ENIGMA 2000 NEWSLETTER

http://www.enigma2000.org.uk

Russian origin transceiver as used by Peter and Helen Kroger from 45 Cranley Drive, Ruislip

Portland Spies:
Harry Houghton, Bunty Gee, Gordon Lonsdale and the Krogers

INSIDE!!

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http://www.enigma2000.org.uk

Trouble at Mill?

Over February us Brits have been bombarded with useless news reports from the media concerinf the flights of Russian Bears, the Tupolev TU95MS bombers.

Interceptions over the south west county of Cornwall were unusual and once GPS and map reader John Nichol [shot down in Iraq war and now a broadcaster] helped British morale, or at least that of the Cornishman, by informing them that we were just being probed and that they should harbour no fear of the nuclear weapons being carried aboard the Russian invaders.

Then we are told that conversations are being intercepted – frequencies never disclosed, try 8131kHz or 8112kHz. [Well done 'E' with citing 18030kHz as a possible number station – its a Russian Airforce frequency with the usual mix of transmissions].
Better than just being told someone posts a converstaion, in Russian, between possible a Russian invader to our shores – and there's been plenty intercepted by English Electric interceptors alll the way up to the modern day Typhoon fighters.

Conveniently the Telegraph newspaper published a film, apparently taken from a TU95 of an interception:

http://wn.com/raf_jets_intercept_russian_bomber_aircraft_off_cornwall.

The video was accompanied by some information too:

RAF jets intercept Russian bomber aircraft off Cornwall

Ministry of Defence says Typhoon fighters scrambled to escort planes spotted in international airspace off Cornwall Two RAF Typhoon fighters were scrambled on Wednesday evening to escort Russian long range bombers flying off Cornwall, the Ministry of Defence has said.
The Russian Tupolev TU-95 bombers, known as Bears, were picked up in international airspace to the north west of Britain at round 6.30pm and escorted as they flew south, then turned around and flew off north.
The interception of the Bears comes a fortnight after similar aircraft flew into the English Channel, prompting the Government to demand an explanation from the Russian ambassador. The Ministry of Defence in London said the Typhoons had been scrambled from RAF Coningsby in Lincolnshire.
A spokesman said: "RAF Quick Reaction Alert Typhoon fighter aircraft were launched yesterday after Russian aircraft were identified flying close to UK airspace. The Russian planes were escorted by the RAF until they were out of the UK area of interest. At no time did the Russian military aircraft cross into UK sovereign airspace."

Meanwhile, a television channel owned by Russia's defence ministry broadcast a separate video showing Nato jets including RAF Typhoons flying alongside a Russian bomber. TV Zvezda said one of its correspondents had filmed the footage from inside a Bear bomber. The channel said the Bear had been a neutral zone on the border with Nato airspace when it was intercepted. It was not immediately clear when the video was filmed, but the MoD said it was not the latest incident on Wednesday. The Russian video shows a French Mirage and RAF Typhoons. It also says the Bear was intercepted by German Eurofighters. As tensions between Nato and Russia have worsened over the Ukraine crisis, Moscow has significantly increased the number of military flights probing Nato airspace. The number of interceptions over the Baltic States trebled last year and Nato members including Britain have stepped up air policing support in the area. Michael Fallon, the Defence Secretary, told The Telegraph that when Russian aircraft were in the Channel earlier this month, "We had to scramble jets very quickly to see them off. "It's the first time since the height of the Cold War, it's the first time that's happened. "That just shows you, you need to respond, each time he [Vladimir Putin] does something like that, you need to be ready to respond."
published: 19 Feb 2015 http://wn.com/raf_jets_intercept_russian_bomber_aircraft_off_cornwall.

Those who follow these incursions and write nonsense need to take up radio monitoring methinks :)

Now a very special piece by Detlev Vriesleben on:

Das Telefonabhörsystem der Stasi

Many of ENIGMA2000, N&O and other groups will doubtless have seen the award winning film 'Das Leben der Anderen.' The scenes featuring the wiring of the apartment and placing wiretaps was fantastic; some members, including myself, travelling to Normenstrasse to see the actual equipment used.
Films always have editorial licence but thanks to Herr Detlev Vreisleben we now find out exactly how the task was performed and without the fizz of a directors drive for thrills; just the hard facts

A big thank you to Detlev for supplying this excellent, if not rare, insight into the workings of an invasive State run machine that affected the lives of all the East German citizens, one way or another. A hearty thanks to our translator who now continues with the introduction to Detlev's excellent piece:

One of the group who regularly visits Germany including numerous business trips to GDR in the 80's also has an interest in 'Stasi' (Min. for State Security) topics, has visited both Normanenstrasse (Stasi HQ) in Berlin and the excellent museum in the ex Stasi HQ ("Runde Eck/'round corner') for the Leipzig region came to know of the expert in Stasi technology, Herr Detlev Vreisleben. Herr Vreisleben regularly gives talks at conferences etc. and in fact will be giving a talk at the "Runde Eck" on 25th April. Our group member has also visited the "Runde Eck" and recommends the excellent museum there which houses a relatively comprehensive array of various Stasi equipment. A favourite of his is the maching for re-sealing envelopes after the contents had been read and he was particularly amused by the fact that the machine was made by a state-owned textile "Kombinat".

Whilst there he took the opportunity to hand in his application to see if there was a Stasi file on him. So far he has had a reply saying he is listed in the main Stasi database. Unsurprising he tells me given the frequency of his visits to the GDR over a 9 year period. Apparently he still has up to another 2 years (1 gone already) to wait as the Stasi Records Agency (BstU) trawl their various regional and local documents, though how many documents avoided being destroyed during the collapse of the Stasi organisation is quite variable he understands.

As I say, our member came into contact with Herr Vreisleben and to cut a long story short, he very kindly allowed our member to prepare (with his help, for which thanks) a translated version of his presentation on the subject of "The Telephone Interception of the Stasi" for inclusion in this NL.

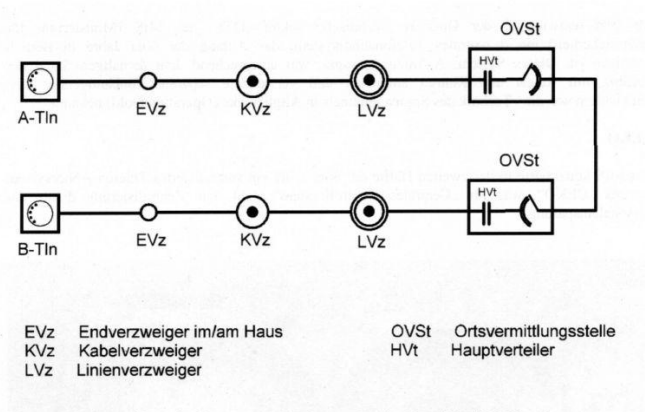
We are grateful to Herr Vreisleben for agreeing we may present his interesting description, based on his extensive knowledge of the technologies, operating techniques and equipment employed , of how the Stasi (MfS – Ministerium für Staatsicherheit / Ministry for State Security) conducted telephone surveillance of their population.

Herr Detlev Vreisleben's bio appears at the end of his excellently descriptive article.

The Telephone Interception System of the Stasi

1. Introduction – Telephony in the GDR

When telephoning, the phones of two subcribers (subscriber A calls, subscriber B picks up) are connected via lines with splitters and switching stations. In the GDR, there was a predominantly electromechanical switching system, the technology still partly coming from the 1920s even. Electromechanical here means switching using a uni-selector (also known in UK/US as Strowger switching) where the impulses produced in the number selector via electromagnets brought the contacts of the electromechanical dialer into the positions needed to establish the telephone connection to the subscriber being called. This system led to disturbances due to wear and cracking noises on the phone that had nothing to do with wiretaps of the Stasi.



Key: EVz Subscriber Distribution Interface
KVz Feeder Distribution Interface
LVz Line Branch
OVSt Local exchange
HVt Main Distribution Frame

The local network in East Berlin consisted of 45 local exchanges, which had been built in the 20s and 30s of the last century. In areas developed later local exchanges were added in GDR times. The local exchanges contain connections to the subscribers and the switching units to make the connection to a particular subscriber. They are housed in buildings, for example, the local exchange in the Tucholskytraße. 6

The line from the subscriber to the local exchange is structured along familiar lines as a 'twig and branch' like structure and in the GDR specifically as follows: The telephone in the apartment is firmly connected to a junction box or to a wall outlet (not shown). From there a line goes to the subscriber's distribution box/End unit (EVz) (in the GDR called only EV), a small green or grey box outside the house (EVza) or internally (EVzi). The distribution point in turn is connected via a cable with, for example 5 twisted pairs - 5 participants can thus be connected - to a Feeder Distribution Interface..

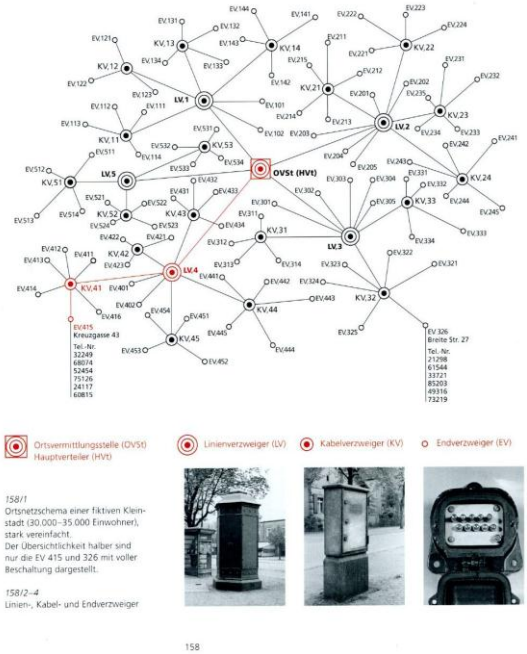
The street cabinet is a grey box that usually stands on the pavement and is about 1 m high, 75 cm wide and 30 cm deep. It provides connection points for the cables from the Subscriber distribution interface and terminal points for the cable to the line branch or to the Main Distribution Frame in the exchange. The connection points required are connected via jumper wires. In a line branch, which, for example, may be in an advertising column- see image in section 1.1 like housing, the cables from several street cabinets come in and are connected in turn via a Main Cable to the Main distribution frame in the local exchange. There, they are also connected via jumper wires to the switching units.

In order to monitor the conversations of a particular telephone subscriber, the Stasi had to intrude on the subscriber line between the subscriber to the exchange. This was done by IM's (Translator's note: IM - Informelle Mitarbeiter – members of the population concopted, often pressurised, to work 'informally' for the Stasi) 'conspiratorially' in the main exchange or the cable network (about 70% in the local exchange, about 9% at the line branch, about 19% at the feeder distribution interface or subscriber distribution interface and about 1% at an Ext.

1.1 Typical/example: local network in theoretical/typical medium sized town/small city

Translator's note:

This is a diagramatic representation of a typical Stasi phone monitoring network for a fictitious small. Note the images of Line Branch (LV), Feeder Distribution Interface (KV) and Subscriber Distribution Interface (EV`) below the network diagram.



158/1
Ortsnetzschema einer fiktiven Kleinstadt (30.000–35.000 Einwohner), stark vereinfacht.
Der Übersichtlichkeit halber sind nur die EV 415 und 326 mit voller Beschaltung dargestellt.

158/2–4
Linien-, Kabel- und Endverzweiger

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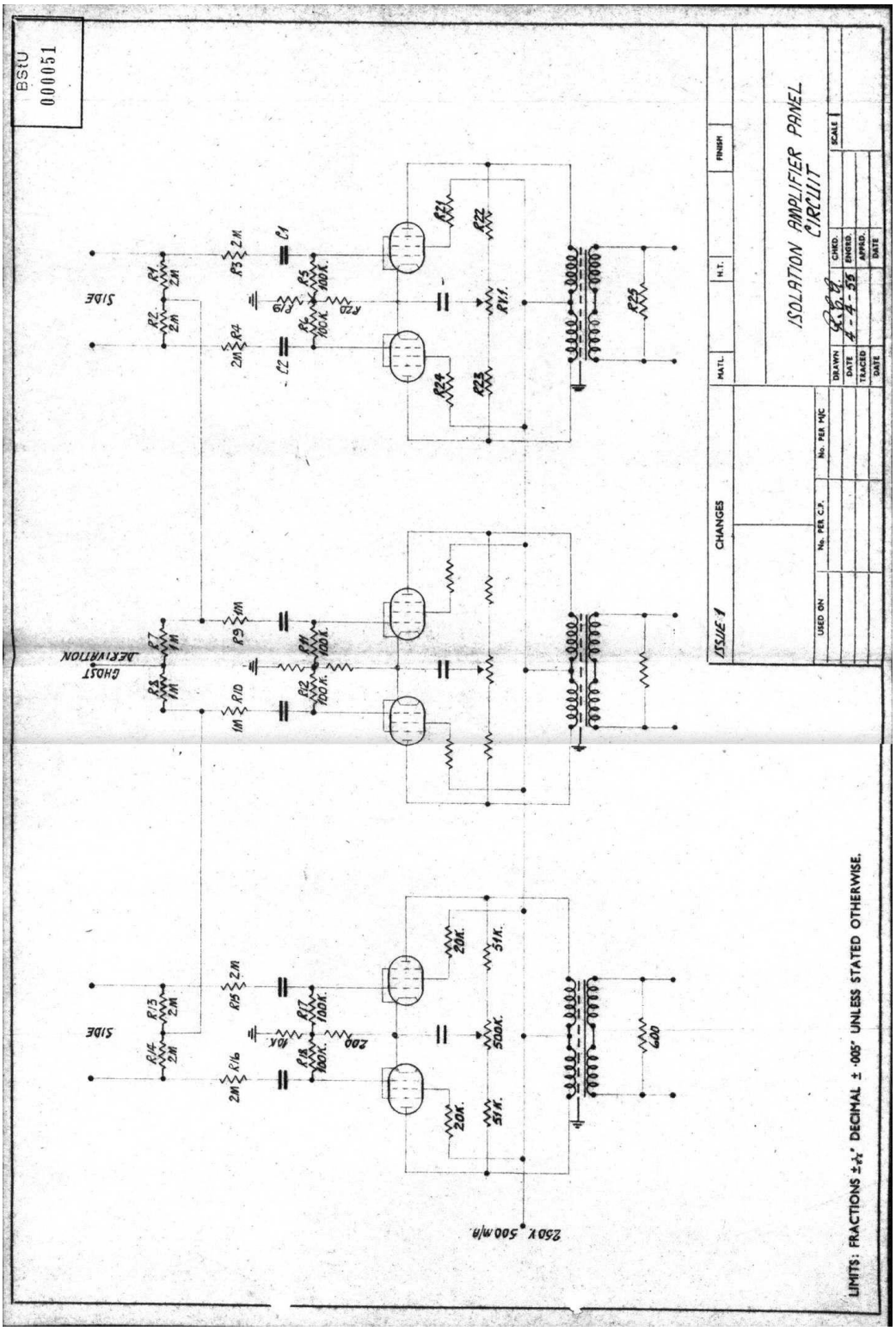
2.<u>The telephone interception system of the Stasi</u>
2.1 System A

From 1956, the Operative Technical Sector (OTS) of the MfS (Ministry for State Security aka Stasi) developed a decentralized telephone tapping system, which went into operation at the beginning of the 60s.

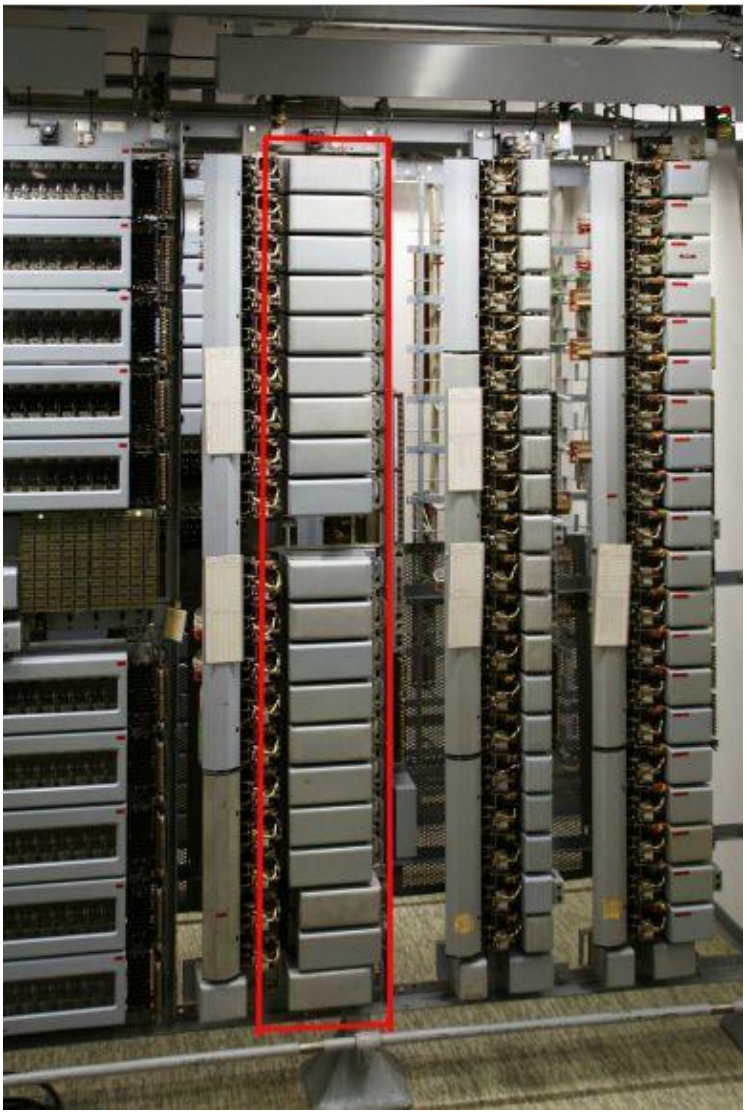
This system, called System A was constructed in accordance with the then state of the art technology using relays and valves and employing separate tape recorders, mostly the BG 31 from the Meßgerätewerk Zwoenitz and other devices such as the Uher 5000.

The System A units were based on the standard 20-piece line selector frame of switching system 50, ie, the rack and the relay case (circled in red) were used and contained discrete electronic components and a telegraph relay as a switching means. Thus, the capacity of a unit was limited to 20 options. The developers were aware of the technique of US (and British!, Ed.) spy tunnel in Altglienicke (Operation Gold).



The isolation amplifier in System A was modelled on the isolation amplifier from the Operation Gold tunnel, but used GDR valves (EF860 instead of 6064)) and an additional EC92 for activation of the recording device.

Also 1 amplifier per 1 telephone line was used because in local network areas there were no four wire lines with phantom switching. System A was only employed in Berlin and Leipzig for a total of about 200 subscriber connections.



Red outline of a line selector frame of the system 50, similar to what System A looked like.

Uher 5000

BG 19

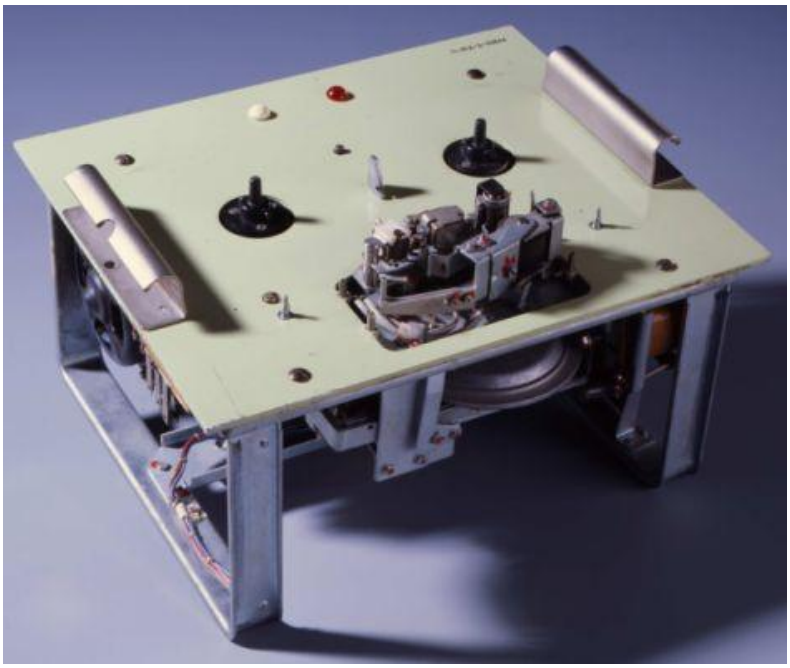
Recording technology used with System A

In the second half of the 60s the Stasi designed a centralised telephone interception system called "CEKO" (Engl. CECO), which stands for "Central Control"system. Centralisation enabled operation with fewer staff. This system was gradually introduced from 1973 onwards. It was a technique based on hybrid circuits KME3 and discrete transistor technology with Czech tape recorders "Jesenik" mounted vertically operating as a recording technique that used a type of cassette which allowed the tapes to be changed quickly. These were designed specifically as secret-service tape recorders. The recording time was 90 min like the series parallel operation (see below). These devices were probably so troublesome that they decided to develop and produce their own recording equipment.

CEKO was designed so that 4000 phone numbers ('control units') could be intercepted centrally in the Regional Centre, and 1,500 locally (eg in mobile bases). In Berlin, there was a capacity of 1100 "control units"(telephone subscribers). In total, about 0.3% of the 1.8 million 'terminal units' (phone lines) in the GDR could be monitored.

In the CEKO Center not only the intercepted telephone calls (Measure A), but also conversations inside the room (Measure B) were recorded.

There were different input modules for installation into terminal sockets or similar at the telephone subscriber's property for Measure A: NF-B (Low-frequency transmission) and TF-B (carrier-frequency transfer).



Recording device for vertical operation "Jesenik"

Replay unit "Hostyn"

2.3 CEKO 2

At the beginning of the 80s CEKO was modernised with some new components such as new recording and evaluation modules as well as a new direct control system and renamed CEKO 2.

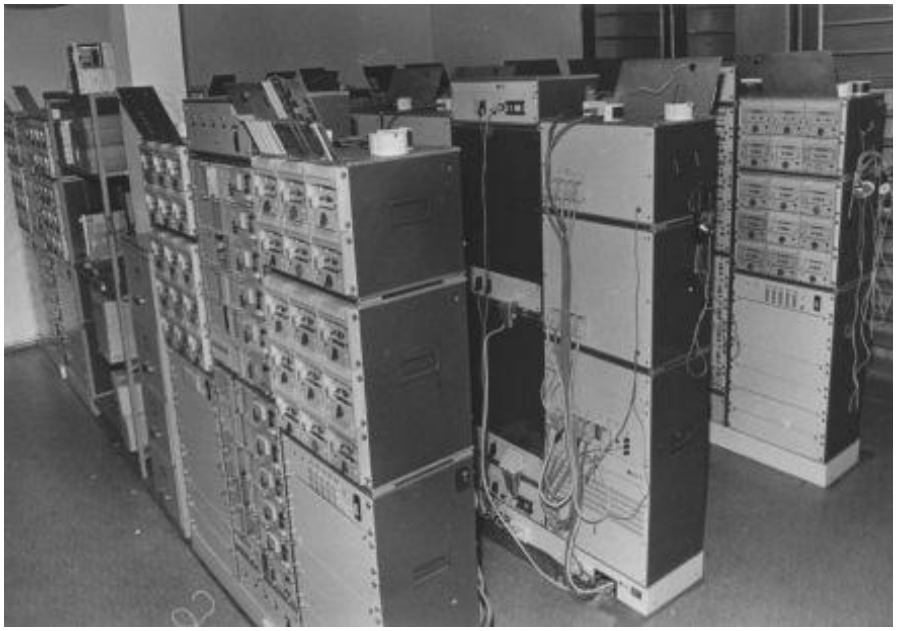
The service life for CEKO 2 was intended to extend up to the 2nd half of the 90s. In CEKO 2 transistors and integrated circuits were used for recording onto cassette tape recorders produced by VEB Electronik Gera. (VEB = People's owned company).

From left Cassette Recording module CAG, Amplifier for single unit, CAG Successor unit CAW-E

From left Evaluation unit AT3, CAW-W Cassette player

Note red display line along top of AT3 Evaluation unit. 'Evaluation' here means that on this red line the date and time of the call being monitored were displayed and, if the subscriber being monitored was dialling out, the number being dialled would also be displayed.
If the call being monitored was incoming, the number calling to the monitored subscriber could not be displayed.

From right: Vertical recording rack units for 5 lines (Measure A), left next 6 cassette recorders, further left Signal concentrators SIR, in the background cassette storage.
Recorded at the CEKO Office Karl-Marx-Stadt (Chemnitz)
Photographer Michael Backhaus



Vertical units each containing 15 cassette recording units in series parallel operation giving 90 min recording time (Karl-Marx-Stadt)
Photographer Michael Backhaus

2.4 Network structure

The CEKO-centers were located in the regional administrations (BV Bezirksverwaltungen) of the Stasi. There were 15 such centers in accordance with the number of regions(Bezirke) in the GDR, eg in Leipzig in the "Runden Eck"/Round Corner" (see above) or in Berlin Johannisthal. The 209 CEKO district bases were usually unmanned, connected by line with the regional administrations (BV). (Translator's note: In the GDR several districts comprised a Region/Bezirk. The term Bezirk was no doubt chosen to get away from the pre-war Laender but after reunification the Laender such as Saxony etc. were re-introduced).
The district bases also had connecting lines to the exchanges and to distribution facilities. Also so-called PO lines were used to transmit the tapped lines to the central office. (PO is a German acronym for postal leased lines in the local network and were leased from Deutsche Post.).

2.5 CEKO bases in Berlin

In Berlin, there were 18 CEKO bases, 6 more were planned, whether they were implemented, is not known. From these bases cables went to the main distribution of neighboring local exchanges. There, the connections of the monitored telephone subscribers were connected to the cable for CEKO Centre.

70% of the control connections were connected on the Main Distribution Frame
9% in a line branch, 19% at a feeder distribution interface or subscriber distribution interface, about 1% at an Ext and 1% at other points.

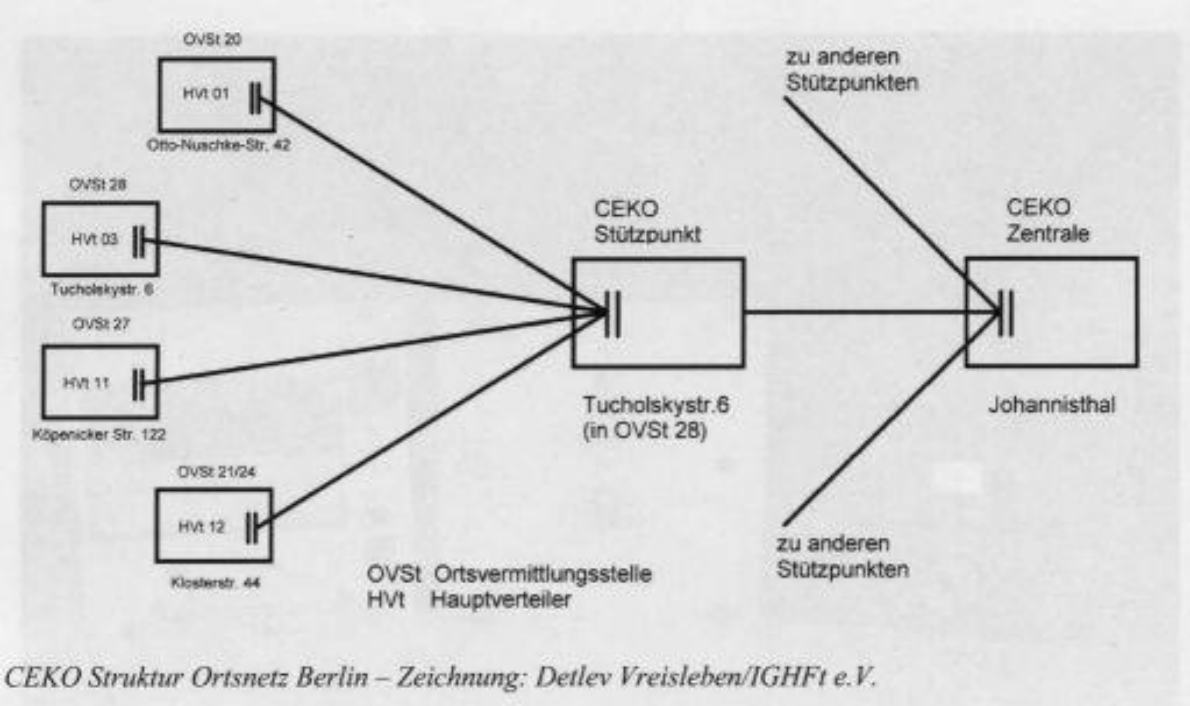
These bases had the cover term Vh (old for main distribution). They were located, for example, in district office Berlin Mitte (Vh 2), district office Köpenick (Vh 8), district office Pankow (Vh 11), the House of Ministries (Vh 3) or the central transmission centre of Deutsche Post (Vh 16), Exchange VStW 28 (which is the local exchange 28 to which all subscribers were connected who had phone numbers starting with 28). From these bases cables went to the main distribution of the local exchanges or even to large PBXs in order to also listen to internal calls. The catchment area of district office Berlin Mitte (Vh 2) is described as:

- Transfer point with connections to 2 adjacent district offices
- Berlin - seat of Embassies, Ministries, large PABXs, Hotels, Palace of the Republic
- Main transfer section for Deutsche Post: distribution Frames 01, 03 distribution Frames, distribution Frames 11, 12 distribution Frames, distribution Frames 13
- Berlin Mitte - focus of activity (Note: Berlin Mitte was the central and governmental district of the eastern part of the city 'Berlin Hauptstadt der DDR'/Berlin capital of the GDR. This central district is still called Berlin Mitte, which in fact was its pre-war name also and is situated around the famous Alexanderplatz with its TV tower for anyone intending to visit).

The main transfer sections within this catachment area were located in:

Exchange VSt 20 (main distribution section 01), Otto-Nuschke Str. 42, distribution
Exchange VSt 28 (main distribution 03), Tucholskystr. 6,
Exchange VSt 27 (main distribution 11), Köpenicker Str. 122,
Exchange VSt 21/24 (main distribution 12) Klosterstr. 44

From the CEKO bases, which served as 'Concentrators', there were lines for CEKO headquarters in Johannistal, partly as TF transfers (TF = carrier frequency) and PCM transmission (Pulse Code Modulation), which are systems that allow several conversations to be transferred on a single line.



CEKO Struktur Ortsnetz Berlin – Zeichnung: Detlev Vreisleben/IGHFt e.V.

Key:	OVSt	Local exchange	CEKO Stutzpunkt
	CEKO base zu anderen Stutzpunkten to other bases		
	HVt	Main Distribution Frame	CEKO Zentrale CEKO HQ

The CEKO-base Vh 01 in the Frankfurter Allee had some control tables (KT 2.1), where if necessary telephone conversations could be directly monitored (without recording).

2.6 The CEKO headquarters in Berlin Johannisthal

There were four Johannistal control systems with a total of 1100 control units, one of which with 20 control units was in a separate room and was for monitoring MfS employees.

The intercepted conversations transmitted to the CEKO-Centre in Johannisthal were recorded there on a CEKO 2 system on cassette tape drives. If the monitored subscriber lifted their receiver,the drive dedicated to them was started. There were two operating modes:
In 'parallel operation' 6 recording devices (casssette recorders) of Type CAG were assigned to five intercepted telephone numbers, the 6th unit was kept as a reserve in case one of the 5 failed or was fully recorded. 60 min cassettes were used which were recorded only on one side, for organizational reasons, ie after 30 min recording time the cartridge had to be changed by hand.

The cassettes were numbered and were stored in racks holding 20 cartridges. Track 1 of the cassette recorded the conversation and on track 2, date, time and, where appropriate, the dialed number were recorded. The number of a caller to the monitored line was not detectable with this system.
In series-parallel operation 15 recording devices (casssette recorders) of Type CAG were assigned to five wiretapped phone numbers, such that for every monitored number 3 x 30 min recording periods were available. A spare device was omitted, because in case of failure another one of the 3 devices could be switched over to.

In 1989 by time the Berlin wall was breached, the MfS possessed over 12,000 such recording devices.
The cassettes were listened to at an evaluation desk and, if required, a written record was made. The cassettes were wiped and were available for use again.

The CEKO system included the Recording Rack section, which contained the recording equipment, Evaluation desks where the tapes were listened to and the stored information date, time and number dialed could be evaluated. In addition, there were direct control desks in order to listen in live.
After the 'Wende'/ 'Change' ***** (Fall of the wall/collapse of the GDR. * - Again, pretty much un translatable) almost the entire CEKO technology/equipment was scrapped except for a few recorders. Only the museum in the "Runden Eck"/Round Corner" (previous Stasi building) in Leipzig, contains an AT 2, an evaluation unit, and the connection to a Recording Rack.

2.7 Decentralized CEKO technology

If operatives found themselves outside the catchment area of the CEKO-centers, 'decentralized technology' was employed. The local loop was tapped where it was done best, i.e. in a feeder distribution interface , a line branch or a main exchange and transferred via special technology to a control base, e.g. a district base or even a mobile base, such as a trailer, where the conversations were recorded.

These devices belong to the A-measure technology for decentralized individual tasks with the cover number 31374
(Note: For persons 'Decknamen'/cover names were used. Devices used by the Stasi were given 'Decknummer'/cover numbers).

This number indicates the device was developed by Dept. 33)

The left hand device connects control connections and transmission line, above is a voice inverter

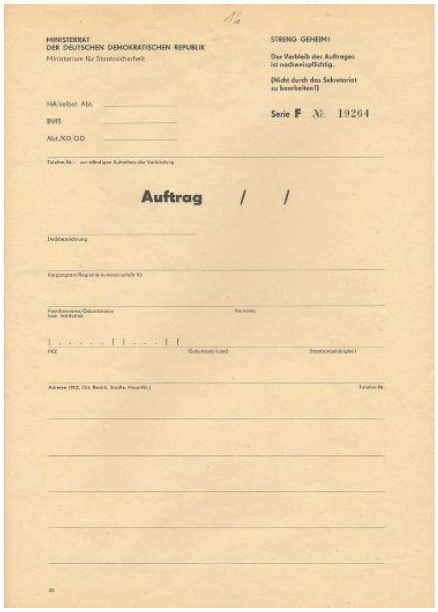
Applications for telephone tapping, Retention time

The wire tapping was carried out by Dept 26 [Abteilung 26]

The requesting operational units used Form 26 (example copy follows – not translated).
Service Instruction 1/84 states regarding the duties of operational units in connection with Form 26:

All other orders (e.g. Measure A (phone tapping)) are to be approved by heads of Main or independent Departments/Regional administrations.

The retention time of the original material is 10 days.


MINISTERRAT
DER DEUTSCHEN DEMOKRATISCHEN REPUBLIK
Ministerium für Staatssicherheit

STRENG GEHEIM!

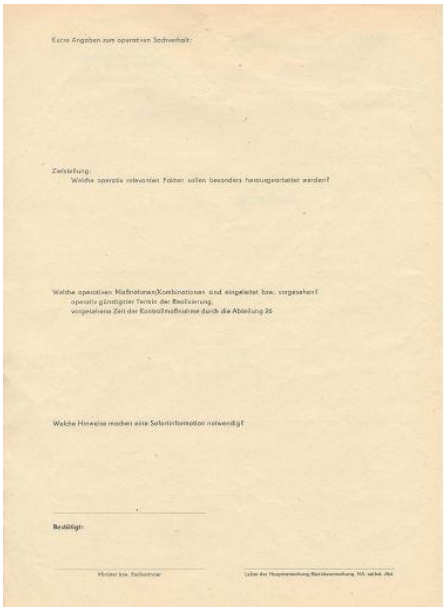
Der Verbleib des Auftrages ist nachweispflichtig.

(Nicht durch das Sekretariat zu bearbeiten!)

HA/selbst. Abt.
BVfS
Abt./KD/OD

Serie F Nr. 19264

Auftrag / /

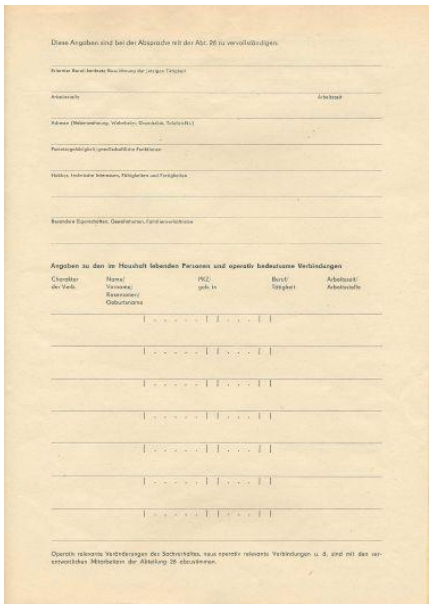

Kurze Angaben zum operativen Sachverhalt:

Zielstellung:
Welche operativ relevanten Fakten sollen besonders herausgearbeitet werden?

Welche operativen Maßnahmen/Kombinationen sind eingeleitet bzw. vorgesehen?
operativ günstigster Termin der Realisierung,
voraussichtliche Zeit der Kontrollmaßnahme durch die Abteilung 26

Welche Hinweise machen eine Sofortinformation notwendig?

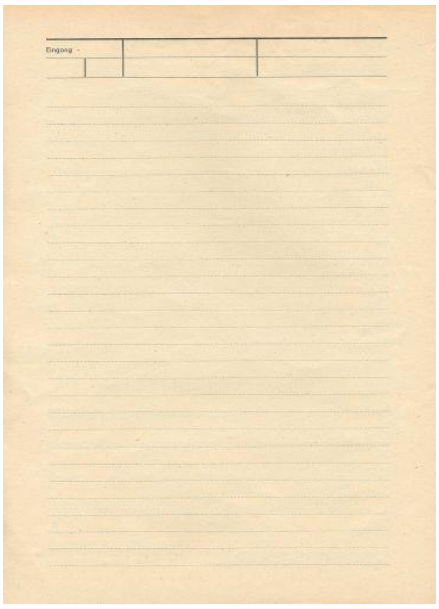
Bestätigt:


Diese Angaben sind bei der Absprache mit der Abt. 26 zu vervollständigen.

Angaben zu den im Haushalt lebenden Personen und operativ bedeutsame Verbindungen

Charakter der Verb.
Name/ Vorname/ Geburtsname
PKZ/ geb. in
Beruf/ Tätigkeit
Arbeitsstelle/ Arbeitsstelle

Operativ relevante Verbindungen des Sachverhaltes, neue operativ relevante Verbindungen u. ä. sind mit den verantwortlichen Mitarbeitern der Abteilung 26 abzustimmen.


Eingang -

Revised 06 Februar 2015
Detlev Vreisleben
vreisleben@netcologne.de

Biography

Detlev Vreisleben, born in 1949 in West-Berlin. Studies of telecommunications, 1976 graduate engineer. Development Engineer (Telefunken), Process Control Engineer (Bayer AG Leverkusen), 2010 retired.

Started collecting and researching secret service devices in 1997, author of some papers about “Photography of the MfS” (MfS State Security of the GDR) and “Spy Radio”, lectures about methods of the MfS.

[Many thanks for a most interesting piece Detlev]

The Logs

German Branch / X06 report

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),

This is the first report of 2015, where we bring an addition to the information about the ARTE transmission, the X06 news and at the end as usual the logs.

Addition to: NumbersKopf on ARTE (see EN83)

The French version of the whole "X:enius" cryptology transmission is available on Youtube:
http://www.youtube.com/watch?v=heATWOTOltM

X06 news

In January 2015 we changed the database. We left the principal of matches (M#). These are groups, where all elements (frequency, time frame, day of week in a month, scale) are confirmations of earlier logs. Now we have only group and random catches as well as the alerts. Every group catch has now a number (for example G388). This indicates, that a transmission belongs to a group of catches with confirmed elements (usually weekday of the month – like the 4th Monday of March – and the time frame). This system is clearer than the matches with numbers, which we began in 2011. With the new system, everyone can follow the group history more easily with the times. Till today we have up to 388 groups, but the number will increase, when random catches are later confirmed. If you have any questions about the new group number system, please feel free to ask me directly (Jochen.Schupper@gmx.de).

As you will see in the logs below, we could confirm more connections between X06b and E07 on the same frequency. We will follow this development more accurately in the next time and try to check the behaviour before all expected E07 skeds. Many thanks go to Peter, our "vice-Kopf", database manager and analyzer, tiNG for his busy logs behalf of E2Kde and of course all E2K loggers; please keep your logs coming.

X06 Mazielka (1C) logs section

Date	Day	UTC	Freq	Scale	Monitor	Comments
20150107	Wed	1440	12208	215346	Antonio/IT	G25
20150115	Thu	1229-1238	18575	352416	Peter/UK	Good (via Twente), G179
20150115	Thu	1605-1607	13961	216354	tiNG	G314
20150115	Thu	1633-1639	12055	256134	CrysisLTU, tiNG	G385
20150116	Fri	1004	20605	256134	RNGB	Monitored in progress, R
20150121	Wed	1101-1102	14970	216354	Danix/PL	G168
20150122	Thu	0286-0829	11620	153624	Danix	Alert 2 (G249) 1
20150122	Thu	0829-0838	14550	153624	Danix	2.2
20150128	Wed	1310	11125	216354	Antonio	G240
20150130	Fri	1502-1505	16115	215346	Danix	G386
20150130	Fri	1502-1505	17470	216354	Kopf	Alert 2 (G387) 1
20150130	Fri	1505-1508	14970	216354	Kopf	2.2
20150201	Sun	1741	10219	1--6--	Avare,Danix	X06b before expected E07 1800 sked
20150202	Mon	1044-1046	20675	641523	Danix	G5
20150202	Mon	1231-1244	13320	1--6--	Danix	X06b
20150203	Tue	1206-1207	20655	325614	Danix	New freq, R
20150203	Tue	2203-2208	7691	351264	Danix	New freq, R
20150204	Wed	0806-0813	12300	111222	Avare,Danix	X06b in different style
20150204	Wed	1224	18197	645321	Danix	Tail end, R
20150205	Thu	1957-2001	9128	164253	Danix	New freq, R
20150206	Fri	0956-0959	14501	361245	Danix	G53
20150206	Fri	1032-1042	14824	625413	Danix	G56
20150208	Sun	1736-1737	10219	6--1--	Avare, Kopf, Linkz/FR	X06b, expecteed pre-E07 TX
20150208	Sun	1745-1751	9163	145632	Kopf, tiNG, Avare	S9 in DE, G135
20150209	Mon	1044-1049	19235	463125	tiNG	I. p. with S9 on new freq, G77
20150210	Tue	1147-1152	16115	215346	tiNG	I. p., good, G83
20150210	Tue	1159-1202	14970	216354	tiNG	I. p., good, G388
20150211	Wed	0859-0905	13985	134265	Danix	Alert 2 (G90, both i. p.) 1
20150211	Wed	0919-0922	16116	134265	Danix	2.2
20150211	Wed	1151-1156	18660	621543	Danix	Another alert 2 (G102) 1
20150211	Wed	1156-1200	15878	621543	Danix	2.2
20150212	Thu	0835-0836	14550	153624	Ary/NL	I. p., G249
20150216	Mon	1948-1952	11438	532614	Jim/US	Strong, G147
20150222	Sun	0802-0807	14947	351264	Danix	R
20150225	Wed	1220-1227	14944	621543	tiNG	S9, G248

Next time we'll bring more. Till then as usual "Auf Wiedersehen" and „Good-bye"

Jochen Schäfer, KopfE2Kde, Numbers- and X06 Teamkopf

Morse Station Roundup

Morse - Number Stations

UNID Just one small UNID report this time round. An intriguing intercept by Jim (JkC). Regrettably there is too little information for any conclusive identification to be made on this one.

M01 The regular M01 transmissions with their curious mix of order & chaos continue to appear as per schedule, however, the 2000z transmissions have proved more difficult to log than usual, due to a wideband signal sitting LF of 4490kHz which causes some extreme QRM to the M01 signals much of the time.

Jim (JkC) spotted that the 1800z transmission on 19 Feb was a repeat of the message sent on 11 July 2013 - also at 1800z, but with a different call-up & decode key. Originally it was believed that M01 never reused messages, but in recent years several instances have been logged where a message was reused, although these were usually either on the same day or within a week of the previous sending.

Jim has not been neglecting the other M01 variants either , with some excellent logs of M01b including a 62 group message, along with unusual catches of M01a / M01c variants.

M03 Activity from M03 continues to be steady, although we appear to have lost another regular schedule, as the Tue/Sat 1535z has failed to appear since the last known sending on 24 Jan on 5358kHz.

M08a AnonUS gives us his round-up & analysis of the output from the Cuban numbers. M08a have suffered some problems over this period, resulting in a blank carrier being transmitted on a number of occasions, in addition to the usual mix of technical & timing errors.

M12 The schedules have still not settled down & several changes have been noted to the regular slots as IDs change or new transmissions appear.

Token (T!) reports on finding a new Asiatic schedule in addition to the existing 0020/0040/0100z previously reported. The new schedule is a 0100/0120/0140z . Again, these transmissions are not usually audible in the UK or Western Europe.

M912b Jim (JkC) has logged some recent activity on 10250kHz. In this variant, there is an extra 5 fig group included between the ID call-up & the DK/GC. We also note that the ID used has in the past, featured in one of the most unusual transmissions ever heard from the M12 stable.

M14 Once again we have received a good number of logs this time & the procedural errors continue to be reported, this time there are two separate transmissions where a series of three or more 5s have been sent during the header sequences. Some excellent logs & reports - many thanks to all concerned - Excellent work!

M23 A most unusual schedule from M23, reported by Ary (AB) from 10 Feb, with an unusually long transmission of over 4 hours, repeated daily until 17 Feb, when the schedule was noted as missing by 0858z & has not been heard since. So was this actually M23?

M24 After the activity reported in the last newsletter we have only three reports of this station this time. All with messages of over 100 groups & within the 4 & 5 MHz bands.

M97 Last heard on Thu 18 Dec sending the SD84 message that had been in use since August 2013. No reports for Jan / Feb 2015 despite almost daily monitoring. After repeating the same message for over a year, has M97 finally ceased?

Morse Stations - Not Number related

M32 Thanks to submissions from Ary (AB) we are including a small number of M32 & M32a relating to the Russian military nets. This is not an area usually covered by this group, but we do like to occasionally cover stations & topics outside of our regular interests. Although, given the recent events in Ukraine, this is not entirely unrelated.

