | 18 Dec | '197' |  | Very weak | signal. No usefu | 1 copy | BR/JkC | THU |
|  | 2000z | 23 Dec | '197' | $38030=$ | 15582... | ...LG $68547=$ = | Fair, slow. With QSB. Only 29 grps? | BR | TUE |
|  | 2000z | 30 Dec | '197' | $78530==$ | 73663... | ...LG $60530=$ = | Weak, med-fast. Several confused grps | BR | TUE |
| 5320 | 1800z | 02 Dec | '197' | $58130=$ | 50384... | ...LG $83016==$ | Fair, med-fast. Good steady CW | BR | TUE |
|  | 1800z | 04 Dec | '197' | $17830=$ | 12331... | ...LG $30198=$ | Fair, med-fast. Good CW | BR | THU |
|  | 1800z | 09 Dec | '197' | 80730 // |  | ...LG 00613 / / | Weak, slow. Poor copy | BR | TUE |
|  | 1800z | 11 Dec | '197' | $25430====$ | 74447... | ...LG $19915=$ = | $==$ Fair, fast. Good CW. Grp30 sent once | BR | THU |
|  | 1800z | 16 Dec | '197' | $73330==$ | 96587... | ...LG $94523=$ = | Fair | JkC | TUE |
|  | 1800z | 18 Dec | '197' | $31830==$ | 73792... | ...LG $07259=$ = | Fair, v.fast. Poor copy at times | BR/JkC | THU |
|  | 1800z | 23 Dec | '197' |  | Very wea | signal. No usefu | 1 copy | BR | TUE |
|  | 1800z | 30 Dec | '197' | $505030==$ | 07605... | ...LG $24775=$ | V.weak, med-fast. Several confused grps | BR | TUE |
| 5465 | 0700z | 07 Dec | '197' | $93730=$ | 85153... | ...LG $44362==$ | Fair, fast. Excellent CW. Errors noted | BR | SUN |
|  | 0700z | 14 Dec | '197' | $28630==$ | 58015... | ...LG $02544=$ = | Good, med-fast. Hesitant, but with few errors | BR | SUN |
|  | 0700z | 21 Dec | '197' | $11730=$ | 33968... | ...LG $54734=$ = | Good, fast. Hesitant pause after grp07 | BR | SUN |
|  | 0700z | 28 Dec | '197' | $27330==$ | 10456... | ...LG $11079==$ | Good, fast. Excellent CW. No noted errors | BR | SUN |
| 5810 | 1500z | 06 Dec | '197' | $11630=$ | 66240... | ...LG $30107=$ = | Weak, fast. Poor copy. Details via Twente | BR | SAT |
|  | 1500z | 13 Dec | '197' | $51130==$ | 27692... | ...LG $60563=$ = | Fair, fast. Poor copy at times | BR | SAT |
|  | 1500z | 20 Dec | '197' | $31130==$ | 96587... | ...LG $94523=$ = | Weak | JkC | SAT |
|  | 1500z | 27 De | '197' | $15630=$ | 12692... | ...LG . $7766=$ = | Fair, fast. Confusing sending from grp22 | BR | SAT |

M01a (formerly end of month TXs, now random)
48471807 (IP) -1818 z 26 Nov (In progress) $876 \ldots$ etc. Strong
JkC
WED

8768768763333743037430
8768768763333793737937
8768768763333500935009 876876876000
(IP) ( 1807 z - continues)
( 1810 z - continues)
( 1814 z - continues)
(hand sent - 1818z)

M01b

## November 2014:

| 2405//3180 | 2110z | 14 Nov | '610' 273/86 $=80958$ |  |  |  | HFD | FRI |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2426//3205 | 2015-1953z | 03 Nov | '375' | $27386=80958 \ldots$ | . $12800=27386000$ | Weak//Very weak | HFD/JkC | MON |
| 2436//3520 | 1910-1947z | 03 Nov | '853' | $27386=80958 \ldots$ | . $12800=27386000$ | Weak//Very weak | HFD/JkC | MON |
| 3160 | 2042z | 06 Nov | '382' | Weak | ( 2485 kHz not heard) |  | HFD | THU |
| 3197 | 2002z | 14 Nov | '866' | $273 / 86=80958$ | (2653kHz not heard) |  | HFD | FRI |
| 3520 | 1910-1947z | 17 Nov | '853' | $27386=80958 \ldots$ | . $12800=27386000$ | Good | tiNG | MON |
| 3545 | 1932z | 06 Nov | '910' | ---36=70958 | ( 2466 kHz not heard) |  | HFD | THU |
|  | 1932z | 13 Nov | '910' | $27386==80958$ | 809582377623776 | $7187371873 \ldots$ | AB | THU |

## December 2014:

| $2405 / / 3180$ | $2110-2126 z$ | 19 Dec | $' 610 ' 56732=40707 \ldots 96508=56732000$ | Weak//Weak | JkC | FRI |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $2470 / / 3545$ | $1932-1948$ | 18 Dec | $' 910^{\prime} 56732=40707 \ldots 96508=56732000$ | Fair//Fair | JkC |  |
| $2485 / / 3195$ | $2042-2058 \mathrm{z}$ | 18 Dec | $' 382 ' 56732=40707 \ldots 96508=56732000$ | Fair//Fair | JkC |  |



## M01c

$\operatorname{Jim}(\mathrm{JkC})$ managed to find this pair of M01c transmissions, first on 9411 kHz then immediately followed by $9051 \mathrm{kHz} \ldots$.

...and then nearly one hour later this pair, first on 10233 kHz followed by a further transmission on 9447 kHz .

| 10233 | 0626 (IP) - 0630z | 04 Nov | [I/P ...] | Strong | Hand sent | JkC | TUE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 3543543547385073850 |  |  |  |  |  |  |
|  | 3543543547486074860 ( 0627 z ) (continues) (silent - 0630z) (monitored until 0645z- nil) |  |  |  |  |  |  |
| 9447 | 0636 (IP) - 0542z | 04 Nov | [I/P ... ] | Strong | Hand sent | JkC | TUE |
|  | 1431431438602786027 (continues) <br> (silent-0642z) (monitored until 0650z- nil) |  |  |  |  |  |  |

M03 III ICW, some CW

## November 2014:

| 4505 | 1320-1338z | 03 Nov | $540 / 36=304667707$ | $7 . . . .08299==000$ Weak |  | Spectre | MON |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1320-1338z | 05 Nov | $540 / 36=304667707$ | $7 . . . .08299==000$ Weak |  | Spectre | WED |
|  | 1320-1323z | 10 Nov | $543 / 00=0000$ Fair |  |  | HFD/Spectre | MON |
|  | 1320-1323z | 12 Nov | $543 / 00==000$ Fair |  |  | Spectre | WED |
|  | 1320-1323z | 17 Nov | $543 / 00==000$ Fair |  |  | Spectre | MON |
|  | 1320-1323z | 19 Nov | $543 / 00==000$ Fair |  |  | AB/Spectre | WED |
| 4828 | 1320-1323z | 02 Nov | $437 / 00 \mathrm{R} 3 \mathrm{~m}==000$ | Weak/Good |  | HFD/JkC/Spectre/tiNG | SUN |
|  | 1320-1323z | 06 Nov | $437 / 00==000$ Fair |  |  | Spectre | THU |
|  | 1320-1323z | 09 Nov | $437 / 00==000$ Fair |  |  | Spectre | SUN |
|  | 1320-1323z | 13 Nov | $434 / 34==144106040$ | 0.... $58343==000$ Fair |  | Spectre | THU |
|  | 1320-1337z | 16 Nov | $434 / 34 \mathrm{R} 3 \mathrm{~m}==14410$ | $60400 \ldots 6011958343==000$ | Fair/Good | Spectre/tiNG | SUN |
|  | 1320-1323z | 20 Nov | $437 / 00=000$ Fair |  |  | Spectre | THU |
|  | 1320-1323z | 23 Nov | $437 / 00 \mathrm{R} 3 \mathrm{~m}==000$ | Good |  | tiNG | SUN |
| 5358 | 1535-1538z | 01 Nov | $798 / 00==000$ Fair |  |  | Spectre | SAT |
|  | 1535-1538z | 04 Nov | $798 / 00=000$ Fair |  |  | HFD/JkC/Spectre | TUE |
|  | 1535-1538z | 08 Nov | $798 / 00==000$ Fair |  |  | Spectre | SAT |
|  | 1535-1538z | 11 Nov | $798 / 00==000$ Fair |  |  | Spectre | TUE |
|  | 1535-1538z | 15 Nov | 798/00 R3m = = 000 | Fair/Strong |  | Spectre/tiNG | SAT |
|  | 1535-1538z | 18 Nov | $798 / 00==000$ Fair |  |  | Spectre | TUE |
|  | 1535-1538z | 22 Nov | $798 / 00 \mathrm{R} 3 \mathrm{~m}==000$ | Fair/Strong |  | Spectre/tiNG | SAT |
|  | 1535-1553z | 25 Nov | $795 / 38 \mathrm{R} 3 \mathrm{~m}==39473$ | $55927 \ldots 6761361365==000$ | Strong | BR/tiNG | TUE |
|  | 1535-1553z | 29 Nov | 795/38 R3m = = 39473 | 55927. . . $6761361365==000$ | Strong | BR | SAT |
| 13911 | 1420-1423z | 02 Nov | 879/00 R3m = = 000 | Strong/Fair/Good |  | HFD/JkC/Spectre/tiNG | SUN |
|  | 1420-1423z | 07 Nov | $879 / 00==000$ Fair |  |  | Spectre | FRI |
|  | 1420-1423z | 09 Nov | $879 / 00==000$ Fair |  |  | Spectre | SUN |
|  | 1420-1423 | 14 Nov | 879/00 = = 000 Fair |  |  | Spectre | FRI |
|  | 1420-1423z | 16 Nov | 879/00 R3m = = 000 | Good |  | Spectre/tiNG | SUN |
|  | 1420-1423z | 23 Nov | 879/00 R3m = = 000 | Fair |  | tiNG | SUN |


| M03 | $\mathbf{4 5 0 5} \mathbf{k H z} \quad \mathbf{1 3 2 0 z}$ | $\mathbf{0 5}$ Nov14 |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $540 / 36$ | $(\mathrm{R} 2 \mathrm{~m})==$ |  |  |  |
| 30466 | 77077 | 23114 | 59152 | 98569 |
| 46151 | 26573 | 44719 | 12067 | 86206 |
| 33830 | 37831 | 12050 | 43353 | 42734 |
| 28469 | 44934 | 74563 | 18326 | 01439 |
| 00276 | 80844 | 38619 | 48665 | 80609 |
| 35860 | 78118 | 90332 | 72791 | 52797 |
| 96338 | 57382 | 41192 | 29300 | 04011 |
| 08299 | $=$ |  |  |  |
| $540 / 36$ | (single group repeat) $=000$ |  |  |  |
| Courtesy | Spectre |  |  |  |


| M03 | 4828 kHz | 1320z | 13 Nov14 |
| :---: | :---: | :---: | :---: |
| 434/34 (R2m) = = |  |  |  |
| 14410 | 604004 | 998284 | 81218 |
| 74113 | 936545 | 1210809 | 97389 |
| 83753 | 44564 | 23 08416 | 93564 |
| 79050 | 403383 | 245663 | 01623 |
| 88746 | 2772909 | 7479243 | 47622 |
| 81129 | 562323 | 18122354 | 93325 |
| 82192 | 9747960 | 958343 | = = |
| $434 / 34($ single group repeat $)=000$ |  |  |  |
| Courtesy Spectre |  |  |  |


| M03 | 5358kHz 15350z | 25 Nov14 |
| :---: | :---: | :---: |
| 795/38 (R2m) $==$ |  |  |
| 39473 | 559275542627300 | 58814 |
| 22841 | 201822610180446 | 13580 |
| 10392 | 489118124295405 | 44152 |
| 98355 | 632876297701741 | 14311 |
| 91831 | 573978016094163 | 68222 |
| 66217 | 874865401489189 | 37873 |
| 40718 | 263332105523004 | 20727 |
| 17747 | $6761361365==$ |  |
| 795/38 (single group repeat $)=000$ |  |  |
|  | Courte | sy $\quad B R$ |

## December 2014:

| 4505 | 1320-1323z | 01 Dec | $543 / 00=000$ Fair |
| :---: | :---: | :---: | :---: |
|  | 1320-1323z | 03 Dec | $543 / 00==000$ Fair |
|  | 1320-1323z | 08 Dec | 543/00 (R3m) $=000$ V.weak |
|  | 1320-1323z | 10 Dec | 543/00 (R3m) $=0000$ V.weak |
|  | 1320-1323z | 15 Dec | 543/00 = = 000 Weak |
|  | 1320-1323z | 17 Dec | 543/00 (R3m) $=0000$ V.weak |
|  | 1320-1323z | 22 Dec | 540/33 R3m $=27967$ 21510..... 5FGs V.weak |
|  | 1320 | 24 Dec | 540/33 R3m $=$ = $27967 \ldots$ rest unworkable Very weak |
| 4828 | 1320-1323z | 07 Dec | $437 / 00=000$ Fair |
|  | 1320-1338z | 11 Dec | $438 / 36==81598 \ldots 97768=000$ Very Weak/Fair |
|  | 1320-1338z | 14 Dec | $438 / 36==81598 \ldots 97768==000$ Fair |
|  | 1320-1323z | 18 Dec | $437 / 00==000$ Very Weak |
|  | 1320-1323z | 29 Dec | $437 / 00(R 3 m)==000$ Very weak (logged via Twente SRR) |
| 5358 | 1535-1538z | 02 Dec | $798 / 00==000$ Fair |
|  | 1535-1538z | 06 Dec | $798 / 00==000$ Fair |
|  | 1535-1553z | 09 Dec | $795 / 38==83610 \ldots 45453==000$ Fair |
|  | 1535-1553z | 13 Dec | $795 / 38==83610 \ldots 45453==000$ Fair |
|  | 1535-1538z | 16 Dec | $798 / 00=000$ Strong |
|  | 1535-1538z | 20 Dec | $798 / 00=000$ Fair |
|  | 1535-1538z | 28 Dec | 798/00 (R3m) $=$ = 000 Strong |
|  | 1535-1538z | 30 Dec | $798 / 00=000$ Strong (VVV at 1531z) |
| 13911 | 1420-1423z | 12 Dec | 879/00 = = 0000 Fair |
|  | 1420-1423z | 14 Dec | 879/00 $==000$ Fair |
|  | 1420-1423z | 19 Dec | 879/00 $=000$ Fair |
|  | 1420-1423z | 21 Dec | $879 / 00=000$ Fair |
|  | 1420-1423z | 29 Dec | 879/00 $(\mathrm{R} 3 \mathrm{~m})==000$ Good |
| $\frac{\text { M03c }}{\text { No reports }}$ (Stutter groups) |  |  | M03d M03e |
|  |  |  | No reports No reports |


| Spectre | MON |
| :--- | :--- |
| Spectre | WED |
| BR | MON |
| BR | WED |
| AB/HFD/JkC | MON |
| BR | WED |
| AB/BR | MON |
| JkC | WED |
|  |  |
| Spectre | SUN |
| Spectre/JkC | THU |
| Spectre | SUN |
| JkC | THU |
| BR | SUN |
|  |  |
| Spectre | TUE |
| Spectre | SAT |
| Spectre | TUE |
| Spectre | SAT |
| JkC | TUE |
| JkC | SAT |
| BR | SAT |
| AB/JkC | TUE |
|  |  |
| Spectre | FRI |
| Spectre | SUN |
| AB/JkC | FRI |
| JkC | SUN |
| BR | SUN |
|  |  |

No reports


## M08a XVIII ICW / CW, some MCW

AnonUS sends us his regular run-down on the Cuban activity from M08a.:-

M08a continued in the usual time slots and frequencies. A few errors crept in, mostly with HM01 appearing on top of the Morse transmissions in the 2300 z slot.

On 08 November two of the schedules had a voice repeating "Uno" 100 times followed by a slight pause then repeated.
On 23 December fast Morse normally associated with the 2300 z slot was heard at 1400 z . At 2300 z the same call-ups were sent with the expected fast Morse so this looks like operator error. Otherwise, noisy carriers are quite often heard with no Morse transmitted.

## November 2014:

| 7554 | 2000z | 03 Nov | [44451 56781 60112] |  |  | AnonUS | MON |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2000z | 04 Nov | [22421 35842 48272] |  |  | AnonUS | TUE |
|  | 2000z | 06 Nov | [01482 14711 37141] |  |  | AnonUS | THU |
|  | 2000z | 08 Nov | "Uno" R100 slight pau | then repeat continued for at least 5 minutes. | Morse 18262 heard once | AnonUS | SAT |
|  | 2000z | 09 Nov | [18262 22501 35022] | Usual weekend call-ups |  | AnonUS | SUN |
|  | 2000z | 10 Nov | [---------------] | Carrier only. |  | AnonUS | MON |
|  | 2000z | 11 Nov | [7334186671 00002] |  |  | AnonUS | TUE |
|  | 2000z | 12 Nov | [88771 00511 13842] |  |  | AnonUS | WED |
|  | 2000z | 14 Nov | [????? ????? ?????] | Came up in progress at 2002 z no call-ups |  | AnonUS | FRI |
|  | 2000z | 15 Nov | [---------35022] |  |  | AnonUS | SAT |
|  | 2000z | 17 Nov | [---- - - --- - - - -] | Came up in progress at 2002z, no call-ups |  | AnonUS | MON |


|  | 2000z | 18 Nov | [71401 04732 17151] | Usual weekend call-ups | AnonUS | TUE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2000z | 20 Nov | [06141 10362 23701] |  | AnonUS | THU |
|  | 2000z | 23 Nov | [18262 22501 35022] |  | AnonUS | SUN |
|  | 2000z | 25 Nov | [47532 5185174282$]$ |  | AnonUS | TUE |
|  | 2000z | 27 Nov | [16541 20872 33311] |  | AnonUS | THU |
|  | 2000z | 28 Nov | [34502 56232 60551] |  | AnonUS | FRI |
|  | 2000z | 29 Nov | [18262 22501 35022] | Usual weekend call-ups | AnonUS | SAT |
|  | 2000z | 30 Nov | [-- -- 22501 35022] | Up late in progress. Appears to be usual weekend call-ups | AnonUS | SUN |
| 8009 | 2300z | 10 Nov | [73412 86741 10162] |  | AnonUS | MON |
|  | 2300z | 12 Nov | [48022 50352 65771] |  | AnonUS | WED |
|  | 2300z | 15 Nov | [18262 22501 35022] | Started with HM01 call-ups 675072274653239382265244043688 | AnonUS | SAT |
|  |  | Note these are call-ups from 12 Nov except for call 552440 which was 36418 on that date note that position 5 the following day was 52441! |  |  |  |  |
|  | 2300z | 17 Nov | [32681 4333157351 ] | HM01 also audible on this frequency | AnonUS | MON |
|  | 2300z | 26 Nov | [6724271571 84002] |  | AnonUS | WED |
| 8096 | 1400z | 05 Nov | [72071 85302 08631] | Stopped part way through the call-ups | AnonUS | WED |
|  | 1400z | 06 Nov | [02151 15482 27711] |  | AnonUS | THU |
|  | 1400z | 07 Nov | [5801262331 75662] |  | AnonUS | FRI |
|  | 1400z | 08 Nov | "Uno" R100 slight pau | e then repeat continued for at least 5 minutes | AnonUS | SAT |
|  | 1400z | 10 Nov | [2384136262 40601] |  | AnonUS | MON |
|  | 1400z | 11 Nov | [6721270631 83012] |  | AnonUS | TUE |
|  | 1400z | 12 Nov | [00272 23501 36032] |  | AnonUS | WED |
|  | 1400z | 14 Nov | [61361 ?4682 07021] |  | AnonUS | FRI |
|  | 1400z | 18 Nov | [-- --- 88681 02122] | Up late missed first call-up. | AnonUS | TUE |
|  | 1400z | 21 Nov | [13442 26762 38101] |  | AnonUS | FRI |
|  | 1400z | 22 Nov | Carrier Only |  | AnonUS | SAT |
|  | 1400z | 23 Nov | [18262 22501 35022] | Morse generator having problems but usual weekend call-ups heard | AnonUS | SUN |
|  | 1400z | 24 Nov | [6315174781 07111] |  | AnonUS | MON |
|  | 1400z | 25 Nov | Carrier with hum but n | Morse | AnonUS | TUE |
|  | 1400z | 26 Nov | [48442 52861 64202] |  | AnonUS | WED |
|  | 1400z | 27 Nov | [08822 ????2 35571] | Up late, can deduce missing call-up as 12242, 12252, 22242 or 22252 | AnonUS | THU |
|  | 1400z | 28 Nov | [5181174342 86671] |  | AnonUS | FRI |
|  | 1400z | 30 Nov | [18262 22501 35022] | Usual weekend call-ups | AnonUS | SUN |
| 8135 | 2300z | 06 Nov | [10131 2345236781 ] |  | AnonUS | THU |
|  | 2300z | 07 Nov | [14452 2688130211 ] |  | AnonUS | FRI |
|  | 2300z | 11 Nov | [28462 3270155221 ] |  | AnonUS | TUE |
|  | 2300z | 14 Nov | [31832 4426157582 ] |  | AnonUS | FRI |
|  | 2300z | 16 Nov | Expected M08a but HM | M01 in place with call-ups 67507 and 22746 heard | AnonUS | SUN |
|  | 2300z | 18 Nov | [20812 33241 46562] |  | AnonUS | TUE |
|  | 2300z | 20 Nov | [25732 3725141582 ] | Simultaneous with HM01 | AnonUS | THU |
|  | 2300z | 21 Nov | [5127164501 77032] |  | AnonUS | FRI |
|  | 2300z | 23 Nov | [18262 22501 35022] | Usual weekend call-ups | AnonUS | SUN |
|  | 2300z | 25 Nov | [05282 18621 22052] | Compare call-ups 2 and 3 to usual weekend call-ups 1826222501 | AnonUS | TUE |
|  | 2300z | 27 Nov | [2021233641 46062] |  | AnonUS | THU |
|  | 2300z | 28 Nov | Carrier only |  | AnonUS | FRI |
|  | 2300z | 30 Nov | [18262 22501 35022] | Usual weekend call-ups | AnonUS | SUN |

## December 2014:

| 7554 | 2000z | 02 Dec | [16822 20251 32672] |  | AnonUS | TUE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2000z | 04 Dec | [58882 62311 75642] |  | AnonUS | THU |
|  | 2000z | 06 Dec | [18262 22501 35022] | Usual weekend call-ups | AnonUS | SAT |
|  | 2000z | 07 Dec | Carrier only |  | AnonUS | SUN |
|  | 2000z | 09 Dec | [78832 8226105682 ] |  | AnonUS | TUE |
|  | 2000z | 11 Dec | [02831 13561 28582] |  | AnonUS | THU |
|  | 2000z | 16 Dec | [41801 54222 66551] |  | AnonUS | TUE |
|  | 2000z | 18 Dec | [07501 11832 24251] |  | AnonUS | THU |
|  | 2000z | 21 Dec | [18262 2250135022 ] | Usual weekend call-ups | AnonUS | SUN |
|  | 2000z | 26 Dec | [34782 46112 50441] |  | AnonUS | FRI |
|  | 2000z | 27 Dec | [18262 2250135022 ] | Usual weekend call-ups | AnonUS | SUN |
|  | 2000z | 30 Dec | [5666268302 71721] |  | AnonUS | TUE |
| 8009 | 2300z | 03 Dec | [3377246111 50432] |  | AnonUS | WED |
|  | 2300z | 08 Dec | [33501----- -- --] | Up late, missed call-ups | AnonUS | MON |
|  | 2300z | 15 Dec | [------------71] | Up early, missed most of the call-ups | AnonUS | MON |
|  | 2300z | 17 Dec | Noisy carrier only |  | AnonUS | WED |
|  | 2300z | 23 Dec | [35081 48312 52741] | Same call-ups as fast Morse at 1400 z | AnonUS | TUE |

Looks like they put the wrong recording on earlier. Also TX should be on 8135z. Additionally HM01 audio also heard on this frequency

|  | 2300z | 29 Dec | [27452 38282 43212] | AnonUS | MON |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8096 | 1400z | 01 Dec | [80741 03262 16501] | AnonUS | MON |
|  | 1400z | 02 Dec | [00872 13212 26531] | AnonUS | TUE |
|  | 1400z | 03 Dec | [08052 12371 25612] | AnonUS | WED |
|  | 1400z | 04 Dec | [51251 64572 77812] | AnonUS | THU |
|  | 1400z | 05 Dec | [23782 36122 50441] | AnonUS | FRI |
|  | 1400z | 06 Dec | Brief carrier but no Morse | AnonUS | SAT |
|  | 1400z | 07 Dec | Carrier only | AnonUS | SUN |
|  | 1400z | 09 Dec | [62801 8453188551 ] | AnonUS | TUE |
|  | 1400z | 10 Dec | [86702 00231 13552] | AnonUS | WED |
|  | 1400z | 11 Dec | [84101 07532 11851] | AnonUS | THU |
|  | 1400z | 15 Dec | [73401 86722 00252] | AnonUS | MON |
|  | 1400z | 16 Dec | [40772 53211 65532] | AnonUS | TUE |
|  | 1400z | 17 Dec | [30472 51212 64541] | AnonUS | WED |
|  | 1400z | 18 Dec | [81452 --- --- --- -----] Up late missed 2 call-ups | AnonUS | THU |
|  | 1400z | 19 Dec | Carrier only | AnonUS | FRI |
|  | 1400z | 21 Dec | [18262 22501 35022] Usual weekend call-ups | AnonUS | SUN |
|  | 1400z | 22 Dec | Carrier only | AnonUS | MON |
|  | 1400z | 23 Dec | [3508148312 52741] Fast Morse usually associated with the 2300z transmissions | AnonUS | TUE |
|  | 1400z | 24 Dec | Up late, no call-ups | AnonUS | WED |
|  | 1400z | 25 Dec | Carrier only | AnonUS | THU |
|  | 1400z | 26 Dec | [5348166821 70242] | AnonUS | FRI |
|  | 1400z | 28 Dec | [18262 2250135022 ] In progress at 1400z. Still going at 1505z. TX ends at 1525 z mid-message | AnonUS | SUN |
|  |  | Ends with what sounds like SKA but is actually the expected SK with the A (1) of the first call-up as the recording immediately restarted. |  |  |  |
|  | 1400z | 29 Dec | [6201175331 08662] | AnonUS | MON |
|  | 1400z | 30 Dec | [2327134811 47331] | AnonUS | TUE |
|  | 1400z | 31 Dec | Carrier only | AnonUS | WED |
| 8135 | 2300z | 02 Dec | [48621 6045173771 ] | AnonUS | TUE |
|  | 2300z | 04 Dec | Noisy carrier only | AnonUS | THU |
|  | 2300z | 05 Dec | [82662 04001 17322] | AnonUS | FRI |
|  | 2300z | 07 Dec | Carrier only | AnonUS | SUN |
|  | 2300z | 09 Dec | [25652 38171 42312] | AnonUS | TUE |
|  | 2300z | 11 Dec | Missing second call-up, likely 512(7 or 8)(1 or 2 ) | AnonUS | THU |
|  | 2300z | 12 Dec |  | AnonUS | FRI |
|  | 2300z | 16 Dec |  | AnonUS | TUE |
|  | 2300z | 18 Dec | [22802 35331 58652] | AnonUS | THU |
|  | 2300z | 19 Dec | Carrier only | AnonUS | FRI |
|  | 2300z | 25 Dec | [60152 73471 86711] HM01 also audible on this freq | AnonUS | THU |
|  | 2300z | 30 Dec | [17812 28542 32861] | AnonUS | TUE |

## Call-up Analysis

Analysis of the sequence of numbers in the call-ups was performed again and the rules previously mentioned seem to hold true. Of interest due to a notebook mishap the second call-up of one transmission was lost on 12 Dec. Using the previously mentioned rules 2 possible options for the missing call-up were deduced. When the missing page turned up the prediction turned out to be correct!

Of note using the sequences was that the jump between the 3 rd digits is normally 3 or 4 but at 2300 z on 29 Dec it was 7 . The following day all 3 transmissions had jumps of 6 between the third digits before things returned to normal. Presumably this is not due to chance. Jumps of 6 or 7 are rare and always occur between the 3rd digits

Sequences between digits in call-ups

Example. 444515678160112 First digits $456=11$, Second Digits $460=23$, Third Digits, $471=33$, Fourth Digits $581=32$.
Note: Last digit always 1 or 2 so no sequence here. Do not include 9 in the sequence as it rarely if ever appears.

| 44451567816011211233332 | 13442267623810111323323 | 84101075321185111334332 |
| :---: | :---: | :---: |
| 37552508716321221233323 V02a | 51271645017703211333423 | 02831135612858211156032 |
| 22421358424827211334223 | 63151747810711112136332 | 14811272323066111323423 |
| 72071853020863111333323 | 47532518517428212333323 | 47851512726451211333323 |
| 02151154822771111323332 | 05282186212205211334333 | 73401867220025211333423 |
| 01482147113714112333323 | 48442528616420211324323 | 40772532116553211324332 |
| 10131234523678111333323 | 67242715718400211333432 | 41801542226655111323323 |
| 58012623317566211333323 | 16541208723331111333433 | 73682860211035123333333 |
| 14452268813021111234332 | 20212336414606211334332 | 30472512126454121137333 |
| 23841362624060111333423 | 51811743428667121324333 | 07501118322425111333332 |
| 73412867411016212333332 | 34502562326055121236332 | 22802353315865212334232 |
| 67212706318306211234323 | 80741032621650111334323 | 35081483125274111333422 |
| 73341866710000211333332 | 00872132122653111333332 | 60152734718671111333323 |
| 28462327015522112333432 | 16822202513267211323432 | 53481668217024211334332 |
| 00272235013603221333423 | 48621604517377121137332 | 34782461125044111233323 |
| 88771005111384211137333 | 08052123712561211333323 | 62011753310866212333323 |
| 48022503526577111143432 | 33772461115043211333332 | 27452382824321211147032 Note 3rd digit |
| 61361 ?4682 07021 ?? 333323 | 51251645727781211333323 | 23271348114733111136432 Note 3rd digit |
| 31832442615758211333332 | 58882623117564211334323 | 56662683027172111226432 Note 3rd digit |
| 32681433315735111146942 | 23782361225044112333332 | 17812285423286111136332 Note 3rd digit |
| -----88681 02122 ? 1 ? 3 ? ${ }^{\text {? }}$ | 82662040011732211233332 | 35111484315186211323423 |
| 71401047321715121333332 | 62801845318855120245032 | 41141545726780111334332 |
| 20812332414656211333332 | 78832822610568211333432 |  |
| 06141103622370111332423 | 25652381714231211334223 | Courtesy AnonUS |
| 25732372514158211234323 | 86702002311355211334332 |  |

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

Changes \& adjustments continue to be made. Schedules which for some while now had remained largely static first started to experience small changes in October. Since the daylight saving changeover the rate of change increased, with many of the regular scheds - unchanged for many years, appearing one hour later, while several other schedules have changed ID, frequency or have ceased completely.

## November 2014:

Token (T!) found this unusual M12 schedule at the end of November. Firstly, it is unusual for a schedule to be logged at this time in the morning, \& secondly it is an unusual set of times for the transmissions, $\mathrm{H}+20 / \mathrm{H}+40 / \mathrm{H}+60$. Historically, we have noted schedules commencing $\mathrm{H}, \mathrm{H}+10, \mathrm{H}+30, \mathrm{H}+40$ but none starting at $\mathrm{H}+20$, although there is no reason why this slot should not be utilised.

This is Token's account of the finding of the transmissions;
Wednesday, November 26, 2014, at 0040 I tuned into the start of an apparent M12 transmission, on 18576 kHz , ICW. Call-up was 253, at about 8 WPM, and it did not match the digits in the call-up/frequency, at least not for an XX00, XX20, XX40 schedule, but I assumed a possible error. I also assumed there had been a transmission at 0000 and 0020 UTC, but I did not notice them. So for the last several days I have been paying attention at 0000 and 0020 to try and find the other frequencies.

This morning (November 29, 2014) at 0020 UTC on 19276 kHz I ran into the same callup, 253. And this lead into the same message as was sent Wednesday morning. 0040 UTC the message was sent on 18576 kHz , as it was Wednesday. I assumed I had missed the 0000 UTC message. But note the call-up and the two frequencies. Call-up 2_5_3 and frequency 19_2_76 and 18_5_76. This might mean that another transmission was to follow, on a frequency with a 3 in the 100's digit, probably either 17376 or 16376 kHz , so I set a receiver watch on each, just in case. I have never seen M12 use XX20/XX40/XX00 before, but I very seldom hear M12 here, so I am not very familiar with its habits, maybe it would do so in this case. Most of the time I have seen it has been on XX00/XX20/XX40 or XX30/XX50/XX10 times.

At 0100 neither of the selected frequencies showed activity, but I noticed a CW signal start up on $16356 \mathrm{kHz}, 20 \mathrm{kHz}$ lower than would be suggested by this family of stations habits (call-up sometimes matching third digit of frequency, reuse 10's and 1's digit) would predict. I tuned to it, and sure enough, there was M12, with the same call-up, 253, and the same message.

I might add that bearing of reception and signal conditions closely match the V07 schedule currently in use. The bearing is towards Asiatic Russia or Kamachatka for me, so I suspect either the same source as V07 or in the general area of the V07 source.

M12, ICW, $\sim 8$ WPM call-up, $\sim 25$ WPM message, ends cut zeros (000 000).
Logs:
M12 18576kHz 0040z 26/11/2014 [253 2532531 (R9) 731127 (R2)] 0050z Strong T! WED
M12 19276kHz 0020z 29/11/2014 [253 2532531 (R9) 731127 (R2)] 0030z Strong T! SAT M12 18576kHz 0040z 29/11/2014 [253 2532531 (R9) 731127 (R2)] 0050z Strong T! SAT M12 16356kHz 0100z 29/11/2014 [2532532531(R9) 731127 (R2)] 0110z Strong T! SAT

Thanks Token!

