ENIGMA 2000 NEWSLETTER

http://www.enigma2000.org.uk

Japanese Embassy
Piccadilly, London with [now] removed antenna

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Editorial

Derek of Kent [DoK] G3LKO

On Sunday 25th November at 2224z I received a call from Derek's partner, Theresa, to inform me that Derek had just passed away at 2202z in the Queen Elizabeth Hospital, Woolwich where he had been receiving treatment in conjunction with an ongoing illness.

I met Derek aboard HMS Belfast in the Bridge Wireless Office [BWO] in late 1973; standing by the Teleprinter Room with headphones around his neck he challenged me as I walked into the BWO one Saturday morning to start my Watch. From that moment on we became good friends.

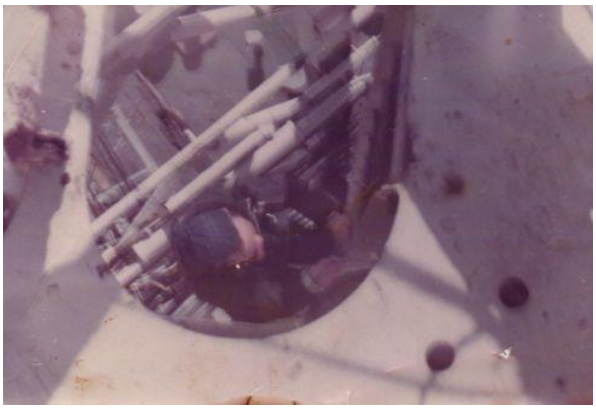
In June 1999 HMS Belfast slipped its moorings and was towed from the Pool of London to Portsmouth Dockyard where it was dry-docked and its hull inspected and fully maintained. Here, on the Thames is Derek, watching the progress of the Belfast back to its Pool mooring. Note his Pentacon 2.25"Sq format SLR at lower right.

We adjusted our Watch requirements so we would be aboard at the same time what was to become a floating museum for the Imperial War Museum, London, enjoying stays aboard and some very interesting runs ashore that cannot be described here.

Memorably, I cheekily and regularly slept in the Admiral's Cabin whilst Derek kept watch, usually migrating to 40m, eventually turning in onto his makeshift bed in the EWO, Emergency Wireless Office.
One night we slept in the FMU [Fleet Maintenance Unit]; whilst letting my bunk down I was instrumental in pinching Derek's hand between the mechanism and the cot; the air turned as blue as the affected part became; then the chorus of 'shut up!' and general moans permeated the darkness. We stood there laughing, the silent treatment in the Petty Officer's Bathroom the very next morning stood as a stark reminder of the disturbance of others' sleep.

Most mornings were generally permeated by the smell of bacon, eggs and beans cooked by Derek in a 6" frying pan on top of a shakey butane gas cylinder placed by the incoming message rack. Much against regs it made the meal all the more enjoyable and kept us out of the Petty Officers Wardroom [but not the Bathroom or associated Heads], one Yeoman appearing mysteriously as the smell of the 'full English' travelled down the trap to other decks.

We used to climb the foremast to be 180 feet above deck level; such a good view for'head and aft along the Thames but also the place we tied off the makeshift antennas we used. One such event resulting in myself suffering RF burns when, against operating procedures, a visiting operator keyed up the main transmitter and I suffered the rather painful effects of unwanted diathermy. He never bothered to ask why the antenna was disconnected and its associated key withdrawn from the antenna exchange. During the Tall Sails Race from the Pool of London in 1989 DoK supplied and operated VHF comms to control the approach of participants; ships such as the German Gorsch Foch and a Welsh Clipper, the Mfanwy. Large vessels they required the raising of Tower Bridge.



Yours truly climbing the foremast 1977, image from G3LKO

The resultant view, looking aft;, image from G3LKO

Along such lines was the repair of the Ship's Marconi Transmitter. It had an intermittent fault on the PA stage [anode connections to the final valve suspected]. Pulling the unit forward on its 19 inch mounting Derek poised to probe the anode cap with his AVO meter probe but sadly misjudged the distance and the transmitter chassis fell forward, the emergency auto send button being depressed against Derek. As I lifted the chassis up and back to release the button [it needed a twist as well] Derek withdrew his hand and there, along the ball of his right thumb was the damage from direct exposure to 100w of RF from the TT20 final [around 600v]. Three years to heal, it was still dripping when Derek was Best Man at my wedding, but the loose cap was fixed.

Derek was ex-RAF. A regular, he served with 276 Signals Unit [SIGINT/Y Service] and completed his service in 1955 having served in RAF Habbiniyah, Iraq and was witness to some rather violent attempted coups. The base was used for airborne SIGINT flights; as unmarked Canberras overflew target areas and the radar fired up the ops would send reports. 267SU intercepted this Morse. Barred Letters, special prosigns and 40WPM – onto a typewriter if you wanted it – was Derek's operating skill.
As for the Radar signatures they were captured by the nearby 123Signals Unit. [276 was also home to Geoff Voller G3JUL who operated the London Science Museum exhibition Amateur Radio Station GB2SM].

The camp also had an amateur radio club of which Derek, who held a British Licence, was a member. The above QSL card showing his rather rare call whilst in Iraq and which caused pile-ups when active.

Derek also had a soft spot for a WAAFofficer Christine H*******g with whom he enjoyed some time and received a swift talking to from 'higher authority,' the officer in question being moved elsewhere. Immediately after demob Derek applied for a position with GCHQ but was refused, no reason given. He often moaned about the interview in an office, entry under the stairs of a certain London building, [*where I too was later told 'You married a foreign national – sorry, goodbye'*]. "No cup of tea, offhand and at the second interview they just told me 'No' and sent me on my way." Derek put that down to his being offhand with an officer when he was in the RAF.

In civilian life Derek worked for Radio Rentals and travelled to clients' homes repairing 405 and then dual standard +625 line sets down to component level. Moving on from that he worked in Undersea Communications for a time, married [I was his best man] , worked for Wein [Lee Products, Erith] and enjoyed a good life. He also DJ'd and was a cinema projectionist.
Somewhere along the lifeline we tread Derek's life changed drastically; his wife left him, the company he worked for closed and he worked for an American vacuum cleaner company that paid too little and expected too much. Derek lost his house but managed to eventually change his life around again to some success.

Moving to his current flat, via short term accommodation, he eventually met Theresa, a neighbour, maintaining a steady relationship.

Radio wise he took a deep interest in M10, S10 and S17c. Him and I used to use a certain 2m repeater to link up first thing in the morning as we found out the month's new parallel freqs for M10. Derek supplied ENIGMA 2000 with charts for years until the station closed. Then it was M23; in hospital his 'World Receiver' was atop his locker next to the book he repeatedly read, 'The Broken Seal' by Ladislav Ferrago.

Some other E2k members met Derek, particularly in a past trip to Bletchley Park, the last time Derek travelled far from his home other than a few meets with me at Charing Cross Railway Station and once to my University.

Although Derek was interested in amateur radio – he was a very good engineer – a greater passion was photography favouring FP4 film of which he gladly pushed the speed during development. His travels behind the Iron Curtain meant that he picked up some decent cameras, Pentax 35mm and the Pentacon 2.25'' Sq SLR s as well as a rather nice DLR in the same format. Visiting his flat after his demise I was surprised that I was unable to find any camera equipment at all apart from the developing trays. I was told his enlarger was safe so perhaps the cameras [wet photography is not in vogue nowadays] are with it.

When the internet arrived DoK was unable to afford a PC; the prices in the shops were highly inflated and as one would expect the prices you saw were, in the main, shown ex-VAT [a con that existed in the world of amateur radio where, in addition to that practice the exchange rate is £1 to US$1, something sometimes practised today despite the ability to get some very good bargains from Asia and the US market along with the pathetic £100 cashback fiddle we see on out high street]. What Derek had was an internet phone; he could receive and send emails and that was it. The problem was long emails cost money to receive and the practice of the continual regurgitation of that which went before became most costly.
Receiving emails from the E2k group caused some consternation to those using this device [and I think the Bush Internet system that JoA used] that following a request to shorten emails we had some flak, mainly from the US from members who rarely posted anything useful, wanted the best of both worlds and who thought they could run the E2k better that the moderators. That spat cost those non-contributors their membership. Derek today simply used a Tablet for the internet.

I visited Derek for the last time on 19th November; he was very thin but happy. Obviously not well he drifted away during conversation but returned again with a twinkle in his eyes. We spoke about some past events, not all mentionable here. I left him after a couple of hours with a hand shake and a 'See you again.' Around lunchtime on 24th November Derek's partner and carer was warned to 'expect the worst.' Derek passed away, peacefully, 2202z 25th November,2018 aged 83.

Derek Fisher, G3LKO, 1st October 1935 to 25th November, 2018. A good Morse man, Y Op, one of the founding members of ENIGMA 2000 and longstanding friend.

DoK and I used to intercept S10E in concert, this is my hasty set up at my university, 6m antenna strung between two parts of the Physics Building

[*Read "Remote and automatic monitoring" that appears later in this newsletter after the log section. Part of my last talk with Derek*].

Not number station but possibly interesting

In the last newsletter in 'Not number station but possibly interesting' we commented on REO DE RMP and received an update and a splendid reply from a member:

The update from PoSW:

The daily CW station, call-sign RMP - comes all the way from Kaliningrad, so they say, which was logged starting up with "REO REO REO DE RMP RMP QTC" routine around 1700 UTC on 5293 kHz in September and October has been heard on a slightly lower frequency in the last two months of 2018:-

2-Nov-18, Friday:- 1811 UTC, 5179 kHz, CW in progress, same format as that heard on 5239 over the past weeks. Still had the AC ripple which was a feature of this one in the last days of October.

3-Nov-18, Saturday:- 1700 UTC, just after, 5179 kHz, confirmed as the station previously resident on 5293 by the "REO...DE RMP...QTC..." start-up - and a clean carrier with no ripple.

4-Nov-18, Sunday:- 1704 UTC, 5179 kHz, clean CW in progress, stopped at approx 1712z then started up again with the "REO...." routine.
Tuning around shortly afterwards found some CW on 8113 kHz which appeared to be the same format but a much weaker signal, only just readable but a check with two receivers showed that the two transmissions were not running exactly in parallel.

15-Nov-18, Thursday:- 1816 UTC, 5179 kHz, CW in progress, and the ripple on the carrier is back.

21-Nov-18, Wednesday:- 1753 UTC, 5179 kHz, weak signal, still with ripple.

23-Nov-18, Friday:- 1920 UTC, 5179 kHz, CW in progress, no AC ripple but a peculiar
keying characteristic, a very slow rise time, the sort of effect that might result with a very large value of capacitance connected across the keying device.

27-Nov-18, Tuesday:- 1757 UTC, no AC ripple and no problem with the keying.
Has been a good signal on those days during the rest of November and into December when this station has been monitored.

Became very weak in the second half of December and the impression was that it had ceased operations but no, it was still there, often way down in the noise and only just detectable and frequently a bit stronger after 1800 UTC when it had been running for an hour or so.
Still using the Morse sequence spelling "TIRE" which must have some special significance,
also has been heard sending "XXX XXX" on occasion. Also, another CW station has been logged using this sequence:-

22-Dec-18, Saturday:- 0845 UTC, 7678 kHz, very strong slow CW sending mostly numbers, not as 5F groups, letters too, pausing for a short while then starting up again with "XXX XXX", for example at approx 0855 UTC, "XXX XXX MFT5 MFT5 97 960 LEQ OKOS 1251 7171K". Which no doubt means something to someone.

The reply to the first piece:

This is a standard call from Baltiysk (RMP) to a collective callsign for allships/units operating in the Baltic Sea region.

The messages contain all sorts, but in general are weather and navigational warnings - examples below:

1812z REO DE RMP QTC 605 51 30 2005 605 =
ПРИП КАЛИНИНПГАД [weather warning "PRIP KALININGRAD":.. continues with
warnings]

1822z REO DE RMP QTC 421 72 30 2017 421 =
ВСЕМ СУДАМ ДЕЙСТВУЮЩИЕ [Nav warning "ALL COURTS VALID":.. continues with
warnings]

1918z REO DE RMP QTC 220 26 30 2217 220 = SML =
БАЛТИЙСОЕ МОРЕ [Baltic weather/Nav warning "BALTIC SEA" :.. continues with
warnings]

They use lots of frequencies, though not all at the same time. There's certainly a few running in parallel for each transmission though.

As well the Baltic Fleet doing this, the other fleets do too. RIT (Severomorsk, Northern Fleet) is extremely busy and normally send scheduled transmissions on four parallel frequencies.

They also send something that the other fleets don't - a RADIOPROGNOZ, thought to be a Propagation Report.

Thanks MaleAnon.

Thanks Peter and thanks MaleAnon for your thoughts.

The Bear Net "Pirate"

By Tony Roper

Many of the Russian military HF networks can be likened to those used by agencies covered by E2K. Some of these Russian networks have been given designations as part of the E2K profiling method with the Russian navy getting M32a for their ship network as an example.

However, I don't use these designations rather just using the branches names. But with one branch, the Russian Long Range Aviation, I do like to use the nickname "Bear Net".

This is in itself a misnomer as not all HF transmissions by aircraft within the branch are Tu-95 “Bear” strategic bombers, with many recent flights in the Western region being Tu-160 “Blackjack’s”.

One of the things that liken the Bear Net to a “spook” network is its use of set callsigns and frequencies for four “seasonal” quarters through the year. These are in effect a schedule, be it with out any times of broadcast – saying that, the Russians do like to send their flights up at the same time each year and I have predicted missions being flown before they actually took place based on historic movements.

Seasonal frequency data

Dates	**Ground(CW)**	**Air(CW)**	**USB**
Spring			
1/3 - 5/5	5620	8170	8090(p)
	8029(p)		5305?
Summer			
6/5 - 31/8	8895	9128	8909(p)
	11241		5635?
			8485
			5606
			7823
Autumn			
1/9 - 31/10	5312	9027	8033
	5835		
	8162(p)		
Winter			
1/11 - 28/2	8112(p)	8990(P)	5827
	11318		8131(p)
			11200
			5635

Notes:
p = primary frequency
? = Not confirmed

Normal operating procedures start with a CW marker beacon, normally a W, starting (we think) before the aircraft get airborne. If it’s not before, it’s not long after. The marker does have a schedule when active, sent every 20 minutes at H+00, H+20 and H+40. The marker lasts for 2 minutes.
There’s many nuances used by the separate aircraft types, something I don’t want to cover here. For more information you can go to my blog - https://planesandstuff.wordpress.com/ - where there’s plenty of coverage on various missions over the last few years.

This small brief for E2K is to cover something that happened on a recent mission that I think you may find interesting, even if you’re not that bothered about the Russian military networks themselves.

As mentioned above, there is further detail on my blog covering this mission, including full logs and recordings. This is basically an extract from it.

About four and a half hours into monitoring a flight of Tu-160’s at the end of October on a mission around the north coast of Norway, the entity I now call the “Bear Net Pirate” showed himself on the USB Voice frequency 8033 kHz used for the autumn period.

The frequency was busy with the usual coded messages being sent back to Moscow or LRA Operational command when at 1427z an open mike became present on the frequency, in AM mode. This was fairly brief, and at 1429z the Pirate started.

Mike Delta Kilo Romeo, Mike Delta Kilo Romeo
Mike Delta Kilo Romeo, Mike Delta Kilo Romeo Standby
Mike Kilo Delta Romeo, Mike Kilo Delta Romeo, Mike Kilo Delta Romeo Standby

** - Note his error or change with the callsign

At 1431z he then transmitted further:
Mike Kilo Delta Romeo
56822166095499102

At 1439z he was back but very faint, almost like it was a recording or live transmission of a Numbers Station followed not long after by another attempt at an EAM/Numbers Station message:

C78AAA5ACBCEA77D76FF33EAFAE63CF5A7AAAAFAF555A85CDBEEBBA5D6DFCCA

Despite listening to the message many times it is very hard to work out some of the digits due to the lack of phonetics. Basically, each time I listen to it I get a different result! I did analyse the 1439z transmission and noted down the numbers, but when carrying out a search on E2K they didn’t match with any previous log reported. The method did not conform with any of the voice stations held in the E2K Control List, though there is no doubt he is trying to be a E** station.

After about six minutes, the Pirate then attempts to jam the frequency again. First of all with a recording extracted from an X06 broadcast – my blog has further analysis on this recording.

This was followed by a continuous tone at 1090 Hz for approximately 35 seconds. These are the last transmissions by the Pirate.

Interestingly this wasn't the first time he'd jumped on the frequency. He was also heard in September.

On this occasion he was a little bit more direct.

Russians we are watching you
Russians we know where you are
Russians, turn around and abort your mission

Followed by:

We will blow you out of the sky
The Russians. We have you under observations [sic], stand down

Despite having what is clearly a South East England accent, he signed off using something along the lines of:

This is the United States BC36

No doubt he is trying to gain some sort of attention, but what else is he trying to achieve? Is he hoping the Russians respond? I doubt they will. Apart from anything, I expect the radio operators, having had to listen to all the noise on HF for every flight, have learnt to ignore any calls which aren't specific to their mission. They will have their own procedures for this, with the main one being ignore all calls except those which are known to be from Command.

My initial thoughts were that he isn't a radio amateur and hasn't worked in any other field that involves speaking on the radio. His use of poor phonetics made me wonder this. However, with access to a transceiver and associated antenna this may not be the case – and amateur radio operators tend to make up their own phonetics and he may just not know the standard NATO ones.

That said, he must have some interest in military aviation and possibly a member of a military aviation forum. These tend to have thousands of members that have not been vetted in any way or form and quite often have threads that give notice of flights are on their way, be it with an alert of a QRA launch or actual comms received on Bear net frequencies.

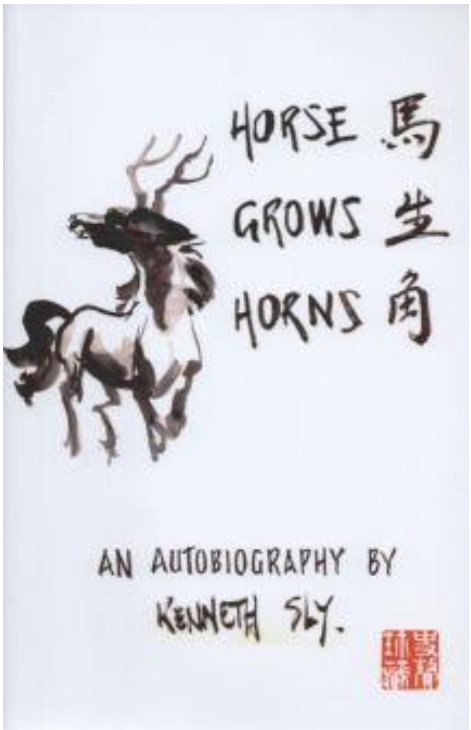
Twitter, of course, is another example of information being out there for anyone to then take action on.

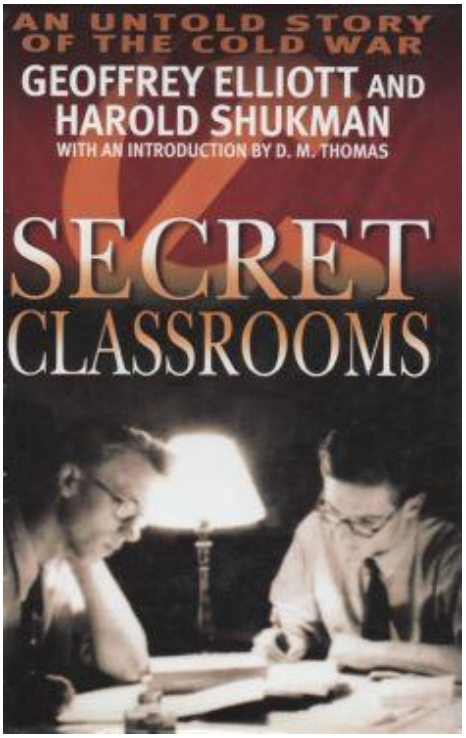
If you go to my blog and listen to the recordings you'll hear the attempts at sounding like an Enigma broadcast, or a US Navy Emergency Action Message (EAM) – or both. I'm not sure what he wants to be.

It will certainly be interesting to see if he turns up again. I highly suspect he has access to one of the forums I am a member of – he may even be a member here with his possible knowledge of Enigma stations – so with this in mind and the fact that I inform these forums whenever I post a blog, he will know he has been heard.

Many thanks Tony [Worth taking a look at Tony's pages – lots of interesting articles and excellent imagery: https://planesandstuff.wordpress.com/]

Book Review





These two books continue the 'Linguist' theme from those reviewed in Newsletter En109; in fact Ken Sly's autobiographical 'Horse Grows Horns' was a referenced work in 'Mandarin Blue,'

Horse Grows Horns: Ken Sly was an Australian, son of a convict he writes, who joined the RAF, became a pilot [Vampires] and also trained as a Russian Linguist. In addition to that in civilian life he travelled to China – amongst other places – represented British Aerospace and, as far as I am aware is still alive today.

Ken Sly also contributed to a Russian Dictionary and a Chinese translation aid using a card based PinYin system and computer viable that was [still is?] used by GCHQ and probably the other allied FVEY partners.
It's an interesting read but sometimes inaccurate – his account of Prime's arrest is incorrect although the reason for his coming to notice is along the right lines. If you are interested in the Chinese military build-up in the 70's this book gives much detail; there's little snippets throughout, but its subject is Ken Sly, not SIGINT overmuch.

Historically, those of you who remember Geoffrey Prime [Codename ROWLANDS] might be interested in the small fact that Mr Sly was Geoff Prime's Line Manager at the time that Prime was selling GCHQ secrets to the KGB wholesale.

Secret Classrooms: This excellent book by Elliott and Shukman outlines in good description the call up, selection of and training as Russian Linguists, RAF Tangmere, Bodmin, Crail and so on. The production of an in course newsletter 'Samovar' [The Joint Services School of Linguists in school magazine] is described and the sometimes hilarious and sometimes most serious subject is covered extremely well. It is a book that is a good, solid read. Took me just three days to exhaust and I re-read again, purely for the pleasure.

Geoffrey Elliott became an Investment Banker on demob, eventually retiring in Bermuda, whilst Harold Shukman became an Academic after taking a First in Russian Language and Literature at Nottingham University [*where yours truly met Geoffrey Perry OBE of Kettering Grammar School Sputnik fame during my time there*].

I read 'Secret Classrooms' in 2002; I was saddened to read of Harold Shukman's passing in the Times Obituary column 'Register' Friday October 12, 2012. He had died on July 11 aged 81.

An excellent, very worthwhile read about those who joined as 'oiks' but who left so much more prepared for the civilian life that awaited them, using the language they had become proficient in.

Russian Spy Ship?

Number station news

Short-wave propagation continues to be somewhat variable as evidenced by the regular number station schedules.

Also the radio-frequency interference from domestic gadgetry in nearby properties does not show any sign of reduction; in fact in the run-up to Christmas it significantly increases due to all those flashing illuminated decorations which everyone seems to find essential at this time of the year.

At one time Christmas lights consisted of a series-string of coloured filament bulbs and if they were made to flash on and off this was done by arranging one of the bulbs to be of the type with a bi-metal strip contrivance which would make and break perhaps a couple of times a minute. This might generate its own particular kind of interference but was liveable with.