M51 Quite active on a varied number of frequencies since the beginning of January, including one frequency within the 80m amateur band where an attempt was made to jam the station or to force it to move frequency. Full report included.

The daily Morse lessons from M51a continue as usual with 5 fig grps & plain text, always a good way to sharpen up your Morse skills

M89 In a change to recent months there was a noticeable increase in new schedules along with changes to some calls & frequencies. Jean-Paul has continued to track & log these changes, including finding frequency pairings & changes from day to night schedules.

Beacons & Oddities

A new beacon has appeared on 5292.3kHz, believed of Russian origin. When it first appeared, it was not at all clear what the call was intended to be as it was sending three 'D's followed by a truncated 'B'. At the time of writing, the beacon is now strongly sending a continuous 'B' signal & the carrier has also been modulated with tones.

Finally, we wrap up with a snippet of information from Ary (AB) about the 20 minute idler that has been featured over the last few newsletters. Thanks Ary!

Morse Stations

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

Morse - Number Stations

UNID CW

UNID 1

Jim (JkC) caught this one sending continuously sounding similar to M12 with a null message:-

5087 2022(IP) - 2025z 14 Jan I/P 418 418 418 000 Strong JkC WED

Jim states the transmission was a minimum of 5 mins long (caught in progress), using short zero & auto-sent around 12 - 15-ish wpm.

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

January 2015:

4490	2000z	01 Jan	'197' 911 30 = =	66754...	...LG 54189 = =	Good, fast. Staccato style CW	BR	THU
	2000z	06 Jan	'197' 918 30 = =	76622...	...LG 27830 = =	Weak Ends 2009z	JkC	TUE
	2000z	08 Jan	'197' 737 30 = =	59534...	...LG 67 .33 = =	Weak, fast. Error on grp01 repeat & long pause	BR/JkC	THU
	2000z	13 Jan	'197' 529 30 = =	82555...	...LG 62 . . . = =	Weak, med-fast. Poor copy, mostly unreadable	BR	TUE
	2000z	15 Jan	'197' 507 30 = =	39388...	...LG 71466 = =	Good, fast. Part obscured by digital QRM	BR/JkC	THU
	2000z	20 Jan	NRH				BR	TUE
	2000z	22 Jan	'197' 191 30 = =	72483...	...LG 81005 = =	Good, fast / V.Weak unworkable	BR/JkC	THU
	1959z	27 Jan	'197' 297 30 = =	28543...	...LG 43504 = =	Good, fast. No errors	BR	TUE
	1959z	29 Jan	'197' 125 30 = =	53920...	...LG 68218 = =	Weak/V.weak, fast. Digital QRM at times	BR/JkC	THU
5320	1800z	01 Jan	'197' 227 30 = =	93432...	...LG 17380 = =	Fair, fast. Several 4 fig grps & periods sent	BR	THU
	1800z	06 Jan	'197' 471 30 = =	69980...	...LG 85422 = =	Strong Ends 1809z	JkC	TUE
	1800z	08 Jan	'197' 115 30 = =	74746...	...LG 36104 = =	Strong	AB/JkC	THU
	1800z	13 Jan	'197' 256 30 = =	07605...	...LG 24775 = =	Weak / V.weak, med-fast. Several periods sent	BR/JkC	TUE
	1800z	15 Jan	'197' 319 30 = =	37729...	...LG 06868 = =	Weak	JkC	THU
	1800z	20 Jan	NRH				BR	TUE
	1800z	22 Jan	'197' 278 30 = =	54944...	...LG 79250 = =	Fair. Ends 1809z	JkC/Spectre	THU
	1759z	27 Jan	'197' 410 30 = =	55391...	...LG 27715 = =	Weak/V.weak unworkable. Slow.	BR/JkC	TUE
	1759z	29 Jan	'197' 534 30 = =	47150...	...LG 96639 = =	V.weak/V.weak unworkable, fast	BR/JkC	THU
5465	0700z	04 Jan	'197' 715 30 = =	76962...	...LG 96905 = =	Weak, fast. Staccato style CW	AB/BR	SUN
	0700z	11 Jan	'197' 423 30 = =	67832...	...LG 46346 = =	Weak, med-fast. Excellent CW. Some QSB	BR	SUN
	0700z	18 Jan	'197' 225 30 = =	51607...	...LG 45492 = =	Weak, fast. Excellent CW	BR	SUN
	0658z	25 Jan	'197' 979 30 = =	69830...	...LG 71087 = =	Weak, fast. Jumbled, disjointed CW	BR	SUN
5810	1500z	03 Jan	'197' 910 30 = =	86442...	...LG 70147 = =	V.weak, fast. Very poor - details via Twente	BR	SAT
	1500z	10 Jan	'197' 321 30 = =	83073...	...LG 55022 = =	Weak, med-fast. Excellent CW. No errors	BR	SAT
	1500z	17 Jan	'197' 385 30 = =	. . . .	...LG 32158 = =	V.weak, fast. Poor copy, details via Twente	BR	SAT
	1500z	24 Jan	'197' 198 30 = =	62662...	...LG 72607 = =	V.weak, fast. Copy difficult at times.	BR	SAT
	1500z	31 Jan	'197' 703 30 = =	. . . .	...LG 07372 = =	V.weak, fast. Poor copy. Details via Twente	BR	SAT

February 2015:

4490	1959z	05 Feb	'197' 093 30 = =	17545...	...LG 938 .7 = =	V.Weak, fast. Details via Twente (V.weak)	BR	THU
	1959z	03 Feb	'197' 307 30 = =	22709...	...LG 91771 = =	Good, fast. Errors noted.	BR	TUE
	1959z	10 Feb	'197' 133 30 = =	41831...	...LG 28093 = =	Weak, fast. Severe QRM from LF signal	BR	TUE
	2000z	12 Feb	'197' 418 30 = =	24406...	...LG 4 .417 = =	Good/Very weak. Severe QRM from LF sig	BR/JkC	THU
	2000z	19 Feb	'197' 164 30 = =	88042...	...LG 28045 = =	Fair. Ended 2011z	JkC	THU
	2000z	24 Feb	'197' 831 30 = =	24679...	...LG 62061 = =	Fair, slow as monitored via Twente SDR	BR	TUE
	2000z	26 Feb	'197' 254 30 = =	70792...	...LG 09192 = =	Good/Weak, slow. Ends 2009z	BR/JkC	THU
5320	1759z	03 Feb	'197' 802 30 = =	22709...	...LG 73802 = =	Fair, fast. Sent first 7 grps of 2000z msg*	BR	TUE
	1759z	05 Feb	'197' 908 30 = =	62659...	...LG 58101 = =	V.weak, fast. Details via Twente (V.weak)	BR/JkC	THU
	1800z	10 Feb	'197' 259 30 = =	62659...	...LG 59801 = =	Fair/Fair. Ends 1809z**	JkC/Spectre	TUE
	1800z	12 Feb	'197' 931 30 = =	90075...	...LG 06105 = =	Weak, fast. Two errors noted	BR/JkC	THU
	1800z	17 Feb	'197' 737 30 = =	06234...	...LG 77632 = =	Fair. Ends 1810z	JkC	TUE
	1800z	19 Feb	'197' 019 30 = =	22835...	...LG 48415 = =	Fair. Ends 1808z***	JkC	THU
	1800z	24 Feb	'197' 562 30 = =	31791...	...LG 50059 = =	Weak, slow. Several noted errors	BR	TUE
	1800z	26 Feb	'197' 127 30 = =	93568...	...LG 28532 = =	Weak, Slow. Excellent CW. No errors	BR	THU
5465	0658z	01 Feb	'197' 910 30 = =	94841...	...LG 13067 = =	Fair, fast. Sig down to weak by EOT	BR	SUN
	0659z	08 Feb	'197 130 30 = =	62740...	...LG 97420 = =	Good, fast Numerous errors noted	BR	SUN
	0700z	15 Feb	'197' 337 30 = =	023	...LG 40956 = =	Weak, med-fast	BR	SUN
	0700z	22 Feb	'197' 909 30	27026...	...LG 8 . 30 = =	Weak, fast but with pauses between grps	BR	SUN
5810	1500z	07 Feb	'197' 406 30 = =	09504 19167 rest unworkable. Ends 1508z Very Weak			JkC	SAT
	1500z	14 Feb	'197' 588 30 = =	17545...	...LG 93976 = =	Weak/Very weak, fast	BR/JkC	SAT
	1500z	21 Feb	'197' 011 30 = =	. . . .	...LG 71894 = =	Weak, fast. Poor copy	BR	SAT
	1500z	28 Feb	'197' 736 30 = =	1688. ...	...LG 15919 = =	Weak, fast. Very poor copy	BR	SAT

* On 03 Feb the 1800z transmission started with the DK '307' and first seven groups of the msg subsequently sent at 2000z. The Op. then paused before continuing to send the correct msg, (presumably from grp08), before ending with the correct DK. (BR)

** The first 5 grps of the Thu 05 Feb 1800z msg were reused in the 1800z msg on Tue 10 Feb.

***The 1800z sked on 19 Feb was unusual, in that it sent a repeat message. The original was sent Thursday, 1800z, 11 July 2013. (NL78 Sept13 for log), using a different call-up & DK. (JkC)

M01 5320kHz 1800z 22 Jan 15

197 (R4m) 278 278 30 30 = =

54944 35336 86345 02939 14991
89428 26337 24470 00135 80252
06197 37039 39034 88775 57347
14304 67233 63784 05789 14867
64368 56310 41054 14472 18723
04355 24819 14099 18056 79250
= =

278 278 30 30 000

Courtesy Spectre

M01 5320kHz 1800z 10 Feb 15

197 (R4m) 259 259 30 30 = =

62659 01992 19190 45172 39882
94475 74485 38696 23157 15069
61901 85489 29178 87101 08539
80511 01300 67228 11877 01108
39190 20789 50732 57466 98198
36581 87722 11274 65224 59801
= =

259 259 30 30 000

Courtesy Spectre

M01a (formerly end of month TXs, now random)

Jim (JkC) managed to find this transmission in progress on 22 Jan:-

4788	2014 (IP) - 2017z 22 Jan	Auto-sent, but poor group spacing, about 10wpm. Using short zero	JkC	THU
	... 39104 93038 55761 3820 . = 000	(2014z) (groups not repeated)		
	111 = 50217 50217 38207 38207 =	(2016z)		
	111 = 55761 55761 =	(2017z) (silent)		
4648	1508 (IP) - 1524z 29 Jan	Fair	JkC	THU
	I/P ... 83295 83295	(hand sent)		
	111			
	111 333 78595			
	333 78595 78595	(1511z)		
	333			
	111 04002			
	111 04005	1513z)		
	111			
	111 111 77795 77795 (all R3)	(1519z)		
	111 111 77795 77795 (all R2)	(1520z)		
	111			
	111 111 72195 72195 (all R2)	(1522z)		
	111 72195 72195	(1523z)		
	111 0 0 0	(long dashes)		
	73	(as in Ham 73?)		
	0 0 0	(1524z) (NFH) (1530z)		
4563	1747(IP) - 1759z 09 Feb	Hand sent, short zero, groups not repeated, 10-12wpm Strong	JkC	MON
	Today's copy is the most complete sked for this station that I have heard. I searched 3-6MHZ for the other end, but nil found.			
	446 446 40526 40526	(1747z)		
	121 999	(1748z)		
	111 211 15	(1750z)		
	45328 16783 56807 23416 52696 24271 52833 98771 10491 75706			
	54271 86182 52788 90110 09758			
	211 15 000	(1753z)		
	111 52788	(1755)		
	111 46328	(1756z)		
	111 46328	(1759z) (silent) NFH 1810z		

M01b

January 2015:

2405//3180	2110 - 2126z	02 Jan	'610' 734 30 = 11815 ... 98467 = 734 30 000 Fair//Fair	JkC	FRI
	2110 - 2126z	15 Jan	'610' 734 30 = 11815 ... 98467 = 734 30 000 Weak//Weak	JkC	THU
	2110 - 2125z	30 Jan	'610' 734 30 = 11815 ... 98467 = 734 30 000 Fair//Weak	JkC	FRI
3205	2015 - 2031z	05 Jan	'375' 734 30 = 11815 ... 98467 = 734 30 000 Fair (//2425kHz NRH)	JkC	MON
2425//3205	2015 - 2031z	12 Jan	'853' 734 30 = 11815 ... 98467 = 734 30 000 Very Weak//Very weak	JkC	MON
3520	1910 - 1926z	05 Jan	'853' 734 30 = 11815 ... 98467 = 734 30 000 Fair (//2435kHz NRH)	JkC	MON
2435//3520	1910 - 1926z	12 Jan	'853' 734 30 = 11815 ... 98467 = 734 30 000] Very Weak//Fair	JkC	MON

2470//3545	1932 - 1949z	01 Jan	'910' 567 32 = 40707 ... 96508 = 567 32 000 Weak//Fair	JkC	THU
			Repeat of 18 Dec 2014 No preamble sent - silent from 1935-38z, then straight into GR1		
	1932 - 1948z	08 Jan	'910' 734 30 = 11815 ... 98467 = 734 30 000 Weak/Fair	JkC	THU
	1932 - 1948z	15 Jan	'910' 734 30 = 11815 ... 98467 = 734 30 000 Weak/Weak	JkC	THU
	1932 - 1947z	22 Jan	'910' 734 30 = 11815 ... 98467 = 734 30 000 Fair/Fair	JkC	THU
3545	1932 - 1947z	29 Jan	'910' 734 30 = 11815 ... 98467 = 734 30 000 V.Weak (//2470kHz NRH)	JkC	THU
2485//3160	2042 - 2059z	01 Jan	'382' 567 32 = 40707 ... 96508 = 567 32 000 Weak//Fair	JkC	THU
	2042 - 2057z	08 Jan	'382' 734 30 = 11815 ... 98467 = 734 30 000 Weak//Weak	AB/JkC	THU
	2042 - 2057z	15 Jan	'382' 734 30 = 11815 ... 98467 = 734 30 000 Weak/Fair	AB/JkC	THU
	2042 - 2057z	22 Jan	'382' 734 30 = 11815 ... 98467 = 734 30 000 Fair/Fair	JkC	THU
2653//3197	2002 - 2005z	30 Jan	[NRH]	JkC	FRI

February 2015:

2425//3205	2015 - 2044z	09 Feb	'375' 426 62 = 87980 ... 04083 = 426 62 000 Very Weak//Fair	JkC	MON
	2015 - 2043z	16 Feb	'375' 426 62 = 87980 ... 04083 = 426 62 000 Very Weak//Very weak	JkC	MON
	2015 - 2043z	23 Feb	'375' 426 62 = 87980 ... 04083 = 426 62 000 Weak//Weak	JkC	MON
2435//3520	1910 - 1938z	09 Feb	'853' 426 62 = 87980 ... 04083 = 426 62 000 Weak//Fair	JkC	MON
	1910 - 1938z	16 Feb	'853' 426 62 = 87980 ... 04083 = 426 62 000 Very Weak//Very weak	JkC	MON
	1910 - 1938z	23 Feb	'853' 426 62 = 87980 ... 04083 = 426 62 000 Weak//Fair	JkC	MON
2470//3545	1932 - 1936z	05 Feb	'910' 385 30 = Weak//Fair Tx stopped after preamble. NFH 1945z	JkC	THU
	1932z	16 Feb	'910' 426 62 = 87980 ... fades to nil Very Weak//Very Weak	JkC	MON
			Tx possibly went off air at 1942z without completing message		
	1932 - 2002z	26 Feb	'910' 426 62 = 87980 ... 04083 = 426 62 000 Very Weak//Fair	JkC	THU
2405//3180	2110 - 2126z	06 Feb	'610' 385 30 = 88538 ... 14316 = 385 30 000 Weak//Weak	JkC	FRI
	2110 - 2138z	13 Feb	'610' 426 62 = 87980 ... 04083 = 426 62 000 Weak//Fair	JkC	FRI
2485//3160	2042 - 2057z	05 Feb	'382' 385 30 = 88538 ... 14316 = 385 30 000 Fair//Fair	JkC	THU
	2042 - 2109z	09 Feb	'382' 426 62 = 87980 ... 04083 = 426 62 000 Weak//Fair	JkC	MON
	2042 - 2109z	19 Feb	'382' 426 62 = 87980 ... 04083 = 426 62 000 Fair//Fair	JkC	THU
	2042 - 2112z	26 Feb	'382' 426 62 = 87980 ... 04083 = 426 62 000 Very Weak//Fair	JkC	THU
2655//3196	2002 - 2017z	06 Feb	'866' 385 30 = 88538 ... 14316 = 385 30 000 Weak//Very weak	JkC	FRI
	2002 - 2034z	26 Feb	'866' 426 62 = 87980 ... 04083 = 426 62 000 Very Weak//Weak	JkC	THU

M01c

4563	1830 - 1858z	10 Feb	Truly appalling hand sent, short zero, 12-15wpm. Strong.	JkC	MON
			In progress ...		
			446 (R3) 48154 (R3) (continues)		
			446 (R3) 40815 (R?) (1839z continues)		
			972 (1850z continues)		
			446 (R3) 40815 (R3) (1851z continues) (silent - 1858z) NFH (1910z)		
2485	2052 (IP) - 2054z	19 Feb	(In progress)	JkC	THU
			... 575 (R3) 60262 (R2) (R2m) Fair		

January 2015:

M03 III ICW, some CW

4505	1320 - 1323z	05 Jan	543/00 = = 0 0 0 Fair	Spectre	MON
	1320 - 1323z	07 Jan	543/00 = = 000 Very Weak	JkC/Spectre	WED
	1320 - 1323z	12 Jan	543/00 = = 0 0 0 Fair (VVV VVV VVV at 1317z)	AB/Spectre	MON
4828	1320 - 1335z	01 Jan	430/37 = = 30733 ... 25323 = = 0 0 0 Fair	Spectre	THU
	1320 - 1335z	04 Jan	430/37 = = 30733 ... 25323 = = 0 0 0 Fair	Spectre	SUN
	1320 - 1323z	08 Jan	437/00 = = 0 0 0 Fair	Spectre	THU
	1320 - 1323z	11 Jan	437/00 = = 0 0 0 Fair	Spectre	SUN
	1320 - 1323z	29 Jan	437/00 = = 000 Fair	JkC	THU
5358	1535 - 1538z	03 Jan	798/00 = = 0 0 0 Fair	Spectre	SAT
	1535 - 1538z	06 Jan	798/00 = = 000 Strong	JkC	TUE
	1535 - 1538z	10 Jan	798/00 = = 000 Strong	AB/BR	SAT
	1535 - 1538z	13 Jan	798/00 = = 000 Strong	AB/JkC	TUE
	1535 - 1538z	17 Jan	798/00 = = 000 Strong	BR	SAT
	1535 - 1404z	20 Jan	796/38 = = 03297 65509 ... 44026 = = 000 Fair	AB/JkC	TUE
	1535 - 1404z	24 Jan	796/38 = = 03297 65509 ... 44026 = = 000 Fair	JkC	SAT

13911	1420 - 1435z	02 Jan	877/38 = = 33542 ... 85649 = = 0 0 0 Fair	AB/Spectre	FRI
	1420 - 1435z	04 Jan	877/38 = = 33542 ... 85649 = = 0 0 0 Fair	AB/Spectre	SUN
	1420 - 1423z	09 Jan	879/00 = = 0 0 0 Fair	AB/HFD/Spectre	FRI
	1420 - 1423z	11 Jan	879/00 = = 0 0 0 Fair	Spectre	SUN
	1420 - 1423z	18 Jan	879/00 = = 000 Fair	BR	SUN
	1420 - 1423z	23 Jan	879/00 = = 000 Strong	JkC	FRI
	1420 - 1423z	25 Jan	879/00 = = 000 Strong	AB/JkC	SUN
	1420 - 1423z	30 Jan	879/00 = = 000 Strong	JkC	FRI

M03 5358kHz 1535z 20 Jan 15

796/38 (R2m) = =

03297 65509 17730 00367 10409
81515 50132 95350 53582 67073
80248 19648 68363 18334 15673
42946 37461 29492 99914 96072
60547 22383 08502 67627 44654
16016 36577 10341 19433 24707
69807 60522 07352 86562 90571
36013 82829 44026 = =

796/38 (single group repeat) = 000

Courtesy JkC

M03 4828kHz 1320z 04 Jan 15

430/37 (R2m) = =

30733 19213 66524 84471 24025
67307 39874 61309 17793 52536
83523 11420 56898 50100 87741
64203 10061 46648 11462 41915
20514 70542 99003 25770 50149
86864 91240 61461 10114 04496
06366 32470 69095 62599 61443
18274 25323 = =

430/37 (single group repeat) = 000

Courtesy Spectre

M03 13911kHz 1420z 02 Jan 15

877/38 (R2m) = =

33542 26316 42233 02792 53684
06878 50035 60532 29117 97948
49808 98743 76683 16318 46868
69975 93523 93199 50543 38720
77404 19892 82208 87529 69562
66350 54224 15006 89020 39381
19251 28032 49022 56682 12359
35209 12829 85649 = =

877/38 (single group repeat) = 000

Courtesy Spectre

February 2015:

4505	1320 - 1323z	04 Feb	543/00 = = 000 Very Weak	JkC	WED
	1320 - 1323z	09 Feb	543/00 = = 000 Very Weak	JkC	MON
	1320 - 1323z	11 Feb	543/00 = = 000 Weak	JkC	WED
	1320 - 1337z	16 Feb	540/33 = = 19835 06258....56081 = = Weak	BR	MON
	1320 - 1323z	25 Feb	543/00 = = 000 Very Weak	JkC	WED
4828	1320 - 1323z	08 Feb	437/00 = = 000 Weak	JkC	SUN
	1320 - 1336z	12 Feb	437/31 = = 55032 ... 53372 = 000 Strong	JkC	THU
	1320 - 1323z	22 Feb	437/00 = = 000 Fair	HFD/JkC	SUN
13911	1420 - 1423z	08 Feb	879/00 = = 000 Strong/Fair	JkC/Kopf	SUN
	1420 - 1438z	13 Feb	878/38 = 78230 ... 47509 = 000 Strong	JkC	FRI
	1420 - 1423z	20 Feb	879/00 = = 000 Strong	JkC	FRI
	1420 - 1423z	22 Feb	879/00 = = 000 Strong	JkC	SUN
	1420 - 1423z	27 Feb	879/00 = = 000 Strong	JkC	FRI

M08a XVIII ICW / CW, some MCW

From our Man in America comprehensive logs, comment & analysis on this station - Thanks AnonUS - excellent work!

January 2015:

7554	2000z	01 Jan	[41141 54572 67801]		AnonUS	THU
	2000z	04 Jan	[18262 - - - - - - - - - -]	Up early just caught first call-up. Looks like usual weekend call-ups	AnonUS	SUN
	2000z	06 Jan	[40021 52651 64082]		AnonUS	TUE
	2000z	08 Jan	[28102 32431 55852]		AnonUS	THU
	2000z	09 Jan		Recording problem, no call-ups	AnonUS	FRI
	2000z	10 Jan	[18262 22501 35022]	Usual weekend call-ups	AnonUS	SAT
	2000z	11 Jan	[18262 22501 35022]	Usual weekend call-ups	AnonUS	SUN
	2000z	13 Jan	[21651 44082 57412]		AnonUS	TUE
	2000z	13 Jan	[- - - - - - - - - - - - - - -]	Came up in progress. WED		
	2000z	15 Jan	[87171 00411 23731]		AnonUS	THU
	2000z	20 Jan	[76461 00802 14222]		AnonUS	TUE
	2000z	21 Jan	[00421 13851 26272]		AnonUS	WED
	2000z	22 Jan	[24122 37451 41772]		AnonUS	THU
	2000z	24 Jan		Carrier only	AnonUS	SAT
	2000z	26 Jan		Up late in progress	AnonUS	MON
	2000z	27 Jan	[42381 55612 68042]		AnonUS	TUE
	2000z	29 Jan	[01301 14631 27152]		AnonUS	THU
	2000z	30 Jan	[75442 88771 02101]		AnonUS	FRI
8009	2300z	03 Jan		Carrier only	AnonUS	SAT
	2300z	05 Jan	[56??? ????? 00???]	Extremely weak, unable to copy full call-ups	AnonUS	MON
	2300z	07 Jan	[22762 34102 47421]		AnonUS	WED
	2300z	10 Jan	[- - - - - - - - - - - - - - -]	In progress at 2301 slow Morse so probably the usual weekend numbers	AnonUS	SAT
	2300z	14 Jan	[04151 16482 20811]		AnonUS	WED
	2300z	17 Jan	[18262 22501 35022]	Usual weekend call-ups	AnonUS	SAT
	2300z	18 Jan		Carrier only	AnonUS	SUN
	2300z	21 Jan	[42362 63002 76421]		AnonUS	WED
	2300z	24 Jan		Carrier only	AnonUS	SAT
	2300z	26 Jan	[15082 28312 32641]		AnonUS	MON

	2300z	28 Jan	[54782 - - - - - 71451]	Call-up 2 probably 6712*(1 or 2)*	AnonUS	WED
	2300z	31 Jan		HM01 heard instead of Morse	AnonUS	SAT
8096	1400z	01 Jan	[35111 48431 51862]		AnonUS	THU
	1400z	03 Jan		Carrier only	AnonUS	SAT
	1400z	04 Jan		Up early in progress	AnonUS	SUN
	1400z	05 Jan	[05602 18132 21451]		AnonUS	MON
	1400z	06 Jan	[34882 47311 51642]		AnonUS	TUE
	1400z	12 Jan	[74801 87222 01551]		AnonUS	MON
	1400z	13 Jan	[23021 36352 40671]		AnonUS	TUE
	1400z	15 Jan	[80342 02771 15102]		AnonUS	THU
	1400z	16 Jan	[84131 07552 11882]		AnonUS	FRI
	1400z	19 Jan	[43831 56252 60581]		AnonUS	MON
	1400z	20 Jan	[51481 62121 75442]		AnonUS	TUE
	1400z	27 Jan		Up late in progress	AnonUS	TUE
	1400z	28 Jan	[30011 53432 65761]		AnonUS	WED
	1400z	29 Jan	[72831 83661 06002]		AnonUS	THU
8135	2300z	01 Jan		Carrier Only	AnonUS	THU
	2300z	02 Jan	[- - - - - - - - -]		AnonUS	FRI
	2300z	04 Jan	[18262 22501 35022]	(On 8134kHz)	AnonUS	SUN
	2300z	08 Jan		(On 8134kHz) Up late, no call-ups	AnonUS	THU
	2300z	11 Jan	[18262 22501 35022]	Usual weekend call-ups	AnonUS	SUN
	2300z	16 Jan	[48672 52011 65332]		AnonUS	FRI
	2300z	20 Jan	[- - - - - - - - - - - - - --]	Up late in progress. HM01 came up briefly during Morse	AnonUS	TUE
	2300z	22 Jan	[43711 56132 60561]		AnonUS	THU
	2300z	25 Jan	[12345 67890]	Repeated continually	AnonUS	SUN
	2300z	27 Jan	[05721 18142 22571]		AnonUS	TUE
	2300z	29 Jan	[27301 31721 44152]		AnonUS	THU

Other logs received;

8097	1400z	29 Jan	[INGDA GDRRA TRTTN cont.]	Fair	JkC	THU

<u>February 2015:</u>

7554	2000z	01 Feb	[18262 22501 35022]	Usual weekend call-ups	AnonUS	SUN
	2000z	02 Feb	[65152 77472 81811]		AnonUS	MON
	2000z	05 Feb		In progress missed call-ups	AnonUS	THU
	2000z	12 Feb	[55581 ***6***8222 72641]	Switched to M08a call-ups after V02a. *(Missed part of second call-up but clearly should be 68222)*	AnonUS	THU
	2000z	15 Feb	[18262 22501 35022]	Usual weekend call-ups	AnonUS	SUN
	2000z	22 Feb	[18262 22501 35022]	Usual weekend call-ups	AnonUS	SUN
	2000z	26 Feb	[24502 37821 50252]		AnonUS	THU
8009	2300z	02 Feb		Carrier only. MON		
	2300z	04 Feb		In progress missed call-ups	AnonUS	WED
	2300z	07 Feb		In progress missed call-ups	AnonUS	SAT
	2300z	16 Feb	[85832 08361 12682]		AnonUS	MON
	2300z	25 Feb	[80202 - - -31 16852]	Into first call-up early. HM01 also audible on this frequency *(Missed first 3 digits of second call-up but it is probably 03531)*	AnonUS	WED
	2300z	28 Feb		Intermittent carrier only	AnonUS	SUN
8096	1400z	01 Feb		Brief carrier only	AnonUS	SUN
	1400z	02 Feb	[83262 05581 18821]		AnonUS	MON
	1400z	03 Feb		In progress missed call-ups	AnonUS	TUE
	1400z	04 Feb		In progress missed call-ups	AnonUS	WED
	1400z	06 Feb		In progress missed call-ups	AnonUS	FRI
	1400z	09 Feb		In progress missed call-ups	AnonUS	MON
	1400z	12 Feb		Carrier only	AnonUS	THU
	1400z	16 Feb	[32172 45402 68731]		AnonUS	MON
	1400z	17 Feb		Up late, too weak to copy	AnonUS	TUE
	1400z	23 Feb	[60701 81431 04752]		AnonUS	MON
	1400z	26 Feb	[31882 44211 57542]		AnonUS	THU
	1400z	27 Feb	[16182 20422 33741]		AnonUS	FRI
	1400z	28 Feb	[18262 22501 35022]	Usual weekend call-ups	AnonUS	SAT
8134	2300z	01 Feb	[18262 22501 35022]	Usual weekend call-ups	AnonUS	SUN
	2300z	03 Feb		In progress missed call-ups	AnonUS	TUE
	2300z	06 Feb		In progress missed call-ups	AnonUS	FRI
	2300z	10 Feb	[61251 72081 85312]		AnonUS	TUE
	2300z	13 Feb	[32501 45822 58251]		AnonUS	FRI
	2300z	15 Feb		Carrier only	AnonUS	SUN
	2300z	17 Feb	[62832 75262 88581]		AnonUS	TUE
	2300z	22 Feb	[18262 22501 35022]	Usual weekend call-ups	AnonUS	SUN
	2300z	24 Feb	[34661 46102 50421]		AnonUS	TUE

Call-up Analysis

Analysis of the spacings between numbers in the call-ups is included below the logs. As with previous months the usual pattern persists. On some occasions when one of the call-ups is missed it is possible to make an educated guess as to its numbers based on the patterns observed.

Number spacings between call-ups. Example: **0**5602 **1**8132 **2**1451

1st digits **012** = 11, 2nd digits. 581 = 32 (do not count 9), 3rd digits 614 = 43, 4th digits 035 = 32. 5th digit will either be 1 or 2 so no pattern to be observed.

05602 18132 21451 11 32 43 32	51481 62121 75442 11 13 63 32	65152 77472 81811 11 23 34 23
34882 47311 51642 11 33 43 23	76461 00802 14222 21 34 43 32	61251 72081 85312 11 13 83 32
40021 52651 64082 11 22 63 33	00421 13851 26272 11 33 43 32	32501 45822 58251 11 33 33 23
22762 34102 47421 11 23 33 32	42362 63002 76421 21 13 64 32	32172 45402 68731 11 33 33 23
28102 32431 55852 12 33 34 32	24122 37451 41772 11 33 33 32	85832 08361 12682 21 33 43 32
74801 87222 01551 11 33 33 23	43711 56132 60561 11 33 34 23	62832 75262 88581 11 33 33 32
23021 36352 40671 11 33 33 32	15082 28312 32641 11 33 33 23	07671 11012 24331 11 33 33 32 V02a
21651 44082 57412 21 33 34 32	42381 55612 68042 11 33 33 32	60701 81431 04752 21 13 63 32
04151 16482 20811 11 23 34 32	05721 18142 22571 11 33 34 23	34661 46102 50421 11 23 43 32
80342 02771 15102 11 23 43 32	72831 83661 06002 11 13 73 33	31882 44211 57542 11 33 33 23
87171 00411 23731 12 23 33 32	01301 14631 27152 11 33 34 32	24502 37821 50252 12 32 33 23
84131 07552 11882 11 33 43 23	27301 31721 44152 11 33 43 23	16182 20422 33741 11 33 33 32
48672 52011 65332 11 33 33 32	75442 88771 02101 11 33 33 32	
43831 56252 60581 11 33 33 23	83262 05581 18821 11 23 33 23	*Courtesy AnonUS*

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.

Asiatic M12 Scheds

Token (T!) reports finding another sched from M12, which , like the 0020z he has previously reported is not audible in the UK or Western Europe. Token takes up the story:-

> At 0100z a new (to me) M12 transmission started. The signal levels and bearing of reception (towards Asiatic Russia or Kamchatka from my location) match the V07 and Wednesday / Saturday M12 signals, and the choice of frequencies also closely matches. I think it is probable that this is from the same source as those two schedules.
>
> I tried multiple European remotes at the same time to see if it could be heard there. As most often with the Sunday V07 and the Wednesday / Saturday M12 I could not receive these transmissions using the European remotes.
>
> Since this was the first night of reception for me I have no idea yet what other days this schedule might be active. But the schedule has been added to my automated recordings to find out.
>
> T! Mojave Desert, California, USA

Asiatic Thur M12 Schedule Version 1.0
Chart based on observations Jan 22, 2015.
Station transmits each Thursday morning, times as listed.
Transmissions are ICW, frequency listed is carrier frequency.

Time UTC	January 435	February	March	April	May	June	July	August	September	October	November	December
0100	14493											
0120	13393											
0140	11593											

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.

Station transmitter sometimes comes on frequency being tuned up with broadcast audio in the background, as is seen occasionally on Asiatic V07 and Asiatic Wed / Sat M12. This can happen as early as 50 minutes before scheduled transmission time.

Token

Thursday schedule Asiatic M12 Logs

M12 15826kHz 0100z 22/01/2015 [435 435 435 1 1 1 (R9), 791 127 (R2)] 0111z Strong T! THU
M12 14576kHz 0120z 22/01/2015 [435 435 435 1 1 1 (R9), 791 127 (R2)] 0131z Strong T! THU
M12 13416kHz 0140z 22/01/2015 [435 435 435 1 1 1 (R9), 791 127 (R2)] 0151z Strong T! THU

Although the group count and transmission time for this message matches what was sent the day before, on January 21, 2015 during the 0020 / 0040 / 0100 schedule, the message was not the same.

Meanwhile, the 0020z sched, discovered by Token in November continues, changing call sign & frequencies monthly. Again, Token takes up the story:-

The somewhat new Asiatic M12 station on Wednesday and Saturday continues. The frequencies for January are now known. The station still occasionally tunes up the transmitter using audio that might be from a broadcast station, as does V07 and the newly found Thursday Asiatic M12 schedule. I have had no luck hearing this station on European remotes, only on Asian and Western US receivers.

T! Mojave Desert, California, USA

Asiatic Wed / Sat M12 Schedule Version 3.1
Chart based on observations Nov 26, 2014 to Jan 21, 2015.
Station transmits each Wednesday and Saturday morning, times as listed.
Transmissions are ICW, frequency listed is carrier frequency.

Time UTC	January 854	February	March	April	May	June	July	August	September	October	November 253	December 548
0020	15826										19276	18576
0040	14576										18576	17436
0100	13416										16356	15826

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.

Station transmitter sometimes comes on frequency being tuned up with broadcast audio in the background, as is seen occasionally on Asiatic V07 and Asiatic Thur M12. This can happen as early as 50 minutes before scheduled transmission time.

Token

Wednesday / Saturday schedule Asiatic M12 Logs
M12 18576kHz 0020z 20/12/2014 [548 548 548 T T T (R9)] 0022z Strong T! SAT
M12 17436kHz 0040z 20/12/2014 [548 548 548 T T T (R9)] 0042z Strong T! SAT

M12 18576kHz 0020z 24/12/2014 [548 548 548 1 (R9), 564 1t1 (R2)] 0029z Strong T! WED
M12 17436kHz 0040z 24/12/2014 [548 548 548 1 (R9), 564 1t1 (R2)] 0049z Strong T! WED
M12 15826kHz 0100z 24/12/2014 [548 548 548 1 (R9), 564 1t1 (R2)] 0109z Strong T! WED

M12 18576kHz 0020z 27/12/2014 [548 548 548 1 (R9), 564 1t1 (R2)] 0029z Strong T! SAT
M12 17436kHz 0040z 27/12/2014 [548 548 548 1 (R9), 564 1t1 (R2)] 0049z Strong T! SAT
M12 15826kHz 0100z 27/12/2014 [548 548 548 1 (R9), 564 1t1 (R2)] 0109z Strong T! SAT

M12 18576kHz 0020z 31/12/2014 [548 548 548 T T T (R9)] 0022z Strong T! WED
M12 17436kHz 0040z 31/12/2014 [548 548 548 T T T (R9)] 0042z Strong T! WED

M12 15826kHz 0020z 03/01/2015 [854 854 854 T T T (R9)] 0022z Strong T! SAT
M12 14576kHz 0040z 03/01/2015 [854 854 854 T T T (R9)] 0042z Strong T! SAT

M12 15826kHz 0020z 10/01/2015 [854 854 854 T T T (R9)] 0022z Strong T! SAT
M12 14576kHz 0040z 10/01/2015 [854 854 854 T T T (R9)] 0042z Strong T! SAT

M12 15826kHz 0020z 14/01/2015 [854 854 854 T T T (R9)] 0022z Strong T! WED
M12 14576kHz 0040z 14/01/2015 [854 854 854 T T T (R9)] 0042z Strong T! WED

M12 Logs

January 2015:

4457/5157/---	0530/0550/0610z	19 Jan	410 000	HFD	MON
	0530/0550/0610z	26 Jan	417 000 Strong/Strong	JkC	MON
5284/5784/----	0730/0750/0810z	08 Jan	277 000 Strong/Strong	HFD/JkC	THU
5361/4461/4061	2200/20/40z	07 Jan	340 000 Strong/Strong	JkC	WED
	2200/20/40z	14 Jan	340 1 (3912 141) 54510 12682 ... 74250 000 Strong/Strong/Strong	JkC	WED
	2200/20/40z	21 Jan	340 000 Strong/Strong	JkC	WED
	2200/20/40z	28 Jan	340 1 (3860 99) 22983 ... 49412 000 Strong/Strong/Strong	AB/JkC	WED
5839/7439/----	0600/20/40z	17 Jan	842 000	HFD	SAT
7692/6792/5892	1310z	15 Jan	678 000	AB	THU
	1310/30/50z	17 Jan	678 000 V.weak/Weak	BR	SAT
	1330/50z	22 Jan	678 1 (9698 201) 18159 00874 ... 97158 000 Weak/Fair	JkC	THU
	1310/30/50z	24 Jan	678 1 (9698 201) 18159 ... 97158 000 Fair/Fair	HFD/JkC	SAT
	1310/30/50z	29 Jan	678 000 Strong/Strong	JkC	THU
8047/6802/5788	1800/20/40z	12 Jan	463 1 (4793 148) 06953 58758 ... 80455 000 Strong/Strong/Strong	AB/JkC	MON
	1800/20/40z	19 Jan	463 1 (3166 131) 60768 17394 ... 68953 000 Fair/Fair/Fair	HFD/JkC	MON
9176/7931/6904	1900/20/40z	12 Jan	257 1 (4750 119) 77080 56945 ... 48136 000 Fair/Fair/Fair	AB/HFD/JkC	MON
	1800/20/40z	14 Jan	257 1 (7233 149) 02828 21117 ... 31994 000 Fair/Fair/Fair	HFD/JkC	WED
	1800/20/40z	21 Jan	257 1 (8697 128) 62811 92814 ... 37680 000 Fair/Fair/Fair	JkC	WED
	1800/20/40z	28 Jan	257 1 (8124 148) 65686 19655 ... 57328 000 Strong/Strong/Strong	JkC	WED

10343/9264/8116	1930/1950/2010z	13 Jan	124 1	(7295 61)	39950	93619 ...	78733	000	Strong/Strong/Strong	HFD/JkC	TUE
	1800/20/40z	15 Jan	124 1	(7307 151)	68869	36553 ...	05960	000	Fair/Strong/Strong	AB/HFD/JkC	THU
	1900/20/40z	15 Jan	124 1	(5612 106)	85165	94341 ...	16420	000	Fair/Fair/Fair	HFD/JkC	THU
	1930/1950/2010z	20 Jan	124 1	(4468 53)	65580	07125 ...	40408	000	Fair/Fair/Fair	JkC	TUE
	1800/20/40z	22 Jan	124 1	(991 171)	19689	42385 ...	41152	000	Strong/Strong/Strong	JkC	THU
	1900/20/40z	22 Jan	124 1	(722 108)	44938	04057 ...	69631	000	V.weak/V.weak/Weak	JkC	THU
	1930/1950/2010z	27 Jan	124 1	(4941 55)	. 0877 ...		... 4	000	V.Weak/V.weak/PLUTO QRM	JkC	TUE
	1900(IP)/20/40z	**28 Jan**	**124 1**	**(4782 140)**	**33960**	**16849 ...**	**57305**	**000**	**Strong/Strong/Strong**	JkC	WED
	1700/20/40z	29 Jan	124 1	(208 212)	27497	19613 ...	37070	000	Strong/Strong/Strong	JkC	THU
	1900/20/40z	**29 Jan**	**124 1**	**(3263 104)**	**84733**	**08569 ...**	**43158**	**000**	**Fair/Fair/Fair**	JkC	THU
11435/10598/9327	1700/20/40z	12 Jan	938 1	(4372 107)	88238	16108 ...	60643	000	Strong/Strong/Strong	HFD/JkC	MON
	1700/20/40z	19 Jan	938 1	(7232 112)	40575	32376 ...	97369	000	Fair/Fair/Fair	JkC	MON
10598/9327	1950/2010z	28 Jan	938 1	(4055 67)	29520	.9442 Mostly unworkable			Weak/V.weak	JkC	WED
13369/14669/---	1010/30/50z	08 Jan	369	000						AB/HFD	THU
	1010/30/50z	15 Jan	369	000						AB	THU
13369	1010z	22 Jan	369 1	(353 153)	79887	77335	22907 ...	000	000	AB	THU
13369	1010z	25 Jan	369 1	(3023 153)	38965	85910 ...	65138	000	000	AB	THU
13386/12189/11491	1700/20/40z	15 Jan	725 1	(8082 111)	59568	75772 ...	79870	000	Fair/Fair/Fair	HFD/JkC	THU
	1700/20/40z	22 Jan	725 1	(5164 104)	48356	25159...	29363	000	Strong/Strong/Strong	JkC	THU
	1800/20/40z	29 Jan	725 1	(7974 110)	87230	50268 ...	97207	000	Strong/Strong/Fair	JkC	THU
15826	**0020 - 0022z**	**14 Jan**	**854**	**000**	**Fair**	**Via Broome remote tuner**				JkC	WED
15826/**14576**/13416	0020/40/010z	24 Jan	854 1	(843 127)	84930	41884 ...	28805	000	Strong/Strong/Not Monitd	JkC	SAT

February 2015:

4617/5317/5817z	0530/0550/0610z	09 Feb	638 1							HFD	MON
5429/4629/4029	2200/20/40z	04 Feb	460	000	Strong/Strong/					JkC	WED
	2200/20/40z	11 Feb	460 1	(9779 81)	08530	14647 ...	44652	000	Strong/Strong/Strong	JkC	WED
	2200/20/40z	25 Feb	460 1	(6386 105)	14408	43084 ...	96489	000	Strong/Strong/Strong	JkC	WED
5884/6884/----	0730/0750/0810z	16 Feb	888	000						HFD	THU
8047/6802/5788	1800/20/40z	09 Feb	463 1	(9494 143)	78310	90974 ...	85524	000	Strong/Strong/Strong	JkC	MON
	1800/20/40z	16 Feb	463 1	**(955 94)**	**16952 ... 10101**	000			Strong/Strong/Strong	JkC	MON
8047	**1900 - 1910z**	**18 Feb**	**463 1**	**(9380 135)**	**41037**	**00566 .....**	**75115**	**000**	**000** V.Strong	Topol	WED
	1800/20/40z	23 Feb	463 1	(6489 150)	59664	18440 ...	81348	000	Fair/Fair/Fair	JkC	MON
9162/8062/7462	1310/30/50z	05 Feb	104 1	(2941 165)	89582	75097 ...	05673	000	Fair/Fair/Fair	HFD/JkC	THU
	1310/30/50z	12 Feb	104	000	Strong/Strong					JkC	THU
	1310/30/50z	14 Feb	104	000	Strong/Strong					JkC	SAT
	1310/30/50z	21 Feb	104	000	Strong/Strong					JkC	SAT
	1310/30/50z	26 Feb	104 1	(5646 193)	74354	98286 ...	86018	000	Strong/Strong/Strong	JkC	THU
	1310/30/50z	28 Feb	104 1	(5646 193)	74354	98286 ...	86018	000	Strong/Strong/Strong	JkC	SAT
9176/7931/6904	1800/20/40z	04 Feb	257 1	(6628 133)	83528	81177 ...	30084	000	Strong/Strong/Strong	JkC	WED
	1900/20/40z	09 Feb	257 1	(9487 115)	93849	21915 ...	32166	000	Strong/Strong/Strong	HFD/JkC	MON
	1900/20/40z	16 Feb	257 1	(4292 112)	38402	73240 ...	75768	000	Strong/Strong/Strong	JkC	MON
	1800/20/40z	18 Feb	257 1	(5540 130)	86540	82069 ...	56141	000	Strong/Strong/Strong	JkC	WED
	1900/20/40z	23 Feb	257 1	(3621 108)	85092	42364 ...	42908	000	Strong/Strong/Strong	JkC	MON
10343/9264/8116	1900/20/40z	04 Feb	124 1	(5784 140)	94103	16390 ...	21008	000	Strong/Strong/Strong	JkC	WED
	1800/20/40z	05 Feb	124 1	(8267 152)	03301	55469 ...	43865	000	Strong/Strong/Strong	JkC	THU
	1900/20/40z	05 Feb	124 1	(6893 112)	44785	51742 ...	35354	000	Fair/Fair/Fair	JkC	THU
	1930/1950/2010z	10 Feb	124 1	(3372 61)	12481	52010 ...	57533	000	Fair/Fair/Fair	JkC	TUE
	1800/20/40z	12 Feb	124 1	**(955 94)**	**16952 60418**	...	10101	000	Strong/Strong/Strong	JkC	THU
	1900/20/40z	12 Feb	124 1	(8386 106)	20004	60306 ...	35326	000	Strong/Strong/Strong	JkC	THU
	1930/1950/2010z	17 Feb	124 1	(9532 70)	29023	84172 ...	70780	000	Fair/Fair/Fair	JkC	TUE
	1800/20/40z	19 Feb	124 1	(5605 154)	30984	30276 ...	96195	000	Strong/Strong/Strong	JkC	THU
	1900/20/400	19 Feb	124 1	(6027 106)	06757	40384 ...	28617	000	Strong/Strong/Strong	JkC	THU
	1800/20/40z	26 Feb	124 1	(9326 152)	35277	96054 ...	10765	000	Strong/Strong/Strong	JkC	THU
	1900/20/40z	26 Feb	124 1	(9387 114)	29338	25604 ...	63770	000	Strong/Strong/Strong	JkC	THU
11435/10598/9327	1930/1950/2010z	04 Feb	938 1	(9790 68)	59355	13194 ...	00738	000	Fair/Fair/Fair	JkC	WED
	1700/20/40z	09 Feb	938 1	(3847 108)	02077	73537 ...	59923	000	Strong/Fair/Strong	JkC	MON
	1930/1950/2010z	11 Feb	938 1	(1500 64)	87494	35 .33 ...	04832	000	Weak/Weak/Fair	JkC	WED
	1700/20/40z	16 Feb	938 1	(7357 111)	67054	13749 ...	78462	000	Strong/Strong/Strong	JkC	MON
	1930/1950/2010z	18 Feb	938 1	(5928 59)	84934	81620 ...	26409	000	Fair/Fair/Fair	JkC	WED
	1700/20/40z	23 Feb	938 1	(8130 113)	54166	86979 ...	81216	000	Fair/Fair	JkC	MON
13386/12189/11491	**1503(IP)/20/40z**	**05 Feb**	**725 1**	**(4824 117)**	**47957**	**46028 ...**	**01729**	**000**	**Strong/Strong/Strong**	JkC	THU
	1700/20/40z	05 Feb	725 1	(4474 113)	23635	66050 ...	94316	000	Strong/Strong/Strong	JkC	THU
	1500/20/40z	12 Feb	725 1	(6658 134)	01784	75545 ...	50403	000	Strong/Strong/Strong	JkC	THU
	1700/20/40z	12 Feb	725 1	(1148 113)	32552	10327 ...	76035	000	Strong/Strong/Fair	JkC	THU
	1500/20/40z	19 Feb	725 1	(2135 123)	91768	34787 ...	47276	000	Strong/Strong/Strong	JkC	THU
	1700/20/40z	19 Feb	725 1	(5229 120)	33041	97463 ...	93615	000	Strong/Strong/Strong	JkC	THU
	1500/20/40z	26 Feb	725 1	(1971 139)	65809	95386 ...	60998	000	Strong/Strong/Strong	JkC	THU
	1700/20/40z	26 Feb	725 1	(1540 105)	55230	47901 ...	58168	000	Strong/Strong/Strong	JkC	THU

13569/14869/16269	1010/30/50z	05 Feb	582 1	HFD	THU
13903	0120z	03 Feb	792 000 Fair Via Hong Kong remote tuner	JkC	TUE
14793/13903/---	**0100/20/40z**	**05 Feb**	**792 000 Strong/Strong Via Hong Kong remote**	JkC	THU
	0100/20/40z	17 Feb	792 000 Strong/Strong Via Hong Kong remote/Via Broome remote 13903kHz also heard weakly on UTwente	JkC	TUE
18576/17436/15826	**0020/0040/0100z**	**18 Feb**	**548 1 (376 113) 69331 84275 ... 31768 000 Hong Kong remote Strong**	JkC	WED

M912b

Jim (JkC) reports that M912b is back on 10250kHz, sending messages in E07a format.