Pacific M12 Schedule Version 1.0
Chart based on observations Nov 26, 2014 to Dec13, 2014.
Station transmits each Wednesday and Saturday morning, times as listed.
Transmissions are ICW, frequency listed is carrier frequency.

| Time <br> UTC | January | February | March | April | May | June | July | August | September | October | November <br> $\mathbf{2 5 3}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0020 |  |  |  |  |  |  |  | December <br> $\mathbf{5 4 8}$ |  |  |  |
| 0040 |  |  |  |  |  |  |  |  |  | 19276 | 18576 |
| 0100 |  |  |  |  |  |  |  |  |  |  | 18576 |

Pacific area observed M12 schedule, Asiatic Russia or Kamchatka possible source based on HFDF and propagation modeling. Western US, Canada, Central America receive a good signal, parts of Asia also.
Propagation modeling and use of down stepping frequencies might suggest US / Canada / Central America as the target area.


## December 2014:

The early morning sched, found by Token (T!) at the end of November, continues in December with a new ID \& freq set, with the Nov 0040 z freq now used for the 0020 transmission. This schedule is NOT audible in the UK or via Twente, but has been monitored in the USA \& Hong Kong.

M12 $18576 \mathrm{kHz} 0020 \mathrm{z} 03 / 12 / 2014$ [548 548548 000] 0022z Strong T! WED
M12 17436kHz 0040z 03/12/2014 [548 548548 000] 0042z Strong T! WED
On Sat 13 Dec Brian (BR) \& Jim (JkC) met together on the Hong Kong remote tuner to monitor the sched \& successfully found the 3rd freq.

M12 12205/13559/14728kHz $1100 / 1120 / 1140 z \quad 22$ Dec14
9739739731 (R2m)
$4090 \quad 146 \quad 4090 \quad 146$
81859088461935096370171378857313686200806345601243
88969772031670966142413168098192592990043330895690
47618472248372973723786574220768332579342713457095
51276749166068943620443662606465560932253102724571
51839432839408603369937836598568898587482593318889
73580937964214208976359993950138625416284627741620
25329888052258942360840990688383437725348384543937
45481603477115365302176595616221948233853344771726
21574353178995621612578677747158329952450793826802
58373978130815826414484343290427052422114383799024
42356290000277232800986687303277146286910559994843
46905122672419204118280457721894997098174400514647
56509608253683201487922274986051415853830006302582
00399579427035214805818339472528659120707768008983
796151819422560998576982997880000000

Courtesy Gert

## November 2014:



* tiNG reports that these transmissions omitted the $==$ separators at start \& end of the message.


## December 2014:

| 4636 | $1820-1829 \mathrm{z}$ | 09 De |
| :---: | :--- | :--- |
| 4761 | $1920-1913 \mathrm{z}$ | 10 De |
| 4975 | $1800-1804 \mathrm{z}$ | 05 De |
|  | $1800-1804 \mathrm{z}$ | 19 De |
| 5240 | $2300-2309 \mathrm{z}$ | 07 De |
|  | $2300-2308 \mathrm{z}$ | 21 De |
| 5374 | $1700-1704 \mathrm{z}$ | 05 De |
|  | $1700-1704 \mathrm{z}$ | 19 De |
| 5561 | 0900 z | 20 De |
| 5825 | $0000-0008 \mathrm{z}$ | 15 De |
|  | $0000-0008 \mathrm{z}$ | 22 De |
| 18041 | $0500-0513 \mathrm{z}$ | 09 De |


| 186 | (275 020) | ) 51059 ... 17105 | 275020 | 00000 | Fair |  | Spectre | TUE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 748 | (621 020) | ) 44108 ... 82828 | 621020 | 00000 | Fair (R | peat of 10 Jun14) | JkC | WED |
| 382 | 00000 F | Fair |  |  |  |  | HFD/Spectre | FRI |
| 382 | 00000 S | Strong |  |  |  |  | AB/JkC | FRI |
| 376 | (524 020) | ) 93295 ... 23051 | 524020 | 00000 | Fair |  | Spectre | SUN |
| 376 | (524 020) | ) 93295 ... 23051 | 524020 | 00000 | Strong | BC QRM1 | JkC | SUN |
| 382 | 00000 F | Fair |  |  |  |  | Spectre | FRI |
| 382 | 00000 | Strong |  |  |  |  | JkC | FRI |
| 171 | (Weak) |  |  |  |  |  | HFD | SAT |
| 376 | (524 020) | ) 93295 ... 23051 | 524020 | 00000 | Strong |  | JkC | MON |
| 376 | (524 020) | ) 93295 ... 23051 | 524020 | 00000 | Strong |  | JkC | MON |
| 952 | (406 55) | 28567 ... $74320=$ | $=$ Fair | Broom | (W. A | t.) remote tuner | JkC | TUE |


| M14 $\quad \mathbf{5 5 6 0 k H z} \quad \mathbf{0 9 0 0 z} \quad 22$ Nov 14 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 171 | $(\mathrm{R} 4 \mathrm{~m})$ | $823 \quad 823 \quad 020 \quad 020==$ |  |  |
| 35091 | 47919 | 710614713749053 |  |  |
| 91535 | 76828 | 32502 | 58546 | 23102 |
| 10871 | 68236 | 75764 | 90152 | 17615 |
| 80721 | 38962 | 04169 | 25634 | 95438 |
| $==$ |  |  |  |  |
| 823 | 823 | 020 | 020 | 00000 |
| Courtesy tiNG |  |  |  |  |



| M14 | $\mathbf{4 5 8 2 5 k H z}$ | $\mathbf{0 0 0 0 z}$ | $\mathbf{1 5}$ | Dec14 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 376 | $(\mathrm{R} 4 \mathrm{~m})$ | 524 | 524 | 020 | 020 |
| 93295 | 26704 | 14838 | 56438 | 79563 |  |
| 29243 | 87610 | 83817 | 86096 | 29313 |  |
| 36191 | 62701 | 76747 | 74420 | 15841 |  |
| 41958 | 10736 | 13238 | 26365 | 23051 |  |
| 524 | 524 | 020 | 020 | 00000 |  |
|  |  |  |  |  |  |
| Courtesy JkC |  |  |  |  |  |

M14a (two message variant)
No reports

## $\underline{\text { M23 }}$ O ICW

No reports - Last heard on 15 July with a ' 200 ' call.
M24 IA MCW / ICW / MCWCC (high speed version of M14), short 0

## November 2014:

Brian (BR) \& Jean-Paul (JPL) managed to catch the last minute each of two transmissions of what, was presumably a $2100 / 2130 \mathrm{z}$ sched on $6789 / 5126 \mathrm{kHz} . . .$.
$6789 \quad 2115$ (IP) - 2116z 17 Nov (426 108) Only last minute of transmission monitored Good MR M
$5126 \quad 2144$ (IP) $-2145 \mathrm{z} \quad 17$ Nov (426 108) (IP - Extremely strong signal) (Remote tuner Siberia) JPL MON (Machine sent - extremely fast) $\quad \ldots . .98126 \quad 2084581961960008760473300$ BT BT 426426108108 TTTTT ( $2145 z$ - Silent)

| 13945 | 1304 (IP) - 1316z | 19 Nov |  | (I/P) | ... $57683=87491$ | 00000 | Strong | JkC | WED |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11073 | 1330-1346z | 19 Nov | 215 | $(87491)=81181$ | ... $57683=87491$ | 00000 | Strong | JkC | WED |
| 12207 | 1406 (IP) - 1416z | 19 Nov |  | (I/P) | ... $57683=87491$ | 00000 | Strong | JkC | WED |
| 9946 | 1430-1446z | 19 Nov | 215 | $(874$ 91) $=81181$ | ... $57683=87491$ | 00000 | Strong | JkC | WED |

Other logs;
8167 1800-1818z 24 Nov $262(493110)==2373231024 \ldots .45948==00000$ Good
BR/RNGB MON

JkC
WED

```
M24 11073kHz 1330z 19 Nov 14 (all groups sent twice)
215(R3) 874874 91 91==
8118174906 04051 79531 66608 79669 04976 14529 17584 35090
87817 72589 02827 14423 42174 93281 53064 10737 05528 99725
37492 12953 12208 87189 25486 08163 73714 68415 32008 02392
51315 80379 70134 77022 06870 82161 59159 23035 42813 98611
61700 20276 67240 895164823453930 4502248925 12530 85391
2089364356 86383 19710 25451 90537 27114 3681400009 17403
7624778684 01223 36996 12830 09675 71447 39001 49814 92167
85755 . 95704693544746 1154673137 38543750724169301909
9980504662 87171 22717 99729 27741 57684 93785 9203148572
57683 = =
8748749191 00000 Courtesy JkC
```


## December 2014:

Following on from his interesting logging of M24 multiple repeats on 19 November, Jim ( JkC ) repeated his success on 03 December with this series of transmissions, also logged by Spectre...

| 10423 | $1400-1413 \mathrm{z}$ | 03 Dec | $262(91875)=85088 \ldots 45481=9187500000$ | Strong/Fair | JkC/Spectre | WED |
| ---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 9946 | $1430-1443 \mathrm{z}$ | 03 Dec | $262(91875)=85088 \ldots 45481=9187500000$ | Strong | JkC/Spectre | WED |
| 8167 | $1500-1513 z$ | 03 Dec | $262(91875)=85088 \ldots 45481=9187500000$ | Strong | WkC/Spectre |  |

...\& again on 10 December...

| 11073 | $1330-1344 \mathrm{z}$ | 10 Dec | $262(40578)=10192 \ldots 61051=4057800000$ | Strong | JkC | WkD |
| ---: | ---: | :--- | :--- | :--- | :--- | :--- | :--- |
| 10423 | $1400-1414 \mathrm{z}$ | 10 Dec | $262(40578)=10192 \ldots 61051=4057800000$ | Strong | JkC | WED |
| 9946 | $1430-1444 \mathrm{z}$ | 10 Dec | $262(40578)=10192 \ldots 61051=4057800000$ | Strong | WED |  |
| 8167 | $1500-1514 \mathrm{z}$ | 10 Dec | $262(40578)=10192 \ldots 61051=4057800000$ | Strong | WkC | WED |

M24a (two message variant)
No reports

M94 CW, MCW, partner station to V24 Virtually unheard in Europe so we rely on our American monitors
Although V24 continues to send messages, albeit on a much reduced level to those previously logged, Token (T!) reports that M94 has not now been seen since November of 2013. It seems that another CW station has now ceased transmissions.

M97 CW, partner station to V30 10375 kHz Starts 1453-1500z (Variable).
Due to the poor reception of this signal in both the UK and Canada, GlobalTuners receivers at Hong Kong, Mojave Desert \& Sydney - as well as the Twente SDR, were used frequently to confirm the msg detail. Reception in S.E. England is still quite variable - though reliably usable at present.

| 10375 | 1500-1522z | 19 Nov | SD84 SN58 | Good Sig into S.E. England | BR | WED |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10375 | 1500-1522z | 20 Nov | SD84 SN58 | Good Sig into S.E. England | BR | THU |
| 10375 | 1500-1522z | 21 Nov | SD84 SN58 | Strong QRM UK. Strong via GTuners, Hong Kong | BR | FRI |
| 10375 | 1500-1522z | 24 Nov | SD84 SN58 | Good Sig into S.E. England | BR | WED |
| 10375 | 1500-1522z | 25 Nov | SD84 SN58 | Fair Sig into S.E. England | BR | THU |
| 10375 | 1500-1522z | 26 Nov | SD84 SN58 | Fair Sig into S.E. England | BR | FRI |
| 10375 | 1500-1522z | 09 Dec | SD84 SN58 | Fair Sig into S.E. England | BR | TUE |
| 10375 | 1500-1522z | 10 Dec | SD84 SN58 | Fair Sig into S.E. England | BR | WED |
| 10375 | 1500-1522z | 11 Dec | SD84 SN58 | Strong QRM UK. Strong via GTuners, Hong Kong | BR | THU |
| 10375 | 1501-1522z | 15 Dec | SD84 SN58 | Good Sig into S.E. England | BR | MON |
| 10375 | 1501-1522z | 16 Dec | SD84 SN58 | Fair Sig into S.E. England | BR | TUE |
| 10375 | 1501-1522z | 17 Dec | SD84 SN58 | Fair Sig into S.E. England | BR | WED |
| 10375 | 1501-1522z | 18 Dec | SD84 SN58 | Fair Sig into S.E. England | BR | THU |

## Morse Stations - Not Number Related

M51 XIX
M51a (FAV22) Daily Mon - Fri, Sun \& some Sats. See NL 72 for details

## 3881//6825

| 1230-1310z | 08 Dec | Lundi-Lecon | 11-1/1 Codé | 11-1/2 Cla | 11-1/3 Co | 11-1/4 Clair (420 grps/hr) | BR | MON |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1230-1300z | 09 Dec | Mardi-Lecon | 12-1/1 Codé, | 12-1/2 Clair, | 12-1/3 Codé, | 12-1/4 Clair (600 grps/hr) | BR | TUE |
| 1230-1304z | 10 Dec | Mercredi-Lecon | 13-1/1 Codé, | 13-1/2 Clair, | 13-1/3 Codé, | 13-1/4 Clair (720 grps/hr) | BR | WED |
| 1230-1255z | 11 Dec | Jeudi-Lecon | 14-1/1 Codé, | 14-1/2 Clair, | 14-1/3 Codé, | 14-1/4 Clair (840 grps/hr) | BR | THU |
| 1230-1303z | 12 Dec | Vendredi-Lecon | 15-1/1 Codé | 15-1/2 Clair, | 15-1/3 Codé, | 15-1/4 Clair (960 grps/hr) | BR | FRI |

## 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.

## Operator Chat from M89

| Op. chat \& traffic reported on the following freqs. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3400 | 4092 | 5145 | 6666 | 7798 | 8055 | 10191 |
| 3461 | 4188 | 5197 | 6674 | 7825 | 8067 |  |
| 3530 | 4243 | 5220 | 6988 |  | 8073 |  |
| 3595 | 4247 | 5225 |  | 8086 |  |  |
| 3734 | 4416 | 5247 |  | 883 |  |  |
| 3748 | 4444 | 5380 |  |  |  |  |
| 3758 | 4578 | 5390 |  |  |  |  |
| 3774 | 4606 | 5555 |  |  |  |  |
| 3779 | 4625 | 5561 |  |  |  |  |
| 3781 | 4631 | 5562 |  |  |  |  |
| 3878 |  | 5685 |  |  |  |  |
|  |  | 5700 |  |  |  |  |
|  |  | 5837 |  |  |  |  |

## New Scheds for Nov/Dec 2014:

| $\underline{3777 / 4532 / 6793 / 8060}$ | On all four // frequencies | First heard 05 Nov | V M8JF (x3) DE RIS9 (x2) |
| :--- | :--- | :--- | :--- |
| $\underline{3777 / 6793 / 8060}$ | On three // freqs | First heard 23 Nov | V M8JF (x3) DE RIS9 (x2) |
| $\underline{8060 / / 9131}$ | New frequency for this round slip. | First heard 22 Nov | V GKLO (x3) DE TYUI (x2) |

## Chart of M89 Freq \& Call signs heard in Nov/Dec $2014 \quad$ New Scheds shown in Bold Type

| Freq in KHz | Call Slip |
| :--- | :--- |
| $3300 / / \mathrm{NRH}$ | V MW3D (x3) DE 2SLC (x2) |
| $3642 / / \mathrm{NRH}$ | V DKG6 (x3) DE 3A7D (x2) |
| $3642 / / 7602$ | V DKG6 (x3) DE 3A7D (x2) |
| $3777 / / 4532$ | V M8JF (x3) DE RIS9 (x2) |
| $3820 / / 5657$ | V GKLO (x3) DE TYUI (x2) |
| $4131 / / \mathrm{NRH}$ | V JKDJ (x3) DE SLBC (x2) |
| $4225 / / \mathrm{NRH}$ | V 7NPE (x3) DE QV5B (x2) |
| $4532 / / \mathrm{NRH}$ | V M8JF (x3) DE RIS9 (x2) |
| $4860 / / 6840$ | VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? |
| $5177 / / \mathrm{NRH}$ | V JKDJ (x3) DE SLBC (x2) |
| $5500 / / \mathrm{NRH}$ | V 7NPE (x3) DE QV5B (x2) |
| $5588 / / \mathrm{NRH}$ | V MW3D (x3) DE 2SLC (x2) |


| Freq in kHz | Call Slip |
| :--- | :--- |
| $5657 / / \mathrm{NRH}$ | V GKLO (x3) DE TYUI (x2) |
| $5801 / / 10180$ | V DKG6 (x3) DE 3A7D (x2) |
| $6793 / / 8060$ | V M8JF (x3) DE RIS9 (x2) |
| $6840 / / \mathrm{NRH}$ | VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K |
| $6840 / / 10640$ | VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K |
| $8060 / / \mathrm{NRH}$ | V M8JF (x3) DE RIS9 (x2) |
| $8072 / / \mathrm{NRH}$ | V GKLO (x3) DE TYUI (x2) |
| $8072 / / 9131$ | V GKLO (x3) DE TYUI (x2) |
| $8072 / / 10421$ | V GKLO (x3) DE TYUI (x2) |
| $8110 / / \mathrm{NRH}$ | V 7NPE (x3) DE QV5B (x2) |
| $10180 / / \mathrm{NRH}$ | V DKG6 (x3) DE 3A7D (x2) |
|  |  |

## Marker Beacons (MX MXI)

| 3594.7 | 2109z | 16 Dec | MX | CW Beacon " ${ }^{\text {D }}$ | Sevastopol | AB | TUE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3658 | 2236z | 29 Dec | MX | CW Beacon "V" |  | BR | MON |
| 4557.7 | 2104z | 16 Dec | MXI | CW Beacon "D" | Sevastopol | AB | TUE |
|  | 2239z | 29 Dec | MXI | CW Beacon "D" | Sevastopol | BR | MON |
| 5153.7 | 2156z | 09 Nov | MXI | CW Beacon "D" | Sevastopol | AB | SUN |
|  |  |  | Also reported 16 Dec 2045z |  |  | AB | TUE |
| 5153.8 | 1612z | 28 Dec | MXI | CW Beacon "D" | Sevastopol | AB | SUN |
| 5153.9 | 2156z | 09 Nov | MXI | CW Beacon "S" | Sevoromorsk | AB | SUN |
|  |  |  | Also reported 28 Dec 1612z |  |  | AB | SUN |
| 5154.9 | 2045z | 16 Dec | MX | CW Beacon "S" | Sevoromorsk | AB | TUE |
| 6917.5 | 0758z | 05 Nov | MX | CW Beacon "L" | St Petersburg (Also heard 09 Nov 2149z) | AB | WED |
|  | 1335z | 16 Nov | MX | CW Beacon "L" | St Petersburg | BR | SUN |
|  | 2153z | 04 Dec | MX | CW Beacon "P" | Kaliningrad (Should be "L" ) | AB | TUE |
|  |  |  | Also reported on 05,16 \& 28 Dec with " $P$ " marker |  |  | AB |  |
| 7000 | 1932z | 16 Nov | MXI | CW Beacon "D" | (IARU lists this as a spurious from 7038.7 kHz ) | BR | SUN |
| 7038.7 | 1933z | 16 Nov | MXI | CW Beacon "D" | Sevastopol | BR | SUN |
|  | 1611z | 28 Dec | MXI | CW Beacon "D" | Sevastopol | AB | SUN |
| 7038.9 | 1933z | 16 Nov | MXI | CW Beacon "S" | Sevoromorsk | BR | SUN |
|  | 1611z | 28 Dec | MXI | CW Beacon "S" | Sevoromorsk | AB | SUN |
| 8494.7 | 2044z | 16 Dec | MX | CW Beacon "D" | Sevastopol | AB | TUE |
| 8497.8 | 1802z | 03 Nov | MX | CW Beacon "L" |  | AB | MON |
|  |  |  | Also r | reported 09 Nov \& 2 |  | AB |  |
| 10871.7 | 1608z | 28 Dec | MXI | CW Beacon "D" | Sevastopol | AB | SUN |
|  | 1313z | 31 Dec | MXI | CW Beacon "D" | Sevastopol | BR | WED |
| 10871.9 | 1608z | 28 Dec | MXI | CW Beacon "S" | Sevoromorsk | AB | SUN |
|  | 2243z | 29 Dec | MXI | CW Beacon "S" | Sevoromorsk | BR | MON |
| 10872 | 1608z | 28 Dec | MXI | CW Beacon "C" | Moscow | AB | SUN |
| 10872.2 | 1608z | 28 Dec | MXI | CW Beacon "F" | Vladivostok | AB | SUN |
| 10872.4 | 1608z | 28 Dec | MXI | CW Beacon "M" | Magadan | AB | SUN |
| 13527.7 | 1311z | 31 Dec | MXI | CW Beacon "D" | Sevastopol | BR | WED |
| 13528 | 2244z | 29 Dec | MXI | CW Beacon "C" | Moscow | BR | MON |
| 16331.7 | 1307z | 31 Dec | MXI | CW Beacon "D" | Sevastopol | BR | WED |
| 16331.9 | 1309z | 31 Dec | MXI | CW Beacon "S" | Sevoromorsk | BR | WED |
| 16332.0 | 1307z | 31 Dec | MXI | CW Beacon "C" | Moscow | BR | WED |
| 20096 | 1305z | 02 Nov | MX | CW Beacon " C " |  | AB | SUN |

## Oddities

## 'The Twenty-Minute Idler'

'The Twenty Minute Idler' is an oddity that has been reported since the early days of the original ENIGMA group, with the earliest reported log being Jan 1998 Originally only noted on 5305 kHz , it was later noted to be operating simultaneously on up to six different frequencies

The station disappeared some time in 2010 z but was rediscovered again active on 5305 kHz , thanks to a British radio amateur, Matt, G7OBR, in Jan 2014. Prior to its disappearance, it was the timing of the transmissions, being exactly twenty minutes long, that gave the station its original nickname. However, on its return in 2014 these transmissions were quite irregular in length \& varied from hour to hour.

Since then, the station appears to have stabilised \& is maintaining better timing, although there are some exceptions. Our regular contributor Spectre has been taking a close look at the stations output;-

09 Nov I have been monitoring the 20 Minute Idler station again, logging from 1500 z on 09 Nov right up to 0800 z on the 10 Nov. Every TX began on the hour and then ended at nineteen minutes past the hour on every occasion except one.
$53050000 \mathrm{z} 10 / 11 \quad$ [Idle Tone] 0119 z Fair Spectre MON

Sadly only the Idle Tone was heard, which wasn't unexpected.
10 Nov I have continued monitoring the 20 minute idler for another night. All of the transmissions sent the idle tone from the top of the hour until twenty minutes past the hour with the exception of one transmission at 2301 z , which continued none stop until 0020 z .
5305 2301z 10/11 [Idle Tone] 0020z Fair Spectre MON

Now look at the previous night's log. It may be a little too early to say, but I can see a pattern emerging regarding these lengthy 1 hour 20 minute transmissions. It may be possible that these lengthy transmission aren't as random as previously thought.

After monitoring the station, some questions and more theories come to light. For example, over the previous 2 days of monitoring the station. I have noticed that the station cannot be heard at these time from 0800 z to 1400 z during the daytime, despite the 0700 z transmission could still be heard at a reasonable signal strength. Transmissions on 5305 kHz can be heard later in the afternoon from 1500 z to 0700 z .

It could be possible the station either:

1 Went out of radio reception range due to SW propagation
2 The station ceased it's transmission activities.
3 The station has switched to another frequency used for the daytime.

I remember that the station used to use other frequencies, but that 5305 kHz was currently the only known active frequency.
Also when the station turns off its transmission at 20 minutes past the hour, could it be possible that the station changed frequency and transmit for another 20 minutes and so forth. So it is possible the station uses three frequencies during the evening hours and another three frequencies for daytime hours. For a station which is willing to transmit right through the small hours of the evening there appears to be a lot of gaps. It's like we are looking at half of the puzzle.

## Spectre

Thanks for the report Spectre. More information on 'The Twenty Minute Idler' can be found here; 'The Twenty Minute Idler'.
Latest:- 'The Twenty Minute Idler' is also now active on $\mathbf{4 3 0 1 k H z}$ - Rediscovered in November \& running parallel with 5305 kHz . May have been active before, but certainly wasn't audible on that frequency when checked following the rediscovery of the 5305 kHz transmissions.

## 20 Minute Idler 5305kHz - Logs (Courtesy Spectre)

1500z 09/11 [Idle Tone] 1519z Fair QRN3 QSB2 Spectre SUN 1600z 09/11 [Idle Tone] 1619z Fair QRN3 QSB3 Spectre SUN 1700z 09/11 [Idle Tone] 1719z Fair QRN3 QSB3 Spectre SUN 1800z 09/11 [Idle Tone] 1819z Fair QRN3 QSB3 Spectre SUN 1900z 09/11 [Idle Tone] 1919z Fair QRN3 QSB3 Spectre SUN 2000z 09/11 [Idle Tone] 2019z Fair QRN3 QSB3 Spectre SUN 2100z 09/11 [Idle Tone] $2119 z$ Fair QRN3 QSB3 Spectre SUN 2200z 09/11 [Idle Tone] 2219z Fair QRN4 QSB3 Spectre SUN 2300z 09/11 [Idle Tone] 2319z Fair QRN4 QSB3 Spectre SUN 0000z 10/11 [Idle Tone] 0119z Fair QRN4 QSB3 Spectre MON (1 Hour 19 Minute TX)
0200z 10/11 [Idle Tone] 0219z Fair QRN4 QSB3 Spectre MON 0300z 10/11 [Idle Tone] 0319z Fair QRN4 QSB3 Spectre MON 0400z 10/11 [Idle Tone] 0419z Fair QRN4 QSB3 Spectre MON 0500z 10/11 [Idle Tone] 0519z Fair QRN4 QSB3 Spectre MON 0600z 10/11 [Idle Tone] 0620z Weak QRN4 QSB3 Spectre MON 0700z 10/11 [Idle Tone] 0719z Weak QRN4 QSB3 Spectre MON 1500z 10/11 [Idle Tone] 1520z Weak QRN3 QSB3 Spectre MON 1600z 10/11 [Idle Tone] 1620z Fair QRN3 QSB3 Spectre MON 1700z 10/11 [Idle Tone] 1720z Fair QRN3 QSB3 Spectre MON 1800z 10/11 [Idle Tone] 1820z Fair QRN3 QSB3 Spectre MON 1900z 10/11 [Idle Tone] 1920z Fair QRN3 QSB3 Spectre MON 2000z 10/11 [Idle Tone] 2020z Fair QRN3 QSB3 Spectre MON 2100z 10/11 [Idle Tone] 2120z Fair QRN3 QSB3 Spectre MON 2203z 10/11 [Idle Tone] 2220z Fair QRN3 QSB3 Spectre MON 2300z 10/11 [Idle Tone] 0020z Fair QRN4 QSB3 Spectre MON (1 Hour 20 Minute TX)
0100z 11/11 [Idle Tone] 0120z Fair QRN4 QSB3 Spectre TUE 0200z 11/11 [Idle Tone] 0220z Fair QRN4 QSB3 Spectre TUE 0300z 11/11 [Idle Tone] 0320z Fair QRN4 QSB3 Spectre TUE 0400z 11/11 [Idle Tone] 0420z Fair QRN4 QSB3 Spectre TUE 0500z 11/11 [Idle Tone] 0520z Fair QRN4 QSB3 Spectre TUE 0600z 11/11 [Idle Tone] 0620z Fair QRN4 QSB3 Spectre TUE 0700z 11/11 [Idle Tone] 0720z Fair QRN4 QSB3 Spectre TUE 1500z 11/11 [Idle Tone] 1520z Weak QRN4 QSB3 Spectre TUE 1600z 11/11 [Idle Tone] 1620z Fair QRN4 QSB3 Spectre TUE 1700z 11/11 [Idle Tone] 1720z Fair QRN4 QSB3 Spectre TUE 1800z 11/11 [Idle Tone] 1820z Fair QRN4 QSB3 Spectre TUE 1900z 11/11 [Idle Tone] 1920z Fair QRN4 QSB3 Spectre TUE 2000z 11/11 [Idle Tone] 2020z Weak QRN4 QSB3 Spectre TUE 2100z 11/11 [Idle Tone] 0122z Fair QRN4 QSB3 Spectre TUE (4 Hour 22 Minute TX)
0201z 12/11 [Idle Tone] 0221z Fair QRN4 QSB3 Spectre WED 0300z 12/11 [Idle Tone] 0320z Fair QRN3 QSB3 Spectre WED 0406z 12/11 [Idle Tone] 0421z Fair QRN4 QSB3 Spectre WED 0500z 12/11 [Idle Tone] 0521z Fair QRN4 QSB3 Spectre WED 0600z 12/11 [Idle Tone] 0621z Fair QRN4 QSB3 Spectre WED 0700z 12/11 [Idle Tone] 0720z Fair QRN4 QSB3 Spectre WED

1500z 12/11 [Idle Tone] 1520z Fair QRN3 QSB3 Spectre WED 1600z 12/11 [Idle Tone] 1620z Fair QRN3 QSB3 Spectre WED 1700z 12/11 [Idle Tone] 1720z Fair QRN3 QSB3 Spectre WED 1800z 12/11 [Idle Tone] 1820z Fair QRN3 QSB3 Spectre WED 1900z 12/11 [Idle Tone] 1920z Fair QRN3 QSB3 Spectre WED 2001z 12/11 [Idle Tone] 2020z Weak QRN3 QSB3 Spectre WED 2100z 12/11 [Idle Tone] 2120z Fair QRN4 QSB3 Spectre WED 2158z 12/11 [Idle Tone] 2220z Fair QRN4 QSB3 Spectre WED 2300z 12/11 [Idle Tone] 2320z Fair QRN4 QSB3 Spectre WED 0000z 13/11 [Idle Tone] 0020z Fair QRN4 QSB3 Spectre THU 0100z 13/11 [Idle Tone] 0120z Fair QRN4 QSB3 Spectre THU 0206z 13/11 [Idle Tone] 0220z Fair QRN4 QSB3 Spectre THU 0300z 13/11 [Idle Tone] 0320z Fair QRN4 QSB3 Spectre THU 0400z 13/11 [Idle Tone] 0420z Fair QRN4 QSB3 Spectre THU 0500z 13/11 [Idle Tone] 0520z Fair QRN4 QSB3 Spectre THU 0600z 13/11 [Idle Tone] 0620z Fair QRN4 QSB3 Spectre THU 0700z 13/11 [Idle Tone] 0720z Fair QRN4 QSB3 Spectre THU 1500z 13/11 [Idle Tone] 1520z Fair QRN4 QSB3 Spectre THU 1600z 13/11 [Idle Tone] 1620z Fair QRN4 QSB3 Spectre THU 1700z 13/11 [Idle Tone] 1720z Fair QRN4 QSB3 Spectre THU 1800z 13/11 [Idle Tone] 1820z Fair QRN4 QSB3 Spectre THU 1900z 13/11 [Idle Tone] 1920z Fair QRN4 QSB3 Spectre THU 2000z 13/11 [Idle Tone] 2020z Fair QRN4 QSB3 Spectre THU 2100z 13/11 [Idle Tone] 2120z Fair QRN4 QSB3 Spectre THU 2200z 13/11 [Idle Tone] 2220z Fair QRN4 QSB3 Spectre THU 2300z 13/11 [Idle Tone] 2320z Fair QRN4 QSB3 Spectre THU 0000z 14/11 [Idle Tone] 0020z Fair QRN4 QSB3 Spectre FRI 0100z 14/11 [Idle Tone] 0120z Fair QRN4 QSB3 Spectre FRI 0200z 14/11 [Idle Tone] 0220z Fair QRN4 QSB3 Spectre FRI 0300 z 14/11 [Idle Tone] 0320z Fair QRN4 QSB3 Spectre FRI 0400z 14/11 [Idle Tone] 0420z Fair QRN4 QSB3 Spectre FRI 0500z 14/11 [Idle Tone] 0520z Fair QRN4 QSB3 Spectre FRI 0600z 14/11 [Idle Tone] 0620z Fair QRN4 QSB3 Spectre FRI 0700z 14/11 [Idle Tone] 0720z Fair QRN4 QSB3 Spectre FRI 1500z 14/11 [Idle Tone] 1520z Fair QRN4 QSB3 Spectre FRI 1600z 14/11 [Idle Tone] 1620z Fair QRN4 QSB3 Spectre FRI 1700z 14/11 [Idle Tone] 1720z Fair QRN4 QSB3 Spectre FRI 1800z 14/11 [Idle Tone] 1820z Fair QRN4 QSB3 Spectre FRI 1900z 14/11 [Idle Tone] 1920z Fair QRN4 QSB3 Spectre FRI 2000z 14/11 [Idle Tone] 2020z Fair QRN4 QSB3 Spectre FRI 2100z 14/11 [Idle Tone] 2120z Fair QRN4 QSB3 Spectre FRI 2200z 14/11 [Idle Tone] 2232z Fair QRN4 QSB3 Spectre FRI 2312z 14/11 [Idle Tone] 0120z Fair QRN4 QSB3 Spectre FRI (2 Hour 8 Minute TX)
0200z 15/11 [Idle Tone] 0220z Fair QRN4 QSB3 Spectre SAT 0300z 15/11 [Idle Tone] 0319z Fair QRN4 QSB3 Spectre SAT 0400z 15/11 [Idle Tone] 0419z Fair QRN4 QSB3 Spectre SAT 0500z 15/11 [Idle Tone] 0520z Fair QRN4 QSB3 Spectre SAT 0600z 15/11 [Idle Tone] 0620z Fair QRN4 QSB3 Spectre SAT 0700z 15/11 [Idle Tone] 0720z Fair QRN4 QSB3 Spectre SAT