These days the high-brightness LED reigns supreme, controlled by electronic circuitry to give various kinds of effects and all receiving the operating voltage from our old pal the switch-mode power supply, a most efficient source of radio frequency interference especially when built into a Class 2 construction plastic housing with no filtering on the mains input and the wiring for the lights acting as a radiating antenna.

The winter seasonal move of some number station schedules, for example the Thursday and Friday E06 and G06 transmissions, to lower frequencies where this kind of interference is at its fiercest brings its own problems with reception.

As regards the number station scene, still a large amount of "full message" transmissions from the Sunday + Wednesday E07 schedule which made the change from AM to SSB in 2018 which might be an indication of its importance.

The mixed-mode station HM01 got into that "stuck in a rut" situation again in the final weeks of 2018, the 5F groups when last heard on Christmas Eve were the same as those in the first week of November.

Morse Stations

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

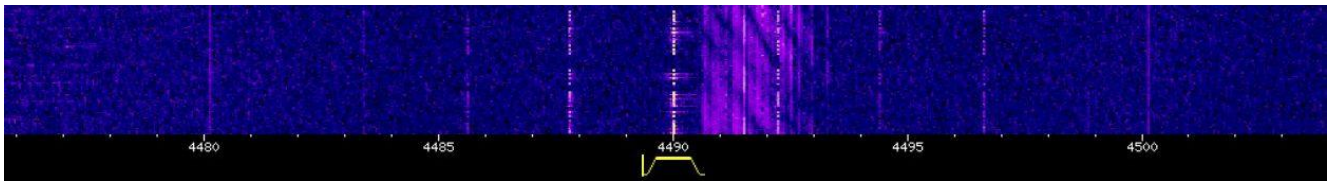
Morse - Number Stations

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

Variant formats continue to be used on an irregular but frequent basis. There are four variant formats uses over the last year:

Standard Format:	197 (R4m) 117 117 30 30 = = 93447 .... 20478 = = 117 117 30 30 000	(Still the most common format in use)
Variant Format 1:	197 (R4m) 147/30 147/30 78902 ... 86083 147/30 000	(Not seen for some time)
Variant Format 2:	197 (R4m) 521=30 = = 521=30 = = 46547 ... 88305 = 521=30 = = 521=30 0=0=0	(Not seen for some time)
Variant Format 3:	463 (R4m) 127 30 = = = = 84820 ... LG 82607 = = = = 127 127 30 30 000	(Seen numerous times in Nov & Dec)
Variant Format 4:	197 (R4m) 589 589 = 30 30 = = 40728 .... 58918 = = 589 589 = 30 30 000	(Seen several times in Nov & Dec)

A possible new variant format appeared three times in November sending SK SK in place of = =



M01 4490kHz 2000z 06 Nov Transmission in Progress Showing Numerous Spurs Either Side of the Operating Frequency Courtesy HFD

HFD sent us this screen capture of M01 in progress. Note the spurs at -6.6, -4.4, -2.2 2.2, 4.4 & 6.6 kHz. Like many of the Russian transmitters, this appears not to be the best operated or maintained. Paul, (PLdn), suggest the transmitter final stage is being overdriven.

November 2018:

4490	2000z	01 Nov	'197' 764 30 = = 92880 ... 71084 = = Good, fast. Several errors noted - figs missing on repeat	BR	THU
	2000z	06 Nov	;197' 317 30 = = 67951 ... 46409 = = Good, fast. Good, brisk Morse. Two errors noted	BR/HFD	TUE
	2000z	08 Nov	'197' 229 30 SK SK 51849 ... 41247 SK SK Good, med-fast, irregular. Several errors noted	BR	THU
	2000z	13 Nov	'197' 19541 ... 49409 = = Fair, slow. No start DK/GC. 986 30 sent at end of msg	BR	TUE
	2000z	20 Nov	'197' 243 30 = = 90389 ... 75832 = = Good, med-fast. Several single-fig errors noted.	BR	THU
	2000z	27 Nov	'197' 399 30 = = 47297 ... 10662 = = Good, med-fast. Many errors. Some repeats only 2 figs.	BR	TUE
5320	1800z	01 Nov	'197' 534 = 30 = = 34887 ... 46845 = = Fair, slow. Each fig. sent separately. One error. Format 4	BR	THU
	1800z	08 Nov	'197' 141 30 SK SK 11371 ... 55432 SK SK Good, med-fast, irregular. Several errors noted	BR	THU
	1800z	13 Nov	'197' 336 ? Very weak, mostly unreadable. Nothing heard after the call-up	BR	TUE
	1800z	15 Nov	'197' 512 30 = = 97228 ... 98689 = = Fair, fast. Poor copy due to QSB. At least one error noted	BR	THU
	1800z	20 Nov	`197' 132 30 = = 68008 ... 96531 = = Fair, med-fast. Several errors noted, otherwise excellent	BR/HFD	THU
	1800z	22 Nov	'197' 717 30 = = 63699 ... 43711 = = Good, fast. Excellent Morse. Two errors in grp16 only	BR	THU
	1800z	27 Nov	'197' 529 30 = = 92043 ... 93204 = = Good, med-fast. Many errors. Some grps sent once only	BR	TUE

5465	0700z	04 Nov	'197' 621 30 SK SK 55623 ... 14434 SK SK Good, med-fast, irregular. Several errors noted	BR	SUN
	0700z	11 Nov	'197' 721 30 = = = = 91788 ... 65063 = = = = Fair, fast. Grp & repeats joined. Several errors noted	AB/BR	SUN
	0700z	25 Nov	'197' 248 30 = = 53560 ... 17813 = = Strong, slow. Several errors noted. Format 4	BR/HFD	SUN
5810	1500z	10 Nov	'197' 521 30= = 28322	HFD	SAT
	15**05**z	17 Nov	'197' 441 30 = = Late start with vvv at 1502z Severe STANAG. No useful copy	BR	SAT
	1500z	24 Nov	'197' 135 30 = = 93725 ... . Good, fast. Strong STANAG - Very poor copy	BR	SAT

December 2018:

4490	2000z	04 Dec	'197' 425 = 30 = = 93241 ... 23148 = = Good, slow. Excellent delivery. No errors. Format 4	BR	TUE
	2000z	06 Dec	'197' 535 30 = = = = 96200 ... 89186 = = = = Good, fast. Error grp26 & 27. Repeated from grp24	BR	THU
	2000z	11 Dec	'197' 931 30 = = 76939 ... 89504 = = Fair, fast. Grp & repeat without pauses. Grps21-26 jumbled	BR	TUE
	2000z	13 Dec	'197' 823 30 = = 53861 ... 67555 = = Good, very fast. Several errors noted	BR	THU
	2000z	20 Dec	'197' 809?30= = 04363 ... 7 .234 = = Fair, fast. Severe STANAG QRM - Mostly unreadable	BR	THU
	2000z	27 Dec	'197' Good signal but swamped by strong STANAG QRM - No useful copy	BR	THU
5320	1800z	04 Dec	'197' 649 = 30 = = 56763 ... 83882 = = Strong, slow. Two errors noted. Format 4	BR	TUE
	1800z	06 Dec	NRH - No trace on clear frequency	BR	THU
	1800z	11 Dec	'197' 263? 30 = = Very Weak - No useful copy	BR	TUE
	1800z	13 Dec	'197' 468 30 = = 72546 ... 48823 = = Good, very fast. Single figure error in grp26	BR	THU
	1800z	18 Dec	'197' 234 30 = = ... 87330 = = Weak, fast. Difficult copy. Parts unreadable	BR	TUE
	1800z	20 Dec	'197' 177 30 = = 836 .4 ... . Weak, fast. Poor sig. Mostly unreadable	BR	THU
	1800z	27 Dec	'197' 351 30 = = = = 01619 ... 42123 = = = = No pause between grp & repeat. One error noted	BR	THU
5465	0700z	02 Dec	'197' 345 30 = = 47557 ... 72868 = = Good, fast. Excellent Morse. Error noted Grp26 (As SAT)	BR	SUN
	0700z	09 Dec	'197' 701 30 = = 78034 ... 63647 = = Fair/Good, fast. Two errors noted	BR	SUN
	0700z	23 Dec	'197' 863 30 = = = = 09485 ... 96342 = = = = Weak, fast. Several errors noted	BR	SUN
	0700z	30 Dec	'197' 121 30 = = 10631 ... 57647 = = Good, fast. Noisy freq. No errors	BR	SUN
5810	1500z	01 Dec	'197' 178 30 = = 03862 ... 31532 = = Good, med-fast. Excellent Morse. One error noted Grp26	BR	SAT
	1500z	08 Dec	'197' 511 = 30 = = ... 81540 = = Fair, slow. Missed start of msg. No errors. Format 4	BR	SAT
	1500z	15 Dec	'197' 817 30 = = = = 38507 ... 84285 = = = = Good, fast. Strong STANAG QRM. Poor copy	BR	SAT
	1500z	22 Dec	'197' 411 30 Fair/Good signal but swamped by strong STANAG QRM	BR	SAT
	1500z	29 Dec	'197' 801 = 30 = = 06449 ... 61472 = = Fair/Good, slow. STANAG QRM moderate strong at times	BR	SAT

A number of transmissions throughout November & December have been severely affected by STANAG QRM, notably the Saturday & weekday 2000z schedules. Is this just coincidence?

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

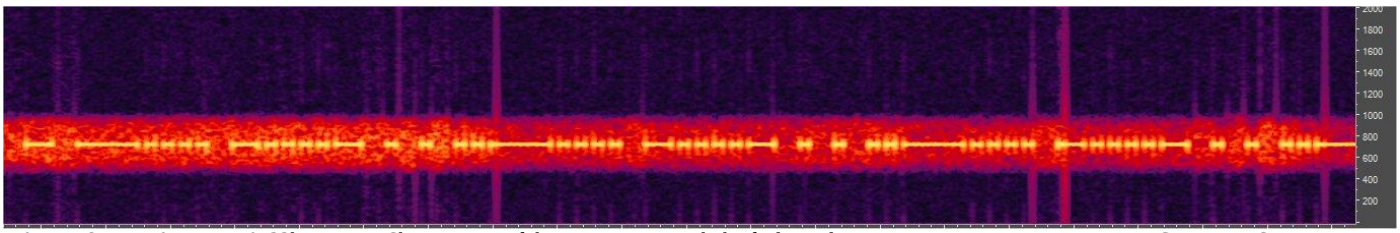
Edd, (E.SMITH), sends us this update on his continuing M01a monitoring;

I follow and record this M01a Schedule below every morning. Although the frequency of transmissions seem to be Ad Hoc, it has run continuously almost every week since discovered it in late 2017. Transmitted this morning, 16 November, with a not uncommon problem with the Radio equipment they use on this Sked. It seems to be the Morse Keyed is transmitting silence instead of sound and vice versa. Does anybody know the cause of this problem? Edd.

Tuesday	Wednesday	Thursday	Friday
9411kHz 0530z	9129kHz 0530z	9129kHz 0530z	9411kHz 0530z
10233kHz 0620z	7692kHz 0540z	7692kHz 0540z	10233kHz 0620z
9447kHz 0630z	9421kHz 0620z *	9421kHz 0620z *	9447kHz 0630z
10651kHz 0710z	8111kHz 0630z	8111kHz 0630z	10651kHz 0710z
9151kHz 0720z	9175kHz 0710z	9175kHz 0710z	9151kHz 0720z

All monitoring of M01a using Twente SDR

* Not audible in Europe, under Greek B/C station. Clear on a Moscow Kiwi Online tuner



M01a 16 Nov 0527z 10233kHz Showing part of the transmission with the fault condition present *Courtesy E.SMITH*

Thanks for the schedule & update, Edd. The transmitter problem is possibly Op error. This is similar to previous transmissions heard where the transmitter is set for FSK instead of CW. It's possible the transmitter is used for both modes as is often the case with Russian military & not been reset before use. *(Ed.)*

M01b

November 2018

2405//3180	2110z	02 Nov	Carrier present on both freqs - No modulation audible	BR	FRI
	2110z	16 Nov	'610' .325 Fair signal 3180kHz. High noise. Carrier only 2405kHz	BR	FRI
3180	2110z	30 Nov	'610' Very weak via SDR Estonia	HFD	FRI
2425//3205	2015z	05 Nov	Carrier present on both freqs - No modulation audible	BR	MON
	2015z	12 Nov	'375' = 13003 07208... Weak carrier on 2425kHz Weak	BR	MON

	2015z	26 Nov	Carrier only 3205kHz. STANAG on 2425kHz	BR	MON
2435//3520	1910z	05 Nov	Carrier present on both freqs - No modulation audible	BR	MON
	1910z	12 Nov	Carrier present on both freqs - No modulation audible	BR	MON
	1910z	19 Nov	Carrier present on both freqs. Strong carrier 3520kHz but no mod audible	BR	MON
	1910z	26 Nov	'853' Weak signals on both freqs - No useful copy	BR	MON
2470//3545	1932z	01 Nov	Carrier present on both freqs - No modulation audible	BR	THU
	1932z	15 Nov	Weak signal on 3545kHz. Carrier only 2470kHz. No useful copy	BR	THU
	1932z	22 Nov	'910' 325 Weak signal on both freqs - No useful copy	BR	THU
	1932z	29 Nov	'910' Weak sig on 3545kHz. STANAG on 2470kHz	BR	THU
2485//3160	2040z	01 Nov	'382' 32 = Weak signal on 2485kHz Carrier only heard on 3160kHz	BR	THU
	2040z	08 Nov	'382' Weak signal on 3160kHz - No useful copy. 2485kHz NRH	BR	THU
	2040z	15 Nov	Carrier present on both freqs - No modulation audible	BR	THU
	2040z	22 Nov	'382' Weak signal on 2485kHz. Carrier only 2485kHz	BR	THU
2655//3195	2002z	23 Nov	Carrier only on 3195kHz. 2655kHz NRH	BR	FRI
2655	2002z	30 Nov	'866' 325 32 = Very weak Via SDR Poland	HFD	FRI

December 2018

2405//3180	2110z	28 Dec	' .10' Carrier only on 2655kHz. Weak signal on 31880kHz	MCW	BR	FRI
2425//3205	2015z	03 Dec	'375' 331 32 = 83883 Via Kiwi POL 3205 Via Twente //3205		HFD	MON
	2015z	10 Dec	'375' 331 32 = 83883 37818.... XJT on 2425kHz Fair sig	MCW	BR	MON
2435//3520	1910z	03 Dec	'853' 331 32 = 83883 Via Kiwi SDR POL		HFD	MON
	1902z	10 Dec	Carrier present on both freqs. No mod heard		BR	MON
2470//3545	1932z	13 Dec	Carrier only on 2470kHz. Weak signal on 3545kHz. No useful copy		BR/HFD	THU
2485//3160	2040z	06 Dec	Carrier present on both freqs. No mod heard		BR	THU
	2040z	13 Dec	'382' Carrier only on 2485kHz. Weak signal on 3160kHz. No useful copy		BR/HFD	THU
2655//3195	2002z	28 Dec	'866' Carrier only on 2655kHz. Weak signal on 3195kHz.	MCW	BR	FRI

M08a XVIII ICW / CW, some MCW

AnonUS sends us his report & logs from America;

As with our HM01 monitoring Hurricane Michael took a toll and no messages were copied until 13 November, after this the usual schedules were present.

Unlike HM01 which starts exactly on the hour the M08a transmissions are currently starting more than 5 minutes before the top of the hour. As they normally start the call-ups 3 minutes before the top of the hour their clocks seem to be running about two to 3 minutes fast currently.

Not much out of the ordinary was noted although on 27 November the 1400z transmission ran on the 8009kHz frequency that is used for the Monday 2300z transmission, someone obviously forgot to change frequency. The 2000z transmission on 7554kHz has reverted to Tuesday and Thursday only although there were single appearances on Monday (03 Dec) and Friday (30 Nov). The 03 and 04 Dec 1400z call-ups bore some striking similarities 08372 12611 35032 85852 08272 12611, unusual as subsequent days' call-ups generally don't bear any resemblance to previous ones.

Other than quite a few late starts for the 1400z schedules there is little of note to report. Happy New Year from the Cuban desk!

November 2018:

7554	2000z	13 Nov	[50501 61231 84561]	AnonUS		TUE
	2000z	15 Nov	[30441 43772 56201]	AnonUS		THU
	2000z	20 Nov	[81251 03582 16811]	AnonUS		TUE
	2000z	27 Nov	[03821 16242 20671]	AnonUS		TUE
	2000z	28 Nov	[60832 82251 05682]	AnonUS		THU
	2000z	30 Nov	[- - - -- - - - -- - - - - -] Too weak to copy	AnonUS		FRI
8009	2300z	26 Nov	[30512 43841 56362]	AnonUS		MON
	2300z	27 Nov	[- - - -- 73541 86872] Note using Monday's 2300z frequency (mistake presumably)	AnonUS		TUE
8096	1400z	13 Nov	[- - - -- 53551 66072] Up before the hour in progress	AnonUS		TUE
	1400z	14 Nov	[- - - -- 86421 00742] Up late in progress	AnonUS		WED
	1400z	15 Nov	[15151 28472 32812] Up at 1355z	AnonUS	THU	
	1400z	16 Nov	[20512 33831 46262]	AnonUS		FRI
	1400z	20 Nov	[64262 85801 08231]	AnonUS		TUE
	1400z	21 Nov	[78782 82121 05551] TX now starting 6 minutes before top of the hour	AnonUS		WED
	1400z	22 Nov	[30432 43751 66181]	AnonUS		THU
	1400z	23 Nov	[55532 68851 72382]	AnonUS		FRI
	1400z	26 Nov	[55762 78282 82521]	AnonUS		MON
	1400z	28 Nov	[48681 52011 65342]	AnonUS		WED
	1400z	29 Nov	[51241 63081 77002]	AnonUS		THU
	1400z	29 Nov	[43872 56201 60632]	AnonUS		FRI
8135	2300z	16 Nov	[- - - -- - - - -- - - - - -] Too weak to copy	AnonUS		FRI
	2300z	20 Nov	[42201 53041 66362]	AnonUS		TUE

	2300z	23 Nov	[44302 57631 61152]		AnonUS	FRI
	2300z	30 Nov	[22- -1 44371 58402]	Extremely weak	AnonUS	FRI

December 2018:

7554	2000z	03 Dec	Present but too weak to copy		AnonUS	MON
	2000z	04 Dec	[- - - -- - - - -- 32882]	Up late in progress	AnonUS	TUE
	2000z	06 Dec	[40662 53101 76422]		AnonUS	THU
	2000z	11 Dec	[05641 18062 22401]		AnonUS	TUE
	2000z	13 Dec	[25562 37802 41221]		AnonUS	THU
	2000z	18 Dec	[57541 61862 84301]		AnonUS	TUE
	2000z	20 Dec	[06111 20432 33761]		AnonUS	THU
	2000z	25 Dec	[- - - -- 14261 26502]	Up late in progress	AnonUS	TUE
	2000z	27 Dec	[11081 24312 47741]		AnonUS	THU
8009	2300z	03 Dec	[66311 80741 03162]		AnonUS	MON
	2300z	05 Dec	[03181 16422 20741]		AnonUS	WED
	2300z	07 Dec	[48041 62372 75601]		AnonUS	FRI
	2300z	10 Dec	[62172 84401 07732]	HM01 in background	AnonUS	MON
8096	1400z	03 Dec	[**08372** 12611 35032]		AnonUS	MON
	1400z	04 Dec	[85852 **08272** 12611]	Note similarity to yesterday	AnonUS	TUE
	1400z	05 Dec	[74222 87651 00072]		AnonUS	WED
	1400z	06 Dec	[32082 45421 58742]		AnonUS	THU
	1400z	07 Dec	[67572 71811 84232]		AnonUS	FRI
	1400z	10 Dec	[70871 83302 05632]		AnonUS	MON
	1400z	11 Dec	[71341 84672 07001]		AnonUS	TUE
	1400z	12 Dec	Present but too weak to copy		AnonUS	WED
	1400z	13 Dec	[- - - -- 13502 26831]	Up late in progress	AnonUS	THU
	1400z	14 Dec	[77001 80322 03651]		AnonUS	FRI
	1400z	17 Dec	[- - - -- 28452 32871]	Up late in progress	AnonUS	MON
	1400z	18 Dec	[- - - -- 54881 67312]	Up late in progress	AnonUS	TUE
	1400z	19 Dec	[27772 03612 14442]		AnonUS	WED
	1400z	20 Dec	[88432 02752 15181]		AnonUS	THU
	1400z	21 Dec	[- - - -- 27542 31072]	Up late in progress	AnonUS	FRI
	1400z	24 Dec	[- - - -- 42811 55242]	Up late in progress	AnonUS	MON
	1400z	25 Dec	[74751 87272 01511]		AnonUS	TUE
	1400z	27 Dec	[- - - -- 17321 21752]		AnonUS	THU
	1400z	28 Dec	[76562 80881 04012]		AnonUS	FRI
	1400z	31 Dec	Present but too weak to copy		AnonUS	MON
8135	2300z	13 Dec	Present but too weak to copy		AnonUS	THU
	2300z	14 Dec	[70101 82421 05752]	HM01 in background	AnonUS	FRI
	2300z	18 Dec	[17002 21321 33652]		AnonUS	TUE
	2300z	21 Dec	[- - - -- 04721 27152]	Up late in progress	AnonUS	FRI
	2300z	24 Dec	[- - - -- 30081 43322]	Up late in progress	AnonUS	MON
	2300z	25 Dec	[- - - -- 60332 73661]	Up late in progress	AnonUS	TUE
	2300z	28 Dec	[52012 65332 78661]		AnonUS	FRI

Thanks AnonUS - Hope your station is in good repair following Hurricane Michael. It's good to see M08a back with such a healthy output!