10250	1320 - 1325z	05 Feb	975 1 54666 (2267 25) 29778 ... 26427 000 Strong Note that there appears to be a group missing here. I'm assuming that it is GR15, and the operator restarted at the wrong place.	JkC	THU
	1140 - 1143z	11 Feb	975 1 32164 (3614 22) 70199 ... 92716 000 Strong	JkC	WED
	1140 - 1149z	12 Feb	975 1 12389 (7554 25) 96824 ... 99195 000 Strong Tx stopped 3 times, each time returning to call-up for about 1 minute before continuing	JkC	THU
	1216 (IP) - 1225z	12 Feb	I/P... 975 2 1397 15 ... Strong Messages stopped and restarted a number of times. Second message not completed	JkC	THU

10250kHz 1320z 05 Feb15

975 1 54666 2267 25

29778 04121 06069 27734 37625
19218 73054 72707 87160 29664
58914 52527 02933 66512 *(stops 1323z)*

975 1 54666 *(back to call up)*

55912 13673 84909 47436 67833
64444 51358 93405 65205 26427

000 000 *Courtesy JkC*

10250kHz 1140z 12 Feb15

975 1 12389 7554 25

96824 91053 72167 94805 42075
36994 05. 97 80290 20706 34993
76170 75070 21013 22198 82893
44011 96067 43290 30587 00643
13914 48235 25961 51439 99195

000 000 *Courtesy JkC*

10250kHz 1216z 12 Feb15

(In progress) .. 975 2 1397 15

23448 40767 91205 49339 70903
82491 02611 63536 14283 32801
64827 92983 63264 52296 63554

975 2 4722 25

50554 40386 23386 21693 34203
90564 16258 17209 70351 00789
24502 0. 480 04440 61564 36357
46362 28405 *(stops) (NFH 1235z)*
Courtesy JkC

Excellent logs Jim, well done. This ID has been seen before. The 975 ID was used for a 1900z Wed/Fri M12 sched in 2008, which then changed to XPA with the same sched in Feb 2009. This ID was then used on Wed 27 July 2011 with a special one-off transmission consisting of 1291 groups on 16190kHz at 2100z. *(Ed.)*

M14 IA MCW / ICW / MCWCC, short 0

Before we move to the main logs for this station, here is a report from PoSW, which due to the additional comments is published as received. Many thanks PoSW

A Wednesday M14 MCW:-

14-Jan-15, Wednesday:- 1920 UTC, 4,761 kHz, constant carrier keyed audio tone M14 MCW calling "748".

The carrier had been noted at around 1850 UTC and I had supposed this was going to be the first sending of the second Wednesday in the month E06 English Man - but it wasn't . I set off tuning up and down trying to find the E06 - without success, and returned to 4,761 a few minutes later when the 5Fs were in progress. Ended before 1928 UTC with, "621 621 020 020 00000". The group count of twenty perhaps suggests some connection with the Thursday and Friday E06 and G06 schedules which have had the same group count for some time. The frequency of the modulating tone somewhat higher than other past examples of M14 MCW.

11-Feb-15, Wednesday:- 1920 UTC, 4,761 kHz, "748" again.

Found under similar circumstances to the above, returned to 4,761 after another fruitless search for E06, expecting to hear the ending but the transmission suddenly stopped in the middle of a 5F group without the usual ending. Listened until 1933 UTC but nothing further heard.

PoSW

January 2015:

4636	1820 - 1820z	13 Jan	186 (275 020) =51059 23438 76167 ... 17105 275 020 00000	AB/HFD	TUE
	1820 - 1828z	27 Jan	186 (275 020) 51059 ... 17105 Strong. Repeat 0f 08 Apr14	JkC	TUE
4761	1920 - 1929z	14 Jan	748 (621 020) 44108 38962 04169 ... 82828 621 020 00000 Fair	JkC	WED
	1920 - 1928z	28 Jan	748 (621 020) 44108 ... 82828 621 020 00000 Strong Repeat of 06 Nov 14 with different ID/DK	HFD/JkC	WED
4975	1800z	02 Jan	382 00000	AB/RNGB	FRI
	1800 - 1804z	16 Jan	382 00000 Strong	JkC	FRI
5240	2300 - 2308z	25 Jan	376 **5555** (524 020) 93295 ... 524 020 00000 Strong	JkC	SUN

Note 4 digit stutter (5555) at beginning of preamble, sent only once (or should it have been 55 55?). Rest of preamble, and message, repeated as normal. Error? Checked old logs of this messages, and find no stutter noted in preamble for previous Tx of this message. As none was sent today either, I guess it must have been an error. Jim

5241	2300z	04 Jan	376 (524 020) 93295 26704.....	RNGB	SUN
5374	1702z	02 Jan	382 00000 (late start)	RNGB	FRI
	1700 - 1704z	16 Jan	382 00000 Strong	JkC	FRI
5431	0800z	10 Jan	171 (823 020) 35091....etc. Very Weak (same message as last week)	RNGB	SAT
5561	0900z	03 Jan	171 (823 020) 35091 47919 71061.....25634 95438 Weak	RNGB	SAT
5825	0000 - 0008z	26 Jan	376 (524 020) 93295 ... 23051 524 020 00000 Strong	JkC	MON
5826	0000z	05 Jan	376 (524 020) 93295....etc.	RNGB	MON
10755	1503 (IP) - 1516z	22 Jan	975 (328 60) = 73169 ... 36040 = 328 60 00000 Fair 19wpm Tx broke at GR25, returned to call-up and resumed at GR21. No repeat found.	JkC	THU
18041	0500z	08 Jan	[NRH] via Hong Kong remote	JkC	THU
	0500 - 0514z	15 Jan	952 (784 60) 03445 ... 74453 = 784 60 00000 Fair via Hong Kong remote	JkC	THU
	0500 - 0514z	20 Jan	952 (301 60) 720 .7 ... 22701 = 301 60 00000 Very Weak Broome remote	JkC	TUE
	0500 - 0516z	26 Jan	952 (471 60) 35380 ... 53946 = 471 60 00000	AB/JkC	MON

February 2015:

4636	1820 - 1828z	10 Feb	197 (275 020) 51059 ... 17105 = 275 020 00000 Strong **Repeat of 08 Apr 2014**	JkC	TUE
4975	1800 - 1804z	06 Feb	382 00000 Fair	JkC	FRI
5240	2300 - 2311z	08 Feb	376 (524 020) 93295 ... 23051 = 524 020 (**Preamble sent as 55524**) Strong	JkC	SUN
	2300 - 2308z	15 Feb	376 (524 020) 93295 ... 23051 = 524 020 00000 Strong	JkC	SUN
	2300 - 2308z	22 Feb	376 (524 020) 93295 ... 23051 = 524 020 00000 Strong	JkC	SUN
5374	1700 - 1704z	06 Feb	382 00000 Strong	JkC	FRI
5825	0000 - 0009z	09 Feb	376 (524 020) 93295 ... 23051 = 524 020 00000 Strong	JkC	MON
	0000 - 0008z	16 Feb	376 (524 020) 93295 ... 23051 = 524 020 00000 Strong	JkC	MON
	0000 - 0008z	23 Feb	376 (524 020) 93295 ... 23051 = 524 020 00000 Strong	JkC	MON
16188	0935(IP) - 0942z	11 Feb	(308 47) (In progress) ...97656 = Extremely Strong (Remote Siberia)	JPL	WED
18041	0500z	03 Feb	952 [rest unworkable] Very Weak Via Broome remote	JkC	TUE
	0500 - 0515z	06 Feb	952 (360 50) = 17304 ... 14731 = 360 50 Fair Via Hong Kong remote (No 000 signoff)	JkC	FRI
	0500 - 0514z	16 Feb	952 (186 50) = 58985 ... 52622 = 186 50 Strong Via Hong Kong remote	JkC	MON
	0500 - 0515z	18 Feb	952 (810 60) = 34021 ... 20237 = 810 60 Strong Via Hong Kong remote	JkC	WED
	0500 - 0514z	27 Feb	952 (148 60) = 38677 ... 71877 = 148 60 Strong Via Hong Kong remote	JkC	FRI

M14 18041kHz 0500z 15 Jan 15

952 (R4m) 784 784 60 60 = =

03445 77626 62612 86862 74366 16406 40551 12672 63583 61290
48702 20809 84819 88485 81063 21079 61197 59088 45533 40058
36023 16760 71033 50458 88358 09323 34262 98634 39315 63982
54510 72427 60001 70833 29987 76522 17078 54366 14077 07516
16843 37646 54989 45876 33789 28852 47212 06992 34572 84873
68228 18478 33327 31636 98914 15955 39270 45861 51080 74453
= =

784 784 60 60 00000 *Courtesy JkC*

M14 5240kHz 2300z 25 Jan 15

376 (R4) **5555** 524 524 020 020 = =

93295 26704 14839 56438 79563
29243 87610 83817 86.96 29313
36191 62701 76747 74420 15841
41958 10736 14238 26365 23051
= =

524 524 020 020 00000

Courtesy JkC

M23 O ICW

The last report of M23 was from Ary (AB) on 6961kHz on 15 July with a '200' (R10m) call. Then we received this report, also from Ary of a new transmission from M23 -- or was it?

Some doubts were raised by several members due to several differences from the usual M23 format. There has been no parallel transmission found, the maximum transmissions is usually 20 minutes & finally the characteristic letter or dash sent at the end of the transmission was not present.

The transmission did sound remarkably like previous transmissions, & there have been other occasions where no parallel frequency was found. The length of these daily transmissions - which appear to have been over 4 hours long, is nevertheless unprecedented.

14400	0820 (IP) - 1015z	10 Feb	'111' Found in progress by Ary (AB) sending continuously for almost 2 hours!	AB/RNGB	TUE
	0820 (IP) - 1015z	11 Feb	'111'	AB	WED
	0723 (IP) - 1015z	12 Feb	'111'	AB/Elmar	THU
	0652 (IP) - 1015z	13 Feb	'111'	AB/PLdn/	FRI
	0615 (IP) - 1015z	14 Feb	'111'	AB/RNGB	SAT
	0700 (IP)	15 Feb	'111'	BR	SUN
	0558 - 1015z	16 Feb	'111' Start time found - Short test dash sent at 0552z	AB/BR	MON
	0725 (IP)	17 Feb	'111' Gone by 0858z (BR)	AB	TUE

Missing on Wed 18 Feb / Thu 19 Feb (AB /BR /GD) & no further reports received.

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

4581	2130 - 2145z	05 Jan	381 (965 107) = 22272 36907 72881 ... 51878 04819 = Strong 26wpm	JkC	MON
5093	2030 - 2045z	15 Jan	381 (427 105) = 75760 84340 91522 ...89133 94183 = Strong	JkC	SUN
5429	2100 - 2115z	19 Jan	391 (274 105) = = and into 5Fs. S9 signal, ending 5-dash "00000"	PoSW	MON

M94 CW, MCW, partner station to V24 Virtually unheard in Europe so we rely on our American monitors

No reports since Nov 2013. Believed to have ceased transmissions.

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

No reports - Last known transmission reported on Thu 18 Dec sending the SD84 message in use since August 2013.

Morse Stations - Not Number Related

M32 Russian Military Nets

5376	1636z	22 Jan	XXX XXX WEGI WEGI 18804 18876 RATELX 8129 7912 K	(CW)	AB	THU
12631	0950z (IP)	12 Jan	(i.p) . 22592 45599 22592 45599 22592 45599	(MCW)	AB	MON
14557	0920 - 0926z	24 Jan		(CW)	AB	SAT
			xxx xxx msk7 msk7 59387 nae			
			xxx xxx msk7 msk7 50590 bryvejka 8317 3041	(0920z)		
			xxx xxx msk7 msk7 90502 kromalxt it 285e? 2e e tm83	(0923z)		
			xxx xxx msk7 msk7 51939 psesens j ee ti tt ttt 67 tatm 0	(0924z)		
			xxx xxx msk7 msk7 73019 gorstx 51 58 3 363	(0926z)		

M32a

8112	0900z	24 Jan	W-marker	(CW)	AB	SAT
	0838z	28 Jan	Ü-markers: Tu-95MS Bear H net	(CW)	AB	WED
	0840z	28 Jan	W-markers: Tu-95MS Bear H net	(CW)	AB	WED
14540	1227z	12 Jan	RJD97 DE RAA K	(CW)	AB	MON

M51 XlX

3164	2355z (IP)	13 Jan	NR 20 J 14 00:58:32 2015 BT etc. (5 ltr grps) Very strong	BR	TUE
	0324z (IP)	23 Jan	NR 38 J 23 04:25:21 2015 BT etc. (5 ltr grps) Very strong	BR	FRI
3748.5	1726 (IP) - 2330z +	20 Feb	NR 45 F 17 18:34:43 2015 BT etc. (5 Ltr grps) Very strong	BR	FRI
3881//6825	1505 (IP) - 2330z +	19 Jan	NR 69 J 21 16:13:04 2015 BT etc. (5 ltr grps) Very strong//Weak	BR	MON
5453	1516z	06 Jan	NR 63 J 06 16:20:37 2015 = (5LGs)	AB	TUE
7529	1710 (IP) - 2330z +	21 Jan	NR 72 J 21 18:14:05 2015 BT etc. (5 Ltr grps) Strong	BR	WED
9461//10238	1600 (IP) - 2330z+	15 Feb	NR 33 F 11 17:02:58 2015 BT etc. (5 Ltr grps) Fair/Strong	BR	SUN
10358	1510 (IP)	16 Feb	NR 74 F 16 16:15:33 2015 BT etc. (5 Ltr grps) Fair. Gone by 1700z	BR	MON

Jamming attempt on M51 - An exercise in Futility

Shortly after first logging the 20 Feb M51 transmission on 3748.5kHz, this transmission was subjected to a concerted attempt to jam or induce M51 to close or move frequency by an individual using a series of sustained transmissions with an auto-key. The attempt started about 1730z.

First they tried to key over the transmission with long bursts of 'dits' pausing for a second or two every now & then before resuming. They tried varying the keying speed, then transmitting just above, then just below the centre frequency. When this failed they changed to several long sequences of 'V' - then again tried varying the speed of the keying before once more transmitting in various steps just below & just above the centre frequency.

The next tactic was to try swinging the VFO backwards and forwards over the centre frequency before reverting to the initial strategy of continuous 'dits' on 3748.5kHz. Finally, the VFO swinging was resumed before the attempt was finally abandoned just after 1800z.

M51 continued, presumably unmonitored using some type of auto-system, well beyond 2330z - no doubt blissfully unaware of earlier events.

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

3881//6825						
	1230 - 1310z	05 Jan	Lundi-Lecon	11-1/1 Codé 11-1/2 Clair, 11-1/3 Codé, 11-1/4 Clair (420 grps/hr)	BR	MON
	1230 - 1304z	07 Jan	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	08 Jan	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	09 Jan	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. (See JPL's full logs for details).

3012	4167	5112	6246	7554	8041	9131
3333	4212	5234	6321	7620	8073	
3597	4319	5256	6544	7709	8084	
3626	4321	5270	6650	7712	8101	10208
3650	4444	5292	6666	7777	8888	
3705	4532	5341	6688	7782		
3729	4597	5431	6762	7788		16735
3732	4630	5545	6794	7792		
3744	4681	5555	6839			
	4676	5564	6855			
	4892	5654	6883			
	4982	5692				

New Scheds for Jan / Feb 2015: **From logs submitted from JPL**

3662//4793	New freq for this Round Slip	First heard 18 Feb	V RA5J (x3) DE BP2S (x2)
3757//4532	New freq for this Round Slip	First heard 29 Jan	V M8JF (x3) DE RIS9 (x2)
3821//5644	New frequency & Round Slip	First heard 12 Jan	V DKSL (x3) DE ALSK V (x2)
6839//NRH	New frequency & Round Slip	First heard 26 Jan	V HER6 (x3) DE WU6L (x2)
8073//NRH	New frequency & Round Slip	First heard 10 Feb	BNGC (x3) DE XSV85 (x2)
9131//NRH	New frequency & Round Slip	First heard 12 Jan	V DKSL (x3) DE ALSK (x2) V
6421//9131	Pairing of freq with 9131kHz	First heard 13 Jan	V DKSL (x3) DE ALSK (x2) V
7640//NRH	New frequency & Round Slip	First heard 23 Feb	BR3S (x3) DE JU9D (x2
9131//**10749**	New freq for this Round Slip	First heard 27 Jan	V DKSL (x3) DE ALSK (x2) V
9131//**10947**	Pairing of freq with 9131kHz	First heard 16 Jan	V DKSL (x3) DE ALSK (x2) V

Chart of M89 Freq & Call signs heard in Jan / Feb 2015 **New Scheds shown in Bold Type**

Freq in KHz	Round Slip
3300//NRH	V MW3D (x3) DE 2SLC (x2)
3642//NRH	V DKG6 (x3) DE 3A7D (x2)
3642//7602	V DKG6 (x3) DE 3A7D (x2)
3662//4793	**V RA5J (x3) DE BP2S** (x2)
3757//4532	V M8JF (x3) DE RIS9 (x2)
3777//4532	V M8JF (x3) DE RIS9 (x2)
3821//5644	**V DKSL (x3) DE ALSK V (x2)**
4131//NRH	V JKDJ (x3) DE SLBC (x2)
4225//NRH	V 7NPE (x3) DE QV5B (x2)
4532//NRH	V M8JF (x3) DE RIS9 (x2)
4532//8060	V M8JF (x3) DE RIS9 (x2)
4860// 6840	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ?
5177//NRH	V JKDJ (x3) DE SLBC (x2)
5500//NRH	V 7NPE (x3) DE QV5B (x2)
5588//NRH	V MW3D (x3) DE 2SLC (x2)
5801//10180	V DKG6 (x3) DE 3A7D (x2)

Freq in kHz	Round Slip
6421//9131	**V DKSL (x3) DE ALSK (x2) V**
6793//8060	V M8JF (x3) DE RIS9 (x2)
6840//NRH	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K
6840//10640	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K
6839//NRH	**V HER6 (x3) DE WU6L (x2)**
7640//NRH	**V BR3S (x3) DE JU9D (x2)**
8060//NRH	V M8JF (x3) DE RIS9 (x2)
8073//NRH	**BNGC (x3) DE XSV85 (x2)**
8110//NRH	V 7NPE (x3) DE QV5B (x2)
9130//NRH	V **DKSL (x3) DE ALSK (x2) V**
9131//**10749**	V DKSL (x3) DE ALSK (x2) V
9131//**10947**	V DKSL (x3) DE ALSK (x2) V
10180//NRH	V DKG6 (x3) DE 3A7D (x2)

Courtesy JPL

Other logs received:-

7602	2140z	21 Jan	V DKG6 (x3) DE 3A7D (x2) (Continuous)	Fair into S.E. England	BR	WED
10947	0107 - 0109z	29 Jan	V DKSL (R3) DE ALSK (R2) cont.0109z	Strong	JkC	THU

Marker Beacons (MX MXI)

3594.7	0410z	13 Feb	MX CW Beacon "D" Sevastopol	BR	FRI
3658	1736z	06 Jan	MX CW Beacon "V" Khiva	AB	TUE
5153.7	1734z	06 Jan	MXI CW Beacon "D" Sevastopol	AB	TUE
5153.8	1734z	06 Jan	MXI CW Beacon "P" Kaliningrad	AB	TUE
5292.3	**1720z**	**10 Feb**	**MX CW Beacon "D" Clearly audible in the Southeast of England**	**BR**	**TUE**
	0746 - 0850z	17 Feb	MX CW Beacon "B" & "D" Very Strong	chpa	TUE
7038.7	1500z	03 Feb	MXI CW Beacon "D" Sevastopol	BR	WED
7038.9	1714z	08 Feb	MXI CW Beacon "S" Sevoromorsk	BR	SUN
7039	1502z	03 Feb	MXI CW Beacon "C" Moscow	BR	TUE
8494.7	1733z	06 Jan	MX CW Beacon "D" Sevastopol	AB	TUE
8494.9	1733z	06 Jan	MX CW Beacon "S" Sevoromorsk	AB	TUE
10871.7	1023z	10 Jan	MXI CW Beacon "D" Sevastopol	AB	SAT
10871.9	1023z	10 Jan	MXI CW Beacon "S" Sevoromorsk	AB	SAT
10872	1455z	03 Feb	MXI CW Beacon "C" Moscow	BR	TUE
10872.7	1732z	06 Jan	MXI CW Beacon "D" Sevastopol	AB	TUE
13527.7	1732z	06 Jan	MXI CW Beacon "D" Sevastopol *Also reported on 10 Jan at 1023z*	AB	TUE
13528	1023z	10 Jan	MXI CW Beacon "C" Moscow	AB	SAT
	0729z	09 Feb	MXI CW Beacon "C" Moscow Very Strong	chpa	MON
16331.7	1140z	10 Jan	MXI CW Beacon "D" Sevastopol	AB	SAT
16331.9	1022z	10 Jan	MXI CW Beacon "S" Sevoromorsk	AB	SAT
16332.0	1141z	10 Jan	MXI CW Beacon "C" Moscow	AB	SAT
20048	1022z	10 Jan	MX CW Beacon "C" Moscow"	AB	SAT

Oddities

'The Twenty Minute Idler'

Further to our recent articles & reports on this station, Ary (AB) reports the 'Twenty Minute Idler' is a Russian military teleprinter which, according to the ITU has the call-sign RJP. - Thanks Ary. ... & finally, a log of this station from Manolis (MG).

4301//5305	1900z	07 Jan	Idle signal // 5305z weaker, QRT 1922z via Twente SDR	MG	WED

Contributors: AB, AnonUS, BR, chpa, ElmarE2Kde, GD, HFD, JkC, JPL, Kopf, MG, PoSW, RNGB, Spectre, T!, Topol *Thank you all for your logs.*

Voice Stations

Reception during February has been a little strange, apparent auroral activity being responsible for some very starnge propagational effects being felt on the lower freq ranges to the 40M band.

E06 continues with a few surprises, the Thur/Fri training programmes remaining regular and somewhat predictable.
E07 has sent more messages than expected and at better strengths whilst Agent 744 on Thursdays must be looking at redundancy now ☺

E17z [and S06s] are given the analysis treatment by JkC in the section dedicated to S06

G06still continues with its pseudo 'Cold War'memorable tones.

V02a is just about running whilst V07 has also sent messages and been herad by monitors in the Argentine and in South of US.

Babbler is still busy and the Polyones continue with their expected output; signal strengths recorded at PLdn's shack have been, in the main between 40 and 60dBs over the nine.

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

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

Apologies to anyone missed.

E06 [from PoSW]

A couple of long-standing E06 schedules appear to have expired, that is they have not made it into 2015, or at least if they are still around I have not been able to find them so far. The schedules in question being the second Wednesday in the month 1920 + 2020 UTC, last heard in November 2014 on 4,527 and 4,047 kHz - I completely forgot to look for it in December, and the repeat on the following Sunday at 1120 + 1220 UTC, heard in the final months of 2014 on 6,874 + 5,776 kHz. Perhaps these schedules are still around but well hidden, but it is unusual not to be able to find one transmission where there are two separated by one hour even if the other one remains elusive.

The only regular E06 schedules of which I am aware are the Thursday 2030 UTC and Friday 2130 UTC transmissions, for some time now always with a group count of twenty and using just a few often repeated 5F messages and generally supposed to be some kind of agent training exercise, all that is left of the once prolific E06 English Man.

First + Third Thursdays in the Month 2030 UTC Schedule:-
1-Jan-15:- 4,836 kHz, call "321", DK/GC "569 569 20 20", same 5Fs as in December, "14259 22676 32782 32782.....", groups 3 and 4 the same which perhaps shows a certain lack of imagination on someone's part. S9 signal with good audio.

15-Jan-15:- 4,836 kHz, "321" and "569 569 20 20" again, same old 5Fs. S9 with good audio, that "grating and rasping" effect which used to be a feature of the Thursday and Friday E06 transmissions seems to be a thing of the past.

5-Feb-15:- 4,836 kHz, "321" and "569 569 20 20" and "14259 22676 32782 32782....." again. S9 with good audio.

19-Feb-15:- 4,836 kHz, started well before the half-hour, "321" and "569 569 20 20" again.

Friday 2130 UTC Schedule, Following the First and Third Thursdays in the Month:-
2-Jan-15:- 4,760 kHz, calling "472", DK/GC "613 613 20 20". S9+ signal with good audio, "14259 22676 32782 32782....", same 5Fs as yesterday's 2030 UTC sending, but with a different Decode Key. The same 5F groups have also been used in the past by the related G06 Thursday 1830 UTC, certainly on 13-March-2014, in the German language, of course.

20-Feb-15:- 4,760 kHz, "472" and "613 613 20 20", as in January.

And now RNGBs log:

E06 Jan/Feb log:

Second /Fourth Wednesday 1230/1300z 1700/1730z 5928/4827kHz

14/01 '215' 870 65 57040 ... 53542 870 65 00000 1716z Strong QRM1 QSB1 JkC WED
'215' 870 65
57040 08130 63167 56816 45032 49269 27780 39599 83230 90108
23309 84364 94903 48922 25774 69423 37687 19333 05504 32535
05920 75746 23082 94363 66675 47250 67572 93362 52916 77151
22965 61768 62221 10349 73788 97393 34511 75724 85815 10914
07223 55742 22805 53327 71351 60439 85217 53274 76821 48005
81837 18916 60601 59120 70249 84043 96018 57261 27092 03117
86691 92149 34039 24914 53542
870 65 00000

28/01 '215' 394 62 26007 ... 99145 394 62 00000 1715z Strong (**used 5931/4816kHz**) JkC WED
'215' 394 62
26007 17433 13765 38907 44466 08618 21840 28618 82575 61297
67683 28954 34265 41976 43072 70057 81573 92464 90129 02953
56653 33651 88968 81501 70278 01807 07929 57334 05298 09587
77348 92475 98461 48930 72813 19318 59074 78037 18810 02653
97885 59630 48730 83440 64688 42647 82160 09001 18040 04608
05393 79326 75542 96788 66096 64184 18140 59429 18088 70715
46848 99145 394 62 00000

1230/1300z 13547/11073kHz 1700/1730z 8167/6792kHz

11/02 215 806 74
02569 25656 74721 18583 49726 76726 07596 23875 53409 92626
05083 59182 23953 75159 15320 68584 90310 86815 15787 46964
19373 92946 98509 64720 15020 89315 97848 97162 42584 18310
12868 79201 28201 62475 45615 75896 20428 72603 54321 87160
97817 34521 15606 78927 06861 42571 01720 74145 50139 09451
02717 25679 84746 13747 14329 23721 13570 54607 30595 48751
56798 61420 31416 40309 39738 13487 08216 76509 31364 53249
42090 39272 27593 75346
806 74 00000

25/02 '215' 743 60 10207…….19719 743 6 00000 1315z S8 Malc , JkC WED

'215' 743 60
10207 71017 38416 68921 89301 36425 53075 26923 25650 82416
28012 97932 38457 68423 09752 36820 56721 52094 90640 16726
78696 95105 79203 81268 81043 59737 24868 86126 39847 65941
36598 29020 04795 51216 97027 90981 35284 59090 15893 02689
18085 45353 74068 16531 39250 67097 32627 52530 42156 18370
85949 72520 21982 40564 71239 97165 74135 43652 79450 19719
743 60 00000

First/Third Thursday of month 2030z 4836kHz
01/01 '321' 569 20 14259.....12250 569 20 00000 (same message as Friday)
19/02 '321' 569 20 14259….etc] Same old message

Second/Fourth Thursday 0830/0930z 17440/15614kHz
26/02 '842' 705 36
14001 91983 84987 15303 67513 27439 25088 46627 61738 04075
23213 48986 17249 25501 76190 75435 18929 89171 11408 38477
82090 10675 76992 04701 44452 77410 78966 24302 32445 73854
76301 50136 75268 45589 69838 26023
705 36 00000

Friday following First / Third Thursday 2130z 4760kHz
02 & 16/01
'472' 613 20
14259 22676 32782 32782 76723 89409 12215 74326 64070 90235
38085 59543 12319 74238 36664 12256 18841 73311 98089 12250
613 20 00000
06/02 '472' 613 20 14259…..etc] Same old message

First /Third Thursday (repeats Friday) 0600z 13960/13945kHz 0700z 16350kHz
01/01 & 15/01 13960kHz 0600z & 15/01 13945kHz 0600z

'139' 475 103
04898 07703 80395 04516 89875 73405 63261 42053 50995 32641
60725 01340 34894 27653 04300 16367 68765 55420 58929 87132
03931 04270 99818 32502 23968 13247 03026 11942 97064 52672
42013 77015 77316 49336 07345 38623 84619 04752 91711 60884
17877 79911 07484 17633 81187 44994 28962 72434 27713 17440
76525 68087 50904 36848 84867 36523 77784 50127 22493 65065
43968 05338 54675 79965 55101 77660 67063 33165 64421 75935
92108 03217 21115 03201 05528 46304 69164 69675 84955 58299
01370 81621 48004 33781 98235 54521 11902 32984 06405 24007
41896 92573 36333 52984 80620 41222 83893 58386 75603 05898
05587 05989 47106 00000 0621z

0600z 17470kHz 0700z 20085kHz
05/02 & 19/02 '702' 958 134
62075 76951 46694 73502 93514 65867 26329 33286 72089 15135
45145 42395 55970 42135 97740 91281 19678 05792 85242 93163
42271 41200 57237 41462 93266 83044 97559 82474 14772 69952
14861 11975 23230 47012 23904 25428 79241 08606 28513 76502
98884 48773 42126 23577 04981 11280 06882 68915 41733 56575
97172 20209 01190 87839 18622 29170 34952 03295 38390 86862
49583 66977 07786 80455 09137 15150 63081 41100 93258 40551
15502 37593 84291 21661 66306 95539 81815 89172 07904 46685
68075 46861 96943 38117 72719 89036 10313 56011 10292 81757
19989 43620 88920 00014 47665 18182 13631 38042 85111 16453
32723 34983 91189 23529 00661 83051 01463 64665 55895 10419
11344 64762 37072 55982 18722 05225 86047 78225 36987 32862
11169 65344 14412 00538 09239 38825 20815 44232 69610 67678
87445 26227 08851 35492
958 134 00000

Unscheduled:
11124kHz/9189kHz 1730z/1830z 27/02 [952 147 153 61004 ... 35612 147 153 00000] 1801z Strong JkC FRI
……
transcript:
'952' 147 153
61004 67173 09716 72346 17240 36185 07124 87056 58724 31223
60139 39972 56151 50847 62014 74676 89026 75573 05255 78180
90821 37429 48116 07662 48966 63426 50730 63853 45415 22651
29302 56752 49080 31650 01801 27359 95700 97813 23604 19720
16319 05425 36511 19760 00209 74074 79577 03207 03224 44137
35205 59773 37484 68967 08918 85807 03358 18537 66271 62581
49654 24179 75327 62409 72987 19130 28133 49794 92230 54568
39637 69773 59008 95824 47492 40661 90162 28448 61167 93373
33127 28836 33819 24527 00148 79096 55349 55483 32292 30832
90096 14550 79178 47543 07591 84507 05370 80330 79811 82657
59354 56583 43393 65574 66077 86346 50198 75757 28932 16053
54720 72363 52164 84297 11729 13203 19630 59357 82613 80201
90833 63141 73854 65499 00187 11240 56059 60388 70432 23786
37001 14266 76162 86803 87106 55791 18375 68728 40810 93447
95994 21791 22237 37674 85320 22958 68629 11776 63302 34103
49975 43788 35612
147 153 00000

16089kHz 0730z 28/02 [952 386 152 13427 91501 94623 24201..... 46068 90349 00000] 0800z Ed Smith SAT
11124kHz/9189kHz 1730z/1830z 28/02 [952 386 152 13427 91501 94623 24201…..46068 90349] RNGB SAT

transcript:
952 386 152
13427 91501 94623 24201 18030 22363 72451 52341 60658 79820
54644 04528 61197 48032 60697 46766 67327 28666 90231 08591
58822 56103 67768 50658 04275 74850 98525 87521 93709 96341
21204 95266 95516 77332 68665 58694 11122 87049 72475 37750
25870 55309 72217 57870 79519 18776 15540 53949 04815 07549
59855 22601 07556 39278 11645 62412 86612 12976 64291 06873
17318 19733 20386 79666 46674 12509 09453 27011 73818 02197
37009 06742 14175 72145 25917 38820 70738 28319 35963 46947
60924 27299 72584 45989 72420 49298 20709 54887 46482 08384
64614 39738 12107 17098 79772 16745 19525 47652 07599 69714
46438 56904 49047 61796 75463 67278 37997 46143 66189 20839
80353 05190 70312 48695 69814 73226 63266 22920 16237 21968
90803 83182 47530 13790 53944 55270 71029 523.8 80754 03699
05277 85181 58364 85582 18150 38202 23689 97970 32273 86420
36271 35826 83659 90922 81697 02829 44501 56595 79008 42211
46068 90349
386 152 00000

Thanks: RNGB, Ed Smith. JkC, Malc

E07

PoSW's analysis of E07's entry to 2015 and his logs:

Continues in 2015 with the expected schedules and frequencies used in the same months as in past years. Noted an E07 using SSB instead of the usual less than fully modulated AM in the last days of 2014, covered in Newsletter En86 by other monitors, my observations for what they are worth to start off with:-
24-Dec-14, Wednesday:- 1603 UTC, 9,121 kHz, surprised to find a transmission in SSB with the E07 voice, "full message" in progress, strength a indicated S7. Finished with "000 000"
after 1607 UTC. Assumed to be E07a format since it was in SSB but found repeat transmissions did not have the 5F group in the call-up routine, a defining feature of E07a.
1620 UTC, 7,967 kHz, second sending, "813 813 813 1", DK/GC "437 57" x 2. Peaking S9, strong signal, no problem to find.
1640 UTC, 6,942 kHz, third sending, also S9. Unusual in that SSB is the mode of transmission and that the "813" call-up is not reflected in the x 100 kHz of the three frequencies used.

Showed up on the Tuesday of the following week:-
30-Dec-14, Tuesday:- 1605 UTC, 9,121 kHz, transmission in progress on the same frequency
as on 24-December, ended "000 000" after 1608 UTC.
1620 UTC, 7,967 kHz, "813 813 813 1", DK/GC "518 70" x 2.
1640 UTC, 6,942 kHz, third sending. It occurred to me that this might be a daily schedule, subsequently confirmed by En86, but on the last couple of days of the month and indeed, the year, it was a bit too late to confirm it!

31-Dec-14, Wednesday:- 1600 UTC, 9,121 kHz, "813 813 813 1", DK/GC "518 70" x 2, looks like the same message as yesterday.
1620 UTC, 7,967 kHz, and 1640 UTC, 6,942 kHz, the expected repeats, all strong signals.

Does not appear to have survived into 2015, at least not on these frequencies.

Onto more predictable E07 activity:-

Sunday + Wednesday Schedule, 1800 UTC Start:-
4-Jan-15, Sunday:- 1800 UTC, 8,194 kHz, weak signal of some kind, unable to confirm as E07 but frequencies used in January last year were 8,194 + 6,794 + 5,294 kHz. Carrier did not go off after 2 minutes and 28 seconds so not a "no message" transmission.
1820 UTC, 6,794 kHz, "172 172 172 1", low audio, difficult copy, DK sounded like "374",
unable to make out the Group Count.
1840 UTC, 5,294 kHz, third sending, also low audio and largely unreadable.

7-Jan-15, Wednesday:- 1800 UTC, 8,194 kHz, "172 172 172 1", DK/GC "374 46" x 2. Peaking well over S9 with reasonable audio, much improved from Sunday's transmission.
1820 UTC, 6,794 kHz, second sending, S9 with reasonable audio.
1840 UTC, 5,294 kHz, third sending, S9+, reasonable audio again. Best signals from this schedule for a while.

18-Jan-15, Sunday:- 1800 UTC, 8,194 kHz, "172 172 172 000", audio low but readable.
1820 UTC, 1820 kHz, second sending, also with low audio.

21-Jan-15, Wednesday:- 1800 UTC, 8,194 kHz, "172 172 172 000", S9 with better than usual audio.
1820 UTC, 6,794 kHz, second sending, weaker, S7 with rapid QSB.

25-Jan-15, Sunday:- 1800 UTC, 8,194 kHz, "172 172 172 1", DK/GC "949 126" x 2, S9 with reasonable audio.
1820 UTC, 6,794 kHz, second sending, S7 to S8.
1840 UTC, 5,294 kHz, third sending, peaking over S9.

1-Feb-15, Sunday:- 1800 UTC, 10,219 kHz, "215 215 215 000", reasonable audio.
1820 UTC, 9,119 kHz, second sending.

4-Feb-15, Wednesday:- 1800 UTC, 10,219 kHz, and 1820 UTC, 9,119 kHz, "215 215 215 000", reasonable audio on both transmissions but appeared to have AC ripple on the carrier.

11-Feb-15, Wednesday:- 1800 UTC, 10,219 kHz, and 1820 UTC, 9,119 kHz, both S9 with reasonable audio, "215 215 215 000".

15-Feb-15, Sunday:- 1800 UTC, 10,219 kHz, and "1820 UTC, 9,119 kHz, still "215 215 215 000".

Monday + Wednesday Schedule, 2000 UTC Start:-
5-Jan-15, Monday:- 2000 UTC, 6,982 kHz, "981 981 981 1", DK/GC difficult copy due to low audio, perhaps GC of "28", certainly a short message, carrier went off shortly after 2005 UTC.
2020 UTC, 5,882 kHz, second sending, difficult copy due to low audio and side-band splash from strong broadcast station on 5,885.
2040 UTC, 5,182 kHz, third sending, unreadable due to weak signal and local interference.

7-Jan-15, Wednesday:- 6,982 kHz, "981 981 981 1", DK/GC "146 28" x 2, S8 with QSB and reasonable audio.
2020 UTC, 5,882 kHz, second sending, low audio and the BC station on 5,885 making for difficult copy.
2040 UTC, 5,182 kHz, third sending, weak signal and low audio.

14-Jan-15, Wednesday:- 2000 UTC, 6,982 kHz, "981 981 981 000", audio low but readable.
2020 UTC, 5,882 kHz, second sending, low audio and broadcast interference.

19-Jan-15, Monday:- 2000 UTC, 6,982 kHz, very weak signal, and 2020 UTC, 5,882 kHz, stronger, "981 981 981 000".

2-Feb-15, Monday:- 2000 UTC, 7,724 kHz, "798 798 798 1", DK/GC "726 59" x 2, audio low but readable.
2020 UTC, 6,924 kHz, second sending, weak signal and low audio, difficult copy.
2040 UTC, 5,824 kHz, third sending, S8 with low audio.

9-Feb-15, Monday:- 2000 UTC, 7,724 kHz, and 2020 UTC, 6,924 kHz, both with low audio,
"798 798 798 000".

11-Feb-15, Wednesday:- 2000 UTC, 7,724 kHz, and 2020 UTC, 6,924 kHz, "798 798 798 000", low audio as usual.

Thursday Schedule, 2110 UTC Start:-
8-Jan-15:- 2110 UTC, 6,777 kHz, weak signal with low audio, unreadable, carrier went off just before 2112:30s UTC so must be "no message".
2130 UTC, 5,449 kHz, "744 744 744 000", S9 with reasonable audio, much better than first sending, noises off from the SSB station on 5,450.

22-Jan-15:- 2110 UTC, 6,777 kHz, "744 744 744 000", low audio.
2130 UTC, 5,449 kHz, second sending, peaking over S9.

5-Feb-15:- 2110 UTC, 6,777 kHz, and 2130 UTC, 5,449 kHz, both S9 with reasonable audio – and with E07 "reasonable" means you can actually hear it - "744 744 744 000".

12-Feb-15:- 2110 UTC, 6,777 kHz, and "2130 UTC, 5,449 kHz, still "744 744 744 000", not much trade for "744" so far this year!