1500z 15/11 [Idle Tone] 1520z Fair QRN3 QSB3 Spectre SAT 1600z 15/11 [Idle Tone] 1620z Fair QRN3 QSB3 Spectre SAT 1700z 15/11 [Idle Tone] 1720z Fair QRN3 QSB3 Spectre SAT 1800z 15/11 [Idle Tone] 1820z Fair QRN3 QSB3 Spectre SAT 1900z 15/11 [Idle Tone] 1920z Fair QRN3 QSB3 Spectre SAT 2000z 15/11 [Idle Tone] 2020z Fair QRN3 QSB3 Spectre SAT 2100z 15/11 [Idle Tone] 2120z Fair QRN3 QSB3 Spectre SAT 2200z 15/11 [Idle Tone] 2220z Fair QRN3 QSB3 Spectre SAT 2300z 15/11 [Idle Tone] 2320z Fair QRN3 QSB3 Spectre SAT 0000z 16/11 [Idle Tone] 0021z Fair QRN3 QSB3 Spectre SUN 0059z 16/11 [Idle Tone] 0120z Fair QRN3 QSB3 Spectre SUN 0200z 16/11 [Idle Tone] 0219z Fair QRN3 QSB3 Spectre SUN 0300z 16/11 [Idle Tone] 0319z Fair QRN3 QSB3 Spectre SUN 0400z 16/11 [Idle Tone] 0419z Fair QRN3 QSB3 Spectre SUN 0500z 16/11 [Idle Tone] 0519z Fair QRN3 QSB3 Spectre SUN 0600z 16/11 [Idle Tone] 0619z Fair QRN3 QSB3 Spectre SUN 0659z 16/11 [Idle Tone] 0719z Fair QRN3 QSB3 Spectre SUN (Not monitored 16/11 1500z to 17/11 0700z)
1500z 17/11 [Idle Tone] 1524z Fair QRN4 QSB3 Spectre MON 1600z 17/11 [Idle Tone] 1620z Fair QRN4 QSB3 Spectre MON 1700z 17/11 [Idle Tone] 1720z Fair QRN4 QSB3 Spectre MON 1800z 17/11 [Idle Tone] 1826z Fair QRN4 QSB3 Spectre MON 1900z 17/11 [Idle Tone] 1926z Fair QRN4 QSB3 Spectre MON 2000z 17/11 [Idle Tone] 2023z Fair QRN4 QSB3 Spectre MON 2100z 17/11 [Idle Tone] 2121z Fair QRN4 QSB3 Spectre MON 2206z 17/11 [Idle Tone] 2235z Fair QRN4 QSB3 Spectre MON 2300z 17/11 [Idle Tone] 2324z Fair QRN4 QSB3 Spectre MON 0001z 18/11 [Idle Tone] 0019z Fair QRN4 QSB3 Spectre TUE 0102z 18/11 [Idle Tone] 0120z Fair QRN4 QSB3 Spectre TUE 0200z 18/11 [Idle Tone] 0220z Fair QRN4 QSB3 Spectre TUE 0259z 18/11 [Idle Tone] 0321z Fair QRN4 QSB3 Spectre TUE 0359z 18/11 [Idle Tone] 0420z Fair QRN4 QSB3 Spectre TUE 0459z 18/11 [Idle Tone] 0519z Fair QRN4 QSB3 Spectre TUE 0559z 18/11 [Idle Tone] 0619z Fair QRN4 QSB3 Spectre TUE 0659z 18/11 [Idle Tone] 0719z Fair QRN4 QSB3 Spectre TUE (Not Monitored 18/11 1500z)

1600z 18/11 [Idle Tone] 1620z Fair QRN4 QSB3 Spectre TUE 1700z 18/11 [Idle Tone] 1720z Fair QRN4 QSB3 Spectre TUE 1800z 18/11 [Idle Tone] 1821z Fair QRN4 QSB3 Spectre TUE 1900z 18/11 [Idle Tone] 1920z Fair QRN4 QSB3 Spectre TUE 2000z 18/11 [Idle Tone] 2020z Fair QRN4 QSB3 Spectre TUE 2100z 18/11 [Idle Tone] 2120z Fair QRN4 QSB3 Spectre TUE 2200z 18/11 [Idle Tone] 2220z Fair QRN4 QSB3 Spectre TUE 2300z 18/11 [Idle Tone] 2320z Fair QRN4 QSB3 Spectre TUE 0000z 19/11 [Idle Tone] 0020z Fair QRN4 QSB3 Spectre WED 0100z 19/11 [idle Tone] 0120z Fair QRN4 QSB3 Spectre WED 0200z 19/11 [Idle Tone] 0220z Fair QRN4 QSB3 Spectre WED 0305z 19/11 [Idle Tone] 0322z Fair QRN4 QSB3 Spectre WED 0401z 19/11 [Idle Tone] 0423z Fair QRN4 QSB3 Spectre WED 0501z 19/11 [Idle Tone] 0520z Fair QRN4 QSB3 Spectre WED 0600z 19/11 [Idle Tone] 0621z Fair QRN4 QSB3 Spectre WED 0700z 19/11 [Idle Tone] 0720z Fair QRN4 QSB3 Spectre WED (Not Monitored 19/11 1500z To 0000z)
0000z 20/11 [Idle Tone] 0120z Fair QRN4 QSB3 Spectre THU (1 Hour 20 Minute TX)
0200z 20/11 [Idle Tone] 0220z Fair QRN4 QSB3 Spectre THU 0300z 20/11 [Idle Tone] 0322z Fair QRN4 QSB3 Spectre THU 0403z 20/11 [Idle Tone] 0420z Fair QRN4 QSB3 Spectre THU 0500z 20/11 [Idle Tone] 0520z Fair QRN4 QSB3 Spectre THU 0559z 20/11 [Idle Tone] 0619z Fair QRN4 QSB3 Spectre THU 0700z 20/11 [Idle Tone] 0725z Fair QRN4 QSB3 Spectre THU (Not Monitored 20/11 1500z To 0000z)
0000z 21/11 [Idle Tone] 0020z Fair QRN4 QSB3 Spectre FRI 0100z 21/11 [Idle Tone] 0228z Fair QRN4 QSB3 Spectre FRI (1 Hour 28 Minute TX)
0305z 21/11 [Idle Tone] 0322z Fair QRN4 QSB3 Spectre FRI 0359z 21/11 [Idle Tone] 0420z Fair QRN4 QSB3 Spectre FRI 0500z 21/11 [Idle Tone] 0520z Fair QRN4 QSB3 Spectre FRI 0600z 21/11 [Idle Tone] 0624z Fair QRN4 QSB3 Spectre FRI 0700z 21/11 [Idle Tone] 0720z Weak QRN4 QSB3 Spectre FRI (Not Monitored 21/11 1500z to 22/11 0000z)

| XSL | 'Slot Machine' |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4153 | 10 Nov | 2231z | QPSK 1500Bd | Japanese Navy a.k.a. Slot Machine | AB | MON |
| 4231.5 | 10 Nov | 2231z | QPSK 1500Bd | Japanese Navy a.k.a. Slot Machine | AB | MON |
| 5417 | 10 Nov | 2232z | QPSK 1500Bd | Japanese Navy a.k.a. Slot Machine | AB | MON |
| 6250 | 10 Nov | 2234z | QPSK 1500Bd | Japanese Navy a.k.a. Slot Machine | AB | MON |
| 6417 | 10 Nov | 2234z | QPSK 1500Bd | Japanese Navy a.k.a. Slot Machine | AB | MON |
| 6445 | 10 Nov | 2236z | QPSK 1500Bd | Japanese Navy a.k.a. Slot Machine | AB | MON |
| 8313 | 10 Nov | 2237z | QPSK 1500Bd | Japanese Navy a.k.a. Slot Machine | AB | MON |
| 8703.5 | 10 Nov | 2237z | QPSK 1500Bd | Japanese Navy a.k.a. Slot Machine | AB | MON |
| 8588 | 10 Nov | 2237z | QPSK 1500Bd | Japanese Navy a.k.a. Slot Machine | AB | MON |
| $\underline{\text { S28 }}$ | 'The Buzzer' |  |  |  |  |  |
| 4625 | 1526z |  | 29 Dec | 'The Buzzer' on loud \& clear - as heard in Stockholm | CHPA | Mon |
| $\underline{\mathbf{S 3 2}}$ | 'Squeaky Wheel' |  |  |  |  |  |
| 3828 | 2018z |  | 14 Dec | 'Squeaky Wheel' marker USB | BR | SUN |

## More on the 'Squeaky Wheel'

In the Sept 2014 newsletter (EN84) we carried a discussion from the RSGB Tech Forum reporting that the 'Squeaky Wheel' signal had been identified as a malfunctioning Home Office transmitter based at Inskip (EN84 Page 5).

However, the signal we know as the 'Squeaky Wheel' is believed to operate from Russia \& to be part of the same group of control stations as 'The Buzzer' \& 'The Pip', all of which are known to use a channel marker \& to send occasional voice messages.

Furthermore, the 'Squeaky Wheel' uses two frequencies, 3828 kHz (Night) \& 5473 kHz (Day) \& although reception in the UK can be quite poor, the night-time signal is still very much in evidence in the late evenings.

The original discussion stated that the problem was a product of the 81.01 kHz signal causing a signal to appear on the 46th harmonic - which would be 3726.46 kHz , some distance from the frequency that the 'Squeaky Wheel' has operated on for many years.

So what was the signal identified in the RSGB Tech Forum discussion, \& does it have any connection to the 'Squeaky Wheel' or was it a different signal entirely?

Contributors: $\quad \mathrm{AB}$, AnonUS, BR, CHPA, Gert, HFD, JkC, JPL, RNGB, Spectre, tiNG, T! Thank you all for your logs.

## Voice Stations, short round up

The stations have all behaved much we would expect although the changes of frequencies amongst E07/E07a was a surprise for December as well as the large slot for the new daily schedule in Upper Sideband.

Some additional activities around 10250 kHz as we have seen.
We have received splendid logs from our members and from others who have seen fit to contact us directly either by mail, phone as well as emails. ... tnx.

## VOICE LOGS:

## E06 Nov/Dec log:

| Second Wednesday | 1920z | 4527 kHz | 2020z | 4047 kHz |
| :---: | :---: | :---: | :---: | :---: |
| 12/11 '376' 00000 |  |  |  |  |
| 10/12 '376' 00000 |  |  |  |  |
| Sunday following second Weds | 1120z | 6874 kHz | 1220z | 5776kHz |
| 16/11 '376' 00000 |  |  |  |  |
| 14/12 '376' 00000 |  |  |  |  |
| First/Third Thursday of month 06/11, 13/11, 04/12 \& 18/12 | 2030z | 4836kHz |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| 14259226763278232782767238940912215743266407090235380855954312319 |  |  |  |  |
| 742383666412256188417331198089122505692000000 |  |  |  |  |
| Repeat of msg first seen on G06 |  |  |  |  |
| Friday following First / Third Thursday 2130 z [760kHz |  |  |  |  |
| 07/11, 21/11, 05/12 \& 19/12 |  |  |  |  |
| '472' 61320142592267632782327827672389409122157432664070902353808559543 |  |  |  |  |
| 1231974238366641225618841733119808912250 |  |  |  |  |

06/11 \& 20/11
‘507' 832109
67028793370052925736702126557736348925697374345969 94093706856348651776147266259520614942955695247959 48937952971817531521359388591997708030057092891206 88236381036877042485064169527272610847489858488021 34042712618250837366941616255111086341571392671981 68983659472727925097380998811115455249259282643878 25922404241103262982843866025611696936197330479092 55148473857532608610668466188605136303957061610728 78088329244231415538891159981519823397350031641533 30346687296067287742209180622006346824940307541312 149584942847625661071233119183904534847955090 83210900000

JkC, RNGB
$0600 \mathrm{z} \quad 15810 \mathrm{kHz} \quad 0700 \mathrm{z} \quad 18455 \mathrm{kHz}$

04/12
'923' 786104
45725789048226944444209741703713910167392655695731
75667387366147189362112711481736405576802607779853 41127015605960482097451968526890580771681164523661 66693455772835357761762441972086768671600387731286 62696926623757715009788076763119134297105359281455 55239825546641123591314236747693354815969600753697 93589916200626785279508866475853983776559999237732 12586220639258321320730543383182425449826078705449 34483211095060650360876287734322100484152565930397 22483289213629799819291605222862872851362919575787 78358548135784715621
78610400000
'923' 845106
78100773264674628401748985077833503205083123132441 46777365728455186595681015992904832045823658073078 14505232533488656457260823180217166966852713315409 21017152236731109143307395337127129605518404374564 73145243793940569879292763786046244777091890250005 85134535295746603332702125070400246914813097898265 74982411421568986594540789172883514969644601271261 77650358541069591861965765999128430133260564803061 77178481925620339999978120675504386498345204605462 46852629900272187114155650400971152263409886065615 512141873780964750668483677163 84510600000

Unscheduled

| $13389 \mathrm{kHzz} \mathrm{1230z}$ | 24/12 | '215' 934616504320420080098322089195 11540_.... 2999359586 | JkC | WED |
| :---: | :---: | :---: | :---: | :---: |
| 10423kHz1301z | 10/12 | '215' 7086981217 ... 6156470869 00000]1317z Strong QRM1 QSB1 | JkC | THU |
| 1300 z | 24/12 | '215'934616504320420 080098322089195 11540..... 2999359586 | RNGB | WED |
| 5926 kHz 1703z | 10/12 | I/P ..... ... LG 615647086900000 End 1717z Strong QRM1 QSB1 | JkC | THU |
| 5931 kHz 1709z | 24/12 | I/P........LG 595869346100000 |  |  |
| $4830 \mathrm{kHz} \mathrm{1730z}$ | 10/12 | '215' 7086981217 ... 615647086900000 End 1747z Strong QRM1 QSB1 | JkC | THU |
|  |  | '215' 70869184567427663642601492328124239856845680240309 |  |  |
|  |  | 5860754963673658038112820984591376015951762304796446968 |  |  |
|  |  | 38583408055323604706979748524757919861429321591470 |  |  |
|  |  | 87858736192810416478737613282045965346231715028947 |  |  |
|  |  | 58474783200641370503751574641828215042791505774854 |  |  |
|  |  | 657941905328521749843463939258575838390161564 |  |  |
|  |  | 7086900000 |  |  |
| 1730z | 24/12 | '215'934616504320420 080098322089195 11540_.... 2999359586 | RNGB | WED |

'215’ 93461650432042008009832208919511540250872433515069 5090014333452005458634515128329128010250257446665314289 22421104610044988918967855309991443515694167302020 90014719626993117630540289361945038216938915104119 76141912661229021069917064570980368047614647200190 5163233397413898413971644018676123248079011912999359586 9346100000

Spectre, RNGB, Malc, JkC

## PoSW's analysis across November and December

Moving lower in frequency in November as expected.
First + Third Thursdays in the Month 2030 UTC Schedule:-
6-Nov-14:- $4,836 \mathrm{kHz}$, started almost one minute before the half-hour, calling " 321 ", $\mathrm{DK} / \mathrm{GC}$
"569 56920 20"
20-Nov-14:- 4,836 kHz, "321" and "569 5692020 " again.
4-Dec-14:- 4,836 kHz, " 321 " and "569 56920 20", as in November. Peaking well over S9 with good audio
Friday 2130 UTC Schedule Following the First + Third Fridays:-
7-Nov-14:- $4,760 \mathrm{kHz}$, call " 472 ", DK/GC "613 6132020 ". 5 Fs message same as yesterday's 2030 UTC sending but with a different Decode Key, group numbers 3 and 4 both " 32782 ". S9 signal with good audio.

5-Dec-14:- 4,760 kHz, "472" and "613 $6132020 "$, S9 with good audio.

Second Wednesday in the Month $1920+2020$ UTC Schedule:-
12-Nov-14:- 1920 UTC, $4,527 \mathrm{kHz}$, this frequency used in January and February of this year, S7 to S8 carrier but very low audio, became clearer towards the end of the transmission, "376 37637600000 ".
2020 UTC, $4,047 \mathrm{kHz}$, second sending, no problem with audio level here.

Sunday $1120+1220$ UTC Schedule Following the Second Wednesday in the Month:-
16-Nov-14:- 1120 UTC, $6,874 \mathrm{kHz}$, "376 37637600000 ", weak signal but surprisingly clear copy with the receiver in USB mode.
1220 UTC, $5,776 \mathrm{kHz}$, second sending, very weak signal. Following what appears to be the standard procedure, the same frequencies as used for this schedule in January and February.

14-Dec-14:- 1120 UTC, $6,874 \mathrm{kHz}$, "376 37637600000 ", very weak signal, only just readable. Had started when tuned in a few seconds before 1120 Z and stopped 1123:40s.
No sign of a transmission at 1220 UTC on $5,776 \mathrm{kHz}$, probably too weak to compete with the local RF noise level.

E07
November2014
Sunday/Wednesday

| $\mathbf{1 8 0 0 z}$ | $\mathbf{8 1 5 3 k H z}$ | $\mathbf{1 8 2 0 z}$ | $\mathbf{6 8 5 3} \mathbf{k H z}$ | $\mathbf{1 8 4 0 z}$ |
| :--- | :--- | :--- | :--- | :--- |
| $\mathbf{5 4 5 3} \mathbf{k H z}$ |  |  |  |  |
| $02 / 11$ | 184000 | Fair/Strong |  |  |
| $05 / 11$ | 184000 | Weak |  |  |
| $09 / 11$ | 184000 | Fair |  |  |
| $16 / 11$ | $184128215834140 \ldots 32088000000$ | Strong |  |  |
| $19 / 11$ | $184128215834140 \ldots 37088000000$ | Fair |  |  |
| $23 / 11$ | 184000 | Fair |  |  |

## Monday/Wednesday

$2000 \mathrm{z} \quad 7724 \mathrm{kHz} \quad 2020 \mathrm{z} \quad 6924 \mathrm{kHz} \quad 2040 \mathrm{z} \quad 5824 \mathrm{kHz}$

| 03/11 | 7981 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 10/11 | 79818775141893 ... 04198000000 |  |  |  |
| Thursday |  |  |  |  |
| 2110z 6777kHz | 2130z | 5449kHz | 2150z | 4483 kHz |
| 06/11 | 744000 |  |  |  |
| 27/11 | 744000 |  |  |  |

December2014
[unscheduled] Apparently daily

| $1100 z$ | 18646 kHz | 1120 z | 17464 kHz | 1140 z | 15826 kHz |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 1200 z | 16139 kHz | 1220 z | 14607 kHz | 1240 z | 13951 kHz |
| 1600 z | 9121 kHz | 1620 z | 7967 kHz | 1640 z | 6942 kHz |
| 1700 z | 6949 kHz | 1720 z | 5886 kHz | 1740 z | 5091 kHz |

8131490468296592347144235610314931. $\qquad$ .6507700545000000 [fm RNGB]

## 813149046

82965923471442356103149315595586440540133591976751
75499193438374978087704244798390748215540215509002
96263683394518716267830266543666819475906269463600
56830544345113025275881012464081088945256824652868
951917127931858557146507700545
000000
Courtesy JkC
$11 / 1281313524300097 \ldots 53008000000$
$12 / 12 \quad 81313524300097 \ldots 53008000000$

Strong
Strong

Strong
Strong to very strong
Very strong

E07 9121kHz/7967kHz/6942kHz/6949kHz/5886kHz/5091kHz 1600z/1620z/1640z/1700z/1720z/1740z 15/12
813167851
40087445272902202821972301069494148414121181439195
24071305999280649642385446545947628672561613356 26141019425258247225794301931893398304509025387417 01817101862046910838041119596298530617203540879370 32442441913117351484188748907705056252022095365051 38908
000000
Courtesy JkC

## 813141148

47543302687238317804170445178154463236607484240903 71795068660073067749674131664935574857920005371875 50572402720653453857004456548278520433483910191052 00235390839327439255248086868015773838416704131745 0149400813807844892288927485686049470608 000000

813132268
70458445827812643950811336773878892694302735391918 52993720968199810724356634743010279227712680216337 97603899216636117277552276911183600980399101271663 63047385466453304528018375997995573364975312843430 23843331791940326950440198519583068864658918643428 20316856704152704712238225085418260320934173016028 9180555887150594064052557458454607501954
000000
Courtesy JkC
81313226870458 ... 01954000000

23/12 $81313226870458 \ldots 01954000000$
Strong
24/12
$81314375719861 \ldots 32254000000$
Very strong
813143757
19861951566976471304888640002726114177313805663771
78044171426713159220923342734959003850142581524066 09644436488734317381301256937730181343763088289881 14993300319823098152890466446760012783225306893572 02497548531020989116571863249635300495274807771322 39633600200767049280563637919032254 000000

## 813194062

39528855607715278865506798117452355776113658452061
82283437617885726513361565319099359992326963546049 55663168483349197260075552465837046823740140541500 30118011572796198259751742851459285106060340740506 52102599073624411881519019765617515419601333554692 87360486885801106560007180099191138365234164988295 6859894550000000

Courtesy tiNG

813194062
39528855607715278865506798117452355776113658452061 82283437617885726513361565319099359992326963546049 55663168483349197260075552465837046823740140541500
30118011572796198259751742851459285106060340740506
52102599073624411881519019765617515419601333554692
87360486885801106560007180099191138365234164988295 6859894550
000000

813151870
39097868359026595123108945034464233866779103733399 16477726215997183716716214012658168637861300737655 36537706900104401455028203067461663930720891673393 39674716157365939061148792083830594439540993407670 79578217207647063545418181650976618888919019806779 79578217207647063545418181650976618888919019806779 40970376778012829833284105300772221833117484287154 $\begin{array}{ll}7275168154 \\ 000 & 600\end{array}$

## PoSW'a E07 logs and analysis:

Continuing to use the same frequencies as in past years, still experiencing readability problems due to low audio levels. Moved by one hour with the end of British Summer Time so still shows up at the same local clock time in the UK.

Sunday + Wednesday Schedule, 1800 UTC Start:-
9-Nov-14, Sunday:- 1800 UTC, $8,153 \mathrm{kHz}$, "184 184184000 ", S9 with reasonable audio.
1820 UTC, $6,853 \mathrm{kHz}, \mathrm{S} 9+$.
16-Nov-14, Sunday:- 1800 UTC, $8,153 \mathrm{kHz}$, first sending unreadable due to a strong wide-band "buzz" extending from roughly 8,140 to $8,160 \mathrm{kHz}$, presumably over-the-horizon radar.
Able to tell E07 was "full message" because the carrier did not go off after two minutes and twenty-eight seconds
1820 UTC, $6,853 \mathrm{kHz}$, second sending, S9 with QSB, no interference. "184 1841841 ", DK/GC "282 158" x 2.
1840 UTC, $5,453 \mathrm{kHz}$, third sending, peaking S9+, slight interference from the SSB station on 5,450 , the artist formerly known as RAF VOLMET.
19-Nov-14, Wednesday:- 1800 UTC, $8,153 \mathrm{kHz}$, unreadable due to very low audio and a strong "XJT" roaring away on a close frequency, not noticed before.
1820 UTC, $6,853 \mathrm{kHz}$, also unreadable due to low audio.
1840 UTC, $5,453 \mathrm{kHz}$, again, largely unreadable due to low audio.
23-Nov-14, Sunday:- 1800 UTC, $8,153 \mathrm{kHz}$, "184 184184000 ", peaking over S9 with reasonable audio, much better signal than on the 19th.
1820 UTC, $6,853 \mathrm{kHz}$, second sending, also over S9.
3-Dec-14, Wednesday:- 1800 UTC, $7,464 \mathrm{kHz}$, "485 485485 1", weak signal with low audio and what sounded like AC ripple on the carrier, unable to hear DK/GC, also side-band splash from a broadcast station on a close frequency.
1820 UTC, $5,864 \mathrm{kHz}$, second sending much better, DK/GC heard as "214 116" x 2.
1840 UTC, $4,564 \mathrm{kHz}$, third sending, S9 with deep QSB.
10-Dec-14, Wednesday:- 1800 UTC, $7,464 \mathrm{kHz}$, "485 485485000 ", low audio and broadcast station interference, difficult copy. 1820 UTC, $5,864 \mathrm{kHz}$, second sending,, also with low audio.

Monday + Wednesday Schedule, 2000 UTC Start:-
3-Nov-14, Monday:- 2000 UTC, $7,724 \mathrm{kHz}$, "798 798798 1", DK/GC "640 37" x 2. S9 carrier, audio low but readable.
2024 UTC, $6,924 \mathrm{kHz}$, second sending in progress, weak signal with low audio, difficult copy.
2040 UTC, $5,824 \mathrm{kHz}$, third sending, weak signal and low audio, unreadable.
17-Nov-14, Monday:- 2000 UTC, $7,724 \mathrm{kHz}$, very weak signal, only just detectable, unreadable, carrier went off just before 2002 and 30 s UTC which indicates a "no message"
transmission.
2020 UTC, $6,924 \mathrm{kHz}$, also very weak and unreadable.
19-Nov-14, Wednesday:- 2000 UTC, $7,724 \mathrm{kHz}$, and 2020 UTC, $6,924 \mathrm{kHz}$, both very weak again, only just detectable by using the receiver in USB mode and adjusting the tuning to produce a beat note, and that was with the ATU switched in and everything peaked as sharp as possible. Carrier went off after two and a half minutes which indicates "no message".

1-Dec-14, Monday:- 2000 UTC, $7,478 \mathrm{kHz}$, the less than impressive signals continue in December with the expected change of frequencies; very low audio plus proximity to a strong broadcast station making for a generally unreadable transmission. Able to tell it was a "full message" because the carrier was still up at 2006 UTC.
2020 UTC, $6,778 \mathrm{kHz}$, somewhat better signal, "472 472472 1". S7 to S8 with deep QSB
one dip in signal coinciding with the spoken Decode Key, Group Count heard as " 85 ".
2040 UTC, $5,278 \mathrm{kHz}$, "472 4724721 ", DK/GC " 24785 " x 2 . Peaking over S9 with reasonable audio, by far the best transmission of the three.
Thursday Schedule, 2110 UTC Start-
13-Nov-14:- 2110 UTC, $6,777 \mathrm{kHz}$, "744 744744000 ", audio low but readable.
2130 UTC, $5,449 \mathrm{kHz}$, second sending, also with low audio, suffering slightly from the SSB station on 5,450 .
20-Nov-14:- 2110 UTC, $6,777 \mathrm{kHz}$, S9 carrier with deep QSB, very low audio, unreadable, carrier off just before 2112 and 30 s so "no message".
27-Nov-14:- 2110 UTC, $6,777 \mathrm{kHz}$, and $2130 \mathrm{UTC}, 5,449 \mathrm{kHz}$, both S9 with reasonable audio for a change, "744 744744000 ".
4-Dec-14:- 2110 UTC, $6,777 \mathrm{kHz}$, "744 744744000 ".
2130 UTC, $5,449 \mathrm{kHz}$ second sending, audio level from both transmissions better than your usual E07.


## Monday/Wednesday

$2000 \mathrm{z} \quad 2020 \mathrm{z} \quad 6778 \mathrm{kHz} \quad 2040 \mathrm{z} \quad 5278 \mathrm{kHz}$
01/12 47212478514948 ... 27896000000

14948112198450084789059319526772800112458292252099 85095370529268023026049117112543703857596553264411 4219265452273209707342576626720392204039086670887 39682061859379840036724070335341448990366193623787 2964734841594800106556370308344008680953434820611 14348401210031729439758182475201585879194653024 81469988512100017414951 88674183610285181494121431117711848173978811265333 8867418361028518149412143
9671624134198848372527896 967162413419884837252789
000000

E07 7478kHz/6778kHz/5278kHz 2000z/2020z/2040z 15/12 42117439
81575930154114510502000997905398242261651896447277 44042225976575954671990267999337512711256872348443 71530587359136985550814715430862985147995501005590 241350383176775535544947022244758077556114387 000000


E07 2130z 04/12 hum just noticeable and cessation 2m30s

| 04/12 | 744000 | Hum on freq, removed after speech complete [See above] | Fair |
| :--- | :--- | :--- | :--- |
| $11 / 12$ | 744000 |  | Weak, just audible |
| $18 / 12$ | 744000 | Strong, low audio |  |
| $25 / 12$ | 744000 | Very weak noisy/Fair |  |

E07a
November2014
Wednesday
$2000 \mathrm{z} \quad 5864 \mathrm{kHz}$

| $05 / 11$ | 815000 | Very strong |
| :--- | :--- | :--- |
| $12 / 11$ | $81511372311059758521 \ldots 00844000000$ | Strong and noisy |

Very strong

58521764326721047651606221302864036262182078646979 14325684931170975276055389336176176196849600434056 62286219056695216650978208314972517914621794100759 47872199504883393226334363151883182955421367618410 3424251241334433163647478533751921431438872536364 3423425124133489382785605418036467187067253636 2638915024254051718518639554872300422620077382253 91634551354650000422068967442854134588818563069885 99215212214637090323261295025780308786160105688076 38514913542745100513592325077700844000000

Courtesy HJH/Spectre

19/11 $81516707766768955146 \ldots 44504000000$ Very strong
$26 / 11815000 \quad$ Very strong
$\begin{array}{lllll}\text { Thursday } \\ \text { 0430z } & 5146 \mathrm{kHz} & 0450 z & 5846 \mathrm{kHz} & \mathbf{0 5 1 0 z}\end{array}$

| 06/11 |  | 188000 |  |  |  | Very strong |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13/11 |  | $18811372311059758521 \ldots 00844000000$ |  |  |  | Very strong |
| 20/11 |  | $18816707766768955146 \ldots 44504000000$ |  |  |  | Very strong |
| 27/11 |  | 188000 |  |  |  | Very strong |
| Friday |  |  |  |  |  |  |
| 07/11 |  | 158000 |  |  |  | Fair |
| 14/11 |  | 1581696823947 | 33092 ... 32 |  |  | Very strong |
| 21/11 |  | 158000 |  |  |  | Strong |
| 28/11 |  | 158000 |  |  |  | Very strong |

E07a 8138/7538/6838kHz 1610/1630/1650z 14/11 Transcript:
158169682394773
33092082140083299856745241823121771773967519890697
04080701024097471745584099527706241860812288390800 59189596455743471330159318863767086223940911072321 50095740954785812001582818483835206838391373307100 30185237966934455319629678811254727421849941378179 89517848518592821381476452328534748278167431134734 55235688452931614317765871622220577219398885532177 755741324332417
000000
Very strong

## Saturday

November2014

| Nan | 11553 kHz | 0920 z | 12153 kHz |
| :--- | :--- | :--- | :--- |


| $01 / 11$ | 515000 | Strong, QSB2 |
| :--- | :--- | :--- |
| $08 / 11$ | 515000 | Strong |
| $15 / 11$ | $51516968239477333092 \ldots 32417000000$ | Very strong |
| $22 / 11$ | 515000 | Strong |
| $29 / 11$ | 515000 | Fair, noisy |

## PoSW's logs and analysis:

Saturday Schedule, 0900 UTC Start:-
1-Nov-14:- 0900 UTC, $11,553 \mathrm{kHz}$, "515 $515515000 "$, S7 to S8.
0920 UTC, $12,153 \mathrm{kHz}$, second sending, also S7 to S8. Same frequencies as in November last year, third sending in event of a "full message" 13,553 kHz.

8-Nov-14:- 0900 UTC, $11,553 \mathrm{kHz}$, and $0920 \mathrm{UTC}, 12,153 \mathrm{kHz}$, both strength S6 to S7, "515 515515000 ".
15-Nov-14:- 0900 UTC, $11,553 \mathrm{kHz}$, a "full message" this morning, " 515515515169682 ". DK/GC " 3947 73" x 2 . Weak signal at first but increased to S7 during the course of the transmission.
0920 UTC, $12,153 \mathrm{kHz}$, second sending, S6 to S 7 .
0940 UTC, $13,553 \mathrm{kHz}$, third sending on the expected frequency.
29-Nov-14:- 0900 UTC $11,553 \mathrm{kHz}$, and 0920 UTC, $12,153 \mathrm{kHz}$, both S7 to S8, " 515515515000 ".

6-Dec-14:- 0920 UTC, $12,221 \mathrm{kHz}$, "124 124124000 ", S5 to S6. Second sending, missed the 0900 UTC transmission which would probably have been on 11,121 .

13-Dec-14:- 0900 UTC, $11,121 \mathrm{kHz}$, a "full message" transmission so all three frequencies will be used, " 124124124111411 ", DK/GC "9906 93" x 2. Wide variation in signal strengths, sometimes barely readable and sometimes up to S7.

0920 UTC, $12,221 \mathrm{kHz}$, second sending, a fairly steady S7.
0940 UTC, $13,421 \mathrm{kHz}$, third sending, peaking S9, strongest of the three transmissions.

Wednesday Schedule, 2100 UTC Start:-
12-Nov-14:- 2100 UTC, $5,864 \mathrm{kHz}$, "815 815815113723 " for a "full message", DK/GC " 110597 " x 2, S9+ SSB signal, weak broadcast station on 5,865.
2120 UTC, $5,164 \mathrm{kHz}$, second sending, also S9+.
2140 UTC, $4,564 \mathrm{kHz}$, third sending.
19-Nov-14:- 2100 UTC, $5,864 \mathrm{kHz}$, "815 $815815167077 "$ DK/GC " 6676 89" x 2 . Strong SSB signal.
2120 UTC, $5,164 \mathrm{kHz}$, second sending, S9+.
2140 UTC, $4,564 \mathrm{kHz}$, third sending, S9.
3-Dec-14:- something strange this evening, a change of frequencies.
Having been aware of this schedule for several years the schedule has always used one trio of frequencies in the spring and summer months and shifting to a lower frequency trio in autumn and winter. So it was something of a surprise not to find " 815 " firing up on $5,864 \mathrm{kHz}$ when tuned in just after 2100 UTC. Found the first sending in progress on a slightly higher frequency shortly afterwards:-
$2104 \mathrm{kHz}, 5,877 \mathrm{kHz}$, E07a SSB in progress with a "full message" thirteen kHz higher than the expected frequency. S9+ signal, ended with " 000 000 " 2110 UTC.
2120 UTC, $5,277 \mathrm{kHz}$, second sending, S9+ so no problem in finding, "825 825825167077 ", DK/GC "6676 89" x 2.
2140 UTC, $4,577 \mathrm{kHz}$, third sending, again an S9+ signal.
10-Dec-14:- 2100 UTC, $5,877 \mathrm{kHz}$, and 2120 UTC, $5,277 \mathrm{kHz}$, "825 82582500000 ".