Ary, (AB), also provided us with some logs & transcripts. Here are examples of his additional logs;

8096	15 Nov	1356z	M08a	Via SDR USA	CW	AB	THU

AWAWA NGUIN DNGAN AWAWA NGUIN DNGAN AWAWA NGUIN DNGAN

AWAWA AWAWA AWAWA AWAWA AWAWA = = =
RUGTG RRRGT WINTT AWNAG GWINW DWATI UNGAA TWIAA WIUGW WWRAN
AWWWI GUGRD RDUTW GIDRW ATTDR NTGGG GIIUG IURGT WADUG WWGGT
AWGND RIDWW GUUWG UDNRU NTAGG DAARG ANBDW NARID DATUD URIDW
WRUIR UNTWU IWNRT WTRTR RGUGI AIRDN RWUUR GRDDI UUNIA RRDAN
NGGGA NRDNN RTGGT GRUGA AIGUD WIATA TANTG DRNNW DUTNG IDRAN
TDRID GDGIN WTDIG DNTUT IUAGR GDWTD DRTGN GWIND WADTT IDTTG
TUITA AWAUR TNGGU UTIGI RAGIN TRTGW DGIUU AGGDN IATNW WWUUW
DUUIR UDGDI DNDGW RTURT ATITR DRATI IRGAT NNNRD NUTAR TIIIW
RWTGU TRGWU GNRID TWAWD WTNRA WAAUN GRIII GAAWW NNTDW ARIDU
RGGII WUTUD DWURI GIDGT GNIIR TAUGN AUTTT RRNNN GUUIU DDUAD
WADGI TWGTW WWGDR NDNAN GRRRR UANGG WATAT TAUNT NTWTN WIDID
RUTUU TANDM RTIGD AWNIN UGUDW WDWIG RTWII DGUTW TUIWG AGWNW
DUWUR GNIIA AGAAD WWGTA WITWA IIRUW MTRUR WTAAA UAITD UTUAT
GAATA RWINN RAWNG NNTWT TIUDU TRGNA WUGWA RDTWR UIWAW IWRAR
UGAID ARRRT IGNWW WTUDR WAWGT DRIDA AUTUN GRWUT UAAGI NWNNR
+ + +

NGUIN NGUIN NGUIN NGUIN NGUIN = = =
TDATN WNDIW UTIAI TTAAI TIIAN NDRAR GTGDD WIDDR WURRW IWTUA
RUATN NATID DGIDW DUTII UWWIN GUAWR IRADW NRNGN UNNNR GDARD
GIRGN GDWRW RDUAU TDTUT NWNID AGDIN WNTWI GDDIT UITTI NRUII
AITGA DTRRU DUDWA GGTAR RGRAI NWWGA NRNRT TGNIT RDUDG RIUAG
NUWWT IAUTD RIRTR ATIDD UGDAW NUUWR GUDDN UIIWI ITGGA GNTGN
TDRTW DDWIN WARMG NAGDG RTNTT NGGTA DUUWI TAUNI RIIWA WWTGD
WINUA ARTWI DWDWI GGTAW IRIDI NITTW WGAAT WIWTG GRDRI GRWRN
RUURR WDGTD RIRTR TATTW DANTR GWWTA GINWA GGWUU DUUTA WNRWU
AWTAR IRTUA TGTDN TTGRG DUDWI NTGAN IATRI AAGUI UTUDT RNGTR
NWUNA IUITT GDTNA WRRDG RUURU ITAGI WNINI DNRAG DGARG NARRW
WWUDU GDUUA DIWRD WDTNI UNARN RNIWR NNNTG GUNAU GRDAN ARNDR
AADTU NNRGR DNART WUIDW TARIN DIGRG GDDWD GDUTI RTGNR TTNAA
NWRUR DNTDA TGRAN WNWWA ATIAN NUNDG RGTDA RWIIA AUDTI UGWNR
GTTAU DWURU WARUR GIWTR WUUTG AWDRN TTGNI AENUAI DUUWU DUDWD
ADDRD RDIDI GUUWA TDTWN DDIAT DINNR UIAR TDGRN DDUDT NTNUU

+ + +

DNGAN DNGAN DNGAN DNGAN DNGAN = = =
NRUII GGATA RDRNN TTGDI UATWW ITIRT ARWGT WDIDU UWNAD RUUIG
UTUGN NINTT ANIRW RWWUR ITIIW TTUNT UGNDA RNAUW TUUNT GNGUU
TATTA IUDDI DNNRW ANTTN WAUAI WRRIR IAGIG WTTWT UAGTW ARDAH
RWRTU WWARW WDTTI TGGIW TGRND DAARD WUIAU GRUGT UGTII GUGUU
DTUGT TWUTW GGIUT AIRNN TWIRG NWGWN GGRDA IGRRW ADITU NIAIT
AUGDW UNIGW TGAGA NGGGG ANGDW NINNW ITRDR DUWAR RGTTN NRINT
WDRII UIWNU WTADR GDIGG TAUNU TIGUR ANWAU NUIAA GWUWI TIUGT
TTUND NRWUA IGTTA UGNGT AENDG GDINI ARNTA NNANW WNTNN URTIG
NDRNN TANNI WITIA RADTN WUDUA IDWWW DNIRU NNRII URTND RRWUG
GRGDI UIDIN NDIIT TUWNA GTIRW ITRUI RATWR DITDT UURWA IRDUW
NAWDR URGUR GTNNI RANTI IWIIN TNRII IRDTR DDNAG RWART UDAUU
TGTAI TAWWN DDUTU GITWG RDTIU IGDNN GDADU WADDD GWIAW GUGWN
AUWAD IWTNT ITWTW WNATU TIDDR AUNNU DTAGD UTUDR NGGWR ANIDW
NUNRN IWWRN RAAWW UUUWI NRWDG WTUTW NAAWR GDNRD DDUNT DAGRI
UNIWT RWTID RINIW IRIIT TGNWD RGGNW RNADT WWDGU GIWTU RAARR
+ + + SK

8096 13 Dec 1400z M08a Via SDR USA CW AB THU

The transmission started exactly at 1400z but halfway through its first message.

NIIR GAUWD DRDRI WDTIG UUWNN WUNAT WATUU DUNRI GIDNW GTDNU
AWDND AWDND NGRRW UGTRU RNAIG NDDDI GTIRT TAWWN UWGTT TWDRA
UNRGA RDRUN IWIDU RAUTA NTRDG RNNID IIDWT TADNW UGNIW NADTR
IUTWN NGNNU TRURI DG TT DGGIW TADIR GURAI DNUGR RAWUT AGTNA
DUTWR UTDNW NAWNW IAIUG ADWNT UNAID NWGRG GINIA WTADU GGRGI
GTGUI AGNTA TGGUT GTTWR TTGNG IGGUA UWTGI AWDUN TWIRI IRUUR
NDNDR TIURA ADUND UWIGN AIWAA GTWAN GNWWR URDTN UAIWD WTTNR
AAAGT WIWND TANWN TADNN UAWIN URDNR TGUGI AUGND RGWUI UUIGD
TRGUT WRAIG GAAGD GDWGG WTAIU ITTDR IANTG WUWNA TWIRD TARGU
TTWNA UWTTD UTWGU RGTUN ANRTN DDWUD WWDUR GWNIT IIDGT ATWAD
ARUGN NTRNI GDUGU RURAN INARI
+ + +

ADWTN ADWTN ADWTN ADWTN ADWTN = = =
WNAIU AUINA DGGUR GWWWG GNDRI IRIUI RRAGI ATIUA RUWGW NRRUW
DNRGD NIRDN GWUTI TGTDI WAAIA AWNDI ATTDN TRRIR IRTTI NINGR
WIIIN INADN TDWII UWAAT TGANR NAWDI IUUTR ADADN WDIDW IGGGD
TWGAA GGAUA RTIDR RDGID GDNRA UNIGU NRDRU DDDIW UDIAN UNNDW
RNNUN TAUAU RTURA RNANN RRGDR UAATW IANTN DRIDN GRDNI RWNGN
ITTWR ITTAD NDDIN UWWIA IGTIA RNWGR WWTRD GWTWN RATGA TIRTW
TGANG IIDDN ARGRD RDNDI GINTA DGNUD WUIWU IGGNI UIDAI ADWGR
AWUTW IIDWT GRDUG DDDTG WWUNT RWUNA TTDDI RIUTU ARRGA DADGU
WGNRG UAAGN RAIGU ITGAW DIWAD NWIUA INNRG RGGGW ATRIR WIGNU
NGNNG TGATW GTNWA DRTNG RTUTW NITIU RNGWD NGNGD UIRAG UIUWG
WIWWT IWRGR GGATD GDUIU ANIID NGGTT DRIIT DTWRG RNWGD RIIDD
WGIGR WNIAD AUUII WTWAW RWGWD ANWTN ATAWR AUGAT WRRIN UIIAR
UANDR UUWDI IRNWW UWTUR RRART URTTR WAUUD DGDIR ARDIR DAGAD
DNTDT DAAWT GARDG WNGTW UGTGN IAGRA GNTTT UGUDN WUGII IARIT
DGDGN GTTNG DUNTG AAIDD UDGIT TADII WUAAR ATNIA RDDUR NAUWN
+ + +

NRGDA NRGDA NRGDA NRGDA NRGDA = = =
IWTNI UUGAT IRWNR RRIAR NATNW DGUTR WGRTW GIWTU WRGAU ADNIA
RIIWN UNRND UUDND GTTAR RNWTT NTGNN NATGG GWIWT UIDUG AWIDG
UITUI DNGAR WIAAR WDUTU TUTAW WIUDU WRDTI DUIII GGRWR ANUNR
GTAGD UWDAA TATNR WNTWU IAUTU RRARW DIGRG GGGTA NGGUI IIRAW
GARTG TIAAR UTWWN GDTRT DWDDT DWTRR UGGDN TDGWG TUATT WAGNU
DTUGN DDIID GGUNA RGWAA UWIRD AWURI IDTGI NTUNA DGNTN DUNRG
AUAND RGAAG TGURG UDIUD ANGUU UIAGU URRRT AWDGG ITIDT NNTDG
AUAAG WAIGU GTUUG DUNRR NWWWT TDRUI GARUN ITWAG DNTIG WNGIW
AAUNU RNATD NWUUR UGAGA UWATG DNIWG AGIDU TUNNW AWDIT TNTRT
GAWWD RWNTI URWUI WNARW NNIUU RGTIT WNRIU TGGRW IIINA RNAAR
NGIAG TRDDU UNIWR NTRRA GWWTN AURII NGAWG TTINN GINII INTGT
ITRTN AIADG DRNGW GGIDW DIDNT DANTG AGDAR IGWTN UDGTD UWURT
ARUTW DRRTG DIUGA GNDGD GUDDG RRNDR DWNDA WUWIN WADNG TDRIN
UUARN IGWIN TDUGN WTTWW AGDUR GDTDT WWNUI NWTGN TWRAT GWUAU
AITIA RRTRA AANWG UUADI TNAWR INGDW DRRDG IGGDR IATNR GDUNG
+ + + SK

8096 14 Dec 1354z M08a Via SDR USA CW AB FRI

IITTA GTDNN TDRWA IITTA GTDNN TDRWA IITTA GTDNN TDRWA

IITTA IITTA IITTA IITTA IITTA = = =
TRWAN INNGU ADIUN GNRNU GIAWA DATTN TGAND ADAIW RTNNT IWURD
AUTRW GIRNG UGIWN IADAD NNRNU DANTD ANUAW WRRNT DWAWR GNGUR
IUAUG INWAN AWUDW IDIRG AWARN WDATN TTNIU TAUDI WWDRR NAWAT
UWGNN UNATU DRRNG IRDDD WRWUA NATGR TUAUN WIUDU DWINW UWITG
GUNWG WRDUU RNGWD TTIGI NWUDU GARAA DINGD GWRWN ITGRT DDDWU
ADNUG RIDRR UWTIU DRAIU GNDTI ADGWR WDGAN IWARU ARUUT WITIR
RUTNI GGTUT NWRDN GRUID TNDRN DDUGR ITDTI DDNAU DIRRW NTTRT
TADAU IGDGI WNUIU UIRAG DGRWI NWDWT GTTRD NIGWI RDNUW DAGIG
IIIWG UTNRI ADDRG UNAGN IWWGD WNNAR AIUTG IUDDW AAWIT DGNAD
UIRRN IGRWG RUDDD UNTAA IGRRW UNNRI TGWIR GWUAN ANING AAGWW
RIDWG DNUIU URIDD DUTNR RRDDG GNWRW GGIRG WDGRI NGGAT TTUWW
GNDRU NTIWR UAUND WWTDA RUIDG GNGNU WNDIU ATAIR DWTNR NUITN
TDUGT WNNUW IUDAG UDRRT UTRRD TAATI ATURA GNNRN NNWRI IDUNR
WNITT RRNRU NRWNN WWINI IRNRR DWNTW AAWRA IDDWD NRDRN TNWDW
DRDAN URWIR DNRWU RWRIA ADNNU RWTRN WRING GGRTW RIGGW DDDUU
+ + +

GTDNN GTDNN GTDNN GTDNN GTDNN = = =
WIUGW RWNTN RUNDD IIRDA GTRIU RTINN AIWIR DINRG IGNIR RRWUA
RDTRA UNAAU WDWTI UTAGU TNNWG GDRWA GUTTA UNTGI WTADD RINWD
TWNTD UIGND AUWIA UNIGW DIWTW UATWT AUTIR ANRWW AIAWU DRTWW
WDNAR NDRIN RTWRU GWRTI NIWWG AAWTG UIDWR GIAWA NTAIR DNAUT
ITADTI RUWW GDRTT GDUNA DDRWU RTWDW RIRGT TDWIR DGAUA AGDNI
IGNTN DIGAR DNNRI TNDRW TDWAU WNNNA AUUIA WUTRN UUITT RNTTN
UAGTI IWWUR URTII AGAIN ANANU DGGDU RADDD GNUIW UUAWI DRNIG
GAGIU IRGGR ADNWN TDRUA UUUUA DUWUW WRRRA DUUIR URIUW AAUAA
WDTDR NTTGD RARAT WDNAR UTTWR RGNGN INNNU GRWAI TNWDW GTAIG
NRIIN DTAUD IUGAR RTNDW DGTAU ADDGU ARAAG IUNGI DINNT WUIUI
IRTIR GNIGW TDWWI GDWTW RTGTT URRGW WIUWW DIWAN IITAI IUUIW
UTWTR AARGR IUUII URUUA IUURU ATUIG DTDNT TRDGW WNAWT IGRIN

WRNUT GAATN NUNAW NAWWA RDITG UNAIT TGAUI NDNTI ANTGA WINUA
ANWNG TNDWD AUANR IDWDR ANGTA IINDR ANUAU DNAGG TRDUU IGTTD
NRGRG NWRNR NTWWD WIDDT DRTIR RTWDW UADAD WRUNI GDTNN GIRTT
+ + +

TDRWA TDRWA TDRWA TDRWA TDRWA = = =
GWTDI URNGI TDATU RDRGW UGTTW GAUNN WATIT GGUTN UNTDT IAIRA
GTRUA ITTWG URTGG RRGTI TGTNU AIGWA ADWDD WTUAA ARATU IRDDT
IAWDA RIRRA IWNWU URRDW IUAWN IIWUR GRTND NUUUD ITGRD GDRDI
INWDW RGURN WDIRW WGRTI GNTUW TAGIA UNRIW DGTGU DDWRG IWGUR
UARGD GDRWN WDNRA GWDNR DTGDA WIGIU EANAN RWADT UWDNI UGWTN
TTIUD WTRDG GATWA WAAUT WITDI IADGA GNNDT ANTTG TIIGN WTWGI
NDGIN DRNTD NDARW WDNTI NGGWG UNWTD NDTUG RIWGU ANNAI NTNDI
IUGWD RRTRW ANWAW TGGTD GIDGN IGWTG NTRRD WUTUG WRGTD ADDIR
WRINT TIGNI GDNTA NATIA UDNWD DUTTI WANWA IWUDR TTAUD RGDWG
DNRWR TWUDD GRIAT UGNUR TATIT GIATA WIIAD RNUGW IAWAI DGRRU
RWWAG WGWTN WAAAT GNIDN UADDU NGUAA RIUDT WGAND AINAN GGRAG
NNTIR DGAII ADUTR TRRRR IDWII WTGDI INRIT DUDGT TRDIT ANWTN
GNAUT GDTIU ANWUR DUGUI RRWTD WNNTG GWUNU TAIGU TWNRN INIGI
TARNN ITSTW WTDNN UTAAD WADTU DIRTN GDIIA WGRNW NGUUR RRWDN
DARIU TNTIU WDNUR WNWWN TUTWT UGNRR TWRRR ANADT NUTIR IRGTT
+ + + SK

8096	17 Dec	1358z	M08a	Via SDR USA	CW	AB	MON

No preamble, right into the message = = =
RUDGU ANDGG AAATD WWDTD NANAI RNWWU TIGRT WUIIW RNAWW IGRUI ..... AGTUW TURGN ADRAA WWGAN GRATU NAWWD NRIWU UNAUR UUIRG WGWTI
+ + +

NGUWN NGUWN NGUWN NGUWN NGUWN = = =
GNNIW ADDRD NGATI NTIAN INNWN IUWAR GIRGI ITGID IUDWU RTGRD ..... TDNND UGUNN IINII ANTGA GIDDA AIDIA TTTUI GIWIU UIGNT NNGDT
+ + +

DNGIA DNGIA DNGIA DNGIA DNGIA = = =
NWTGG RRWAA GWDAG ANNNA UINTN AWIAD IANAA AGRWG ITWAN GUTRT ..... GAITA IGIII ATTWG TTUTR NDITA TGWWT TGNAW AGAAN TDITA NTARI
+ + + SK

8096	19 Dec	1457z	M08a	Via SDR USA	CW	AB	WED

TDRAN AUUUN NIIIN TDRAN AUUUN NIIIN TDRAN AUUUN NIIIN

TDRAN TDRAN TDRAN TDRAN TDRAN = = =
GGANW RGWRU NTDTN RAAGR RDTTN DUTIU RATDA GDTUD TWIRN RIGTW ..... DNARR GUAWW UGGWG RDITR ANWIR UWURA RTDDR DRGDI IIRWU WTAWN
+ + +

AUUUN AUUUN AUUUN AUUUN AUUUN = = =
NIWND ITTTT RTWID UUNII WNATT NUIRD IGTUT WANAU GIGIA IDIUG ..... NWIGA NWNIA WGUGR ATNWW GRGDU WWGTW RDIGR GGNUT RWGWN DDIDD
+ + +

NIIIN NIIIN NIIIN NIIIN NIIIN = = =
NNUUR TTNGD WDITG WNRIW TRWAR NAARN AGWTT DGTGR UDRWA WAGDT ..... NWTGT DUGRU DGNRT DAGAW GGIGR IAWUI WIGUG UTGRD TNGDA GRIDT
+ + + SK

8096	26 Dec	1354z	M08a	Via SDR USA	CW	AB	WED

AGUGA DNGNA UWNUN AGUGA DNGNA UWNUN AGUGA DNGNA UWNUN

AGUGA AGUGA AGUGA AGUGA AGUGA = = =
GATNR ARRAR AIRUT AIDDR RTITI NDWUG TNGTW RRNRN UIWWW ANDUG ..... TIUNW UADRR GANUD WUDWT ANTIT RWUIG NDIIG DNTAD IWAIR GUNRW
+ + +

DNGNA DNGNA DNGNA DNGNA DNGNA = = =
GAUNG DUWWW DNNWT NIAGG URAWT ADRAI RUNGT DDRAU WGDWN UITTN ..... GNWGG AWIWA GTTNI GDNIT DWUGA WNAWI AUGRN INGGT TWTTU TARNI
+ + +

UWNUN UWNUN UWNUN UWNUN UWNUN = = =
TGDAA RAUTD NUNRA WAGRG DUNUI UURRR IGRRU GDIIN UUUDW GNNUG ..... DITAD WDGNN AUAGN URWWI DWAIW RRTWA TTWUN NIWRG NAWUW NINTW
+ + + SK

8096	28 Dec	1355z	M08a	Via SDR USA	CW	AB	FRI

IRWRN GTGGA TUTAN IRWRN GTGGA TUTAN IRWRN GTGGA TUTAN

IRWRN IRWRN IRWRN IRWRN IRWRN = = =
GAUGI UTGRN GIARI GGATW TDUUA DGADW AGTWD UIARA NUWAA RWANA .... DNRUA GNDGT IDADN UGITI UAIWG DUAWG RDIWR DAURN WTDDD IWTAR
+ + +

GTGGA GTGGA GTGGA GTGGA GTGGA = = =
IUDND RUTTG UNARA TNGAA DRANA NAIAM TNTUD TIIGG DUTTU RIDAT ..... RUTGW RNWGN DRRDI ANTWW NDDUD GRDGU INRII TIWDT IADTI WDTIT
+ + +

TUTAN TUTAN TUTAN TUTAN TUTAN = = =
WIGTU WRUUI TNUIT RDTDD DUWNA AARRT GWATG TWRNN NWINR NUNAD ..... ARGTW UDGGA NIITW AWRUI AAGIG ARRGI RTNGD INWWI RATIW GTRIN
+ + + SK

M12 IB ICW, some MCW / CW, short 0. Reuses many freqs year on year.

New ID's may be only for the month/sched shown, but not necessarily unknown. The reason for their reuse, some after long periods of time, is unknown.

European M12 Logs

November 2018: **New scheds in bold type**

5429/4629/4029	2200/20/40z	07 Nov	460 1 (377 77)	11795 73907....	BR	WED
	2200/20/40z	14 Nov	460 000		BR	WED
	2200/20/40z	21 Nov	460 1 (6430 83)	82951 71827....	BR	WED
	2200/20/40z	28 Nov	460 000		HFD	WED

6836	2110z	23 Nov	581 000			Gert	FRI
6859	**2200z**	**16 Nov**	**849 000**		(Remote tuner India)	JPL	FRI
6937/5737/---	2210/30/50z	05 Nov	975 000			BR	MON
	2210/30/50z	08 Nov	975 000			BR	THU
	2210/30/50z	12 Nov	975 000			BR	MON
	2210/30/50z	15 Nov	975 000			BR	THU
	2210/30/50z	19 Nov	975 000			BR	MON
	2210/30/50z	22 Nov	975 000			BR	THU
	2210/30/50z	26 Nov	975 000			BR	MON
7536/6836/---	2050/2110/2130z	02 Nov	581 000			BR	FRI
	2050/2110/2130z	07 Nov	581 000			HFD	WED
	2050/2110/2130z	09 Nov	581 000			BR	FRI
	2050/2110/2130z	14 Nov	581 000			BR	WED
	2050/2110/2130z	16 Nov	581 000			BR	FRI
	2050/2110/2130z	21 Nov	581 000			BR	WED
	2050/2110/2130z	23 Nov	581 000			BR	FRI
	2050/2110/2130z	28 Nov	581 000			BR	WED
7637/9137/10237	0600/20/40z	03 Nov	612 1 (377 77)	11795 73907....		BR	SAT
	0600/20/40z	10 Nov	612 000			BR	SAT
	0600/20/40z	17 Nov	612 1 (6430 83)	82951 71827....		BR	SAT
	0600/20/40z	24 Nov	612 000			Gert/HFD	SAT
8047/6802/5788	1800/20/40z	05 Nov	463 1 (2342 98)	38318 76609....		BR/HFD	MON
	1800/20/40z	12 Nov	463 1 (6004 98)	03714 58199....		BR	MON
	1800/20/40z	19 Nov	463 1 (3392 100)	09141 051 .5....		BR	MON
	1800/20/40z	26 Nov	463 1 (6320 99)	44371 81132....		BR	MON
10343/9264/8116	1900/20/40z	01 Nov	124 1 (6646 115)	13240 55164 ... 63641 58527 000 000		Gert/HFD	THU
	2000/20/40z	05 Nov	124 1 (7937 105)	65619 94712....	(10343kHz NRH)	BR	MON
	2000/20/40z	12 Nov	124 1 (8005 106)	67757 61053....		BR	MON
	1900/20/40z	15 Nov	124 1 (. .63 1 . .)	....	Weak sigs - High noise. All freqs	BR	THU
	2000/20/40z	19 Nov	124 1			HFD	MON
	1900/20/40z	22 Nov	124 1 (9523 121)	46547 36553....		BR	THU
	2000/20/40z	26 Nov	124 1 (746 38)	62097 41413....		BR	MON
	1900/20/40z	29 Nov	124 1 (5681 123)	94890 74048....	(10343kHz NRH)	BR	THU
13936/12136/11536	**1310/30/50z**	**07 Nov**	**915 1 (389 71)**	**81096 26966 ... 10348 74734 000 000**		AB	WED
	1310/30/50z	21 Nov	915 1			HFD	WED
15869/17469/18769	1010/30/50z	11 Nov	847 1			HFD	SUN
	1010/30/50z	22 Nov	847 1 (447 113)	20268 37923 ... 51054 49114 000 000		Gert	THU
	1010/30/50z	25 Nov	847 1 (133 447)	20268 37923 ... 51054 49114 000 000		Gert	SUN
16296/14796/13396	1400/20/40z	07 Nov	273 1 (541 107)	03657 93278....		BR	WED
	1400/20/40z	12 Nov	273 000			BR	MON
	1400/20/40z	14 Nov	273 000			BR	WED
	1400/20/40z	19 Nov	273 1 (604 129)	13201 13592 ... 48388 26650 000 000		Gert/HFD	MON
	1400/20/40z	26 Nov	273 000			BR	MON