Onto other's logs:

January 2015
Sunday/Wednesday

1800z	**8194kHz**	**1820z 6794kHz**	**1840z 5294kHz**	
07/01		172 1 374 46 51078 74990 ... 84413 000 000		Fair
14/01		172 000		Weak
21/01		172 000		Fair
25/01		172 1 949 126 57167 ... 27060 000 000		Strong

E07 8194kHz/6974kHz/5274kHz 1800z/1820z/1840z 25/01
172 1 949 126
57167 88120 79271 57828 37698 83343 83237 03286 00901 09017
68781 27210 90321 05050 72869 42755 57713 37510 90997 19120
40283 08338 59232 90224 03130 79177 23306 73121 44659 65296
02396 87027 86849 99330 61885 81870 49790 79889 31327 24501
44893 94681 22909 85298 51019 76352 00043 76403 55940 34973
85543 87352 29231 88952 42191 .3890 74486 99021 20466 88238
31653 82208 56365 04997 95357 79376 46115 76830 18944 80976
01122 05398 86660 28891 57716 40282 65781 44474 11253 85697
95305 03149 32568 72823 07919 04692 13180 47132 04369 70234
51348 24927 27488 04557 66856 96644 99927 20259 74628 95611
85168 03048 44768 33093 48352 43109 03124 14623 33203 27778
54337 38478 74089 63900 57043 40658 78156 90483 23965 98969
n2238 66767 54686 37119 17765 27060
000 000 *Courtesy DanAr/JkC*

28/01		215 394 62 26007 ... 99145 394 62 00000		Strong

Monday/Wednesday

2000z	**6982kHz**	**2020z**	**5882kHz**	**2040z**	**5182kHz**	
05/01	981 1 146 28 29930 ... 50723 000			[2040z too weak]		Weak
07/01	981 1 146 28 29930 ... 50723 000					Strong

E07 6982kHz/5882kHz/5182kHz 2000z/2020z/2040z 07/01
981 1 146 28
29930 82714 03586 57430 22413 64080 14870 32432 67289 87364
69982 56135 39058 87627 37161 58041 92283 27372 78002 60503
52274 38250 96083 92602 40094 87176 22057 50723
000 000 *Courtesy JkC*

12/01	981 1 9805 36 33904 ... 81710 000 [200z Carrier down fm Gr 6 to Gr 9]					Strong

981 1 9805 36
33904 04986 59480 40166 75073 95354 74639 57843 33270 96182
89935 62238 92845 26202 98199 41147 45988 51440 96328 64194
08226 71178 07577 87561 93126 49171 80580 81705 01528 27935
12620 03016 04140 42740 20625 81710
000 000 *Courtesy JkC*

21/01	981 000		[1920z BCQRM3]			Fair
26/01	981 000		[1900z NRH]			Fair
28/01	981 000					Fair

Thursday

2110z	**6777kHz**	**2130z**	**5449kHz**	**2150z**	**4483kHz**	
01/01	744 000					Fair
08/01	744 000	[2110z Unworkable]				Strong
15/01	744 000					Strong
22/01	744 000					Strong
29/01	744 000					Fair

February 2015

Sunday/Wednesday

1800z	**10219kHz**	**1820z**	**9119kHz**	**1840z**	**7519kHz**	
01/02	215 000					Weak
04/02	215 000					Strong
08/02	215 000					Weak, clear audio
11/02	215 000					Weak to fair
15/02	215 000		*[1900z Weak, poor audio]*			Strong
18/02	215 000					Strong
22/02	215 000					Very strong
25/02	215 000					Very strong

February 2015
Monday/Wednesday

2000z	**7724kHz**	**2020z**	**6942kHz**	**2040z**	**5824kHz**	
04/02	798 1 726 59 77713 ... 40524 000 000					Strong

E07 7724kHz/6924kHz/5824kHz 2000z/2020z 2040z04/02
798 1 726 59
77713 75294 73921 65625 18589 16773 07925 59133 85564 78878
66937 56699 83641 73095 48455 46218 63092 71824 77675 17348
53570 43240 70205 64523 40811 23194 54617 59884 52189 89795
23914 17896 64603 85639 26291 54448 62029 93752 68550 17761
33791 34461 08751 47202 47844 93152 26551 71605 68366 17905
98977 52128 19600 54456 49242 00681 82304 07673 40524
000 000 *Courtesy JkC*

09/02	798 000	Strong
11/02	798 000	Strong
16/02	798 000	Strong
18/02	798 000	Strong
23/02	798 1 783 75 92011 ... 62871 000 000	Strong

7724kHz/6924kHz/5824kHz 2000z/2020z/2040z 23/02
798 1 783 75
92011 69552 89951 24734 91578 29035 27271 85842 34416 41391
79624 42211 78269 10305 71073 26055 03684 60585 58501 62275
31231 42609 52553 26237 55629 26970 90182 43607 97830 53396
64071 85666 65875 93224 57802 10236 95257 48945 21097 30585
58512 25695 15500 09571 38894 21135 97575 04343 73984 50222
04532 64402 04199 15364 48424 60361 82767 88252 65664 62929
78316 65129 88911 54512 45626 92223 76929 60582 82914 30072
10121 11546 95471 89797 62871
000 000 *Courtesy JkC*

25/02	798 1 783 75 92011 ... 62871 000 000	Very strong

Thursday

2110z 6777kHz 2130z 5449kHz 2150z 4483kHz

05/02	744 000	Strong
12/02	744 000	Strong
19/02	744 000	Strong
26/02	744 000	Fair

E07 a

Continues in 2015 on the expected frequencies:-

Wednesday Schedule, 2100 UTC Start:-
7-Jan-15:- 2100 UTC, 5,877 kHz, "825 825 825 000.
2120 UTC, 5,277 kHz, second sending, both transmissions S9+ SSB signals, sticking to the frequencies and call of the uncharacteristic change noted on the first Wednesday in December.

21-Jan-15:- 2100 UTC, 5,877 kHz, full message, "825 825 825 1 17077", DK/GC "981 95" x 2. S9+, very strong signal.
2120 UTC, 5,277 kHz, second sending, also S9+.
2140 UTC, 4,577 kHz, third sending, S9+ again.

4-Feb-15:- 2100 UTC, 5,877 kHz, and 2120 UTC, 5,277 kHz, "825 825 825 000", both transmissions S9+.

Saturday Schedule, 0900 UTC Start:-
3-Jan-15:- 0900 UTC, 11,123 kHz, very weak signal way down in the noise.
0920 UTC, 12,123 kHz, much stronger although only an indicated S5 at best, but perfectly readable, "114 114 114 000".

10-Jan-15:- 0900 UTC, 11,123 kHz, very weak signal, and 0920 UTC, 12,123 kHz, much stronger, S6 to S7, "114 114 114 000".

17-Jan-15:- 0900 UTC, 11,123 kHz, "114 114 114 1 17763", a full message this morning, DK/GC "6411 79" x 2. Weak signal but readable.
0920 UTC, 12,123 kHz, second sending, signal strength up to S6.
0940 UTC, 13,423 kHz, third sending, strongest signal of the three transmissions, up to S7.

24-Jan-15:- 0900 UTC, 11,123 kHz, "114 114 114 000", much, much stronger than on previous Saturdays this month, peaking S8 or even S9.
0920 UTC, 12,123 kHz, second sending, also up to S9.

7-Feb-15:- 0900 UTC, 11,053 kHz, "015 015 015 000", weak signal.
0920 UTC, 12,153 kHz, second sending, much stronger signal, up to S9.

14-Feb-15:- 0900 UTC, 11,053 kHz, full message this morning, "015 015 015 1 39097", DK/GC "1714 91" x 2, S5 to S6.
0920 UTC, 12,153 kHz, second sending, S7 to S8.
0940 UTC, 13,553 kHz, third sending, also S7 to S8.

21-Feb-15:- 0900 UTC, 11,053 kHz, and 0920 UTC, 12,153 kHz, both weak signals this morning, "015 015 015 000".
[PoSW]

E07a
January 2015
Wednesday

2100z 5877kHz **2120z 5277kHz** **2140z 4577kHz**

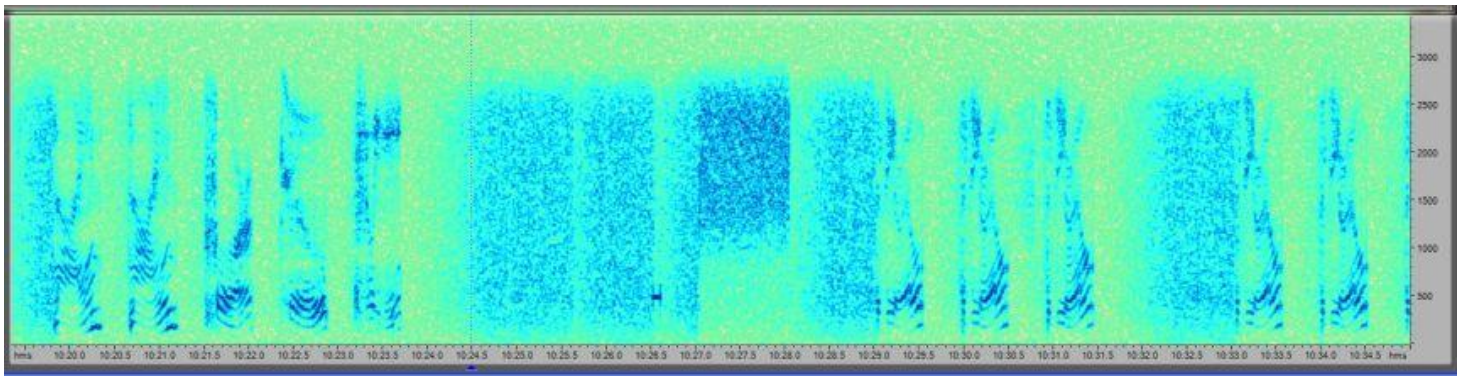
07/01 812 000 Very strong

14/01 825 1 34430 9097 85 39573 ... 44805 000 000 Very strong

825 1 34430 9097 85
39573 66502 61423 22156 46512 58495 97484 33411 36685 02550
73665 97907 71094 83941 22882 91825 55124 75850 42058 28562
13078 83778 59851 97028 43025 05869 85852 21437 55371 43639
38560 47042 66001 34088 49012 74666 25757 38176 72352 51451
69500 03371 12313 03339 76636 04166 15847 99247 72096 12187
25173 54874 74060 72884 19144 72311 43890 93844 12320 38194
08680 40506 40753 21563 05658 11204 37831 71692 02993 16825
05457 92026 13135 58289 28319 65593 92350 12525 53665 29162
84716 69921 70167 65741 44805
000 000 *Courtesy JkC*

21/01 825 1 17077 981 95 15125 ... 99423 000 000 Very strong
Tone and data burst 10m26s to 10m28s [*See image*]

E07a 5877kHz/5277kHz/4577kHz 2100z/2120z/2140z 21/01
825 1 17077 981 95
15125 91745 29699 70734 32165 77921 65071 86884 96546 37842
27896 04707 56932 79354 72209 26827 93823 83930 48375 69351
17381 07146 21461 37930 33166 61596 87392 68552 95228 70234
48530 58909 27234 96685 89414 32550 03542 91021 39730 84034
14787 20666 64027 26923 04248 03991 92691 77842 45875 59539
09830 00379 58477 84473 29933 14350 19001 62778 28084 44949
59194 15930 71989 94939 35205 01181 08749 34869 91844 50039
56883 51360 57782 24255 14618 28640 64907 29148 87375 02602
62394 05678 48046 35723 22302 07624 75223 81323 43590 22356
53886 30745 97369 78250 99423
000 000 *Courtesy JkC*



Note data burst after last group but before zeros [Visible after short 500Hz tone].

28/01 825 000 Very strong

Thursday

0530z 5111kHz **0550z 5811kHz** **0610z 6911kHz**

01/01 189 000 Very strong

08/01 189 000 Very strong

15/01 189 1 34430 9097 85 39573 ... 44805 000 000 Very strong

22/01 189 1 17077 981 95 15125 ... 99423 000 000 Very strong

28/01 189 000 Very strong

Friday

1610z 7632kHz **1620z 6832kHz** **1640z 5832kHz**

02/01 688 000 Very strong

09/01 688 000 Very strong

16/01 688 1 17763 6411 79 07047 ... 71290 000 000 Fair to strong

688 1 17763 6411 79
07047 95986 84023 27522 16529 33561 30491 19933 19296 26823
09342 79580 21366 14604 70313 12242 07215 69584 97921 59072
47020 63252 02769 41910 88679 44432 29379 06514 36067 41210
41163 76213 87925 48938 49735 55880 84010 51333 03581 95730
60193 72378 77373 49966 48757 20766 47158 23057 40675 17883
64835 31638 55526 71524 90101 20020 14134 45204 21002 33858
82637 85739 23603 02771 28748 50522 39368 18118 64816 11394
38992 42817 02445 73402 75067 13195 42480 69723 71290
000 000 *Courtesy JkC*

23/01 688 000 Strong

30/01 688 000 Very strong

Saturday

0900z 11123kHz **0920z 12123kHz** **0940z 13423kHz**

03/01 114 000 [0920z NRH] Very weak

10/01 114 000 Strong

17/01 114 1 17763 6411 79 07047… 71290 000 000 Very weak, noisy, QSB3

114 1 17763 6411 79
07047 95986 84023 27522 16529 33561 30491 19933 19296 26823
09342 69580 21366 14604 70313 12242 07215 69584 97921 59072
47020 63252 02769 41910 88679 44432 29379 06514 36067 41210
41163 76213 87925 48938 49735 55880 84010 51333 03581 95730
60193 72378 77373 49966 48757 20766 47158 23057 40675 17883
64835 31638 55526 71524 90101 20020 14134 45204 21002 33858
82637 85739 23603 02771 28748 50522 39368 18118 64816 11394
38992 42817 02445 73402 75067 13195 42480 69723 71290
000 000 *Courtesy Spectre*

24/01 114 000 Strong

31/01 114 000 Strong

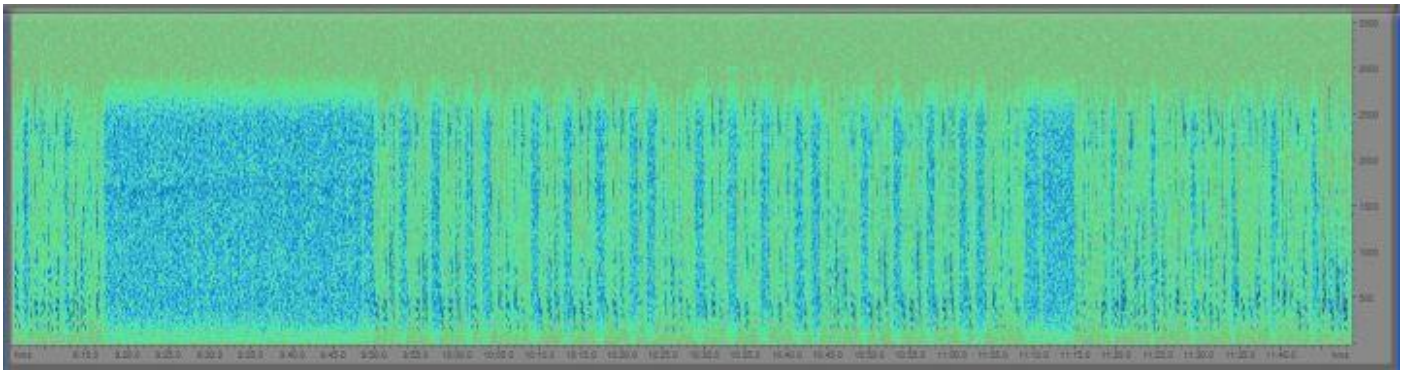
February 2015
Wednesday

2100z 5877kHz **2120z 5277kHz** **2140z 4577kHz**

04/02 825 000 Very strong

11/02 825 1 17077 981 95 98195 ... 15125 000 000 Very strong

E07a 5877kHz/5277kHz/4577kHz 2100z/2120z/2140z 11/02
825 1 17077 981 95
15125 91745 29699 70734 32165 77921 65071 86884 96546 37842
27896 04707 56932 79354 72209 26827 93823 83930 48375 69351
17381 07146 21461 37930 33166 61596 87392 68552 95228 70234
48530 58909 27234 96685 89414 32550 03542 91021 39730 84034
14787 20666 64027 26923 04248 03991 92691 77842 45875 59539
09830 00379 58477 84473 29933 14350 19001 62778 28084 44949
59194 15930 71989 94939 35205 01181 08749 34869 91844 50039
56883 51360 57782 24255 14618 28640 64907 29148 87375 02602
62394 05678 48046 35723 22302 07624 75223 81323 43590 22356
53886 30745 97369 78250 99423
000 000 *Courtesy JkC/ Specttre*



5277kHz2120z 18/02 Note breaks in sendings

18/02	825 1 67178 6120 93 78727 ... 59704 000 000 [33s and 7s breaks in 2120z transmission [prev page image]	Very strong

E07a 5877kHz 2100z 18/02
825 1 67178 6120 93
78727 01611 78454 76246 46122 67770 95490 96790 30797 10440
34139 95057 52172 95323 35039 21987 01718 54824 06534 83596
28573 03546 76635 43351 73827 30973 32229 84141 33840 40720
76836 62290 42029 85076 48193 73253 96542 91796 03009 08503
64145 36735 9861 34298 92518 72198 88915 02420 99679 83935
74081 53418 21943 61465 25734 93216 86871 01862 08305 65867
19714 21521 34226 30803 31904 71463 87401 41455 75061 99543
84122 91360 04319 91642 20234 48847 04721 54272 54191 52092
39160 47052 53133 01195 89320 11925 76263 66830 83052 24675
90704 98889 59704
000 000 Courtesy JkC

25/02	825 000	Extremely strong

Thursday

0530z 5111kHz 0550z 5811kHz 0610z 6911kHz

05/02	189 000	Very strong
12/02	189 1 17077 981 95 98195 ... 15125 000 000	Very strong
19/02	189 1 17077 981 95 98195 ... 15125 000 000	Very strong
26/02	189 000	Very strong

Friday

1610z 9347kHz 1630z 8147kHz 1650z 6847kHz

06/02	318 000	Very strong
13/02	318 1 39097 1714 91 89427 ... 60952 000 000	Very strong

E07a 9347kHz/8147kHz/6847kHz 1610z/1630z/1650z 13/02
318 1 39097 1714 91
89427 81050 81766 45040 39384 82508 19573 30998 95173 37010
40057 68350 10060 35814 18040 70411 64337 29702 70254 44562
31302 15232 52838 32904 87235 05103 97854 69077 43218 73875
75782 41561 07595 66309 88980 03315 76281 27204 54514 97155
76106 25975 27156 50430 76693 12790 73454 71685 76339 00053
76407 06915 70534 54347 56243 60237 70421 08751 32148 63107
03249 99239 06737 12753 19554 41694 83139 12940 01786 10790
96524 87115 82330 77427 01015 78369 73244 43574 08815 56061
43504 99319 02177 15596 03100 24928 57468 90650 22953 42031
60952
000 000 *Courtesy JkC*

20/02	318 000	Strong
27/02	318 000	Strong

Saturday

0900z 11053kHz 0920z 12153kHz 0940z 13553kHz

07/02	015 000	Very strong
14/02	015 1 39097 1714 91 89427 ... 60952 000 000	Very strong
21/02	015 000 [0920z Weak]	Fair
28/02	015 000 [0920z Weak]	Fair

E11 log Jan/Feb

4441kHz	1445z	03/01 [287/00] 1448z Weak QRN3 QSB3	Spectre	SAT
	1445z	07/01 [287/00] Out 1448z Strong	JkC	WED
	1445z	10/01 [287/00] 1448z Weak QRN3 QSB3	Spectre	SAT
	1445z	14/01 [287/00] Out 1448z Fair QRM1 QSB1	JkC	WED
	1445z	11/02 [287/00] Out1448z Very Weak QRM1 QSB2	JkC , Spectre	WED
5082kHz	1730z	01/01 [416/00]	RNGB	THU
	1730z	15/01 [416/00]	RNGB	THU
	1730z	22/01 [416/00] Out 1733z S5	Malc	THU
	0450z	26/01 [416/00] Out 0453z Strong QRM2 QSB1	JkC, Ed Smith	MON
	1730z	29/01 [416/00] S5	Malc	THU
	0450z	02/02 [416/00] Out1733z Strong QRM1 QSB1	JkC	WED
	0450z	16/02 [416/00] Out 0433z Strong QRM1 QSB1	JkC	MON

5409kHz	1530z	01/01 [262/00]	RNGB	THU
	1530z	08/01 [262/00] Out 1533z Strong QRM2 QSB1	JkC, Gary H	THU
	1530z	15/01 [262/00] Out 1533z Strong QRM2 QSB1	JkC	THU
	1530z	12/02 [262/00] Out 1533z Strong QRM1 QSB1	JkC	WED
	1530z	26/02 [262/00]	RNGB	THU
5779kHz	0315z	01/01 [253/00] 0318z Fair QRN3 QSB3	Spectre	THU
	0315z	07/01 [253/00] 0318z Fair QRN3 QSB3	Spectre	WED
	0315z	08/01 [253/00] Out 0318z	Ed Smith	THU
	0315z	14/01 [253/00] Out 0318z Very strong	PLondon	WED
	0315z	04/02 [253/00]	RNGB, Plondon	WED
	0315z	05/02 [253/00] Out 0318z Strong	PLondon	THU
	0315z	11/02 [253/00] Out 0318z	Ed.Smith	WED
	0315z	25/02 [253/00] Out 0318z Strong	PLondon	WED
	0315z	26/02 [253/00] Out 0318z Extremely Strong	PLondon	THU
6304kHz	2000z	02/01 [576/00]	JkC, Malc	FRI
	2000z	09/01 [576/00] 2003z Fair QRN3 QSB3	Spectre	FRI
	2000z	16/01 [576/00]	Gary H, Malc	FRI
	2000z	30/01 [576/00] Out 2003z Fair QRM1 QSB1	JkC	FRI
	2000z	06/02 [576/00] Out 2003z S9	Malc	FRI
	2000z	13/02 [576/00] Out 1717z Strong QRM1 QSB1	JkC	FRI
	2000z	20/02 [576/00] Out 2003z S9	Malc	FRI
7504kHz	0915z	27/01 [484/00] Weak	RNGB, Malc	TUE
7840kHz	0645z	01/01 [517/00] 0648z Fair QRN3 QSB3	Spectre	THU
	0645z	06/01 [517/00] 0648z Fair QRN3 QSB3	Spectre	TUE
	0645z	08/01 [517/00] Out 0648z	Ed Smith	THU
	0645z	13/01 [517/00]	RNGB	TUE
	0645z	20/01 [517/00] Out 0648z	Ed Smith	TUE
	0645z	17/02 [517/00] Out 0648z	Ed Smith	TUE
	0645z	24/02 [517/00]	Ed Smith	TUE
8091kHz	1045z	13/01 [469/00] Weak	RNGB	TUE
	1045z	20/01 [469/00] Out 1048z S3	Malc	TUE
	1045z	28/01 [469/00] Out 1048z Very Strong QRM3	CHPA	WED
	1045z	03/02 [469/00]	RNGB	TUE
	1045z	04/02 [469/00] 1048z Fair QRN3 QSB3	Spectre	WED
	1045z	10/02 [469/00] 1048z Fair QRN3 QSB3	Spectre	TUE
	1045z	11/02 [469/00] Weak	RNGB, Ed Smith	WED
9443kHz	1705z	03/01 [392/00] Out 1708z S9+10	Malc	SAT
	1705z	07/01 [392/00]	RNGB	WED
	1705z	10/01 [392/00] Out 1708z S5	Malc	SAT
	1705z	21/01 [392/00] Out 1708z S9	Malc	WED
	1705z	24/01 [392/00] Out 1708z	Ed Smith, Malc	SAT
	1705z	28/01 [392/00] Out 1708z S9+20	Malc	WED
	1705z	31/01 [392/00] Out 1708z S8	Malc	SAT
	1705z	04/02 [392/00] Out 1708z S9	Malc	WED
	1705z	07/02 [392/00]	RNGB	SAT
	1705z	18/02 [392/00] Out 1508z Strong QRM1 QSB1	JkC , Malc	WED
	1705z	21/02 [392/00]	RNGB	SAT
	1705z	28/02 [392/00] Out 1708z S9+10	Malc	SAT
9446kHz	0830z	02/01 [649/00]	RNGB	FRI
	0830z	05/01 [649/00]	RNGB	MON
	0900z	05/01 [534/00] 0903z Fair QRN3 QSB3	Spectre	MON
	0900z	07/01 [534/00] Out 0903z S6	Malc	WED
	0830z	09/01 [649/00]	RNGB	FRI
	0830z	12/01 [649/00] Good	RNGB, Malc	MON
	0900z	12/01 [534/00] Weak	RNGB, Malc	MON
	0830z	16/01 [649/00] Out 0833z S5	Malc	FRI
	0900z	19/01 [534/00] 0903z Fair QRN3 QSB3	Spectre	MON
	0900z	21/01 [534/00] Weak	RNGB	WED
	0830z	26/01 [649/00] Weak	RNGB	MON
	0830z	30/01 [649/00] Out 0933z S7	Malc	FRI
	0900z	02/02 [534/00] Fair	RNGB	MON
	0900z	04/02 [534/00]	RNGB	WED
	0830z	09/02 [649/00]	RNGB	MON
	0830z	13/02 [649/00]	RNGB	FRI
	0830z	16/02 [649/00]	RNGB	MON

	0900z	16/02 [534/00]	RNGB	MON
	0900z	18/02 [534/00]	RNGB	WED
	0830z	23/02 [649/00] Out 0833z S7	Malc	MON
	0900z	23/02 [534/00]	RNGB	MON
	0830z	27/02 [649/00] Out 0833z S6	Malc	FRI
9950kHz	0930z	07/01 [270/00] Out 0933z S3	Malc, RNGB	WED
	0930z	08/01 [270/00] 0933z Fair QRN3 QSB3	Spectre	THU
	0930z	21/01 [270/00] Out 0933z S2	Malc	WED
	0930z	22/01 [270/00] Out 0933z S2	Malc	THU
	0930z	28/01 [270/00]	RNGB	WED
	0930z	05/02 [270/00] 0933z Fair QRN3 QSB3	Spectre	THU
	0930z	18/02 [270/00]	Malc	WED
	0930z	19/02 [270/00]	RNGB	THU
	0930z	25/02 [270/00]	RNGB	WED
10125kHz	0820z	01/01 [438/00]	RNGB	THU
	0820z	05/01 [438/00] Out 0823z S7	Malc	MON
	0820z	08/01 [438/00] 0823z Fair QRN3 QSB3	Spectre	THU
	0820z	22/01 [438/00] Out 0823z S3	Malc	THU
	0820z	26/01 [438/00] Weak	RNGB, Malc	MON
	0820z	29/01 [438/00]	RNGB	THU
	0820z	02/02 [438/00]	RNGB	MON
	0820z	16/02 [438/00] Out 0823z S6	Malc	MON
	0820z	19/02 [438/00]	Malc	THU
	0820z	22/02 [438/00] Out 0823z S7	Malc	MON
10213kHz	0745z	05/01 [262/00]	RNGB	MON
	0745z	26/01 [262/00] S3	Malc	MON
	0745z	02/02 [262/00]	RNGB	MON
	0745z	09/02 [262/00] 0748z Fair QRN3 QSB3	Spectre	MON
	0745z	22/02 [262/00] Out 0748z S9	Malc	MON
10429kHz	0805z	04/01 [311/00] 0808z Fair QRN3 QSB3	Spectre	SUN
	0805z	07/01 [311/00] Out 0808z S7	Malc	WED
	0805z	11/01 [311/00] Out 0808z S9	Malc	SUN
	0805z	14/10 [311/00]	RNGB	WED
	0805z	28/01 [311/00] Out 0808z S9	Malc	WED
	0805z	01/02 [311/00] 0808z Fair QRN3 QSB3	Spectre	SUN
	0805z	04/02 [311/00]	RNGB	WED
	0805z	08/02 [311/00] Very Strong	CHPA	SUN
	0805z	11/02 [311/00] Out 0808z	Ed Smith	WED
	0805z	15/02 [311/00]	RNGB	SUN
	0805z	25/02 [311/00] Out 0808z	RNGB	WED
10448kHz	1625z	04/02 [978/00] Out 1628z Strong QRM1 QSB1	JkC	WED
	1625z	08/02 [978/00] Out 1628z Strong QRM1 QSB1	JkC	SUN
	1625z	18/02 [978/00] Out 1628z Strong QRM1 QSB1	JkC	WED
	1625z	22/02 [978/00]	RNGB	SUN
	1625z	25/02 [978/00] Out 1628z Strong QRM1 QSB1	JkC	WED
10800kHz	0710z	02/01 [633/00]	RNGB	FRI
	0710z	06/01 [633/00]	RNGB	TUE
	0710z	09/01 [633/00] 0713z Fair QRN3 QSB3	Spectre	FRI
	0710z	20/01 [633/00]	RNGB	TUE
	0710z	23/01 [633/00] 0713z Fair QRN3 QSB3	Spectre	FRI
	0710z	27/01 [633/00]	CHPA	TUE
	0710z	03/02 [633/00]	RNGB	TUE
	0710z	06/02 [633/00] 0713z Fair QRN3 QSB3	Spectre	FRI
	0710z	17/02 [633/00]	RNGB	TUE
	0710z	24/02 [633/00] Out 0713z	Ed Smith	TUE
11107kHz	2005z	01/02 [363/00] 2008z Fair QRN3 QSB3	Spectre	SUN
	2005z	07/02 [363/00] Out 2008z Fair QRM1 QSB1	JkC	SAT
	2005z	08/02 [363/00] 2008z Fair QRN3 QSB3	Spectre	SUN
12153kHz	1045z	06/01 [576/00] Out 1048z Strong QRM1 QSB1	JkC	TUE
	1045z	13/01 [576/00]	RNGB, Malc	TUE
	1045z	03/02 [576/00] Good	RNGB	TUE
	1045z	17/02 [576/00]	RNGB	TUE
15632kHz	1155z	01/01 [718/00]	RNGB	THU
	1540z	04/01 [228/00] Strong	RNGB, Malc	SUN

	1540z	12/01 [228/00]	RNGB, Malc	MON
	1540z	15/01 [718/00]	RNGB	THU
	1540z	18/01 [228/00]	JkC	SUN
	1155z	22/01 [718/00] Out 1158z S2	Malc	THU
	1540z	26/01 [228/00] Out 1543z S2	Malc	MON
	1155z	28/01 [718/00] Out 1158z S3	Malc	WED
	1155z	29/01 [718/00] Out 1158z S5	Malc	THU
	1540z	01/02 [228/00]	Gary H	SUN
	1540z	09/02 [228/00] 1543z Fair QRN3 QSB3	Spectre	MON
	1155z	11/02 [718/00]	RNGB, JkC	WED
	1540z	15/02 [228/00]	Malc	SUN
	1540z	16/02 [228/00] Out 1543z Strong BCQRM2 QSB1	JkC	MON
	1155z	18/02 [718/00] Out 1158z S2	Malc	WED
	1540z	22/02 [228/00]	Malc	SUN
	1540z	23/02 [228/00] Out 1543z Fair QRM1 QSB1	JkC	MON
	1155z	25/02 [718/00] Out 1158z	Ed Smith	WED
16112kHz	0745z	01/01 [335/00]	RNGB	THU
	0745z	13/01 [335/00] Out 0748z S8	Malc	TUE
	0745z	15/01 [335/00] Good	RNGB	THU
	0745z	20/01 [335/00]	RNGB	TUE
	0745z	22/01 [335/00] 0748z Fair QRN3 QSB3	Spectre	THU
	0745z	27/01 [335/00] Weak	RNGB	TUE
	0745z	29/01 [335/00] Good	RNGB	THU
	0745z	03/02 [335/00]	RNGB	TUE
	0745z	05/02 [335/00] 0748z Fair QRN3 QSB3	Spectre	THU
	0745z	10/02 [335/00] 0748z Fair QRN3 QSB3	Spectre	TUE
	0745z	24/02 [335/00] Out 0748z	Ed Smith	TUE
18030kHz	1300z	06/01 [133/00] Good	RNGB, Malc	TUE
	1300z	07/01 [133/00]	JkC	WED
	1300z	21/01 [133/00] Out 1303z S7	Malc	WED
	1300z	27/01 [133/00] Out 1303z Fair QRM3 QSB1	JkC	TUE
	1300z	10/02 [133/00]	RNGB	TUE
	1300z	11/02 [133/00]	JkC	WED
	1300z	17/02 [133/00]	RNGB	TUE
	1300z	18/02 [133/00] Out 1303z S9	Malc	WED
	1300z	24/02 [133/00]	Ed Smith	TUE
	1300z	25/02 [133/00] Good	RNGB	WED

E11a log Jan/Feb

4441kHz	1445z	24/01 [286/31 36154 70883 50413 77980 28934 72310 09532 …….45289 30962] Out 1452z	Ed Smith	SAT
	1445z	04/02 [289/36 80385 48679 19710 07080 11797 15341 42350... 07569 06856] Out1454z Weak	JkC	WED
	1445z	07/02 [289/36 80385.....06856] Weak QRM1 QSB3 (Repeat of Weds)	JkC	SAT
5082kHz	0450z	05/01 [415/36 Attention 90668.....06980 Out] 0500z Fair QRN3 QSB3	Spectre	MON
	1730z	08/01 [415/36 90668 72026 10661 26054 76557 22562 56011……41317 06980] Out 1740z S9	Malc, JkC, RNGB	THU
	1730z	26/02 [418/32……ATTENTION 25126……30440]	Malc	THU
5409kHz	1530z	22/01 [266/33 40071 34186 35528 28784 34011 30861 05503……46347 08966] Out 1539z Strong	JkC	THU
	1530z	19/02 [262/33 37961 96918 94023 05382 19846 25645 33045 77840.....56769 28876] Out 1539z	JkC	THU
5779kHz	0315z	28/01 [250/38 27627 19625 45740 77115 72792 38176 62900 69360.....88127 51179] Out 0325z	JkC, PLondon	WED
	0315z	29/01 [250/38 27627….etc] Repeat of Weds	PLondon	THU
	0315z	18/02 [256/31 01273 34561 00062 13507 38744 14575 42786 04085…… 57063 61113] Out 0324z	JkC, Smith	WED
	0315z	19/02 [256/31 A 01273 ... 61113 OUT] 0324z Strong (Repeat of Wednesday)	PLondon	THU
6304kHz	2000z	23/01 [576/32 93289 75176 13744 64959 99635 01012 28616 01540 89731…..38130 91081]	Gary H, Malc	FRI
6923kHz	1710z	02/01 [951/20 46303 36867 69277 13297 19946 30958 19150 05578……90602 54348]	RNGB, Malc	FRI
	1710z	05/01 [953/30 Attention 10577 ... 05108 Out] 1720z Fair QRN3 QSB3	Spectre	MON
	1710z	09/01 [955/30 60414 30264 30827 06520 58259 25853 08027 59159……05174 17213]	RNGB	FRI
	1710z	12/01 [951/20 93919 12848 94454 45624 26069 93714 42506 62697……64904 03252] Good	RNGB, JkC, Malc	MON
	1710z	16/01 [957/21 50729 08982 55407 97073 32380 46106 02037 55996……83588 11153] Strong	JkC	FRI
	1710z	19/01 [956/31 40125 77436 49581 48997 44597 56092 14982 20209.....77081 68912] Out 1718z	JkC	MON
	1710z	23/01 [953/21 10117 76955 95498 34553 79354 30209 62501 97933……81481 01178]	RNGB	FRI
	1710z	26/01 [951/20……ATTENTION 51863……24906]	Malc	MON
	1710z	30/01 [953/25 99358 79760 57672 56075 39365 65616 49060 15158……67784 92801]	JkC	FRI
	1710z	02/02 [953/21 Attention 62815 ... 86298] Out 1718z Fair QRN3 QSB3	Spectre	MON
	1710z	06/02 [953/21 04925 23638 37096 20182 15050 34603 40928 90615……71836 81417]	RNGB	FRI

	1710z	09/02 [953/21 31548 69072 07373 11470 60709 04647 13817 91570……88980 80413]	JkC	MON
	1710z	13/02 [953/21 36063 64239 28235 12339 54893 09879 17155 94380.....40912 43935] Out 1717z	JkC	FRI
	1710z	16/02 [955/30 57297 60738 93276 96392 87054 52422 23361.....90515 32791] Out 1719z Strong	JkC , Malc	MON
	1710z	20/02 [953/20……..ATTENTION 00070……..89525]	Malc	FRI
	1710z	23/02 [951/23 30765 16261 24345 69972 55478 82318 12854 31912……66884 06182]	JkC	MON
	1710z	27/02 [957/20 33115 68354 13440 27634 68141 20744 05614 70840……17520 99871]	RNGB	FRI
7840kHz	0645z	27/01 [510/35 85983 62463 13406 96689 92885 42558 17759 18984 … 66321 31429] Out 0655z	CHPA, Ed Smith	TUE
	0645z	03/02 [510/34 24687 23571 18239 73772 00256 78012 70230 97969……48450 58559]	RNGB, JkC	TUE
	0645z	05/02 [510/34 Attention 24687 ... 58559] Out 0655z Fair QRN3 QSB3	Spectre	THU
8091kHz	1045z	06/01 [463/36 91118 93880 52191 17664 42405 85572 21189 73931……45800 95723]	JkC	TUE
	1045z	07/01 [463/36 91118…. etc] Repeat of Tuesday	RNGB, Malc	WED
	1045z	17/02 [462/34 61778 84609 91648 30242 96718 05501 69457 16253 63931……62168]	RNGB	TUE
	1045z	18/02 [462/34 61778……..62188] Repeat of Tuesday	Malc	WED
9443kHz	1705z	14/01 [392/38 2595 44336 89033 67826 96122 89910 01728 82582……46680 44813] Strong	RNGB, Malc	WED
	1705z	17/01 [392/38 25950.....44813] Out 1715z Strong QRM2 QSB1 Repeat of Wednesday	JkC	SAT
	1705z	11/02 [393/37 98349 77545 12441 22765 49866 54332 22190 63432……77125 34404]	JkC	WED
	1705z	14/02 [393/37 98349 77545……34404] Out 1715z Repeat of Wednesday	Malc	SAT
9446kHz	0830z	19/01 [649/38……..ATTENTION 48865 43431…….05579 67618]	Malc	MON
	0830z	23/01 [649/38 48865 43431…etc] S5 Repeat of Monday	Malc	FRI
	0900z	26/01 [537/38 17282 35574 48754 65489 63151 86650 87921 87784……. 58739]	RNGB, Malc	MON
	0900z	28/01 [537/38 17282……58739] Repeat of Monday	Malc	WED
	0830z	02/02 [640/32 79722 46437 06170 45450 41454 34614 03474 44763……05887 15132]	RNGB	MON
	0830z	06/02 [640/32 79722…..15132] repeat of Monday	Malc, JKC	FRI
	0900z	09/02 [533/31 64136 22681 56808 33263 12545 81388 38944 76679 42427……66317]	RNGB	MON
	0900z	11/02 [533/31 64136…..etc] Repeat of Monday	RNGB	WED
9950kHz	0930z	14/01 [278/34……..ATTENTION 24561……95003]	Malc	WED
	0930z	15/01 [278/34 Attention 24561 ... 95003 Out] 0931z Fair QRN3 QSB3	Spectre	THU
	0930z	11/02 [271/32 58183 57676 19925 96862 96106 11878 75527 96396……38419 28027]	RNGB	WED
10125kHz	0820z	10/01 [430/30 40128 91024 71737 98051 21487 04366 69798 77280……18033 43547]	RNGB, Malc	MON
	0820z	15/01 [430/30 40128 …..etc] Repeat of Monday	Malc	THU
	0820z	09/02 [438/37 Attention 14352 ... 76768] Out 0831z Fair QRN3 QSB3	Spectre	MON
10213kHz	1810z	03/01 [988/10…ATTENTION 82069.....59583] Out 1715z S5	Malc	SAT
	1810z	06/01 [988/10 51809 80676 98571 77867 90643 87446 85502 85853 81234 68491] Very Weak	RNGB, Malc	TUE
	1810z	17/01 [988/10 28350 35060 14715 45306 82590 72410 65798 77465 12754 05938]	JkC, Malc	SAT
	0745z	19/01 [266/33……ATTENTION 40071 34186…….46347 08966]	Malc	MON
	1810z	20/01 [983/10 43382 09293 28738 25765 24520 81520 06158 85103 81348 84176]	JkC	TUE
	1810z	27/01 [983/10 90950 17406 60685 18603 95883 95002 22271 00237 36624 48764]	JkC	TUE
	1810z	31/01 [988/10 40609 63632 11801 73455 97161 76480 83598 71413 53419 81510]	Malc	SAT
	1810z	03/02 [982/10 83219 83567 91242 54871 14337 21611 99100 69553 14334 48873]	RNGB	TUE
	1810z	07/02 [988/10 41670 76965 25172 22099 73881 95436 48167 55760 99502 00092]	Gary H, JkC	SAT
	1810z	10/02 [987/10 81502 77705 34508 97894 94589 96315 29561 64146 77409 98620]	JkC	TUE
	0745z	16/02 [262/33 37961 96918 94023 05382 19846 25645 33045 77840……56769 28876] Good	RNGB	MON
	1810z	17/02 [988/10 71956 01759 13906 42341 04968 25203 79287 30314 95797 32115]	RNGB	TUE
	1810z	21/02 [983/10……..ATTENTION 52354……..22415] Out 1815z S7	Malc	SAT
10429kHz	0805z	21/01 [374/33……..ATTENTION 62241……..20269]	Malc	WED
	0805z	18/02 [374/34 13834 29477 91302 50010 13473 27097 35688……78709 05846] Out 0814z	Ed Smith, Malc	WED
	0805z	22/02 [374/34 13834….etc] Repeat of Wednesday	Malc	SUN
10448kHz	1625z	11/02 [792/30 30218 87175 40586 74631 96949 36043 37626 20019……47241 44754] Good	RNGB, JkC	WED
	1625z	15/02 [792/30 30218 87175…..etc] Repeat of Wednesday	Ary, RNGB	SUN
10690kHz	1400z	03/01 [983/10 17669 08462 06791 77338 31320 69502 88359 18907 48845 62082]	RNGB	SAT
	1400z	06/01 [983/10 42081 63652 31320 64969 23870 84117 23938 31613 62475 33744]	JkC, Malc	TUE
	1400z	10/01 [981/10 28440 79017 53578 09702 15933 45723 04841 44288 73373 48460]	Gary H	SAT
	1400z	13/01 [984/10 29569 05305 63638 44410 53234 98223 20576 79562 81140 74472]	JkC	TUE
	1400z	20/01 [981/10 44973 28271 70690 71705 94841 60408 36552 88623 65350 89478]	Malc	TUE
	1400z	24/01 [981/10 95071 86579 59921 80871 71770 95888 62029 36030 88922 58494] Out 1405z	Ed Smith	SAT
	1400z	27/01 [981/10 95691 04449 64384 38590 52506 09084 53091 67799 68831 40874] Out 1405z	JkC	TUE
	1400z	03/02 [981/10 86008 79100 96626 50027 85487 47461 61572 64803 95854 36075]	RNGB	TUE
	1400z	07/02 [985/10 73533 72891 31581 62612 79312 66513 10417 36652 71887 08580]	JkC	SAT
	1400z	10/02 [984/10 49933 39606 01481 39953 19437 90124 24651 30163 63341 88853] Out 1405z	JkC , Ed Smith	TUE
	1400z	14/02 [987/10 38523 44737 51763 80885 22806 05175 01101 54417 04020 04843]	RNGB	SAT
	1400z	17/02 [981/10 57990 70795 75659 11214 04048 21824 08051 73371 35436 06313]	JkC	TUE
	1400z	21/02 [982/10 52025 50643 00121 17290 14039 18913 85569 59393 97657 52342]	JkC	SAT

10800kHz	0710z	13/01 [636/31……..ATTENTION 98899……..11332]	Malc	TUE
	0710z	10/02 [639/34 Attention 48985 ... 18246] Out 0721z Fair QRN3 QSB3	Spectre	TUE
11107kHz	2005z	03/01 [367/30 62003 02026 72355 21632 64739 63552 50788 ……59835 40300] V. weak	RNGB	SAT
	2005z	04/01 [367/30 62003….] Repeat of Saturday Very weak	Malc	SUN
	2005z	22/02 [365/35 27409 95450 11836 31752 18784 84403 17595 48949……58843 60857]	JkC	SUN
12153kHz	1045z	20/01 [576/32 93289 75176 13744 64959 99835 01012 28616.....44208 38130 91081] Out 1054z	Ed Smith, Malc, Jan	TUE
	1045z	24/02 [57?/31 31124 19279 19110 93487 75744 95885 61556 46874 18399……44388 80768]	RNGB	TUE
13455kHz	0530z	20/01 [980/10 44769 75638 59970 41011 69074 88326 29720 42147 69891 86701] Out 0535z	Ed Smith	TUE
	0530z	27/01 [980/10 89279 70007 72469 41435 34614 82094 45012 41578 60515 96808] Out 0535z	Ed Smith	TUE
	0530z	03/02 [980/10 rest unworkable] Out 0535z Very Weak QRM1 QSB3	JkC	TUE
	0530z	17/02 [983/10 90813 59839 08045 45899 72487 17674 47966 09661 54156 09705] Out 0535z	Ed Smith	TUE
	0530z	21/02 [981]/10 71120 66211 ..... 44965 93617 OUT 0535z	Ed Smith	SAT
14410kHz	1110z	05/01 [952/35…….ATTENTION 51299…….93218]	Malc	MON
	1110z	12/01 [954/32…….ATTENTION 95578…….88433]	Malc	MON
	1110z	16/01 [950/31 92842 222657 86774 86345 97721 54883 69410 23740…..61988 57190]	RNGB	FRI
	1110z	19/01 [952/40 74666 84870 18814 00477 43937 68595 00877 334921…..80737 62680]	RNGB, Malc	MON
	1110z	23/01 [952/31 10117 76955 95498 34553 79354 30209 62501 97933……17574 59997] Out 1119z	JkC, Malc	FRI
	1110z	26/01 [954/32…….ATTENTION 57287…….30917]	Malc	MON
	1110z	30/01 [952/31 01557 82544 90521 65167 64412 64498 69576 71116……36179 93173]	JkC, Malc	FRI
	1110z	02/02 [952/31 67833 06771 25152 34889 91449 32774 67435 62604……19342]	RNGB	MON
	1110z	06/02 [950/31…..…ATTENTION 72862…….26016]	Malc	FRI
	1110z	09/02 [951/20 Attention 99793 ... 29254] Out 1118z Fair QRN3 QSB3	Spectre	MON
	1110z	13/02 [950/31 Attention 71990 ... 43217] Out 1119z Fair QRN3 QSB3	Spectre	FRI
	1110z	16/02 [952/40…….ATTENTION 25535……..87776]	Malc	MON
	1110z	20/02 [952/31 89604 08171 16427 31466 14728 26714 91091 32676…….21371 37878]	Malc, Ed Smith	FRI
	1110z	22302 [951/20 30075 02836 04428 85225 73062 10123 15045 01643……67292 75580] Out1119z	Ed Smith, Malc	FRI
15632kHz	1540z	05/01 [227/34 26540 35862 03384 11825 72060 85449 79256 69655……21952 60732]	Malc	MON
	1155z	07/01 [712/32 89140 94686 75282 45802 92713 14672 18762 29731…....45828 85640]	RNGB, Malc	WED
	1155z	08/01 [712/32 Attention 89140.....85640 Out] 1205z Fair QRN3 QSB3	Spectre	THU
	1540z	11/01 [227/34 26540 35862 03384 11825 72060 85449 79256 69655…....21952 60732]	Malc	SUN
	1540z	02/02 [226/31 75786 27951 08518 98582 03219 60847 35448 29048……72853 16944]	JkC	MON
	1155z	04/02 [712/32…….ATTENTION 76012……..66396]	Malc	WED
	1155z	05/02 [712/32 76012 13586 13388 53330 64655 21763 10824 40145……66396]	RNGB	THU
	1540z	08/02 [226/31 75786.....16944] Out 1405z Strong Repeat of Monday	JkC	SUN
16112kHz	0745z	06/01 [331/36 18727 57965 13877 11709 72555 32451 89637 09487 12022……53903 35718]	RNGB	TUE
	0745z	08/01 [331/36 18727 57965……etc] Repeat of Tuesday	Ed Smith	THU
	0745z	17/02 [335/33 59114 62490 58532 09579 25345 71411 88141 94245……87429 44159 15279]	RNGB	TUE
	0745z	19/02 [335/33 59114……etc] Repeat of Tuesday	Malc	THU
18030kHz	1300z	13/01 [133/37 91083 71140 35510 20760 35189 55268 31398 90450…….68608 66000] Out 1309z	JkC, Malc	TUE
	1300z	14/01 [133/37 91083…..etc] Repeat of Tuesday	Malc	WED
	1300z	03/02 [131/33 95806 34825 62070 30372 12701 06087 12984 42353……35880 94463]	RNGB	TUE
	1300z	04/02 [131/33 95806…….94463] Repeat of Tuesday	Malc	WED

E17z
January 2015
Thursday

0800z	**11170kHz**	**0810z**	**9820kHz**	
08/01	674 932 5 12532 06674 38829 10996 79419 932 5 00000			Strong
22/01	674 955 8……00000			Weak
29/01	674 00000			Weak

February 2015
Thursday

0800z	**11170kHz**	**0810z**	**9820kHz**	
05/02	674 230 5 33578 89136 36335 45164 83303 230 5 00000			Strong
12/02	674 230 5 33578 89136 36335 45164 83303 230 5 00000			No signal report
19/02	674 590 8 11171 64385 ... 53718 590 8 00000			Fair
26/02	674 590 8 11171 ... 53718 00000			No signal report

E25

9450kHz1215z 05/01[835 5555 8080 3660 3076 5307 3172 4590 3660 7478] 1224z "Inte Omri" musical info, audio problems, break during msg, WinXP shutdown sound, QSA5 MG MON

Note that 5555 is not a typo; the YL was repeating 5555 before the message. I suppose the correct ID is 555.