03/12 $82516707766768955146 \ldots 44504000000$ Very strong

E07a 5877/5277/4577kHz 2100/2120/2140z 03/12 Transcript:
825167077667689
55146765046682383441340104107779266914290405285630 52140337918603648512422607364409449757075257805965 61723715351658978407718498365106948867004232828898 69269898701097807563362689909779451710577058569870 66209876255093554436538702428700267269122579856475 65690872819302534442112702002192217428211474556610 13791303766720013592639118521826452740991309833134 00395281407116475902620324399569557925291046608383 038594618526699827467853638144851158050744504 000000 Courtesy Spectre
$10 / 12 \quad 825000 \quad$ Very strong
$17 / 12 \quad 825000 \quad$ Very strong
$0530 \mathrm{z} 5111 \mathrm{kHz} \quad 0550 \mathrm{z} \quad 5811 \mathrm{kHz} \quad 0610 \mathrm{z} \quad 6911 \mathrm{kHz}$
04/12 Missed due to change of frequency - not tracked by automatic system

| Friday 1610z | 5887kHz | 1630z | 5387 kHz | 1650z |
| :---: | :---: | :---: | :---: | :---: |
| 05/12 |  | 830000 |  |  |
| 12/12 |  | $83011141199069367516 \ldots 33370000000$ |  |  |
|  |  | E07a $5887 \mathrm{kHz} / 5387 \mathrm{kH}$ <br> 830111411990693 <br> 675169993624286116 | 87 kHz 1610z/16 <br> 432475650994 | $\begin{aligned} & 12 \\ & 7508648 \end{aligned}$ |
|  |  | 073237144522214314 | 430301826848 | 123494 |
|  |  | 637582121659792797 | 784127597619 | 33526 |
|  |  | 39931501963440104467 | 535399479926 | 7406475 |
|  |  | 038103775510217208 | 065631061109 | 871613 |
|  |  | 711328901175925642 | 856225634668 | 7 39356 |
|  |  | 151098209726134048 | 697858241501 | 643452 |
|  |  | 2757587732879915263 | 881748627473 | 755181 |
|  |  | 545832823606567754 | 395521300083 | 942431 |
|  |  | 270188110533370000 | - | esy JkC |0545792026131355828928319655939235012525536652916205457920261313558289283196559392350125255366529162$8471669921701676574144805000000 \quad$ Courtesy Spectre



E11 log
Nov/Dec

| 4441 kHz | 1445z | 01/11 [287/00] Out 1448z Weak QRM1 QSB1 |
| :---: | :---: | :---: |
|  | 1445z | 05/11 [287/00] 1448z Weak QRN4 QSB3 |
|  | 1445z | 08/11 [287/00] 1448z Weak QRN4 QSB3 |
|  | 1445z | 12/11 [287/00] 1448z Weak QRN4 QSB3 |
|  | 0900z | 13/11 [248/00] 0903z Weak QRN4 QSB3 |
|  | 1445z | 15/11 [287/00] Out 1448z QSA5 QRM1 QRN1 QSB1 |
|  | 0900z | 15/11 [248/00] 0903z Weak QRN4 QSB3 |
|  | 0900z | 20/11 [248/00] 0903z Weak QRN4 QSB3 |
|  | 0900z | 22/11 [248/00] Out 0903z S2 |
|  | 1445z | 03/12 [287/00] Out 1448z Fair QRM1 QSB2 |
|  | 0900z | 06/12 [248/00] 0903z Fair QRN3 QSB3 |
|  | 1445z | 06/12 [287/00] 1448z Fair QRN3 QSB3 |
|  | 1445z | 13/12 [287/00] Out 1448z QSA2 |
|  | 1445z | 27/12 [287/00] |
| 5082 kHz | 1730z | 06/11 [416/00] |
|  | 1730z | 20/11 [416/00] 17:33z QSA5 |
|  | 1730z | 11/12 [416/00] |
|  | 0450z | 08/12 [416/00] 0453z Fair QRN3 QSB3 |
|  | 1730z | 18/12 [416/00] 17:33z QSA4 |
|  | 0450z | 22/12 [416/00] Out 0458z Fair QRM1 QSB1 |


| JkC | SAT |
| :--- | :---: |
| Spectre | WED |
| Spectre | SAT |
| Spectre | WED |
| Spectre | THU |
| Thomas | SAT |
| Spectre | SAT |
| Spectre | THU |
| Malc, Thomas | SAT |
| JkC | WED |
| Spectre | SAT |
| Spectre | SAT |
| Karsten | SAT |
| RNGB | SAT |
|  |  |
| RNGB | THU |
| Karsten, Malc | THU |
| RNGB | THU |
| Spectre | MON |
| Karsten, Malc | THU |
| JkC | MON |


| 5409 kHz | 1530z | 06/11 [262/00] Out 1533z Strong QRM1 QSB1 | JkC | THU |
| :---: | :---: | :---: | :---: | :---: |
|  | 1530z | 20/11 [262/00] Out 1533z S2 | Malc | THU |
|  | 1530z | 18/12 [262/00] Out1533z Fair QRM1 QSB1 | JkC | THU |
| 5779 kHz | 0315z | 05/11 [253/00] | RNGB, JkC | WED |
|  | 0315z | 12/11 [253/00] | RNGB | WED |
|  | 0315z | 03/12 [253/00] Out 0318z Very strong | PLondon | WED |
|  | 0315z | 10/12 [253/00] Out 0318z Very strong | PLondon | WED |
|  | 0315z | 17/12 [253/00] Out 0318z Very strong | PLondon | WED |
|  | 0315z | 18/12 [253/00] Out 0318z Very strong | PLondon | THU |
|  | 0315z | 31/12 [253/00] | Christer | WED |
| 6304 kHz | 2000z | 28/11 [576/00] | Gary H, RNGB | FRI |
|  | 2000z | 05/12 [576/00] | Gary H | FRI |
|  | 2000z | 12/12 [576/00] QSA1 | Karsten | FRI |
|  | 2000z | 26/12 [576/00] | RNGB | FRI |
| 7840 kHz | 0645z | 04/11 [517/00] Out 0648z Very Strong QRM 3 QRN 2 QSB 2 | Christer, JkC | TUE |
|  | 0645z | 06/11 [517/00] Out 0648z Strong QRM1 QSB1 | JkC | THU |
|  | 0645z | 13/11 [517/00] | RNGB | THU |
|  | 0645z | 02/12 [517/00] 0648z Fair QRN3 QSB3 | Spectre | TUE |
|  | 0645z | 04/12 [517/00] 0648z Fair QRN3 QSB3 | Spectre | THU |
|  | 0645z | 09/12 [517/00] Out 0648z Fair QRM1 QSB2 | JkC | WED |
|  | 0645z | 11/12 [517/00] 0648z Fair QRN3 QSB3 | Spectre | THU |
|  | 0645z | 16/12 [517/00] 0648z Fair QRN3 QSB3 | Spectre | TUE |
|  | 0645z | 18/12 [517/00] | Ary | WED |
| 8091 kHz | 1045z | 04/11 [469/00] | RNGB | TUE |
|  | 1045z | 02/12 [469/00] | RNGB, Malc | TUE |
|  | 1045z | 10/12 [469/00] Out 1048z S2 | Malc | WED |
|  | 1045z | 16/12 [469/00] 1048z Fair QRN3 QSB3 | Spectre | TUE |
|  | 1045z | 23/12 [469/00] Out 1048z S2 | Malc | TUE |
| 9443 kHz | 1705z | 05/11 [392/00] Out 1708z S9 | Malc | WED |
|  | 1705z | 19/11 [392/00] Out 1708z Fair QRM1 QSB1 | JkC | WED |
|  | 1705z | 22/11 [392/00] Out 1708z QSA1 | Karsten | SAT |
|  | 1705z | 26/11 [392/00] | RNGB | WED |
|  | 1705z | 03/12 [392/00] Out 1508z Strong QRM1 QSB1 | JkC | WED |
|  | 1705z | 06/12 [392/00] | RNGB | SAT |
|  | 1705z | 17/12 [392/00] Out 1708z S9 | Malc | WED |
|  | 1705z | 20/12 [392/00] | Malc | SAT |
|  | 1705z | 24/12 [392/00] Good | RNGB | WED |
|  | 1705z | 31/12 [392/00] | Gary H | WED |
| 9446 kHz | 0830z | 03/11 [649/00] | RNGB | MON |
|  | 0900z | 03/11 [534/00] | RNGB | MON |
|  | 0900z | 05/11 [534/00] | RNGB | WED |
|  | 0830z | 07/11 [649/00] Good | RNGB | FRI |
|  | 0900z | 10/11 [534/00] | RNGB | MON |
|  | 0830z | 17/11 [649/00] 08:33z QSA5 | Karsten | MON |
|  | 0830z | 21/11 [649/00] Out 0833z S7 | Malc | FRI |
|  | 0900z | 24/11 [534/00] | RNGB, Malc | MON |
|  | 0830z | 01/12 [649/00] | RNGB | MON |
|  | 0900z | 01/12 [534/00] | RNGB | MON |
|  | 0900z | 03/12 [534/00] | RNGB | WED |
|  | 0830z | 05/12 [649/00] 0833z Fair QRN3 QSB3 | Spectre | FRI |
|  | 0830z | 08/12 [469/00] Out 0833z S6 | Malc | MON |
|  | 0900z | 08/12 [534/00] Fair | RNGB, Malc | MON |
|  | 0830z | 12/12 [649/00] Out 0833z S6 | Malc | FRI |
|  | 0830z | 15/12 [649/00] | RNGB | MON |
|  | 0900z | 17/12 [534/00] Fair | RNGB | WED |
|  | 0830z | 19/12 [649/00] Out 0833z S7 | Malc | FRI |
|  | 0900z | 22/12 [534/00] | RNGB | MON |
|  | 0900z | 24/12 [534/00] Out 0903z S5 | Malc | WED |
| 9950 kHz | 0930z | 20/11 [270/00] Out 0933z S4 | Malc | THU |
|  | 0930z | 26/11 [270/00] | RNGB | WED |
|  | 0930z | 27/11 [270/00] Out 0933z S4 | Malc | THU |
|  | 0930z | 10/12 [270/00] Out 0933z S2 | Malc | WED |
|  | 0930z | 11/12 [270/00] Out 0933z S5 | Malc | THU |
|  | 0930z | 17/12 [270/00] | RNGB, Malc | WED |
|  | 0930z | 24/12 [270/00] Out 0933z S3 | Malc | WED |
|  | 0930z | 31/12 [270/00] Out 0933z S2 | Malc | WED |
| 10125 kHz | 0820z | 06/11 [438/00] | RNGB | THU |
|  | 0820z | 10/11 [438/00] | RNGB | MON |
|  | 0820z | 24/11 [438/00] | RNGB | MON |
|  | 0820z | 27/11 [438/00] | RNGB | THU |
|  | 0820z | 01/12 [438/00] | RNGB | MON |
|  | 0820z | 04/12 [438/00] Out 0833z S7 | Malc | THU |
|  | 0820z | 08/12 [438/00] out 0823z S3 | Malc | MON |
|  | 0820z | 11/12 [438/00] 0823z Fair QRN3 QSB3 | Spectre | THU |
|  | 0820z | 22/12 [438/00] | Malc | MON |



| RNGB | THU |
| :---: | :---: |
| RNGB | MON |
| Malc, RNGB | MON |
| Malc | MON |
| Malc | MON |
| RNGB, Malc | MON |
| RNGB | MON |
| Malc | MON |
| RNGB | WED |
| RNGB | WED |
| Spectre | SUN |
| RNGB | WED |
| RNGB | SUN |
| Malc | WED |
| RNGB | WED |
| RNGB | TUE |
| RNGB | FRI |
| RNGB | TUE |
| Spectre | TUE |
| RNGB | FRI |
| Malc | TUE |
| Spectre | FRI |
| Spectre | TUE |
| RNGB | FRI |
| RNGB | TUE |
| Spectre | SAT |
| Spectre | SUN |
| JkC | SAT |
| Malc | SUN |
| JkC | SAT |
| RNGB, Malc | TUE |
| RNGB | TUE |
| RNGB | TUE |
| Malc | TUE |
| RNGB | TUE |
| RNGB | SUN |
| Malc | WED |
| Gary H, Malc | SUN |
| RNGB | MON |
| Malc | WED |
| Malc | MON |
| Malc | SUN |
| Malc | WED |
| RNGB | MON |
| Malc | WED |
| Malc | MON |
| RNGB | TUE |
| Malc | THU |
| Malc | TUE |
| RNGB | THU |
| Spectre | TUE |
| RNGB | TUE |
| Ary | WED |
| Malc | TUE |
| Malc, JkC | WED |
| RNGB | TUE |
| Malc | WED |

## E11a log Nov/Dec

| 4441 kHz | 0900z | 06/11 [247/31 Attention 28757 ... 87201] Out 0910z Weak QRN4 QSB3 |
| :---: | :---: | :---: |
|  | 0900z | 08/11 [247/31 Attention 28757 ... 87201] Out 0910z Weak QRN4 QSB3 |
|  | 1445z | 19/11 [289/36 07697706963954798642805247254333852 90739..... 62502 59077] Out 1455z Fair |
|  | 1445z | 22/11 [289/36 Attention 07697 ... 59077] Out 1456z Fair QRN4 QSB3 |
|  | 1445z | 17/12 [286/36 77993280862293490597468208298210360 32987...... 02066 33426] Out 1455z Fair |
|  | 1445z | 20/12 [286/36 77993 ... 33426] Out 1454z Fair QRM1 QSB1 Repeat of 17/12 |
| 5082 kHz | 1730z | 13/11 [412/34 $4931929425508478119388385969036296899924 \ldots \ldots .2364149348]$ |
|  | 1730z | 04/12 [411/30 $450352371808345211761127290391260386598967736 \ldots . .02131$ 21124] |
| 5409 kHz | 1530z | 13/11 [262/33 $7449683422231895081134333811814796079567 \ldots . .04316$ 52368] Good |
|  | 1530z | 11/12 [260/33 $9315859984188941437018342479934582781709 \ldots . .70698$ 69088] |
| 5779 kHz | 0315z | 27/11 [258/32 V 03685414265672990042969587200943976 39921.... 20099 80661] Good |
|  | 0315z | 24/12 [258/38 $8881281596351463230168772193073329759953 \ldots .13563$ 07062] Out 0325z Very strong |


| Spectre | THU |
| :--- | :--- |
| Spectre | SAT |
| JkC | WED |
| Spectre | SAT |
| JkC | WED |
| JkC | SAT |
|  |  |
| RNGB | THU |
| RNGB | THU |
|  |  |
| RNGB | THU |
| JkC, Malc | THU |
|  |  |
| RNGB | THU |
| PLondon | WED |


| 6304 kHz | $\begin{aligned} & 2000 \mathrm{z} \\ & 2000 \mathrm{z} \end{aligned}$ |  | RNGB, Spectre JkC | $\begin{aligned} & \text { FRI } \\ & \text { FRI } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 6923 kHz | 1710z | 03/11 [953/30 $6652668370987686243549847656740929174703 \ldots . . .20302$ 58165] Out 1719z Strong | JkC, Spectre | MON |
|  | 1710z | 07/11 [955/25 Attention 20697.......79810] Out 1717z Fair QRN3 QSB3 | Spectre | FRI |
|  | 1710z | 10/11 [952/30 $86000096001274617567398660521775022 \ldots . .39047$ 48371] | RNGB | MON |
|  | 1710z | 21/11 [953/21.............ATTENTION 11711...................72933] | Malc | FRI |
|  | 1710z | 24/11 [951/20............ATTENTION 12403..................05776] | Malc | MON |
|  | 1710z | 01/12 [955/30 5686826964811898220205276239083577382862 69501...... 06720 50939] | RNGB, Malc | MON |
|  | 1710z | 08/12 [957/30 $3486924751866345774916667318635195493317 \ldots \ldots . .13030$ 79635] | RNGB | MON |
|  | 1710z | 12/12 [957/21 61915923909329194861049196434710502 61226.....67900 75158] Out 1717z Strong | JkC | FRI |
|  | 1710z | 15/12 [955/30 $3808369960558406924819213954848347444303 . \ldots . .74596$ 29259] Out 1719z Strong | JkC | MON |
|  | 1710z | 19/12 [951/20 $8695145229168689724388770892102657065220 \ldots . .26113$ 42618] Out 1715z Strong | JkC | FRI |
|  | 1710 z | 22/12 [955/30 $3407810171233948549952536637709830644281 \ldots \ldots \ldots \ldots . . .81079$ 25871] | Karsten, Malc | MON |
|  | 1710z | 29/12 [951/20 $0200643150251985651487841658628149850775 \ldots . .09431$ 99882] | RNGB | MON |
| 7840 kHz | 0645z | 27/11 [51?/30 $5466302165691990323239191086684045574458 \ldots . .64433$ 70929] | RNGB | THU |
| 8091 kHz | 1045z | 25/11 [469/35 52966899269096354758467944251346685 80403..... 84595 12301] Fair | RNGB | TUE |
|  | 1045z | 30/12 [463/37 1082346924862456748192177 81040...... 47931 40197] Out 1055z Weak | RNGB, Thomas | TUE |
| 9443 kHz | 1705z | 12/11[395/34 $7335936007555527604192672750665323074600 \ldots . .05427$ 83777] Good | RNGB | WED |
|  | 1705z | 10/12[392/32 0006587601767730167107519910580933144629 98921......03411 51253] | RNGB, Malc, JkC | WED |
|  | 1705z | 13/12 [392/32 00065.....] Repeat of Weds | RNGB | SAT |
| 9446 kHz | 0900z | 17/11 [538/30 342265694285384938352895391293 81187..... 99636 98082] | RNGB | MON |
|  | 0900z | 19/11 [538/30 Attention 34226 ... 98082] Out 0909z (Repeat of Monday) Fair QRN4 QSB3 | Spectre | WED |
|  | 0830z | 24/11 [649/38 $4785317177300408935627437606668728899502 \ldots . .17585$ 15173] | RNGB | MON |
|  | 0830z | 28/11 [649/38 47853.....etc] Repeat of Monday | Malc | FRI |
|  | 0830z | 26/12 [648/35 05706653264253579484303358175064530 96194..... 31027 55028] | RNGB | FRI |
|  | 0900z | 29/12 [537/35.............ATTENTION 10638...................09602] | Malc | MON |
|  | 0900z | 31/12 [537/35 10638............... 21266 09602] | RNGB, Malc | WED |
| 9950 kHz | 0930z | 05/11 [276/30 $6431532982232279097652262556443931408412 \ldots . .88782$ 98291] Fair | RNGB | WED |
|  | 0930z | 03/12 [275/33.................ATTENTION 00584..................82370] | Malc | WED |
|  | 0930z | 04/12 [275/33 $0058464859546215941699334958102368448495 \ldots . .67318$ 82370] | RNGB | THU |
| 10125 kHz | 0820z | 17/11 [439/37 Attention 70870.......42002] Out 0832z Fair QRN4 QSB3 | Spectre | MON |
|  | 0820z | 20/11 [439/37............ATTENTION 70870.................42002] | Malc | THU |
|  | 0820z | 15/12 [438/37 $29376873893220736377411615767270094611076549048814 \ldots \ldots .28366$ 19712] | RNGB, Malc | MON |
|  | 0820z | 18/12 [438/37 29376......etc] Repeat of Monday | Malc | THU |
| 10213 kHz | 1810z | 01/11 [983/10 884640305133634361495362289909089083990961999 63281] | RNGB, Spectre | SAT |
|  | 1810z | 04/11 [983/10 048079757182856805884652267331899708825950615 45757] | Malc | TUE |
|  | 1810z | 08/11 [988/10 410001592611086556393917023026784609245943232 44063] | RNGB | SAT |
|  | 0745z | 10/11 [262/33 Attention 74496.......52368] Out 0755z Fair QRN3 QSB3 | Spectre | MON |
|  | 1810z | 11/11 [983/10 93451729424315981534979745574105033956970269508282 ] | Karsten | TUE |
|  | 1810z | 02/12 [982/10 451868114287171768743465188764888608233518622 58281] Out 1815z S2 | Malc, JkC | TUE |
|  | 1810z | 06/12 [981/10 662253119179111470179437302763745686121523898 44309] | Malc | SAT |
|  | 0745z | 08/12 [260/33...........ATTENTION 93158...........69088] | Malc | MON |
|  | 1810z | 09/12 [983/10............ATTENTION 76271............08495] | Malc | TUE |
|  | 1810z | 16/12 [983/10 50?98 $21780413409330972500007358 ? 9380483483899$ 21157] Weak | RNGB | TUE |
|  | 1810z | 20/12 [985/10 599393493182570312522531943599357329549211341 35101] | JkC | SAT |
|  | 1810z | 23/12 [988/10.............ATTENTION 90057..........89022] | Malc | TUE |
|  | 1810z | 30/12 [984/10 758759799019561538873448237197834096964148051 63791] | JkC | TUE |
| 10429 kHz | 0805z | 19/11 [373/38 Attention 94282.......35349] Out 0817z Fair QRN4 QSB3 | Spectre | WED |
|  | 0805z | 17/12 [373/32 $0084743725238137575103036341676497445432 \ldots . . .78679$ 35924] Good | RNGB, Malc | WED |
| 10690 kHz | 1400z | 01/11 [982/10 488395633074502219214614067669030101018446267 54440] Out 1405z Strong | JkC | SAT |
|  | 1400z | 04/11 [988/10 269839353805007064119847754926583643087058619 12739] | Malc | TUE |
|  | 1400z | 08/11 [985/10 Attention 95916.......11377] Out 1406z Weak QRN4 QSB3 | Spectre | SAT |
|  | 1400z | 15/11 [981/10 40119468410300707984092177166612697941842304163336 ] | RNGB, Malc | SAT |
|  | 1400z | 22/11 [988/10 984517966819256796182942207931693560638664015 24621] | Karsten | SAT |
|  | 1400z | 25/11 [988/10..................ATTENTION 32660...........29312] S7 | Malc | TUE |
|  | 1400z | 02/12 [981/10 933607202416818525088291782019956813303543366 64586] | Gary H | TUE |
|  | 1400z | 06/12 [988/10 700539536708841583487034300449466305038109664 12275] | Malc | SAT |
|  | 1400z | 13/12 [981/10 735166840050270289525160489491437872869949878 80917] | Karsten | SAT |
|  | 1400z | 20/12 [984/10 921619450110011882336546421474108514232061198 33191] | JkC | SAT |
|  | 1400z | 23/12 [987/10 820242530135683564866868157900479946849079650 51827] | Karsten | TUE |
|  | 1400z | 27/12 [981/10 335804797943788368059440746647471562817566597 38424] | RNGB | SAT |
|  | 1400z | 30/12 [987/10 699526986459702313424074276865723840016071002 36696] | JkC, Malc | TUE |
| 10800 kHz | 0710z | 11/11 [637/31 Attention 26308......31255] Out 0720z Fair QRN4 QSB3 | Spectre | TUE |
|  | 0710z | 16/12 [630/33 $8827389189174071646210090076273292274493 \ldots . .47714$ 01298] | RNGB | TUE |
| $12153 \mathrm{kHz} \mathrm{1045z}$ |  | 04/11 [571/35 7041906000764509953254501396217515702370 38633.....66030 88608] | RNGB | TUE |
| $\begin{array}{r} 13455 \mathrm{kHz} 0534 \mathrm{z} \\ 0530 \mathrm{z} \end{array}$ |  | 04/11 [I/P ........LG 31075] Out 0535z Strong QRM1 QSB1 | JkC | TUE |
|  |  | 09/12 [981/10 897245602351734625788995453699185023447673738 69961] 0535z Fair QRM1 QSB2 | JkC | WED |


| 14410kHz 1110z | 03/11 [952/33 $6918253976220611379254422817640910073918 \ldots . .68275$ 35773] | RNGB, Malc | MON |
| :---: | :---: | :---: | :---: |
| 1110 z | 07/11 [952/38.............ATTENTION 79740............56456] | Malc | FRI |
| 1110z | 14/11 [954/32 $5594403013275176801654447562898256235636 \ldots . .05379$ 93979] | RNGB | FRI |
| 1110 z | 17/11 [956/33 22594042074167988698083843935021017 09896.... 55813 77196] | RNGB, Karsten | MON |
| 1110 z | 21/11 [952/31.......ATTENTION 86682...................20311] | Malc | FRI |
| 1110 z | 24/11 [954/32.........ATTENTION 69427...................04048] | Malc | MON |
| 1110 z | 28/11 [954/32........ATTENTION 67823....................79347] | Malc | FRI |
| 1110 z | 01/12 [95?/35........ATTENTION 12542.....................14607] | Malc | MON |
| 1110 z | 08/12 [952/40........ATTENTION 17535...................97746] | Malc | MON |
| 1110 z | 12/12 [958/31.......ATTENTION 76846...................45026] | Malc | FRI |
| 1110 z | 15/12 [954/32 8387401513055698395405073 66766......55028] | RNGB, Malc | MON |
| 1110 z | 19/12 [954/32...............ATTENTION 07722..................60605] | Malc | FRI |
| 1110 z | 22/12 [950/40 $2469699764323338407197200864102082140191 \ldots . . .9086775211]$ | RNGB | MON |
| 1110 z | 26/12 [956/3295055 $47218504424432419149083700876627608 \ldots . .2639573248$ ] | RNGB | FRI |
| $15632 \mathrm{kHz} \mathrm{1540z}$ | 03/11 [225/319850726657 $153506822609719982639569352542 \ldots . .80580$ 11070] | Gary H, JkC | MON |
| 1540z | 09/11 [228/3198507 26657153506822609719982639569352542 98205..... 80580 11070] | Gary H | SUN |
| 1155z | 19/11 [716/32 Attention 62932.......78180] Out 1205z Fair QRN3 QSB3 | Spectre | WED |
| 1155z | 20/11 [716/32............ATTENTION 63932..............78180] | Malc | THU |
| 1540z | 01/12 [226/37 7928124930172548313904672960317032685847 82200..... 1745893152 ] | JkC, Malc | MON |
| 1540z | 07/12 [226/37...........ATTENTION 79281.................93152] | Malc | SUN |
| 1155z | 10/12 [713/30..........ATTENTION 69614..................10436] | Malc | WED |
| 1155z | 11/12 [713/30 69614..............10436] Repeat of Weds | Malc | THU |
| $16112 \mathrm{kHz} \mathrm{0745z}$ | 18/11 [330/30 99484320819256552568914476277268138 25246.....32104] | RNGB, Malc | TUE |
| 0745z | 20/11 [330/30 99484.....32104] repeat of Tuesday | Malc | THU |
| 0745z | 02/12 [330/35 Attention 40755 ... 21609] Out 0756z Fair QRN3 QSB3 | Spectre | TUE |
| 0745z | 04/12 [330/35 4075557118170606241198185103215906744252 56249.........21609] | Malc, RNGB | THU |
| $18030 \mathrm{kHz} \mathrm{1300z}$ | 11/11 [131/36 Attention 42978 ... 89006] Out 1312z Fair QRN3 QSB3 | Spectre | TUE |
| 1300z | 12/11 [131/36 4297865341829937987461682577620993650649 85802..... 19611 89006] | RNGB | WED |
| 1300z | 30/12 [138/3171661 $05678327622461243959832872089903673 \ldots . .16955$ 54946] | RNGB |  |

## E17

Jim writes:
I just caught an unscheduled E17, almost certainly training, on 10240kHz. Partial recording available. Details as follows:
E17z 10240kHz 1533z 15/11[274 9583033796 ... 5628189160 00000] $1558 z$ Strong QRM1 QSB1 JkC SAT
Transcript:

## 274 (1533z)

95830
3379613577745264664779302205341116043494 (stops and carrier off 1536z)
274
3878630485 (stops 1538 z)
74 (tones) (1543z)
274 (1545z)
46062686728646838786304859663252537533170667541847
21767535871183481022369034141255676097758631525910
058995038745847230138975752343796284243254 (stops 1553z)
274 (live YL, started with low audio, then corrected) (1555z)
23013 (pause)
897575234379628424325457756281
891891606000000 (1558z)
Carrier off (1559z)
Note: GR30, 25910, was repeated as 25901.
As far as I can tell, the complete message is:
27495830
33796135777452646647793022053411160434943878630485 46062686728646838786304859663252537533170667541847 21767535871183481022369034141255676097758631525910 05899503874584723013897575234379628424325457756281 8913000000

One thing that is slightly strange: I have been analyzing the groups used by $\mathrm{S} 06 \mathrm{~s} / \mathrm{E} 17 \mathrm{z}$, and 46062 , a common group, is only ever seen as GR1. On the restart at 1545 z , this is the group restarted from, giving a total of 40 groups. As the beginning and end "DK" does not match, I am guessing that the training used two messages, the first 10 groups (of a 30 group message) for the initial failures, and a second message for the final live operator intervention.

An interesting insight into training procedures.
Followed by iING's intercept:
E17 10240,0 1555 z 15.11. [Strong carrier on, some noise as someone is grabbing on the open microphone, then a female live operator came on: 274 R1m 23013 230897575243479628424325457756281891891303000000 ] 1558z QSA5 QRM1 QRN1 QSB1 tiNG SAT
http://datainer.amasha.de/utdx/L1115E07.mp3

| Thurs | 7 Mar 2013 | $09: 30$ | 8650 | 25498255351625616560699681314199 |  |
| :--- | :--- | :---: | :---: | :---: | :---: | :--- | :--- |
| Monday | 10 Feb 2014 | $13: 10$ | 10265 | 8312645 | 5351625616560699681314199 |


| 13/11 | $67489055351625616560699681314199890500000(\mathrm{~s})]$ |  | Fair QRN4 QSB3 |
| :--- | :--- | :--- | :--- | :--- |
| $20 / 11$ | 67489252619046164201371168734868892500000 | [0810z too weak to copy] | Weak |
| $27 / 11$ | 6748952619046164201371168734868892500000 |  | Weak |



## E25

## November2014

$6140 \mathrm{kHz0944z} \quad 26 / 11[3501025431021319341502792525451233337406735415897164310]$
0951 z carrier i.p. "Inte Omri" musical intro, YL calling "335 350 350...", carrier up till 0957z, AM QSA2 QSB2

## December2014

$9450 \mathrm{kHz} 1214 \mathrm{z} \quad 28 / 12$ "Inte Omri" musical intro, YL "8830", carrier, 1219 z WinXP shutdown sound and QRT, AM QSA5 MG SUN

G06
PoSW's logs leading onto others' logs:
As with other members of this number station family, a seasonal change to lower frequencies in November.

Second + Fourth Thursdays in the Month 1830 UTC Schedule:-
13-Nov-14:- $4,519 \mathrm{kHz}$, call "271", DK/GC "394 3942020 ". Same 5Fs as used for the
Friday 1930 UTC transmissions, although with a DK of " 215 ", in October.
27-Nov-14:- 4,519 kHz, "271" and "394 39420 20" again, S9 signal.

Friday 1930 UTC Schedule Following Second + Fourth Thursdays:-
14-Nov-14:- $4,792 \mathrm{kHz}$, call " 436 ", DK/GC "701 7012020 ". Same 5 F message which has been used many times in the past both by G06 and E06 in their respective languages and
with various Decode Keys, starts, "37839 35787 98273.....".

28-Nov-14:- $4,792 \mathrm{kHz}$, started about 40 seconds before the half-hour by by MSF controlled clock, " 436 " and "701 7012020 " again, peaking well over an indicated S9.

12-Dec-14:- 4,792 kHz, "436" and "701 7012020 ", as in November. Somewhat slower than usual delivery of the 5F groups, I thought. Ended just after 1939 UTC

First + Third Fridays in the Month $2000+2100$ UTC Schedule:-
7-Nov-14:- 2000 UTC, $7,844 \mathrm{kHz}$, "167 $16716700000 "$, S6 to S7.
2100 UTC, $5,769 \mathrm{kHz}$, second sending, stronger signal, S9+. In keeping with standard practice these two frequencies were used for this schedule in January and February.

21-Nov-14:- 2000 UTC, $7,844 \mathrm{kHz}$, and 2100 UTC, $5,769 \mathrm{kHz}$, both S9+ signals, "167 16716700000 ". I have been tracking this Friday schedule since the late spring of 2013 and the only time this schedule has transmitted a "full message" was in June of that year.

5-Dec-14:- 2000 UTC, $7,844 \mathrm{kHz}$, and 2100 UTC, $5,769 \mathrm{kHz}$, "167 16716700000 ", again both transmissions S9+.

First + Second Mondays in the Month $1700+1800$ UTC Schedule:-
10-Nov-14:- 1700 UTC, $3,635 \mathrm{kHz}$, "367 36736700000 ". An indicated S 7 to S 8 inside the 80 metre amateur band, slight interference from weaker ham SSB signals.
1800 UTC, $4,538 \mathrm{kHz}$, second sending, good signal peaking well over S9.
8-Dec-14:- 1700 UTC, $3,635 \mathrm{kHz}$, "367 36736700000 ", strength S6. Started early, call-up was in progress when tuned in approx 25 seconds before the hour.
1800 UTC, $4,538 \mathrm{kHz}$, second sending, started six or seven seconds after the hour.