December 2018:

5312/4512/4012	2200/20/40z	05 Dec	350 1 (8305 91)	69326 47574....		BR/HFD	WED
	2200/20/40z	12 Dec	350 000			BR	WED
	2200/20/40z	26 Dec	350 000			BR	WED
5784/7584/---	0600/20/40z	29 Dec	751 000			BR	SAT
5832/6832/---	**2200/20/40z**	**28 Dec**	**887 000**			BR	FRI
	2200z	**29 Dec**	**887 000**			Gert	SAT
6908/5808/---	2050/2110/2130z	05 Dec	985 000			HFD	WED
	2050/2110/2130z	12 Dec	985 000			BR	WED
	2050/2110/2130z	26 Dec	985 000			BR	WED
	2050/2110/2130z	28 Dec	985 000			BR	FRI
6937/5737/---	2210/30/50z	03 Dec	975 000			Gert	MON
	2210/30/50z	17 Dec	975 000			BR	MON
8047/6802/5788	1800/20/40z	03 Dec	463 1 (6421 93)	04480 80967....		BR	MON
	1800/20/40z	10 Dec	463 1 (585 111)	648 .6 .7504....	Weak signals on all freqs	BR	MON
	1800/20/40z	17 Dec	463 1 (5928 92)	74421 66316....		BR	MON
10343/9264/8116	2000/20/40z	03 Dec	124 1 (2542 104)	50387 89583....		BR	MON
	2000/20/40z	10 Dec	124 1 (80 .4 41)	73949 64618....	Weak signals on all freqs	BR	MON
	2000/20/40z	17 Dec	124 1 (7890 106)	22228 74506....		BR	MON
	1900/20/40z	27 Dec	124 1 (5455 116)	95434 22083.... 60220 93833 000 000		Gert	THU
12217/11517/10317	1310/30/50z	05 Dec	253 1			HFD	WED

	1310/30/50z	26 Dec	253 1 (9544 91) 95072 49177 ... 60452 83965 000 000	Gert	WED
13371/11571/10271	1400/20/40z	03 Dec	352 1 (413 153) 99195 .. 05242 000 000	Gert/HFD	MON
	1400/20/40z	10 Dec	352 000	BR	MON
	1400/20/40z	17 Dec	352 1 (621 147) 52646 43436 ... 04209 05252 000 000	Gert	MON
	1400z	26 Dec	352 000	Gert	WED
14769/16269/18169	1010/30/50z	06 Dec	721 000	HFD	THU
	1010/30/50z	13 Dec	721 1 (570 115) 94298 79569 ... 18543 82580 000 000	AB	THU
	1010/30/50z	16 Dec	721 1 (570 115) 94298 79569 ... 18543 82580 000 000	Gert	SUN
	1010/30/50z	27 Dec	721 1 (363 175) 89028 58073 ... 28424 57953 000 000	Gert	THU
	1010/30/50z	30 Dec	721 1 (363 175) 89028 58073 ... 28424 57953 000 000	Gert	SUN

M12 13936/12136/11536kHz 1310/1330/1350z 07 Nov 2018

915 915 915 1 (R2m) 389 71 389 71

81096 26966 14274 41597 14857 69427 06688 46441 55991 24591
88102 17515 45118 13760 02343 78230 58769 42970 59523 75602
90052 90461 70094 29711 54758 56053 52568 51409 17879 76954
08840 02919 33072 60560 65146 68144 74513 00703 39737 01176
77802 74276 04257 07569 92808 81378 16816 17355 20431 38507
90906 92568 82102 33055 60764 65754 30533 52732 01065 94797
00420 10072 45123 95652 62438 85084 32553 59787 20280 10348
74734 000 000

Courtesy AB

M12 12217/11517/10317kHz 1310/1330/1350z 26 Dec 2018

253 253 253 1 (R2m) 9544 91 9544 91

95072 49177 35936 05321 05405 56327 85486 38501 28370 41508
19087 89708 03451 48417 10126 19335 35547 31685 32737 65059
27407 76401 59608 21853 20233 39331 07786 90501 35494 74278
07420 89781 24851 65871 39271 55910 71652 82800 07967 40225
74302 71232 74102 15262 08723 80076 22415 74501 25555 35352
44670 90985 84292 32048 46481 98187 58252 15293 62818 73006
66150 77947 70167 69800 32303 82687 35082 79524 29961 82141
78216 52800 36623 44448 66897 13319 62129 52378 04047 45610
17363 91605 55671 35591 24209 45155 00422 90781 23701 60452
83965 000 000

Courtesy Gert

M14 IA MCW / ICW Short 0

November 2018:

4025	1600z	06 Nov	725 00000		HFD	TUE
4636	**1809z**	13 Nov	186 (456 42) = 23451 56347 ... 45721 01469 = = Started 11 mins early	MCW	AB	TUE
	1820z	27 Nov	186 (228 45) = 78134....		HFD	TUE
4761	1920z	14 Nov	748 (456 42) =	MCW	PoSW	WED
	1920z	28 Nov	748 (228 45) = 78134....		HFD	WED
5320	1600z	07 Nov	725 00000	Strong	PoSW	WED
	1600z	21 Nov	725 00000	Strong	PoSW	WED
18041	0500z	01 Nov	952 (401 60) = 95626....		HFD	THU
	05**03**z	08 Nov	952 (671 50) = 45458 08385 ... 00441 14388 = = Late start. Msg at 0504z	CW	AB	THU

December 2018:

4480	2000z	07 Dec	735 00000	MCW	RNGB	FRI
4650	**0900z**	**08 Dec**	**523 523 523 00000 followed by msg 903 43 = 78142 35271 ... 33678 90351**	MCW	AB	SAT
	0900z	15 Dec	523 (752 44) = 67145 36289 ... 11453 90674 = 752 752 44 44 00000	MCW	AB/HFD	SAT
	0900z	22 Dec	**532** (632 43) = 67134 78245 890345 56327.....	MCW	RNGB	SAT
	0900z	29 Dec	523 (**48** 43) = 78153 46238 ... 26481 45123 = 348 348 43 43 00000	MCW	AB	SAT
4730	**0808z (IP)**	**08 Dec**	**523 523 523 00000 followed by msg 903 43 = 78142 35271 ... 33678 90351**	MCW	AB	SAT
	0808z	15 Dec	523 (752 44) = 67145 36289 ... 11453 90674 = 752 752 44 44 00000	MCW	AB/HFD	SAT
	0800z	22 Dec	**532** (632 43) = 67134 78245 890345 56327.....	MCW	RNGB	SAT
	0804z	29 Dec	523 *[57 sec silence]* 78153 46238 ... 26481 45123 = 348 348 43 43 00000	MCW	AB	SAT
4761	1920z	12 Dec	748 (903 43) =		PoSW	WED
4813	1900z	07 Dec	735 00000	MCW	PoSW/RNGB	FRI
	1900z	21 Dec	735 00000		PoSW	FRI
53**25**	1600z	05 Dec	725 00000		PoSW	WED
17458	0930z	10 Dec	617 00000		RNGB	MON

M14 4636kHz 1809z 13 November 2018

186 (R4m) 456 456 42 42 = =

23451 56347 13425 67342 43267 56789 14687 24431 68241 37309
43561 61245 67901 25612 46780 06521 24709 56231 46813 05612
32076 47123 64780 10645 40901 36781 43089 17650 89456 90431
45109 10122 45672 78109 30725 34561 96451 70071 45621 14521
45721 01469 = =

456 456 42 42 00000

Courtesy AB

M14 4650kHz 0900z 15 December 2018

523 (R4m) 752 752 44 44 = =

67145 36289 90561 73521 69015 66351 74891 04672 38176 45319
87451 62387 79567 14263 75623 90745 27184 45271 06457 83512
44781 32904 16478 56321 43672 89342 56314 78462 16723 80967
46231 78452 35267 85634 22784 89453 62451 74512 34278 95367
34156 75352 11453 90674 = =

752 752 44 44 00000

Courtesy AB

PoSW sends us his report on several of the regular M14 schedules;

M14 MCW:-
Several regular schedules from M14 Morse using constant carrier keyed audio tone and lower side-band suppressed mode:-

First + Third Wednesdays in the Month 1600 UTC Schedule:-

07-Nov-18:- 5320 kHz, started about 15 seconds before the hour, "725 725 725 00000", peaking S9 with QSB. Carrier with characteristic slight background noise was up on 5320kHz almost one hour earlier at 1504 UTC. Was logged on this frequency back in February.

21-Nov-18:- 5320 kHz, started late by 50 seconds or so, "725 725 725 00000", strong signal.

5-Dec-18:- 5325 kHz, "five higher" than expected, tuned in at around 1601z, "725 725 725 00000", stopped just after 1604z on a "7".

Second + Fourth Wednesdays in the Month 1920 UTC Schedule:-

14-Nov-18:- 4761 kHz, calling "748" for a "full message" transmission, signal up and down, sank into noise, came up towards the end, finished with "= = 456 456 42 42 00000" - the MCW version has been noted in the past to omit the "break break" sign, but it was present here.

12-Dec-18:- 4761 kHz, "748", DK/GC "903 903 43 43 = =", sinking into the noise on occasion, ended approx 1934z with, "= = DKDK GCGC 00000". Carrier with background noise was on 4761 when checked at 1846 UTC.

First + Third Fridays in the Month 1900 UTC Schedule:-

07-Dec-18:- 4813 kHz, "735 735 735 00000", peaking over S9.

21-Dec-18:- 4813kHz, "735 735 735 00000", almost missed it, put the TV on to see the latest news regarding the Gatwick Airport drone fiasco. Tuned in to M14 at about two minutes past the hour, transmission stopped after 1904:20s UTC.

M23 O ICW

Ary reports a possible M23 transmission on 5345kHz sending 111, from 1620 - 1630z. Transmissions started on 01 December. *This is almost certainly M23, Ary. Records show this frequency was used in July 2017, sending '246'. (Ed.)*

5345	1620 - 1640z	12 Dec	111 (R20) Good	AB	WED
	1635z (IP)	14 Dec	111 111 111 (In progress) No final seen	PLdn	FRI

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

No reports for a long time - May have ceased.

M76 Schedule on 3280kHz (Changes to 3820kHz or 3294kHz over the year). A detailed analysis can be found in ENIGMA Newsletter 93 - May2016.

Difficult to receive with a good signal into the UK most of the time, monitors rely on various SDRs for logs of this station.

No logs - May have ceased

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

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

No logs for some time - May have ceased

Morse Stations - Not Number Related

M51 XlX

3881//6825	100 grp 5-ltr messages with headers				
3881//6825	1130z (IP)	17 Dec	Continuous grps - Mostly 5-ltr, but with occasional 5-number or 5-puncuation chars No headers sent.	BR	MON

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

3881//6825								
	1230 - 1314z	12 Oct	Lundi-Leçon	21-2/1 Codé	21-2/2 Clair,	21-2/3 Codé,	21-2/4 Clair (420 grps/hr)	BR	MON

M89 O

This is a summary of activity from the M89 stations.

Traffic & Operator Chat from M89

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

2659	3046 3116 3187 3194 3200 3205 3210 3230 3231 3232 3246 3311 3355 3508 3510 3543 3647 3836	4100 4135 4253 4279 4566 4598 4828 4878 4952	5037 5069 5149 5313 5335 5470 5501 5541 5555 5791 5796 5824 5840	6022 6504 6747	7507 7541		10632

New Scheds for Nov / Dec 2018:

3238//**4238**//4870	New frequency for this Round Slip	First heard 14 November	V M8JF (x3) DE RIS9 (x2)	JPL
4952	New Round Slip for this network	First heard 21 December	**V QWS1 (x3) DE 87DS (x2)**	JPL

Chart of M89 Freq & Call signs heard in Nov / Dec 2018 **New Scheds shown in Bold Type** **From logs submitted from JPL**

Freq in KHz	Call Slip
3238//NRH	V M8JF (x3) DE RIS9 (x2)
3238//**4238**//4870	V M8JF (x3) DE RIS9 (x2)
3238//4870	V M8JF (x3) DE RIS9 (x2)
3238//4870//6874	V M8JF (x3) DE RIS9 (x2)
3238//4870//8157	V M8JF (x3) DE RIS9 (x2)
3238//4870//6874//8157	V M8JF (x3) DE RIS9 (x2)
3238//6874//8157	V M8JF (x3) DE RIS9 (x2)
4131//NRH	V JKDJ (x3) DE SLBC (x2)
4326//NRH	V QW2A (x3) DE G5VD (x2)
4326//NRH	V QW2A (x3) DE G5VD (x2)
4326//4904	V QW2A (x3) DE G5VD (x2)
4620//4860//6840	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K
4720//5150	VVV WNF (x3) DE FXM (x2)

Freq in kHz	Call Slip
4860// 6840	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ?
4860//10640	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ?
4904//NRH	V QW2A (x3) DE G5VD (x2)
4952//NRH	**V QWS1 (x3) DE 87DS (x2)**
5177//NRH	V JKDJ (x3) DE SLBC (x2)
5835//NRH	V QW2A (x3) DE G5VD (x2)
5835//10589	V QW2A (x3) DE G5VD (x2)
6840//NRH	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K
6874//8157	V M8JF (x3) DE RIS9 (x2)
7620//8350	V WNF(x3) DE FXM (x2) (R5) QSA ? QSV K

Courtesy JPL

2659	1520z (IP) 27 Nov	V PO9I (x3) DE FTGY (x2) (N/H @ 1800z)	(Remote tuner India)	JPL	TUE
3046	1217z (IP) 10 Dec	NR 1216 CK 65 8 1210 2022 RMKS BT X692 TO X696 AR	(Remote tuner Siberia)	JPL	MON
3187	1225z (IP) 16 Nov	Calling various call signs - N2S7, 7DJI, P6UO, 22AE, P83D	(Remote tuner China)	JPL	FRI
3200	1232z (IP) 16 Nov	IEC 9305 AR K (Exercise associated) SVC NR 183 20 30 RMKS 2029 TO 4989 AR K IEC BT 8337 AR K UAT2130 UGT COMM 2029 271 AR K	(Remote tuner China)	JPL	FRI
3205 DR8P	1008z (IP) 02 Dec	V ZUD5 (x3) DE DR8P (x2) (IP - Cont'd)	(Remote tuner South Korea)	JPL	SUN
3238//4870	1110z 16 Nov	V M8JF (x3) DE RIS9 (x2) (IP - Cont'd) BT 304/2270/201./00/05/0376/061/A AR (IP – Machine sent – Return to R/S – 1110z)	(Remote tuner China)	JPL	FRI
3242	1115z (IP) 13 Dec	FFF NR 135/EX BT 1918 BT IEOZ/9W	(Remote tuner Siberia)	JPL	THU
3510	1949z 28 Nov	V VGSBB (x3) DE FY5S (x2) (IP - Cont'd)	(Remote tuner India)	JPL	WED
3647	1505z (IP) 27 Nov	V ZCJ0 (x3) DE ORP2 (x2) (IP - Cont'd)	(Remote tuner India)	JPL	TUE

3836		1232z (IP)	08 Dec	221 RMKS BT 299.. 98 TO .9. 69. K (Remote tuner Siberia)	JPL	SAT	
4100		1113z (IP)	16 Nov	NR 1017 CK 13515 0528 000 (Remote tuner China) NR 1017 CK 235 34 0528 0950 RMKS 7101 TO 7104 BT		JPL	FRI
4123	998E	1603z	09 Dec	V 4DBE DE 998E (Remote tuner Siberia)	JPL	SUN	
				IEC BT 1988 AR K (Normally associated with Exercise traffic – (1606z) IEC BT 1994 AR K (Different IEC Code sent) MSG NR 5986 CK 10 60 1204 1435 RMKS .388 TO 9448 K (1611z)			
4135		1127z	13 Nov	Two stations on this freq. Mostly unreadable (Remote tuner New Zealand) NR .6843 CK .. 1113 1.00 RMKS ... 916.. TO 9125 K (1127z)	JPL	TUE	
4952	FY5S	1100z	28 Nov	V VGSBB (x3) DE FY5S (x2) (IP - Cont'd) (Remote tuner India)		JPL	WED
	87DS	1008z	02 Dec	V QWSJ (x3) DE 87DS (x2) (IP - Cont'd) (Remote tuner India)		JPL	SUN
5037		0901z (IP)	01 Dec	Two stations on this freq. - Exercise traffic & msgs (Remote tuner Japan) R IEC BT 57.5 AR K (0902z) (Normally associated with Exercise traffic) FFF F NR 7283/EK EEEE NR 7283/EX 1702 RMKS 0221 TO 0160 K (0903z) BT BT NJZ8/QR63 AR K FF NR 0.283/EX 1704 RMKS 0160 TO 0221 K BT NJZ8/QR63 AR MSG NR 7284 CK 400 45 1201 1700 RMKS 0221 TO 0160 K		JPL	SAT
5069		0845z (IP)	01 Dec	HR MSG NR 002 CK 99 97 1201 1653 RMKS 8835 TO 0333 K (Remote tuner Japan)		JPL	SAT
5335		0806z (IP)	06 Dec	Two stations on this freq. (Remote tuner Siberia) FF NR 6243/EX 1608 BT TF7/8PO BT	JPL	THU	
5313	4TLD	0109z	14 Nov	NR .069 CK 59 08 1114 0900 RMKS CQ RMKS CQ BT (Remote tuner China)	JPL	WED	
5501		1130z (IP)	27 Nov	H5J6/K7L8 AR BT (Type of message normally Exercise traffic) (Remote tuner Siberia) FFF BT QXH5/K7L8 AR BT SW46/BV84 AR (Normally contains a message number and time) FFF BT BT V7F3/S8M4 AR BT V7F3/H8M4 AR G5J6/N8M4 AR BT FFF BT E5J7/S7JH AR FFF BT D5A2/LBF4 AR BT D5A2/LBF4 AR BT BT BT . HN3/N7M5 AR V5N3/N7M5 AR FFF BT BT BT F5M7/F3G9 AR M4BB/FBU4 AR (1140z) VVVV 05 22/U/...3/N7M5 AR BT 45N3/N7A BT BT (1144z) FFF NR NR NR 05U5.. 1950 BT (Finally sent a msg nr and time) 5BU2/5Y5 AR	JPL	WED	
5541	VXH2	0150z	14 Nov	YU8G DE VXH2 QSA ? QSA 1 HR 7G TO U K (Remote tuner China) NR 2981/KB CK 200 77 1114 0945 RMKS 2130 TO 2120 K		JPL	WED
5796		0231z (IP)	21 Dec	NR NR 4995 CK 54 1221 1000 RMKS 6167 TO 6192 K (Remote tuner South Korea)	JPL	THU	
5824		0130z (IP)	14 Nov	Msg in 4-char code & header (Remote tuner China) MSG NR 1069 CK .9 08 1115 .00 RMKS 7770 TO 7680 K		JPL	WED
6022		0144z (IP)	14 Nov	MSG NR 2234 CK 61 78 1114 0900 K (Remote tuner China)		JPL	WED
6747		0123z (IP)	27 Nov	Calls to ESZG, RGBE, DUWW, FFF NR 130/EX 0923 (Remote tuner Siberia) JPL WED FF NR 131/EX 0925 FF NR 313/EX 0925 BT MSG NR 131 CK 40 35 1128 .935 RMKS 5885 TO 5886 AR AR			
7507		1159z (IP)	16 Nov	RMKS 1003 TO 1425 K (Remote tuner China) M4K6/G7L5 AR BT (Normally exercise related)		JPL	FRI

M89 6504kHz 11109 (IP) - 1118z 14 November 2018

GU/ABWE AR (IP – Hand sent – 1109z)
BT D5GU/ABWE AR
BT D5GU/ABWE AR K (Normally associated with Exercise traffic)
R U FF GA K K (Other station N/H on this frequency)
R GA (1110z)
RR GA K (1110z)
QSL 1911 K (1111z)
HR MSG GA K (1113z) (Monitored until 1118z)

M89 7507kHz 1155 (IP) - 1202z 16 November 2018

RMKS 1003 TO 1425 K (IP – Hand sent – 1159z)
R BT BT
M4K6/N EEEEE BT
M4K6/G7L5 AR BT (Normally exercise related)
M4K6/G7L5 AR K (1200z)
R OK (Other station N/H on this frequency)
R GA K (1201z)
R QSL 2003 U EEEE UP SB K (1202z)

M89 4123kHz 1603 - 1622z 09 December 2018

V 4DBE DE 998E

VV 4DBE DE (IP – Hand sent – 1603z)
VV R 4DBE DE 998E K
R QSL D EEEE HI R (1604z)
R QSA 2 QSA ? K (Other station N/H on this frequency)
R IEC BT ET EEEEEE R IEC BT 1D EEEEEE
R IEC BT 1988 AR K (Normally associated with Exercise) (1606z)
R IEC BT 1994 AR K (Different IEC Code sent)
R (1608z)
HR MSG GA K
R NR 5986 CK 91 EEEEEE (1609z)
R NR 598 EEEEEE
R MSG NR 5986 CK 10 60 1204 1435 RMKS .388 TO 9448 K (1611z)
R MSG NR 5986 CK 10 60 1204 1435 RMKS 9389 TO 9448 K (1613z)
R BT
R BT (1616z)
U3NT AU3U UAD7 3UD4 U3NU 45T4 4A5T TND7 67A4 AND4 AR K (1617z)
R U MSG GA K (1618z)
R GA (1621z)
R RPT K (1622z)