9450 kHz1221z 06/01 "Inte Omri" musical intro, 8835 once, carrier, QRT 1233z, QSA5 MG TUE

E25a

9450kHz1217z 01/01[830 6 (as of 31/12)] 1223z "Inte Omri" musical intro, audio and voice problems, ended with "Mx3", AM QSA5 MG FRI

G06

Continues in 2015 with the exception of the first + third Fridays in the month 2000 UTC + 2100 UTC schedule which appears to have gone, or at least I haven't found it so far.
Last heard on 19-December-14, 7,844 + 5,769 kHz with four minutes of "no message" with weak signals on both transmissions, was much stronger, S9+ on both, when heard on the first Friday in December, the 5th. However, in January 2015 an S06 Russian schedule has been noted, same days, same time, so perhaps this is a replacement.
Continuing with those G06 schedules which have survived into the New Year:-

Second + Fourth Thursdays in the Month, 1830 UTC Schedule:-
8-Jan-15:- 4,519 kHz, calling "271", DK/GC "394 394 20 20". The 5Fs the same as heard in December, starts "06132 75514 79681....", and looking back through the log noted that it was used on the *Friday* 1930Z G06 in March 2014 although with a different DK. Good signal peaking over S9.

22-Jan-15:- 4,519 kHz, "271" and "394 394 20 20" again.

12-Feb-15:- 4,519 kHz, "271" and "394 394 20 20", 5Fs same as in January. S9 signal.

Friday 1930 UTC Schedule Following Second + Fourth Thursdays in the Month:-
9-Jan-15:- 4,792 kHz, calling "436", DK/GC "701 701 20 20", 5Fs same as in December and on many other occasions, "37839 35787 98273....".

23-Jan-15:- 4,792 kHz, "436" and "701 701 20 20", S9 signal.

13-Feb-15:- 4,792 kHz, continuing with "436" and "701 701 20 20".

First + Second Mondays in the Month 1700 + 1800 UTC Schedules:-
5-Jan-15:- 1700 UTC, 3,728 kHz, "248 248 248 00000", S7 to S8 inside the 80 metre amateur band, weaker SSB stations on close frequencies.
1800 UTC, 4,484 kHz, second sending, peaking S9, usual slow pace of delivery usual for this schedule. Call has changed from "367" used in 2014.

12-Jan-15:- 1700 UTC, 3,728 kHz, over-riding weaker amateur SSB stations, and 1800 UTC, 4,484 kHz, peaking S9 with QSB, "248 248 248 00000".

2-Feb-15:- 1700 UTC, 3,728 kHz, started approx 10s before the hour, "248 248 248 00000", S7 to S8 with the usual slow delivery of this schedule.
1801 UTC, 4,484 kHz, no voice heard until almost one minute past the hour, second sending started – then stopped; heard some frantic, agitated chat from a female voice in what sounded like Russian language, telephone line type of audio quality, several bursts over the course of 30 seconds or so before continuing with G06 YL.

9-Feb-15:- 1700 UTC, 3,728 kHz, and 1800 UTC, 4,484 kHz, "248 248 248 00000". [PoSW]

Others' Logs

January 2015
Monday

1700z	**3728kHz**	**1800z**	**4484kHz**	
05/01	248 00000			Strong
12/01	248 00000			Fair

Wednesday

1200z	**4946kHz**	**1300z**	**4051kHz**	
07/01	248 00000			Fair
14/01	248 00000			Fair

Thursday
1830z 4519kHz

08/01 271 394 20 06132 ... 04884 394 20 00000 Strong

271 394 20
06132 75514 79681 94217 21443 31441 81797 17512 62689 33103
48930 93432 25709 93628 48683 18809 85052 49870 63962 04884
394 20 00000 *Courtesy HRT/Spectre*

22/01 271 394 20 26132 ... 24884 394 20 00000 Very strong
Figures checked

Friday
1930z 4792kHz

09/01 436 701 20 37839 ... 04594 701 20 00000 Strong

23/01 436 701 20 37839 ... 94594 701 20 00000 Strong

436 701 20
37839 35787 98273 60187 16202 95625 31691 52538 61025 22567
93296 67423 40968 16891 63781 34820 04842 60491 75924 04594
701 20 00000 *Courtesy Spectre*

February 2015

Monday
0800z 5329kHz

16/02 329 00000 Fair

1700z 3728kHz

02/02 248 00000 Fair, QRN3 QSB3

09/02 248 00000 Strong

1800z 4484kHz

02/02 248 00000 Fair, QRN3 QSB3

09/02 248 00000 Strong

Wednesday
1200z 4946kHz 1300z 4051kHz

04/02 248 00000 Fair, QRN3 QSB3

11/02 248 00000 Fair, QRN3 QSB3

Thursday

1300z 4460kHz

19/02 329 00000 No sig strength

1830z 4519kHz

12/02 271 394 20 06132 ... 24884 394 20 00000 Very strong

26/02 271 394 20 06132 ... 24884 394 20 00000 Very strong

Friday

1930z 4792kHz

13/02 436 701 20 37839 ... 04594 701 20 00000 Very strong

S06

S06 log January

Daily Mon- Fri 0400z 15721kHz

15/01 [480 376 50 16903 ... 54440 376 50 00000] 0411z Fair QRM2 QSB1 JkC THU Hong Kong remote (see transcript)
'480' 376 50
16903 31061 29128 34286 51404 04691 89918 36496 29036 02228
06791 78425 84621 00388 51388 33598 37324 27681 04720 74316
59956 79691 77293 91086 69866 42262 68803 09800 08599 58528
47056 05106 02501 00742 50819 33414 21490 32808 46285 33964
78135 74495 91835 71392 34277 03232 90792 18251 07336 54440
376 50 00000

26/01 [480 396 50 09709 ... 15567 396 50 00000] 0411z Fair QRM1 QSB2 JkC MON Hong Kong remote (See transcript)
'480' 396 50
09709 08053 24983 98499 49512 42139 20292 46995 89540 19002
33026 76890 90730 86552 93927 72821 05927 32338 32310 14247
71851 12102 62603 26905 60139 73748 47945 19527 54658 12665
20514 04242 47276 19316 63279 24107 69276 05075 82879 36211
00603 17200 28288 23775 24131 78924 34972 35694 17135 15567
396 50 00000

Fridays		**2000z**	**7897kHz**	**2100z**	**5821kHz**
02/01		'392' 00000			RNGB, Karsten
16/01		'392' 00000			RNGB

Saturdays 1st/2nd/3rd and 4th		**1600z**	**6778kHz or**	**1605z**	**5068kHz**
03/01	1605z	'491' 00000		RNGB, Malc, Spectre	
10/01	1605z	'491' 00000	(used 5073kHz)	RNGB, Malc	

Saturday 1st/3rd	**4047kHz**	**2000z**	**2100z**	**3508Hz**
03/01	'738' 00000			RNGB, Malc
17/01	'738' 00000	(used 3522kHz)		JkC

S06s January log:

Mondays			
5th/12th	0830/40	8057/8530	'371' 829 5 82395 58825 82037 89622 70831
19th/26th			'371' 482 5 47325 37713 45436 49783 35979
5th/12th	0900/10	14675/12830	'872' 493 5 20529 80749 03752 76367 84777
19th/26th			'872' 419 5 33391 30214 30358 37943 35381
5th/12th	1200/10	8420/10635	'831' 496 5 31084 92096 58781 62106 27361
19th/26th			'831' 247 5 34682 17455 76294 55995 54595

Tuesdays			
6th/13th	0600/10	16145/14240	'438' 517 6 85346 32993 62529 38408 36364 36982?
20th/27th			'438' 512 6 03176 58842 55499 72223 55285 56438
6th/13th	0700/15	5250/6320	'374' 802 5 33640 38293 43330 32403 88443
20th/27th			'374' 869 5 99228 77544 04816 56557 51269
6th/13th	0730/40	7410/11532	'427' 531 6 32679 93099 36580 39638 40224 41899
20th/27th			'427' 590 6 41832 31621 32774 37587 43603 43203
6th/13th	0800/10	11945/13195	'352' 890 6 37529 80755 33802 43834 37194 37938
20th/27th			'352' 807 6 47325 37713 45436 49783 30533 37558
6th/13th	1000/10	6440/5660	'893' 412 5 34018 43214 38631 39843 99931
20th/27th			'893' 425 6 45990 35243 45943 44305 31200 30883
6th/13th	1100/10		'754' No reports
20th/27th			'754' No reports
6th/13th	1500/10	6845/9170	'537' 218 6 30720 43259 33366 46044 36844 78319
20th/27th			'537' 804 6 31444 83368 30396 83927 83132 37255

Wednesday			
7th/14th	0820/30	6778/7675	'471' 983 5 45033 37231 38888 48097 35474
21st/28th			'471' 968 5 31092 39190 46831 34173 47504
7th/14th	0830/40	7335/11830	'745' 260 8 37184 36129 33983 83321 85246 32993 38408 36364
21st/28th			'745' 810 6 33379 39705 36201 37352 96930 41476
7th/14th	1000/10	12365/14280	'729' 851 6 44530 37108 56798 30221 47454 86730
21st/28th			'729' 534 6 41645 35709 36414 49790 32628 39730
7th/14th	1230/40	4580/6420	'967' 841 5 33391 30214 30358 37943 48384
21st/28th			'967'

Thursdays				
1st/8th	(E17z)	0800/10	11170/9820	'674' 932 5 12532 06674 38829 10996 79419
15th/22nd				'674' 915 8 83208 37829 47458 42867 39674 32387 44142 33104
1st/8th		0900/10	5765/6315	'624' 879 5 01952 86415 57790 87655 21414
15th/22nd				'624' NRH
1st/8th		0900/10	12952/13565	'167' 493 5 65136 36049 13153 37049 31418
15th/22nd				'167' 405 8 45032 39366 87471 31487 40130 30905 37181 39971
1st/8th		0930/40	5765/6315	'314' 592 6 79419 68387 43884 53728 98342 93110
15th/22nd				'314' 529 6 38424 31664 36308 38723 32460 36090
1st/8th		0950/1000	12445/13130	'635' 204 7 83293 81099 85793 93110 19385 83910 65839
15th/22nd				'635' 241 7 35647 36545 34528 39182 37447 36382 42745
1st/8th		1200/10	8812/9540	'425' 893 6 40643 72983 73291 37563 92831 82101
15th/22nd				'425' 810 6 42453 44746 47475 35253 35011 37817

Fridays			
2nd/9th	0600/10	7125/8795	'934' NRH
16th/23rd			'934' NRH
2nd/9th	0700/10	7150/8215	'196' 478 5 92101 27563 92383 65982 32189
16th/23rd			'196' 438 5 37463 35510 37447 39238 54325
2nd/9th	0800/10	5810/6770	'278' 413 5 46062 68672 97478 39685 30485
16th/23rd			'278' 496 5 45675 …… (too weak to copy)
2nd/9th	0930/40	11780/12570	'516' 432 7 21767 53672 11834 81022 36903 41412 55678
16th/23rd			'516' 842 7 81589 69992 42717 83203 84124 35344 32987

Saturday			
3rd	1200/10	8680/8260	'254' 983 6 20534 11160 43494 37638 16070 53516
3rd	2100/10	5420/4543	'874' 00000

Sundays

4th/11th	0630/40	13470/16515	'524' 836 7 68840 45644 53957 80236 16644 83405 15114
18th/25th			'524' 978 6 43686 41225 40696 81942 34293 43952

Thanks to RNGB, JkC, Malc,

S06 log February

Daily Mon- Fri 0400z 15721kHz

06/02 '480' 157 60 54314 ... 69518 157 60 00000 0413z Fair QRM1 QSB2 JkC FRI Hong Kong remote
'480' 157 60
54314 83908 46352 30589 35019 14258 25106 23747 19537 39357 07600 43356 64132 49299 63114 04942 67022 13065 01085 53308
15386 57351 83983 20711 44983 08392 55143 59733 73298 01437 04967 68063 92163 87618 23944 47347 30791 92847 15930 63321
25148 08464 70110 99385 54622 18300 15096 20839 31911 91863 03587 91933 57062 98326 01035 12959 79626 20989 76754 69518
157 60 00000

13/02 '480' 597 60 48260 49805 …... 74590 38508 00000 0412z QSA2 QSB3 E.Smith FRI
16/02 '480' 263 60 75089.....73722 263 60 00000 0413z Fair QRM1 QSB2 JkC MON Hong Kong
75089 15997 92124 32408 65474 81155 9689? 15069 92717 86204 61912 17082 77470 34084 75305 27107 18353 19530 93925 02314
20683 91467 47096 25790 27255 25674 03609 00293 30860 06067 52181 49291 73228 38277 82560 85225 60087 43586 39457 97926
47021 07015 58496 93139 75815 77795 62382 42077 65977 45735 36453 27943 91127 41892 25816 00375 94929 37005 21258 73722
263 60 00000

17/02 '480' 791 50 68635 27944 …... 38268 17386 00000 0411z Ed Smith TUE
18/02 '480' 352 50 36288 26323 …... 92977 81496 00000 0412z Ed Smith WED
36288 26323 06889 79176 00423 93332 54371 82564 66290 62506 75492 44804 62508 77984 71203 46894 50306 02036 08485 76938
11184 22129 99467 44489 12419 47170 26352 23904 17571 28835 91817 25142 34215 68929 99609 15431 16054 98737 94981 40265
61619 41265 19702 17142 76741 92341 61284 00504 92977 81496 352 50 00000

20/02 '480' 592 60 44623 ... 65413 00000 0413z Strong QRM1 QSB2 JkC FRI Hong Kong remote
44623 38009 31367 86764 14145 64735 19847 99779 14230 49878 17492 89360 77401 84547 97307 82811 26578 90349 77366 95669
40306 39282 89017 16492 95425 60832 81128.....10618 53463 46296 00967 39273 42698 79977 95465 85109 52960 08455 82604
38981 85370 46602 58006 60320 18702 71356 96766 51638 75652 21863 97912 99540 21641 62214 41836 80675 88318 67720 65413
592 60 00000

25/02 '480' 792 60 96766 79224 …... 70764 00937 00000 0412z QSA2 E.Smith WED
26/02 '480' 351 50 14326 04747 …... 31353 70723 00000 0411z [To weak to copy] Ed Smith THU
27/02 '480' 267 50 13486 25071…….29509 00000 0411z QSA2 QSB3 Ed Smith FRI
13486 25071 20877 57707 97783 37372 54338 74136 72311 05810 44952 16503 66461 67356 02657 34860 07338 16684 71583 78756
62081 61549 25759 69464 67801 16180 54739 21929 10032 37318 62628 33599 35662 32643 28912 82349 11290 96237 04546 00668
62902 50794 41734 18300 57858 01246 80837 90540 15086 29509 00000

Second and fourth Thursdays? 0830z 17440kHz 0930z 15614kHz

05/02 '842' 659 33 71034 ... 80104 659 33 00000(f) 0840z Fair QRN3 QSB3 Spectre THU Repeated Friday
26/02 '842' 705 36 14001……69838 26023 RNGB, Ed Smith THU
14001 91983 84987 15303 67513 27439 25088 46627 61738 04075 23213 48986 17249 25501 76190 75435 18929 89171 11408
38477 82090 10675 76992 04701 44452 77410 78966 24302 32445 73854 76301 50136 75268 45589 69838 26023 00000

Fridays (1st & 3rd) 1900z 7897kHz 2000z 5831kHz

06/02 '392' 00000
19/02 '392' 00000 (used 5826kHz)

Saturdays (1st/2nd/3rd and 4th) 1600z 6778kHz or 1605z 5068kHz

07/02 1605z '491' 00000 (used 5073kHz) RNGB
14/02 1600z '491' 00000 Strong QRM1 QSB1 JkC
21/02 1600z '491' 00000 RNGB

Saturdays (1st/3rd) 4047kHz 2000z 2100z 3508Hz

07/02 '738'00000 Fair QRN3 QSB3 (used 4057kHz & 3522kHz) Spectre
21/02 '738' 00000 RNGB

Temporary schedule?

5829kHz 1730z 05/02 [480 963 45 99904 ... 94032 963 45 00000] 1742z Fair QRM2 QSB1 JkC THU
'480' 963 45
99904 95504 14366 79792 21650 25083 40638 73660 56546 92487 67964 90219 81069 34175 24009 69719 81100 77770 12989 38689
91520 83786 43013 40385 17152 94080 87110 33679 95981 91734 01391 77600 90615 02050 48761 43709 18882 89345 01666 23483
59543 29236 22245 22922 94032 963 45 00000

5829kHz 1730z 09/02 [480 275 41 19674 ... 59226 275 41 00000] 1741z Strong QRM1 QSB1 JkC MON
'480' 275 41
19674 86265 13839 11049 50090 16639 62927 71419 70622 32888 13202 73295 59381 07871 15447 78100 35975 77007 08648 65205
94487 71912 31917 10331 89281 18198 57234 67967 40837 33365 22569 56232 53778 85731 70737 67607 64309 00335 21754 53985
59226 275 41 00000

7417kHz/5829kHz 1700z/1730z 11/02 WED
‘480’ 693 42
43054 61823 34343 74221 04548 58656 05449 65144 39556 52737
56526 51120 58630 75231 10359 55916 04802 37257 77407 81117
07451 68021 90195 96839 29644 20226 74132 14581 26106 28712
84446 90629 54035 33251 63916 33481 03930 01439 01090 13693
42620 12631
693 42 00000

5829kHz 1730z 17/02 TUE
’480’ 913 44
64950 21574 35374 12960 46909 92803 54055 87610 92227 73725 26084 47466 34377 10233 10401 79513 57755 49501 13643 28472
84385 02233 32666 02585 01921 66086 88729 54680 04965 79335 25984 41166 70541 92449 13303 85017 16590 36384 51092 13958
72436 47109 34818 96901 913 44 00000

6974kHz /5829kHz 1700z/1730z 23/02 [480 627 44 52066 ... 73321 627 44 00000] 1712z Strong QRM1 QSB1 JkC MON See transcript
‘480’ 627 44
52066 01630 66200 57401 84853 00773 88198 03406 11905 45671 09335 66502 84676 22763 63948 35769 95824 79412 98651 94441
68080 27822 77305 23843 95883 08867 73626 67677 92924 75241 15470 32175 64478 75710 14096 73995 85328 87650 23576 55716
55206 60429 13963 73321 627 44 00000

6974kHz /5829kHz 1700z/1730z 25/02
‘408’ 159 44 78430 ... 43347 159 44 00000] 1712z Strong QRM1 QSB1 JkC WED See transcript
S06 seemed to make a mistake with call-up at 1700, sent "408" instead of "480". Corrected on 1730z sked.
‘480’ 159 44
78430 31192 49124 23068 95405 58261 82515 27048 56151 54890
39941 64423 34229 30007 61753 67546 19795 69197 29868 40529
18027 92425 68208 21206 48133 98220 41359 58310 86475 50996
73201 71458 72797 15128 28810 62853 29344 45434 04714 58814
36804 26660 57159 43347
159 44 00000

S06c

12162kHz 1122z	11/02	‘11017’	1124z Strong QRM1 QSB1	JkC	WED
10181kHz 1130z	11/02	‘11017’	1134z Strong QRM1 QSB1	JkC	WED

Here follows an excellent article by JkC on his first analysis of S06s

S06s/E17z – first thoughts

S06s is one of the most prolific number stations currently broadcasting, yet this station is also one of the most mysterious. Although I rarely hear S06s/E17z, as it transmits mainly in the morning hours UTC, and I, being in the Western USA, am usually still sleeping, I have been fascinated with the net almost as long as I have been in the ENIGMA2000 group.

As, in a past life, my experience was in traffic analysis, I decided to attempt to better understand the workings of the station. This is very much an incomplete work in progress, and I expect to discover more in the months to come. Whether anything in the future finds its way onto these pages depends on whether others find the information useful and/or interesting, but, in any event, I will be continuing, if only for my own enjoyment.

I’ll be setting out some of what we do know about S06s/E17z, presenting some things that may not be immediately obvious from an intercept standpoint, and questioning some of the conventional “wisdom” about the station. Spoiler alert: in my view, it is not run by Ukrainian SZRU, nor did it start operations in 2004.

What we know – the basics

No digit is repeated in the call/preamble of a message.
In this respect, the station looks like a Family IA station. There are exceptions, mainly in the case of messages of 10 groups or longer and/or in what appear to be training schedules.

The “decode key” (DK) always starts with 2, 4, 5, 8, or 9.
The term “decode key” is almost certainly a misnomer here, and its use is discussed briefly later.

The call-up ID never contains a 0, using only digits 1-9.

Messages are a minimum of 5 groups and, usually, a maximum of 9 groups.
Longer messages have been seen but seem to be used for training.
The above rules are occasionally broken.
For example, on 3/11/14 S06s, in what in all likelihood was a training message, sent the following:

127 302 18
49711 63258 87613 95086 31910
65625 94603 94027 13253 95086
31910 65625 38984 52523 02630
38984 52523 02630
302 18 00000

Note the repeat of the digit 2 in the call up, the DK begins with 3, and a number of group values are repeated within the message.

Traffic

In analyzing S06s/E17z traffic, I have considered only the period 1/1/2009-31/10/2014. There are two reasons for this: 1) as S06s was only assigned in 2009, traffic could easily be separated from S06 traffic and extracted from ENIGMA2000 newsletters into an Excel spreadsheet/MySQL database, and 2) in 2009 the station moved from sending one message per month to two per month, giving a greater amount of traffic to consider. I am working on extracting traffic prior to 2009, but these earlier messages have been ignored for the current exercise. As analysis had started by October last year, traffic after that date also had to be ignored. During the period, over 3000 schedules, for a total of 15300+ groups, were intercepted, of which 98% were fully transcribed, yielding about 8100 unique group values.

As previously mentioned, S06s/E17z has a minimum message length of five groups, and it quickly became obvious that certain groups were repeated much more often than could be expected if one-time pads (OTP) were in use. This led me to believe that either the repeated groups (or entire messages) were practice traffic, or that a codebook was in use.

I began by doing a frequency count of groups. In doing so, I noticed that some groups only appeared in specific positions within messages. For example, one of the most used groups, 46062 (appearing in 50+ messages), only ever appears as the first group of a message. This was true for a significant number of other groups. Further, many groups always appeared in the same sequence within messages (which would tend to indicate practice traffic), but fragments (2 or 3 groups) also appeared in the same order within messages consisting of different groups (which would lean more to codebook traffic). I then attempted to see whether the sequence of groups extended beyond the boundaries of a single message.

A very small example of this is shown below.

46062	68672	97478	39685	30485	96632	52537	53317					Msg 1
					96632	52537	53317	06675	41736			Msg 2
						52537	53317	06675	41736	81413	94073	Msg 3
	68672	97478	39685	30485	96632							Msg 4
46062	68672	97478	39685	30485	96632	52537	53317	06675	41736	81413	94073	Seq.
46062	21767	05899	26635	47665	52401							Msg 5
					52401	63919	92699	14600		48754		Msg 6
					52401	63919	92699	14600	74328		64125	Msg 7
					52401	63919	92699	14600	74328	48754	64125	Msg 8
46062	21767	05899	26635	47665	52401	63919	92699	14600	74328	48754	64125	Seq.
etc.												

From the above, I now have two sequences, both anchored by 46062. What I do not know, at this point, is whether which of string 68672-94073 or 21767-64125

Of the 8100 unique group values seen during the period, 6500 (80%) have occurred only once. Of the rest, 330 re-occur often enough to attempt to place them in a sequence. Of these, I have succeeded, so far, in constructing two sequences of 60 and 150 values, which could suggest that at least two, and possibly more, codebooks are in use. This makes sense to me, as 8000+ items in a codebook seems to be very large.

At least one (and usually more) of the 330 (or less than 1% of known groups) often used groups appear in over 60% of all traffic sent by S06s/E17z. This is useful to me as an analyst, because group values for which I have, as yet, no way of inserting into a sequence because of unique/infrequent use are anchored to a known group value. If/when the infrequent groups are used in the future, I should be able to extend sequence recoveries. I won't reproduce the recovered sequences here but, should anyone be interested in them, I can either get them uploaded to my website, or place them in the group files section.

The order of groups is very strictly adhered to (but see final note in this section below). To use the example in the table above, if a message begins with, say, 06675 (messages 2 and 3), then the next, or any following group, could not be, say, 97478 (group 2 in message 4 above). As the sequence is 97478 39685 30485 96632 52537 53317 06675, the message would have to be 97478 06675, whether or not intervening groups are present in the message, or not. i.e. groups can be skipped over (e.g. messages 5 and 6 in the table) but the group order cannot be changed.

In addition to group value sequences, there is also a set of groups/messages that are clearly training messages. These consist of anagrammed groups, one digit differences between groups, numerical sequences, even repeated groups in the same message. For example, a message of 10/1/14, 934 851 6 67534 89756 32109 89756 34216 67453 851 6 00000 (groups 1 and 6 are anagrams, 2 and 4 are the same). Most that I have identified thus far include the groups 6745x and/or 6754x (the above message contains both), so seeing either of those sets of digits in a message more than likely indicates a training/practice message.

There is also a set of about 30 groups that have only appeared in self-contained sets. These probably fit into the sequence, but the differences in messages are so small, and groups don't repeat elsewhere, that they can't be placed in the sequence. As an example messages beginning 21767 (17/09/13: 352 907 6 21767 53672 11834 81002 36903 41412 531 6 00000). There are other messages containing 21767 (e.g. as group 2 in message 5 in the table above) where the sequence fits, but when 21767 is the first group, the groups following are always very similar, and appear nowhere else. It could be that this is a standard "command", or that this is a little used codebook, with value 21767 coincidentally included in more than one code-set, and not enough evidence is yet available to expand the sequence.

One final note on traffic. In attempting to construct group sequences I occasionally came across a group, or groups, that appeared to be out of order. As stated above, the order is strictly adhered to. The out of order phenomenon appears so infrequently that I initially thought that it was due to operator/transcription error, but, prompted by Richard (RNGB), I looked more closely. What appears to be the case is that groups can be "out of sequence" if, and only if, the out of sequence group occurs from group 5 onwards. I have not finished going back and checking all instances yet, but results so far tend to bear this out. It is interesting that the out of sequence group can occur from group 5, and not group 6 (as 5 figure groups are the minimum message set), but this seems to be what happens. Is the fifth group sometimes a filler, and the building block is really 4 groups?

"Decode key" or "DK"

If, as in my view seems likely, S06s/E17z uses a codebook(s), then the three digit group following the call up is not a "decode key". So what is it? I see limited possibilities:

- An authentication key assuring the receiving station that this is really the mother-ship calling. As an example, in the British military we had a grid with letters along the edges. If we were unsure of the real identity of another station on the radio net, we would choose one letter from across the top of the grid (say "P"), and one from the left-hand side (say "Z"), and say "Authenticate PAPA ZULU". The other station would consult their grid, find the corresponding internal grid square which contained, say, "BR", and respond "I authenticate BRAVO ROMEO". Simple, and everyone was assured we were who we said we were.

- If more than one codebook is in use, the trinome, in similar fashion to authenticate, indicates the correct codebook to be used. I find this unlikely, as this procedure has the potential to give away the fact that multiple codebooks are in use!

- A method of ensuring correct reception of call/group count. Again, unlikely, as call + DK + GC = 7 digits, leaving three unused, and therefore prone to error, unless the other three digits are hidden in the message text!

I have made little headway in trying to figure out the use/method of this group. However, as an aside, if it is indeed a decode key, its possible combinations are extremely limited for some of the IDs used, given the other rule constraints. For example, given the rules we know of, then IDs 254 and 524 are limited to a total of 60 possible DKs, all beginning with 8 or 9.

2004 beginnings?

I wasn't listening to number stations as a hobby in the 1990s/2000, so all I have to go on here is some sparse evidence in logs from that period. Those of you with knowledge of stations at that time may be able to shoot down this section very quickly, or may already be aware of this, but I throw it out there as a possibility, based on very limited traffic analysis.

As far as I can tell, common understanding is that S06s began broadcasting in 2004, using a YL voice and "slow" zeros to terminate transmissions. As traffic format was almost identical to S06, it was thought for a long time that the two were related, thus the signature S06s was not assigned until 2009. While I have had to limit my analysis of traffic above to 2009 onwards, in the course of my research I came across a few oddities from long before then which, I think, pushes the genesis of S06s back by at least 4 or 5 years.

The first of those oddities are S06f transmissions. ECL 25 has little information on S06f: S06f OM AM, 3 group msg, ends "00000"

I can find very few S06f logs, and the station seems to have disappeared in mid-2005.

The first log I found was from 1133z, Monday 29/03/1999, on 9145kHz when message 831 109 3 66622 8657(6) 99900 was heard. This transmission breaks a number of S06s rules (repeated digits, DK begins with 1), but ID 831 was an active S06s station, broadcasting on Mondays, 9145kHz, from 2005-2013 at around the 1200/1300z. i.e. Same ID on the same day and frequency, at a similar time.

Log 2 –Monday, 27/03/2000, 0600z, 7620kHz 967 251 3 56338 40503 34210. S06s ID 967 was active in 2005 on 7620kHz at 0600z on Mondays, and from 2007-2014, on and off, on Wednesdays, 7620kHz. An almost perfect match, group count and voice(?) being the only differences.

Log 3 - Thursday 02/06/2005, 1700z, 6666kHz 537 284 3 14493 ….. ….. S06s ID 537 was active, intermittently, from 2007-2014 on Tuesdays, 1500z, on 6666kHz. Again, a very similar profile.

Was S06f the precursor to S06s? If anyone has any other S06f information/logs, and is willing to make them available to me, I would very much appreciate it. Secondly, prior to 2004, a number of S06 IDs later used by S06s were logged. Most are good matches for S06s behavior, and I have yet to find any S06 logs with any of these IDs post 2004.

ID matches are:

	S06				S06s			
ID	Year	Day	Freq.	Time	Year	Day	Freq	Time
176	2001	Mon/Tue	6820/7608	2114/1900	2007-09	Mon	No match	1600
328	2002	Wed	10120	0830	2005-09	Wed	10120	0840
418	1999	Tue	9842	0810	2004-08	Tue	9840	0800
537	1998	Tue	10267	1400	2010	Wed	10265	0800
624	2000	Mon	5750	2200	2002-08	Tue	5745	1800
729	2003	Wed	14580	0700	2004-09	Wed	14580	0700

Only ID 176 seems to be a poor match, and this ID is the only one that appears to have sent anything other than nulls prior to 2004 (a possible 84 group message on 17/06/2003). Please note that the above grid does not represent all frequencies, days of the week, etc., used. For brevity, I have generally included only the supporting part of the evidence. As with most nets, frequencies have changed from time to time.

I have to admit the evidence is thin, at best, but I believe that there is good circumstantial evidence that S06s existed as far back as 1999, and possibly 1998, or even earlier.

Ukrainian SZRU?

At the outset of this section, let me make clear that, while the majority of the preceding paragraphs have been based on evidence, much of this section is opinion, I hope reasoned opinion, but opinion, nonetheless.

It is my view that S06s/E17z is not operated by the Ukrainian SZRU. For that matter, I find it difficult to understand that it is operated by any intelligence agency, at least not on an agency/agent level.

I have seen very little Radio Direction Finding (RDF) for this station. What little RDF information is available seems to indicate a location somewhere in the Ukraine, and maybe in the northwest of the country. However, information is spotty and, I'm guessing, not particularly accurate (we had enough problems getting accurate RDF from AN/FLR-9 (and similar) antennas, and I doubt anyone has one of those in their back yard).

While the format of S06s/E17z messages bears a strong resemblance to S06, it is difficult to understand how traffic is used to communicate with agents. The station does not appear to use OTP, and the same message is repeated to different IDs. For example, between 2009-2014 message 46062 68672 97478 39685 30485 has been sent to every ID operating during the period, and some IDs have received the message more than once. Are all the repeat messages practice traffic? If they are, it places a huge burden on an agent in the field to have to continually receive these messages, rather than the simple null message used by most number stations. If they are not practice, then every single agent has received the exactly the same instruction during the period. If this is communication with agents then, should one agent be discovered, communications to all the rest are compromised if the codebook is recovered. The length of messages is also problematic. Even with a codebook, it is difficult to see how the variety of instructions required to communicate with an agent can be condensed into 5-9 five figure groups. As agency/agent communication, the profile of this station simply does not scan. My personal theory is that this is a military, possibly special forces, net transmitting unit readiness/status instructions, though much more work on traffic analysis is needed to prove/disprove this.

None of the above, of course, precludes S06s/E17z being an SZRU, or at least Ukrainian, net. However, the time and effort (in manpower, equipment, and money) to operate these stations must be huge, and it is here that I have the most problems with the net being associated with the Ukrainian Intelligence.

SZRU was formed in 2004 (often used as "evidence" that S06s/E17z is part of the organization – even here there is a disconnect, as SZRU began operating in October, 2004, and the first S06s traffic was noted in May, 2004).
There were, of course, Intelligence organizations operating in Ukraine prior to this[1], so even if the net has its origins in the 1990s, it could still be Ukraine related.

However, in 2003 the total intelligence budget in Ukraine (i.e. for all agencies/activities, including entities such as the Tax Police, State Border Service, and State Customs Service[2]), was $14.2M, rising to $41.2M in 2007[3]. No figures are available for 2008 onwards, but even if the Ukraine Intelligence budget has risen by the 2003-07 average of over 40% per year (a totally unsustainable figure given Ukraine's economy – Government spending rose from $7.0B in 2007 to $11.2B in 2014[4]), today's total Intelligence budget would only be around $434.5M. Given total government spending over the same period, the Intelligence budget is much likely to be closer to $100M, for all intelligence activities. The cost of operating S06s/E17z as an Intelligence operation, both home and abroad, manpower and equipment, would totally overwhelm that budget.

[1] For a brief history, see *Political and Budgetary Oversight of the Ukrainian Intelligence Community: Processes, Problems and Prospects for Reform*, P.67 by Petrov, O. 2007, Naval Postgraduate School, Monterey, CA
[2] *Ibid*. P.63
[3] *Ibid*. P.74
[4] http://www.tradingeconomics.com/ukraine/government-spending

Conclusion

There is still much unknown about S06s/E17z. In attempting to answer one question, it seems that 4 or 5 additional questions are raised. For me, that is part of the fascination of not only this group of stations, but number stations in general. I intend to continue to try and bring its operations more into the light, and hope that, even if you can't agree with my conclusions, you have found this informative. Again, if anyone has information (logs, RDF, personal knowledge, etc.) about anything discussed here, I would be grateful if you can share it with me.

For anyone interested in Intelligence activities, I have to recommend the Petrov Naval Postgraduate School Masters thesis cited here. It is available on the web, and a Google search will find it. Many of Petrov's ideas can be transferred to Intelligence agencies beyond those of the Ukraine.

Finally, I have to thank Richard (RNGB) for his knowledge and help during this exercise. Without his patience and encouragement, very little of the above would have been possible.

JkC [*Thanks Jim, a very interesting insight .....Ed*]

For Petrov: www.dcaf.ch/content/download/35606/526429/file/**Petrov**.pdf

And now on to the logs:
ID 471 on Wednesdays was found sending nulls every day from the 2nd to the 6th of the month commencing at the scheduled start time of 0820z and then at 10 minute intervals using 5732, 6260, 6859, 7547, 8417 and 9262kHz consecutively. The following week it went into message sending, with the repeat sent on the 3rd week, leaving the final week for a null sending using the last two frequencies of 8417/9262kHz at scheduled time of 0820/0830z
Similarly **ID729** also sent nulls daily from the 2nd until the 5th of the month using 14235, 15355, 16125, 16865, 17455 and 18294kHz consecutively. Sent a message with a repeat the following 2 weeks and then null sending for the last week. (Presumably was unable to send a new message as there would be no time left for a repeat before the end of the month)

S06s February log:
Mondays

2nd/9th	0830/40	8057/8530	'371' 945 6 94302 93250 85837 32062 33461 98237
16th/23rd			'371' 420 5 67286 74059 72532 59526 30430
2nd/9th	0900/10	14675/12830	'872' 931 5 84008 83450 42868 26318 36534

16th/23rd			‘872’ 913 5 57914 99227 16046 11393 00359
2nd/9th	1200/10	8420/10635	‘831’ 962 5 34621 86804 13264 96693 46798
16th/23rd			‘831’ 970 5 58936 32738 48354 41045 96298

Tuesdays

3rd/10th	0600/10	16145/14240	‘438’ 502 6 41442 44599 36384 58353 40385 32934
17th/24th			‘438’ 590 6 31704 91596 47308 92107 40398 38448
3rd/10th	0700/15	5250/6320	‘374’ 921 5 30181 39033 31747 38634 35674
17th/24th			‘374’ 820 5 44833 36140 39300 30334 47733
3rd/10th	0730/40	7410/11532	‘427’ 589 6 62159 85689 57708 29853 28328 15785
17th/24th			‘427’ 859 6 23247 17099 94961 35826 56096 77233
3rd/10th	0800/10	11945/13195	‘352’ 981 6 11909 44056 83104 55996 85756 99566
17th/24th			‘352’ 491 6 10597 23521 4766092883 69901 88620
3rd/10th	1000/10	6440/5660	‘893’ 501 6 74814 47375 18272 29626 58577 50754
17th/24th			‘893’ 450 6 95225 84090 09531 88430 33240 61135
3rd/10th	1100/10		‘754’ No reports
17th/24th			‘754’ No reports
3rd/10th	1500/10	6845/9170	‘537’ 948 6 10244 10276 97774 18538 98832 47769
17th/24th			‘537’ 810 6 54545 50128 99477 83574 48874 94031

Wednesday

2nd/3rd/4th/5th/6th	0820/30/40/50/00/10		‘471’ 00000 (See notes above)
11th/18th	0820/30	6778/7675	‘471’ 820 5 44365 43025 39283 33578 47568
25th		8417/9262	‘471’ 00000
4th/11th	0830/40	7335/11830	‘745’ 902 6 14199 96813 65069 25616 33796 13577
18th/25th			‘745’ 280 6 21816 42997 94184 47374 74154 08531
2nd/3rd/4th/5th	1000/10/20/30/40/50		‘729’ 00000 (See notes above)
11th/18th	1000/10	12365/14289	‘729’ 815 6 43247 32329 48080 36478 39013 82605
25th			‘729’ 00000
4th/11th	1230/40	4580/6420	‘967’ NRH
18th/25th			‘967’ NRH

Thursdays

5th/12th (E17z)	0800/10	11170/9820	‘674’ 230 5 33578 89136 36335 45164 83303
19th/26th			‘674’ 590 8 11171 64385 82707 06123 22536 88280 84116 53718
5th/12th	0900/10	5765/6315	‘624’ 917 5 31704 91596 47308 92107 40398
19th/26th			‘624’ 937 5 96320 36793 53038 76342 15009
5th/12th	0900/10	12952/13565	‘167’ 249 5 38311 81228 33428 93171 43979
19th/26th			‘167’ 490 5 01405 15003 24357 60583 54545
5th/12th	0930/40	5765/6315	‘314’ 298 5 40853 48988 34015 84394 41577
19th/26th			‘314’ 582 6 42169 35797 33873 39235 93615 84408
5th/12th	0950/1000	12445/13130	‘635’ 901 7 80744 86200 84706 42227 61736 40613 77249
19th/26th			‘635’ NRH
5th/12th	1200/10	8812/9540	‘425’ 803 6 95225 84090 09531 88430 33240 61135
19th/26th			‘425’ 837 6 36913 39919 43334 40151 91243 33830

Fridays

6th/13th	0600/10	7125/8795	‘934’ NRH
20th/27th			‘934’ NRH
6th/13th	0700/10	7150/8215	‘196’ 834 5 48115 24153 84706 42227 61735
20th/27th			‘196’ 235 7 31704 91596 47308 92107 40398 85417 38448
2nd/9th	0800/10	5810/6770	‘278’ 913 5 87380 36118 36744 37610 86587
20th/27th			‘278’ 951 6 81399 33242 44702 32120 88355 43979
6th/13th	0930/40	11780/12570	‘516’ 804 7 31921 33583 88671 34120 88330 49310 65748
20th/27th			‘516’ 430 7 58312 36287 83448 80145 36220 91318 40832

Saturday

7th	1200/10	8680/8260	‘254’ 891 6 46062 68672 97478 39685 30485 96632
7th	2100/10	5420/4543	‘874’ NRH

Sundays

1st/8th	0630/40	13470/16515	‘524’ 910 6 33821 34934 34102 91946 43341 33300
15th/22nd			‘524’ 937 6 91309 84062 43661 49504 35328 48896

Thanks to RNGB, JkC, Malc,

S06 analysis and logs from PoSW

Several long-standing S06 Russian OM schedules appear to have gone, not survived into 2015 - or at least I have not been able to find them. The Monday + Thursday 1900 UTC or 1905 UTC S06 has not appeared in 2015 on the expected frequencies, 3,192 or 3,838 kHz, plus or minus, unless it is under all the locally generated QRM which gets fierce at these lower frequencies. Last logged by me at 1905 UTC on the Thursday of Christmas Day
on 3,838 with a respectable S8 and "349 349 349 00000". The most predictable of all S06 schedules with regard to frequencies used at any given time of the year and always with call "349", first noted in early 2010, as far as I am aware had not sent a "full message" since May 2011.
On to some S06 survivors and more "no shows":-

Weekly Saturday 1600 or 1605 UTC Schedule:-
3-Jan-15:- 1605 UTC, 5,068 kHz, "491 491 491 00000", found about one minute into the transmission on a lower frequency than anticipated. Signal strength S7 to S8, call changed from "194" of 2014.

10-Jan-15:- 1605 UTC, 5,073 kHz, "491 491 491 00000", peaking over S9.

17-Jan-15:- 1605 UTC, 5,073 kHz, "491 491 491 00000", S7 to S8.

7-Feb-15:- 1605 UTC, 5,073 kHz, "491 491 491 00000", up to S9. Carrier was up on 5,073
when checked at 1547 UTC, tone heard after 1552 and a single spoken Russian "491" about a minute afterwards.

14-Feb-15:- 1600 UTC, 6,778 kHz, first time this year noted with the "on the hour" start up,
"491 491 491 00000". Peaking well over S9, carrier noted on 6,778 at 1545 UTC, tone at 1548 and a single spoken Russian "491" about a minute afterwards.

21-Feb-15:- 1600 UTC, 6,778 kHz, "491 491 491 00000", S8 to S9.

The other weekly Saturday schedule at either 1930 UTC or 1935 UTC appears to have gone, or at least I haven't been able to find it so far in 2015. Last heard on 27-December-2014 at 1935 UTC on 3,842 kHz with "396 396 396 00000" at signal strength indication of
S6 to S7, not too bad for a low frequency.

First + Third Saturdays in the Month 2000 + 2100 UTC Schedule:-
3-Jan-15:- 2000 UTC, 4,047 kHz, "738 738 738 00000", S9, no problem to find.
2100 UTC, 3,508 kHz, second sending in the 80 metre amateur band, S8 to S9, again no problem to find. The call has changed from "362" used in 2014, frequencies in not too far from those used in the last months of that year which were 4,027 and 3,368 , plus or minus a few kHz.

7-Feb-15:- 2000 UTC, 4,057 kHz, 10 kHz higher than when last heard, underneath an S9+ "XJT" noise-maker, could just about make out the S06 "738 738 738 00000".
2100 UTC, 3,522 kHz, also higher than last time, second sending, S9 carrier but audio seemed somewhat low, lots of strong amateur CW all around.

21-Feb-15:- 2000 UTC, 4,047 kHz, clear of the "XJT" on 4,057 – still there, "738 738 738 00000". Strength S7.
2100 UTC, 3,522 kHz, second sending, peaking S8, no so much amateur CW as last time.

Another S06 schedule which has so far not been found in 2015 is the first + third Saturdays in the month 2030 + 2130 UTC, heard in the last months of 2014 on 4,616 + 4,036 kHz with the usual variations with call "621". Not found on 3-January or 7-February.

One new S06 schedule found in 2015:-
First + Third Fridays in the Month 2000 + 2100 UTC Schedule:-
2-Jan-15:- 2101 UTC, 5,821 kHz, S06 in progress, "392 392 392 00000", found while searching for the first + third Fridays G06 schedule which seems not to have survived into the New Year.

16-Jan-15:- 2002 UTC, 7,897 kHz, "392 392 392 00000", looks like the first sending of the schedule noted on the 2nd. S3 to S4 at best, not strong.
2100 UTC, 5,821 kHz, second sending, S7 at best, weaker than last time. Looks as if this Russian language relative has replaced the G06, frequencies are not too different - or perhaps it has been there all the time - G06 used 7,844 + 5,769 kHz in the last months of 2014.

And this S06 schedule seems to have been a very short – lived one, not found on the first Friday in February 2015, the 6th, not at 2000 or 2100 UTC.

UPDATE :- It turns out that this schedule *has* survived into February but has moved by one hour:-
20-Feb-15:- 1900 UTC, 7,897 kHz, actually found about one minute into the transmission,
"392 392 392 00000", strength S7.
2000 UTC, 5,826 kHz, second sending, peaking well over an indicated S9.
Something out of the ordinary here, I thought these time shifts only took place in spring and autumn, that is when the clocks change forwards or back presumably so that the schedule appears at the same local clock time for the convenience of the intended recipient.
We'd better re-classify it as, "First + Third Fridays in the Month 1900 + 2000 UTC Schedule, then.