## Others' logs:

## November2014

## $\begin{array}{ll}\text { Monday } \\ 0800 z & 5463 k H z\end{array}$

| $03 / 11$ | 21500000 | Weak |
| :--- | :---: | :---: |
| $17 / 11$ | 21500000 | Weak |
| $24 / 11$ | 21500000 | $\mathbf{1 8 0 0 z}$ |
| $\mathbf{1 7 0 0 z}$ | $\mathbf{3 6 3 5 k H z}$ | $\mathbf{4 5 3 8 k H z}$ |
| $03 / 11$ | 36700000 | Weak |
| $10 / 11$ | 36700000 |  |

Wednesday
1200 z

| 05/11 | 36700000 | Weak QRN4 QSB3 |
| :--- | :--- | :--- |
| $12 / 11$ | 36700000 | Weak QRN4 QSB3 |

Thursday
1300z 4024kHz

| $13 / 11$ | 21500000 | Weak QRN4 QSB3 |
| :--- | :--- | :--- |
| $20 / 11$ | 21500000 | Weak QRN4 QSB3 |

1830z 4519 kHz


4519 kHz 1830 z 13/11/2014 This is a sonogram of G06, ending at 7 m 26 s . Note chimes/dashes and later digital sending

The above sending lasted 7 m 26 s [ended 1837 z ], at 1838 z a seies of chimes were heard. These lasted 8 s and were thought to be a computer sound. After the cessation of the chimes four dashes were sent [ 275 Hz tone] but at 1841 z 10 seconds of a digital signal were also heard.


Chime/Dashes heard 1838z onwards 13/1 1/2014
27/11
2713942006132 ... 044823942000000
Strong

Friday
1930z 4792 kHz

14/11
4367012037839 ... 045647012000000
Strong
43670120
37839357879827360187162029562531691525386102522567
93296674234096816891637813482004842604917592404594 4367012000000

Courtesy HRT

28/11
4367012037839 ... 045647012000000
Strong

2000z
7844kHz
$2100 \mathrm{z} \quad 5769 \mathrm{kHz}$

07/11
16700000
Strong

21/11
16700000
Strong

G06
December2014
Monday
0800z 5463 kHz

| $01 / 12$ | 21500000 | Weak |  |
| :--- | :--- | :--- | :--- |
| $08 / 12$ | 21500000 |  | Weak |
| $22 / 12$ | 21500000 | $\mathbf{4 5 3 8 k H z}$ | Strong |
| Monday <br> $\mathbf{1 7 0 0 z}$ | $\mathbf{3 6 3 5 k H z}$ | $\mathbf{1 8 0 0 z}$ |  |
| $01 / 12$ | 36700000 | 36700000 |  |
| $08 / 12$ |  |  | Strong |

Wednesday
1300z
4016kHz
03/12 36700000

10/12
36700000
Very Weak QRM1 QSB4

Very Weak
$1823 z$
4761kHz [per RNGB]

10/12 123123400000


## S06/S06s

November/December2014
RNGB followed by PoSW
S06 log November:


| Saturdays 1st/2nd/3rd and 4th |  | 1930z | 3169kHz ${ }^{\text {ar }}$ - 1935z | 3842 kHz |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01/11 | $1935 \mathrm{z} \quad 3932 \mathrm{kHz}$ | '396' 4253735480133180269649280936945619756941509531043382894 |  |  |  |  |
| 73586062780739781348103772549834748328084213214749 |  |  |  |  |  |  |
| 57606111254457881267106291245689263025754370670016 |  |  |  |  |  |  |
|  |  | 19173602607142 | 178750134514821743354253700000 | 1945z Fair QRN4 QSB3 | Spectre | SAT |
| 08/11 | 1935z | '396' 00000 |  |  |  |  |
| 15/11 | 1930z | '396' 00000 | Spectre |  |  |  |
| 22/11 | 1935z | '396' 00000 |  |  |  |  |
| Unscheduled |  |  |  |  |  |  |
| 13/11 | 19875kHz 0830z | '842'970 317215709772410899224637632211528981053846300177718201329724734932009515 |  |  |  |  |
|  |  | 66987452475816191384286163461910285739052877463318440064707684518269606404742678 |  |  |  |  |
|  |  | 70654970310000 | 0840z Fair QRN3 QSB3 | Spectre | THU |  |

S06s November log:

## Mondays <br> 3r/at

 17th/24th 3rd/10th 17th/24th 3rd/10th 1200/10 17th/24th$8057 / 8530$
$14675 / 12830$
$8420 / 10635$

| 16145/14240 | '438' No reports |
| :---: | :---: |
|  | '438' 5076659066661020336173018855482045 |
| 5250/6320 | '374'980530508313993824632423 34747 |
|  | '374' 29851286414986924996932085039 |
| 7410/11532 | '427' 9536617327453757440105971235747880 |
|  | '427' 89536165564445283405813342103115149 |
| 11945/13195 | '352' 9416337961357774526466477930253516 |
|  | '352' 4906273619060341965182892379165920 |
| 6440/5660 | '893' 46253801342924359453205730805 |
|  | '893' 47253246235968379823383137501 |
|  | '754' No reports |
|  | '754’ |
| 6845/9170 | '537' 4986364343639048328323753583736310 |
|  | '537’ 4926437143594046508343403146838354 |


| 6778/7675 | '471'9635432473232948080 3647839013 |
| :---: | :---: |
|  | '471' 2356337961357774526466477930253516 |
| 7335/11830 | '745' 8026361133110737806371373140546464 |
|  | '745' 961888620580697173427453757440105972352147660 |
| 12365/14280 | '729' 81054235238713306994808036113 |
|  | '729' 4586205341116043494376381607048834 |
| 4580/6420 | '967' 81453018730568321544796532869 |
|  | '967' 82459721146936904770882102044 |

## Thursdays

| 6th/13th (E17z) | 0800/10 |
| :---: | :---: |
| 20th/27th |  |
| 6th/13th | 0900/10 |
| 20th/27th |  |
| 6th/13th | 0900/10 |
| 20th/27th |  |
| 6th/13th | 0930/40 |
| 20th/27th |  |
| 6th/13th | 0950/1000 |
| 20th/27th |  |
| 6th/13th | 1200/10 |

## Fridays

$\left.\begin{array}{llc}\begin{array}{lll}\text { 7th } / 14 \text { th } \\ \text { 21st/28th }\end{array} & 0600 / 10 & 7125 / 8795 \\ \begin{array}{l}\text { 7th } / 14 \text { th }\end{array} & 0700 / 10 & 7150 / 8215 \\ \text { 21st/28th }\end{array}\right)$

Saturday

| 1st | 1200/10 | 8680/8280 | '254' 8196172638917345637229072356768891 |
| :---: | :---: | :---: | :---: |
| 1st | 2100/10 | 5420/4543 | '874' 3189827959943471556839710339866805988654596429474 |
| 8th | 2100/10 |  | '874' 00000 |
| 22nd | 2100/10 |  | '874' 00000 |
| Sundays |  |  |  |
| 2nd/9th | 0630/40 | 13470/16515 | '524' 9836354793005045056313973373264535 |
| 16th/23rd |  |  | '524' 8716524016391992699146007424848754 |

Unscheduled - A very unusual message as there is a repeated figure in the ID/DK and group count ( 2 ones and and 2 twos) 02/11 6262kHz/7010 0405/0420z
‘127’ 30218
49711632588761395086319106562594603940271325395086
3191065625389845252302630389845252302630
3021800000

Similarly, ID 874 appeared on Saturday evenings with messages which didn't follow normal protocol. Has now ended.

Thanks to RNGB, Spectre, Malc, JkC, Ary

## S06 log December

Daily Mon- Fri 0400z 15721 kHz
22/12 '480' 2365004656 ... 179212365000000 Ended 0411z Fair QRM1 QSB2 JkC MON HK Remote. See transcript 48023650
04656639241811948479729436209584731207813289065258
73833134903623700055333541486542324284047393958377
94750245222279932715051548758755780009039255932238
18606202245173624087732044762748988524453007530314
68831574435263074183599795372444441238365409317921 2365000000

| Mondays/Thursdays | 1900z 3192 kHz | or | 1905z | 3838 kHz |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 01/12 1905z | '349' 00000 |  | Malc, HFD |  |  |
| 04/12 1905z | '349' 00000 |  | Malc |  |  |
| 08/12 1905z | '349' 00000 |  | Malc |  |  |
| 15/12 1905z | '349' 00000 |  | Malc |  |  |
| 18/12 1905z | '349' 00000 |  | JkC |  |  |
| 20/12 1905z | '349' 00000 (used 38 | 32kHz) | JkC |  |  |
| 22/12 1900z | '349' 00000 |  | Malc |  |  |
| 25/12 1905z | '349' 00000 |  | RNGB |  |  |
| 29/12 1905z | '349' 00000 |  | Malc |  |  |
| Fridays | 1900z 7971 kHz |  | 2000z | 5909kHz |  |
| 05/12 | '278’ 00000 |  | RNGB |  |  |
| Saturdays 1st/2nd/3rd and 4th | 1600 z | 6943 kHz | or | 1605z | 5786kHz |
| 06/12 1600z | '194' 00000 |  | HFD |  |  |
| 13/12 1600z | '194' 00000 |  | Spectre |  |  |
| 20/12 1605z | '194' 00000 |  | Malc |  |  |
| 27/12 1600z | '194' 00000 |  | RNGB, | homas |  |
| Saturdays 1st and 3rd | 2030z 4616kHz |  | 2130z | 4036 kHz |  |
| 06/12 | '621’ 00000 |  |  |  |  |
| 20/12 | '621' 00000 |  |  |  |  |
| Saturdays 1st and 3rd | 4022 kHzz 2000 z |  | 2100z | $3368 \mathbf{k H z}$ |  |
| 06/12 2000z | '362' 00000 | (Used 402 | 7 kHz ) |  |  |
| 20/12 2000z | '362' 00000 | (Used 402 | 4 kHz ) |  |  |


| Saturdays 1st/2nd/3rd and 4th | $\mathbf{1 9 3 0 z} \mathbf{~ 3 1 6 9 k H z}$ | or | $\mathbf{1 9 3 5 z}$ | $\mathbf{3 8 4 2 k H z}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $06 / 12$ | $1935 z$ | $' 396 ' 00000$ | Karsten, HFD |  |
| $13 / 12$ | $1935 z(3834 \mathrm{kHz})$ | $' 396 ' 00000$ | JkC |  |
| $20 / 12$ | $1935 \mathrm{z}(3832 \mathrm{kHz})$ | $' 396 ' 00000$ | Malc |  |

S06c

| 8173 kHz 1503 z | 03/12 [I/P 11212] 1503z Fair QRM1 QSB1 | JkC | WED |
| :---: | :---: | :---: | :---: |
| $10163 \mathrm{kHz} \mathrm{1441z}$ | 03/12 and again at 1450 z with " 11212 " x 5 mins | Jan | WED |
| $18452 \mathrm{kHz} \mathrm{1100z}$ | 16/12 [I/P 11051] 1104z Strong QRM1 QSB1 | JkC | TUE |
| $14452 \mathrm{kHz} \mathrm{1100z}$ | 23/12 '11179' x 4 mins | RNGB | TUE |

S06s December log:

Mondays
$1 \mathrm{st} / 8 \mathrm{th}$
$15 \mathrm{th} / 22 \mathrm{nd}$
$1 \mathrm{st} / 8 \mathrm{th}$
$15 \mathrm{th} / 22 \mathrm{nd}$
$1 \mathrm{st} / 8 \mathrm{th}$
$15 \mathrm{th} / 22 \mathrm{nd}$

Tuesdays
2nd/9th

2nd/9th
16th/23rd
2nd/9th
16th/23rd
2nd/8th 16th/23rd 2nd/9th 16th/23rd 2nd/9th 16th/23rd 2nd/9th 16th/23rd 2nd/9th 16th/23rd

Wednesday
3rd/10th 17th/24th 3rd/10th 17th/24th 3rd/10th 17th/24th 3rd/10th 17th/24th

0830/40

0900/10

1200/10

0600/10
0700/15

0730/40

0800/10

1000/10

1100/10

1500/10

0820/30
0830/40

1000/10

1230/40

Thursdays

| 4th/11th (E17z) | 0800/10 | 11170/9820 |
| :---: | :---: | :---: |
| 18th/25th |  |  |
| 4th/11th | 0900/10 | 5765/6315 |
| 18th/25th |  |  |
| 4th/11th | 0900/10 | 12952/13565 |
| 18th/25th |  |  |
| 4th/11th | 0930/40 | 5765/6315 |
| 18th/25th |  |  |
| 4th/11th | 0950/1000 | 12445/13130 |
| 18th/25th |  |  |
| 4th/11th | 1200/10 | 8812/9540 |
| 18th/25th |  |  |
| Fridays |  |  |
| 5th/12th | 0600/10 | 7125/8795 |
| 19th/26th |  |  |
| 5th/12th | 0700/10 | 7150/8215 |
| 19th/26th |  |  |
| 5th/12th | 0800/10 | 5810/6770 |
| 19th/26th |  |  |
| 5th/12th | 0930/40 | 11780/12570 |
| 19th/26th |  |  |

8680/8260 5420/4543 13470/16515
'371’ 2506450323936687471314874013030905 '371' 9526105972352147660928836990115636 ' 872 ' 41654375030431389864221846193 ' 872 ' 90451059723521476609288369901 '831' 20953765530146344759132641043 ‘831’94059611110544980036890945279
'438' 5096829467492072849920318653485022 '438' 5926169458074486200847064222761736 ‘374’ 21954080948367334063278537331 ' 374 ' 91654811524151518022380715521 ‘ 427 ' 89654606253672118348102236903 '427' 96858862058069617327453757440 '352' 4786886205806961732745375744010545
‘ 352 ' 9476337961357774527466477930253516 ' 893 ' 47651059723521475609288369901 ' 893 ' 4576460626867297487396853048547660 '754' No reports
'754' No reports
'537' 8246319004836636434328404843681480
' 537 ' 8206317049159647308921074039885417
'471'98654452046992313733924631773
‘ 471 ' 2536460626867297478396853048596632 '745' 8096492943806431724373243931696930 '745' 8036524016391992699146007424848754 '729’ 8356460626867297478396853048596632 ‘729' 5106421693579733873392359361584408 '967' No reports '967' 20854142244599363845835340329
' 674 ' 92053292932622329393109647473 ‘ 674 ' 93159214536330319564027639393 ' 624 ' 87053337348111447023806793171 ‘ 624 ' 98753554347913473299573986599 ‘167’ 84953154238747335343621337680 ' 167 ' 98353169481576463198137475416 ' 314 ' 2576401383330737028331931430914320 '314' 9856447451633088418304808865034434 '635' 294784674899788036149906357948260546305 ‘635’ 489733796135777542646647793025351625616 '425' 8736421693579733873392359361584408 ' 425 ' 9386933514219130821337253766130885
'934' 86054498837970302833688984253 '934' NRH
'196' 47253139933444443849959839459
'196' 48354061377249406781796721816 '278' 5016460626867231312523439288369901 '278' 41053940833487834563739393068 '516' 402788146578569883546186169458074447374 ' 516 ' 204749002325713331340597914304048915690

```
`254' NRH
'874'00000
```

' 524 ' No reports
'524' 90168862058069617327343757440

November saw several expected seasonal changes of frequency, in general moving to those used in the first two months of 2014.

## Weekly Saturday 1600 or 1605 UTC Schedule:-

1-Nov-14:- 1600 UTC, $6,943 \mathrm{kHz}$, calling " 194 " for a full message, DK/GC "780 7803636 ", has been appearing on this schedule since $11-$ October so the same 5 F message. Or was it? On Saturdays 11 -October, 18 -October and 25 -October and on a Wednesday repeat on 15 -October the signal had been clear enough for me to hear the 5 F groups clearly and I logged 5 F group no. 12 as " 03591 ". Today I logged it as " 03519 ", i.e. the " 1 " and " 9 " transposed, as was the case with the repeat on Wednesday 5 -November, see below.
$6,943 \mathrm{kHz}$ was used for this schedule in January and February with 5,786 the frequency for
1605 UTC.
8-Nov-14:- 1605 UTC, $5,786 \mathrm{kHz}$, the expected frequency for the "plus five minutes" start-up, "194 19419400000 ", so the "full message" which has been running for the last four weeks has ended.

15-Nov-14:- 1605 UTC, $5,786 \mathrm{kHz}$, "194 19419400000 ", peaking over S9, weak FSK RTTY type signal on a close frequency.
6-Dec-14:- 1600 UTC, $6,943 \mathrm{kHz}$, "194 19419400000 ", up to S9.

13-Dec-14:- 1600 UTC, $6,943 \mathrm{kHz}$, "194 19419400000 ", S9 with deep QSB.

Wednesday 2000 or 2005 UTC Repeat of Saturday "194" Schedule:-
5-Nov-14:- 2000 UTC, $3,720 \mathrm{kHz}$, " 194 " and "780 7803636 ", S9 signal inside the 80 metre amateur band but no interference from the legal occupiers of this part of the spectrum. Whatever the situation with regard to 5 F group no. 12 may have been in October,
it was definitely " 03519 " this evening because the signal was clear enough to be recorded
and on playback Ivan's voice, transliterated as best I can from Ruski to the English alphabet says, "Null tri pyat adean devyet".

## Weekly Saturday 1930 or 1935 UTC Schedule:-

1-Nov-14:- 1935 UTC, $3,832 \mathrm{kHz}$, call " 396 " for a "full message", DK/GC "425 4253737 ". Looks like the same message first noted on 11-October. Weak signal, seasonal change of frequency, similar + or - a few kHz used in January and February with 3,169 kHz at 1930 UTC.

22-Nov-14:- 1935 UTC, $3,842 \mathrm{kHz}$, "396 $39639600000 "$, S7 to S9.

6-Dec-14:- 1935 UTC, 3,842 kHz, "396 396396 00000", S7.

## First + Third Saturdays in the Month $2000+2100$ UTC Schedule:-

1-Nov-14:- 2000 UTC, $4,022 \mathrm{kHz}$, "362 36236200000 ", very weak signal, only just readable.
2100 UTC, $3,368 \mathrm{kHz}$, second sending, also very weak, strong "XJT" churning away on a close frequency. Seasonal change of frequencies, similar used in the first two months of 2014.

6-Dec-14:- 2000 UTC, $4,027 \mathrm{kHz}$, "362 36236200000 ", S7, much stronger than on the first Saturday in November. 2100 UTC, $3,368 \mathrm{kHz}$, second sending, also S 7 or so, much stronger than when last heard.

First + Third Saturdays in the Month 2030 + 2130 UTC Schedule:-
1-Nov-14:- 2030 UTC, $4,612 \mathrm{kHz}$, "621 62162100000 ", S6 to S 7 on a clear frequency.
2130 UTC, $4,026 \mathrm{kHz}$, second sending, close to a weak broadcast station. Again, a seasonal change to frequencies used in January and February.

6-Dec-14:- 2030 UTC, $4,616 \mathrm{kHz}$, " 62162162100000 ", peaking well over S 9 on a clear frequency.
2130 UTC, 2130 UTC, $4,036 \mathrm{kHz}$, second sending, also S 9 on a clear frequency.

## Monday + Thursday 1900 UTC or 1905 UTC Schedule:-

6-Nov-14, Thursday:- 1905 UTC, $3,838 \mathrm{kHz}$, "349 34934900000 ", very weak signal. Seasonal change of frequency, 1900 UTC sending should be on 3,192 or thereabouts.

10-Nov-14, Monday:- 1905 UTC, $3,838 \mathrm{kHz}$, "349 34934900000 ".

13-Nov-14, Thursday:- 1905 UTC, $3,838 \mathrm{kHz}$, "349 34934900000 ", S9, best signal so far.
17-Nov-14, Monday:- 1905 UTC, $3,838 \mathrm{kHz}$, "349 $34934900000 "$, S7 to S8.

20-Nov-14, Thursday:- 1905 UTC, $3,838 \mathrm{kHz}$, "349 34934900000 ", weak signal down in the noise.

24-Nov-14, Monday:- 1905 UTC, $3,838 \mathrm{kHz}$, "349 34934900000 ".

27-Nov-14, Thursday:- 1905 UTC, $3,838 \mathrm{kHz}$, "349 34934900000 ".
1-Dec-14, Monday:- 1905 UTC, $3,838 \mathrm{kHz}$, "349 349349 00000", weak signal.
8-Dec-14, Monday:- 1905 UTC, $3,838 \mathrm{kHz}$, "349 34934900000 ", weak signal down in local noise. So far I have only logged this one on the "five minutes past" frequency.

S11a log Nov/Dec

| 4828 kHz | 0455z | 04/11 [320/00] Конец 0458z Strong QRM1 QSB1 | JkC | TUE |
| :---: | :---: | :---: | :---: | :---: |
|  | 0455z | 07/11 [320/00] | RNGB | FRI |
|  | 0455z | 25/11 [320/00] | RNGB | TUE |
|  | 0455z | 23/12 [321/00] | RNGB | TUE |
| 5779 kHz | 0315z | 26/11 [388/32 V 0368541426567299004296958 72009.... 20099 80661] Конец 0326z Very strong 10m46s | PLondon, JkC | WED |
| 5815 kHz | 1955z | 05/11 [378/30 $43071374304598967221600633038609971 \ldots . .42813$ 65819] | RNGB | WED |
|  | 1955z | 19/11 [370/00] | Gary H | WED |
|  | 1955z | 26/11 [370/00] | RNGB | WED |
|  | 1955z | 28/11 [370/00] | Malc | FRI |
|  | 1955z | 03/12 [370/00] Конец 1958z S9 | Malc | WED |
|  | 1955z | 10/12 [370/00] | JkC | WED |
|  | 1955z | 12/12 [370/00] QSA1 Копец 1958z Strong QRM1 QSB1 | JkC, Karsten | FRI |
|  | 1955z | 17/12 [370/00] Копец1958z Weak BC QRM2 QSB1 | JkC | WED |
|  | 1955z | 26/12 [370/34 3400923894 32352.....73452] Very weak | RNGB | FRI |
|  | 1955z | 31/12 [370/00] Weak | RNGB | WED |
| 6433 kHz | 1020z | 05/11 [221/00] Конец 1023z S2 | Malc | WED |
|  | 1020z | 15/11 [221/00] | RNGB | SAT |
|  | 1020z | 22/11 [221/00] Конец 1023z S2 | Malc, Thomas | SAT |
|  | 1020z | 13/12 [221/00] QSA5 | Karsten | SAT |
|  | 1020z | 27/12 [221/00] | Thomas | SAT |
|  | 1020z | 31/12 [221/00] | Thomas | WED |
| 7504 kHz | 0915z | 04/11 [484/00] | RNGB | TUE |
|  | 0915z | 07/11 [484/00] Конец 0918z S5 | Malc | FRI |
|  | 0915z | 11/11 [484/00] | RNGB | TUE |
|  | 0915z | 18/11 [487/35 $4745941115422935342800768183466412362869 \ldots . . .6153889792]$ | RNGB, Malc | TUE |
|  | 0915z | 25/11 [484/00] | Malc | TUE |
|  | 0915z | 02/12 [484/00] | RNGB | TUE |
|  | 0915z | 09/12 [484/00] | Malc | TUE |
|  | 0915z | 12/12 [484/00] Конец 0918z S2 | Malc | FRI |
|  | 0915z | 16/12 [487/36....] too weak to copy | RNGB | TUE |
|  | 0915z | 23/12 [484/00] | RNGB | TUE |
|  | 0915z | 26/12 [484/00] | RNGB | FRI |
| 9610 kHz | 1020z | 04/11 [426/34 $8347231611931102762070438854271325528401 \ldots . .74639$ 86629] | RNGB | TUE |
|  | 1020z | 07/11 [426/34 83572...........86629] Repeat of Tuesday. Конец 1030z S4 | Malc | FRI |
|  | 1020z | 11/11 [426/00] | RNGB | TUE |
|  | 1020z | 25/11 [426/00] Конец 1023z S3 | Malc | TUE |
|  | 1020z | 02/12 [426/00] | RNGB | TUE |
|  | 1020z | 09/12 [426/00] | RNGB | TUE |
|  | 1020z | 12/12 [426/00] Конец 1023z S4 | Malc | FRI |
|  | 1020z | 16/12 [426/00] | RNGB | TUE |
|  | 1020z | 19/12 [426/00] Конец 1023z S5 | Malc | FRI |
|  | 1020z | 23/12 [420/33 18987761919401078420403196702703815 18565..... 8463573560$]$ | RNGB | TUE |
|  | 1020z | 30/12 [426/00] | Malc | TUE |
| 12530 kHz | 1015z | 17/11 [475/00] Конец 10:18z QSA3 QRM4 | Karsten, Malc | MON |
|  | 1015z | 20/11 [475/00] Конец 1018z S9 | Malc | THU |
|  | 1015z | 24/11 [478/35 $0042063802579650169137795157759058443651 \ldots . . .94179$ 19597] | RNGB, Malc | MON |
|  | 1015z | 01/12 [475/00] Конец 1015z S3 | Malc | MON |
|  | 1015z | 04/12 [475/00] Конец 1018z S4 | Malc | THU |
|  | 1015z | 15/12 [479/36] too weak to copy msg | Malc | MON |
|  | 1015z | 22/12 [475/00] | Malc | MON |
|  | 1015z | 25/12 [475/00] | Thomas | THU |
| 19099 kHz | 0715z | 12/11 [382/00] Fair | RNGB | WED |
|  | 0715z | 01/12 [382/00] Конец 0718z S2 | Malc | MON |
|  | 0715z | 31/12 [382/00] | RNGB | WED |

E11 0315z schedule Weds/Thurs unexpectedly change to S11a on the 26th with ID 388 and 32 groups. The following day repeat Was E11a with ID 258 sending the same 32 group message. Operator error?

NOTE: Due to the many variations in the reported endings of S11a I have now written it correctly in Cyrillic. The pronunciation in English is Konyetz

## V02a <br> Novemeber/December 2014

V02a continued with its occasional appearences with the following.

| Sunday    <br> $0100 z$ $18074 k H z$ $0120 z$ $15874 k H z$ |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | $0140 z$ | $14374 k H z$ |



## December2014

Sunday
$0100 \mathrm{l} 16037 \mathrm{kHz} \quad 0120 \mathrm{z} \quad 14637 \mathrm{kHz}$ 0140z 12137 kHz

07/12
14/12

21/12
661000
$66114287148133 \ldots 07783000000$
661142871
4813340300791354343383157
8131438503730371942904739
5110197190503395333724247
5110197190503395333724247
3538323250371293535512832
3538323250371293535512832
0045547928717445333138813
0045547928717445333138813
5539145473390705191000149
5539145473390705191000149
2524738157482383707378004
0818139801192599350783373
0818139801192599350783373
8424137322553141507073377
8424137322553141507073377
9091970302705021233499399 9091970302705021233499399
9133334791050871142784713 4312207211473887715313978 5871185472955381294509081 07783000000 Courtesy DanAr

## V21

November/December 2014

V21 continued to be active on the expected frequencies of 5637 kHz and 6529 kHz . However the almost nightly transmissions on 5637 kHz appeared to cease around 20/12. Perhaps they have switched to another as yet undiscovered frequency.

Items of note during the November/December period are detailed below. Some new behaviors were seen on both frequencies

As expected on November 3rd the 6529 kHz transmissions switched to 1400 z to keep them on the same local time when Daylight Savings Time commenced.
On $7 / 11$ at 0035 z he repeated a lot of his numbers after each pause. The same occurred on $12 / 11$ at 0230 z .
On $15 / 11$ on 5637 kHz at 0230 z he counted above 49 which is very unusual for this frequency.
on $15 / 11$ on 6529 kHz he counted to 150 and 180 on two of his counts, again higher than 100 on this frequency is very unusual.
On $15 / 11$ on 5637 kHz at 2300 z after the usual multiple counts to 32 , a new voice came on and counted to 99 then counted backwards from 99 to 79 .
On $27 / 11$ on 5637 kHz at 2315 unusual counts up to 100 also counts very fast and repeats 42 four times.
On $28 / 11$ on 5637 kHz at 2240 z Some repeats of numbers and also skipped some numbers. Repeated 42 four times (see previous day).

On $1 / 12$ on 6529 kHz he skipped the count of 31 to 40 . This became a regular occurence during December!

On $5 / 12$ on 5637 kHz at 0245 z new behavior for this Babbler as he counts to different numbers each time rather than counting to the same numbera almost every time. This behavior is seen to continue on subsequent days.

On $7 / 12$ on 5637 kHz at 0245 z , a loud bell is heard to ring 5 times in the background.
On $17 / 12$ on 6529 kHz he counts to 110 . Counts above 100 are rarities.
On $25 / 12$ on 6529 kHz the skipping of counts 31-40 continues until a new voice starts counting at which point the counts contain all numbers.
On to the logs
V21 $5637 \mathrm{kHz} 1130 \mathrm{z} 1 / 11$ [31 32, 32, 32, 32 (skips 16), 22, 32, 21 END] SAT
V21 $6529 \mathrm{kHz} 1300 \mathrm{z} 1 / 11[40,50,30,30,50,30,10,20,40,60,40,50,50,30,30,30$ END
V21 $5637 \mathrm{kHz} 0045 \mathrm{z} 3 / 11[32,32,32,21,22,36,16,49,36,16,36,26,36,36,49$ (repeats 42 ), $10,10,36,13,22,49$ (repeat 42), 46, 10, 36 (repeat 32 ), 10, 32,42 , 42 (repeat 22), 49 (repeat 22), 36, 22, 29, 31 (repeat 22), 42, 31, 26 END] MON

V21 $6529 \mathrm{kHz} \mathrm{1400z} 3 / 11$ [40, too weak to copy for 6 minutes, $30,30,20,30,30,30,50$, becomes too weak to copy] MON
V21 $6529 \mathrm{kHz} 1400 \mathrm{z} 4 / 11$ [50, 50, 30 END] TUE
V21 $5637 \mathrm{kHz} 0045 \mathrm{z} 5 / 11[22,32,32,22,32,32,32,32,31,29,29,32,32,26,32,29,32,22,29,27,26,22,26,26,32,32,29,32,26,31,32,25,32,28,32,22$ END] WED

V21 $6529 \mathrm{kHz} 1400 \mathrm{z} 5 / 11$ [30, 30, 20] END
V21 $5637 \mathrm{kHz} 0045 \mathrm{z} 6 / 11[31,31,31,8,31,31,31,29,28,21,6,31,31,31,31,22,31,31,21,26,32,31,21,31,31,31,5 \mathrm{END}]$ THU
V21 $5637 \mathrm{kHz} 0035 \mathrm{z} 7 / 11$ [49,33 (repeat 26), 16, 26 (repeat 2123 ) 15,49 (repeat 20, 21, 32, 42, 46), 21, 36, 49 (repeat 42), 23, (repeat 22), $7,5,16,11,36,($ repeat 2232 ), 2, 25, 3, 23, 31, 26, 22, 6, 23, 23, 20, 20, 26, 25, 14, 19, 29, 28, 24, 28, 25 ENR] FRI

V21 $5637 \mathrm{kHz} 0245 \mathrm{z} 7 / 11$ [25, (repeat 22 twice more), 44, 49, 46, 22, 49, 26, 46, 49, 16, 39 END] FRI
V21 $6529 \mathrm{kHz} 1400 \mathrm{z} 7 / 11$ [20, 50, 50, 20, 20, 40, 60, 50 END$]$
V21 $6529 \mathrm{kHz} 1400 \mathrm{z} 8 / 11$ [Too weak to copy at start, $50,50,50,40,100,100,100,50,100,100,100$ END]
V21 $6529 \mathrm{kHz} 1400 \mathrm{z} 9 / 11[30,30, ? ? 30,30,30,30,30,30 \mathrm{END}]$
V21 5637kHz 0030z 10/11 [25 END]
V21 6529 kHz 1400 z 10/11 [40, 40, 40, 40, 30, 30 END]
V21 6529 kHz 1400 z 10/11 [40, 40, 40, 40, 30, 30 END]
V21 $5637 \mathrm{kHz} 0300 \mathrm{z} 11 / 11$ [31, 21, 31, 21, 21, 25, 31, 21, 31, 25, 22, 31, 21, 16 END]
V21 6529kHz 1400z 11/11 [40, 30, 30, 30, 40 END]

V21 $5637 \mathrm{kHz} 0230 \mathrm{z} 12 / 11$ [6, 49 (counts 1 twice, 31-32 twice, skips 36, counts 42 twice), 16,16 (counts 16 twice) END]
V21 5637kHz 0330z 12/11 [23 $23369 \ldots . \ldots 24292465329$ 26.......continues with similar for 45 minutes.] WED
V21 $6529 \mathrm{kHz} 1400 \mathrm{z} 12 / 11[30,50, ? ?, 50,30,50,40,10,20,50,40,30,40,10,50,20,40,30,30,40,50,30, ? ?, 40,30,30$ END] WED
V21 $6529 \mathrm{kHz} 1400 \mathrm{z} 13 / 11[30,40,40,40,30,50,60,100,50,10,30,30 \mathrm{END}]$
V21 $6529 \mathrm{kHz} 1400 \mathrm{z} 14 / 11$ [20, 20, 40, 20, 30, 40, 30, 60, 40, 40, 40, 60 END]
V21 5637kHz 0000z 15/11 [32, 22, 23, 23, 32, 23, 32, 32, 26, 20 END]
V21 $5637 \mathrm{kHz} 0245 \mathrm{z} 15 / 11[100,100,36]$ Unusual to hear him count above 49 on this frequency.
V21 $6529 \mathrm{kHz} 1400 \mathrm{z} 15 / 11[30,70,30, ? ?, ? ?, 50,20,50,30,50,150,60,180,40, ? ?, ? ?, 30,40,50,50,10$ END] Very unusual, counts to 150 and 180.
V21 $5637 \mathrm{kHz} 2300 \mathrm{z} 15 / 11[32,32,22,32,32,32,32,32,32,22,32,32,23,26,32,32,32,32,32,32,32,32,22,21,32,32,32,32,22,16$ New Voice 99 , backwards from 99 to 79 END] Unusual, count above 49 and then counting backwards. SUN