Courtesy JPL

M95 O XSV, XSV70, XSV85

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

3045	**E2UG**	**1705 (IP) - 1717z**	**21 Dec**	**V JX0N (x3) DE E2UG (x2) (IP - Cont'd)** Calling various call signs MSG NR 676/CCK CK 99 3. 1222 0100 RMKS BT CQ AR (Message format indicates M95 station)	(Remote tuner Siberia)	JPL	FRI
3156	IR7D	1703z (IP) 21 Nov		V FE6K (x3) DE IR7D (x2) Calling outstations - YU4R, YPC6, TEW4, VQM2, RI6N, JC1T, M46Q, SL9Q MSG NR 617/CCK CK 99 71 1122 0100 RMKS BT Calling outstations - 9PIQ, CIE8, YU4R, YPC6, TEW4, VQM2, RE7D, 9CJT, M4BQ, SL9Q	(Remote tuner South Korea)	JPL	WED
3642//NRH		**Call Sign 3A7D**		(Active daily - only first log has been included)			
		1759z	06 Nov	V DKG6 (x3) DE 3A7D (x2) (IP - Cont'd)	(Remote tuner Siberia)	JPL	TUE
3642//7602		**Call Sign 3A7D**		(Active daily - only first log has been included)			
		1820z	12 Nov	V DKG6 (x3) DE 3A7D (x2) (IP - Cont'd)	(Remote tuner Siberia)	JPL	MON
		1437z	01 Dec	V DKG6 (x3) DE 3A7D (x2) (IP - Cont'd)	(Remote tuner India)	JPL	SAT
		1556z	09 Dec	NR 18 CK 162 35 1209 1612 BT NR 086 CK 15 35 1209 1619 BT	(Remote tuner India)	JPL	SUN
3642//**7642**		1444z (IP)	27 Nov	V DKG6 (x3) DE 3A7D (x2) (IP - Cont'd) **Note: New frequency for this Round Slip**	(Remote tuner India)	JPL	TUE
4110		**05 05 05** (Associated with M95)					
		1036 (IP) - 1038z	14 Nov	Msg in 4-char code. Noisy / fading	(Remote tuner China)	JPL	WED
4243//NRH		Message number differs from current XSV70 and XSV85 message numbers.					
		1141 (IP) - 1201z	08 Nov	NR 08 CK 40 49 1108 1530 BT NR 079 CK 32 35 1108 1641 BT NR 16 CK 200 35 1108 1610 BT	(Remote tuner China)	JPL	THU
		1141 (IP) - 1154z	09 Nov	NR 08 CK 40 49 1108 1530 BT (Msg sent yesterday) NR 081 CK 30 35 1109 1539 BT NR 082 CK 22 35 1109 1606 BT NR 18 CK 137 35 1109 1635 BT	(Remote tuner China)	JPL	FRI
		1152 (IP) - 1213z	10 Nov	NR 08 . CK 26 35 1110 1531 BT NR 29 CK 158 35 1110 1540 BT NR 085 CK 24 35 1110 1625 BT (Normally switches to voice for V26 Sked, but did not today)	(Remote tuner China)	JPL	SAT
		1141 (IP) - 1156z	12 Nov	NR 087 CK 16 35 1112 1536 BT NR 091 CK 18 35 1112 1620 BT NR 24 CK 121 35 1112 1640 BT	(Remote tuner New Zealand)	JPL	MON
		1143 (IP) - 1201z	13 Nov	NR 089 CK 13 35 1113 1524 BT NR 26 CK 147 35 1113 1615 BT	(Remote tuner New Zealand)	JPL	TUE
		1142 (IP) - 1156z	14 Nov	NR 091 CK 24 35 1114 1539 BT NR 28 CK 165 35 1114 1625 BT	(Remote tuner China)	JPL	WED
		1143 (IP) - 1158z	16 Nov	NR 09 CK 23 49 1115 0720 BT NR 095 CK 21 35 1116 1533 BT NR 32 CK 131 35 1116 1600 BT	(Remote tuner China)	JPL	FRI
		1206 (IP) - 1207z	23 Dec	NR 46 CK 195 35 1223 1630 BT	(Remote tuner Hong Kong)	JPL	SUN
4243//9054		Message number differs from current XSV70 and XSV85 message numbers.					
		2347 (IP) - 2355z	05 Nov	NR 074 CK 29 35 1106... BT NR 11 CK 073 35 1106 0700 BT	(Remote tuner China)	JPL	MON
		1144 (IP) - 1158z	19 Nov	NR 001 CK 40 35 1119 1521 BT NR 38 CK 196 35 1119 1555 BT	(Remote tuner New Zealand)	JPL	MON
		1150 (IP) - 1151z	23 Nov	NR 46 CK 17 3 35 1123 1556 BT	(Remote tuner New Zealand)	JPL	FRI
4364//NRH		Call Sign XSV85					
		1132 (IP) - 1141z	14 Nov	NR 1015 CK 291 35 1114 1644 BT	(Remote tuner China)	JPL	WED
4364//8073		Call Sign XSV85					
		1138z	08 Nov	IP - Hand sent - Too weak to copy	(Remote tuner China)	JPL	THU
		1140z	09 Nov	IP - Hand sent - Too weak to copy	(Remote tuner China)	JPL	FRI
		1131 (IP) - 1143z	16 Nov	NR 1019 CK 292 35 1116 1607 BT	(Remote tuner China)	JPL	FRI
		1134 (IP) - 1147z	10 Dec	NR 1150 CK 169 35 1219 1542	(Remote tuner Hong Kong)	JPL	WED
		1207 (IP) - 1213z	31 Dec	NR 1215 CK 50 35 1231 1635 BT NR 1216 CK 48 35 1231 1636 BT	(Remote tuner Hong Kong)	JPL	MON

4625	5288	1438z (IP)	22 Dec	CD5K DE 5288 K IEC BT BT 3153 AR K (Normally associated with exercise traffic) NR 06CCK CK .. 213...(Audio issues – 1440z)	(Remote tuner Siberia)	JPL	SAT
5801//NRH		Call Sign 3A7D	(Active daily - only first log has been included)				
		1052z	16 Nov	V DKG6 (x3) DE 3A7D (x2) (IP - Cont'd)	(Remote tuner Siberia)	JPL	FRI
		1212z	08 Dec	V DKG6 (x3) DE 3A7D (x2) (IP - Cont'd)	(Remote tuner Siberia)	JPL	SAT
5801//10180		Call Sign 3A7D	(Active daily - only first log has been included)				
		1052z	07 Nov	V DKG6 (x3) DE 3A7D (x2)	(Remote tuner India)	JPL	WED
		0830z	01 Dec	V DKG6 (x3) DE 3A7D (x2)	(Remote tuner Siberia)	JPL	SAT
8073		Usual format is Initial call-up in voice USB, then to digital 4+4 mode LSB, finally, switching to CW CW call-up is **V BNGC (x3) DE XSV85 (x2)**					
		1134 - 1140z	12 Nov	NR 1011 CK 232 35 1112 1632 BT	(Remote tuner New Zealand)	JPL	MON
		1134 - 1142z	13 Nov	NR 1013 CK 294 35 1113 1631 BT	(Remote tuner New Zealand)	JPL	MON
		1136 - 1143z	19 Nov	NR 1033 CK 36 03 1119 1.05 BT	(Remote tuner New Zealand)	JPL	MON
		1132 - 1149z	23 Nov	NR 1056 CK 62 35 1123 1639 BT NR 1057 CK 284 35 1123 1644 BT	(Remote tuner New Zealand)	JPL	FRI
		1133 - 1148z	27 Nov	NR 1081 CK 38 35 1127 1551 BT NR 1082 CK 297 35 1127 1607 BT	(Remote tuner Indonesia)	JPL	TUE
		1130 - 1147z	09 Dec	NR 1128 CK 40 35 1208 16.. BT BT NR 1129 CK 277 35 1209 1624 BT BT	(Remote tuner New Zealand)	JPL	SUN
		1134 - 1149z	10 Dec	NR 1123 CK 30 35 1210 1634 BT BT NR 1124 CK 329 35 1210 1635 BT	(Remote tuner Indonesia)	JPL	MON
		1154 (IP) - 1156z	23 Dec	NR 1171 CK 38 35 1223 1630 BT	(Remote tuner Hong Kong)	JPL	SUN
10180		**Call Sign 3A7D**	(Active daily - only first log has been included)				

M95 4243kHz 1141z 09 November 2018

(IP - In Chinese digital 4+4 QPSK 75/3000 - LSB – 1141z)

(Switched to CW from Chinese digital 4+4 QPSK 75/300

(LSB – Hand sent – 1147z)

VV HR MSG TO YR PSE CY (1147z)
NR 08 CK 40 49 1108 1530 BT (This msg was sent yesterday)
545 DN3 346 NUD T5U 4AN 7U6 36T 7N3 A3U
DD3 5N6 5TT 7N3 A.U DN3 7U6 3TT 7N3 ANU
DD3 5N6 53T 7N3 ANU 3U5 4UU DU5 7D5 DN3
4UU UAN NA3 7UA A53 DN3 N3A NUA 7TD DT3 AR (1149z)
A HR MSG GA
NR 081 CK 30 35 1109 1539 BT
5AA UTT TTN 3U6 3A4 TTU 773 35U 4TA 445
3DA 4D3 TT3 773 35U 4AA N3D 4T3 445 3DA
4D3 TT4 773 356 4AA N3D 4T3 445 3DA 4D3 AR (1151z)
A HR MSG GA
NR 082 CK 22 35 1109 1606 BT
UT5 TTN 3U6 3A4 TTA TTU TT3 773 353 N3D
35U 4A5 446 33U N3U 445 4D3 N3D 4D6 3DU
N3D 3DA AR (1153z)
A HR MSG GA
NR 18 CK 137 35 1109 1635 BT
UTU TTN 3U6 3A4 TTU 773 35A N3D 353 4TA (Cont'd – 1154z)
AR (1202z)
A HR UP SB WK AR AR (1202z)

(Switched to voice – USB – Female – Chinese)

(Now V26 sked – 1204z)

Courtesy JPL

M95 9054kHz 2347z 05 November 2018

AR (IP – Hand sent – 2347z)
A HR MSG GA
NR 074 CK 29 35 1106... BT (2347z)
5AA .TT TT6 3U4 3A4 TTU TT3 773 357 4TA
.46 3D. 336 N3U 445 3DA 4D3 TT4 773 3..
373 4TA 446 4DU 336 N3U 445 3DA 4D3 AR (2349z)
A HR MSG GA
NR 11 CK 073 35 1106 0700 BT
.TU TT5 3U4 (Cont'd – 2350z)
AR (2355z)
A HR UP SB WK AR (2355z)

(Switched to voice – USB – Female – Chinese)

M95 8073kHz 1134z 10 December 2018

BNGC DE XSV85
(IP - In Chinese digital 4+4 QPSK 75/3000 - LSB – 1134z)

(Switched to CW – Hand sent – 1141z)

V BNGC (x3) DE XSV85 (x2) (Hand sent - 1141z)
HR MSGS GA PSE CY (1144z)
NR 1123 CK 30 35 1210 1634 BT BT
TAU N5U TAT N53 TAD N54 7TT TAA 746 7T5
77T TN3 7T7 TAU 773 TUT 773 TUA 773 TU3
773 TU4 .73 TU5 773 7AN 7AD N47 3AN 7U5 AR (1147z)
A HR 7G GA
NR 1124 CK 329 35 1210 1635 BT
TAT 3U6 3AN 3U7 TAU 773 353 4T3 NN3 447 (Cont'd – 1149z)

Courtesy JPL

Oddities

S28 **'The Buzzer'**

4625	1355z	19 Nov	The Buzzer	Excellent	USB	chpa	MON
	1354z	02 Dec	The Buzzer	Excellent	USB	chpa	SUN

S30 **'The Pip'**

3756	1358z	19 Nov	The Pip	Weak	USB	chpa	MON

Contributors: AB, AnonUS, BR, chpa, E.SMITH, Gert, HFD, JPL, PLdn, PoSW, RNGB *Thank you all for your logs.*

Voice, Polytone, Tones, Hybrids and FSK

E06

Nov/Dec log:

Mondays **0210z 9382kHz 0310z 13426kHz**

03/12 '537' 812 35 41286 32082 32057 99511 87816 75049 17494 74933 82171 13418 91682 27354 98451 74606 68618 29304 33048 14305 63084 93517 73587 14662 54641 07466 60784 21028 53897 18508 77985 57920 97377 53969 60340 68639 812 35 00000 (Barry W)

Thursdays **0300z 16175kHz 0400 13863kHz** (frequencies may vary slightly)

29/11 '361' 427 50 52915 37325 38909 12800 78532 45747 85354 79895 54275 55382 36090 86104 46695 18005 20071 01658 09263 87559 15006 30022 08898 21574 98160 80649 83460 37335 71084 11355 47387 0890687945 88754 87649 15502 42172 40219 17247 77870 91079 95795 78391 42897 23174 43293 12601 02810 97818 45729 39865 59776 427 50 00000 (Barry W)

0300z 14654khz 0400z 12177kHz

20/12 '361' 854 33 72716…..etc via Russian SDR (thanks HfD)

First /Third Thursday (repeats Friday) **0600z 18285Hz 0700z 20140kHz**

01/11 '507' 284 61 13227 81745 69496 44444 30009 26048 54584 55410 57419 17630 98337 69329 32354 66929 57717 29355 41790 28926 83077 39590 42848 47198 57232 13684 76697 67225 80697 94820 37257 23613 26571 23850 80610 30929 13473 97754 86080 32846 69993 85635 04914 89267 89082 94405 57479 06132 95815 01372 64963 37577 76978 95908 26456 15163 45906 97391 77392 83821 41007 41600 90283 284 61 00000

15/11 '507' 129 53 73736 01773 05982 44444 24141 63374 46615 02915 33448 99078 56063 30068 95236 70464 86815 61067 76958 15347 05768 94434 66415 23684 92460 51676 65159 48329 11632 33797 39806 05348 33520 16580 67195 43563 00367 76825 34337 88034 62537 66737 79075 87143 32722 78834 82421 17986 31623 67191 48474 29747 23603 21373 32884 129 53 0000

0600z 14575kHz 0700z 17420kHz

06/12 '923' 607 51 53898 77272 32701 71394 41481 44396 93158 91918 05500 22530 29399 77842 43017 70991 83011 37092 68542 11712 85597 12418 94537 75541 09060 26581 26096 19358 69886 97557 05705 93661 85892 15948 69052 65348 08821 01780 97806 25349 81278 82901 80299 35807 91412 62134 16064 96512 23784 65388 25153 35245 29872 607 51 00000

20/12 '923' 861 54 37868 97044 80080 70389 19481 87200 34566 27655 61535 33803 37813 37935 97533 08546 44168 27339 04870 07649 55990 88988 30772 50336 59805 82526 83582 03975 95748 00123 56554 71816 40016 97427 76355 04269 04971 12905 93468 19643 86630 23969 56674 45304 14190 13394 38797 15183 81294 44401 05918 84558 63732 67878 47224 48074 861 54 00000

First/Third Thursday of month **2030z 4836kHz (frequency may vary slightly)**

01/11 '321' 134 57 69834 91020 28974 71856 74832 89648 73282 64825 48142 73848 36457 38491 82713 43143 65689 28756 42351 73145 32424 67857 83273 56425 34245 23246 76879 87435 28184 61547 93671 75364 72825 34732 53426 47589 73647 58326 15264 37485 63542 43557 64536 47586 76453 45684 65783 74859 82736 47382 74651 27631 72361 74827 36452 35263 72813 26743 84732 134 57 00000

06/12 '321' 655 50 69059 32549 71652 48279 42103……..24685 655 50 00000] 2042z

Friday following First & Third Thursday **2130z 4760kHz (frequency may vary slightly)**

07/12 '472' 199 42 56712…….03823 199 42 00000] 2140z

And from PoSW we have:

First + Third Thursdays n the Month 2030 UTC Schedule:-
1-Nov-18:- 4836 kHz, started about 20 seconds before the half-hour, call "321", DK/GC "134 134 57 57", peaking over S9.

15-Nov-18:- 4836 kHz, call "321", DK/GC "671 671 45 45". Not one of the 5F messages from a list of half a dozen or so which have been much used by these Thursday and Friday schedules in recent times.

6-Dec-18:- 4836 kHz, "321", DK/GC "655 655 50 50", another uncommon message.

20-Dec-18:- 4836 kHz, call "321", unusually weak signal, not strong enough to over-ride the local domestic QRM, sounded like, "129 129 43 43".

Friday 2130 UTC Schedule Following First + Third Thursdays:-
16-Nov-18:- 4760 kHz, call "472", DK/GC "671 671 45 45", same as the previous day's 2030z transmission.

21-Dec-18:- 4760 kHz, "472" and DK/GC "129 129 43 43", again the same as heard on the previous day, but unlike then this was an S9 signal.

E07

We start as usual with Peter's analytical logs:

Sunday + Wednesday Schedule, 1800 UTC Start:-
7-Nov-18, Wednesday:- This is the E07 schedule which made the change from AM to SSB earlier in the year together with frequencies different from past years, so a search needed in the new month:-
1804 UTC, 7582 kHz, E07 SSB found in "full message" mode, not too strong, side-band splash interference from a broadcast station on 7585.
1820 UTC, 6782 kHz, second sending, S5 to S6 on a clear frequency, "571 571 571 1", DK/GC "3039 70" x 2.
1840 UTC, 5182 kHz, third sending, peaking over S9, strongest sending of the three.

11-Nov-18, Sunday:- 1800 UTC, 7582 kHz, "571 571 571 1", DK/GC "3036 92" x 2.
1820 UTC, 6782 kHz, S6.
1840 UTC, 5182 kHz, unlike on the 7th the third sending the weakest.

14-Nov-18, Wednesday:- 1800 UTC, 7582 kHz, "571" and "3036 92" again.
1820 UTC, 6782 kHz, S6 signal.
1840 UTC, 5182 kHz, the third sending back to being the strongest, indicating around "9".

21-Nov-18, Wednesday:- 1800 UTC, 7582 kHz, "571" and "3036 92", still. Weak signal, interference from broadcast station on the HF side.
1820 UTC, 6782 kHz, weak.
1840 UTC, 5182 kHz, up to S8.

25-Nov-18, Sunday:- 1800 UTC, 7582 kHz, still "571" and "3036 92", the BC station on the HF side very strong.
1820 UTC, 6782 kHz, S5 to S6.
1840 UTC, 5182 kHz, peaking S9.

5-Dec-18, Wednesday:- 1820 UTC, 5871 kHz, "785 785 785 000", second sending of the schedule for December, a search at 1800z for the first transmission had proved fruitless,
"785" call suggests 7771 or 6771 kHz.

9-Dec-18, Sunday:- 1800 UTC, 6771 kHz, very weak signal, "785 785 785 1", became slightly stronger in time to hear DK/GC "379 73" x 2.
1820 UTC, 5871 kHz, second sending, weak, a much stronger "XJT" churning away, not noted on Wednesday.
1840 UTC, 4571 kHz, peaking around S8 on a clear frequency.

12-Dec-18, Wednesday:- 1800 UTC, 6771 kHz, "785" and "379 73" again, strength S6.
1820 UTC, 5871 kHz, strong enough to over-ride the "XJT" for most of the time.
1840 UTC, 4571 kHz, S6 to S7.

23-Dec-18, Sunday:- 1800 UTC, 6771 kHz, "785 785 785 000", "no message" - must be winding down for the holidays, weak but clear signal.
1820 UTC, 5871 kHz, over-riding the "XJT" noise-maker.

Monday + Wednesday Schedule, 2000 UTC Start:-
5-Nov-18, Monday:- 2000 UTC – no sign of E07 SSB on the expected frequency for the first sending, 7616 kHz. Must have been down to propagation because the second sending was clear enough:-
2020 UTC, 6816 kHz, "682 682 682 000", peaking around S7.

7-Nov-18, Wednesday:- 2000 UTC, 7616 kHz, "682 682 682 000", no problem receiving the first sending this evening.
2020 UTC, 6816 kHz, both transmissions S6 to S7.

14-Nov-18, Wednesday:- 2000 UTC, 7616 kHz, very weak signal, could just about make out "682 682 682 1" warm-up for a "full message".
2020 UTC, 6816 kHz, second sending much stronger, S8, DK/GC "129 44" x 2.
2040 UTC, 5216 kHz, third sending, strong "XJT" on frequency making copy difficult.

19-Nov-18, Monday:- 2000 UTC, 7616 kHz, very weak again, could hear "682...1", just.
2020 UTC, 6816 kHz, much stronger, DK/GC "129 44" again.
2040 UTC, 5216 kHz, strong enough to over-ride the "XJT".

28-Nov-18, Wednesday:- 2000 UTC, 7616 kHz, 682" and "129 44" still.
Peaking around S6 to S7.

2020 UTC, 6816 kHz, weak.
2040 UTC, 5216 kHz, the "XJT" strong, E07 difficult copy.

3-Dec-18, Monday:- 2000 UTC, 6823 kHz, "881 881 881 1", DK/GC "129 44" x 2; the message which has been running throughout the second half of November carries over into December.
2020 UTC, 5823 kHz, second sending.
2040 UTC, 5123 kHz, third sending the strongest, peaking S9.

10-Dec-18, Monday:- 2000 UTC, 6823 kHz, "881 881 881 1", DK/GC "798 68" x 2, weak signal at first, came up to around S6.
2020 UTC, 5823 kHz, second sending, stronger.
2040 UTC, 5123 kHz, weaker "XJT" heard underneath.

12-Dec-18, Wednesday:- 2000 UTC, 6823 kHz, "881" and "798 68" again, strength S4 at best.
2020 UTC, 5823 kHz, S6.
2040 UTC, 5123 kHz, peaking around S9, much weaker "XJT" underneath.

17-Dec-18, Monday:- 2000 UTC, 6823 kHz, "881" and "798 68" again.
2020 UTC, 5823 kHz, peaking around S8, and 2040 UTC, 5123 kHz, also S8, the "XJT" somewhat weaker.

Saturday + Sunday Schedule, 0700 UTC Start:-
3-Nov-18, Saturday:- 0700 UTC, 10112 kHz, "111 111 111 1", DK/GC "792 45" x 2, around S7.
0720 UTC, 11112 kHz, second sending.
0740 UTC, 12112 kHz, both of the repeats also around a "7" on the S-meter.

10-Nov-18, Saturday:- 0700 UTC, 10112 kHz, "111 111 111 000".
0720 UTC, 11112 kHz, second sending, both transmissions S5 to S6.

11-Nov-18, Sunday:- 0700 UTC, 10112 kHz, and 0720 UTC, 11112 kHz, both S9, "111 111 111 000".

24-Nov-18, Saturday:- 0700 UTC, 10112 kHz, "111 111 111 000", peaking S9.
0720 UTC, 11112 kHz, weaker.

1-Dec-18, Saturday:- 0700 UTC, 8123 kHz, "134 134 134 000", strong signal, strong "XJT"
on a close frequency.
0720 UTC, 9323 kHz, weaker.

2-Dec-18, Sunday:- 0700 UTC, 8123 kHz, "134 134 134 000".
0720 UTC, 9323 kHz, second sending.

8-Dec-18, Saturday:- 0700 UTC, 8123 kHz, "134 134 134 000", the "XJT" still there, close enough to be a nuisance.
0720 UTC, 9323 kHz, peaking S9 on a clear frequency.

16-Dec-18, Sunday:- 0700 UTC, 8123 kHz, "134 134 134 000", over-riding weaker "XJT".
0720 UTC, 9323 kHz, S7.

22-Dec-18, Saturday:- 0700 UTC, 8123 kHz, S7 with a weaker "XJT" for company, and 0720 UTC, 9323 kHz, S6 with deep QSB, "134 134 134 000".