S06s [YL]

A selection of the more readily received in the UK transmissions from "Young Olga", always soon over and done with four minutes of call-up and a short message; I have never heard more than seven 5F groups, two transmissions ten minutes apart. There used to be a couple of S06s schedules in the UK evening time, but I think these are long gone. The following are in the UK morning and in one case the mid afternoon.

Monday 0900 + 0910 UTC Schedule:-
26-Jan-15:- 0900 UTC, 14,675 kHz, very weak signal, could just make out the "872" call.
0910 UTC, 12,830 kHz, should be the second sending according to the prediction lists, very weak signal of some kind, unable to confirm as S06s.

9-Feb-15:- 0900 UTC, 14,675 kHz, calling "872", DK/GC "931 931 5 5". Weak signal, difficult copy. "84008 83450 42868 26318 36534".
0910 UTC, 12,830 kHz, second sending, just a little bit stronger.

16-Feb-15:- 0900 UTC, 14,675 kHz, weak signal down in the noise, largely unreadable.
0910 UTC, 12,830 kHz, second sending, call "872", DK/GC "913 913 5 5", sank into the noise somewhat during the message part of the transmission, sounded like, "57914 89227 16046 11393 00359", all "query".

Tuesday 1500 + 1510 UTC Schedule:-
27-Jan-15:- 1510 UTC, 9,170 kHz, weak signal with call "537", DK/GC sounded like "804 804 6 6", everything else difficult to hear. The prediction lists suggest 6,845 kHz for the 1500 UTC sending.

17-Feb-15:- 1500 UTC, 6,845 kHz, very weak signal, could just make out the "537" call.
1510 UTC, 9,170 kHz, much better copy although only strength S5 at best, call "537", DK/GC "810 810 6 6", "54545 50128 99477 83574 48874 94031".

Wednesday 1000 + 1010 UTC Schedule:-
14-Jan-15:- 1000 UTC, 12,365 kHz, call "729", DK/GC "851 851 6 6", "44530 37108 56798 30221 47454 86730". Strength S6 to S7.
1010 UTC, 14,280 kHz, second sending, S6 with deep fading. Inside the 20 metre amateur band but not attracting any hostile attention at this time of day.

21-Jan-15:- 1000 UTC, 12,365 kHz, "729" and DK/GC "534 534 6 6". "41645 35709 36414 49790 32628 39730". S6 to S7.
1010 UTC, 14,280 kHz, second sending, S5 to S6.

28-Jan-15:- 1000 UTC, 12,365 kHz, "729" and DK/GC "534 534 6 6". Same 5Fs as last Tuesday, see above. Peaking well over S9.
1010 UTC, 14,280 kHz, second sending, S9+, very strong this morning.

11-Feb-15:- 1000 UTC, 12,365 kHz, call "729", DK/GC "815 815 6 6". "43247 32329 48080 36478 39013 82605", S8 with deep QSB.
1010 UTC, 14,280 kHz, second sending, up to S9.

18-Feb-15:- 1000 UTC, 12,365 kHz, "729", DK/GC "815 815 6 6", same 5F groups as last week. S8 to S9, sounded like a trace of "high cycle", i.e. something higher than fifty or sixty cycles, ripple on the carrier.
1010 UTC, 14,280 kHz, second sending, S9+, also with slight AC on the carrier.

Thursday 0900 + 0910 UTC Schedule:-
8-Jan-15:- 0900 UTC, 12,952 kHz, call "167", DK/GC "493 493 5 5". "65136 36049 13153 37049 31418". S9+, very strong signal.
0910 UTC, 13,565 kHz, second sending, also S9+.

19-Feb-15:- 0900 UTC, 12,952 kHz, call "167", DK/GC "490 490 5 5". "01405 15003 24357 60583 54545", S9+.
0910 UTC, 13,565 kHz, second sending, also S9+.

Thursday 0950 + 1000 UTC Schedule:-
8-Jan-15:- 0950 UTC, 12,445 kHz, calling "635", DK/GC "204 204 7 7". "83293 81099 85793 93110 19385 83910 65839". S8 to S9.
1000 UTC, 13,130 kHz, second sending, peaking over S9.

15-Jan-15:- 0950 UTC, 12,445 kHz, "635" and "241 241 7 7", "35647 36545 34528 39182 37447 36382 42745", S7 to S8.
1000 UTC, 13,130 kHz, second sending, over S9.

Friday 0930 + 0940 UTC Schedule:-
16-Jan-15:- 0930 UTC, 11,780 kHz, calling "516", DK/GC "842 842 7 7". "81589 69992 42717 83203 84124 35344 32987". S9 over-riding a weak broadcast station, 25 metre band.
0940 UTC, 12,570 kHz, second sending, close to a strong "XJT".

23-Jan-15:- 0930 UTC, 11,780 kHz, call "516", DK/GC "842 842 7 7", 5Fs same as last time. S9 with weak broadcaster underneath.
0940 UTC, 12,570 kHz, second sending, S9, no sign of the "XJT".

30-Jan-15:- 0930 UTC, 11,780 kHz, no message this morning, somewhat unusual for S06s, "516 516 516 00000". S9 with deep QSB.
0940 UTC, actually started well before this time, 12,570 kHz, second sending, S9+, very strong.

13-Feb-15:- 0930 UTC, 11,780 kHz, call "516", DK/GC "804 804 7 7". "31921 33583 88671 34120 88330 49310 65748". S9+ signal.
0940 UTC, 12,570 kHz, second sending, also S9+.

S11a log Jan/Feb

4624kHz	2100z	15/01[I/P 121/20 02559 46764 55370 34013 10627 68886 31369 11474 43099 16484 59408 98384 45564 03353 55474 73214 55820 28323 34977 80474] Копец 2107z Strong	JkC	THU
4828kHz	0455z	02/01 [321/00] Good	RNGB	FRI
	0455z	13/01 [321/00]	RNGB	TUE
	0455z	20/01 [321/00] Копец 0458z Strong QRM1 QSB1	JkC	TUE
	0455z	23/01 [321/00] Копец 0458z	Ed Smith	FRI
	0455z	27/01 [321/00]	Ed Smith	TUE
	0455z	03/02 [321/00]	RNGB, JkC	TUE
	0455z	06/02 [321/00] Копец 0458z Strong QRM2 QSB1	JkC	FRI
	0455z	24/02 [321/00]	Ed Smith	TUE
	0455z	27/02 [321/00] Копец 0458z	Ed Smith	FRI

5815kHz	1955z	02/01 [371/00]	RNGB	FRI
	1955z	07/01 [371/00]	RNGB, Malc, JkC	WED
	1955z	09/01 [371/00] Конец 1958z S2	Malc	FRI
	1955z	14/01 [371/00] Конец 1958z S9+10	Malc, RNGB	WED
	1955z	16/01 [371/00] Копец 1958z Fair BC QRM2 QSB1	JkC	FRI
	1955z	21/01 [371/00] Копец 1958z S9+10	Malc	WED
	1955z	23/01 [371/00] S9+20	Malc	FRI
	1955z	28/01 [379/31 81510 18132 50787 34072 44242 63436.....10143 81027] Копец 2004z Strong	JkC, RNGB	WED
	1955z	30/01 [379/31 81510.....81027] Копец 12004z Fair QRM3 QSB1	JkC	FRI
	1955z	04/02 [377/36 29205 96871 30878 38691 11933 75105 76030....01950 49105] Копец 2006z Strong	JkC, RNGB	WED
	1955z	06/02 [377/36 29205…..etc] Repeat of Wednesday	RNGB	FRI
	1955z	11/02 [371/00] Strong	JkC	WED
	1955z	18/02 [371/00] Копец]1958z Fair QRM3 QSB1	JkC	WED
6433kHz	1020z	07/01 [227/30…..] too weak to copy	Malc	WED
	1020z	10/01 [227/30 79142 01571 77938 33074 39203……83127 44859	RNGB	SAT
	1020z	11/02 [221/00]	Ed Smith	WED
	1020z	18/02 [221/00] Конец 1023z	Ed Smith	WED
	1020z	21/02 [221/00] Конец 1023z S4	Malc	SAT
7504kHz	0915z	02/01 [484/00]	RNGB	FRI
	0915z	06/01 [484/00]	Malc	TUE
	0915z	09/01 [484/00] Конец 0918z S8	Malc	FRI
	0915z	13/01 [484/00] Weak	RNGB	TUE
	0915z	23/01 [481/35 33038……] Very weak	RNGB	FRI
	0915z	30/01 [484/00] S4	Malc	FRI
	0915z	03/02 [484/00]	RNGB, JkC	TUE
	0915z	13/02 [484/00]	RNGB	FRI
	0915z	17/02 [484/00] Конец 0918z S3	Malc	TUE
	0915z	20/02 [484/00] Конец 0918z S4	Malc	FRI
	0915z	24/02 [484/31 37652 40872 28926 74343 29222 59312 87181 74229……46164]	RNGB	TUE
9610kHz	1020z	06/01 [426/00]	Malc	TUE
	1020z	13/01 [422/34 32469 78117 87782 24933 34609 21075 52458 02808……13634 84330]	RNGB	TUE
	1020z	20/01 [426/00]	RNGB	TUE
	1020z	27/01 [426/00]	RNGB	TUE
	1020z	30/01 [426/00] S3	Malc	FRI
	1020z	03/02 [429/36 74426 09876 98821 45250 60660 40616 82243 17165……08011 49230]	RNGB, JkC	TUE
	1020z	17/02 [426/00] Конец 1023z S3	Malc	TUE
	1020z	20/02 [426/00] S2	Malc	FRI
	1020z	27/02 [426/00] Конец 1023z S2	Malc	FRI
12153kHz	1045z	27/01 [426/00] Sent in error. Should have been ID 576 in E11	RNGB, Malc	TUE
12530kHz	1015z	01/01 [475/00]	RNGB	THU
	1015z	05/01 [475/00] S7	Malc	MON
	1015z	08/01 [475/00] Конец 1018z S9	Malc	THU
	1015z	15/01 [475/00]	RNGB	THU
	1015z	22/01 [475/00]	Malc	THU
	1015z	26/01 [478/38 53425 18080 27345 20597 69730 76522 40897 46859……36119 08631] Weak	RNGB	MON
	1015z	02/02 [475/00]	RNGB	MON
	1015z	16/02 [475/00]	Malc	MON
	1015z	23/02 [472/30 03255 86581 31433 86281 27657 23475 42004 53260……23684 67403]	RNGB	MON
19099kHz	0715z	19/01 [382/00] Weak	RNGB	MON
	0715z	02/02 [382/00] Weak	RNGB	MON
	0715z	16/02 [382/00] Very weak	RNGB	MON
	0715z	25/02 [382/00]	Ed Smith	WED

V02a

V02a put in three welcome appearances during February in the usual 2000z slot. The voice was only properly audible in LSB mode.

On 12/2 only the "Attencion" and callups were heard before the TX switched to M08a.

Logs:

V02a 7554kHz 2000z 12/2 [A20142 42772 55212] Callups only before switching to M08a. THU
V02a 7554kHz 2000z 17/2 [A07671 11012 24331] TUE
V02a 7554kHz 2000z 24/2 [A????? ?7771 6111?] Extremely weak but definitely V02a. TUE

V07
January 2015
Sunday

0100z	**16037kHz**	**0120z**	**14637kHz**	**0140z**	**12137kHz**	
04/01	661 661 661 000					Very weak
11/01	661 661 661 000					Weak
18/01	661 661 661 000					Strong
25/01	661 1 529 71 85475 ... 02593 000 000					Week, poor audio

661 1 529 71
85475 29200 55095 92190 33543
73901 79788 17050 89213 20778
54859 84373 00325 97051 18481
23984 ?4737 03337 77399 38021
01385 44459 29745 37389 87402
99113 23974 33191 10098 88733
78183 80770 01174 32212 04272
28194 34893 73720 81705 52523
91053 59441 38303 99873 09947
39775 57544 23380 19231 30033
58158 37512 83530 13838 72932
32331 33723 70322 37583 48013
35037 52881 00392 39207 44208
13194 72237 00792 07182 03189
02593 000 000 *Courtesy DanAr*

February 2015

0100z	**18368kHz**	**0120z**	**16268kHz**	**0140z**	**13968kHz**	
08/02	329 1 258 65 58048 ... 14789 000 000					Fair
15/02	329 000					Weak
22/02	329 1 337 83 37410 ... 29348 000 000					

329 1 337 83
37410 39120 99721 08153 90213 33093 07022 33061 32803 75380
80809 95528 18584 21?33 79329 37887 83042 39076 95726 52588
82832 83137 35748 05182 62449 48594 43411 31096 74032 65370
37461 73313 47316 76327 20591 85398 40852 73134 92997 38943
38479 31844 22309 44943 69144 84467 72782 13337 15326 13315
57991 16701 33873 19341 56113 08304 46353 34866 85233 33083
05431 75441 05405 23418 71229 19305 33992 59107 73029 15554
40831 74840 52790 49057 21833 55446 88333 89548 83719 04020
33277 29175 29348 000 000 *Courtesy westt1us*

There may be a few mistakes as tres (3) and seis (6) sounded very similar

V13

11430kHz0800z	13/02 V13 AM New Star #4	AB	FRI
15388kHz0201z	09/02[I/P ... lost audio]0217z Strong QRM1 QSB1	Hong Kong remote	JkC	MON
15388kHz0300z	09/02[?????]0327z Strong QRM3 QSB1	Hong Kong remote	JkC	MON
15388kHz 0300z	11/02[????]0328z Strong QRM3	Hong Kong remote	JkC	WED
15388kHz 0200z	17/02 [ ] 0230z	ES	TUE
15388kHz 0300z	17/02 [ ] 0330z	ES	TUE

V21

V21 Logs and analysis.

V21 continued on its expected frequencies of 5637kHz and 6529kHz. Sadly the transmissions on 5637kHz are much reduced over previous months and are now mostly confined to between 1400z and 1500z and mostly consist of fast counting.
The 6529kHz transmissions are often appearing between 1345 and 1400z currently rather than starting on or very close to 1400z. Expect a switch back to 1300z when the clocks "Spring forward"

Most of the transmissions have been of the counting variety. One particular operator seems to dislike the numbers 31 to 40 and often skips them during his counts. Several counts above 100 have been heard but these are still a rarity.
A very fast transmission occurred on 10/1 on 5637kHz with the number 17 being very popular for some reason! Then on 29/1 the number 20 proved very popular. Could there be a reason for this?

On 27/1 on 5637kHz a transmission with strings of numbers rather than counting occurred. This seemed to follow the expected format for these types of transmissions.

Logs:

V21 6529kHz 1400z 1/1 [30 END] THU
V21 6529kHz 1355z 3/1 [110, 120, ??, 90, 50, 60, 40, 30, 10, 50, becomes too weak to copy] Found in progress. SAT
V21 6529kHz 1400z 4/1 [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] SUN
V21 5637kHz 1405z 4/1 In progress, too weak to copy, SUN
V21 6529kHz 1400z 5/1 [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), 17 END] MON
V21 6529kHz 1400z 6/1 [60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 30, 20 END] TUE
V21 6529kHz 1400z 7/1 [50, 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 20, 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 20 END] WED
V21 5637kHz 1410z 7/1 [32, ??, ??, 49, 16, becomes too weak to copy] WED
V21 5637kHz 2215z 7/1 [23, 9, 31, 49, 22, 6, 22, 26, 10, 29, 26, 49, 16, 36, 12 END] WED
V21 6529kHz 1400z 8/1 [??, 50 (skips 31-40), ??, 50 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 40 END] THU
V21 5637kHz 1410z 8/1 Very fast too weak to copy. THU
V21 6529kHz 1400z 9/1 [60 (skips 31-40), 50 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 30, 30, 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40) END] FRI
V21 5637kHz 1400z 9/1 [42, 42, ??, 41, 49, 36, 42, ??, 3 minute pause, 36, ??, 22, ??, ??, 35, ??, 42, 49, 49, 49, 22, 49, 49, ??, 49, 22, 22, ??] Very fast and very weak. Difficult to copy. FRI
V21 6529kHz 1400z 10/1 [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), 60 (skips 31-40), 60 (skips 31-40), 50 (skips 31-40), 60, 50, 50 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60, 50, 100, 50, 50, becomes too weak to copy for 2 minutes, 50, 30 END] TX lasted 25 minutes. SAT
V21 5637kHz 1400z 10/1 [32, 32, 32, 10, 24, 18, 22, 16, ??, 18, 18, 18, 12, 17, 17, 17, 6, 17, 17, 18, 18, 16, 25, 18, 18, 18, 22, 17, 17, 17, 17, 17, 17, 17, 16, 18, 17, 23, 16, 23, 22, 18, 17, 17, 17, 16, 17, 16, ??, ??, 17, 17, 17, 17, 17, 17, 17, 10, 17, 17, 17, 19, 17, ??, 17, 17, 17, 17, 17, 17, 17, ??, 17, 17, 17 END] This guy likes 17 apparently. Very fast delivery. TX lasted 11 minutes. SAT
V21 5637kHz 1400z 12/1 [9, 11, 23, 21, 19, 20, 22, 21, 19, 23, ??, 21, ??, 20, 20, 20, 22, 22, ??, 22, 22, 21, 19, 22, 22, ??, ??, 19, 19, 19, ??, ??, 23, 20, 20, ??, 18, 18, ??, 22, 21, 21, 19, 19, 18, 16, 17, 15, 16, 22, 19, ??, 16, 17, 17, 17, 17, 17 END] MON
V21 6529kHz 1400z 12/1 [60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), becomes too weak to copy.] MON
V21 6529kHz 1340z 13/1 [30, 30, 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), continues for several minutes but too weak to copy] TUE
V21 5637kHz 1400z 13/1 [present for about 8 minutes very fat but too week to copy, then slower 49, 42, 10, 16, 22, the very fast 49, 22, 21, 16, then too weak to copy.] TUE
V21 5637kHz 1400z 14/1 [16, 49, 49, 38, ??, 32, 49, 22, 56, 22, 43, 49, 49, 49, 26, 42, 38, 46 END] WED
V21 6529kHz 1400z [50, 10 END] WED
V21 5637kHz 1400z 15/1 [too weak to copy for first 2 minutes, 46?, ??, ??, 46, 42, ??, 49, 16, 49, 22, 26, 28, 21, 32, ?? END] TX lasted 9 minutes. THU
V21 6529kHz 1400z 15/1 [60 (skips 31-40), 30, 50 (skips 31-40), ??, 60 (skips 31-40), 60 (skips 31-40), 50 (skips 31-40) END] THU
V21 5637kHz 1400z 16/1 [Present but too weak to copy.] FRI
V21 6529kHz 1400z 16/1 [40, 50, ??, 30, ??, 60, 50, 50, 50 END] FRI
V21 5637kHz 1400z 17/1 [Present but too weak to copy.] SAT
V21 6529kHz 1400z 17/1 [50, 60, 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), 60 (skips 31-40), 30 END] SAT
V21 6529kHz 1400z 18/1 [Present but too weak to copy] SUN
V21 5637kHz 1405z 18/1 [7, 49, 41, ??, 46, 49, ??, becomes too weak to copy] SUN
V21 6529kHz 1400z 19/1 [Present but too weak to copy] MON
V21 5637kHz 1405z 19/1 [Mostly too weak to copy but one count to 49 then to 10 audible] MON
V21 5637kHz 1400z 20/1 [Present but too fast and weak to copy] TUE
V21 6529kHz 1400z 20/1 [Present but too weak to copy] TUE
V21 5637kHz 1430z 21/1 [Present but too fast and weak to copy] WED
V21 6529kHz 1400z 21/1 [Present but too weak to copy] WED
V21 5637kHz 1400z 22/1 [Weak with fast delivery, some counts into the 40s audible] THU
V21 6529kHz 1400z 22/1 [One count to 40 heard otherwise too weak to copy] THU
V21 5637kHz 1400z 24/1 [Present but too weak to copy] SAT
V21 6529kHz 1400z 24/1 [Present but too weak to copy] SAT
V21 5637kHz 1415z 24/1 [very fast delivery counts to 42 and 46 heard but difficult to copy.] SAT
V21 5637kHz 1400z 25/1 [Present but too weak to copy] SUN
V21 5637kHz 1230z 27/1 [22 989 294 27.........21 9?? ??? 28.....21 ??? 23.....counts to 33 then 00 23 968 263 11 00 23......??.......00 29 2?? 421 11 00 24.....24 993 421 11 00 23 24 9?? 23...counts to 27......11 00 ??? 321 6 24 ?? 423 23......?4 924 ?? 11 24 28 ?27 8..........23 9?4 ??.........24 369 437 8.......24 ??? ?? 11......114 9?4 ???.......continues with similar for 7 minutes. Difficult to copy] TUE
V21 6529kHz 1345z 28/1 [Present but too weak to copy] WED
V21 5637kHz 1400z 28/1 [22 49 becomes too weak to copy] WED
V21 5637kHz 1400z 29/1 [Too weak to copy] THU
V21 5637kHz 2230z 29/1 [7, 24, 30, 23, 18, 21, 20, 20, 20, 26, 21, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 32, ??, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 10, ??, 20, 6, 20, 20, 20, 20, 20, ??, 20, 20 END] THU
V21 6529kHz 1400z 30/1 [50, 50, 60, 60, 50, 60, becomes too weak to copy. FRI
V21 5637kHz 1415z 31/1 [21, 21, becomes too weak to copy but continues for approximately 12 minutes] SAT
V21 6529kHz 1400z 31/1 [Present but too weak to copy] SAT
V21 5637kHz 1415z 1/2 Present but too weak to copy. SUN
V21 6529kHz 1400z 2/2 [50, 60, 60 (skips 31-40), 50 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 20, 30 END] MON
V21 6529kHz 1400z 4/2 [50, 80, 10, 50, 110, 110, 30, 30, 110, 40, 40, 100, 60, 20, 40, 30, 40 END] Rare count above 100. TUE
V21 6529kHz 1345z 5/2 [60, 50 (skips 31-40), 60, 50 (skips 31-40), 50 (skips 31-40), 50 (skips 31-40), 50 (skips 31-40), 50 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 10 END] Found in progress. WED
V21 6529kHz 1350z 6/2 [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, 60 END] THU
V21 6529kHz 1345z 7/2 [60, 60, 60, 30, 50, 30, 30, 30, 30, 30, 60, 50, 110, 110, 60, 10 END] Found in progress FRI
V21 6529kHz 1405z 8/2 [100, 110, 20 END] SAT
V21 6529kHz 1355z 8/2 [60, 30 END] SAT
V21 6529kHz 1405z 9/2 [34, 40, 30, becomes too weak to copy] SUN
V21 6529kHz 1355z 10/2 [100, 70, 70, 30, 40, 30, 110, 50 END] MON
V21 6529kHz 1345z 11/2 [60, 10, 70, 20 END] Found in progress. TUE
V21 6529kHz 1350z 12/2 [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), 20 END] THU
V21 6529kHz 1350z 13/2 [60, 100, 100, 110, 30 END] FRI
V21 6529kHz 1350z 14/2 [100, 60, 70, 20 END] SAT
V21 6529kHz 1400z 14/2 [30, 10, 10, 10, 10, 30, 10, 160, 60, 60 END] SAT

V21 6529kHz 1345z 16/2 [50, 100, 100, 100, 40, 30, 50, ??, 100, too weak to copy for 2 minutes, 100, 60, 23 END] found in progress. MON
V21 6529kHz 1400z 17/2 [13 minute transmission too weak to copy until then end when 60, 40 heard] TUE
V21 6529kHz 1400z 18/2 [60, 30, 50, 40, 30, 40 END] WED
V21 6529kHz 1345z 19/2 [50, 50, 40, 50, 40, 40, 30, 30, 30, 10, 20, 10, 30, too weak to copy for 6 minutes, 30, 30, 30, ?? END] THU
V21 6529kHz 1400z 20/2 [80, 10 END] SAT
V21 6529kHz 1345z 21/2 [mostly too weak but one count to 100 heard] SUN
V21 6529kHz 1415z 22/2 [50, 100, 100, becomes to weak to copy after 60 on the next count.] MON
V21 6529kHz 1415z 23/2 [50, 30, 10, 10, 50, 30, 10, 20, 70, 30, 30, 20, 30, 30, 30, 20, 20, 30 END] TUE
V21 6529kHz 1350z 25/2 [100, 80, 110, 40, too weak to copy for 5 minutes, 30, 100, 80, 30, 40, 20, 30, becomes too weak to copy.] WED
V21 6529kHz 1350z 26/2 [60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 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, 30, 20, 30, 30, 30, 30, 50, 10 END] THU
V21 6529kHz 1350z 27/2 [60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40), 60 (skips 31-40) END] FRI
V21 6529kHz 1350z 28/2 [60, 60, 30, 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), 60 (skips 31-40), 30 END] SAT

Polytones

XPA c
January 2015
Wednesday/Saturday

0700z 9108kHz	**0720z 10908kHz**	**0740z 12208kHz**	
03/01	192 000 08633 00001 00000 10140		Fair
07/01	192 000 01797 00001 00000 10140		Fair
10/01	192 000 05438 00001 00000 10140		Fair
14/01	192 1 00695 00179 67492 16070		Strong
17/01	192 1 00695 00179 67492 16070		Fair
21/01	192 000 09319 00001 00000 10140		Very strong
24/01	192 000 04261 00001 00000 10140		Fair
28/01	192 1 03266 00245 40993 15752		Fair to strong
31/01	192 000 05830 00001 00000 10140		Fair to strong

February2015
Wednesday/Saturday

0700z 11409kHz	**0720z 13509kHz**	**0740z 14609kHz**	
04/02	456 000 02894 00001 00000 10140		Fair, QSB3
07/02	456 000 06081 00001 00000 10140		Very strong
11/02	456 1 09410 00253 49732 23040		Very strong
14/02	456 1 09410 00253 49732 23040		Very strong
18/02	05129 00001 00000 10140		Very strong
21/02	456 000 08575 00001 00000 10140		Very strong
25/02	456 1 00974 00197 54418 26546		Very strong
28/02	456 1 00974 00197 54418 26546		Extremely strong

XPA e
January 2015
Tuesday/Thursday

1900z 7891kHz	**1920z 6791kHz**	**1940z 5391kHz**	
01/01	873 000 08432 00001 00000 10140 Very poor conditions above ~40m noted	[*1900 NRH, 1920 extremely weak*]	Very weak
06/01	873 000 04227 00001 00000 10140		Weak
08/01	873 000 03691 00001 00000 10140		Weak
13/01	873 1 04727 00267 66783 22773	[*1920/1940z too weak for process*]	Fair, QSB3
15/01	Too weak for process		
20/01	833 000 06650 00001 00000 10140	[*1920/1940z too weak for process*]	Very weak and noisy
22/01	873 000 07650 00001 00000 10140	[*1900z Extremely weak unuseable*]	Fair
27/01	873 1 04338 00251 20818 65726	[*1900/ 1920z Weak, QSB3 unuseable*]	Fair

873 873 873 1 873 873 873 1 873 873 873 1
Block Sync
4444444444
Block Sync
6
Message Start
04338 00251 20818 10893 74970 73348 95442 28853 48563 96893 02667 35260 22015 76654 59124
53628 35983 86068 67236 77501 48073 95771 23023 48193 38875 55047 77847 36886 33532 49917
57598 10930 43988 67095 12437 82683 45766 12141 22057 98666 59335 19210 45499 50192 29829
72195 69877 19363 97735 74654 21395 43977 81033 38668 26918 18650 27156 20697 72263 37056
00599 71926 92560 69430
Block Sync
66850 10114 24517 28501 91348 57755 61605 11312 75229 96591 04024 75513 91963 18427 82481
42083 39504 88734 91471 84182 87095 52394 18065 18773 86419 20494 36223 42327 84937 92757
59134 54634 39809 17753 05325 13081 12294 74982 14592 58903 00428 95005 50625 58332 33473
50070 37827 65125 09439 05055 01709 82623 73823 09296 49559 44859 49806 37795 13010 07824
63102 86949 40311 90389
Block Sync
47531 92373 85865 65064 11171 97163 97437 39360 19651 44656 97766 37508 93013 19729 52721
80681 88328 58116 83097 66590 64882 85828 23056 93334 19190 05878 11120 18815 57311 52710
24379 71270 68258 26598 79708 39322 62590 56789 59042 69977 63776 24257 98890 11620 94963
04400 05618 03401 10704 32874 33069 53329 61374 54157 25420 56493 28836 39400 71400 11265
92445 73303 78100 60205
Block Sync
43391 82381 17856 01923 58378 30437 54935 62220 39590 61289 23279 61488 17439 44760 81117
02580 24336 10379 42456 63203 90353 58109 45291 04753 64910 79998 36361 87079 79263 03232
83481 48457 52448 34538 26852 95448 98297 62028 66468 31308 44088 30399 56854 36115 53616
03545 54330 01910 88636 02784 30626 56023 25618 42485 49711 19242 22103 97201 05868 67816
91617 65726 Courtesy JkC

29/01	873 1 04338 00251 20818 65726		Fair to strong

February2015
Tuesday/Thursday

1900z 8123kHz	**1920z 7523kHz**	**1940z 6823kHz**	
03/02	158 000 06038 00001 00000 10140		Very weak
05/02	158 000 03551 00001 00000 10140	[*1900/1920z Very weak, unprocessable*]	Weak
10/02	158 1 02788 00225 19734 36713	[*1900/1920z Very weak, Unpocessable*]	Strong
12/02	158 1 02788 00225 19734 36713		Fair
17/02	158 000 08716 00001 00000 10140	[*1900/1920z Very weak, Unpocessable*]	Strong
19/02	158 000 08893 00001 00000 10140	[*All processable*]	Fair
24/02	158 1 09094 00257 18224 last grp lost		Weak, QSB3
26/02	158 1 09094 00257 18224 30304		Fair

XPA2 m
January 2015
Sunday/Tuesday

1300z	**16138kHz**	**1320z**	**14438kHz**	**1340z**	**13438kHz**	
04/01	03975 00001 00000 10140					Very strong
06/01	07811 00001 00000 10140					Very strong
11/01	05401 00001 00000 10140					Very strong
13/01	06247 00001 00000 10140					Very strong
18/01	07171 00107 35949 73323					Very strong
20/01	07171 00107 35949 73323					Very strong
25/01	01993 00001 00000 10140					Very strong
27/01	01928 00001 00000 10140					Very strong

February2015
Sunday/Tuesday

1500z	**16338kHz**	**1520z**	**14538kHz**	**1520z**	**13538kHz**	
01/02	03544 00073 24603 61517					Extremely strong
03/02	03544 00073 24603 61517					Very strong
08/02	08744 00001 00000 10140					Very strong
08/02	08744 00001 00000 10140					Very strong
10/02	05168 00001 00000 10140					Very strong
15/02	05479 00065 28680 61415					Extremely strong
17/02	06804 00001 00000 10140					Very strong
22/02	08468 00117 69802 02476					Extremely strong

Rivet (Build 88) by Ian Wraith
16:48:49 Loading file C:\Users\Paul\Documents\WiNRADiO\G31DDC\XPA2 m-14.538MHz_2015-02-22_15'18'20.wav
16:48:49 XPA2 Start Tones Found (correcting by -55 Hz)
16:48:50 Sync tone found
16:48:50 Symbol timing found

08468 00117 69802 59892 20531 60653 26558 03451 91993 16674
87688 45115 75364 66646 84943 49269 05465 95456 29925 63224
50682 43663 28250 20017 55922 32845 60881 66876 08884 94738
81623 22292 44599 45954 39638 12232 19805 07896 31765 96598
50465 30004 38163 03262 11748 16476 52872 57792 10337 28044
99272 60797 21684 83496 87505 44093 03728 32699 95790 79824
97678 45884 41583 91248 01766 56639 40367 77282 99181 95257
76313 58862 10334 98893 43528 22970 96535 13414 59108 85362
57034 85814 02273 39219 18411 59973 03118 76660 50611 53915
56385 45759 98738 26666 39586 22694 16001 62755 15060 22151
72790 80503 88887 38104 27227 56248 99907 25531 21929 91807
56525 03179 90757 92250 03311 23049 12224 92881 79638 02476

24/02 End Tone — All tx weak, unprocessable

16:48:52 XPA2 Decode Complete

Courtesy PLdn

XPA2 p
January 2015
Monday/Wednesday

0800z	**15978kHz**	**0820z**	**14978kHz**	**0840z**	**14378kHz**	
05/01	05122 00001 00000 10140	[*0800z incomplete sending*]				Very strong
08/01	05848 00001 00000 10140					Very strong
12/01	08724 00001 00000 10140	[*0800z incomplete sending*]				Very strong
14/01	06435 00001 00000 10140					Very strong
19/01	Missed					
21/01	01478 00247 78459 54715					Very strong
26/01	00122 00193 75835 06312					Very strong
28/01	08854 00001 00000 10140					Very strong

XPA2 p
February 2015

0800z	**15983kHz**	**0820z**	**14783kHz**	**0840z**	**13883kHz**	
02/02	00239 00175 94685 72221	[*0800z QSB4*]				Very strong
04/01	08460 00001 00000 10140					Very strong
09/02	03990 00189 16275 02455					Very strong
11/02	03990 00189 16275 02455					Very strong
16/02	09846 00001 00000 10140					Very strong
18/02	08124 00001 00000 10140	[*0840z failed 10s into sending*]				Very strong
23/02	02010 00205 24728 05520					Very strong
25/02	02010 00205 24728 05520					Very strong

XPA2 r
January 2015
Friday/Saturday

1400z	**16167kHz**	**1420z**	**14663kHz**	**1440z**	**13923kHz**	
02/01	01447 00001 00000 10140					Very strong
03/01	07083 00001 00000 10140					Very strong
09/01	04835 00001 00000 10140					Very strong
10/01	03179 00001 00000 10140					Very strong
16/01	07998 00117 84602 34441	[*1420z carrier dropped after 20, not recovered*]				Very strong
17/01	01013 00001 00000 10140					Very strong
23/01	01781 00001 00000 10140					Very strong
24/01	01756 00001 00000 10140					Very strong
30/01	03722 00135 20411 35445					Very strong
31/01	07391 00001 00000 10140					Very strong

February 2015
Friday/Saturday

1400z	**18667kHz**	**1420z**	**17419kHz**	**1440z**	**16212kHz**	
06/02	00951 00179 75266 02431					Very strong
07/02	00951 00179 75266 02431					Very strong
13/02	06572 00001 00000 10140					Very strong
14/02	08839 00001 00000 10140					Extremely strong
20/02	08168 00155 02825 23245					Extremely strong
21/02	08168 00155 02825 23245					Extremely strong
27/02	05616 00001 00000 10140					Very strong
28/02	07259 00155 02825 23245					Extremely strong

HM01

HM01 continued into 2015 with the same format as in previous months. There has been no reduction in the number of transmission in spite of the current slow thaw in US/Cuba diplomatic relations. Unnoticed by most it seems, the Tuesday, Thursday, Saturday 0500-1000z schedules underwent an almost complete change of frequencies in January. These lasted approximately two weeks until things returned to normal. Similar short-term changes in frequencies occurred during October/November 2013 before things returned to normal. A separate schedule documenting this change has been published for future reference.

Events of note:
On 19/1 the callup in position 2 changed to 79830 = 38327983.TXT at 2100z
On 25/2 the callup in position 1 changed to 56040 = 55825604.TXT at 2100z
Looking back through the records we noted that on 19/11 a similar thing occurred.
19/11 Callup 4 became 89860 = 20558986.TXT at 2100z
All of these changed at 2100z whereas the callups normally change at 1600z. In addition the last digit of these callups increments daily rather than remaining the same for the first two days as the other callups do.

Several callups with F1* files were seen. These followed the usual format. File names ending F1C begin 50 and file names ending F1G begin with 36.
30051 = 50553005.F1C, 28731 = 50052873.F1C, 24671 = 50762467.F1C, 61661 = 36676166.F1G, 85201 = 50758520.F1C, 44631 = 50744463.F1C, 44451 = 50524445.F1C

Things apparently stagnated on 17/2 and all callups stopped incrementing until 24/2 when things returned to normal.

On to the logs:

HM01 11435kHz 1600z 1/1 [66455 44451 10113 63253 22126 03345] New callup position 2, 44451 = 50524445.F1C. THU
HM01 11435kHz 1600z 2/1 [66456 44451 10114 63254 22127 03346] FRI
HM01 11435kHz 1600z 3/1 [66457 44452 10115 63255 22128 03347] SAT
HM01 11435kHz 1600z 4/1 [13541 44453 10116 63256 44631 03348] New callups positions 1 and 5, 13541 = 75131354.TXT, 44631 = 50744463.F1C. SUN
HM01 11435kHz 1600z 5/1 [13541 44454 10117 63257 44631 21171] New callup position 6. 21171 = 47472117.TXT. MON
HM01 11435kHz 1600z 6/1 [13542 44455 10118 63258 44632 21171] TUE
HM01 11435kHz 1600z 7/1 [13543 44456 10119 63259 44633 21172] WED
HM01 11435kHz 1600z 8/1 [13544 44457 32051 48031 44634 21173] New callups positions 3 and 4 32051 = 22803205.TXT, 48031 = 67704803.TXT. THU
HM01 11435kHz 1600z 9/1 [13545 44458 32051 48031 44635 21174] FRI
HM01 11435kHz 1600z 10/1 [13546 85201 32052 48032 44636 21175] New callup position 2, 85201 = 50758520.F1C. SAT
HM01 11435kHz 1600z 11/1 [13547 85201 32053 48033 44637 21176] SUN
HM01 11435kHz 1600z 12/1 [61661 85202 32054 48034 44638 21177] New callup position 1, 61661 = 36676166.F1G MON
HM01 11435kHz 1600z 13/1 [61661 85203 32055 48035 44639 24671] New callup position 6, 24671 = 50762467.F1C TUE
HM01 11435kHz 1600z 14/1 [61662 85204 32056 48036 03571 24671] New callup position 5, 03571 = 36410357.TXT WED
HM01 11435kHz 1600z 15/1 [61663 85205 32057 48037 03571 24672] THU
HM01 11435kHz 1600z 16/1 [61664 85206 32058 24151 03572 24673] New callup position 4, 24151 = 87862415.TXT. FRI
HM01 11435kHz 1600z 17/1 [61665 85207 32059 24151 03573 24674] SAT
HM01 11435kHz 1600z 18/1 [61666 85208 56431 24152 03574 24675] New callup position 3, 56431 = 85555643.TXT. SUN
HM01 11635kHz 1800z 19/1 [61667 85209 56431 24153 03575 24676] MON
HM01 11635kHz 2100z 19/1 [61667 79830 56431 24153 03575 24676] New callup position 2, 79830 = 38327983.TXT. Note this has changed since 1800z and contains an unusual 9 and ends in 0.. MON
HM01 11435kHz 1600z 20/1 [61668 79831 56432 24154 03576 24677] TUE
HM01 11435kHz 1600z 21/1 [61669 79832 56433 24155 03577 24678] WED
HM01 11435kHz 1600z 22/1 [78011 79833 56434 24156 03578 78721] New callups positions 1 and 6, 78011 = 18727801.TXT, 78721 = 82867872.TXT. THU
HM01 11435kHz 1600z 23/1 [78011 79834 56435 24157 27731 78721] New callup position 5. 27731 = 07512773.TXT. FRI
HM01 11435kHz 1600z 24/1 [78012 79835 56436 50071 27731 78722] New callup position 4, 71685007.TXT. SAT
HM01 11435kHz 1600z 25/1 [78013 79836 56437 50071 27732 78723] SUN
HM01 11435kHz 1600z 26/1 [78014 79837 56438 50072 27733 78724] MON
HM01 11435kHz 1600z 27/1 [78015 79838 82871 50073 27734 78725] New callup position 3, 82871 = 65018287.TXT. TUE
HM01 11435kHz 1600z 28/1 [78016 79839 82871 50074 27735 78726] WED
HM01 11435kHz 1600z 29/1 [78017 87641 82872 50075 27736 78727] New callup position 2, 87641 = 67118764.TXT. THU
HM01 11435kHz 1600z 30/1 [41821 87641 82873 50076 27737 78728] New callup position 1, 41281 = 37174182.TXT FRI
HM01 11435kHz 1600z 31/1 [41821 87642 82874 50077 77521 78729] New callup position 5, 77521 = 52357752.TXT SAT
HM01 11435kHz 1600z 1/2 [41822 87643 82875 50078 77522 28731] New callup position 6, 28731 = 50052873.F1C. Callup 7752 should not have incremented to 2 today. SUN
HM01 11435kHz 1600z 2/2 [41823 87644 82876 30051 77523 28731] New callup position 4. 30051 = 50553005.F1C. MON
HM01 5855kHz 0500z 13/2 [00196 85724 16166 28521 32874 83622] FRI
HM01 11435kHz 1600z 13/2 [00197 85725 16167 28522 32875 83623] FRI
HM01 11435kHz 1600z 14/2 [00198 85726 16168 28523 32876 83624] SAT
HM01 11435kHz 1600z 15/2 [00199 85727 16169 28524 32877 83625] SUN
HM01 11435kHz 1600z 16/2 [64031 85728 14121 28525 32878 83626] New callups positions 1 and 3 64031 = 75346403.TXT, 14121 = 50171412.TXT MON
HM01 11435kHz 1600z 17/2 [64031 81621 14121 28526 32879 83627] New callup position 2, 81621 = 12178162.TXT. TUE
HM01 11435kHz 1600z 23/2 [64031 81621 14121 28526 32879 83627] No recordings since 17/2 but callups appear the same as that date. MON
HM01 11435kHz 1600z 24/2 [64032 81621 14122 28527 86581 83628] New callup position 5 86581 = 12228658.TXT. TUE
HM01 11435kHz 1600z 25/2 [64033 81622 14123 42311 86581 66861] New callups positions 4 and 6 42311 = 11354231.TXT, 66861 = 30826686.TXT. TUE
HM01 11635kHz 2100z 25/2 [56040 81622 14123 42311 86581 66861] New callup since 1600z 56040 = 55825604.TXT. Note 0 in callup. WED
HM01 11435kHz 1600z 26/2 [56041 81623 14124 42311 86582 66861] THU
HM01 11435kHz 1600z 27/2 [56042 81624 14125 42312 86583 66862] Note callup that ended with 0 on 25/2 incremented to 2 after 1 day as 1. FRI
HM01 11435kHz 1600z 28/2 [56043 81625 14126 42313 86584 66863] SAT

Other's logs

HM01 11530kHz 1700z 02/01 S7 (on WebSDR)
HM01 11635kHz 2100z 02/01 S7 (on WebSDR)
HM01 10715kHz 2200z 02/01 S9 (on WebSDR)

voice > RDFT encrypted file (decoded with DIGTRX)

66456 > 00026645.TXT 341 bytes
44451 > 50524445.F1C 295 bytes
10114 > 07351011.TXT 744 bytes
63254 > 48156325.TXT 464 bytes
22127 > 85242212.TXT 445 bytes
03346 > 15480334.TXT 232 bytes

HM01 11530kHz 1700z 03/01 S9 (on WebSDR)

voice > RDFT encrypted file (decoded with DIGTRX)

66457 > 00026645.TXT 341 bytes
44452 > 50524445.F1C 295 bytes
10115 > 07351011.TXT 744 bytes
63255 > 48156325.TXT 464 bytes
22128 > 85242212.TXT 445 bytes
03347 > 15480334.TXT 232 bytes

HM01 11435kHz 1600z 04/01 S7 (on WebSDR)
HM01 11530kHz 1700z 04/01 S7 (on WebSDR)
HM01 11635kHz 1800z 04/01 S7 (on WebSDR)
HM01 9155kHz 1000z 05/01 S9 (on WebSDR)
HM01 5855kHz 1000z 05/01 S8 (on WebSDR)

voice > RDFT encrypted file (decoded with DIGTRX)

13541 > 75131354.TXT 211 bytes
44453 > 50524445.F1C 295 bytes
10116 > 07351011.TXT 744 bytes
63256 > 48156325.TXT 464 bytes
44631 > 50744463.F1C 606 bytes
03348 > 15480334.TXT 232 bytes

Obs: F1C files are not displayed by DIGTRX but saved in autosave folder!

It looks like some changes may be happening to the HM01 schedules.

HM01 11462kHz0500z 08/01[13543 44456 10119 63259 44633 21172] THU
HM01 9063kHz 0500z 08/01[13543 44456 10119 63259 44633 21172] Expected on 14375kHz. THU
HM01 9330kHz 0600z 08/01[13543 44456 10119 63259 44633 21172] Expected on 14375kHz. THU

HM01 11530kHz 1700z 25/01 S9 (on WebSDR)
HM01 11635kHz 1800z 25/01 S7 (on WebSDR)

voice > RDFT encrypted file (decoded with DIGTRX)

78013 > 18727801.TXT 158 bytes
79833 > 38327983.TXT 406 bytes
56437 > 85555643.TXT 565 bytes
50071 > 71685007.TXT 756 bytes
27732 > 07512773.TXT 650 bytes
78723 > 82867872.TXT 796 bytes

10715kHz2200z	02/01[44451 10114 63254 22127 03346 66456] QSA2	DanAR	FRI
2200z	04/01[44453 10116 63256 44631 03348 13541] QSA2	DanAR	SUN
2200z	05/01[44454 10117 63257 44631 21171 13541] QSA3	DanAR	MON
2200z	07/01[44456 10119 63259 44633 21272 13543] QSA2	DanAR	WED
2200z	09/01[44458 32051 48031 44635 21174 13545] QSA3	DanAR	FRI
2230z	11/01[85201 32053 48033 44637 21176 13547] QSA2	DanAR	SUN
2200z	12/01[85202 32054 48034 44638 21177 61661] QSA3	DanAR	MON
2230z	14/01[85204 32056 48036 03571 24671 61662] QSA1	DanAR	WED
2230z	16/01[85206 32058 24151 03572 24673 61664] QSA2 QRN5	DanAR	FRI
2200z	18/01[85208 56431 24152 03574 24675 61666] QSA2	DanAR	SUN
2200z	19/01[79830 56431 24153 03575 24676 61667] QSA3	DanAR	MON
2200z	21/01[79832 56433 24155 03577 24678 61669] QSA3	DanAR	WED
2200z	25/01[79836 56437 50071 27732 78723 78013] QSA4	DanAR	SUN
2200z	30/01[87641 82873 50076 77520 78728 41821] QSA2	DanAR	FRI
11635kHz 2130z	23/01[79834 56435 24157 27732 78721 78011] QSA3	DanAR	FRI
2115z	26/01[79837 56438 50072 27733 78724 78014) QSA2 QRM1	DanAR	MON
16180kHz2100z	13/01[85203 32055 48035 44639 24671 61661] QSA2	DanAR	TUE
2130z	20/01[79831 56432 24154 03576 24677 61668) QSA2	DanAR	TUE
2100z	27/01[79838 82871 50073 27734 78725 78015) QSA3	DanAR	TUE
2100z	29/01[87641 82872 50075 27736 78727 78017) QSA2	DanAR	THU
17480kHz2200z	01/01[44451 10113 63253 22126 03345 66455] QSA3	DanAR	THU
2200z	06/01[44455 10118 63258 44632 21171 13542] QSA3	DanAR	TUE
2230z	08/01[44457 32051 48031 44634 21173 13544] QSA2	DanAR	THU
2230z	15/01[85205 32057 48037 03571 24672 61663] QSA2	DanAR	THU
2200z	22/01[79833 56434 24156 03578 78721 78011) QSA2	DanAR	THU

February 2015

10715kHz2230z 01/02[87643 82875 50078 77522 28731 41822) QSA2 DanAR SUN

UK analysis from PoSW

Signals from Cuba fairly awful in the English winter months, especially on those days when 11,462 / 11,635 / 12,180 kHz are used in the UK morning. Transmissions in the 9 MHz band a little better.