V21 $6529 \mathrm{kHz} 1400 \mathrm{z} 16 / 11$ [40, 50, 30, 30, 20 becomes too weak to copy] SUN

V21 6529 kHz 1400 z 17/11 [Audible but too much lightning noise to copy] MON

V21 5637kHz 2345z 17/11 [Recording] [Very fast delivery with strings such as 0025140233140233110014421165144695340 ?60 46844361859944 351684271963251641284520 19....Continues with similar for 70 minutes.] MON

V21 6529 kHz 1400 z 18/11 [50, 50, 50, becomes too weak to copy] TUE
V21 6529 kHz 1400 z 19/11 [Approximately 12 minute TX but too weak to copy except one count from 30 to 40 heard] WED
V21 5637kHz 2345z 20/11 [120 228 23....... $242428042842 \ldots \ldots .$. ???? 369....... 1100 ?? 311100 ?46 369........ $43 \ldots \ldots 00271119627111962224 \ldots . .$. continue with similar for 30 minutes, very fast, hard to copy.] THU

V21 $5637 \mathrm{kHz} 2315 \mathrm{z} 21 / 11[118525 \ldots \ldots \ldots .28263326142714 \ldots \ldots . .2245236943233634371524462461152546346315$ $\qquad$ ..continues for 20 minutes finishing with 303552367 35] Found in progress at 2315z FRI

V21 5637kHz 2345z 21/11 [32, 32, 32, 23 END] FRI

V21 $5637 \mathrm{kHz} 2345 \mathrm{z} 23 / 11$ [33 331151368452929125 ??? 9597 225........continues with similar for 20 minutes. Fast delivery, very hard to copy.] SUN
V21 5637kHz 0130z 27/11 [36 36164428292024124427302112442730 $\qquad$ $37194499293535 \ldots .303030302525124267$ ?24 26332. $\qquad$ with similar for approximately 1 hour.] THU

V21 $5637 \mathrm{kHz} 2315 \mathrm{z} \mathrm{27/11}[100,93,63,42,23,62,43,62,40,100,16,63,53,43,53,16,50,43,16,33,33,23,16,30,33,22,53$ (suddenly goes very fast and counts 42 four times), 63, 43, 29 END] THU

V21 $5637 \mathrm{kHz} 2240 \mathrm{z} 28 / 11[43,16,49,32,26,49,49,10,42,49$ (repeat 42 four times), 10, 43, 49, 42, 46, 49, 49 (skips 15 to 42 ), 49, 22, $33,2 \mathrm{END}$ ] FRI V21 6529kHz 1400z 30/11 [Present but too weak to copy] SUN

V21 $6529 \mathrm{kHz} 1415 \mathrm{z} 1 / 12[50,60$, becomes too weak to copy but next count skips 31-40
V21 5637kHz 0300z 2/12 [29, 59, 16 END] TUE
V21 $6529 \mathrm{kHz} 1415 \mathrm{z} 2 / 12[60,40,5050,50$, too much noise for next 3 minutes, 50, 30 becomes too weak to copy.] TUE
V21 $6529 \mathrm{kHz} 1400 \mathrm{z} 3 / 12[10,50,100,100,100,100,100,100,60$ END] WED
V21 $5637 \mathrm{kHz} 0245 \mathrm{z} 4 / 12[32,32,32,32,32,32,32,32,32,32,24,32,23,32,32,25,32,32,8,16,22,32,31,32,32,32,32,16,32,29,32,22,22,32,22,32,16$, $23,23,22,32,32,32,6,32,32,32,32,32,32,32,32,32,32,22,29,22,10$ END] THU

V21 $5637 \mathrm{kHz} 1230 \mathrm{z} 4 / 12[32,32,32,32,32,29,32,32,13,32,3,32,32,32,22,22,32,22,32,22$ (skips 17) END] THU
V21 $6529 \mathrm{kHz} 1355 \mathrm{z} 4 / 12$ [60 (skips 31-14 and says50 instead of 60, 60, 60 (skips 31-40), 60 (skips 31-40), ??, 60 , 60 (skips 31-40), 60 (skips $31-40$ ), 10, 10, 60, 40, 60, 40 END ] found in progress. THU

V21 $5637 \mathrm{kHz} 0245 \mathrm{z} 5 / 12$ [50, 55, 35 , starts at 7 counts to $60,60,70,43,53,27,60,68,43,35,60,20,60,60,25,50,48$ or 49 ? Actually counts $44,45,46,47,48$, $45,40,21,50,50,35,60,50,40,39,6 \mathrm{END}]$ Unusual sequence of numbers for this Babbler. FRI

V21 $6529 \mathrm{kHz} 1355 \mathrm{z} 6 / 12$ [60, 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), at least 50 on this count skipping 31-40 END] found in progress. SAT

V21 $5637 \mathrm{kHz} 0245 \mathrm{z} 7 / 12$ [45, 80, 53, 100 (skips 60-69), 85 (loud bell rings 5 times in the background), 100, 46, 50, 100, 30, 85, 74, 50, 45 END] SUN

V21 $5637 \mathrm{kHz} 1245 \mathrm{z} 7 / 12[25,105,75,100, ? ?, 23,12,70,45, ? ?, 100, ? ?, 95,99,99,60,51$ END] SUN
V21 5637kHz 1310z 7/12 [25 208364 8..... 2520836569 63.... 23128423 ?? 23...... 242631390922208136 09.......... $002833831600283160028 \ldots . .24169$ 136 11....... 278169 61...... 21819192 11..... 26 69...... 242625049 12....continues with similar, TX lasts approximately 6 minutes.] SUN

V21 5637kHz 0230z 8/12 [32, 32, 16, 32, 12, 32, 32, 32, 32, 22, 32, 32, 18 END] MON

V21 $6529 \mathrm{kHz} 1355 \mathrm{z} 8 / 12$ [100, 100, 100, 100, 50, 50 END] MON
V2 $6529 \mathrm{kHz} 1355 \mathrm{z} 9 / 12[50,50,50,50,50,50,30,60, ~ ? ?, 50,40 \mathrm{END}]$ Found in progress. TUE
V21 $5637 \mathrm{kHz} 0000 \mathrm{z} 10 / 12[36,23,29,5,53,59,42,22,1,10,10,22,22,36,46$, into string 20200000212118214311006100 then back to counting, 16, 1, 10 END] WED

V21 $5637 \mathrm{kHz} 0230 \mathrm{z} 10 / 12[32,32,32,19,22,32,26,32,22,32,29,32,32,32,26,32,32,32,26,32,29,26,32,32,32,9,32,14$ END] WED
V21 6529 kHz 1355z 10/12 In progress, no copy. WED
V21 $5637 \mathrm{kHz} 0245 \mathrm{z} 11 / 12$ [100, 55, 55, 100, becomes very weak but goes into strings of numbers such as $0027003724112112112160005 \ldots$ continues for 2.5 hours.] THU

V21 $5637 \mathrm{kHz} 1350 \mathrm{z} \mathrm{11/12}[41,65,50,71,40,25,65,60$, goes into strings of numbers but too weak to copy] THU
V21 $6529 \mathrm{kHz} 1400 \mathrm{z} 11 / 12$ [180, 50, 50, 50 END] THU

V21 5637kHz 2130z 11/12 [32, 32, 32, 32, 32, 32, 32, 23 END] THU

V21 $5637 \mathrm{kHz} 0245 \mathrm{z} 12 / 12[32,32,32,32,32,32,32,26,32,32,32,32,32,32,32,32,32,29,32,32,32,31,32,32,32,30,6$ END] FRI V21 6529 kHz 1400 z 16/12 [60, 50, 100, 60, 60, 100, 100 END $]$

V21 $6529 \mathrm{kHz} \mathrm{1355z}$ 17/12 [70, 60, $11090,40,50,100,30,100,60,40$ END] Found in progress, unusual count above 100.

V21 6529kHz 1400z 18/12 [30, 30, 60 (skips 31-40), 30, 30, 60 (skips 31-40), 30 END]
V21 5637 kHz 1100 z 19/12 [32, 22, 26, 32, 32, 32, 22, 22, 32, 32, 21, 29, 22, 6 END]
V21 6529kHz 1400z 19/12 [60 (skips 31-40), ??,??, 60 (skips 31-40), 60 (skips 31-40), 50 (skips 31-40) END]
V21 5637kHz 0730z 20/12 [33 (repeats 22 three times and 32 twice), 49 (repeats 22 and 32), 10 END] SAT

V21 6529kHz 1400z 20/12 [60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 50 (skips 31-40) END]

V21 $6529 \mathrm{kHz} 1400 \mathrm{z} 21 / 12$ [30, 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 20, starts at 11 counting to 60 skipping $31-40,60$ (skips $31-$ 40 ), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40) END] SUN

V21 6529kHz 1400z 25/12 [70, 60 (skips 31-40), , 60 (skips 31-40), , 60 (skips 31-40), , 60 (skips 31-40), , 60 (skips 31-40), , 60 (skips 31-40), , 60 (skips 31-40) New voice starts 50, 50, 30, 60 END] THU

V21 $6529 \mathrm{kHz} 1400 \mathrm{z} 26 / 12$ [40, 50, 20, 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 30, 110, 50, 50 END] FRI

V21 6529kHz 1400z 27/12 [60 (skips 31-40), 20 END] SAT

V21 6529kHz 1400z 28/12 [60, 50, 40, 30, 60, 50, 40, 30, 50, 50, 50, 20, 50, 60, 60, 10 END] SUN

V21 $6529 \mathrm{kHz} 1400 \mathrm{z} 29 / 12[50,50,50,50,50,50,100,50,50,50,30,27$ END] MON

V21 $6529 \mathrm{kHz} 1355 \mathrm{z} 30 / 12$ Found in progress. Very weak, one count to 50 heard. TUE

V21 $6529 \mathrm{kHz} 1400 \mathrm{z} 31 / 12$ [50, 60,50 becomes too weak to copy] WED

Token sends the latest 'schedule' with notes, which can also be found at:
http://www.tokenradio.net/Radio/SharedFiles/NumbersTfer/V24 M94 latest sched.JPG
V24 Schedule. late 2014.
V24 Schedule Version 9.0

| Dry | 1200 | 1230 | 1300 | 1330 | 1400 | 1430 | 1400 | 1530 | 1000 | 1630 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |  |  |
| 5 |  |  |  | 5715 |  | 6310 |  | 5290 + |  |  |
| 6 |  |  |  | 6215 |  | 6310 |  | 5290 * |  |  |
| 7 |  |  |  |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  | 4000 ? |  |  |  |
| 9 |  |  |  |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  | 4900 ! |  |  |  |
| 11 |  |  |  |  |  |  | 4900 ! |  |  |  |
| 12 |  |  |  |  |  |  |  |  |  |  |
| 13 |  |  |  |  |  |  |  |  |  |  |
| 14 |  |  |  |  |  |  |  |  |  |  |
| 15 |  |  |  | 5715 |  | 6310 |  |  |  |  |
| 16 |  |  |  | 6215 |  | 6310 |  |  |  |  |
| 17 |  |  |  |  |  |  |  |  |  |  |
| 18 |  |  |  |  |  |  | 4900 |  |  |  |
| 19 |  |  |  |  |  |  | 4900 |  |  |  |
| 20 |  |  |  |  |  |  | 4900? |  |  |  |
| 21 |  |  |  |  |  |  |  | $5290{ }^{\text {² }}$ |  |  |
| 22 |  |  |  |  |  |  |  | $5290{ }^{\text {* }}$ \# |  |  |
| 23 |  |  |  |  |  |  |  |  |  |  |
| 24 |  |  |  |  |  |  |  |  |  |  |
| 25 |  |  |  | 5715 |  |  |  |  |  |  |
| 26 |  |  |  | 6215 |  |  |  |  |  |  |
| 27 |  |  |  |  |  |  |  |  |  |  |
| 28 |  |  |  |  |  |  |  |  |  |  |
| 29 |  |  |  |  |  |  |  |  |  |  |
| 30 |  |  |  |  |  |  |  |  |  |  |
| 31 |  |  |  |  |  |  |  | 4900 : |  |  |

4 Alternate months, odd months only (July, September, November, etc)
? Possible error, but more than one occurrence
: Seen only one time, but two days in a row and proper message
*\# Typically only transmits one of these two days
Very little change from Version 8.0 to Version 9.0 of this schedule.
Active frequencies now appear to be $4900,5290,5715,6215$, and 6310 kHz .
M94 not seen since November 2013, M94 dropped from title.
Note the 1330 UTC cycles, one day on 3715 kHz and the next on 6215 kHz . Initially believed to be an error this has now repeated for several months. The same message is sent both days.

Note the return of an alternate month schedule at 1530 UTC on day 5 and 6 of the month.

Start times have become more "loose", with errors of $+\gamma-10$ minutes noted. Typically the music starts before the scheduled start time.

## Polytones

XPA c
November2014
Wednesday/Saturday
$0700 \mathrm{z} \quad 11409 \mathrm{kHz} \quad 0720 \mathrm{z} \quad 13509 \mathrm{kHz} \quad 0740 \mathrm{z} \quad 14609 \mathrm{kHz}$

| $01 / 11$ | 456106985002137993437634 | Very strong |
| :--- | :--- | :--- |
| $05 / 11$ | 45600007001000010000010140 | Very strong |
| $08 / 11$ | 45600007645000010000010140 | Very strong |
| $12 / 11$ | 456102454001914422231475 | Very strong |
| $15 / 11$ | 456102454001914422231475 | Very strong |
| $19 / 11$ | 45600009641000010000010140 | Very strong |
| $22 / 11$ | 45600004069000010000010140 | Very strong |
| $26 / 11$ | 456101762001778488240121 | Very strong |
| $29 / 11$ | 456101762001778488240121 | Very strong |

$0700 \mathrm{~m} \quad$ 7756kHz $\quad 0720 \mathrm{z} \quad 9056 \mathrm{kHz} \quad 0740 \mathrm{z} \quad 10656 \mathrm{kHz}$
03/12 706000062120000100000101

Very strong
Strong
Very strong
Very strong

Very strong
Weak
Fair
Weak to very strong
Weak

XPA e
November2014
Tuesday/Thursd
1920z 7523kHz
04/11
06/11
11/11
13/11
18/11
20/11

25/11
27/11
15800009321000010000010140
$1940 \mathrm{z} \quad 6823 \mathrm{kHz}$

15800009120000010000010140

158103885002416609677110
15800002088000010000010140 Unsure of figs
[1920/1940z poor]

Fair

Fair,Co-channel QRM3
Fair, digitalQRM2
Fair, digiQRM3
Fair
Too weak to process
Very weak, QSB to nil
Weak, QRM3 QSB3
December2014
Tuesday/Thursday
$1900 \mathrm{z} \quad 8164 \mathrm{kHz} \quad 1920 \mathrm{z} \quad 7364 \mathrm{kHz} \quad 1940 \mathrm{z} \quad 5864 \mathrm{kHz}$
[1940z NRH, BC Stn]
138000 Available on 1900 weak/QSB to nil, $1920 / 1940$ z unuseable due to BCQRM.
$1381 \quad \mathrm{Msg} 4 \mathrm{m09}$ s on 1900 weak/QSB to nil, $1920 / 1940$ z unuseable due to BCQRM.

NRH across the schedule

13800006208000010000010140

NRH across the schedule
NRH across the schedule

13800002447000010000010140
[1920/1940z occluded by BC QRM3-5]
Weak, noisy

XPA2 m
November2014
Sunday/Tuesday

| 1300z | 18238 kHz | 1320z | 16238 kHz | 1340z | 14438kHz |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 02/11 |  | 043470000100000 | 10140 |  |  | Very strong |
| 04/11 |  | 096740000100000 | 10140 |  |  | Very strong |
| 09/11 |  | 06685001417432 | 22512 |  |  | Very strong |
| 11/11 |  | 0668500141743 | 22512 |  |  | Very strong |
| 16/11 |  | 07560000612759 | 75145 |  |  | Very strong |
| 18/11 |  | 07560000612759 | 75145 |  |  | Very strong |
| 23/11 |  | 04582000010000 | 10140 |  |  | Very strong |
| 25/11 |  | 032060000100000 | 10140 |  |  | Very strong |
| 30/11 |  | 046250000100000 | 10140 |  |  | Very strong |

## December 2014

Sunday/Tuesday
1300z 14538 kHz

## 1320z <br> 13538 kHz

$1340 \mathrm{z} \quad 12138 \mathrm{kHz}$

| $02 / 11$ | 06347000010000010140 |
| :--- | :--- |
| $07 / 12$ | 05080000671574255544 |
| $09 / 12$ | 02945000010000010140 |
| $14 / 12$ | 01515000010000010140 |
| $16 / 12$ | 06762000010000010140 |
| $21 / 12$ | 01189000934398226600 |
| $23 / 12$ | 01189000934398226600 |
| $28 / 12$ | 03491000859182675216 |

Very strong
Very strong, QSB3, 1340z Weak

Very strong
Very strong
Very strong
Very strong
Very strong
Very strong

XPA2 $\mathbf{p}$
November 2014
Monday/Wednesday
0800 z 16073kHz
$0820 \mathrm{z} \quad 14973 \mathrm{kHz}$
0840z $\quad 14373 \mathrm{kHz}$

| $03 / 11$ | 04613000010000010140 | Very strong |
| :--- | :--- | :--- |
| $05 / 11$ | 03708000010000010140 | Very strong |
| $10 / 11$ | 07825001716414557331 | Very strong |
| $12 / 11$ | 03024000010000010140 | Very strong |
| $17 / 11$ | 09413002312476063317 | Very strong |
| $19 / 11$ | 09413002312476063317 | Very strong |
| $24 / 11$ | 05507002078585321727 | Very strong |
| $26 / 11$ | 08142000010000010140 | Very strong |

$0800 \mathrm{z} \quad 15861 \mathrm{kHz} \quad 0820 \mathrm{z} \quad 14761 \mathrm{kHz}$
01/12 01321000010000010140
03/12 07179000010000010140
08/12 06331002130586761516

10/12

01321000010000010140 06331002130586761516 06331002130586761516 03353002279047053350 04715000010000010140 01477000010000010140 04230000010000010140 05695001811606953504 04492000010000010140
$0840 \mathrm{z} \quad 13561 \mathrm{kHz}$

| $[0840 \mathrm{z}$ obviated by local noise] | Very strong |
| :--- | :---: |
| $[0840 \mathrm{z}$ obviated by local noise $]$ | Very strong |
| $[0840 \mathrm{z}$ obviated by local noise $]$ | Very strong |
| $[0840 \mathrm{z}$ obviated by local noise] | Very strong |
| $[0840 \mathrm{z}$ obviated by local noise] | Very strong |
| $[0840 \mathrm{z}$ obviated by local noise] | Very strong |
| $[0840 \mathrm{z}$ obviated by local noise] | Very strong |
|  | Very strong |
|  | Very strong |
|  | Very strong |

XPA2 r
November2014
Friday/Saturday
1400z 17462k

1420z $\quad 16114 \mathrm{kHz}$
$01 / 1108862000010000010140$

## 1440z 14828kHz

Very strong

Very strong
Very strong
Very strong
Very strong
Very strong

Very strong
Very strong
Very strong

December2014
Friday/Saturday
$1440 \mathrm{z} \quad 12217 \mathrm{kHz}$
05/12 08652000010000010140

07/12 05080000671574255544

12/12 01947000852201501650

13/12 01947000852201501650

19/12
20/12
26/12

27/12 09941000010000010140

Very strong
Very strong, QSB3, 1340z Weak

Very strong
Very strong

Strong
Very strong
Very strong
Very strong

## HM01

## Analysis and Logs from out Cuban Desk [US]:

HM01 continued with the same format as previously reported for the majority of November/December.
Of most note on $19 / 11$ callup 4 and file changed at 2100 z and thereafter to $89860=20558986$.TXT . This is notable because the callup contained a 9 (unusual) ended in a 0 instead of a 1 (Unusual). Also note the first 4 digits of the file name 2055 (the new file was transmitted from 2100 z so possibly a time stamp?)

Another callup with a 9 appeared on $24 / 12$, namely $34191=07853419$. TXT.
A possible minor format change was noted on $24 / 12$. New callups (ending in 1) would keep the 1 suffix for a second day but on $24 / 12$ this was not the case as the last digit changed to 2 on the next day. The same thing was seen with a new callup on $25 / 12$, however, things reverted to normal after this date.

Four files with names not ending in .TXT were transmitted. These being. 50441761.F1C on 2/11, 50426148.F1C on 23/11, $36882577 . \mathrm{F} 1 \mathrm{G}$ on $7 / 12$ and 36578826.F1G on 19/12. These followed the usual format (F1C file nambes begin 50 and F1G file names begin 36)

Logs as follows

HM01 11435kHz 1600z 2/11 [07761 2156175722778471761143049$]$ New callups positions 1,2 and $507761=74540776$. TXT, $21561=55132156$. TXT, $75722=18257572$. TXT, $17611=50441761$. F1C SUN

HM01 11435kHz 1600z 3/11 [07761 21561757237784817612 12311] New callup position 6, $12311=51251231$.TXT MON

HM01 11435kHz 1600z 4/11 [07762 21562757247784917613 12311] TUE

HM01 5855kHz 0500z 5/11 [02317 66366532300160650279 72827] WED

HM01 9330kHz 0700z 5/11 [02317 ----- ----- ----- ----- -----] Much stronger signal than usual WED

HM01 9065kHz 0800z 5/11 [02317 ----- ----- ----- ----- ------] Much stronger signal than usual WED
HM01 9240kHz 0900z 5/11 [02317 ----- ----- ----- ----- -----] Much stronger signal than usual WED
HM01 9155kHz 1000z 5/11 [02317 ----- ----- ----- ----- ------] Much stronger signal than usual WED
HM01 5855kHz 0500z 5/11 [02317 ----- ----- ----- -----------]
HM01 11435kHz 1600z 5/11 [02318 6636753231016073641143681 ] All new callups since 1600 z yesterday. $02318=51200231 . \mathrm{TXT} 66367=$ 18656636.TXT, $53231=00555323 . T X T, 01607=32130160 . T X T, 36411=62403641 . T X T, 43681=36684368 . T X T$. WED

HM01 11435kHz 1600z 6/11 [67501 6636853232016083641143681 ] New callup position 1, 67501 = 11706750.TXT THU
HM01 11435kHz 1600z 7/11 [67502 2274153234382213641343683 ] Last digits skipped +2 . New callups positions 2 and $422741=36642274 . T X T 38221=$ 70503822.TXT FRI

HM01 11435kHz 1600z 8/11 [67503 22742532353822236414 43684] SAT
HM01 11435kHz 1600z 9/11 [67504 22743532363822336415 43685] SUN
HM01 11435kHz 1600z 10/11 [67505 22744532373822436416 43686] MON
HM01 11435kHz 1600z 11/11 [67506 22745532383822536417 43687] TUE

HM01 11435kHz 1600z 12/11 [67507 22746532393822636418 43688] WED

HM01 11435kHz 1600z 13/11 [67508 2274780781382275244186781$]$ New callups positions 3, 5 and $6.80781=27848078$. TXT, $52441=25455244 . T X T$, $86781=26368678$. TXT. THU

HM01 11435kHz 1600z 14/11 [67509 22748807818741152442 86781] New callup position $487411=11878741$.TXT

HM01 11435kHz 1600z 15/11 [60751 22749807828741152443 86782] New callup position 1, $60751=25156075$. TXT SAT

HM01 11435kHz 1600z 16/11 [60751 71601807838741252444 86783] New callup position 2, $71601=00627160 . T X T$ SUN

HM01 11435kHz 1600z 17/11 [60752 71601807848741352445 86784] MON

HM01 11435kHz 1600z 18/11 [60753 71602807858741452446 86785] TUE
HM01 11435kHz 1600z 19/11 [60754 71603807868741552447 86786] WED
HM01 11635kHz 1800z 19/11 [60754 71603807868741552447 86786] WED
HM01 11635kHz 2100z 19/11 [60754 71603807868986052447 86786] Note callup 4 has changed since the $1600 / 1800 \mathrm{Z}$ transmissions. $89860=$ 20558986.TXT. WED

HM01 8008kHz 2300z 19/11 [60754 71603807868986052447 86786] In LSB mode, expected HM01 in this time slot. WED HM01 11435kHz 1600z 20/11 [60755 71604807878986152448 86787] THU

HM01 11435kHz 1600z 21/11 [60756 71605807888986205561 86788] New callup position 5, $05561=14530556$. TXT. FRI HM01 11435kHz 1600z 22/11 [60757 7160680789898630556106601$]$ New callup position 6, $06602=41370660 . T X T$. SAT HM01 11435kHz 1600z 23/11 [60758 71607614818986405562 06601] New callup position 3, $61481=50426148 . F 1 \mathrm{C}$. SUN HM01 11435kHz 1600z 24/11 [22151 7160861481898650556306602 ] New callup position 1, $22151=64612215$. TXT. MON HM01 11435kHz 1600z 25/11 [2215171609614828986605564 06603] New callup position $200101=43170010$.TXT. TUE HM01 11435kHz 1600z 26/11 [22152 00101614838986705565 06604] WED HM01 11435kHz 1600z 27/11 [22153 00101614848986805566 06605] THU HM01 11435kHz 1600z 28/11 [22154 00102614858986905567 06606] FRI HM01 11435kHz 1600z 29/11 [22155 00103614862148105568 06607] New callup position 4, $21481=01262148$.TXT. SAT HM01 11435kHz 1600z 30/11 [22156 00104614872148105569 06608] SUN HM01 11435kHz 1600z 1/12 [22157 0010561488214828742154881$]$ New callups positions 5 and $6,87421=43878742$. TXT, $54881=03625488 . T X T$ MON HM01 11435kHz 1600z 2/12 [67351 0010610531214838742154881$]$ New callups positions 1 and 3, $67351=26356735$. TXT, $10531=28081053 . \mathrm{TXT}$ TUE HM01 11435kHz 1600z 3/12 [67351 00107105312148487422 54882] WED HM01 11435kHz 1600z 4/12 [67352 00108105322148587423 54883] THU HM01 11435kHz 1600z 5/12 [67353 44441105332148687424 54884] New callup position 2, $44441=41024444 . T X T$. FRI HM01 11435kHz 1600z 6/12 [67354 44441105342148787425 54885] SAT HM01 11435kHz 1600z 7/12 [67355 44442105352577187426 54886] New callup position 4, 25771 = 36882577.F1G. SUN HM01 11435kHz 1600z 8/12 [67356 44443105362577187427 54887]

HM01 11435kHz 1600z 9/12 [67357 44444105372577224251 54888] New callup position 5, 24251 = 72352425.TXT. TUE HM01 11435kHz 1600z 10/12 [73821 4444504861257732425154889$]$ New callups positions 1 and $373821=47237382$. TXT, $04861=42170486 . T X T$. WED

HM01 11435kHz 1600z 11/12 [73821 44446048612577424252 50581] New callup position 6, $50581=01185058 . T X T$. THU HM01 11435kHz 1600z 12/12 [73822 44447048622577524253 50581] FRI HM01 11435kHz 1600z 13/12 [73823 44448048632577624254 50582] SAT HM01 11435kHz 1600z 14/12 [73824 44449048642577624255 50583] SUN HM01 11435kHz 1600z 15/12 [73825 21261048652577824256 50584] New callup position 2, $21261=48502126 . T X T$. MON HM01 11435kHz 1600z 16/12 [73826 21261048666110124257 50585] New callup position 4, $61101=77636110 . T X T$. TUE HM01 11435kHz 1600z 17/12 [73827 21262048676110101221 50586] New callup position 5, $01221=71060122$. TXT. WED HM01 11435kHz 1600z 18/12 [33371 21263048686110201221 50587] New callup position $133371=80603337$. TXT. THU HM01 11435kHz 1600z 19/12 [33371 2126488261611030122265121$]$ New callups positions 3 and $688261=36578826$. F1G, $65121=14716512$. TXT FRI HM01 11435kHz 1600z 21/12 [33373 21266882626110501224 65122] SUN HM01 11435kHz 1600z 22/12 [33374 21267882636110601225 65123] MON

HM01 11435kHz 1600z 23/12 [333753354188264 611070122665124$]$ New callup position $233541=84243354$. TXT. TUE
HM01 11435kHz 1600z 24/12 [33376 3354288265341910122765125$]$ New callup position $434191=07853419$. TXT, also callup contains a rare 9 . Callup 2 didn't remain with last digit as 1 for a second day. WED

HM01 11435kHz 1600z 25/12 [33377 3354388266341920122865126 ] Callup 4 did not remain with last digit 1 for a second day. Looks like this might be a slight format change.

HM01 11435kHz 1600z 29/12 [66452 3354710111341962212303342$]$ New callup position 3. $10111=07351011 . T X T$. MON

HM01 11435kHz 1600z 30/12 [66453 33548101116325122124 03343] TUE
HM01 11435kHz 1600z 31/12 [66454 33549101126325222125 03344] WED

## PoSW's analysis and logs of this hybrid station as received in Great Britain:

Reasonable signals in the UK morning, not quite as strong compared to the summer months. Still the occasional mistake in starting up on the wrong frequency and in a few instances logged on unexpected frequencies. Quite often will appear to have already started if tuned in two or three minutes before the hour with the call-up in progress and then going into data mode before pausing just before the hour and then going into the call-up routine proper. Usually comes with a variation of signal strength up and down by a few 'S' points, not too surprising considering the distance the signal is travelling.

Transmission stops twenty minutes past the hour or thereabouts with the call-up routine starting up again on the half hour. Ten minutes in which to partake of a couple of shots of Havana Club rum, perhaps, or smoke about one third of a Romeo y Julieta cigar.

Latest:- Noted in the last days of November, $12,180 \mathrm{kHz}$ has replaced 11,635 at 1000 UTC on days of the week when this frequency is used, presumably because Radio China International in English starts up on this frequency at 1000Z. On one occasion both frequencies were noted running in parallel, as shown in the chart towards the end of E2k Newsletter 85, although this now appears to have stopped.

1-Nov-14, Saturday:- 0830 UTC, $11,635 \mathrm{kHz}$, "17347 6430675721778457603943047 ".
Starting up on the half-hour following the break, S9 with good audio.
0900 UTC, $11,462 \mathrm{kHz}, 5 \mathrm{Fs}$ as earlier, very strong signal, an indicated S9+.
1000 UTC, $11,635 \mathrm{kHz}, 5 \mathrm{Fs}$ as earlier, over-riding a weaker broadcast station, Radio China International in American English.
3-Nov-14, Monday:- 0811 UTC, $9,065 \mathrm{kHz}$, transmission in progress, peaking over S9 with good audio. Heard 5F groups, "07761 215617572277847 1761143049 ".
0900 UTC, $9,240 \mathrm{kHz}, ~ " 077612156175722778471761143049 "$, S7 to S8.
2230 UTC, $10,715 \mathrm{kHz}$, managing to over-ride local noise interference which is quite fierce
in this part of the spectrum for some reason, presumably from local digital TVs. "07761 21561757237784817612 12311", so not totally the same as earlier in the day. Data at 2133 and 15 seconds UTC.

4-Nov-14, Tuesday:- 0800 UTC, $11,635 \mathrm{kHz}, " 077612156175753778481761212311$ ", peaking well over S9 with excellent audio. 0900 UTC, $11,462 \mathrm{kHz}, 5 \mathrm{Fs}$ as earlier, S 7 to S 8.

5-Nov-14, Wednesday:- 0730 UTC, $9,330 \mathrm{kHz}$, new 5Fs, "02317 6636653230016065027972827 ". S9 with deep QSB.
0800 UTC, $9,065 \mathrm{kHz}, 5 \mathrm{Fs}$ as earlier, peaking over S9.
6-Nov-14, Thursday:- 0800 UTC, $11,635 \mathrm{kHz}$, "02318 $6636753231016073641143681 "$, S6
to S 7 .
0900 UTC, $11,462 \mathrm{kHz}, 5 \mathrm{Fs}$ as earlier, up to S9 with deep fading.
7-Nov-14, Friday:- 0900 UTC, $9,240 \mathrm{kHz}$, "67501 $6636853232016083641143681 "$, S5 to S6.
9-Nov-14, Sunday:- 0930 UTC, $9,240 \mathrm{kHz}$, starting up again, "67503 2274253235382223641443684 ". S7 to S8 with the usual QSB.
10-Nov-14, Monday:- 2200 UTC, 10,715 kHz, "67505 2274453237382243641643686 ",
strong enough to over-ride local RF hash interference. Data started at 2203 and 10 seconds UTC.
11-Nov-14, Tuesday:- 0800 UTC, a catalogue of errors this morning, was on $13,435 \mathrm{kHz}$ the frequency which would have been used for the previous hour's transmission, 11,635 being the norm for 0800 Z on a Tuesday. Weak signal, just able to confirm as HM01. Still on 13,435 when checked again at 0810 UTC, but had vanished when checked at 0816.
However had not moved to the expected 11,635 but was found on $11,670 \mathrm{kHz}$ with an S 9 signal. Stopped approx 0821 UTC, call-up started again at 0830 , " 675052274453237382243641643686 ". Went off air with carrier at 0831 UTC, was found on the correct frequency $11,635 \mathrm{kHz}$ continuing the call-up with an S9 signal, into data after 0833 UTC.

12-Nov-14, Wednesday:- 0800 UTC, $9,065 \mathrm{kHz}, " 675062274553238382253641743687$ ".
Peaking over S9 with deep QSB.
0930 UTC, $9,240 \mathrm{kHz}$, calling up after the "half-time break", 5 Fs as earlier, S9 signal.
13-Nov-14, Thursday:- 0800 UTC, $11,635 \mathrm{kHz}, " 675072274653239382265244043688$ ". 0930 UTC.