Onto others' logs

Sunday/Wednesday

November 2018

1800z	**7582kHz**	**1820z**	**6782kHz**	**1840z**	**5182kHz**		
05/11		NRH [poor condx]					
07/11		571 1 3039 70 82653 …… 000 000				[1800zNRH]	Weak (Dutch SDR)
11/11		571 1 3036 92 13515 ... 06972 000 000				[1800z QRM]	Weak
14/11		571 1 3036 92 13515 ... 06972 000 000				[1800z QRM]	Weak
18/11		571 1 3036 92 13515 ... 06972 000 000					Weak
21/11		571 1 3036 92 13515 ... 06972 000 000					Weak

571 1 3036 92
13515 84481 53201 68569 29803 62376 61973 07212 13395 51635
30239 60061 15533 12259 65438 96612 26408 93958 07773 42147
80647 94347 30702 40696 25763 70498 67083 61265 99785 35781
50665 53982 68240 93462 70345 49464 51314 40714 40712 48718
57527 28686 49869 64004 33801 75014 90535 69618 50645 71374
87159 10491 77097 94055 42729 25245 45472 57994 49262 59651
59651 06551 14156 03093 37027 83651 65387 99467 31369 43212
69663 21628 41634 46936 02151 82230 59749 64828 61800 14749
16357 85151 54667 92849 74196 11868 45159 63886 35803 53821
30213 06972
000 000 *Courtesy BW, Alabama via Perseus net- Netherlands*

25/11		571 1 3036 92 13515 ... 06972 000 000				[1800z BCQRM]	Weak
28/11		571 1 3036 92 13515 ... 06972 000 000					Weak

December 2018

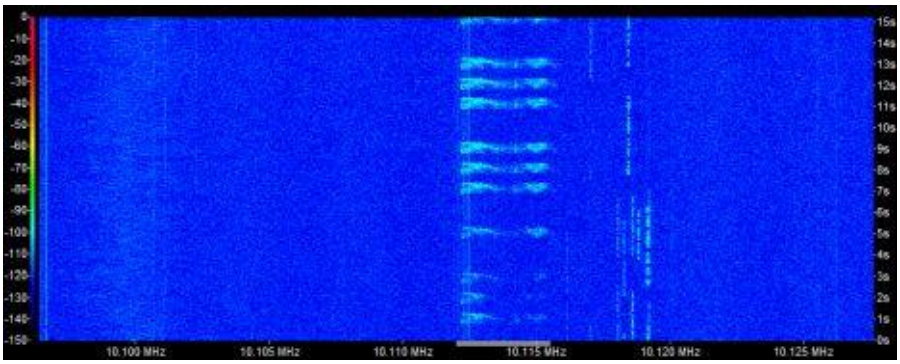
1800z 6771kHz 1820z 5871kHz 1840z 4571kHz

05/12	785 000		Weak
09/12	785 1 379 73 44446 ... 20737 000 000	[1800/1820z unworkable]	Fair, diminishing to weak by end
	Somewhat poor choice of frequencies, BC and other QRM crud most prevalent.		
12/12	785 1 379 73 44446 ... 20737 000 000	[1800z Weak, QRM3]	Fair, QRM3
16/12	785 1 9237 173 46681 ... 56505 000 000		
	Scheduled sendings starting 5m late due to extended sending time		Weak
19/12	785 1 9237 173 46681 ... 56505 000 000		Fair (Dutch SDR)
23/12	785 000		Weak
26/12	785 1 Msg txt lost in local noise		Weak
30/12	785 1 469 188 00625 ... 05246 000 000	[1800z Dutch SDR]	Weak
	Length of msg of 21m means revised start times as 1827 and 1852z respectively.		

Sunday/Saturday

November 2018

0700z 10112kHz 0720z 11112kHz 0740z 12112kHz

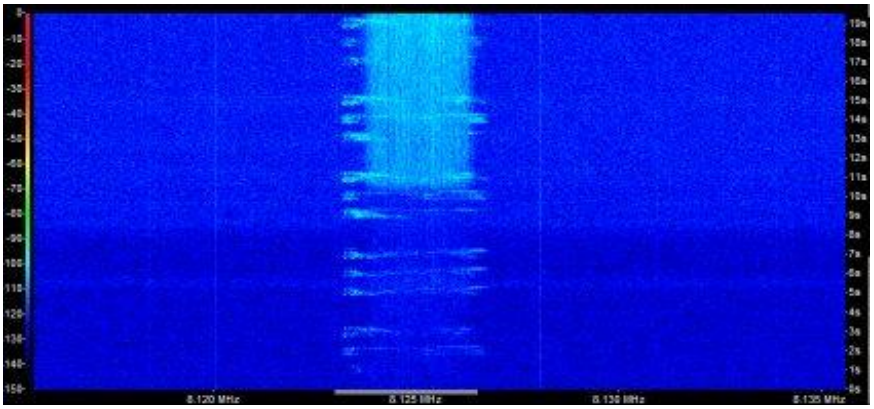


10112kHz 0700z 03/11/2018 alongside amateur Morse transmissions

03/11	111 1 792 45 84892 ... 56313 000 000	[0700z Fair, QSB3]	Weak
04/11	111 1 792 45 84892 ... 56313 000 000	[0700z Strong]	Weak, QSB3
17/11	111 000		Fair
18/11	111 000		Fair
24/11	111 000		Weak
25/11	111 000		Weak, noisy

December 2018

0700z 8123kHz 0720z 9323kHz 0740z 10423kHz



8123kHz 0700z 01/12 Shows XJTQRM3 adequately removed by homebrewed Phase Noise unit

01/12	134 000	[0700z XJTQRM3]	Fair
02/12	134 000	[0700z XJTQRM3]	Strong
08/12	134 000	[0700z XJTQRM3]	Very strong
09/12	134 000	[0700z XJTQRM2]	Very strong
15/12	134 000	[0700z XJTQRM2]	0700z Strong 0720z Weak
16/12	134 000	[0700z XJTQRM2]	0700z Strong, 0720z Fair
22/12	134 000	[0700z XJTQRM2]	Strong
23/12	134 000	[0700z XJTQRM2]	0700z Strong, 0720z Fair
29/12	134 1 755 55 57236 ... 36438 000 000	[0700z XJTQRM3, QSB3/4]	Fair
30/12	134 1 755 55 57236 ... 36438 000 000	[0700z XJTQRM3,0720z QSB3]	Fair, 0740z Weak

Monday/Wednesday

November 2018

2000z	**7616kHz**	**2020z**	**6816kHz**	**2040z**	**5216kHz**		
07/11	682 000					Weak	(Dutch SDR)
12/11	682 000					Weak	(Dutch SDR)
14/11	682 1 129 44 90721 ... 72134 000 000				[2000z Unworkable]	Weak	
19/11	682 1 129 44 90721 ... 72134 000 000				[2000z Unworkable]	Weak	
21/11	682 1 129 44 90721 ... 72134 000 000				[2000z Unworkable]	Weak	
26/11	682 1 129 44 90721 ... 72134 000 000					Weak	
28/11	682 1 129 44 90721 ... 72134 000 000				[2040z Unworkable, QRM5]	Weak	

December 2018

2000z	**6823kHz**	**2020z**	**5823kHz**	**2040z**	**5123kHz**	
03/12	881 1 129 44 90721 … 72134 000 000					Weak
05/12	881 000					Weak
10/12	881 1 798 68 64562 ... 79804 000 000					Weak
12/12	881 1 798 68 64562 ... 79804 000 000				[2000z Unworkable]	Strong
17/12	881 1 798 68 64562 ... 79804 000 000				[2020z Fair, 2040z QRM]	Weak
24/12	881 1 257 43 09075 ... 07384 000 000				[2000z NRH]	Strong

881 1 257 43
09075 47963 82881 85397 18413
02043 74094 23451 26892 17170
56901 27491 83471 30594 57807
94336 85306 81298 12156 76963
18528 85499 75646 64500 97679
65601 12547 18033 65546 82435
58472 13840 64948 30865 91988
39683 06329 78503 95942 26730
68374 09988 07384 000 000
Courtesy PLdn

26/12	881 1 257 43 09075 ... 07384 000 000	[2040z XJTQRM4]	Strong

Tuesday/Friday

November 2018

0700z	**15823kHz**	**0720z**	**16323kHz**	**0740z**	**18623kHz**		
06/11	836 000					Weak	
09/11	836 1 449 87 23464 ... 75610 000 000					Weak (0740z Dutch SDR)	
13/11	836 1 449 87 23464 ... 75610 000 000					Weak	
20/11	836 000				[0700z Unworkable]	Weak	
23/11	836 1 222 71 21794 … 03934 000 000					0750/0740z Weak	
27/11	836 1 221 71 21754 ... 03934 000 000				[0740z NRH]	Weak	

Tuesday/Friday

December 2018

0700z	**13464kHz**	**0720z**	**14964kHz**	**0740z**	**15964kHz**		
11/12	399 1					[message unworkable]	
14/12	399 1 211 111 87847 ... 38734 000 000						Weak
18/12	399 000					[0700z NRH]	Weak (Dutch SDR)

Tuesday/Friday

November 2018

1100z	**14884kHz**	**1120z**	**13384kHz**	**1140z**	**11584kHz**		
02/11	835 000						Fair
06/11	835 000						Weak to Fair
13/11	835 1 7178 75 31840 ... 89451 000 000						Weak to fair
20/11	835 000						Weak
23/11	8351 453 139 77227 … 77271 000 000					[1100z Fair]	Weak
27/11	835 1 453 139 77227 ... 77271 000 000						Weak

December 2018

1100z	**11493kHz**	**1120z**	**10193kHz**	**1140z**	**8193kHz**		
04/12	411 1 3042 173 33894 ... 95917 000 000						Weak
07/12	411 1 3042 173 33894 ... 95917 000 000						Weak
11/12	411 000						Weak
14/12	411 000						Weak
18/12	411 1 410 109 93956 ... 63178 000 000						Weak (Dutch SDR)
21/12	411 1 410 109 93956 ... 62178 000 000						Weak to fair

Thursday/Saturday

November 2018

1410z	**11574kHz**	**1430z**	**10274kHz**	**1450z**	**9274kHz**		
03/11	327 000					[1430z only]	Weak, S5 per M8
10/11	327 1 146 71 63040 ... 25351 000					[1450z QRM5]	Weak (1430z Dutch SDR)
15/11	327 000						Weak
17/11	327 000						Weak
22/11	327 1 9610 65 24259 ... 75626 000 000						Weak
24/11	327 1 9610 65 24259 ... 75626 000 000					[1450z QRM2]	Weak
29/11	327 000						Weak

1410zkHz	**1430z**	**9226kHz**	**1450z**	**8126kHz**		
01/12	674 000					AB
06/12	674 000					Weak
08/12	674 000					Weak

13/12	674 1 362 79 14319 ... 29007 000 000	AB

14319 30573 56686 88151 12180 80861 35939 01623 28114 78249
22188 71675 04004 35590 19740 99709 31640 08510 31438 17874
97490 11419 34217 15355 94405 20660 84262 28952 80342 75669
83732 60894 90330 91577 32175 73211 81957 52209 55978 39978
84705 75153 69335 88835 56763 39283 91711 38557 43000 76014
51693 11971 43189 56250 99021 54922 12978 65788 01556 11673
40452 58128 09765 15921 14882 02340 52340 09236 49750 42748
76266 99397 27606 30670 95329 02036 59729 89243 29007
000 000 *Courtesy Ary*

15/12	674 1 362 79 14319 ... 29007 000 000	[1420z via Dutch SDR]	Weak
27/12	674 1 9320 85 35677 ... 39668 000 000	[1430z via Dutch SDR]	Weak
29/12	674 1 9320 85 35677 ... 39668 000 000	[1430/1450z Dutch SDR]	Weak

E07a

Peter's logs reflect that heard in others' logs:

Friday Schedule, 1610 UTC Start:-
2-Nov-18:- 1610 UTC, 8138 kHz, "158 158 158 1 35046" for a "full message", DK/GC
"409 57" x 2, same message as on Friday 26-October - and on the E07a transmission on Saturday the 27th.
1630 UTC, 7538 kHz, second sending, slight interference from a broadcast station on a close frequency.
1650 UTC, 6838 kHz, S7.

9-Nov-18:- 1610 UTC, 8138 kHz, and 1630 UTC, 7538 kHz, "158 158 158 000".

16-Nov-18:- 1610 UTC, 8138 kHz, "158 158 158 000", peaking around S7 to S8.
1630 UTC, 7538 kHz, weaker.

23-Nov-18:- 1610 UTC, 8138 kHz, and 1630 UTC, 7538 kHz, "158 158 158 000".

7-Dec-18:- 1630 UTC, 5387 kHz, peaking over S9, "830 830 830 000", missed the 1610z sending which would have been on 5887.

14-Dec-18:- 1610 UTC, 5887 kHz, weak signal, and 1630 UTC, 5387 kHz, stronger, up to S8 with deep QSB, "830 830 830 000".

28-Dec-18:- 1610 UTC, 5887 kHz, and 1630 UTC, 5387 kHz, both strong signals pushing the S-meter over the 9, "830 830 830 000".

Saturday Schedule, 0900 UTC Start:-
3-Nov-18:- 0900 UTC, 11553 kHz, "515 515 515 1 35046", DK/GC "409 57" x 2.
0920 UTC, 12153 kHz, second sending, weak FSK signal on close frequency.
0940 UTC, 13553 kHz, third sending.

10-Nov-18:- 0900 UTC, 11553 kHz, and 0920 UTC, 12153 kHz, both around S7 to S8, "515 515 515 000".

24-Nov-18:- 0900 UTC, 11553 kHz, "515 515 515 000", peaking around S9.
0920 UTC, 12153 kHz, weaker.

1-Dec-18:- 0900 UTC, 11121 kHz, "124 124 124 000", over S9 to S9 plus, unusually strong for this schedule.
0920 UTC, 12221 kHz, second sending even stronger.

8-Dec-18:- 0900 UTC, 11121 kHz, and 0920 UTC, 12221 kHz, both well over S9, "124 124 124 000".

22-Dec-18:- 0900 UTC, 11121 kHz, "124 124 124 000", signal up and down, S6 to S9.
0920 UTC, 12221 kHz, weaker.

Wednesday Schedule, 2100 UTC Start:-
7-Nov-18:- 2100 UTC, 5877 kHz, "825 825 825 000", S9.
2120 UTC, 5277 kHz, second sending, S9+.

14-Nov-18:- 2100 UTC, 5877 kHz, and 2120 UTC, 5277 kHz, "825 825 825 000".

28-Nov-18:- 2100 UTC, 5877 kHz, "825 825 825 000".
2120 UTC, 5277 kHz, S9+.

5-Dec-18:- 2100 UTC, 5877 kHz, and 2120 UTC, 5277 kHz, "825 825 825 000".
12-Dec-18:- 2100 UTC, 5877 kHz, over S9, and 2120 UTC, 2120 UTC, weaker, "825 825 825 000".

Now onto others' logs:

Wednesday

November 2018

2100z	**5877kHz**	**2120z**	**5277kHz**	**2140z**	**4577kHz**	
07/11	825 000					Strong
14/11	825 000					Fair

21/11		825 000					Very strong
28/11		825 000					Very strong
December 2018							
05/12		825 000					Very strong
12/12		825 000					Very strong
19/12		825 000					Very strong
26/12		825 000				[2100z BCQRM3]	Very strong

Thursday

November 2018

0530z	**5111kHz**	**0550z**	**5811kHz**	**0610z**	**6911kHz**		
01/11		189 1 31602 445 63 31013 ... 28258 000 000					Very strong
08/11		189 000					Fair
15/11		189 000					Very strong
22/11		189 000					Very strong
29/11		189 000					Very strong
December 2018							
06/12		189 000					Very strong
13/12		189 000					Very strong
20/12		189 000				[Auto 5111kHz only]	Very strong
27/12		189 000				[0550z TTYQRM2]	Strong

Friday

November 2018

1610z	**8138kHz**	**1630z**	**7538kHz**	**1650z**	**6838kHz**		
02/11		158 1 35046 409 57 85452 ... 51919 000 000					Fair
09/11		158 000					Weak
16/11		158 000					Weak
23/11		158 000					Weak
30/11		158 000					Fair
December 2018							
1610z	**5887kHz**	**1630z**	**5387kHz**	**1650z**	**5087kHz**		
07/12		830 000					Very strong
14/12		830 000					Fair
21/12		830 000					Fair
28/12		830 000				[Auto both freqs]	Fair

Saturday

November 2018

0900z	**11553kHz**	**0920z**	**12153kHz**	**0940z**	**13553kHz**		
03/11		515 1 35046 409 57 85452 ... 51919 000 000					Strong
10/11		515 000					Fair
17/11		515 000					Fair
24/11		515 000					Fair

December 2018

0900z 11121kHz	**0920z 12221kHz**	**0940z 13421kHz**	
01/12	124 000		Strong
08/12	124 000		Very strong
15/12	124 000		Weak
22/12	124 000		Fair
29/12	124 000		Strong

E11 log Nov/Dec

4505kHz	1605z	04/11 [235/00] Out 1608z S4	Malc	SUN
	1605z	06/11 [231/00] Out 1608z S4	Malc, Gary H	TUE
	1605z	11/11 [237/00] Out 1608z S5	Malc	SUN
	1605z	13/11 [231/00] Out 1608z S9	Malc, Gary H	TUE
	1605z	27/11 [237/00] Out 1608z S5	Malc	TUE
	0710z	24/11 [497/00]	RNGB	SAT
	1605z	11/12 [233/00]	Gary H, Malc	TUE
	1605z	16/12 [236/00] Out 1608z S3	Malc	SUN
	1605z	18/12 [238/00] Out 1608z S4	Malc	TUE
	0710z	22/12 [495/00]	RNGB	SAT
	1605z	23/12 [238/00]	Gary H	SUN
	1605z	30/12 [233/00] Out 1608z S3	Malc	SUN
4909kHz	0820z	05/11 [430/00] Fair	RNGB	MON
	0820z	08/11 [430/00] Out 0823z S3	Malc	THU
	0820z	22/11 [435/00] Out 0823z S2	Malc, RNGB	THU
	0450z	26/11 [413/00]	Hfd	MON
	0820z	26/11 [434/00] Out 0823z S2	Malc	MON
	0820z	29/11 [436/00] Out 0823z S3	Malc	THU
	0820z	03/12 [439/00] Out 0823z S3	Malc, RNGB	MON
	0820z	06/12 [432/00] Out 0823z S3	Malc, RNGB	THU
	0820z	10/12 [432/00] Out 0823z S2	Malc	MON
	0820z	13/12 [434/00] Out 0823z S2	Malc, RNGB	THU
	0820z	24/12 [439/00] Out 0823z S2	Malc	MON
	0820z	27/12 [431/00] Out 0823z S2	Malc, RNGB	THU
5409kHz	1530z	01/11 [264/00] Out 1533z S5	Malc	THU
	1530z	08/11 [266/00] Out 1533z S2	Malc	THU
	1530z	22/11 [261/00] Out 1533z S6	Malc	THU
	1530z	29/11 [267/00]	dmhz, Gary H	THU
	1530z	06/12 [267/00] Out 1533z S4	Malc, RNGB	THU
	1530z	20/12 [266/00]	Barry W	THU
	1530z	27/12 [266/00]	Barry W, Malc	THU
5779kHz	1730z	01/11 [416/00] Out 1733z S3	Malc	THU
	1730z	15/11 [418/00] Out 1733z S4	Malc, Barry	THU
	0315z	28/11 [251/00]	Hfd	WED
	0315z	29/11 [251/00]	Barry	THU
	1730z	27/12 [414/00] Out 1733z S2	Malc	THU
6804kHz	0700z	02/11 [576/00] Strong	RNGB	FRI
	0700z	06/11 [574/00] Out 0703z S3	Malc	TUE
	0700z	27/11 [579/00] Good	RNGB	TUE
	0700z	04/12 [570/00] Good	RNGB, Malc	TUE
	0700z	11/12 [576/00] Out 0703z S5	Malc, RNGB	TUE
	0700z	18/12 [576/00] Out 0703z S2	Malc, RNGB	TUE
6849kHz	1900z	01/11 [649/00] Out 1903z S3	Malc	THU
	1900z	08/11 [648/00] Out 1903z S3	Malc	THU
	1900z	22/11 [644/00] Out 1903z S4	Malc	THU
	1900z	26/11 [646/00] Out 1903z S3	Malc	MON
	1900z	10/12 [649/00] Out 1903z S2	Malc	MON
	1900z	17/12 [648/00] Out 1903z S3	Malc	MON
	1900z	24/12 [640/00] Out 1903z S2	Malc	MON
	1900z	27/12 [646/00]	Barry W, Malc	THU

7317kHz	1205z	06/11 [461/00] Out 1208z S4		Malc	TUE
	1205z	07/11 [462/00] Out 1208z S3		Malc	WED
	1205z	13/11 [465/00] Out 1208z S3		Malc	TUE
	1205z	14/11 [460/00] Out 1208z S3		Malc	WED
	1205z	27/11 [465/00] Out 1208z S2		Malc	TUE
	1205z	28/11 [461/00] Out 1208z S3		Malc	WED
	1205z	04/12 [466/00] Out 1208z S3		Malc	TUE
	1205z	05/12 [464/00] Out 1208z S2		Malc	WED
	1205z	11/12 [466/00] Out 1208z S3		Malc	TUE
	1205z	12/12 [464/00] Out 1208z S2		Malc, RNGB	WED
	1205z	18/12 [464/00] Out 1208z S7	(Dutch SDR)	Malc	TUE
	1205z	19/12 [466/00] Out 1208z S2		Malc, RNGB	WED
7377kHz	0805z	03/11 [313/00] Out 0808z S4		Malc, RNGB	SAT
	0805z	04/11 [314/00] Good		RNGB	SUN
	0805z	10/11 [315/00] Out 0808z S4		Malc	SAT
	0805z	25/11 [314/00] Out 0808z S5		Malc	SUN
	0805z	08/12 [314/00] Out 0808z S4		Malc	SAT
	0805z	15/12 [310/00] Out 0808z S5		Malc	SAT
	0805z	16/12 [319/00] Out 0808z S3		Malc	SUN
	0805z	22/12 [319/00] Good		RNGB	SAT
	0805z	30/12 [312/00] Out 0808z S3		Malc	SUN
7840kHz	0645z	04/12 [514/00] Strong		RNGB	TUE
	0645z	18/12 [518/00] Good		RNGB	TUE
7984kHz	1045z	26/11 [696/00] Out 0948z S3		Malc	MON
	1045z	28/11 [692/00] Out 1048z S3		Malc	WED
	1045z	05/12 [691/00] Out 1048z S5		Malc, RNGB	WED
	1045z	10/12 [696/00] Out 1048z S5		Malc, RNGB	MON
	1045z	12/12 [697/00] Out 1048z S4		Malc	WED
	1045z	26/12 [693/00] Out 1048z S3		Malc, RNGB	WED
	1045z	31/12 [690/00] Out 1048z S3		Malc	MON
8180kHz	0930z	01/11 [275/00]		RNGB	THU
	0930z	07/11 [270/00] Out 0933z S2		Malc	WED
	0930z	08/11 [275/00] Out 0933z S3		Malc	THU
	0930z	14/11 [279/00] Out 0933z S4		Malc	WED
	0930z	15/11 [277/00] Out 0933z S3		Malc	THU
	0930z	28/11 [275/00] Out 0933z S4		Malc	WED
	0930z	29/11 [271/00] Out 0933z S3		Malc	THU
	0930z	05/12 [276/00] Out 0933z S4		Malc, RNGB	WED
	0930z	06/12 [271/00] Out 0933z S3		Malc, RNGB	THU
	0930z	12/12 [279/00] Out 0933z S2		Malc, RNGB	WED
	0930z	13/12 [277/00] Good		RNGB	THU
	0930z	19/12 [273/00] Out 0933z S3		Malc	WED
8545kHz	1730z	03/11 [409/00] Out 1733z S2		Malc	SAT
	1730z	14/11 [402/00] Out 1733z S2		Malc	WED
	1730z	14/11 [402/00] Out 1733z S2		Malc	WED
	1730z	21/11 [402/00] Out 1733z S2		Malc, Paul	WED
	1730z	24/11 [403/00] Out 1733z S2		Malc	SAT
	1730z	28/11 [402/00] Out 1733z S3	(Dutch SDR)	Malc	WED
	1730z	05/12 [404/00] Out 1733z S2		Malc, RNGB	WED
	1730z	08/12 [404/00] Out 1733z S2	(Dutch SDR)	Malc	SAT
	1730z	12/12 [404/00] Out 1733z S2		Malc	WED
	1730z	15/12 [409/00] Out 1733z S2		Malc	SAT
	1730z	19/12 [409/00]		Barry W	WED
	1730z	22/12 [403/00] Out 1733z S2		Malc	SAT
	1730z	26/12 [402/32] Out 1733z S2 QRM		Malc	WED
8597kHz	0900z	05/11 [537/00]		Ary, Malc	MON
	0900z	07/11 [534/00] Out 0903z S2		Malc	WED
	0900z	21/11 [535/00] Out 0903z S2		Malc, RNGB	WED
	0900z	26/11 [537/00] Out 0903z S2		Malc	MON
	0900z	28/11 [538/00] Out 0903z S5		Malc	WED
	0900z	03/12 [535/00] Out 0903z S3		Malc, RNGB	MON
	0900z	05/12 [532/00] Out 0903z S2		Malc, RNGB	WED
	0900z	17/12 [537/00] Out 0903z S3		Malc	MON
	0900z	19/12 [534/00] Out 0903z S3		Malc, RNGB	WED
	0900z	24/12 [535/00]		RNGB, Malc	MON
	0900z	26/12 [538/00] Out 0903z S4		Malc	WED
	0900z	31/12 [538/00] Out 0903z S2		Malc, RNGB	MON