8-Jan-15, Thursday:- 0900 UTC, 11,462 kHz, very weak signal of some kind, unable to confirm as HM01.

9-Jan-15, Friday:- 0738 UTC, 9,330 kHz, transmission in progress, best signal from an HM01 for a while, heard 5Fs "13544 44457 32051 48031 44634 21173". Peaking S9 with the usual fading up and down, and with good audio.
0759 UTC, 9,065 kHz, "13544 44457 32051 48031 44634 21173", S7 to S8, data noise started at 0802:15s UTC.

11-Jan-15, Sunday:- 0859 UTC, 9,240 kHz, "13546 85201 32052 48032 44636 21175". S7 to S8 with QSB.

12-Jan-15, Monday:- 0829 UTC, 9,065 kHz, calling up after the break, "13547 85201 32053 48033 44637 21176".

14-Jan-15, Wednesday:- 0759 UTC, 9,065 kHz, "61661 85203 32055 48035 44639 24671".
Peaking S7 to S8, over-riding a weaker FSK/RTTY type signal on the same frequency.

15-Jan-15, Thursday:- 0930 UTC, 11,462 kHz, very weak, unreadable signal, just able to confirm as HM01 voice.

19-Jan-15, Monday:- 0859 UTC, 9,240 kHz, starting up with S8 to S9 carrier but low audio, difficult copy.

21-Jan-15, Wednesday:- 0829 UTC, 9,065 kHz, calling up after the break, "61668 79831 56432 24154 03576 24677", S9 with deep fading, audio better than in recent times, over-riding the FSK which resides here.

23-Jan-15, Friday:- 0759 UTC, 9,065 kHz, weak signal, unable to copy.

26-Jan-15, Monday:- 0829 UTC, 9,065 kHz, "78013 79836 56437 50071 27732 78723".
Up to S8 with good audio.
0859 UTC, 9,240 kHz, 5Fs as earlier, S7 to S8.

30-Jan-15, Friday:- 0759 UTC, 9,065 kHz, "78017 87641 82872 50075 27736 78727". S8 to S9, the FSK signal on this frequency somewhat stronger than usual but loosing the fight to HM01.
0859 UTC, 9,240 kHz, 5Fs as earlier, S6 to S7.

3-Feb-15, Tuesday:- 0900 UTC, 11,462 kHz, very weak signal presumed to be HM01 starting up but unable to confirm.

6-Feb-15, Friday:- start-up time is becoming earlier, call-up routine started well before 0759 UTC, 9,065 kHz, "41826 87647 82879 30053 77526 28734", S8 over-riding the FSK signal on the same frequency.
0858 and 25 seconds UTC I made it, and starting up on 9,065 kHz again, someone has dozed off in the control room! 5Fs as earlier, into data at 0901:45s UTC - then vanished.
Came up on the correct frequency, 9,240, shortly afterwards, carrier went off and on several times before resuming data transmission after 0903:30s UTC.

8-Feb-15, Sunday:- 0829 UTC, 9,065 kHz, call-up after the half-time break in progress when tuned in, "00191 87649 16161 30055 77528 28736", S7 to S8 with good audio, data at 0831:45s UTC.

9-Feb-15, Monday:- 0858:20s UTC, 9,240 kHz, "00192 85721 16162 30056 32871 28737".
S8 with deep QSB.

10-Feb-15, Tuesday:- 0759 UTC, 11,635 kHz, peaking over S9, by far the best signal on 11,635 for a long time, "00193 85721 16163 30057 32871 28738". Call-up had started when tuned in, data noises at 0801:40s UTC.
0858 and 20 seconds UTC, 11,462 kHz, 5Fs as earlier, again best signal from HM01 on this frequency for quite a while.

12-Feb-15, Thursday:- 0758:20s UTC, 11,635 kHz, "00195 85723 16165 28521 32873 83621", strength S6 to S7, not as strong on this frequency as it was on Tuesday.

14-Feb-15, Saturday:- 0828:15s UTC – that Cuban clock is running fast - 11,635 kHz, starting up again after the break, "00197 85725 16167 28522 32875 83623", peaking S9. Data noise started at 0831:25s UTC.
0900 UTC, 11,462 kHz, weak signal of some kind, unreadable, if it was HM01 it was in marked contrast with the strong transmission on 11,635 half an hour earlier.

16-Feb-15, Monday:- 0859 UTC, 9,240 kHz, "00199 85727 16169 28524 32877 83625". S8 to S9.

18-Feb-15, Wednesday:- 0859 UTC, 9,240 kHz, "64031 81621 14121 28526 32879 83627".
Peaking S9 with good audio.

19-Feb-15, Thursday:- 0759 UTC, 11,635 kHz, the improvement in signal strength on this frequency didn't last for long, weak and unreadable this morning.

21-Feb-15, Saturday:- 0828 and 10s UTC, 11,635 kHz, starting up after the break, "64031 81621 14121 28526 32879 83627", signals have recovered again, peaking S9.
0858 : 10s UTC, that clock is still gaining, the start-up gets ever earlier, and on the wrong frequency, 11,635 kHz. 5Fs as earlier, vanished just before 0901 UTC and came up on the correct frequency, 11,462 kHz.

Digital, Incursions and Unexplained Signals

Hello once again and the big news this month is that several data modes we cover in this desk report have been issued with Enigma identifiers.
These are as follows :

FSKM42 : This covers undefined Russian signals. There are many possible candidates for this classification. The most of obvious are the Serdolik (Crowd36) signals which are frequently logged but there are also the short lived data signals we see once or twice a year. In addition there are most likely other mysterious data modes which little to nothing is known about as well.

FSKM42a : Signals believed to be associated with GRU (Russian Military Intelligence) HFDF (Radio direction finding) activities.

FSKM42b : RTTY (Radio TeleTYpe) 50/500 (50 baud and 500 Hz shift) signals.

In the late 80s and early 90s the HF bands used to be full of RTTY signals with traffic that consisted of RYRYs then 5 digit number encrypted traffic. Many of these stations operated to known schedules and some of the numeric identifiers were linked to Russian embassies in different countries (although I have no idea how this was done and with what level of accuracy). By the mid 90s though much of this traffic vanished from the airwaves and was replaced with Crowd36/Serdolik which initially carried the same 5 digit number traffic. However the RTTY stations are still on the air from time to time. Looking back in my logs I seem to come across them every 6 months or so. The good news is that they can be decoded by Rivet (set the program to Baudot mode then in the "Baudot & FSK Options" dialog set to 50 Baud , 500 Hz and 1.5 Bits the bad news is that the transmissions usually last less than 10 minutes and don't appear to operate to any kind of a schedule so it is impossible for me to predict their appearance. The traffic sent is easily recognised such as this example logged by Ary B ..

RYRYRYRYRYRYRYRYRYRY
198 156 31 1750
73180 40992 98051 58069 80201 68409 58713 89297 26241 99557
76528 75368 74678 97693 74598 40849 68646 54922 70646 35357
36273 87156 95581 45166 42509 61996 76635 27585 54722 95446
64710 66507 14245 78429 10678 72612 31074 19011 20276 76609
43898 11293 42308 89005 12646 66900 69839 24801 35737 70007 =50=
51399 43734 39289 98313 83903 0198 88489 14578 45716 67715
48349 25122 04176 36264 10127 18147 34828 41296 14735 41465
67926 65006 02816 21589 27608 60975 81692 67287 93440 80624
51420 68558 39010 84931 57098 26938 27256 39833 59635 78108
67224 18759 42171 92717 61938 60730 94317 66366 02072 57464 =100=
41431 34688 85102 67915 11079 74466 64654 83704 53911 76726
59687 93853 61113 02731 78253 22283 45619 58829 35478 36496
56361 76637 17226 19848 74554 97006 83566 61417 68745 84721
31251 71859 13375 31602 92401 51900 87644 86452 50088 87071
45158 22053 67001 59857 18431 76454 85724 19760 12959 42041 =150=
67757 47207 70508 00774 63509 72251 06349 29070 30432 33983
03611 75398 31134 27498 91334 13482 28532 97745 00565 58101
86459 73935 76279 20557 68420 83615 81382 16210 30493 78543
06479 32154

Note the separators after every group of 50 numbers.

I am going to start to send M42b logs to the group when I come across them and I urge other members to also.

FSKM42c : FSK200/500

FSKM42d : FSK200/1000

FSK POL : A data mode associated with Family III transmissions. I first mentioned this two years ago in my desk report for January & February 2013. In short this is a FSK (Frequency Shift Keying) sending data at 100 baud usually with a 625 KHz shift (although they did briefly use a 725 Hz shift last month). Transmissions aren't easy to find since they sometimes last only 30 seconds these are always sent on the hour or half hour then are repeated on the same frequency 5 minutes later. Thanks to the huge efforts put into investigating this mode by E2K member **Jim K-C** (and others) these messages can now be decoded and have been found to contain the same message as sent by the voice station E11 at a similar time. This to me is puzzling behaviour and raises many questions. Is E11 a backup for the data transmissions so if the recipient does receive the data they listen to the voice transmission or is it the other way around where the POL FSK transmission is the backup for if the voice transmission can't be received. In an additional complication **Jim K-C** noticed that the binary pattern of data used to represent numbers suddenly changed we he received this message on 2nd February ..

0221 (etc.)
33333 33333
08034 10789 53893 73831 56197 45320 68223 17523 13033 14369
50802 94396 69411 41777 25971 16657 86349 02365 78020 30464
29195 24164 51780 53308 50577 43838 89631 52422 21014 01386
93722
33333 33333
55568 55568

but the matching E11 transmission was this ..

226/31 ATTENTION

75786 27951 08518 98582 03219 60847 35448 29048 28788 26831
07574 16813 31622 62999 40192 23309 53861 74830 95747 87636
41210 46236 02957 08875 07099 68585 51382 04644 42726 72853
16944
(single Group repeat)
OUT

Jim realised that the "stutter" group in the POL FSK transmission should have been 88888 as in the E11 transmission not 33333 so all that had happened was the numbers had been swapped about in the following way ..

E11	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
FSK POL	**5**	**9**	**1**	**6**	**2**	**8**	**4**	**0**	**3**	**7**

Once the numbers are changed the transmission bodies are the same.

Lots of questions remain about FSK POL and much more research is needed. For instance do all Family III members have associated data transmissions ? If not why does only E11 have them ? Also do all have E11 transmissions have these FSK POL transmissions as well ?

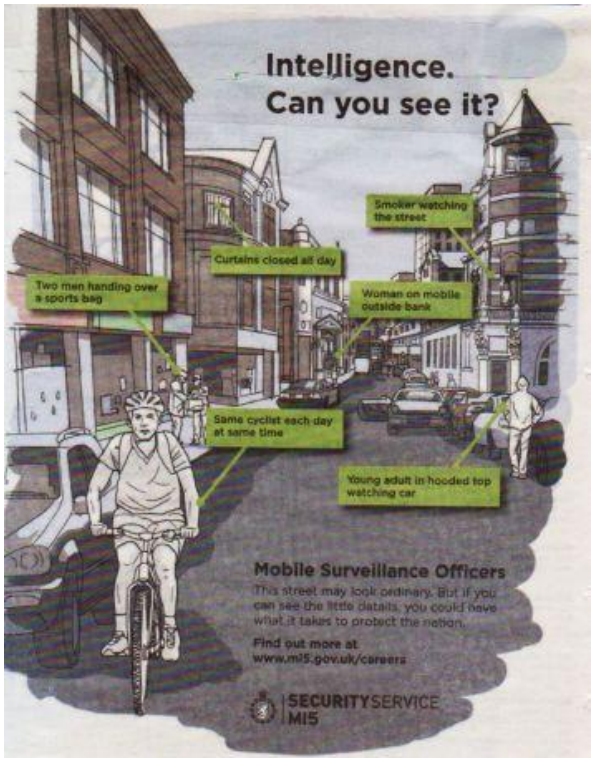
So you can see why the group needs your logs.

If you want Rivet the free software decoder for many of the modes discussed in this desk report you can download it from here ..

http://www.apul64.dsl.pipex.com/enigma2000/rivet/index.html

Ian (Digi Desk)

Gizza Job



PoSW's Items of Interest in the Media:-

Local soldiers for local people:- Following the incident in Paris in January the following news item appeared on the *Breitbart London* web site on 15-January:- Headlined, "British troops could be recalled to provide 'Homeland Security' against Paris style attacks", the article says, "A Whitehall source has suggested 'thousands' of British troops presently stationed around the globe could be redeployed to home turf in a bid to improve resilience and response times to Paris-style terror attacks against the United Kingdom.
Officials are apparently concerned that while troops stationed in London are formed into high readiness response groups prepared to assist police in the case of a terrorist attack, outside of London availability is much lower. In cities and towns outside London it could take thirty minutes or more for the army to be deployed if needed.
The unnamed source said, 'The country has a force of more than 80,000 troops and they need to be deployed where the threat is. Homeland security needs to be stepped up and as part of that we are looking at where there are gaps. We are looking at bringing back soldiers from overseas.'
'The government is recognising the threat could be on British soil. Currently our high readiness troops are ready to be deployed overseas but we need to make sure we have enough soldiers in the UK.'
'We are looking at sending soldiers to cities such as Manchester, Newcastle, Birmingham or having many more troops stationed in Scotland.'
The Ministry of Defence has denied the claims saying, 'There are no plans to redeploy troops from overseas in support of domestic security measures.'
Although the establishment of high-readiness battalions outside of London could improve
security in the regions Britain is hopefully unlikely to see army patrols on the streets any time soon. Although troops can assist police operations if requested, without the declaration
of Martial Law the actions soldiers can take are very limited.
Although soldiers could mount patrols and present a show of force, it would remain the duty of Police marksmen to actually confront terrorists where found, as was the case in France last week.
British troops were last deployed in significant numbers on home territory during the London 2012 Olympics to make up a shortfall left by insufficient private security with many being redeployed from the Middle East. After the murder of the Canadian Corporal
in the Parliament Hill terrorist attack last year, there has been an increase in armed soldiers in London and other Western cities in anticipation of copycat attacks."

Shall we send the government all our old 27 MHz CB radios? The question is asked because a short piece in *The Times* of 5-January, by James Dean - yes, really - the paper's Technology Correspondent carries the headline, "Emergency network 'is unworkable'", and says, "A crucial part of a £1.2 billion Home Office project to upgrade the mobile communications network for the emergency services has been described as 'unworkable' by one of the telecoms companies asked to build it.
Four of five companies selected by the Home Office to tender for a contract to build masts in national parks, areas of outstanding natural beauty, and other areas where they are likely to encounter disputes over planning permission, have decided not to bid.
At present, mobile communications for about 250,000 of the emergency services are run through a special radio network that covers 100 per cent of the UK. However, the Home Office wants to transfer this service to the commercial mobile networks, which have less than 70 per cent coverage, to take advantage of the fast data speeds offered by 4G technology.
Part of the £1.2 billion project will involve extending the coverage past that offered by the commercial networks.
A source at one of the bidders said: 'We simply do not think that this (the contract to build the masts in remote areas) is deliverable within the time-frame set by the government. It is unworkable.'
Vodafone, EE and Telefonica, the owner of O2, are among those bidding on four contracts to upgrade the emergency services network.
Labour recently warned that the 'unseemly haste' of the tendering process could put public safety at risk.
A spokeswoman for the Home Office said: 'We are on track to deliver this critical part of our national infrastructure by 2017.'
An analysis of tender documents by *Wireless* magazine suggested that the contracts were
'extremely complicated' and were to be delivered in an 'eye-wateringly tight time-scale.'
Vodafone, EE and Telefonica have decided not to bid for the contact to ensure that the new emergency services network covers remote locations. Airwave, the provider of the existing emergency services network, also pulled out, leaving only Arqiva."

Coppers told to go two-by-two:- The *Mail on Sunday* of 18-January contained an item headlined, “Anti-terror chief tells police: Don't go out on the streets alone”. The opening paragraph says, “Police were last night urged to patrol in pairs for their own safety amid rising fears of a terrorist plot to murder an officer on UK streets”.

Now it comes as a bit of a surprise to some of us that the police still actually patrol the streets; we don't see too much of that in my part of the world, they all seem to like tearing around in cars with the sirens screaming and the blue strobe lights on. The image of the police among Middle England these days, if the readers comments in on-line news papers such as the *Daily Telegraph* are anything to go by, is that of the “fat lazy copper” who can't be asked to get his blue-serge covered backside off the driver's seat of his nice warm, dry and comfortable car, stand up on his own two feet and do some proper police work, unless it is to enforce some piece of “political correctness” legislation to please his Cultural Marxist overlords.

However, be that as it may, the article in the *Mail* continues, “The advice was issued by the nation's counter-terrorism chief as it was revealed that hundreds of extra firearms officers will be deployed across London. Fears of an attack were raised after the atrocities in France that left 17 dead, among them three police officers.

Assistant Commissioner Mark Rowley, the national police lead for counter-terrorism, has now advised force chiefs in England and Wales to 'review the safety and staff' urgently - and to abandon lone patrols where necessary.

In response, the country's biggest force, the Met, has adopted dual patrols as policy - something previously considered a luxury. With resources stretched, Home Secretary Theresa May had previously encouraged forces to let officers take to the streets alone. The reversal will be welcomed by London's front-line officers who have felt increasingly in danger amid warnings from Islamists that uniformed police or soldiers would be targets for terror attacks..... Yesterday, as Europe remained on high alert, it was revealed that hundreds of extra firearms officers were being deployed across London, which already has 2,700 heavily equipped officers authorised to carry guns. Scotland Yard is also likely to double the number of its officers carrying Tasers from 2,500 to 5,000. Officers have been given a four-page document with advice on safety measures. It urges caution, for instance, when using social media accounts.

Meanwhile Britain's border forces have stepped up security checks to prevent automatic weapons, such as those used in Paris, from entering the country. Security sources say the French cities of Marseilles and Toulouse have become a 'hotbed' for high-powered assault rifles in recent years. 'France in particular has seen a huge expansion in the number of weapons on the streets, and there is no guarantee they won't end up here,' said a source ……..Officials estimate there could be as many as 10 million weapons in illegal circulation across the EU and say an assault rifle can be bought for under £1,000 on the black market and handguns for half that amount. Many are understood to come from Eastern Europe and the former Yugoslav republics as well as from the Middle East and North Africa. Last night, immigration and security Minister James Brokenshire said: 'This Government is doing more than any previous Government to disrupt organised crime and protect the security of the border,' ”

And the article in the *Mail* included a photograph of a police officer outfitted in the manner which is apparently *de rigueur* when out and about on the streets of my country's capital city, fitted out with such fashion accessories as, “Ballistic Kevlar body armour”, “Encrypted mobile phone”, “Glock 17 pistol with an effective range of 50 metres”, all nicely complimented by a “Heckler & Koch G36 assault rifle capable of firing up to 750 rounds a minute.” Dixon of Dock Green he ain't! I am sure we are all grateful to our political class for turning our once-peaceful country into the kind of multi-cultural cesspit that makes this necessary.

Those wacky guys in Langley Virginia - what will they get up to next? “CIA accused of trying to control the world's weather” is the headline in *The Times* newspaper of 16-February over an article by Tom Whipple, in San Jose - I guess that'll be in somewhere like California, which says, “Not content with reading the world's emails, could the CIA also be trying to control its weather?

A scientist has claimed that the US foreign intelligence agency sought his advice about techniques for disrupting the climate,

Professor Alan Robock, a climatologist from Rutgers University who specialises in the effect of releasing aerosols into the atmosphere, has said he was approached by representatives of the organisation for advice on the clandestine use of such methods.

'I got a phone call from two men who said, We work as consultants for the CIA and we'd like to know if some other country was controlling our climate, would we know about it?', said Professor Robock.

'I told them, after thinking a little bit, that we probably would because if you put enough material in the atmosphere to reflect the sunlight we would be able to detect it and see the equipment that was putting it up there'.

'At the same time I thought they were probably also interested in if we could control somebody else's climate, could they detect it?'

He said the approach scared him. 'I'd learnt a lot of other things the CIA had done that haven't followed the rules and I thought that wasn't how I wanted my tax money spent. I think this research has to be in the open and international so there isn't any question of it being used for hostile purposes'.

There was controversy two years ago when it emerged the CIA had part-funded an investigation by the US National Academy of Sciences into 'geo-engineering' - which involves intervening in the planet's weather system by, among other things, changing the reflectivity of the Earth or releasing clouds to block the Sun.

Professor Robock was speaking at a presentation discussing the publication of that report, ostensibly about using geo-engineering to combat climate change. He said he was concerned whether that was the true purpose of the research. 'The CIA is a major funder of the National Academies report so that makes me really worried who is going to be in control'.

During the Vietnam war, the US military experimented with cloud seeding to make the Ho Chi Minh Trail, relied on by the north as a supply route, too muddy to be passable. There are also allegations that similar methods were used in an attempt to ruin the Cuban sugar crop.

Professor Robock was an author on the latest report by the Intergovernmental Panel on Climate Change, and has met Fidel Castro – whom he calls 'the Comandante' ”.

The mention of Fidel's same reminds me of the reports in the media towards the end of last year of improvements in relations between Cuba and the US. My first thoughts were that it might mean the imminent end of the HM01 Cuban number station since Uncle Sam might insist on the cessation of Cuba's overseas intelligence activities as a condition of ending the years of hostility. I am sure the anti-Castro Cubans holed up in Florida must be alarmed at the prospect since they have been anxious for the last fifty years or more to overthrow Fidel and get back into their old haunts in Cuba and return the place to being the offshore casino and brothel which it was before Castro booted them out. I noted some concern from some Brits who have discovered in recent years that Cuba is a sunny country to take a pleasant holiday free from Americans and all their works, expressed in a most eloquent manner by the writer of a letter, from Dorking, Surrey in *The Times* of 19-December:- “Sir, How disappointing to learn that the US is now on friendly terms with Cuba after 54 years of hostility. The great advantage of the 'stand-off ' was that visits to Cuba were guaranteed to be free of US tourists, hotels, McDonald's and other dreadful influences. Where is the next US-free destination if Cuba falls?”

Point to Ponder:- “A nation of sheep will beget a government of wolves” - Edward R Murrow.

Spectres's News Articles:

The Daily Beast 17/01/2015

US Spies Expected Airline Bombs–And Got The Paris Attacks Instead

Everyone worried that al Qaeda's deadliest affiliate would try to take down a plane. Then came the slaughter at Charlie Hebdo.

For more than five years, U.S. intelligence agencies, counterterrorism operators, and the military have been intensely focused on trying to stop al Qaeda in the Arabian Peninsula (AQAP), the Yemen branch of the global terrorist network, from sneaking hard-to-detect bombs onto airplanes and slaughtering hundreds of people.

What they got last week was Paris—a completely different kind of attack.

In claiming credit for last week's decidedly lower-tech shooting spree at the offices of Charlie Hebdo, AQAP seems to have flipped its playbook, leading to inevitable questions about whether U.S. officials misjudged the terror group's capabilities or were too focused on the wrong threat: bombs instead of bullets.

All this, despite a slick AQAP magazine that called specifically for shooters—and for Charlie Hebdo to be put in the crosshairs.

"In some quarters there's skepticism that [the Paris attack] was AQAP because analysts expected that AQAP would launch an attack against aviation, rather than this kind of tactic," said Daveed Gartenstein-Ross, an experienced terrorism analyst and a senior fellow at the Foundation for Defense of Democracies. "We get into trouble when we think we know a clandestine foe better than we actually do."

In interviews with half a dozen current and former U.S. officials with frontline experience fighting al Qaeda, a clearer picture is emerging about the years leading up to the rampage in Paris. While intelligence and security agencies never ruled out the possibility that the terror group could employ mass shootings as a way to "create havoc in the West," as one former top counterterrorism official put it, the U.S. security bureaucracy was more focused on AQAP's repeated attempts to launch more spectacular attacks against civilian aviation, particularly after the group tried to blow up a commercial airliner over Detroit in 2009.

"Analysts expected that AQAP would launch an attack against aviation, rather than this kind of tactic. We get into trouble when we think we know a clandestine foe better than we actually do."

Now, as investigators scrutinize the more than three years that the Paris shooters spent between a visit to Yemen in 2011 and last week's attack, they're looking for clues that might have alerted Western security services to the plot but apparently went undetected. Current and former officials insisted that they had not taken their eyes off al Qaeda in Yemen in the time before the Charlie Hebdo attack. "The U.S. intelligence community has been beating the drum about the threat from AQAP for years," a U.S. counterterrorism official told The Daily Beast.

Of all of Al Qaeda's regional groups, AQAP is the one that American intelligence and homeland security officials have worried about the most. A domestic attack by AQAP was "top of the list. Absolutely top of the list" of concerns for U.S. intelligence, said Michael Morell, a former deputy director of the CIA. Morell left the agency in 2013, but he said that the CIA's focus on AQAP hasn't abated.

In recent months, senior U.S. intelligence officials have said they're intent on locating AQAP's chief bombmaker, Ibrahim Al Asiri. He has survived American drone strikes and is believed to be teaching fellow terrorists how to build explosive devices without metal parts that can evade airport security systems. The anxieties about Asiri reached a fever pitch last fall when U.S. intelligence concluded that an Al Qaeda unit in Syria, known as the Khorasan Group, was close to launching an airliner attack. President Obama ordered airstrikes against the group's bases in Syria to knock the plot off course, according to senior administration officials.

"Our biggest concern has continued to be the non-metallic bomb on airplanes," another former U.S. official told The Daily Beast, and intelligence agencies were focused on "anything we could do to get intelligence on the bomb-making, and on Ibrahim al Asiri, in addition to anything that he could be sharing with the Khorasan Group."

The focus on AQAP's bomb-making menace began in August 2009, when al Asiri designed an explosive package that was inserted into his younger brother's rectum. The brother then met face-to-face with Muhammad bin Nayef, Saudi Arabia's then-deputy interior minister, and blew himself up. The attack failed, killing the younger al Asiri, but American officials were alarmed.

"After the attempted assassination, there was a realization that these guys were good. They had a good engineer and bombmaker," said Andrew Liepman, who retired in August 2012 as the second-in-command of the National Counterterrorism Center and worked more than 30 years at the CIA.

AQAP didn't wait long to put al Asiri's handiwork to use again. On Christmas Day, 2009, it sent a young Nigerian man, Umar Farouk Abdulmutallab, aboard a commercial airliner bound for Detroit with an improvised bomb sewn into his underwear. The bomb failed to detonate and succeeded only in wounding Abdulmutallab, but it made clear that AQAP had the intention, and nearly the capability, to attack inside the United States.

"After the attempted assassination, there was a realization that these guys were good. They had a good engineer and bombmaker."

"The benchmark for how we viewed AQAP was established in late 2009," after the bin Nayef and Christmas Day plots, said Liepman, who's now a senior policy analyst at the Rand Corp.

The terror group didn't relent. Less than a year later, AQAP tried twice to get bombs hidden inside printer cartridges onto cargo airplanes. The group even claimed responsibility for the downing of a UPS jet in September 2010, though officially that crash was attributed to a fire in the plane's cargo hold causd by lithium batteries, and not a deliberate act.

Then in 2012, the U.S. foiled another plot by AQAP to detonate an underwear bomb, this one using a more sophisticated design. Not long before the plot was revealed by the Associated Press, CIA Director John Brennan gave a speech in New York in which he singled out AQAP as "the most active operational franchise," with some 1,000 members in Yemen and ties to the terrorist network's central operations base in the tribal regions of Pakistan. "We are very concerned about AQAP," Brennan said, calling the outfit "very, very dangerous."

Behind the scenes, however, a debate over just how big a threat al Qaeda still posed was dividing intelligence officials into rival factions. As The Daily Beast previously reported, a draft National Intelligence Estimate, a consensus document crafted by all the spy agencies, planned to say that Al Qaeda no longer posed a direct threat to the United States. Some senior U.S. officials, including Gen. Michael Flynn, then the director of the Defense Intelligence Agency, bucked against that assessment and successfully fought to have it struck from the document.

Former U.S. officials said this week that while there was a debate over whether al Qaeda's central operations in the tribal regions of Pakistan still posed a direct threat to the American homeland, there was never a question about whether AQAP was still a danger.

Still, the rift over how to assess al Qaeda central reflected concerns within some quarters of the intelligence community that the White House in particular was trying to minimize the overall threat from Al Qaeda. And those concerns have risen up again in the wake of the Paris shootings.

One prominent terrorism analyst said there's a "reflexive tendency" among many in the intelligence community and political elite to downplay Al Qaeda's resiliency and its reach.

"There's this immediate urge to say something isn't Al Qaeda when there's evidence that it is," said Thomas Joscelyn, the editor of the influential Long War Journal, which chronicles the workings of AQAP and U.S. drone strikes against the group. Joscelyn pointed out, for example, that President Obama initially described Abdulmutallab, the Christmas Day bomber, as an "isolated extremist" even though he had already told authorities that he was sent by al Qaeda in Yemen.

The Kaouachi brothers also claimed to be working with AQAP. And while U.S. officials told The Daily Beast that they are confident at least one of the brothers met in Yemen in 2011 with AQAP recruiter Anwar Awlaki, those officials still aren't sure that the group planned and directed the Charlie Hebdo shooting, despite its public claims.

In that hesitation to definitively pin the Paris attacks on the Yemeni terror group, some terrorism analysts see a blind spot. The intelligence community primarily viewed AQAP as a collection of bombers. Attacks like Paris seemed both far-fetched—and maybe unstoppable.

One former official, for example, that the Paris attack looked "exactly" like the kind of attack that analysts worried AQAP might inspire or direct others to carry out. But it was also the kind of plot that U.S. security agencies would "have little opportunity to stop," because it's much simpler to buy guns than get a bomb onto an airplane. The threat of mass shootings was like a nagging worry, whereas bomb plots were cause for immediate panic.

U.S. officials didn't have to look far to see what AQAP had in mind. Its English language magazine called Inspire has for years been encouraging readers to launch small-scale attacks, including shootings, against Western targets deemed offensive to Islam. The editors and cartoonists of Charlie Hebdo were on the Inspire hit list.

Two former senior counterterrorism officials described some of the Inspire ideas as "wacky"—such as a ramming cars into crowds. But they also said that the magazine was taken seriously by U.S. analysts. What's more, they feared that a lone terrorist could be motivated by the magazine to launch a small-scale attack, like a shooting, and that this would be something U.S. security agencies were essentially powerless to stop.

The idea that AQAP might turn to shooting attacks also had a precedent: the November 2008 attacks by gunman in India's capital that killed 164 people. "Mumbai absolutely got our attention," said Liepman, the former No. 2 at the National Counterterrorism Center. "It's sensible and responsible to model your threat against what they'd done already," and for AQAP, that was using hard-to-detect bombs.

The big lesson of the Paris attacks may be that focusing on a terrorist's weapon is less important than the terrorist himself.

"It's more the profile of a person they're looking for as opposed to the method of attack," the U.S. counterterrorism official told The Daily Beast. Who has the ability to travel freely between the Middle East and Western countries? Who can lay low and be depended upon to patiently carry out the plan? Who can avoid detection?

It's still not clear why the Kouachi brothers, who seem to fit that profile, didn't set off alarms for U.S. or French counterterrorism officials. Investigators are zeroing in on the more than three years that passed between the meeting with Awlaki and the Charlie Hebdo attacks, and are looking for any indications that the brothers, and their shooting plot, should have been scrutinized more closely.

The bulk of those questions will fall to French officials. The Kaouachi brothers were well known to French security authorities for their terrorist activities. The investigation into why the French failed to apprehend the suspects is exposing longstanding grievances among U.S. officials over who bears the weight of counterterrorism operations.

For years, Pentagon officials have publicly and privately griped that the military campaign against terrorist groups in the Middle East has fallen largely to them. When officials ask for more help from NATO allies, the response is often that members cannot afford to spend more on defense, leaving the U.S. to lead.

The war against AQAP was no different. The majority of drone and strikes against the group in Yemen were conducted by the U.S. military, with more assistance coming from Yemeni intelligence officials than from Europe.

"It is always on us. We have been a leader on counterterrorism in the region. Those are just the facts," one defense official told The Daily Beast.

Almost immediately after the attack on Charlie Hebdo offices, U.S. officials adamantly defended their ongoing campaign against AQAP, stressing the war against ISIS, which has consumed far more public attention, had not derailed them.

But privately, they concede there were other distractions. As the drone strike campaign continued, AQAP adapted, making it harder to spot targets. In addition, there were simply fewer targets still around as previous strikes took out so many.

And at times, the U.S. government itself decided to reduce the strikes it conducted in Yemen, particularly as concerns rose over civilian casualties. By 2014, when at least one of the Kouachi brothers received militant training in Yemen, U.S. strikes dropped by nearly half from their 2012 peak, according to statistics compiled by the Long War Journal.

Navy Rear Adm. John Kirby, a Pentagon spokesman, told reporters Friday that the number of strikes is not the only measure of the US commitment to the war on AQAP. "I think we have had a pretty strong record," Kirby said. And though there are fewer drone strikes, they're also more lethal. In 2014, 138 militants died, compared to 99 the year before, according to the Long War Journal.

One senior U.S. official credited the drone campaign with reducing the overall threat of terror attacks on American soil. It's not a coincidence, this official said, that after the killing of Awlaki and a concerted effort to kill other AQAP operational leaders, there have been fewer attempts by the group to put bombs on airplanes, and none documented since 2012. And stopping those attacks has always been the United States' top concern.

BBC News 20/01/2015

Ex-MI6 chief: Government and tech firms must agree spy pact

British intelligence agencies and technology companies need to agree on data-sharing to stop terrorism, the former head of MI6 has said.

Speaking publically for the first time since stepping down, Sir John Sawers said there could not be online "no-go areas" the government could not access.

The ex-spy chief said trust between governments and internet companies had been shattered and needed rebuilding.

Sir John Sawers Former MI6 chief:

Another UK terrorist attack "would get through" at some point, he said.

Speaking at the launch of a study by public affairs firm Edelman on attitudes towards bodies like the security services, the ex-chief of the Secret Intelligence Service said it was not possible to stop terrorist attacks like those in Paris without a data-sharing agreement to allow the security agencies to monitor people's activity online.

"Of course there is a dilemma here because the general public and politicians and the technology companies, to some extent, they want us to be able to monitor the activities of terrorists and other evil doers but they do not want their own activities to be open to any such monitoring," he said.

"If you allow areas which are completely impenetrable, then, okay, you might feel comfortable that your communications are private and no one else can see them, but so are those who are trying to do you down and undermine your society."
'Shattered trust'

Sir John said a breakdown in trust between between internet companies and the government was the result of revelations by whistleblower Edward Snowden, the former US spy agency contractor who disclosed the extent of surveillance and electronic monitoring by US and British government agencies.

"Snowden threw a massive rock in the pool and the ripples haven't stopped yet," he said.

Sir John also warned a "hardened core" of fighters returning to Britain from Iraq and Syria posed a real threat.

"At some point these threats will get through and there will be another terrorist attack in this country," he said.

The Guardian 21/01/2015

Bletchley Park 'girls' break code of secrecy for book launch

Women who worked together throughout war meet – some for the first time – to mark publication of new book featuring their memories

For years Betty Webb and Mary Every worked a few yards apart, often through the night, in Block F among the codebreakers of Bletchley Park. Now, both aged 92, they have met for the first time.

Although thousands of women worked there cheek by jowl throughout the war years, billeted among curious local families or sharing accommodation eight double bunks to a hut, absolute secrecy ruled. It was decades before the outside world learned anything of what went on in the warren of dilapidated huts surrounding the ugly Edwardian mansion in Buckinghamshire, but the bright young women recruited from secretarial colleges, the armed forces, or straight from school, scarcely knew any more.

Now seven veterans, with a collective age of 639, wearing the gold and blue brooches – not medals – they were finally awarded in 2009, have returned for the launch of a book about their lives there, The Debs of Bletchley Park by Michael Smith. Through its pages and their conversations many learned for the first time what the others had been up to.

The codebreaking work at Bletchley is estimated to have shortened the second world war by two years and saved thousands of lives. "You never knew what the person in the next-door office was doing, never mind the next block," Every said.

She is the last of the small group who learned Japanese specially to work on intercepted messages from the Far East. Once they had been translated, Webb rewrote them into the blandest possible English before they were passed on, to disguise the fact that the intelligence came from intercepted and decoded messages. The two fell into animated conversation about their work, which would never have happened if they had met queuing at the tea urn in a break from a night shift. "We could talk to each other in the same language," Every said. "It was like we were on the same railway track."

Everyone who worked there signed the Official Secrets Act, and they stuck to it like glue. One day in 1974 Lady Marion Body's husband, the MP Sir Richard Body, slapped down a book he had just bought. It was Frederick Winterbotham's account of the Bletchley codebreakers, The Ultra Secret. "Now will you tell me what you did in the war?" he demanded. "No," she said.

Jean Pitt-Lewis watched in astonishment a documentary that year, the first, presented by Ludovic Kennedy, and shouted at the screen: "No, no, no!" However, her mother phoned, ecstatic, to say: "Now at last I know what you were doing."

Pitt-Lewis was one of "Dilly's girls", recruited straight from school by a legendary figure, the Greek classicist Dilly Knox. He had been working for the Admiralty as a cryptographer since 1914 and, disliking rowdy young men, got special permission to work with an all-female team.

Pitt-Lewis recalled the interview as "a bit of a farce". Knox asked if she could speak German, she said no, and he said sadly that it might have been helpful if she had a few words.

That was it, she was in. Some of his girls were rather unusual, he warned her. One was "a very nice person, but a bit odd – she wears trousers and a bow tie, and she smokes a pipe".

Marigold Mortimer became a Wren when she left school, and was told she might be going to "somewhere in the country – we can't tell you where it is because we don't know, and if you get the job you won't be able to tell anyone and you won't be able to go anywhere else until the war ends".

"It sounded like a prison sentence," she recalled.

It was not all grim. The women billeted in huts at Woburn Abbey envied the women closer to Bletchley who could join in the nightly concerts, lectures, dances and choirs at the manor.

The women at the manor in turn envied the ones at the abbey with the run of the beautiful park, and those who kept their own ponies in the stables and went hunting.

All lived for the leave days when they could run from their shifts to the station and hop on a train to be in London and its cinemas, theatres, dance halls and museums in an hour – "if the train was running", Body said. Most had boyfriends, but not at Bletchley, where women outnumbered the men four to one: "We were playing away," Webb recalled of her Canadian boyfriend – who never learned one word of what they were working on.

They were officially freed to speak in 1975, but few did. Block F, like many of the records, had been destroyed, and until the recent revival of interest and the restoration of the site as a museum, the stories of the women, overshadowed by the brilliant maverick men such as Alan Turing, seemed likely to go untold for ever.

They are amazed now at shelves of books about their work, and the Oscar-nominated The Imitation Game – about which they had mixed opinions. “Over dramatised,” Body said. “And that’s putting it mildly.”

IBNews 21/01/2015

Chinese Spies Stealing Designs Of Australia's New Fighter Jet 'Highlights' Cyber Risks

Australian Foreign Minister Julie Bishop has highlighted cyber risks of the reported theft of Chinese spies of Australia’s new warplane designs. Crucial informaion from top secret documents were allegedly obtained about the new Joint Strike Fighter, the F-35 built by the U.S.

Bishop told Sky News that she remains confident that the U.S. would protect its intellectual property. The foreign minister was responding to media reports citing the leaked U.S. documents containing sensitive information about the F-35.

The Australian government has placed an order for 72 units of F-35 jets to be operational in 2020, BBC reported. The new fighter jet has been described as the most expensive defence project the U.S. has in history. U.S.-based Lockheed Martin manufactures the stealth aircraft with a development cost estimated at $400 billion. The U.S., UK and Australian military forces were among the major buyers of the F-35s.

Prime Minister Tony Abbott had announced in April 2014 that Australia will be buying 58 more F-35 worth more than $12 billion as part of the country’s plan to acquire 72 aircraft. Mr Abbott said the new fighter planes will make an important contribution to Australia’s national security.

Aside from the 72 aircraft initially placed by the Australian government, an option to increase the order to 100 is being considered which could have billions of dollars at stake. Bishop told media the leaked documents involving stolen aircraft designs “highlight” the challenges of cyber attacks.

Former U.S. National Security Agency intelligence contractor Edward Snowden had leaked the confidential documents to German magazine Der Spiegel. The documents revealed that Chinese cyber spies had illegally acquired “huge volumes” of classified military information related to the new fighter jet. The stolen data includes details about the aircraft’s radar systems, cooling exhaust gas, engine schematics and aft deck heating contour maps, according to Fairfax Media.

Previous reports have indicated that the F-35 is being targeted by Chinese cyber spies, but the Snowden leaks may have provided the first public confirmation of how highly classified data has been compromised. According to military experts, the design of China’s new fifth-generation fighters such as the Chengdu J-20 and the Shenyang J-31 may have been heavily influenced by design information stolen from the U.S.

The Diplomat 22/01/2015

The Spies Are Coming! The Spies Are Coming to Taiwan!

Just how bad is Taiwan’s spy problem?

The optics couldn’t be worse — four Taiwanese military officers, including an Air Force pilot, a lieutenant colonel and a former Army major general, indicted on charges of belonging to a spy ring led by a Chinese intelligence officer. Oh, and the owner of a karaoke club, to boot. The January 16 indictments, which follow the arrest in September last year of Zhen Xiaojiang, the Chinese handler who was also indicted, are but the latest in a string of arrests on espionage charges in recent years. 15 cases were uncovered in 2014 alone. Has the Taiwanese security apparatus been completely penetrated by Chinese spies, as some analysts have been arguing?

Maybe, but the extent to which systems and people have been compromised is anyone’s guess. The People’s Liberation Army is particularly interested in establishing a complete picture of Taiwan’s C4ISR architecture, radar and air defense systems, as well as war preparedness plans, a focus that has been confirmed through the string of arrests over the years, including the latest case. Despite warming ties between Taiwan and China since 2008, espionage efforts against the island-nation never abated; in fact, substantially increased contact between the two sides created a wealth of opportunities for intelligence collection and source recruitment by China.

The PLA’s rationale for stealing secrets from Taiwan is self-evident: Beijing does not recognize the existence of Taiwan as a sovereign state and regards it instead as a province awaiting “re-unification,” by force if necessary. Despite views to the contrary, Taiwan remains a so-called “core interest” of Beijing, and President Xi Jinping has stated that he hopes to resolve the Taiwan “issue” during his term. It goes without saying that if force were used to resolve the “issue” — that is, preventing a permanent state of division through the de jure independence of Taiwan — the Chinese military would seek to exploit the weaknesses in Taiwan’s defense establishment. To be able to do so, it must gather intelligence, recruit agents, and have sources in the many agencies that would play a role in a military contingency.

So of course Taiwan has a serious spy problem on its hands! It was, is, and will remain an intelligence priority for the Chinese.

However, damage assessments in the wake of a Chinese op should not be limited to the information that was, or may have been, stolen. Just as important are the propagandistic aspects of Chinese intelligence gathering, which are felt not when agents access classified information, but rather when they are caught and their activities are exposed.

For all the bluster, Beijing would much rather “win” Taiwan without having to fire a shot in anger. War is a messy adventure and its outcomes are unpredictable. Even if the PLA had the ability to prosecute a “quick and clean” war over Taiwan, which is by no means certain, the consequences would be dire for China, both in terms of the human cost and the blow to China’s image internationally. Better, then, to win without a fight, a strategy that certainly isn’t alien to Chinese culture.

Ironically, most defense analysts in Taiwan and abroad do not seem to be all that interested in understanding the propaganda component of China’s offensive operations against Taiwan. Through propaganda, Beijing aims to undermine Taipei’s image, further isolate Taiwan within the international community, and destroy morale in Taiwan. Consequently, whenever an espionage case is brought to light — regardless of the seriousness or nature of the incident — it tends to reinforce the notion that Taiwan is crawling with Chinese spies and therefore cannot be trusted with secrets or advanced military technology. The ramifications for intelligence sharing and arms sales to Taipei can be serious. Even careless operations in which agents are likely to be exposed can yield propaganda benefits for Beijing by damaging Taiwan’s reputation as a reliable security partner. In some cases, being caught could very well be the main goal of an intelligence operation!

Worse, Beijing’s propaganda ops broadcast the belief that Taiwanese can simply be “bought,” a view that simply doesn’t stand scrutiny. Western media have sometimes irresponsibly helped create that impression. For example, in an otherwise fine (if somewhat pessimistic) piece, Defense News writes, “The joke among many government officials in Beijing, according to media reports, is that it will be easier to buy Taiwan than invade it.” Unfortunately, the author doesn’t tell us which media reports he is referring to, or who the government officials are, not to mention whether they are qualified to discuss the matter or what their motivations might be for doing so.

The spy problem puts Taiwanese counterintelligence in a difficult position, as successful operations, especially when they are made public, exacerbate perceptions of Taiwan as drywood infested with termites. During the détente period of President Ma Ying-jeou’s reign, the military tended to downplay the seriousness of the Chinese espionage problem, or punished those who, like this author, sought to draw attention to the problem. Politics then dictated that the negative aspects of the relationship, such as continued Chinese belligerence, should be papered over in order to ensure continued dialogue, President Ma’s main consideration. Top-down

intervention was rampant, and agencies were instructed to remain silent on Chinese aggression. As a result, intensifying Chinese espionage (and military buildup) against Taiwan was relatively cost-free for Beijing: The consequences of exposure were next to nil, and rapprochement continued as if nothing had happened.