16-Nov-14, Sunday:- 0930 UTC after the break, $9,240 \mathrm{kHz}$, "60751 2274980782874115244386782 ", S6 at best with deep rapid QSB.
17-Nov-14, Monday:- 0900 UTC, $9,240 \mathrm{kHz}$, "60751 $7160180783874125244486783 "$.
S9 with the usual variations and a strong "XJT" roaring away on the LF side removed by selecting USB mode on the receiver.
1000 UTC, $9,165 \mathrm{kHz}$, would have expected 9,155 at this time. S7 to S8, 5 F groups as earlier. Strong FSK type signal of some kind came up during call-up for a couple of minutes and when this stopped HM01 had vanished. Found it on $9,155 \mathrm{kHz}$ at 1006 UTC.

18-Nov-14, Tuesday:- 0800 UTC, $11,635 \mathrm{kHz}$, "60752 7160180784874135244586784 ", S6 to S 7 at best.
0900 UTC, $11,462 \mathrm{kHz}, 5 \mathrm{Fs}$ as earlier, 55 to S6.
2200 UTC, $17,480 \mathrm{kHz}, 10 \mathrm{PM}$ in the increasingly dis-United Kingdom, weak signal, generally unreadable, just able to confirm the voice as the Señorita from Havana.

19-Nov-14, Wednesday:- 0800 UTC $9,065 \mathrm{kHz}$, "60753 7160280785874145244686785 ". Peaking S9, weaker FSK/RTTY type signal on same frequency.
0900 UTC, $9,240 \mathrm{kHz}, 5 \mathrm{Fs}$ as earlier, the "XJT" is still there.
1000 UTC, $9,155 \mathrm{kHz}$, weak signal, 5 Fs as earlier.
23-Nov-14, Sunday:- 0930 UTC, $9,240 \mathrm{kHz}$, "60757 $7160680789890630556106601 "$, after the half-time break, peaking over S9. 1000 UTC, $9,155 \mathrm{kHz}, 5 \mathrm{Fs}$ as earlier, S9 with the usual QSB.

24-Nov-14, Monday:- 0800 UTC, $9,065 \mathrm{kHz}$, "60758 $7160761481898640556206601 "$. S9 signal.
0900 UTC, $9,240 \mathrm{kHz}$, peaking well over S9. No sign of the "XJT" which caused problems to 9,240 last week.
2200 UTC, $10,715 \mathrm{kHz}$, "22151 7160861481898650556306602 ", S9 with deep fading, over-riding local interference when the signal at its strongest.
25-Nov-14, Tuesday:- 0800 UTC, $11,635 \mathrm{kHz}$, very weak signal, unable to confirm as HM01.
0900 UTC, $11,462 \mathrm{kHz}$, no weak signal here, peaking well over S9, "22151 7160861481898650556306602 ".
1000 UTC, $12,180 \mathrm{kHz}$, surprised to find HM01 on this frequency, 11,635 has been used on several days of the weak for some time. 12,180 was used in the early days of HM01, perhaps being used again because of China Radio International starting up on 11,635 at 1000 UTC. Weak signal, 5 Fs as earlier.

26-Nov-14, Wednesday:- 0830 UTC, $9,065 \mathrm{kHz}$, starting up after the break, "22151 7160961482898660556406603 , well over S9 with good audio.
27-Nov-14, Thursday:- 0800 UTC, $11,635 \mathrm{kHz}$, "22152 0010161823898670556506604 ",
signal strength S7.
28-Nov-14, Friday: 0900 UTC, $9,240 \mathrm{kHz}$, "22153 0010161484898680556606605 ", peaking S9.
1030 UTC, $9,155 \mathrm{kHz}$, starting up again after the break, 5 Fs as earlier, weak signal.
29-Nov-14, Saturday:- 0930 UTC, 11,462 kHz, "22154 $0010261485898680556706606 "$.
1000 UTC, $11,635 \mathrm{kHz}$, starting up, just about detectable under a much stronger Radio China International broadcast. Noticed on the half hour that $12,180 \mathrm{kHz}$ was also active:-
1030 UTC, $12,180 \mathrm{kHz}$, starting up after the break, 5 Fs as earlier, also still on $11,635 \mathrm{kHz}$, running in parallel - unusual for HM01.
30-Nov-14, Sunday:- 1000 UTC, $9,155 \mathrm{kHz}$, "22155 0010361486214810556806607 ", strength S6 to S7.
1-Dec-14, Monday:- 0930 UTC, 9,240 kHz, "22156 0010461487214810556906608 ". Peaking S9.
3-Dec-14, Wednesday:- 0800 UTC, $9,330 \mathrm{kHz}$, starting up on the wrong frequency, "67351 0010610531214838742154881 ". Vanished just before 0801 UTC, came up on the correct frequency, $9,065 \mathrm{kHz}$, after 0802 UTC.
0900 UTC, starting up on $9,065 \mathrm{kHz}$ again, call-up had begun when tuned in 15 seconds before the hour, 5 Fs as earlier, into data at 0902 and 50 s UTC, was still on 9,065 at 0910 UTC.
2200 UTC, $10,715 \mathrm{kHz}$, "67351 0010710531214848742254882 ". S9, over-riding local interference.
4-Dec-14, Thursday:- 0800 UTC, $11,635 \mathrm{kHz}$, very weak signal, way down in the noise and unreadable. Was much stronger when checked again just before 0850 UTC, heard 5 F group
" 54882 " - which was the very last one and the end of the transmission. Carrier went off shortly afterwards.
0900 UTC, started about 30s before the hour, $11,462 \mathrm{kHz}$, "67351 0010710531214848742254882 ", S7 to S8.
1000 UTC, $12,180 \mathrm{kHz}$, weak signal, 5Fs as earlier, nothing heard on 11,635 - just RCI.
5-Dec-14, Friday:- 0900 UTC, started about half a minute before the hour, $9,240 \mathrm{kHz}$, "67352 0010810532214858742354883 ", peaking S8. 1000 UTC, $9,155 \mathrm{kHz}$, again starting well before the hour, 5 Fs as earlier, S9 with deep QSB.

7-Dec-14, Sunday:- 0930 UTC, minus 35 seconds approx, $9,240 \mathrm{kHz}$, "67354 4444110534214878742554885 ", S9 with deep and rapid QSB.
9-Dec-14, Tuesday:- 1000 UTC, $12,180 \mathrm{kHz}$, appeared to be relaying a broadcast station with OM voice and music until approx one minute past the hour when the usual HM01 YL call-up routine started, "67356 4444310536257718742754887 ". Weak signal, had improved S6 to S7 when checked again just after the second call-up after the half-hour.

10-Dec-14, Wednesday:- 0800 UTC, start-up time is getting earlier, about 38 to 40 seconds before the hour this morning, $9,065 \mathrm{kHz}$. " 67357 m 4444 10537257722425154888 ". S5 to S6, a weak FSK/RTTY type signal underneath.
0900 UTC, $9,240 \mathrm{kHz}$, also started early, 5 Fs as at 0800 UTC, S7 to S8.
12-Dec-14, Friday:- 0930 UTC, minus about 40 seconds, $9,240 \mathrm{kHz}$, starting up after the break with, "73821 4444604861257742425250581 ". 1000 UTC, starting up on $9,240 \mathrm{kHz}$ again, 5 Fs as earlier, was on the correct frequency $9,155 \mathrm{kHz}$ when checked again towards the end of the transmission at 1044 UTC.

## Others' logs:

## November2014

| 10715 kHz 2200 z | 10/11[67505 22744532373822436416 43686] QSA2 | DanAR | MON |
| :---: | :---: | :---: | :---: |
| 2200z | 12/11[2274653239 382265244043688 67507] QSA3 | DanAR | WED |
| 2200z | 14/11[22748 80781874115244286781 67509] QSA3 | DanAR | FRI |
| 2200z | 16/11[7160180783 874125244486783 60751] QSA4 | DanAR | SUN |
| 2200z | 19/11[71603 80786898605244786786 60754] QSA3 | DanAR | WED |
| 2200z | 21/11[71605 80788898620556186788 60756] QSA3 | DanAR | FRI |
| 2200z | 24/11[71608 61481898650556306602 22151] QSA3 | DanAR | MON |
| 2200z | 26/11[00101 61483898670556506604 22152] QSA3 | DanAR | WED |
| 2230z | 28/11[00102 61485898690556706606 22154] QSA3 | DanAR | FRI |
| 2230z | 30/11[00104 61487214810556906608 22156] QSA3 | DanAR | SUN |
| 11462 kHz 0800 z | 01/11[Voice and Data.........]0810z S7 | M8 | SAT |


| $17480 \mathrm{kHz2200z}$ | $04 / 11[023176636653230016065027972827]$ QSA4 | DanAR |
| :---: | :--- | :--- |
| 2200 z | $13 / 11[227478078138227524418678167508]$ QSA4 | DanAR |
| 2200 z | $18 / 11[716028078587414524468678560753]$ QSA4 | DanAR |
| 2200 z | $20 / 11[716048078789861524488678760755]$ QSA4 | DanAR |
| 2200 z | $22 / 11[716068078989863055610660160757]$ QSA4 | DanAR |
| 2200 z | $25 / 11[716096148289866055640660322151]$ QSA4 + Hum | TUE |
| 2230 z | $27 / 11[001016148489868055660660522153]$ QSA4. Only carrier until $22: 30 \mathrm{z}$ | DanAR |
| SAT |  |  |
| TUE |  |  |
| THU |  |  |

## December2014

http://www.nytimes.com/2014/12/18/world/americas/us-cuba-relations.html?emc=edit_na_20141217\&nlid=61653669\&_r=0
This snippet outlines changes in the US/Cuba attitude. What the effect, if any, on HM01 or the remaining M08a/V02a tranmissions can be can only be patiently awaited:
"WASHINGTON - President Obama on Wednesday ordered the restoration of full diplomatic relations with Cuba and the opening of an embassy in Havana for the first time in more than a half-century as he vowed to "cut loose the shackles of the past" and sweep aside one of the last vestiges of the Cold War.
The surprise announcement came at the end of 18 months of secret talks that produced a prisoner swap negotiated with the help of Pope Francis and concluded by a telephone call between Mr. Obama and President Raúl Castro. The historic deal broke an enduring stalemate between two countries divided by just 90 miles of water but oceans of mistrust and hostility dating from the days of Theodore Roosevelt's charge up San Juan Hill and the nuclear brinkmanship of the Cuban missile crisis........"

The entire article needs to be read for an indepth understanding.
It is also interesting that an un-named person who spied for the US - and gave a damning report that led to the capture and prosecution of Ana Belen Montes and possibly the Myers has been exchanged. All these had been spying for Cuba for years.

| $\begin{array}{r} 10715 \mathrm{kHz} 2200 \mathrm{z} \\ 2200 \mathrm{z} \end{array}$ | 08/12[44443 10536257718742754887 67356] QSA3 17/12 NRH; note newspiece above? | DanAR | MON |
| :---: | :---: | :---: | :---: |
| 11435kHz1600z | 22/12 S9 (on WEBSDR) See 11530kHz for decodes |  |  |
| $11530 \mathrm{kHz1700z}$ | 22/12 S 9 (on WEBSDR) |  |  |
| voice > RDFT encrypted file (decoded with DIGTRX) |  |  |  |
| $33374>80603337$ $21267>48502126$ $88263>36578826$ $61106>77636110$ $01225>71060122$ $65123>14716512$ | XT 487 bytes XT 430 bytes GT 969 bytes X 961 bytes XT 798 bytes XT 269 bytes |  |  |
| 11635kHz2130z | 01/12[00105 61488214828742154881 22157] QSA2 | DanAR | MON |
| $\begin{array}{r} 16180 \mathrm{kHz} 2115 \mathrm{z} \\ 2140 \mathrm{z} \end{array}$ | 09/12[44444 10537257722425154888 67357] QSA2 11/12[44446 04861257742425250581 13821] QSA3 | DanAR <br> DanAR | TUE <br> THU |
| 17480kHz2230z | 02/12[0010610531214838742154881 67351] QSA3 | DanAR | TUE |
| 2200 z | 04/12[00108 10532214858742354883 67352] QSA2 | DanAR | THU |
| 2230z | 13/12[44448 0486325776242545058273823$]$ QSA3 | DanAR | SAT |
| 2210z | 16/12[21261 0486661101242575058573826$]$ QSA2 | DanAR | TUE |

## Crowd 36

8106kHz 1548z 11/11 [In Progress] 1700z Fair QRN4 QSB3
Spectre
TUE
(Note, this Crowd 36 transmission was caught in progress, this data mode appeared to be in idle mode for most of the time with some short bursts of data. The transmission was still active after 1700 z , making this Crowd 36 transmission the longest I have ever witnessed.)

## Digital, Incursions and Unexplained Signals

I am sometimes asked why I think FSK200/1000 is a mode which should be covered in the E2K NL and logged on the mailing list , surely people say it is just another of the 100s of mysterious digital modes which can be found on HF and its probably just another military or embassy data link. My main arguments why this mode should matter to E2K members are as follows .

1) It has schedules. Just like E06, E07 and the like FSK200/1000 has regular schedules on frequencies which in its case change monthly. Just like the voice number stations some of these schedules are long running (since at least 2012), others exist just a week or so while a small number appear to be random one offs.
2) It appears to be a one way transmission which is sent blind (i.e the sender doesn't know if the recipient has received the message or not). Some schedules send the same message for over a month. Again just like the voice and CW numbers stations.

Next I thought I would look in detail at each of the FSK200/1000 link IDs and speculate a little on them. So without further ado I bring you the FSK200/1000 cast of players ..

## $\underline{00000}$

This usually called a special. It identifies with a 'type' of 07104 (unlike the usual 07145). It rarely has schedules and when they do exist they never last longer than a week. It can occur on any day of the day at any time. Initially thought to be for training E2K members have reported it seems more common when something is happening in the world. However we may just be seeing patterns where there are none

## 02858

A member of the 00000 family. It has a 'type' of 7104 and appears at random or in short lived schedules. Only logged during September 2014 so may have had a specific purpose.

## 02881

Another member of the 00000 family. It has a 'type' of 7104 and has been logged just the once in May 2014

## 03667

The newest member of the 00000 family. It has a 'type' of 7104 and appears at random or in short lived schedules. Logged in December 2014 but not as common as 00000 .

## 16384

A weekends only station last logged in July 2013. It appears to be no more.

## 16404/16405

Scheduled transmissions at 08:00/10/20 (summer) and 09:00/10/20 winter. Logged on Wednesdays , Thursdays and Fridays. Last logged on Christmas Eve 2014 so still active. This station may transmit every weekday but more research is needed.

## 20492

A real oddity this one since its schedule transmits at odd times which are 10:15/25/35 on Wednesdays.Last heard on Christmas Eve 2014 so still active.

## 20501

A long running schedule which transmits on Sunday afternoon at 15:30/40/50. Most messages are nulls but if a message is sent then it is repeated at the same times and same frequencies on Monday, Tuesday, Wednesday and Thursday of the following week. The occasions messages are sent don't seem to correlate to any real world events but more research is needed.
$\underline{24584}$
A rarely logged link. Active on Monday evenings at 21:00/10/20. Last logged in December 2014 so still active.
$\underline{28676}$
Logged only once at 12:10 on a Wednesday in March 2014

## 28680/28681

Logged on Saturdays at 20:00/10/20 and Fridays at the same time during November 2014. Not known if still active.

## 28724/28725/28732

This trio of idents appeared in May 2013 transmitting on weekdays and weekends before vanishing. Obviously they had some special purpose but what?

## 32799

This ident was first logged in March 2014 sending null messages on weekends and weekdays. It last appeared in April 2014 and hasn't been logged since.

## 32821

A long running Saturday at 15:00/10/20 schedule which usually sends nulls. However it can also appear on Saturdays at 15:30/40/50 and sometimes on Sundays at these times also. In addition it has been logged on Saturdays at 21:00/10/20 also 21:30/40/50. Possibly these are regular repeats of the 15:xx transmissions

## 36882

Another long running schedule which transmits on Saturdays and Sundays at 11:00/10/20. It can be heard in Europe but also Australia and East Coast USA so it is unknown where it is aimed. It used to send long messages every weekend but over the last few months the messages have go shorter and shorter. Now null messages are frequently sent

## 36930/36931

A short lived group of idents which appeared in March 2014 on Sundays at 11:00/10/20 but then vanished from the air. It may have been linked with the Ukraine crisis.

## 40988

Transmits on Tuesdays at 23:00/10/20 and Fridays at 06:00/10/20. Last heard in December 2014 so still active.

## 41018

A real oddity schedule this one. It transmits every weekday at $02: 00 / 10 / 30$ but the frequencies used never change. Heard in Argentina and USA but it isn't a strong signal so isn't aimed at them

## 45057

A long running schedule which is a very strong signal in Western Europe (I don't need an antenna to hear it). Transmits on alternate weekends at 09:00/10/20 sending just one message a month. Also Tuesdays at 22:00/10/20 sending nulls. No other schedule sends messages repeated in this way

## 45075

Transmits on Wednesdays and Thursdays at 08:00/10/20. Last logged in September 2014 and believed still to be active.

45079
Active on Monday mornings at 05:00/10/20 or 06:00/10/20 depending on the time of year. Last logged in November 2014 most likely still active.

## 45114/45115

Another long running weekend schedule. It used to transmit every weekend but in the latter half of 2014 dropped this to alternate weekends.

## 45136/45137

A long running weekdays only schedule transmitting at 07:00/10/20 then repeating the same message at 12:00/10/20. Initially it never transmitted on a Friday which plus the fact this schedule sends a different message daily made me wonder if it was linked to the situation in Syria. However now there are transmissions on Fridays (although usually just nulls) and traffic seems to have declined slightly.

## 45141

A short lived schedule operating on weekends and weekdays heard only during March 2014.

## 49202

First logged in December 2013 and last heard in April 2014 this schedule transmitted on weekdays at 10:00/10/20 and Wednesdays 22:00/10/20. Not sure if still active.

49237
Logged sending nulls on Thursdays and Fridays at 13:30/40/50. Last heard in September 2014 and am not sure of its current status.

## 53254

Another short lived schedule from March 2014. This one was logged on Wednesdays at 15:30/40/50

## 53277

Again I'm not sure of this ones status last logged in July 2014 on Wednesdays at 12:30/40/50.

As you can see there are a large number of link IDs whose status is unknown. We really need more listeners to monitor the FSK200/1000 stations and report their logs to the group. All you need is a standard HF receiver (many of this modes schedules are good signals so you don't need a huge antenna) and 'Rivet' a free decoder which should work on any MS Windows, Linux or Apple PC. This can be downloaded from its new home here .
http://www.apul64.dsl.pipex.com/enigma2000/rivet/index.html

I would like to thank all the people who have sent me data logs during 2014 as without you none of this would have been possible. In addition I would like to wish all of my readers and very happy 2015.

Ian (Digi Desk)

Thanks to all those who have contributed logs and other pieces:

## BR, JkC, PoSW, RNGB, Spectre, M8, BRIXMIS, JO, MoK, Ary, DoK, Karsten, IW, Christer, HGH, E, tiNG, DanAR X06 team, MaleAnon.

Apologies to anyone missed

## Book Review

If you have an interest in espionage/Cold War/Radio Intercepts then this book should be of much interest [it's a very good read]:

## Chinese Whispers: Listening to China: RAF Chinese Linguists remember 1956-58, Jim Wilson

Available both as a 'book' or a Kindle ebook the description reads, "It sounds like an adventure straight out of an Ian Fleming novel: lads still wet-behind-the-ears taught Chinese and then stationed in Hong Kong in the late fifties, spying on communications from beyond the bamboo curtain. It was indeed a life-changing experience, as the group recalls more than 60 years later."

This book is about National Servicemen who opted to learn Chinese, become RAF linguists and in Hong Kong practised their trade in what was known as Little Sai Wan. After being handed over to GCHQ where is functioned as a Composit Signals station it ceased to exist before Britain handed HK back to the Chinese at midnight on July 1, 1997. The last Governor of HK being Chris Patten.


Review:
An excellent piece of work indeed. I have long been interested in the workings within Little Sai Wan and Batty's Belvedere and luckily had an insight via another rather personal route.

However, this piece more than adequately describes the path to LSW in the form of the RAF No2 Chinese Linguists' Course and is written from the compiled memories of those who learnt and practised their skills whilst performing their now, long gone National Service.

For me, the style of Jim Wilson writing ensured I was an intimate bystander observing activities before and during the learning practise, the almost sparse entertainment in spare time and the creation of SPLIMB in 1957 with its activities almost to this day
The detail of travel between RAF Stations and eventually to Hong Kong splendidly recounted down to the issue of tropical wear and the necessary vaccinations.
No real detail of the intercepts processed by the Lingys in LSW but the mention of the AR88 which I have used and the Marconi 1475 which I now wait in vain to use was enough to put me in the Set Room, doubtless with Ferrograph reel to reel Recorders turning routinely less the intercepted spoken word is lost. I could almost smell the tainted heat from the valves [tubes] as I read that short description.
Anyone who expects this book to describe the official activities of the persons in this book whilst employed at LSW will be disappointed; this book is very much about the personalities who undertook language education a la RAF, traveled to foreign parts in clapped out aircraft and made the very best of what they had.

It is an excellent read and firmly recommended for those with an interest in Signals Interception and in those who, for want of a better word, became Spies.
The book in its hard copy format can be ordered by telephone, calling Mr Lance Slater on +44 (0)1628 484323


From 'E' taken from an unknown source: There's something decidedly CCCP about that protective helmet comrade!

## PoSW'sItems of Interest in the Media:-

Latest news from GCHQ and a "gissajob" opportunity:- from the Breitbart London on-line news-site on 7-December comes a story written by Donna Rachel Edwards with the headline, "British spy agency to snoop on office e-mails in an attempt to root out double agents" and says, "The spy agency Government Communications Headquarters (GCHQ) is investing in techniques that will allow it to spy on peoples' office e-mails in attempt to uncover fifth columnists. It is hoping that through the use of language analysis it will be better able to catch double agent turncoats such as Kim Philby and Guy Burgess who displayed anomalous behaviour before being unmasked as Soviet agents.
GCHQ is sponsoring a PhD post at the University of Lancaster which will last three and a half years at a cost of $£ 22,000$ a year. The Times has reported that, in its advert for the post, the university said: 'The research.....will investigate the use of natural language processing to detect the early indicators of an insider threat within an organisation's unstructured internal data.
Or in other words, the researcher will study e-mails for signs of employees who may have become disaffected. Paul Taylor, professor of psychology at Lancaster University said: 'Instead of ending their e-mail with "see ya" they might suddenly offer you "kind regards". Instead of talking about "us" they might refer to themselves more. These changes are important and could hint at a disgruntled employee about to go rogue.'
The university has indicated that it will use the latest data analysis techniques to process data contained e-mails as an indicator of possible rogue behaviour. The successful applicant for the PhD post will need to pass GCHQ security checks.
GCHQ currently sponsors upwards of 30 PhDs in cyber security. It has refused to comment on whether or not the techniques developed will be used on its own staff, but the secret services are known to be haunted by the memory of the Cambridge Five spy ring, which included Philby, Burgess and Donald Maclean, all of whom were employed within the secret services whilst feeding information to Moscow in the early half of the 20th century."

More Bears in the air:- the incidence of large Russian four-engine turboprop aircraft, NATO reporting code "Bear", flying close to United Kingdom airspace continues apace. The Times newspaper of 31 -October carried a short item with the headline, "NATO reports rise in military jets over Europe which says, "NATO has reported a spike in Russian military flights in European airspace after RAF fighters were scrambled to intercept a pair of Russian long-range bombers over the North Sea.
Typhoon jets from RAF Lossiemouth tracked the two TU-95 Bear H bombers through the UK 'flight information region' as NATO radars picked up a series of Russian formations engaged in 'significant military manoeuvres' ranging from the Black Sea to the Atlantic Ocean.
'These sizeable Russian flights represent an unusual level of activity over European airspace,' a statement on the NATO website said. 'The bomber and tanker aircraft from Russia did not file flight plans or maintain radio contact with civilian air traffic control authorities and they were not using onboard transponders. This poses a potential risk to civil aviation as civilian air traffic control cannot detect these aircraft or ensure there is no interference with civilian air traffic.
The flight coincided with similar incidents over the Black Sea in which Russian military formations were intercepted by Turkish fighters.
Jens Stoltenberg, secretary-general of NATO, said the alliance remained 'vigilant and ready to respond' to any further Russian moves. 'We need to keep our forces ready, therefore we are investing in high readiness, new capabilities,' he said.
The article in the Times showed a photograph of Tu-95, taken from a position slightly higher and above the clouds. A sense of "We have all been here before" about this; in fact it was like deja vu all over again!
This sort of thing was going on thirty years ago; it so happened that at about the same time as this news item appeared I was sorting through a large stack of aviation hobbyist magazines among which was a copy of Aircraft Illustrated from December 1984 - so three decades ago exactly since I am writing this in December 2014. The main item in this magazine is an informative article entitled, "To intercept a Bear", written and illustrated with photographs by Denis J Calvert of Inter-Air Press. The article of four pages describes the writers time spent with the Quick Reaction Alert squadron at RAF Leuchars in Scotland in which the he was fortunate enough to be able to ride in the rear seat of an RAF Phantom fighter taking part in the interception of a Soviet - era "Bear". The full colour centre spread of the magazine shows an impressive photograph of a "Bear" flanked by two RAF fighters with the caption, "A Phantom FG1 of 'Treble One' and a Lightning of No 11 squadron flank a Soviet 'Bear-E' over the North Sea.

French government to honour former Second World War spy:- the I newspaper's "Page 3 Profile" column of 24 November carried an item about a lady of senior years photographed with a row of medals on her jacket topped by a winged parachute insignia, Phyllis Latour Doyle. The article reads, "Is discretion the better part of valour? For a spy it's paramount, as Phyllis Latour Doyle knows. The former British agent is to receive France's highest honour for helping to liberate the country from the Nazis in the Second World War. Mrs Doyle, 93, will be presented with the Legion d'honneur 70 years after she parachuted behind enemy lines.
The reluctant heroine, now living in New Zealand, has shunned the limelight and did not even tell her four children about her wartime exploits until 15 years ago. 'My eldest son found out by reading something on the internet,' she said.
Mrs Doyle joined the RAF to train as a mechanic in 1941 but upon discovering she spoke fluent French, the Secret Service signed her up. Aged 23 she dropped into Normandy on 1 May 1944, assumed the identity of a 14 -year-old French girl and cycled around the area, passing information through coded messages. The French government wants to highlight Mrs Doyle's remarkable achievements."

Point to ponder:- "Those who would give up essential liberty to purchase a little temporary safety deserve neither liberty nor safety." - Benjamin Franklin.

## Gizza Job

These two excellent on line vacancies as seen by Spectre on the MI5 website are interesting and show that our Security services have their fingers on the pulse.

It is interesting to note that E2k has access to speakers of both these languages as well as Cantonese.

There are other languages we can access too including Far Eastern and other European languages.

The way things are going in this country we'll all be speaking anything Eastern European as a second language soon ..... ever tried Serbo-Croat with a Nigerian accent? The mind boggles.

Thanks for posting Spectre.

## RUSSIAN LANGUAGE VACANCIES - REGISTER FOR JOB ALERT

| ROLE | GEHIERAL <br> ELIGIBILITY$\quad$ APPLY |
| :--- | :--- |
| Role |  |
|  |  |
| Ref: | RVUpdate Me |
| Location: | London and Cheltenham <br> Salary: |
| Closing date: | $14,000-£ 30,000$ *Allowances subject to location |
|  |  |

Please note that this vacancy is currently closed. You may register to be contacted when vacancies open.
Coming soon: A recruitment campaign for Russian language specialistsilinguists in conjunction with our sister agency. This will launch in mid-November 2014 and will be an exciting opportunity to match your language skills to a position in MI5, MI6 or GCHQ .

MANDARIN CHINESE LANGUAGE VACANCIES - REGISTER FOR JOB ALERT

| ROLE | GEHERAL <br> ELIGIBILITY$\quad$ APPLY |
| :--- | :--- |
| Role |  |
| Ref: | RVUpdate Me <br> Location: |
| London and Cheltenham  <br> Salary: $£ 25,000-£ 30,000$ *Allowances subject to location <br> Closing date: 14 November 2014 |  |

Please note that this vacancy is currently closed. You may register to be contacted when vacancies open.

Coming soon: A recruitment campaign for Mandarin language specialists / linguists in conjunction with our sister agencies. The campaign will launch in mid-November 2014 and will be an exciting opportunity to match your language skills to a position in MI5, MI6 or GCHQ .

## Spectre's News Articles

## Foreign Policy 04/11/2014

## Is China Swarming With Foreign Spies?

The Communist Party is finally getting serious about ferretting out Western spooks. But a new counterespionage law, passed on Nov. 1, may be just a finger in the dike.

Sometime in 2011, Gen. Jin Yinan gave what he thought was a closed-door briefing at a corporate conference in China, where he spoke about the dangers of espionage. In September of that year, what appeared to be the official video of his remarks turned up briefly on the Chinese video sharing site tudou.com, before being taken down. Jin gave tantalizing details of eight recent cases in which senior Chinese officials had allegedly spied for foreign governments, several of which had never previously been made public. The highest-ranking official was Kang Rixin, a member of the elite Chinese Communist Party (CCP) leadership body, the Central Committee, and head of China National Nuclear Corporation, which oversees China's nuclear programs. The official version held that Kang was sentenced to life in prison in November 2010 for bribe-taking. But Jin said the real sentence was espionage:

Kang had sold nuclear secrets to an undisclosed foreign nation, in a case that made the top leadership "extremely nervous."
Concerns about foreign espionage in China seem only to have grown. On Nov. 1 of this year, Xi signed a Counterespionage Law, replacing the 1993 National Security Law. The biggest change appears to be a greater emphasis on rooting out both foreign spies and their Chinese collaborators. When Chinese Communist Party (CCP) Secretary Xi Jinping and President Barack Obama meet in Beijing on Nov. 11 and 12, cyberspying will almost certainly be part of their discussion. But the new law suggests that it's the potential of human spies to wreak havoc that has China really worried.

It's difficult to build an open-source picture of foreign espionage operations in China: as in Kang's case, the Chinese authorities appear to hide espionage cases behind other crimes, to save themselves embarrassment. It's likely that many arrests and trials simply never come to public attention.
But outside observers can assume two things: First, much of the foreign spying against China is related to deciphering the country's military capabilities and strategic intentions. This may seem rather obvious, but it's in contrast to China's spying abroad, much of which appears aimed at stealing industrial and commercial secrets.

Second, it may seem that China would be a tough place for a foreign spy to operate, but you can bet that the United States and its allies have dozens of assets in place. Anyone who has lived and worked in China's surveillance-saturated cities could be forgiven for wondering how on Earth a foreign spy could function there. But function they do. China appears to be infested with spies, and it knows it. In early August, a graduate student in aerospace engineering surnamed Chang in the northeastern city of Harbin was reportedly arrested for selling sensitive information to a foreign intelligence agency -- he allegedly spied for two years, for which he received more than $\$ 32,000$. He appears to have been recruited online, and to have conveyed his product the same way. As is often the case, the reports don't identify the foreign agency involved. Perhaps the Chinese authorities don't even know from where his handlers hailed.

Occasionally, a story breaks that is sufficiently detailed and well sourced to give a real flavor of what's going on. In May, the Communist Party newspaper People's Daily reported the story of a man surnamed Li who, while living and working in an unnamed seaside city in the wealthy southern province of Guangdong, struck up acquaintance over the Internet with a user calling himself Feige, which means "Flying Brother." Feige reportedly paid Li over several years to gather and forward military publications from libraries and online bookstores, to glean information from chatrooms used by military enthusiasts, and to take photographs of military installations. Feige was working for a foreign intelligence agency, said the paper, without specifying which one. Li ended up with a 10-year prison sentence, which seems lenient, and could suggest that the snippets of information and the military journals marked "neibu" or "internal" that he supplied were relatively low-level material.

But Feige's Internet trail led investigators to no fewer than 40 other suspected spies across the country, suggesting 1) that the operative was part of an effort to take advantage of the explosion of connectivity in China, and 2) the difficulty for Beijing of ensuring that sensitive information does not leak onto public servers. As the analyst Peter Mattis points out, the digital Chinese state is now a very leaky place, and the majority of publicly reported state secrets cases have an online component to them.

The cyber and signals intelligence elements of U.S. collection efforts take advantage of this leakiness on a grander scale. Edward Snowden's 2013 revelations of the National Security Agency's penetration of China, particularly of the telecommunications behemoth Huawei, are well documented: According to materials viewed by the New York Times, the NSA penetrated Huawei's network and stole source codes for its products, in the hope that this would enhance the NSA's signals intelligence capabilities. In an activity that really annoys the Chinese military, U.S. spy planes and spy ships routinely loiter off the Chinese coast, sucking up electronic signals, which a spokesman for China's Ministry of National Defense Yang Yujun called in August "large-scale, high-frequency, close-proximity surveillance."

But despite all this activity, China watchers here in Washington say that the holy grail of political intelligence collection -- an understanding of the intentions and vulnerabilities of the CCP -- remains frustratingly elusive. Little emerges from U.S. intelligence agencies on the inner workings of the CCP, one Washington consumer of intelligence on China told me. "We still don't really understand the mechanics of how Xi Jinping became general secretary," he said, referring to the intra-party drama that lifted Xi to the country's top position in November 2012. For an indication of the way U.S. intelligence views the task of collecting intelligence from China, take a look at the recently issued 2014 National Intelligence Strategy of the United States. China is the first country mentioned in the document, and "remains opaque in its strategic intentions and is of concern due to its military modernization." In other words, spying on China is difficult and necessary.

Occasionally, though, signs suggest the CCP has been penetrated at a senior level in a way that might provide the kind of insight Washington seeks. In mid-2012, Reuters reported that an aide to Vice Minister Lu Zhongwei of the Ministry of State Security, the agency responsible for much foreign intelligence collection and counterintelligence, had been arrested for spying for the CIA. Since then, little else has emerged: no official version of events, no news of a conviction or a sentence. The Hong Kong press spat out florid reports that the alleged agent had been recruited in true "honey-trap" style by a beautiful seductress. All of this makes for great copy, but none of it appears to have been confirmed.
A half-seen human drama such as this tantalizes the journalist and the writer. What kinds of people serve, and then betray, the Chinese state? In my 2014 novel, Night Heron, an angry Chinese aerospace engineer sells classified documents to Britain's Secret Intelligence Service. In imagining his motives, I thought of the corruption and arbitrariness permeating the Chinese justice system and the broader party state, and the resentment that might breed. It seemed plausible to me that, despite the Leninist legacy of state secrecy, Beijing might be a place where potential agents abound, even among the military and CCP elites.