8680kHz	1300z	01/11 [589/00] Out 1303z S3		Malc	THU
	1300z	03/11 [583/00] Out 1303z S6		Malc, RNGB	SAT
	1300z	08/11 [581/00] Out 1303z S5		Malc	THU
	1300z	10/11 [585/00] Out 1303z S7		Malc	SAT
	1300z	29/11 [583/00]		RNGB	THU
8800kHz	1000z	02/11 [302/00] Out 1003z S2		Malc, RNGB	FRI
	1000z	06/11 [307/00] Out 1003z S2		Malc	TUE
	1000z	09/11 [302/00] Out 1003z S3		Malc	FRI
	1000z	13/11 [307/00] Out 1003z S2		Malc	TUE
	1000z	23/11 [309/00] Out 1003z S2		Malc	FRI
	1000z	11/12 [302/00] Out 1003z S4		Malc	FRI
	1000z	18/12 [309/00] Out 1003z S5	(Dutch SDR)	Malc, RNGB	TUE
	1000z	21/12 [309/00]		RNGB	FRI
	1000z	25/12 [305/00] Good		RNGB	TUE
	1000z	28/12 [307/00] Strong		RNGB	FRI
9130kHz	0715z	02/11 [633/00] Out 0718z S4		Malc	FRI
	0715z	06/11 [633/00] Out 0718z S4		Malc	TUE
	0715z	09/11 [636/00] Out 0718z S3		Malc	FRI
	0715z	23/11 [630/00] Out 0718z S3		Malc	FRI
	0715z	27/11 [636/00] Out 0718z S4		Malc	TUE
	0715z	04/12 [630/00] Out 0718z S3		Malc, RNGB	TUE
	0715z	11/12 [634/00] Out 0715z S2		RNGB, Malc	TUE
9443kHz	1705z	03/11 [391/00] Out 1708z S2		Malc, RNGB	SAT
	1705z	10/11 [393/00]		Gary H	SAT
	1705z	21/11 [391/00] Out 1708z S2		Malc	WED
	1705z	24/11 [391/00] Out 1708z S2		Malc, Barry	SAT
	1705z	05/12 [393/00] Out 1708z S2		Malc , RNGB	WED
	1705z	19/12 [399/00]		Barry W	WED
	1705z	26/12 [391/00] Out 1708z S2	(Dutch SDR)	Malc	WED
	1705z	29/12 [399/00] Out 1708z S2		Malc	SAT
10213kHz	0745z	26/11 [268/00] Out 0748z S3		Malc	MON
	0745z	03/12 [264/00] Out 0753z S5		Malc, RNGB	MON
	0745z	17/12 [267/00] Out 0748z S7		Malc, RNGB	MON
	0745z	24/12 [267/00] Out 0748z S3		Malc, RNGB	MON
	0745z	31/12 [268/00] Out 0758z S3		Malc	MON
10448kHz	1625z	04/11 [975/00] Out 1628z S4		Malc	SUN
	1625z	07/11 [974/00] Out 1628z S3		Malc	WED
	1625z	11/11 [975/00] Out 1628z S5	(Dutch SDR)	Malc	SUN
	1625z	21/11 [978/00] Out 1628z S4	(Dutch SDR)	Malc	WED
	1625z	28/11 [974/00] Out 1628z S2	(Dutch SDR)	Malc	WED
	1625z	12/12 [970/00] Out 1608z S2		Malc	WED
	1625z	16/12 [976/00] Out 1628z S2	(Dutch SDR)	Malc	SUN
	1625z	30/12 [977/00] Out 1628z S2	(Dutch SDR)	Malc	SUN
10487kHz	1910z	11/11 [610/00] Out 1913z S2	(Dutch SDR)	Malc	SUN
	1910z	18/11 [618/00] Out 1913z S2	(Dutch SDR)	Malc	SUN
	1910z	30/12 [610/00] Out 1913z S2	(Dutch SDR)	M8	SUN
11104kHz	0845z	01/11 [155/00] Strong		RNGB	THU
	0845z	06/11 [156/00] Out 0848z S5		Malc	TUE
	0845z	08/11 [159/00] Out 0848z S5		Malc	THU
	0845z	13/11 [157/00] Out 0848z S4		Malc	TUE
	0845z	15/11 [151/00] Out 0848z S4		Malc	THU
	0845z	27/11 [155/000 Out 0848z S5		Malc	TUE
	0845z	29/11 [157/00] Out 0848z S5		Malc	THU
	0845z	04/12 [150/00] Out 0848z S3		Malc	TUE
	0845z	06/12 [159/00] Out 0848z S3		Malc	THU
	0845z	11/12 [150/00] Out 0848z S4		Malc, RNGB	TUE
	0845z	13/12 [155/00] Out 848z S3		Malc, RNGB	THU
	0845z	18/12 [156/00] Good		RNGB	TUE
	0845z	20/12 [156/00] Out 0848z S5		Malc	THU
11107kHz	2005z	03/11 [360/00] Out 2008z S2	(Dutch SDR)	Malc	SAT
	2005z	02/12 [360/00] Very poor	(Dutch SDR)	Barry	SUN
	2005z	16/12 [365/00] Out 2008z S3	(Dutch SDR)	Malc	SUN
	2005z	23/12 [360/00] Out 2008z S2	(Dutch SDR)	Malc	SUN

11116kHz	1300z	13/12 [580/00] Good		RNGB	THU
	1300z	27/12 [581/00] Out 1303z S3		Malc	THU
	1300z	29/12 [588/001 Out 1303z S4		Malc	SAT
11450kHz	0640z	03/12 [945/00]		RNGB	MON
	0640z	17/12 [949/00] Weak		RNGB	MON
11493kHz	1645z	22/11 [330/00] Out 1648z S2		Malc	THU
	1645z	27/11 [331/00] Out 1648z S2		Malc	TUE
	1645z	06/12 [338/00] Out 1648z S2	(Dutch SDR)	Malc	THU
	1645z	11/12 [335/00] Out1648z S2		Malc	TUE
12067kHz	1925z	01/11 [553/00] Out 1928z S3	(Dutch SDR)	Malc	THU
	1925z	15/11 [558/00] Out 1928z S2	(Dutch SDR)	Malc, Barry	THU
12924kHz	1745z	04/11 [248/00] Out 1748z S2		Malc	SUN
	1745z	25/11 [247/00] Out 1748z S2	(Dutch SDR)	Malc	SUN
	1745z	24/12 [242/00] Out 1748z S4		Malc	MON
	1745z	30/12 [248/00] Out 1748z S2	(Dutch SDR)	RNGB, Malc	SUN
14611kHz	0820z	18/12 [132/00] Weak		RNGB	TUE
	0820z	19/12 [138/00] Weak		RNGB	WED
	0820z	26/12 [130/00] Weak		RNGB	WED
14666kHz	1345z	13/11 [917/00] Out 1348z S2		Malc	TUE
	1345z	24/11 [917/00] Out 1355z S2	(Dutch SDR)	Malc	SAT
	1345z	27/11 [916/00] Out 1438z S2	(Dutch SDR) very weak	Malc	TUE
	1345z	11/12 [912/00] Out 1348z S2	(Dutch SDR)	Malc	TUE
	1345z	18/12 [916/00] Out 1348z S2		Malc	TUE
16335kHz	1650z	11/11 [925/00] Out 1650z S2	(Dutch SDR)	Malc	SUN
	1650z	25/11 [921/00] Out 1653z S3		Malc	SUN
	1650z	14/12 [926/00] Out 1653z S2	(Dutch SDR)	Malc	FRI
	1650z	30/12 [929/00] Out 1653z S2	(Dutch SDR)	Malc, dmhz	SUN
17378kHz	0745z	02/11 [342/00] Out 0748z S2	(Dutch SDR)	Malc, RNGB	FRI
	0745z	09/11 [348/00] Out 0748z S2	(Dutch SDR)	Malc	FRI
	0745z	21/11 [346/00] Out 0748z S2	(Dutch SDR)	Malc	WED
	0745z	28/11 [347/00] Out 0748z S2	(Dutch SDR)	Malc	WED
	0745z	05/12 [340/00] Out 0748z S1	(Dutch SDR)	Malc	WED
	0745z	07/12 [344/00] Out 0748z S1	(Dutch SDR)	Malc	FRI
20167kHz	1225z	05/11 [520/00] Weak		RNGB	MON
	1225z	09/11 [522/00] Out 1228z S2	(Dutch SDR)	Malc	FRI

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4505kHz	1605z	20/11 [236/32 50394 43952 07905 77960 34769 79852 91656……09404 98834]		Paul, RNGB	TUE
	1605z	25/11 [236/32 50394…..etc] S6 Repeat of Tuesday		Malc	SUN
	1605z	04/12 [232/31 65229 02174 27097 03116 74477……..76876 47638] Out 1614z S4		Malc	TUE
	1605z	09/12 [232/31 65229……etc] Repeat of Tuesday		Gary H	SUN
	0710z	15/12 [496/35 76361 02661 96557 69553 49032 21973 93898 97547……33913 52927]		RNGB	SAT
4909kHz	0820z	12/11 [435/36…79713 80896 63727 22329 54767….86237 single repeat OUT]0830z S2		Malc	MON
	0820z	15/11 [435/36…..79713 80896 63727 22329 54767……86237 single repeat OUT]0830z S3		Malc	THU
	0820z	17/12 [430/37 37731……..95578] Out 0829z S3		Malc	MON
	0820z	20/12 [430/31 37731…….95578] Out 0829z S3		Malc	THU
5409kHz	1530z	15/11 [266/38….61165 21460 86471 17078 35369…….54970 single repeat OUT]1541z S5		Malc	THU
5779kHz	1730z	22/11 [414/38 21628 82160 75320 43276 99192……44060] Out 1740z S5		Malc	THU
6804kHz	0700z	13/11 [573/3233927 73965 66323…….36228 single repeat OUT]0710z S3		Malc	TUE
6849kHz	1900z	12/11 [644/40……42830 62952 69047 21458 08177…53953]1911z S2	(Dutch SDR)	Malc	MON
	1900z	15/11 [644/40……42830……53593 single repeat OUT]1911z S2		Malc	THU
	1900z	29/11 [648/34 16168…….81277] Out 1910z S2		Malc	THU
	1900z	03/12 [641/34 17776 62508 85432 957125 26199…….08859] Out 1910z S2		Malc	MON
	1900z	06/12 [641/34 17776……etc] Repeat of Monday		Malc	THU

7317kHz	1205z	20/11 [465/33 35829 74494 69904 08607 74534 21579 07829 52386……74903 46646]	RNGB	TUE
	1205z	21/11 [465/33 35829…..etc] Repeat of Tuesday	Malc	WED
	1205z	26/12 [462/35 40064……27800] Out 1215z S2	Malc	WED
7377kHz	0805z	01/12 [310/39 84294 76014 50728 75590 91102 12542 70741 48503……32259 03729]	RNGB	SAT
7984kHz	1045z	05/11 [694/39 81843 97080 22130 42503 89693 72301 71659 54122……12521 45622]	RNGB	MON
	1045z	07/11 [694/39…..81843 97080 22130 42503 89693…….45622] Out 1056z S3	Malc	WED
	1045z	17/12 [694/27 73261 07192 62308 26375 88620 72324 93901 93911……58003 53108] S5	RNGB, Malc	MON
	1045z	19/12 [695/48 73880…….52348] Out 1058z S4	Malc	WED
8180khz	0930z	22/11 [275/31 83597 80980 42840 65528 39161 04229 90441 23434……58380 11418]	RNGB, Malc	THU
	0930z	26/12 [278/32 70266 66485 27005 85251 31902 51533 48523……39100 40487] Out 0940z S5	RNGB, Malc	WED
	0930z	27/12 [278/32 70266……etc Repeat of Wednesday	Malc	THU
8545kHz	1730z	07/11 [400/31 23689 08164 61659 63299 13298] Out 1740z S4	Malc	WED
	1730z	29/12 [402/32 21853……50425] Out 1733z S2	Malc	SAT
8597kHz	0900z	12/11 [533/39……39949 38497 80503 05276 47482…97404] Out 0911z S3	Malc	MON
	0900z	14/11 [533/39……etc] Repeat of Monday	Malc	WED
	0900z	10/12 [535/33 67335 99039 59433 74040 14174 88760 82446……39656 09986] Out 0909z S4	RNGB, Malc	MON
8680kHz	1300z	15/11 [580/33….31106 29088 75164 21409 40928…….07472] Out 1310z S5	Malc	THU
8800kHz	1000z	27/11 [307/27 47857……78622] Out 1008z S2	Malc	TUE
	1000z	04/12 [306/23 22796 22449 97347 97549 99733……..59359] Out 1007z S3	Malc	TUE
9130kHz	0715z	13/11 [630/32 86811 01812 44415…….20240] Out 0824z S3	Malc	TUE
	0715z	18/12 [631/38 68839 45747 78125 12121 69570 07806 53443……20105 42692] Strong	RNGB	TUE
9443kHz	1705z	14/11 [392/40 73503 26175 68870 54449 90788……34451] Out] 1716z S2	Malc	WED
	1705z	12/12 [395/33 32119…….49145] Out 1715z S5	Malc	WED
	1705z	15/12 [395/33 32119……etc] Repeat of Wednesday	Malc	SAT
10213kHz	0745z	12/11 [266/33……..61165 21460 86471 17078 35369…54970] Out 0756z S8	Malc	MON
	0745z	10/12 [262/38 22760……..14493] Out 0748z S5	Malc	MON
10448kHz	1625z	14/11 [978/32 too weak to copy msg]	Malc	WED
	1625z	19/12 [972/34 41992 18917 85668 45420 13552 68427 45566 ……98605 31373] Out 1634z S3	Barry W, Malc	WED
10487kHz	1910z	14/12 [612/38 54305……69370] Out 1921z S2 QSB1 (Dutch SDR)	Malc	FRI
	1910z	16/12 [612/38 54305 49029 15883 40601 90456 64230 09490 50158……69370] Russian SDR	RNGB	SUN
11104kHz	0845z	22/11 [151/27 35008 61097 44816 88901 12663 12627 26531 03345……65768 31293]	RNGB, Malc	THU
	0845z	25/12 [152/24 13661 22981 88801 59970 56527 45506 19607 48775……13520 50436] Good	RNGB	TUE
11450kHz	0630z	05/11 [944/30 30252 25282 54764 45339 81196 80520 55342…….80088 32358]	RNGB	MON
11493kHz	1645z	27/12 [333/35 …faded out	RNGB	THU
14611kHz	0820z	27/11 [132/38 47083 19533 04344 25757 21339 08503 64707…...16845 58335] (Russian SDR)	RNGB	TUE
	0820z	04/12 [131/37 45249 46586 33088 89421 12542 82233 57405 87085……96891 44462]	RNGB	TUE
	0820z	05/12 [131/37 45249……etc] Repeat of Tuesday	RNGB	WED
14666kHz	1345z	06/11 [911/34 77882 83372 40608 03323 14468…27075] Out 1355z S2 (Dutch SDR)	Malc	TUE
	1345z	10/11 [911/34……etc] Repeat of Tuesday	Malc	SAT
16335kHz	1650z	04/11 [922/34…….too weak to copy msg] Out 1700z (Dutch SDR)	Malc	SUN
17378kHz	0745z	14/11 [343/36 too weak to copy msg]	Malc	WED

E17z

Thursday

November 2018

0800z	**11170kHz**	**0800z**	**9820kHz**	
01/11		674 839 5 11794 10552 56936 57989 05371 839 5 00000		Weak
08/11		674 839 5 11794 70552 56936 57989 05371 839 5 00000		Weak
15/11		674 985 10 33699 39998 30667 35947 43334 37545 30588 40244 44475 36871 985 10 00000		Weak
22/11		674 985 10 33699 39998 30667 35947 43334 37545 30588 40244 44475 36871 985 10 00000		Weak
29/11		674 00000		Weak

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06/12		674 813 5 38163 33231 31323 32680 85418 813 5 00000		Weak (Dutch SDR)
13/12		674 813 5 38163 33231 31323 32680 85418 813 5 00000		Weak
20/12		674 930 5 65963 57057 54661 01212 01578 930 5 00000		Weak
27/12		674 930 5 65962 57057 54661 01212 01578 930 5 00000		Weak (Dutch SDR)

E25

No Reports

G06

Second + Fourth Thursdays in the Month 1830 UTC Schedule:-
8-Nov-18:- 4519 kHz, call "271", DK/GC "289 289 54 54", one of the messages used by these Thursday and Friday G06 and related E06 schedules; for some time these transmissions have used of one or other 5F messages drawn from a list of about half a dozen. Good signal.

22-Nov-18:- 4519 kHz, "271" and "289 289 54 54" again.

Friday 1930 UTC Schedule Following Second + Fourth Thursdays:-
9-Nov-18:- 4792 kHz, start times are nominal with these Thursday and Friday schedules,
had started when tuned in just after 1929 UTC, call "436", DK/GC "289 289 54 54".

23-Nov-18:- 4792 kHz, started just a few seconds before the half-hour, "436" and "289 289 54 54" again.

28-Dec-18:- 4792 kHz, call "436", signal up and down, DK/GC sounded like, "129 129 43 43", not one of the more commonly used messages from this schedule. Returned to 4792 a bit after 1940z expecting to catch the ending to confirm but had stopped by then; however,
heard that "computer shutting down" musical chimes at around 1941:30s.

First + Second Mondays in the Month 1700 + 1800 UTC Schedule:-
12-Nov-18:- 1659 UTC, just after, 3750 kHz – another schedule where precise time-keeping is not a regular feature - "938 938 938 00000".
1759:30s UTC – had started when tuned in at this time, 4490 kHz, second sending, weak signal.

3-Dec-18:- 1700 UTC, a few seconds before, 3753 kHz, "938 938 938 00000", peaking over S9.
1800 UTC, missed start, tuned in at 1801z approx, 4485 kHz, second sending, voice stopped 1803:55s UTC so no doubt started before the hour.

10-Dec-18:- 1659 UTC, 3750 kHz, had started when tuned in about one minute before the hour, "938 938 938 000", weak signal, voice stopped before 1703 UTC.
1800:15s UTC, 4490 kHz, started late for a change.

Thanks Peter, and onto other's logs, mostly M8's:

Monday

November

0759z	**5320kHz**		
05/11	329 00000		Weak
19/11	329 00000		Weak

1659z 3750kHz 1759z 4490kHz

05/11 938 00000 1659z Weak, 1759z Fair

12/11 938 00000 Weak

December 2018

0800z 5320kHz

03/12 329 00000 Weak

17/12 329 00000 Weak

1700z 3759kHz 1800z 4485kHz
03/12 938 00000 Weak

1700z 3750kHz 1800z 4490kHz

10/12 938 00000 Weak

Wednesday

November 2018

1159z 4920kHz 1259z 4042kHz

07/11 938 00000 Weak (1300z Dutch SDR)

14/11 938 00000 Weak

December 2018

1159z 4912kHz 1259z 4042kHz

05/12 938 00000 Weak

12/12 938 00000 Weak (Dutch SDR)

November 2018

Thursday

1300z 4460kHz

22/11 329 00000 [1259z] Weak

1830z 4519kHz

08/11 271 289 54 12345 ...72492 289 54 00000 Weak

22/11 271 289 54 12345 ...72492 289 54 00000 Weak

December 2018 Weak

Thursday

1300z 4460kHz

06/12 329 00000 Weak

1830z 4519kHz

13/12 271 281 49 69512 ... 73595 281 49 00000 Weak

27/12 271 129 43 45278 ... 21452 129 43 00000 Weak

Friday

November 2018

1929z 4792kHz

09/11 436 289 54 12345 ... 72492 289 54 00000 Weak

23/11 436 289 54 12345 ... 72492 289 54 00000 Weak

December 2018

1930z 4792kHz

14/12 436 404 42 Msg unworkable UK

Heard in US (Alabama) via Perseus net- Greece as: SR FRI

436 404 41
35984 50790 78205 78054 74670 05241 76994 99350 05791 35971
78054 78040 53974 45931 32590 02579 25791 22579 78214 41984
78517 17081 17845 25792 02746 25793 35967 78264 25641 31017
47931 22841 59374 48077 45793 61504 96951 45912 07016 10184
00019 *Courtesy Barry Williams*

S06

S06 log November 2018

Daily Mon- Fri 0400z 15721kHz No reports

Thursdays (Repeats following day) 0830z 19875kHz 0930z 16067kHz
01/11 '842' 105 37 64275 57630 21037 16763 91511 84150 58355 92078 37397 88524 97047 80103 02569 00868 97337 05166 99765 15316 57117 67843 62412 26709 64143 49665 86904 35741 90511 29246 32009 39747 15354 39529 23846 51326 86699 20833 39860 105 37 000000

08/11 '842' 796 35 22498 72134 24138 03284 19753……..faded out] S2 Malc

S06b

1500z 13397kHz 1600z 9194kHz
19/11 '387' 951 2 11111 00022; '387' 206 49 33276…….etc tks hfd

Fridays (1st & 3rd) 2000z 7523khz 2100z 5305kHz (frequencies may vary slightly)
02/11 '483' 00000

Saturdays (1st/3rd) 2000z 3897kHz 2100z 3317kHz (frequencies may vary slightly)
03/11 '263' 00000
17/11 '263' 00000

S06 log December 2018

Daily Mon- Fri 0400z 15721kHz
03/12 '480' 735 60 groups

Thursdays 0830z 17435kHz 0930z 14375kHz
27/12 '842' 150 39 35815 47428 21090 75210 39063 70505 43213 82329 71127 83000 15689 40293 66912 31874 10488 69876 09845 07090 16573 86562 05748 54724 24165 15657 27117 42121 69271 08661 63753 54783 36904 53101 40676 29693 46422 93012 89258 54743 67441 150 39 00000

Fridays (1st & 3rd) 1900z 7523khz 2000z 5305kHz (frequencies may vary slightly)
07/12 '483' 00000
21/12 '483' 00000

Saturdays (1st/3rd) 2000z 3897kHz 2100z 3317kHz (frequencies may vary slightly)
01/12 '263' 00000
15/01 '263' 00000