However, relations soured in early 2014, by which time Beijing had lost patience with Ma over his "inability" to meet its timelines (for all his faults, President Ma has to deal with a democracy). Accordingly, Taipei reciprocated by taking a tougher line on China. Electoral considerations, growing apprehensions about China's intentions in part due to the Sunflower Movement, and the need to appear strong on national security compelled the government to become more vocal on the China threat. Suddenly the National Security Bureau (NSB), the island's civilian spy agency, was less reluctant to point fingers at China, and the government didn't intimidate journalists who presented an overly pessimistic picture of the spy situation.

Ma, who is widely regarded as the architect of Taipei's "pro-China" policies since 2008, stepped down as chairman of the Chinese Nationalist Party (KMT) following his party's disastrous performance in the November 29 "nine-in-one" elections." The presidential election next year will likely force the KMT to distance itself from the embattled president, and the party's candidate (Ma cannot run for a third consecutive term) will be tempted to adopt a more Taiwan-centric position to increase his or her appeal with the majority of Taiwanese. Taipei could therefore conceivably become more openly critical of China and more willing to expose Beijing's bad behavior.

So we should not be surprised if more spy cases come to light in the coming months. However, in order to fully understand the severity of the situation, we must look beyond the secrets that were potentially leaked and take into consideration the propaganda value of an intelligence operation — both the costs of exposure and Beijing's motives for launching an op in the first place. In other words, while we should regard Taiwan's spy problem as a serious issue, we must not overstate the matter: China might be attempting to make it look worse than it actually is.

Gerry Wells, radio enthusiast - obituary
Collector of vintage radios and TVs whose London home became a museum of the history of broadcasting

http://www.telegraph.co.uk/news/obituaries/11411545/Gerry-Wells-radio-enthusiast-obituary.html

Gerry Wells, who has died aged 85, was a self-confessed obsessive whose life was dominated by his fascination with radio apparatus.

By the time of his death he had amassed a collection of more than 1,300 radio and television sets and associated equipment, covering the entire pre-transistor history of broadcasting. This had become the British Vintage Wireless and Television Museum, and today it occupies his lifelong home, a substantial Edwardian house in Dulwich, south-east London.

The collection contains many working examples, most of them found and brought back to life by Wells himself. Visitors can have the unique and somewhat unsettling experience of watching live television programmes in the old 405-line, black-and-white format, abandoned in 1984. Wells rescued the converter from the nearby Crystal Palace transmitter. He was a bit short of space at the time, so he set it up in his bedroom.

Gerald Lloyd Wells was born in the same Dulwich house on September 18 1929, the son of an insurance clerk. His future obsession with things electrical made itself known early when, aged three, he carefully inserted a piece of tinfoil into a power socket and blew every fuse in the house. Thereafter, electricity, radio especially, became his overwhelming interest.

As an unconventional child, the young Gerry was alternately ostracised and bullied at school. This, combined with difficulties at home, led him to play truant at the age of 11. He occupied his illicit free time in exploring bombed houses, scavenging for electrical switches, fuse boxes and other bits and pieces. From this he graduated to stealing radios from neighbouring flats. These he dismantled and hid in the attic; but he was found out and sent to a remand home.

This pattern of behaviour was repeated several times until, at 15, he was sent to an Approved School in Lancashire. There his skills found a legitimate outlet, and he was soon happily employed on electrical tasks, including renovating the local cinema's projector. It was correctly judged that his life of crime was over and he was released on licence.

With television starting up again after the war, and everything in short supply, he found his skills in great demand. It was a good time to set up in the repair business. The Coronation made 1953 a particularly busy and profitable year. He even designed and manufactured his own television sets.

With increasing affluence, the demand for small-scale repair work fell away, and in the early 1960s Wells turned to general electrical contracting. Never an astute businessman, he was an even worse employer, and his business struggled. That, plus a back injury, finally brought it to an end in 1974.

This was when (encouraged by friends who told him "If Lord Montagu could do it with cars, you can do it with radios") he determined to turn his home into a wireless museum. In a very short time it had taken over every room in the house, including the attic, and spread to a sizeable wooden structure that he built in the garden. The collection continued to grow until it became necessary to purchase a strip of garden from the house next door, for a further building.

The establishment, now a registered charity, is closed at present, while his devoted team of helpers reorganise it – not least to get some of the weight off the upper floor before it gives way. But it will reopen to visitors, always by prior arrangement. No doubt its annual summer garden party will take place again this year, at which people will crowd into a darkened room to watch BBC television "Interludes" from the early 1950s in glorious black and white.

Gerry Wells is survived by a daughter.

Gerry Wells, born September 18 1929, died December 22 2014

http://www.telegraph.co.uk/news/obituaries/11411545/Gerry-Wells-radio-enthusiast-obituary.html

The Daily Mail 28/01/2015

Russian bombers in the skies over the Channel: RAF jets scramble to intercept intruders

Typhoon jets flew alongside the long-range bombers over the Channel
Experts say Russians may have been probing weaknesses in UK defence
Bombers were in international airspace, but deviated from a standard route

British war planes were yesterday scrambled to intercept two Russian bombers capable of carrying nuclear missiles as they flew south of Bournemouth.

Typhoon jets on high alert were dispatched from two RAF bases and flew alongside the long-range Russian Bear aircraft until they were out of the region.

Last night experts said Vladimir Putin's move to send planes capable of carrying cruise missiles so close to British shores could be seen as an act of aggression.

They said the manoeuvre in the English Channel could have been designed to 'probe the RAF speed of reaction' – raising fears that the Russians were looking for weaknesses in the British fighter force.

Within seconds of the bombers deviating from their usual flight path, the British quick reaction alert (QRA) jets were scrambled.

A defence source said the RAF always 'maintains the highest level of readiness', just as in the days of Battle of Britain.

The Typhoons were dispatched from RAF Lossiemouth in Scotland and RAF Coningsby in Lincolnshire. They were so close to the Russian planes – roughly 1,000ft away – that they could signal to the pilots.

A QRA is launched to intercept aircraft that cannot be identified by any other means. In this case, the Russians would either not have filed a flight plan, not transmitted a recognisable surveillance radar code, or failed to talk to air traffic control.

Elizabeth Quintana, of defence think-tank the Royal United Services Institute, said: 'This case is very unusual. Normally Russian Bears come past Norway and down the North Sea. It could have been used to probe the RAF speed of reaction south.'

In a reference to the inquiry into the poisoning of former KGB spy Alexander Litvinenko in London, she said: 'Flying any military aircraft in or close to the sovereign airspace of another country signals displeasure or at worst aggression.'

While the bombers were in international airspace, they were deviating from a standard route.

A defence ministry spokesman said: 'Typhoons were launched after Russian aircraft were identified flying close to UK airspace.

'The Russian planes were escorted until they were out of the UK area of interest. At no time did they cross into UK airspace.'
If we knew the aircraft did have cruise missiles on it and was ready to use them, it wouldn't last very long

A source added: 'Why would you want to send Russian strategic bombers this far down? There is the Ukraine crisis and there is the Litvinenko trial but I wouldn't like to speculate. If we knew the aircraft did have cruise missiles on it and was ready to use them, it wouldn't last very long.'

The two Bears were escorted for about half an hour as they passed over the Channel and south of Bournemouth and Portsmouth. They then returned to their normal route, flying around Ireland and up past the tip of Scotland.

During this time it is likely the RAF will have been communicating to the Russian pilots through their radios.

In October, Typhoons intercepted another Russian Bear over the North Sea and Russian warships passed through the Channel and had to be escorted by the Navy.

The Guardian 27/02/2015

US charges Russian 'spies' suspected of trying to recruit New Yorkers

Evgeny Buryakov, Igor Sporyshev and Victor Podobny allegedly conspired to gather intelligence on behalf of Russia and to recruit Americans

The FBI has arrested a Russian man as a spy, breaking up a trio of agents who allegedly sought to recruit New Yorkers into the service of the Kremlin's foreign intelligence service.

Federal officers arrested 39-year-old Evgeny Buryakov – "aka Zhenya" – in the Bronx on Monday and charged him with conspiracy to gather intelligence on behalf of Russia. Igor Sporyshev, 40, and Victor Podobny, 27 – both of whom have left the US – were charged in absentia with the same offence, the office of New York prosecutor Preet Bharara confirmed.

At an initial court appearance on Monday, assistant US attorney Adam Fee portrayed Buryakov as a professional spy skilled at duplicity. "His life here, your honor, really, is a deception," the prosecutor said.

Buryakov's lawyer, Sabrina Shroff, lost an argument for bail after a magistrate judge agreed with the government that he had an incentive to flee since his cover was blown. Shroff argued the married father of two deserved bail, calling the charges "merely allegations".

According to the criminal complaint unveiled on Monday, the three Russians' alleged mission was to recruit Americans and gather "economic intelligence" – meaning secrets of everything from bankers' plans to US policy details and the workings of major US industries.

They were also accused of helping a "leading Russian state-owned news organisation" gather information which would help the SVR.

The complaint does not identify the news organization, but the complaint adds: "The news organization has been publicly identified by former SVR agents as an organization that is sometimes used by Russian intelligence to gain access to and gather intelligence under cover of the news media." In recent years the Kremlin has made a push into western countries with state organs such as RT and Sputnik launching English-language versions and opening bureaus around the world. The Russian government also controls news outlets such as Tass and RIA Novosti.

In court, prosecutor Adam Fee said Buryakov had previously worked in a different country as a banker for Russia's intelligence service, the SVR.

In 2010 the FBI broke up a similar "deep cover" spy ring, arresting 10 SVR operatives who posed as ordinary Americans, and had for years lived in east-coast suburbia under false names. The mission of the "illegals" ended with a major spy swap between the US and Russia, which were then on comparatively friendlier terms under the presidency of Dmitry Medvedev. The Kremlin welcomed the Russian spies home as heroes, instantly elevating one, the auburn-tressed Anna Chapman, to the status of celebrity and fashion icon.

The officials charged on Monday were not impressed by their sleeper cell predecessors. Podobny told one of his colleagues: "They weren't doing shit here, you understand."

The latest arrests are likely to put further strain on US-Russian relations, which are already at their lowest point since the end of the cold war – largely due to Russia's support of pro-Russian rebels in east Ukraine.

According to the complaint, Buryakov worked as a "deep cover" agent for the SVR. He entered the US as a civilian and posed as an employee in a Russian bank in New York, while reporting to Sporyshev and Podobny "using clandestine methods and coded messages".

While in the US, Sporyshev and Podobny were both protected by diplomatic immunity – the former a trade representative and the latter an attaché to Russia's permanent mission to the UN – but also named as SVR agents in the complaint. Sporyshev and Podobny "acted as covert intermediaries" for Buryakov, presumably reporting back to SVR superiors in Moscow.

A Evgeny Buryakov is listed as a "deputy representative" at Vnesheconombank (the Russian Development Bank), according to LinkedIn, but a representative there refused to confirm that he was the man who had been arrested. Vnesheconombank is not a commercial bank but a state-owned institution that works to "improve the competitiveness of the Russian economy".

Mark Galeotti, an expert in Russian security services at New York University, said the latest arrests showed that "to the Russians, as it was to the Soviets, the intelligence services are sort of the Swiss army knife of the state. They've always got a tool."

Galeotti said that the spies' interest in economic information was part of a Russian shift to gain an advantage – or at least "make up for a shorftall" – with the west financially and technologically. "To think that you could find assets that can help you understand the secrets of modern finance doesn't really make sense," Galeotti said, "but for Putin there's not really anything the security services can't do."

The complaint details how FBI surveillance teams watched the three men at as they slipped "a bag, magazine or slip of paper" to each other in outdoor locations, and how the Russians held brief phone calls – eavesdropped by the FBI – about delivering a "ticket", "umbrella" or "hat" to one another. The justice department notes in wonder how only once did the men actually discuss going to a movie, but never actually attended or spoke about another event that would require tickets.

Instead, conversations intercepted by the FBI show that the two Russian officials talked openly about recruiting Americans, including employees of unnamed major companies and "several young women with ties to a major university located in New York". Podobny even explained how he went about recruiting Americans, telling Sporyshev that he courted a New York consultant with "cheating, promising favors and then discarding the intelligence source".

"This intelligence method to cheat," Podobny says, is to "promise a favor for a favor. You get the documents from him and tell him to go fuck himself."

Of that same consultant, Podobny says: "I think he is an idiot and forgot who I am."

Podobny explicitly states in a recorded phonecall that he works for the SVR, and even expresses their disappointment that spycraft was not what they dreamed of. Podobny told his colleague, "The fact that I'm sitting with a cookie right now at the … chief enemy spot. Fuck! Not one point of what I thought then, not even close."

He then mutters something regarding "movies about James Bond", and concludes sadly: "Of course, I wouldn't fly helicopters, but pretend to be someone else at a minimum."

The two officials even discussed terms of their SVR employment, according to the complaint, talking about how "everyone has a five-year contract" and how travel for their families may be covered by "our SVR" payment plans.

Sporyshev on the other hand complained about women he tried to recruit as sources. "I have lots of ideas about such girls," he tells Podobny, but these ideas are not "actionable". "In order to be close you either need to fuck them or use other levels to influence them to execute my requests." He ends by advising Podobny: "So when you tell me about girls, in my experience, it's very rare that something workable will come of it."

In 2014 Buryakov met with an FBI source posing as a representative of a would-be casino mogul interested in the Russian gambling scene. Buryakov pressed the source for a range of economic information "far outside the scope of his work as a bank employee" and took fake US government documents that supposedly had information about sanctions against Russia.

Buryakov, the only member of the trio in US custody, could face a decade in prison on the counts of conspiracy to act as a foreign agent.

In a statement, Bharara said it was clear that despite the 20 years since "the presumptive end of the cold war – Russian spies continue to seek to operate in our midst under the cover of secrecy". Bharara said the presence of a Russian banker in New York, although mundane, would not disguise espionage from the FBI.

Attorney general Eric Holder said the US would find foreign agents in the US "no matter how deep their cover".

The Russian foreign ministry and intelligence service could not immediately be reached for comment on the case on Monday. Alexey Zaytsev, spokesman for Russia's UN Mission, said: "We don't have any comment now."

Vnesheconombank did not respond to requests for comment.

The Guardian 06/02/2015

UK Government issues first definition of computer hacking by spies

Code of practice sets out rules and safeguards surrounding use of computer hacking outside UK by security services

The British government has for the first time offered an official definition of computer hacking by the security services. In a Home Office "draft equipment interference code of practice" released on Friday, the government defines it as:

Any interference (whether remotely or otherwise) by the intelligence services, or persons acting on their behalf or in their support, with equipment producing electromagnetic, acoustic and other emissions, or information derived from or related to such equipment, which is to be authorised under section 5 of the 1994 [Intelligence Services] Act, in order to do any or all of the following:

a) obtain information from the equipment in pursuit of intelligence requirements;

b) obtain information concerning the ownership, nature and use of the equipment with a view to meeting intelligence requirements;

c) locate and examine, remove, modify or substitute equipment hardware or software which is capable of yielding information of the type described in a) and b);

d) enable and facilitate surveillance activity by means of the equipment.

'Information' may include communications content, and communications data as defined in section 21 of the 2000 [Regulation of Investigatory Powers] Act.

The Intercept 19/02/2015

The Great SIM Heist

How Spies Stole the Keys to the Encryption Castle

AMERICAN AND BRITISH spies hacked into the internal computer network of the largest manufacturer of SIM cards in the world, stealing encryption keys used to protect the privacy of cellphone communications across the globe, according to top-secret documents provided to The Intercept by National Security Agency whistleblower Edward Snowden.

The hack was perpetrated by a joint unit consisting of operatives from the NSA and its British counterpart Government Communications Headquarters, or GCHQ. The breach, detailed in a secret 2010 GCHQ document, gave the surveillance agencies the potential to secretly monitor a large portion of the world's cellular communications, including both voice and data.

The company targeted by the intelligence agencies, Gemalto, is a multinational firm incorporated in the Netherlands that makes the chips used in mobile phones and next-generation credit cards. Among its clients are AT&T, T-Mobile, Verizon, Sprint and some 450 wireless network providers around the world. The company operates in 85 countries and has more than 40 manufacturing facilities. One of its three global headquarters is in Austin, Texas and it has a large factory in Pennsylvania.

In all, Gemalto produces some 2 billion SIM cards a year. Its motto is "Security to be Free."

With these stolen encryption keys, intelligence agencies can monitor mobile communications without seeking or receiving approval from telecom companies and foreign governments. Possessing the keys also sidesteps the need to get a warrant or a wiretap, while leaving no trace on the wireless provider's network that the communications were intercepted. Bulk key theft additionally enables the intelligence agencies to unlock any previously encrypted communications they had already intercepted, but did not yet have the ability to decrypt.

As part of the covert operations against Gemalto, spies from GCHQ — with support from the NSA — mined the private communications of unwitting engineers and other company employees in multiple countries.

Gemalto was totally oblivious to the penetration of its systems — and the spying on its employees. "I'm disturbed, quite concerned that this has happened," Paul Beverly, a Gemalto executive vice president, told The Intercept. "The most important thing for me is to understand exactly how this was done, so we can take every measure to ensure that it doesn't happen again, and also to make sure that there's no impact on the telecom operators that we have served in a very trusted manner for many years. What I want to understand is what sort of ramifications it has, or could have, on any of our customers." He added that "the most important thing for us now is to understand the degree" of the breach.

Leading privacy advocates and security experts say that the theft of encryption keys from major wireless network providers is tantamount to a thief obtaining the master ring of a building superintendent who holds the keys to every apartment. "Once you have the keys, decrypting traffic is trivial," says Christopher Soghoian, the principal technologist for the American Civil Liberties Union. "The news of this key theft will send a shock wave through the security community."

The massive key theft is "bad news for phone security. Really bad news."

Beverly said that after being contacted by The Intercept, Gemalto's internal security team began on Wednesday to investigate how their system was penetrated and could find no trace of the hacks. When asked if the NSA or GCHQ had ever requested access to Gemalto-manufactured encryption keys, Beverly said, "I am totally unaware. To the best of my knowledge, no."

According to one secret GCHQ slide, the British intelligence agency penetrated Gemalto's internal networks, planting malware on several computers, giving GCHQ secret access. We "believe we have their entire network," the slide's author boasted about the operation against Gemalto.

Additionally, the spy agency targeted unnamed cellular companies' core networks, giving it access to "sales staff machines for customer information and network engineers machines for network maps." GCHQ also claimed the ability to manipulate the billing servers of cell companies to "suppress" charges in an effort to conceal the spy agency's secret actions against an individual's phone. Most significantly, GCHQ also penetrated "authentication servers," allowing it to decrypt data and voice communications between a targeted individual's phone and his or her telecom provider's network. A note accompanying the slide asserted that the spy agency was "very happy with the data so far and [was] working through the vast quantity of product."

The Mobile Handset Exploitation Team (MHET), whose existence has never before been disclosed, was formed in April 2010 to target vulnerabilities in cellphones. One of its main missions was to covertly penetrate computer networks of corporations that manufacture SIM cards, as well as those of wireless network providers. The team included operatives from both GCHQ and the NSA.

While the FBI and other U.S. agencies can obtain court orders compelling U.S.-based telecom companies to allow them to wiretap or intercept the communications of their customers, on the international front this type of data collection is much more challenging. Unless a foreign telecom or foreign government grants access to their citizens' data to a U.S. intelligence agency, the NSA or CIA would have to hack into the network or specifically target the user's device for a more risky "active" form of surveillance that could be detected by sophisticated targets. Moreover, foreign intelligence agencies would not allow U.S. or U.K. spy agencies access to the mobile communications of their heads of state or other government officials.

"It's unbelievable. Unbelievable," said Gerard Schouw, a member of the Dutch Parliament, when told of the spy agencies' actions. Schouw, the intelligence spokesperson for D66, the largest opposition party in the Netherlands, told The Intercept, "We don't want to have the secret services from other countries doing things like this." Schouw added that he and other lawmakers will ask the Dutch government to provide an official explanation and to clarify whether the country's intelligence services were aware of the targeting of Gemalto, whose official headquarters is in Amsterdam.

Last November, the Dutch government proposed an amendment to its constitution to include explicit protection for the privacy of digital communications, including those made on mobile devices. "We have, in the Netherlands, a law on the [activities] of secret services. And hacking is not allowed," Schouw said. Under Dutch law, the interior minister would have to sign off on such operations by foreign governments' intelligence agencies. "I don't believe that he has given his permission for these kind of actions."

The U.S. and British intelligence agencies pulled off the encryption key heist in great stealth, giving them the ability to intercept and decrypt communications without alerting the wireless network provider, the foreign government or the individual user that they have been targeted. "Gaining access to a database of keys is pretty much game over for cellular encryption," says Matthew Green, a cryptography specialist at the Johns Hopkins Information Security Institute. The massive key theft is "bad news for phone security. Really bad news."
att_sim

AS CONSUMERS BEGAN to adopt cellular phones en masse in the mid-1990s, there were no effective privacy protections in place. Anyone could buy a cheap device from RadioShack capable of intercepting calls placed on mobile phones. The shift from analog to digital networks introduced basic encryption technology,

though it was still crackable by tech savvy computer science graduate students, as well as the FBI and other law enforcement agencies, using readily available equipment.

Today, second-generation (2G) phone technology, which relies on a deeply flawed encryption system, remains the dominant platform globally, though U.S. and European cellphone companies now use 3G, 4G and LTE technology in urban areas. These include more secure, though not invincible, methods of encryption, and wireless carriers throughout the world are upgrading their networks to use these newer technologies.

It is in the context of such growing technical challenges to data collection that intelligence agencies, such as the NSA, have become interested in acquiring cellular encryption keys. “With old-fashioned [2G], there are other ways to work around cellphone security without those keys,” says Green, the Johns Hopkins cryptographer. “With newer 3G, 4G and LTE protocols, however, the algorithms aren’t as vulnerable, so getting those keys would be essential.”

The privacy of all mobile communications — voice calls, text messages and Internet access — depends on an encrypted connection between the cellphone and the wireless carrier’s network, using keys stored on the SIM, a tiny chip smaller than a postage stamp, which is inserted into the phone. All mobile communications on the phone depend on the SIM, which stores and guards the encryption keys created by companies like Gemalto. SIM cards can be used to store contacts, text messages, and other important data, like one’s phone number. In some countries, SIM cards are used to transfer money. As The Intercept reported last year, having the wrong SIM card can make you the target of a drone strike.

SIM cards were not invented to protect individual communications — they were designed to do something much simpler: ensure proper billing and prevent fraud, which was pervasive in the early days of cellphones. Soghoian compares the use of encryption keys on SIM cards to the way Social Security numbers are used today. “Social security numbers were designed in the 1930s to track your contributions to your government pension,” he says. “Today they are used as a quasi national identity number, which was never their intended purpose.”

Because the SIM card wasn’t created with call confidentiality in mind, the manufacturers and wireless carriers don’t make a great effort to secure their supply chain. As a result, the SIM card is an extremely vulnerable component of a mobile phone. “I doubt anyone is treating those things very carefully,” says Green. “Cell companies probably don’t treat them as essential security tokens. They probably just care that nobody is defrauding their networks.” The ACLU’s Soghoian adds, “These keys are so valuable that it makes sense for intel agencies to go after them.”

As a general rule, phone companies do not manufacture SIM cards, nor program them with secret encryption keys. It is cheaper and more efficient for them to outsource this sensitive step in the SIM card production process. They purchase them in bulk with the keys pre-loaded by other corporations. Gemalto is the largest of these SIM “personalization” companies.

After a SIM card is manufactured, the encryption key, known as a “Ki,” is burned directly onto the chip. A copy of the key is also given to the cellular provider, allowing its network to recognize an individual’s phone. In order for the phone to be able to connect to the wireless carrier’s network, the phone — with the help of the SIM — authenticates itself using the Ki that has been programmed onto the SIM. The phone conducts a secret “handshake” that validates that the Ki on the SIM matches the Ki held by the mobile company. Once that happens, the communications between the phone and the network are encrypted. Even if GCHQ or the NSA were to intercept the phone signals as they are transmitted through the air, the intercepted data would be a garbled mess. Decrypting it can be challenging and time-consuming. Stealing the keys, on the other hand, is beautifully simple, from the intelligence agencies’ point of view, as the pipeline for producing and distributing SIM cards was never designed to thwart mass surveillance efforts.

One of the creators of the encryption protocol that is widely used today for securing emails, Adi Shamir, famously asserted: “Cryptography is typically bypassed, not penetrated.” In other words, it is much easier (and sneakier) to open a locked door when you have the key than it is to break down the door using brute force. While the NSA and GCHQ have substantial resources dedicated to breaking encryption, it is not the only way — and certainly not always the most efficient — to get at the data they want. “NSA has more mathematicians on its payroll than any other entity in the U.S.,” says the ACLU’s Soghoian. “But the NSA’s hackers are way busier than its mathematicians.”

GCHQ and the NSA could have taken any number of routes to steal SIM encryption keys and other data. They could have physically broken into a manufacturing plant. They could have broken into a wireless carrier’s office. They could have bribed, blackmailed or coerced an employee of the manufacturer or cellphone provider. But all of that comes with substantial risk of exposure. In the case of Gemalto, hackers working for GCHQ remotely penetrated the company’s computer network in order to steal the keys in bulk as they were en route to the wireless network providers.

SIM card “personalization” companies like Gemalto ship hundreds of thousands of SIM cards at a time to mobile phone operators across the world. International shipping records obtained by The Intercept show that in 2011, Gemalto shipped 450,000 smart cards from its plant in Mexico to Germany’s Deutsche Telekom in just one shipment.

In order for the cards to work and for the phones’ communications to be secure, Gemalto also needs to provide the mobile company with a file containing the encryption keys for each of the new SIM cards. These master key files could be shipped via FedEx, DHL, UPS or another snail mail provider. More commonly, they could be sent via email or through File Transfer Protocol, FTP, a method of sending files over the Internet.

The moment the master key set is generated by Gemalto or another personalization company, but before it is sent to the wireless carrier, is the most vulnerable moment for interception. “The value of getting them at the point of manufacture is you can presumably get a lot of keys in one go, since SIM chips get made in big batches,” says Green, the cryptographer. “SIM cards get made for lots of different carriers in one facility.” In Gemalto’s case, GCHQ hit the jackpot, as the company manufactures SIMs for hundreds of wireless network providers, including all of the leading U.S.— and many of the largest European — companies.

But obtaining the encryption keys while Gemalto still held them required finding a way into the company’s internal systems.

Diagram from a top-secret GCHQ slide.

TOP-SECRET GCHQ documents reveal that the intelligence agencies accessed the email and Facebook accounts of engineers and other employees of major telecom corporations and SIM card manufacturers in an effort to secretly obtain information that could give them access to millions of encryption keys. They did this by utilizing the NSA’s X-KEYSCORE program, which allowed them access to private emails hosted by the SIM card and mobile companies’ servers, as well as those of major tech corporations, including Yahoo and Google.

In effect, GCHQ clandestinely cyberstalked Gemalto employees, scouring their emails in an effort to find people who may have had access to the company’s core networks and Ki-generating systems. The intelligence agency’s goal was to find information that would aid in breaching Gemalto’s systems, making it possible to steal large quantities of encryption keys. The agency hoped to intercept the files containing the keys as they were transmitted between Gemalto and its wireless network provider customers.

GCHQ operatives identified key individuals and their positions within Gemalto and then dug into their emails. In one instance, GCHQ zeroed in on a Gemalto employee in Thailand who they observed sending PGP-encrypted files, noting that if GCHQ wanted to expand its Gemalto operations, “he would certainly be a good place to start.” They did not claim to have decrypted the employee’s communications, but noted that the use of PGP could mean the contents were potentially valuable.

The cyberstalking was not limited to Gemalto. GCHQ operatives wrote a script that allowed the agency to mine the private communications of employees of major telecommunications and SIM "personalization" companies for technical terms used in the assigning of secret keys to mobile phone customers. Employees for the SIM card manufacturers and wireless network providers were labeled as "known individuals and operators targeted" in a top-secret GCHQ document.

According to that April 2010 document, "PCS Harvesting at Scale," hackers working for GCHQ focused on "harvesting" massive amounts of individual encryption keys "in transit between mobile network operators and SIM card personalisation centres" like Gemalto. The spies "developed a methodology for intercepting these keys as they are transferred between various network operators and SIM card providers." By that time, GCHQ had developed "an automated technique with the aim of increasing the volume of keys that can be harvested."

The PCS Harvesting document acknowledged that, in searching for information on encryption keys, GCHQ operatives would undoubtedly vacuum up "a large number of unrelated items" from the private communications of targeted employees. "[H]owever an analyst with good knowledge of the operators involved can perform this trawl regularly and spot the transfer of large batches of [keys]."

The document noted that many SIM card manufacturers transferred the encryption keys to wireless network providers "by email or FTP with simple encryption methods that can be broken … or occasionally with no encryption at all." To get bulk access to encryption keys, all the NSA or GCHQ needed to do was intercept emails or file transfers as they were sent over the Internet — something both agencies already do millions of times per day. A footnote in the 2010 document observed that the use of "strong encryption products … is becoming increasingly common" in transferring the keys.

In its key harvesting "trial" operations in the first quarter of 2010, GCHQ successfully intercepted keys used by wireless network providers in Iran, Afghanistan, Yemen, India, Serbia, Iceland and Tajikistan. But, the agency noted, its automated key harvesting system failed to produce results against Pakistani networks, denoted as "priority targets" in the document, despite the fact that GCHQ had a store of Kis from two providers in the country, Mobilink and Telenor. "[I]t is possible that these networks now use more secure methods to transfer Kis," the document concluded.

From December 2009 through March 2010, a month before the Mobile Handset Exploitation Team was formed, GCHQ conducted a number of trials aimed at extracting encryption keys and other personalized data for individual phones. In one two-week period, they accessed the emails of 130 people associated with wireless network providers or SIM card manufacturing and personalization. This operation produced nearly 8,000 keys matched to specific phones in 10 countries. In another two-week period, by mining just six email addresses, they produced 85,000 keys. At one point in March 2010, GCHQ intercepted nearly 100,000 keys for mobile phone users in Somalia. By June, they'd compiled 300,000. "Somali providers are not on GCHQ's list of interest," the document noted. "[H]owever, this was usefully shared with NSA."

The GCHQ documents only contain statistics for three months of encryption key theft in 2010. During this period, millions of keys were harvested. The documents stated explicitly that GCHQ had already created a constantly evolving automated process for bulk harvesting of keys. They describe active operations targeting Gemalto's personalization centers across the globe, as well as other major SIM card manufacturers and the private communications of their employees.

A top-secret NSA document asserted that, as of 2009, the U.S. spy agency already had the capacity to process between 12 and 22 million keys per second for later use against surveillance targets. In the future, the agency predicted, it would be capable of processing more than 50 million per second. The document did not state how many keys were actually processed, just that the NSA had the technology to perform such swift, bulk operations. It is impossible to know how many keys have been stolen by the NSA and GCHQ to date, but, even using conservative math, the numbers are likely staggering.

GCHQ assigned "scores" to more than 150 individual email addresses based on how often the users mentioned certain technical terms, and then intensified the mining of those individuals' accounts based on priority. The highest-scoring email address was that of an employee of Chinese tech giant Huawei, which the U.S. has repeatedly accused of collaborating with Chinese intelligence. In all, GCHQ harvested the emails of employees of hardware companies that manufacture phones, such as Ericsson and Nokia; operators of mobile networks, such as MTN Irancell and Belgacom; SIM card providers, such as Bluefish and Gemalto; and employees of targeted companies who used email providers, such as Yahoo and Google. During the three-month trial, the largest number of email addresses harvested were those belonging to Huawei employees, followed by MTN Irancell. The third largest class of emails harvested in the trial were private Gmail accounts, presumably belonging to employees at targeted companies.

"People were specifically hunted and targeted by intelligence agencies, not because they did anything wrong, but because they could be used."

The GCHQ program targeting Gemalto was called DAPINO GAMMA. In 2011, GCHQ launched operation HIGHLAND FLING to mine the email accounts of Gemalto employees in France and Poland. A top-secret document on the operation stated that one of the aims was "getting into French HQ" of Gemalto "to get in to core data repositories." France, home to one of Gemalto's global headquarters, is the nerve center of the company's worldwide operations. Another goal was to intercept private communications of employees in Poland that "could lead to penetration into one or more personalisation centers" — the factories where the encryption keys are burned onto SIM cards.

As part of these operations, GCHQ operatives acquired the usernames and passwords for Facebook accounts of Gemalto targets. An internal top-secret GCHQ wiki on the program from May 2011 indicated that GCHQ was in the process of "targeting" more than a dozen Gemalto facilities across the globe, including in Germany, Mexico, Brazil, Canada, China, India, Italy, Russia, Sweden, Spain, Japan and Singapore.

The document also stated that GCHQ was preparing similar key theft operations against one of Gemalto's competitors, Germany-based SIM card giant Giesecke and Devrient.

On January 17, 2014, President Barack Obama gave a major address on the NSA spying scandal. "The bottom line is that people around the world, regardless of their nationality, should know that the United States is not spying on ordinary people who don't threaten our national security and that we take their privacy concerns into account in our policies and procedures," he said.

The monitoring of the lawful communications of employees of major international corporations shows that such statements by Obama, other U.S. officials and British leaders — that they only intercept and monitor the communications of known or suspected criminals or terrorists — were untrue. "The NSA and GCHQ view the private communications of people who work for these companies as fair game," says the ACLU's Soghoian. "These people were specifically hunted and targeted by intelligence agencies, not because they did anything wrong, but because they could be used as a means to an end."
key-slide2

THERE ARE TWO basic types of electronic or digital surveillance: passive and active. All intelligence agencies engage in extensive passive surveillance, which means they collect bulk data by intercepting communications sent over fiber-optic cables, radio waves or wireless devices.

Intelligence agencies place high-power antennas, known as "spy nests," on the top of their countries' embassies and consulates, which are capable of vacuuming up data sent to or from mobile phones in the surrounding area. The joint NSA/CIA Special Collection Service is the lead entity that installs and mans these nests for the United States. An embassy situated near a parliament or government agency could easily intercept the phone calls and data transfers of the mobile phones used by foreign government officials. The U.S. embassy in Berlin, for instance, is located a stone's throw from the Bundestag. But if the wireless carriers are using stronger encryption, which is built into modern 3G, 4G and LTE networks, then intercepted calls and other data would be more difficult to crack, particularly in bulk. If the intelligence agency wants to actually listen to or read what is being transmitted, they would need to decrypt the encrypted data.

Active surveillance is another option. This would require government agencies to "jam" a 3G or 4G network, forcing nearby phones onto 2G. Once forced down to the less secure 2G technology, the phone can be tricked into connecting to a fake cell tower operated by an intelligence agency. This method of surveillance, though effective, is risky, as it leaves a digital trace that counter-surveillance experts from foreign governments could detect.

Stealing the Kis solves all of these problems. This way, intelligence agencies can safely engage in passive, bulk surveillance without having to decrypt data and without leaving any trace whatsoever.

"Key theft enables the bulk, low-risk surveillance of encrypted communications," the ACLU's Soghoian says. "Agencies can collect all the communications and then look through them later. With the keys, they can decrypt whatever they want, whenever they want. It's like a time machine, enabling the surveillance of communications that occurred before someone was even a target."

Neither the NSA nor GCHQ would comment specifically on the key theft operations. In the past, they have argued more broadly that breaking encryption is a necessary part of tracking terrorists and other criminals. "It is longstanding policy that we do not comment on intelligence matters," a GCHQ official stated in an email, adding that the agency's work is conducted within a "strict legal and policy framework" that ensures its activities are "authorized, necessary and proportionate," with proper oversight, which is the standard response the agency has provided for previous stories published by The Intercept. The agency also said, "[T]he UK's interception regime is entirely compatible with the European Convention on Human Rights." The NSA declined to offer any comment.

It is unlikely that GCHQ's pronouncement about the legality of its operations will be universally embraced in Europe. "It is governments massively engaging in illegal activities," says Sophie in't Veld, a Dutch member of the European Parliament. "If you are not a government and you are a student doing this, you will end up in jail for 30 years." Veld, who chaired the European Parliament's recent inquiry into mass surveillance exposed by Snowden, told The Intercept: "The secret services are just behaving like cowboys. Governments are behaving like cowboys and nobody is holding them to account."

The Intercept's Laura Poitras has previously reported that in 2013 Australia's signals intelligence agency, a close partner of the NSA, stole some 1.8 million encryption keys from an Indonesian wireless carrier.

A few years ago, the FBI reportedly dismantled several transmitters set up by foreign intelligence agencies around the Washington, D.C. area, which could be used to intercept cellphone communications. Russia, China, Israel and other nations use similar technology as the NSA across the world. If those governments had the encryption keys for major U.S. cellphone companies' customers, such as those manufactured by Gemalto, mass snooping would be simple. "It would mean that with a few antennas placed around Washington, D.C., the Chinese or Russian governments could sweep up and decrypt the communications of members of Congress, U.S. agency heads, reporters, lobbyists and everyone else involved in the policymaking process and decrypt their telephone conversations," says Soghoian.

"Put a device in front of the U.N., record every bit you see going over the air. Steal some keys, you have all those conversations," says Green, the Johns Hopkins cryptographer. And it's not just spy agencies that would benefit from stealing encryption keys. "I can only imagine how much money you could make if you had access to the calls made around Wall Street," he adds.

GCHQ slide.

THE BREACH OF Gemalto's computer network by GCHQ has far-reaching global implications. The company, which brought in $2.7 billion in revenue in 2013, is a global leader in digital security, producing banking cards, mobile payment systems, two-factor authentication devices used for online security, hardware tokens used for securing buildings and offices, electronic passports and identification cards. It provides chips to Vodafone in Europe and France's Orange, as well as EE, a joint venture in the U.K. between France Telecom and Deutsche Telekom. Royal KPN, the largest Dutch wireless network provider, also uses Gemalto technology.

In Asia, Gemalto's chips are used by China Unicom, Japan's NTT and Taiwan's Chungwa Telecom, as well as scores of wireless network providers throughout Africa and the Middle East. The company's security technology is used by more than 3,000 financial institutions and 80 government organizations. Among its clients are Visa, Mastercard, American Express, JP Morgan Chase and Barclays. It also provides chips for use in luxury cars, including those made by Audi and BMW.

In 2012, Gemalto won a sizable contract, worth $175 million, from the U.S. government to produce the covers for electronic U.S. passports, which contain chips and antennas that can be used to better authenticate travelers. As part of its contract, Gemalto provides the personalization and software for the microchips implanted in the passports. The U.S. represents Gemalto's single largest market, accounting for some 15 percent of its total business. This raises the question of whether GCHQ, which was able to bypass encryption on mobile networks, has the ability to access private data protected by other Gemalto products created for banks and governments.

As smart phones become smarter, they are increasingly replacing credit cards and cash as a means of paying for goods and services. When Verizon, AT&T and T-Mobile formed an alliance in 2010 to jointly build an electronic pay system to challenge Google Wallet and Apple Pay, they purchased Gemalto's technology for their program, known as Softcard. (Until July 2014, it previously went by the unfortunate name of "ISIS Mobile Wallet.") Whether data relating to that, and other Gemalto security products, has been compromised by GCHQ and the NSA is unclear. Both intelligence agencies declined to answer any specific questions for this story.

Signal, iMessage, WhatsApp, Silent Phone.

PRIVACY ADVOCATES and security experts say it would take billions of dollars, significant political pressure, and several years to fix the fundamental security flaws in the current mobile phone system that NSA, GCHQ and other intelligence agencies regularly exploit.

A current gaping hole in the protection of mobile communications is that cellphones and wireless network providers do not support the use of Perfect Forward Secrecy (PFS), a form of encryption designed to limit the damage caused by theft or disclosure of encryption keys. PFS, which is now built into modern web browsers and used by sites like Google and Twitter, works by generating unique encryption keys for each communication or message, which are then discarded. Rather than using the same encryption key to protect years' worth of data, as the permanent Kis on SIM cards can, a new key might be generated each minute, hour or day, and then promptly destroyed. Because cellphone communications do not utilize PFS, if an intelligence agency has been "passively" intercepting someone's communications for a year and later acquires the permanent encryption key, it can go back and decrypt all of those communications. If mobile phone networks were using PFS, that would not be possible — even if the permanent keys were later stolen.

The only effective way for individuals to protect themselves from Ki theft-enabled surveillance is to use secure communications software, rather than relying on SIM card-based security. Secure software includes email and other apps that use Transport Layer Security (TLS), the mechanism underlying the secure HTTPS web protocol. The email clients included with Android phones and iPhones support TLS, as do large email providers like Yahoo and Google.

Apps like TextSecure and Silent Text are secure alternatives to SMS messages, while Signal, RedPhone and Silent Phone encrypt voice calls. Governments still may be able to intercept communications, but reading or listening to them would require hacking a specific handset, obtaining internal data from an email provider, or installing a bug in a room to record the conversations.

"We need to stop assuming that the phone companies will provide us with a secure method of making calls or exchanging text messages," says Soghoian.

The Guardian 23/02/2015

Scottish children don't need these government spies

The SNP's proposal to allow state guardians to be named for every child in Scotland is interfering and unhelpful

The SNP's disturbing, seven-year obsession with looking through the nation's keyholes to ensure we are all behaving, sitting straight, eating properly and getting to bed early continues. It is surely only a matter of time before the Scottish government's children's minister, Aileen Campbell, is invited to North Korea to make a presentation on how her party has managed to secure such coast-to-coast state surveillance of families without any bad publicity.

Last Wednesday night, the government effectively paved the way for official surveillance of family life by allowing for state guardians to be appointed for every child in Scotland. The move is part of the SNP's otherwise sound and thoughtful children and young people bill, which also guarantees free school meals for children in primary year one to three and a significant increase in nursery provision. This interventionist, hand-wringing party of state busybodies simply cannot help itself, though, and they ruined the tenor of the legislation with their state guardians.

According to them, this is a benign move that will assign a named person to every child from birth until the age of 18. If said named person has any concerns about a child's welfare, they may be able to refer the case to social workers. Before that, though, the named person will be able to access information about a child and his family from the police and health authorities. The government says that families are not required to accept advice or offers of help from the named person. "Any actions or advice from the named person must be fair, proportionate and respect rights with the aim of safeguarding the wellbeing of the child," the government says.

It adds that the guardians will be chosen from among existing teachers and healthcare professionals and will be people who may already exist in a child's life. So effectively, they are being encouraged to go further by being given extra powers. This, as with much of what passes for the SNP's social agenda, is meaningless and incoherent. In reality, any poor family that does indeed reject intervention of the state busybody will soon be receiving a visit from the plods and an army of social workers.

There is a formidable array of agencies, both formal and informal, which protects children from abuse and neglect. These are designed to receive and pass on early warnings about a child's welfare. This is a list of them; you might recognise most of them: the immediate family; relatives of immediate family; friends; neighbours; teachers; doctors; health visitors; the police; social workers; charities that specialise in child welfare issues. Also, the proposals could lead, bizarrely, to a situation where there could be different named people for different children in the family. This seems in contrast to the GIRFEC (getting it right for every child) model of sharing information and could leave scope for things to be missed.

So why does the Scottish government seek to impose another layer of watchmen upon the nation's families? The first reason is because it seems programmed to seek control of every aspect of the lives of its citizens. Aided and abetted by an increasingly out-of-control police force it has already sought to criminalise young people from poor neighbourhoods for singing political songs that the Scottish state deems unacceptable. It has tried to ban Buckfast; prevent the use of glasses in pubs and banish happy hours. It wants to examine our fridges and ban smoking in cars. The Scottish government, aided and abetted by a nonexistent opposition, will not stop until surveillance cameras are installed in every home.

The second reason is that the government simply don't trust poor people and those who live in our edgier neighbourhoods to bring up their children according to the Mumsnet way. The people who face social challenges every day in their lives simply do not have enough time to organise cupcake demonstrations or have online discussions on how to get the best out of a blowjob.

Sometimes, they shout at their children in supermarkets and the rest of us look on meaningfully, wishing we could intervene but fearing a good slap if we did. Warning signs of neglect or worse may not be warning signs at all, but merely the behavioural consequences of living in extreme deprivation.

What these people do not need is another well-meaning, middle-class, professional nanny peering into their lives. I'll be surprised if this piece of legislative suburban junk isn't deemed contrary to article 12 of the Universal Declaration of Human Rights: "No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks."

If it is somehow allowed to become law, then we all know what the consequences will be: many more working-class people will be held to be guilty of something unstated and inferred. In several cases, innocent families will be pulled apart simply on the whim of a government that doesn't know when to stop and that wants us to sign up to its "one-size-fits-all" model of family life. Soon, they will be designing the family and telling us how big it ought to be (according to postcode, of course).

Unaccountably, some of the bigger children's charities, including those that are handsomely paid by government, have no problem with this. There is a reason for this; many of the organisations in this sector, while doing great work in research and teaching, have simply forgotten – or don't want to know – what daily challenges are faced by poor, single mothers (and some fathers) in rearing children.

Here I must declare an interest. I help with a charity, With Kids, which operates in Glasgow's East End and Edinburgh's Wester Hailes and that works closely with schools to help children and families who may be encountering an array of social challenges in their lives through no fault of their own. Many of our therapists are disturbed at the implications of this shallow and ill-conceived proposal. They are part of a dynamic network of care and community values that encompasses many very good people and overworked agencies. When it works, as it often does against the odds, the results can be beautiful and uplifting.

The Scottish government last week just tried to make their jobs a lot harder.

Karsten; the following input from Ary [N&O] who wrote as this was being prepared:

I received a note from an old friend of mine who noticed the article about the Zeiss JO-4.02 in your latest newsletter. He says that the system itself is much older and that it was used to talk across the Berlin wall back in the late 60's and 70's -so, yeah, they were used for covert / clandestine work. The one on the picture is a later version of the one that he has seen in the 1960's.
The ones that my friend saw were used by "the West".

Thanks Ary!

SPECIAL MATTERS

Operation Jallaa: Nil Reported; Jan2015 observations NRH

MESSAGES:

Thanks 'E'Your rptd 18030kHz is Russian Air Force. Search 'Planes and Stuff wordpress' for Tony's excellent blog

RELEVANT WEBSITES

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

EyeSpyMag! http://www.eyespymag.com