Certainly, General Jin's leaked video testimony would seem to support such a notion. He describes how an Air Force attaché in Tokyo, Wang Qingjian, planted listening devices in the Chinese Embassy on behalf of Japanese intelligence. Another Air Force officer, Jia Shiqing, angry at being passed over for promotion, loaded memory sticks with information, stuck them up his own rectum and smuggled them out to Hong Kong to hand to a foreign intelligence agency, Jin said. It's the human spy -- the Chinese citizen who turns on his own country, negating every national narrative of unity and patriotism -- that the Party finds most threatening and demoralizing.

Jin confirmed that Li Bin, no less a figure than the former Chinese ambassador to South Korea, was charged with corruption, but was actually deemed guilty of passing state secrets to Seoul. "What country has an ambassador who spies?" the general asked plaintively. "We do."

## Russia test-fires intercontinental missile from submerged submarine in Barents Sea

Test comes after Russia informed the United States on Tuesday that it will boycott the 2016 Nuclear Security Summit.
Russia test-fired a Sineva intercontinental missile from a submerged submarine in the Barents Sea on Wednesday as part of a check on the reliability of the navy's strategic forces, the Defense Ministry said.

The liquid-fueled missile, which can carry nuclear warheads, was fired from the Tula submarine to the Kura Test Range in the far eastern region of Kamchatka, RIA news agency quoted the ministry as saying. It gave no other details.

The Sineva, which has a range of about $12,000 \mathrm{~km}(7,500$ miles $)$, entered service in 2007 and is part of efforts to prevent the weakening of Russia's nuclear deterrent.

President Vladimir Putin has underlined the importance of the nuclear deterrent during the standoff with the West over the crisis in Ukraine, and Russia has held several military exercises during the crisis that have alarmed Western powers.

Russia informed the United States on Tuesday that it will boycott the 2016 Nuclear Security Summit, diplomats told The Associated Press on Tuesday, potentially stripping the meeting of one of its key participants and hurting efforts initiated by President Barack Obama to reduce the threat of nuclear terrorism.

Officials already had told the AP on Monday that Moscow was absent from last week's initial summit planning session in Washington but had left it unclear whether Russia planned to attend the summit itself.

## BBC News 08/11/2014

## The time when spy agencies officially didn't exist

This week the new heads of intelligence agencies MI6 and GCHQ took up their posts. Once shrouded in mystery, the spy chiefs are now public figures.
The appointments of Alex Younger and Robert Hannigan were announced with brief biographies and photographs, yet it was not that long ago that the public knew nothing of their roles or the organisations they led. As chief of MI6, Younger is known as "C", the codename of the first chief Sir Mansfield Cummings.

This is now common knowledge. But in 1923 the novelist Compton Mackenzie was prosecuted, among other things, for revealing the letter and to whom it referred. Such was the secrecy that when the judge asked when Cummings had died, the prosecution barrister, the attorney general and "K", the then-head of MI5 did not know. The only person in the room who did know was Mackenzie.

It shows how secretive the service was in its early days, that simply mentioning the name of a dead chief led to a court case, says Christopher Andrews, the writer of MI5's official history.

Cummings was the first chief of what was then the Secret Service Bureau in 1909. As far as the public was concerned it did not exist, the writer of MI6's official history Prof Keith Jeffery says. It was a time many people working in intelligence "look back to fondly". The eccentric chief would wear disguises to see if colleagues would recognise him, kept photographs of those which had worked well, used sword sticks and invisible ink. "He loved and was very engaged with the technology of it all," Jeffery says. Rumours circulated that he would stab his wooden leg with a letter opener in interviews to see if potential employees flinched.

In 1992 Dame Stella Rimington was the first chief of MI5 to be officially named. "Her neighbours discovered what she did and her children found out for the first time," Andrews says. But MI5 only released her name. Official pictures of her were only released after a paparazzo got a "very blurry picture of her out shopping", Andrews says.

But even if the heads of the intelligence services have been revealed, Ben Macintyre, the historian and author of A Spy Among Friends, says the "humble worker bees" and their work have not. If anything, it is more secretive. "Up until recently even reporting the colour of the carpet in MI6 was a breach of the Official Secrets Act."

007 would have been an officer, not an agent. Officers are employees, whereas an agent is a secret source used to gather information. "There is not a single case of SIS ever disclosing the identity of agents even after something like 100 years," says the intelligence historian Nigel West. Keith Jeffery, when researching his history of MI6, spoke to active officers about whether they would be happy for their identity to be revealed 60 years or so down the line. "Some were happy to be part of the history of it," he says. "But because it is technically living a lie, some really did not want their families to find out."

MI5 was recognised in law in 1989. "There shall continue to be a Secret Intelligence Service," were the words that officially confirmed that MI6 and GCHQ existed, in the 1994 Intelligence Services Act. The government was more relaxed about MI5, says Christopher Andrews. But MI6 was a more difficult proposition. It is "un-embarrassing to admit to an organisation which caught spies. But it was embarrassing to admit that you had spies of your own".

It was an open secret that all three of the intelligence agencies existed - MI5 had been mentioned in parliament in 1952 - but the government reluctantly first acknowledged MI6 in 1986. Peter Wright, a former senior member of MI5, published a memoir, Spycatcher, in Australia and the British government tried to bring an injunction against him for breaching the Official Secrets Act.

Spycatcher: The Candid Autobiography of a Senior Intelligence Officer was a bestselling 1987 book co-written by former MI5 officer Peter Wright, and journalist Paul Greengrass (later a successful film director)

Wright claimed he had been assigned to unmask a Soviet spy in MI5, whom he claimed was a former director general, Roger Hollis; the book also describes British intelligence operations, such as a plot against a former prime minister, Harold Wilson

Published first in Australia, it gained notoriety due to a long and unsuccessful attempt by the British government to ban it; the attendant publicity helped Spycatcher become an international bestseller.

The Cabinet Secretary Sir Robert Armstrong flew out to appear as a witness. Although upon landing he was so "riled" by the press attention that he "lashed out with his briefcase at photographers and pushed one of them against a wall", the Times reported.

In the dock he was asked the awkward question: "Does MI6, Britain's secret intelligence service, exist?" He declined to comment. The Times reported that "MI6 is the one area of intelligence work which still requires, in government eyes, the glazed-look approach". Although he refused to acknowledge MI6 then, the government was eventually forced to release a summary of memos between sections of MI6. This confirmed the service's existence.

But as well as knowing they exist and who runs them, we now know the headquarters of the agencies. All three of the services are based in recognisable headquarters - the MI6 building has featured in Bond films since Goldeneye in 1995, the GCHQ "doughnut" is regularly seen on news bulletins, and MI5's Thames House, like MI6, is a stop on a James Bond boat trip for tourists.
"If you're going to get a taxi to Albert Embankment they think you are a spy," Jeffery says. But West says these public locations are not part of them wanting to have more of a public face. "If they could find a big enough anonymous building in London they would move tomorrow." MI6's old headquarters, an unmarked concrete tower called Century House, "started making people ill and the only building being built at that time which could house them was the Lego-looking building on Vauxhall". They were forced into view, he says.

In the past they were a little more proactive at hiding their location - 54 Broadway, which MI6 occupied from 1926 to 1964, was marked with a brass plaque describing it as the "Minimax Fire Extinguisher Company". But this disguise did not work for long. In his book on British spying, Michael Smith recounts how after it became known MI6 was looking to move building, the landlord started doing viewings. Unfortunately one was a Russian trade delegation and staff were forced to rush around ripping maps off the walls.
"They know they have to have a public face now. These are huge government organs and we want to know who is running them," MacIntyre says.

## Daily Mail 09/11/2014

## Don't have sex with beautiful young women, MoD warns senior officials before postings to Russia and China

Russian security services 'may use honey traps to blackmail personnel'
British officials warned to avoid sexual encounters in leaked report
Tactic was used extensively and effectively during the Cold War
Top military officials have been warned not to have sex with attractive women in Russia or China in case they are spies, it has been reported.
A leaked document says agents of the FSB, Russia's intelligence service and successor to the Soviet-era KGB, could attempt to lure British officials into bed and then blackmail them.

The document, the Ministry of Defence Manual of Security, warns senior officers that the FSB, could gain valuable intelligence by exploiting 'knowledge of marital infidelity or sexual activity the target may wish to hide'

The KGB used 'honey traps' like this extensively during the Cold War, using both men and women to target those they believed to have valuable information.
The Communist East German security services targeted young men to seduce middle-aged West German secretaries working for senior officials.
So convincing were these young men that one woman who was told her lover had been a spy that she refused to believe it, stating: 'He did really love me.'
One senior military official told the Sunday Times how a very attractive blonde woman in her early 30s approached him in a St Petersburg hotel and began chatting about how she loved vintage British sports cars - the man's hobby.

She flirted with him and he suddenly became suspicious and left suddenly.
He said: 'I think i said something very awkward like "sorry, it's my bedtime" and scarpered. I put it down as a close shave.'
A Ministry of Defence spokesperson refused to comment on the report.
In 2010 Russian Katia Zatuliveter was accused of being a Kremlin spy after it emerged she had had an affair with Commons Defence Committee MP Mike Hancock.

She denied the claim and later won an appeal against deportation from the UK.
The scandal came after a ring of 10 Russian spies were rounded up and deported from the US.
One of the spies, Anna Chapman, had lived and worked in London before marrying and gaining a British passport.
In 2009 an American diplomat in Moscow was embroiled in a sex scandal after footage apparently showing him with a prostitute was released on the internet.
The married envoy, a second secretary, was named as Kyle Hatcher by two Russian newspapers which reported unconfirmed claims that he was a CIA undercover agent.

Russian newspapers were apparently tipped off about the footage, suggesting that the FSB was behind it.
The U.S. Embassy in Moscow complained to the Russian Foreign Ministry about the tape and the State Department said the video was a fabricated montage that includes some real footage of Mr Hatcher, a married diplomatic liaison to Russian religious and human rights groups.

Meanwhile, Britain's spy chiefs have launched a recruitment drive for Russian-speaking agents amid mounting tensions with the Kremlin.
MI5, responsible for protecting the UK against terror attacks and other security threats, has placed an advert on its website calling for Russian language specialists to apply.

The drive comes amid warnings of a new Cold War between Russia and the West as tensions continue to rise over the military stand-off in Ukraine.
Up to 50 Russian spies are said to be operating in Britain, with ex-MI5 boss Jonathan Evans claiming there has been 'no decrease in the number of undeclared Russian intelligence officers in the UK' since the end of the Cold War.

The new recruitment campaign is being run jointly with Government's eavesdropping centre GCHQ, which gathers intelligence for the Government and Armed Forces by tapping phones and monitoring the internet.

## Now an interesting piece from our man in the Baltics:

## Russia's Military Will Get Bigger and Better in 2015

## By Matthew Bodner

Dec. 082014 20:05
Last edited 20:05
http://www.themoscowtimes.com/business/article/russia-s-military-will-get-bigger-and-better-in-2015/512753.html
Despite a looming recession, Russia will increase military spending by 30 percent next year to a record post-Soviet high of 3.3 trillion rubles ( $\$ 62$ billion), cash that will be used to buy more aircraft, submarines, missiles and weapons for an ascendent armed forces.

The increase, which takes Russia's spending on defense to 4.2 percent of gross domestic product, comes amid an ongoing crisis in Ukraine that has seen a return to Cold War-style rhetoric and the reinsertion of military posturing into international politics.

Amid the muscle-flexing, the Russian military has had a good year. The Defense Ministry showed during the annexation of Crimea from Ukraine in March that it had successfully reformed its armed forces since the 2008 war with Georgia, when the Russian army looked disorganized and poorly equipped.

With a 20 trillion ruble ( $\$ 375$ billion) rearmament drive that aspires to replenish 70 percent of the armed forces with modern equipment by the end of the decade in full swing, 2015 looks to be a year of breakneck growth in Russia's military capacity.

Despite that, Moscow still lags behind the world's biggest players: The U.S. Congress last week approved a defense budget for next year of $\$ 584$ billion. China's defense spending will reach $\$ 159.6$ billion next year, according to Britain-based defense consultancy IHS Jane's.

Russia's grand rearmament began in 2011. Since then, the military's modernization has progressed by 16 percent, according to news agency RIA Novosti. The target by the end of next year is 30 percent.

A complete picture of Russia's 2015 rearmament plans is hard to pin down - a product of military secrecy and industrial uncertainty, according to defense expert Ruslan Pukhov, director of the Center for the Analysis of Strategies and Technologies, a Moscow-based think tank.

The Moscow Times looked through Russian media reports announcing plans and contracts for some idea of what to expect. Land Forces

Russia will continue to strengthen its ground forces in 2015. Although the troops seen in Crimea earlier this year were unmistakably better trained and equipped than they were six years ago in Georgia, they represented an elite contingent of the Russian army.

The task now is to continue purchasing and upgrading equipment, and training soldiers. According to media reports, the Russian military has 4,000 exercises of various types and sizes planned for next year - 1,000 more than in 2014.

Several new armored vehicles are expected to be unveiled during Victory Day celebrations on May 9, including new tanks, infantry fighting vehicles, and armored personnel carriers, officials have said.

Deputy Prime Minister Dmitry Rogozin said earlier this year that Russia's new Armata main battle tank would be among the innovations shown at the parade, though land forces head Colonel General Oleg Salyukov was quoted by the RIA Novosti news agency in October as saying the vehicles wouldn't be ready until the end of next year.

Featuring heavy armor, a fully digital control system, and even the ability to be controlled remotely, according to the TASS news agency, the Armata tank has been billed by its maker as superior to all analogues in Russia and abroad.

According to Salyukov, the tank will be tested by the military next year and go into serial production in 2016 if the army embraces it.
A separate branch of the Russian military - the Strategic Rocket Forces - is also due for some upgrades next year, with deployment beginning of new Yars missiles.

Yars missiles are reported to be an answer to U.S. plans to deploy missile shields in Eastern Europe. Intended to replace the Topol-M missiles currently deployed in the Russian military, the Yars are reported to have 10 independently targeting nuclear warheads, making them harder to halt.

By 2020, Rogozin has promised that every missile in Russia's arsenal will be replaced with a new one.
Navy
One of the big winners this year was the Russian navy, in particular the Black Sea Fleet. Liberated from restrictions placed on deployment by a leasing agreement with Kiev before Moscow annexed Crimea, where the Black Sea Fleet is based, Russia has been investing heavily in its forces there.

By the end of 2015, the Black Sea Fleet will receive a new Admiral Grigorovich-class frigate, two new super-silent improved Kilo-class diesel-electric submarines, and a handful of small Project 21631 missile corvettes.

By 2016, six new Grigorovich-class frigates and six improved Kilo-class submarines will take positions in the Black Sea Fleet. In 2015, the fleet is expected to receive a handful of small Buyan-class missile corvettes, according to RIA.

Moscow has been beefing up its presence in the Black Sea in response to what it sees as higher NATO presence in the area. As Russia's major warm-water port, Sevastopol is also an important strategic launching pad for Russian naval expansion into the Mediterranean Sea.

Replacements for the Kilo-class submarines will start making their way into the water in next year as well. According to TASS, the second of the new Project 677 Lada-class submarines, named the Kronstadt, will be launched by the end of next year.

The Lada class is a next-generation diesel-electric submarine, but some reports suggest they may be getting air-independent propulsion systems, which will make them even quieter and more effective than their stealthy Kilo-class predecessors.

Meanwhile, the Northern Fleet has begun to receive new nuclear powered submarines of the Borei and Yasen classes, with more on the way next year. By 2020, the Russian navy is expected to have at least eight of each new nuclear submarine class in service in the Northern and Pacific fleets.

Russia's new nuclear submarines are perhaps the most powerful of its new military hardware. The Borei-class submarines are replacing Russia's aging Soviet-era nuclear missile fleet, boosting the power of Russia's nuclear forces significantly, while the Yasen-class hunter-killer submarines are raising Russia's ability to hunt enemy submarines and surface ships.

## Air Force

The Russian air force has been busy harassing NATO's eastern members this year, and plane-spotters in the West will likely have good chances of seeing stray MiGs, Sukhois and even giant Tupolev bombers next year.

The air force's press service told RIA last week that the state defense order for 2015 includes 150 new airplanes and helicopters.
These new units include bulk orders of Su-30 multirole fighters, MiG-29s, Su-34s and Su-35s. These are Russia's front-line aircraft, serving as bombers and dogfighting planes.

Beyond combat aircraft, the air force is looking to receive several large An-148 transport planes and Yak-130 training aircraft. Training is a big overall focus, with 30 virtual simulators on order to outfit new training centers for Russian pilots.

Also, according to the air force, we can expect to see more Ka-52, Mi-28, Mi-8 and related combat and transport helicopters, which will enable Russia to better support its modernized ground forces.

But these are all old designs. One of the more interesting developments to keep an eye out for in 2015 will be related to Russia's next-generation Sukhoi T-50 (also known as the PAK FA), which is still in testing.

The T-50 is being built for both the Russian air force and foreign military customers, and is billed as an answer to the U.S. F-22 Raptor stealth fighter.
As for ground infrastructure for the air force, the defense order is reported to include new radar systems and deployment of the new S-400 anti-aircraft missile systems. The S-400 is billed as one of the world's best air-defense systems, with the ability to engage up to 36 targets with 72 missiles simultaneously. It is particularly targeted at countering the U.S. F-35 fighters and is said to have the ability to intercept ballistic missiles.
$\underline{\text { http://www.themoscowtimes.com/business/article/russia-s-military-will-get-bigger-and-better-in-2015/512753.html } \quad \text { [Splendid pic of T90 tank in article] }}$

## WWW.Unian.Info 24/11/2014

## Russian submarine spotted near Latvian waters

Latvian border forces spotted a Russian submarine fifty kilometers from the maritime border of Latvia on November 22, the National Armed Forces of Latvia has said in a posting on its Twitter page.
"On November 22, the border forces of Latvia identified a submarine of the Russian Navy's Kilo class in the exclusive economic zone of Latvia, at a distance of 27 nautical miles (or 50 kilometers) from Latvia's territorial waters," the armed forces said in a posting made on Sunday.

NATO has observed greatly increased activity by Russian warships and military aircraft in the Baltic region in recent months. Last month, Latvia reported a Russian Kashtan class submarine support ship just 18 nautical miles (or 33 kilometers) from its territorial waters. That was just week after Sweden launched a large operation, the biggest in the country since the end of the Cold War, to locate a "foreign submarine" it said had been spotted in its territorial waters.

Latvia has in recent days been hosting military exercises with U.S. troops as part of Operation Atlantic Resolve, a U.S. Department of Defense program to support the militaries of NATO member states in Eastern Europe threatened by Russia's ongoing aggression against Ukraine.

The Independent 04/12/2014
(This article is not related to Enigma 2000's interest's, but I am sure many Enigma 2000 members who have taken photographs in the past for the newsletter will understand.)

## Photographers snap over use of Section 44 by police officers

The heavy-handed use of anti-terror laws is making innocent people feel like criminals, complain civil liberties groups.
Politicians, civil liberties groups and police bodies yesterday added their voices to fears that police officers are abusing anti-terror legislation to stop and question photographers taking pictures of famous landmarks.

Yesterday, The Independent highlighted the concern that police forces across the country are misusing the Section 44 legislation granted to them under the Terrorism Act, which allows them to stop anyone they want in a pre-designated area, without the need for suspicions of an offence having been committed.

But photographers have complained that they are regularly stopped while taking pictures and are treated like terrorists on reconnaissance missions. This is despite the act giving officers no power to seize cameras or demand the deletion of photographs.

The Metropolitan Police use Section 44 legislation far more than any other police force in England and Wales. In the first quarter of this financial year the Met, along with British Transport Police, were responsible for 96 per cent of the Section 44 stop-and-searches in the country.

Jenny Jones, a Green Party member of the Metropolitan Police Authority, Scotland Yard's governing body, said police officers stopping innocent people, as Section 44 allows them to do, was "unacceptable" and "illegal".
"This is an area where the Met is going to have to change its tactics," she said. "It is unacceptable to use a law like this illegally, which is what I think they are doing. It is something that the MPA's civil liberties panel is going to look at. It is a law that seems to hamper photographers, journalists, tourists and trainspotters. Anyone who carries a camera, basically."

Earlier this year, the Metropolitan Police commissioner, Sir Paul Stephenson, said the force would cut back on its use of Section 44, except around sites which are obvious terror targets, such as the Houses of Parliament.

But Ms Jones said the force needs to train its officers more thoroughly in the application of the law. "Some officers think they have the right to seize cameras. It is unbelievable and amounts to an abuse of power," she said.

Shami Chakrabarti, the director of civil liberties group, Liberty, called on the Government to reassess the law. "Section 44 stops are not based on reasonable suspicion and we know less than 1 per cent result in arrest.
"Hassling photographers and preventing them from carrying out perfectly ordinary assignments helps nobody, but blame must rest squarely with Parliament. It is time for this blunt and overly broad power to be tightened," she said.

Baroness Neville-Jones, the Conservatives' shadow security minister, said: "Inappropriate and ever wider use of these powers is one of the surest ways to lose public support in the fight against terrorism. Their use is declining, but not fast enough. These statistics also show that normal criminal legislation is much more effective."

Chris Huhne, the Liberal Democrats' home affairs spokesman, said: "Terrorism powers are clearly being abused when they are routinely applied to photographers, tourists and trainspotters. Police officers need more information and training to stop these inappropriate and excessive Section 44 searches."

Photographers continue to criticise the use of the power. In today's Independent, Stuart Franklin, a celebrated British photographer, reveals that he was stopped and searched by police officers in north London while on an assignment earlier this year

Jeff Moore, chairman of the British Press Photographers' Association (BPPA), said: "The main problem we face is that Section 44 is an extremely poor piece of legislation that creates an enormous amount of confusion, both among the public and among the police officers that use it."

Mr Moore said police have ignored the BPPA's requests over the past four years to have photographers talk to newly qualified police constables during their media training. He said: "We're not trying to fight the police, we're trying to work with them."

Section 44: Special powers for the police

* The Terrorism Act 2000 came in to force on 19 February 2001, "in response to the changing threat from international terrorism". It replaced temporary legislation that had been brought in to address the Troubles in Northern Ireland.
* Section 44 grants police officers wide-ranging powers to stop and search and is one of the Act's more controversial provisions. Under it, police are entitled to stop and search any pedestrian or vehicle in a certain area, as well as anything carried by them or their passengers, provided prior authorisation has been given. Officers can do this without having any suspicion that an offence is being committed
* Such an authorisation is given only if the person giving it "considers it expedient" for the prevention of terrorism - a rather open-ended clause.
* Authorisations are granted for "areas", for up to 28 days. Once one has been given for an area, any police officer can conduct their searches there for as long as it lasts.

The Daily Mail 07/12/2014
GCHO to snoop through office emails: Anti-spy agency will monitor disgruntled employees in danger of threatening UK security by going rogue
Anti-spy agency has turned attention to 'insider' threats within companies
Will monitor disgruntled employees who could undermine UK security
Unusual tone in emails could now be interpreted as a sign you are a spy
Britain's anti-spy agency is to snoop through office emails in a bid to preempt disgruntled employees threatening the nation's security by going rogue.

The Government Communications Headquarters (GCHQ) has turned its attention to 'insider' threats within companies - meaning staff gossip and gripes could now be checked for hidden agendas

The shocking revelation means unusual language or uncharacteristic tones adopted in emails to colleagues could be interpreted as sign that the sender is undermining the UK's security.

Threat to nation: Britain's anti-spy agency is to snoop through office emails in a bid to preempt disgruntled employees threatening the nation's security by going rogue

GCHQ, the British intelligence organisation which unmasks spies, is sponsoring research at Lancaster University using 'behavioural analysis' to identify rogue employees, The Sunday Times reports.

The university is currently advertising the three and a half year PhD post financed by GCHQ - and paying $£ 22,000$ a year
The university said: 'The research will investigate the use of techniques from the field of natural language processing to detect the early indicators of an insider threat within an organisation's unstructured internal data.'

This means that the person they hire will study email correspondences among employees who have become disgruntled and who may have an axe to grind
Paul Taylor, professor of psychology at the university, said: 'Instead of ending their email with 'see ya!' they might suddenly offer you 'kind regards'.
'These changes are important and could hint at a disgruntled employee about to go rogue.'

The university say they will be using advanced techniques to predict anomalous behavior among staff.
Paul Taylor, professor of psychology at Lancaster University, said changes in the tone of emails 'could hint at a disgruntled employee about to go rogue'
The aim is to prevent a recurrence of spies such as Guy Burgess and Kim Philby - who were insiders whose behaviour became noticeably out of character.
The revelation comes shortly after a judgement which ruled that GCHQ's mass surveillance programmes were found to be lawful - despite protests from privacy campaigners.

Human rights groups Liberty, Privacy International and Amnesty brought a legal challenge against GCHQ following disclosures made by American NSA (National Security Agency) whistleblower Edward Snowden about mass surveillance programmes known as Prism and Tempora

They argued that GCHQ's methods breached article 8 of the European Convention on Human Rights (ECHR), the right to privacy, as well as article 10, which protects freedom of expression.

In a written judgment, a panel of IPT judges said: 'We have been able to satisfy ourselves that as of today there is no contravention of articles 8 and 10 by reference to those systems
'We have left open for further argument the question as to whether prior hereto there has been a breach.'
Amnesty immediately said it would appeal the decision at the European Court of Human Rights - there is no domestic right of appeal.
Amnesty UK's legal advisor, Rachel Logan, said: 'The Government's entire defence has amounted to 'trust us' and now the tribunal has said the same.
'Since we only know about the scale of such surveillance thanks to Snowden, and given that 'national security' has been recklessly bandied around, 'trust us' isn't enough.

The Government Communications Headquarters (GCHQ) has turned its attention to 'insider' threats within companies - meaning staff gossip and gripes could now be checked for hidden agendas
'We will now appeal to Strasbourg, who might not be as inclined to put their trust in the UK Government given what we know so far.'
James Welch, legal director for Liberty, which also intends to appeal to the ECHR, said: 'So a secretive court thinks that secret safeguards shown to it in secret are an adequate protection of our privacy.
'The IPT cannot grasp why so many of us are deeply troubled about GCHQ's Tempora operation - a seemingly unfettered power to rifle through our online communications.'

## The Diplomat 07/12/2014

## Russian Intelligence in Kyrgyzstan, Cold War Redux

The activities of Russia's FSB in Central Asia - and Ukraine - share much in common with an earlier time.

The crisis in Ukraine has highlighted the work of Russia's FSB, or Federal Security Service, in Moscow's so-called sphere of influence. It is a widely shared perception that the blueprint the Kremlin uses for the active presence of its intelligence service in the former republics is based on know-how from the Soviet era, when KGB cadres were essential to keeping communist rule intact.

KGB tactics were employed by the Politburo in Afghanistan, for instance, where Soviet advisers monitored factional splits in an attempt to manage Afghan communist party affairs. While the Soviet Union is no more, Russia's approach to its backyard today bears many of the hallmarks of that earlier Cold War era.

The Kremlin's strategy in the mountainous republic of Kyrgyzstan is a very good example. Back in the mid 2000s, Russian satellite states Georgia and Ukraine experienced political turbulence that were dubbed "color revolutions." The Kyrgyz Republic had its own uprising, which overthrew what had been a typical exSoviet regime. These events helped to shape Russia's policy of engaging with its former territories to preserve the Kremlin's influence.

The Russian leadership's particular interest in Kyrgyzstan has been tied to NATO's use of the Manas Air Base to supply its operations in Afghanistan. The Kremlin's coercive actions in Kyrgyzstan led to a second uprising in the country that was later named the "April revolution" of 2010. Western observers believe that the Russian security services were complicit in the overthrow of the regime in Bishkek four years ago. That year, 2010 was a disastrous one for the Kyrgyz Republic, with severe ethnic conflict between Kyrgyz and Uzbeks occurring in June, in the country's southern provinces.

In the fall of 2010, the Kremlin set up a Russian FSB surveillance team presence on the ground in South Kyrgyzstan. Moscow's official pretext was concern about the growing drug trafficking dilemma. But Kyrgyzstan's neighbor in the Ferghana Valley, Uzbekistan was critical of Russia's interference in Central Asia from the start, suspecting that the Kremlin would use the regional divide for its own geopolitical agenda. The Uzbek government had been clear about its fears in 2009, a year prior to the devastating ethnic strife in South Kyrgyzstan.

Uzbekistan has still failed to normalize relations with its neighbors Kyrgyzstan and Tajikistan. Many regional observers meanwhile remain skeptical of the Ferghana Valley's conflict-prone interstate relations, which at times produce skirmishes and small-scale military confrontations on the borders. In the meantime, Moscow has been skillfully managing its relations with these republics, steadily transforming Kyrgyzstan into a client state.

Russia's actions in Kyrgyzstan are not dissimilar to its strategy in Ukraine. The propaganda campaign managed by Russian intelligence and directed at the Ukrainian government has been a regular occurrence in other post-Soviet states. The Kremlin leveraged its influence to remove the Kyrgyz regime in April 2010 and then later targeted uncooperative Kyrgyz political figures. In one case, the leader of the Ata-Meken (Fatherland) party was vilified by Russia's state-run NTV channel, after a hidden camera captured him in a tryst. In 2011, Russian intelligence was involved in falsely accusing another Kyrgyz opposition figure and leader of the southern Ata-Zhurt (Homeland) party, Kamchy Tashiyev, of running a drug trafficking organization in the country. Two years later, the same Moscow-based news source published a news report claiming that the Russian government had granted political asylum to the Tashiyev family after the Kyrgyz politician fell out with local authorities in Bishkek. The Russian embassy in Kyrgyzstan denied the claim, but Tashiyev has this year backed Russia's annexation of Crimea and Vladimir Putin's policy in Ukraine.

So involved has Russia been in Kyrgyz political affairs, that Kazakhstan and Uzbekistan now recoil at cooperating with Kyrgyzstan. In autocratic Central Asia, personal relations among the rulers is nearly always the best way to achieve win-win outcomes. Three carbon resource-rich states, Turkmenistan, Kazakhstan and Uzbekistan, have been somewhat successful in coordinating their regional policies over a broad range of issues, particularly toward Afghanistan and water disputes. Notably, Turkemnistan and Uzbekistan are suspicious of the Kremlin's regional approach. By contrast, Kyrgyzstan is moving into the embrace of Vladimir Putin, for instance agreeing to join Eurasian Economic Union project.

Ultimately, the Kyrgyz leadership's missteps in choosing its friends has worsened its important relationship with Uzbekistan. As a result, Uzbek authorities cut a vital gas supply line to South Kyrgyzstan, complicating the border delimitation process in the Ferghana Valley triangle.

## US Drones May Stick to Routines to Shield From Cyberattacks

Pentagon-sponsored engineers have developed a system to shield unmanned aerial vehicles from cyber-attacks. It sounds the alert if a drone starts doing something that it is not supposed to do.

Called System-Aware Secure Sentinel, the new system detects "illogical behavior" compared to how the aircraft normally operates.
"Detections can serve to initiate automated recovery actions and alert operators of the attack," said Barry Horowitz, a systems and information engineer at the University of Virginia in Charlottesville, in a statement.

Apparently, the system is meant to prevent embarrassing situations like the loss of a US spy drone in December 2011 to Iran. A CIA RQ-170 Sentinel drone was brought down after what the Iranians claimed to have been a hacker attack as it was flying in the country's airspace.

The Iranians said they used a technique called "spoofing" where they sent the drone the wrong coordinates and tricked it into believing it was landing at its home base in Afghanistan when in fact it was landing on Iranian territory.

A handout picture released by the office of Iran's Supreme Leader Ayatollah Ali Khamenei on May 11, 2014 shows him (C-L) sitting next to the captured US RQ170 sentinel high-altitude reconnaissance that crashed in Iran. (AFP Photo/Iranian Leader's Website)

Various threats were simulated by the researchers during five days of in-flight tests, including cyber-attacks launched from the ground, interference with supply chains and attacks from military insiders.

The attacks focused on four different areas, GPS data, location data, information about imagery, on-board surveillance and control of payloads and took place over five days. In each scenario the system was able to detect cyber-attacks, the team said.
"The inflight testing gauged the effectiveness of the countermeasure technology in hardening the unmanned system's cyber agility and resiliency under attack conditions," the researchers said.

The technology was developed with funds from the US Department of Defense. The project involved collaboration between the Georgia Institute of Technology and the University of Virginia.

## SPECIAL MATTERS

Operation Jallaa: Possibility around $15^{\text {th }}$ January 2015

## MESSAGES:

$\underline{\mathbf{E}}$ Thanks your last, ok on stamps and *no compo* needed, tnx

## 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 http://www.cvni.net/radio/ http://www.brogers.dsl.pipex.com/page2.html http://www.timeanddate.com/library/abbreviations/timezones/ http://www.espionageinfo.com/


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

## Copyright \& Fair Use Policy

© All items posted on our website and within our newsletter remain the property of ENIGMA 2000 and are copyright.
The above applies only to documents found on this website and not logs sent to ENIGMA 2000 for their sole use which cannot be used elsewhere.

Within the Number Monitors Group site, the following applies:
USE OF POSTINGS, IMAGES, SOUND SAMPLES and OTHER FILES:
©All items posted here remain the property of ENIGMA 2000 and are copyright.
MEMBERS' LOGS \& IMAGERY POSTED HERE *SOLELY FOR ENIGMA2000 USE* CANNOT BE LIFTED FOR USE ELSEWHERE.