S06c

17/12 6810kHz 1836z in progress sending '11052' thanks the Kopf & Ary

S06s November log:

Monday

5th/12th	0630/0640z	13470/16515	'524' 809 6 16945 80744 86200 47330 97067 58604
19th/26th			'524' No reports
5th/12th	0830/0840z	8057/8530	'371' 926 5 52417 23648 63025 35264 64830
19th/26th			'371' 982 5 25861 33432 89219 33494 27142
5th/12th	0900/0910z	14675/12830	'872' 416 5 63823 54960 74064 63812 84725
19th/26th			'872' 910 5 24917 36991 28642 20996 35222

5th/12th	1300/1310z	8420/10635	‘831’ 927 5 05749 72173 62719 30516 72481
19th/26th			‘831’ 920 5 44475 20322 26024 45445 44008

Tuesday

6th/13th	0600/0610z	16145/14240	‘438’ No reports
20th/27th			‘438’ 509 6 36444 27144 96123 84424 29808 42033
6th/13th	0700/0710z	5250/6320	‘374’ 216 5 11749 70552 56936 57989 05371
20th/27th			‘374’ 956 8 40244 36012 38322 47552 42620 40846 20519 55564
6th/13th	0730/0740z	7410/11532	‘427’ 805 6 88569 89617 25757 77158 95225 84090
20th/27th			‘427’ 591 6 44475 30322 36034 45445 44008 38453
6th/13th	0800/0810z	11945/13195	‘352’ 479 6 26634 14690 95590 60486 03009 68431
20th/27th			‘352’ 591 6 44475 30322 36034 45445 44008 38453
6th/13th	1000/1010z	6440/5660	‘893’ 214 5 47665 94092 48521 63888 92060
20th/27th			‘893’ 570 6 37545 30989 41691 43753 32543 40936
6th/13th	1100/1110z	5035/5975	‘754’ 962 8 52801 63919 92699 14600 74248 48754 65125 41879
20th/27th			‘754’ 801 6 43043 38367 33406 42366 37868 37250
6th/13th	1500/1510z	6845/9170	‘537’ 904 6 09394 76911 75155 92918 97067 68604
20th/27th			‘537’ 809 6 44008 38453 48324 33885 31830 34645

Wednesday

7th/14th	0820/0830z	8417/9262	‘471’ 958 6 42036 01653 15521 53005 51135 14199
21st/28th			‘471’ 236 5 32940 43079 32154 30738 56864
7th/14th	0830/0840z	11535/11830	‘745’ 963 8 52098 08497 28075 85052 82152 62725 14535 58231
21st/28th			‘745’ 281 6 40639 33180 48008 34072 83030 32030
7th/14th	0830/0840z	7062/10532	‘464’ 953 7 06675 86415 56075 94063 57989 84648 68362
21st/28th			‘464’ 973 5 34806 32963 31716 81515 30841
7th/14th	1000/1010z	12365/14280	‘729’ 465 8 87566 75855 07443 51240 62434 54159 77888 02656
21st/28th			‘729’ 406 5 40936 36892 45221 43786 86234

Thursday

1st/8th	(E17z) 0800/0810z	11170/9820	‘674’ 839 5 11794 70553 56936 57989 05371
15th/22nd			‘674’ 985 10 33699 39998 30667 35947 43334 37545 30588 40244 44475 36871
2nd/9th	0930/0940z	8812/9540	‘314’ 952 6 36903 41412 55678 09775 86415 25910
16th/23rd			‘314’ 986 5 46446 43475 35453 38083 54054 986
2nd/9th	1200/1210z	12155/10920	‘425’ 978 6 22536 88280 84116 53718 78927 34694
16th/23rd			‘425’ 986 7 98328 35751 35375 31716 81515 48354 44053

Friday

2nd/9th	0900/0910z	5765/6315	‘624’ 805 7 46052 68672 97478 29685 30485 96632 52537
16th/23rd			‘624’ 817 5 39976 43843 39801 35875 42149
2nd/9th	0930/0940z	11780/12570	‘516’ 287 9 21767 53672 11834 81022 36903 41412 55678 09775 86415
16th/23rd			‘516’ 974 8 48007 37230 46446 43475 35453 38032 36584 35194

Saturday

3rd	0800/0810z	8680/8260	‘254’ 897 6 90733 20954 32983 45458 43992 21026

With thanks to RNGB, Malc, Ary

S06s December log:

Monday

3rd/10th	0630/0640z	13470/16515	‘524’ No reports
17th/24th			‘524’ 813 6 87378 30647 31464 40750 42433 35630
3rd/10th	0830/0840z	8057/8530	‘371’ 924 5 76148 25163 22415 25821 73717
17th/24th			‘371’ 952 6 64807 91035 19998 59022 93873 67105
3rd/10th	0900/0910z	14675/12830	‘872’ 946 5 39544 64372 13078 10914 84612
17th/24th			‘872’ 931 5 14415 76950 70886 41267 71182
3rd/10th	1300/1310z	8420/10635	‘831’ 207 5 83208 37829 47458 42867 39654
17th/24th			‘831’ 946 5 56381 88266 93717 31318 99550

Tuesday

4th/11th	0600/0610z	16145/14240	‘438’ 297 5 31896 36053 33679 32814 47565
18th/25th			‘438’ 521 6 42967 56243 97421 99601 38269 45531
4th/11th	0700/0710z	5250/6320	‘374’ 826 5 42069 30913 32098 31335 35931
18th/25th			‘374’ 516 8 41034 39799 48769 45522 34919 30123 44131 42614
4th/11th	0730/0740z	7410/11532	‘427’ 913 5 39534 17228 15636 47891 23247
18th/25th			‘427’ 835 6 87378 30647 31464 40750 42433 37392
4th/11th	0800/0810z	11945/13195	‘352’ 419 6 40614 77249 40678 17976 21816 42997
18th/25th			‘352’ 890 6 31101 37931 35379 35372 36941 40140
4th/11th	1000/1010z	6440/5660	‘893’ 410 5 88620 58069 61732 74537 57440

18th/25th			‘893’ 504 6 83208 37829 47458 42867 39674 42387
4th/11th	1100/1110z	5035/5975	‘754’ 913 6 52401 63919 92699 14600 74238 48754
18th/25th			‘754’ 932 6 35131 84430 39244 36860 39818 38792
4th/11th	1500/1510z	6845/9170	‘537’ 249 6 46062 68672 97478 30785 30485 96632
18th/25th			‘537’ 981 6 90406 36113 31107 37806 37137 31405

Wednesday

5th/12th	0820/0830z	8417/9262	‘471’ 986 5 95834 27641 00285 38299 12095
19th/26th			‘471’ 862 5 31896 36053 33669 36946 31568
5th/12th	0830/0840z	11535/11830	‘745’ 936 8 87378 30647 31464 30750 42433 35630 47392 47956
19th/26th			‘745’ 291 6 39654 42387 44142 30698 33104 31985
5th/12th	0830/0840z	7062/10532	‘464’ 250 7 86733 92250 46291 10164 99728 77053 61927
19th/26th			‘464’ 983 5 34931 35379 35372 36941 40140
5th/12th	1000/1010z	12365/14280	‘729’ 415 6 11744 92460 28274 13509 42755 28611
19th/26th			‘729’ 510 6 44365 43028 33642 36688 32805 37450

Thursday

6th/13th (E17z)	0800/0810z	11170/9820	‘674’ 813 5 38163 33231 31323 32680 85418
20th/27th			‘674’ 930 5 65962 57057 54661 01212 01578
6th/13th	0930/0940z	8812/9540	‘314’ 802 5 31896 36053 33779 32814 47565
20th/27th			‘314’ 280 5 90406 36113 31107 37806 37137
6th/13th	1200/1210z	12155/10920	‘425’ 970 6 36850 39818 38792 30187 30568 32154
20th/27th			‘425’ 831 6 87378 30647 31464 40750 42433 35630

Friday

7th/14th	0900/0910z	5765/6315	‘624’ 839 5 42387 44142 30698 33104 31985
21st/28th			‘624’ 893 5 78553 96624 19963 24307 64642
7th/14th	0930/0940z	11780/12570	‘516’ 209 7 34203 80585 53623 02508 34465 29833 44420
21st/28th			‘516’ 827 9 49153 48563 38083 35431 53538 60988 00987 69932 41322

Saturday

1st	0800/0810z	8680/8260	‘254’ 809 6 25163 57057 48288 02507 53571 37181

With thanks to RNGB, Malc, Ary, HfD

Of this prolific station PoSW writes:

S06, OM Voice:-

First + Third Fridays in the Month 2000 + 2100 UTC Schedule:-

2-Nov-18:- 2000 UTC, 7532 kHz, “483 483 483 00000”, very weak signal, only just readable.
2100 UTC, 5305 kHz, second sending, much stronger, pushing the S-meter over the “9” at times.
The expected seasonal change of frequencies here, similar to those used in the first two months of 2018.

16-Nov-18:- 2000 UTC, 7523 kHz, “483 483 483 00000”, “ten lower” than last time, S6 to S7. Missed the 2100z sending having lost track of the time – as you do.

7-Dec-18:- Has moved back by one hour, nothing on 7532 kHz when checked at 2000 UTC, was on 5305:-
2000 UTC, 5305 kHz, “483 483 483 00000”, S9 with QSB, so the first sending would have been at 1900z.

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

3-Nov-18:- 2000 UTC, 3897 kHz, “263 263 263 00000”, a strong broadcast station on 3900
close enough to be a nuisance, appeared to be one of those Dutch land-based pirates, OM announcement in what seemed like a mixture of Dutch and English, the sort of station we used to hear frequently at the HF end of the medium-wave broadcast band for many years until the local QRM from domestic electronic gadgets with their interference-generating digital circuitry and switch-mode power supplies wiped out this part of the radio spectrum.
2100 UTC, 3317 kHz, second sending, as with the Friday schedule now using frequencies similar to those of January and February.

15-Dec-18:- 2000 UTC, 3897 kHz, “263 263 263 00000”, S6 to S7.
2100 UTC, 3317 kHz, very weak signal, unreadable, something there presumed to be the second sending.

S06s, YL Voice:-

A few of the stronger S06s transmissions heard in the final two months of 2018:-

Monday 0830 + 0840 UTC Schedule, Call “371”:-

5-Nov-18:- 0830 UTC, 8057 kHz, DK/GC “926 926 5 5”, “52417 23648 63025 35264 64830”, S9 signal.
0840 UTC, 8530 kHz, slightly weaker signal.

19-Nov-18:- 0830 UTC, 8057 kHz, DK/GC “25861 33432 89219 33494 27142”.
0840 UTC, 8530 kHz, second sending.

3-Dec-18:- 0830 UTC, 8057 kHz, DK/GC “924 924 5 5”, “76148 25163 22415 25821 73717”.
0840 UTC, 8530 kHz, both transmissions around S6.

10-Dec-18:- 0830 UTC, 8057 kHz, “924 924 5 5” and same 5Fs as on 3-Dec.
0840 UTC, 8530 kHz, second sending, both around S6.

17-Dec-18:- 0830 UTC, 8057 kHz, DK/GC “952 952 6 6”, “64807 91035 19998 59022 93873 67105”, strength S8.
0840 UTC, 8530 kHz, also around S8.

Tuesday 0730 + 0740 UTC Schedule, Call "427":-
6-Nov-18:- 0730 UTC, 7410 kHz. DK/GC "805 805 6 6", "88569 89617 25757 77158 95225 84090", S8 with QSB.
0740 UTC, 11532 kHz, very strong signal.

20-Nov-18:- 0730 UTC, 7410 kHz, DK/GC "591 591 6 6" strong signal, "44475 30322 36034 45445 44008 38453".
0740 UTC, 11532 kHz, strong signal, side-band splash interference from a very strong broadcast station on a close frequency.

4-Dec-18:- 0730 UTC, 7410 kHz, DK/GC "913 913 5 5", strong signal with QSB, "39534 17228 15636 47891 23247".
0740 UTC, 11532 kHz, interference from broadcast station.

18-Dec-18:- 0730 UTC, 7410 kHz, DK/GC "835 835 6 6", strength S7, "87378 30647 31464 40750 42433 37392".
0740 UTC, 11,532 kHz, strong signal.

Wednesday 0820 + 0830 UTC Schedule, Call "471":-
14-Nov-18:- 0820 UTC, 8417 kHz, DK/GC "958 958 6 6", "42036 01653 15521 53005 51135 14199", S7 to S8.
0830 UTC, 9262 kHz, second sending, weaker.

12-Dec-18:- 0820 UTC, 8417 kHz, DK/GC "986 986 5 5", S6 to S7, "95834 27641 00285 38299 12095".
0830 UTC, 9262 kHz, weaker.

Wednesday 0830 + 0840 UTC Schedule, Call "745":-
7-Nov-18:- 0830 UTC, 11535 kHz, weak signal, DK/GC "963 963 8 8", "52098 08497 28075 85052 82152 62725 14535 58231".
0840 UTC, 11830 kHz, second sending, much stronger signal.

21-Nov-18:- 0830 UTC, 11535 kHz, peaking over S9, DK/GC "281 281 6 6", "40639 33180 48008 34072 83030 32030".
11830 UTC, 11830 kHz, peaking over S9 with QSB.

28-Nov-18:- 0830 UTC, 11535 kHz, "281 281 6 6" and 5Fs as on the 21st, over S9.
0840 UTC, 11830 kHz, also a strong signal.

12-Dec-18:- 0830 UTC, 11535 kHz, DK/GC "936 936 8 8", "87378 30647 31464 30750 42433 35630 47392 47956".
0840 UTC, 11830 kHz, both transmissions strong signals.

19-Dec-18:- 0830 UTC, 11535 kHz, DK/GC "291 291 6 6", "39654 42387 44142 30698 33104 31985".
0840 UTC, 11830 kHz, second sending, both strong.

Friday 0930 UTC + 0940 UTC Schedule, Call "516":-
9-Nov-18:- 0930 UTC, 11780 kHz, strong signal, DK/GC "287 287 9 9", a higher group count than most, "21767 53672 11834 81022 36903 41412 55678 09775 86415".
0941 UTC, just after, 12,570 kHz, second sending started over a minute late, also a strong signal.

16-Nov-18:- 0930 UTC, 11780 kHz, DK/GC "974 974 8 8", "48007 37230 46446 43475 35453 38032 36584 35194, strong signal.
0940 UTC, 12570 kHz, also strong.

23-Nov-18:- 0930 UTC 11780 kHz, "974 974 8 8" and 5Fs as on 16-Nov. Very strong signal.
0940 UTC, 12570 kHz, over S9.

30-Nov-18:- something went terribly wrong with this transmission, started five minutes late and came up with the wrong call:-
0935 UTC, just before, 11780 kHz, plain carrier only until this time, started up with the expected "no message" format since this is the fifth Thursday in the month but with "624 624 624 00000". Voice stopped after less than one minute, audio tone around 0936z, changed to a higher frequency tone at approx 0939:40s until 0941:30s then finally proceeded with the expected "516 516 516 00000" and stopped at 0945:45s UTC.
0951 UTC, just after, 12570 kHz, second sending with the correct "516" call. Both transmissions very strong signals.

7-Dec-18:- 0930 UTC, 11780 kHz, DK/GC "209 209 7 7", "34203 80585 53623 02508 34465 29833 44420".
0940 UTC, 12570 kHz, strong signal.

28-Dec-18:- 0930 UTC, 11780 kHz, DK/GC "827 827 9 9", strong signal, a higher than average group count, "49153 48563 38083 35431 53538 60988 00987 69932 41322".
0941 UTC, 12570 kHz, no voice heard until after 0941z, also a strong signal.

First Saturday in the Month 0800 + 0810 UTC Schedule, Call "254":-
3-Nov-18:- 0800 UTC, 8680 kHz, DK/GC "897 897 6 6", "90733 20954 32983 45458 43992 21026".
0810 UTC, 8260 kHz, second sending, both transmissions around S6 to S7.

1-Nov-18:- 0800 UTC, 8680 kHz, started off a reasonable signal but rapidly became weak and largely unreadable.
0810 UTC, 8260 kHz, Second sending much better signal, DK/GC "809 809 6 6", "25163 57057 48288 02507 53571 37181".

S11a log Nov/Dec

5815kHz	1955z	02/11 [370/00] Konyetz 1958z S4	Malc, RNGB	FRI
	1955z	07/11 [376/37.55437…….etc] Konyetz 2005z S2 (Dutch SDR)	Malc	WED
	1955z	09/11 [376/37……..54438…….27059] S9 QSB7	Malc	FRI
	1955z	14/11 [377/00] Konyetz 1958z S5	Malc	WED
	1955z	23/11 [376/00] Konyetz 1958z S5	Malc	FRI
	1955z	28/11 [373/00] Konyetz 1958z S5	Malc	WED
	1955z	05/12 [373/33 07072 53511 67451 41147 68467……..33765] Konyetz 2006z S9	Malc	WED
	1955z	07/12 [373/33 07072……etc] S9 Repeat of Wednesday	Malc	FRI
	1955z	12/12 [373/00] Konyetz 19158z S9	Malc	WED
	1955z	14/12 [371/00] Konyetz 1958z S9	Malc	FRI

	1955z	21/12 [376/00] Good	RNGB	FRI
	1955z	26/12 [371/00] Konyetz 1958z S9	Malc	WED
7600kHz	1020z	02/11 [42?/00] (intercepted too late!)	RNGB	FRI
	1020z	06/11 [42?/00] Konyetz 1023z S1	Malc	TUE
	1020z	09/11 [425/00] Konyetz 1023z S2	Malc	FRI
	1020z	13/11 [421/31 56153 31608 89285 67097 88489…..21212] Konyetz 1023z S3	Malc	TUE
	1020z	23/11 [427/00] Konyetz 1023z S3	Malc	FRI
	1020z	04/12 [424/00] Konyetz 1023z S3	Malc, RNGB	TUE
	1020z	07/12 [425/00] Konyetz 1023z S3	Malc	FRI
	1020z	11/12 [422/00] Konyetz 1023z S2	Malc	TUE
	1020z	14/12 [425/00] Konyetz 1023z S4	Malc	FRI
	1020z	18/12 [422/00]	RNGB	TUE
	1020z	21/12 [420/00] Good	RNGB	FRI
	1020z	28/12 [422/40 36865 38739 83451 67204 73364 65677 14820 09868……57838 56834] Fair	RNGB	FRI
10728kHz	1540z	03/11 [565/00] Konyetz 1543z S5	Malc	SAT
	1540z	07/11 [563/00] Konyetz 1543z S5	Malc	WED
	1540z	10/11 [569/00] Konyetz 1543z S2	Malc	SAT
	1540z	14/11 [567/35 33270 76121 58347 77530 81455…….07529] Konyetz 1551z S2	Malc	WED
	1540z	17/11 [567/35 33270…….etc] Repeat of Wednesday	Malc	SAT
	1540z	24/11 [566/00] Konyetz 1543z S2 QSB (Dutch SDR)	Malc	SAT
	1540z	28/11 [566/00] Konyetz 1543z S3 (Dutch SDR)	Malc	WED
	1540z	05/12 [563/00] Konyetz 1543z S2	Malc	WED
	1540z	12/12 [569/00] Konyetz 1543z S2	Malc	WED
	1530z	19/12 [563/00] Konyetz 1533z S3	Malc	WED
	1540z	26/12 [564/33 96475…….35169] Konyetz 1550z S6	Malc	WED
11486kHz	1850z	10/11 [286/00] Konyetz 1853z S2 (Dutch SDR)	Malc	SAT
	1850z	21/11 [281/00] Konyetz 1853z S2 (Dutch SDR)	Malc	WED
	1850z	24/11 [280/00] Konyetz 1853z S2 (Dutch SDR)	Malc	SAT
	1850z	05/12 [285/00] Konyetz 1853z S4	Malc, RNGB	WED
	1850z	08/12 [285/00] Konyetz 1853z S2	Malc	SAT
	1850z	12/12 [286/00] Konyetz 1853z S2	Malc	WED
	1850z	19/12 [386/00] Konyetz 1853z S3 (Dutch SDR)	Malc	WED
	1850z	26/12 [282/39 51157…….93358] Konyetz 1902z S4	Malc	WED
	1850z	29/12 [282/39 51157…….etc] Repeat of Wednesday	Malc	SAT
11559kHz	1015z	01/11 [475/00] Konyetz 1018z S6	Malc	WED
	1015z	05/11 [475/36 83077 12963 35387 40198 13912 14909 48903……72961 17922]	RNGB	MON
	1015z	08/11 [475/36 83077 12963 35387 50198 13912……17922]	Malc	THU
	1015z	12/11 [477/00] Konyetz 1018z S3	Malc	MON
	1015z	15/11 [476/00] Konyetz 1018z	Malc	THU
	1015z	19/11 [470/00] Konyetz 1018z S2	Malc	MON
	1015z	22/11 [479/00] Konyetz 1018z S2	Malc	THU
	1015z	26/11 [476/00] Konyetz 1023z S4	Malc	MON
	1015z	29/11 [478/00] Konyetz 1518z S4	Malc	THU
	1015z	03/12 [476/00] Fair	RNGB	MON
	1015z	06/12 [476/00] Konyetz 1018z S4	Malc, RNGB	THU
	1015z	10/12 [477/00] Konyetz 1018z S5	Malc	MON
	1015z	13/12 [474/00] Konyetz 1018z S5	Malc	THU
	1015z	17/12 [475/00] Konyetz 1018z S3	Malc, RNGB	MON
	1015z	20/12 [470/00] Konyetz 1018z Strong	RNGB, Malc	THU
	1015z	24/12 [470/35 53610……..28031] Konyetz 1026z S3	Malc	MON
	1015z	27/12 [470/35 53610 30362 14984 06647 13998 96807 72687 92637……187342 28031]	RNGB, Malc	THU
	1015z	31/12 [478/00] Konyetz 1018z S3	Malc, RNGB	MON
14753kHz	0735z	13/11 [385/00] Konyetz 0738z S2	Malc	TUE
	0735z	15/11 [385/00] Konyetz 0738z S2 (Dutch SDR)	Malc	THR
	0735z	20/11 [382/00……KONEZ]0738z S2 (Dutch SDR)	Malc	TUE
	0735z	22/11 [380/00]	RNGB	THU
	0735z	27/11 [384/39 19336 89702 35505 93467 52494 80816 52051 34471……53418 77368]	RNGB	TUE
	0735z	29/11 [384/39 19336…..etc] Repeat of Tuesday	RNGB	THU
	0735z	04/12 [380/00] Strong (Russian SDR)	RNGB, Malc	TUE
	0735z	18/12 [385/00]	RNGB	TUE
	0735z	20/12 [382/00]	RNGB	THU

V02 a

No reports via E2k

V07

Sunday

November 2018

0100z	**15946kHz**	**0120z**	**14846kHz**	**0140z**	**13486kHz**			
04/11	984 000						‘T’	SUN
11/11	984 1 240 55 52272 54143 89935 ...98188 87281 000 000					[0100z Audio problems '8']	Weak	
18/11	984 000						Weak	
25/11	984 1 8814 67 73320 ... 83402 000 000 * 15946kHz At 00:20z seems brief audio music distorted with hum						Weak	

December 2018

0100z	**11594kHz**	**0120z**	**10794kHz**	**0140z**	**10194kHz**			
02/12	571 000						Weak	
09/12	571 1 9728 43 97559 ... 47847 000 000						Weak	
16/12	571 000					[0103z Mx hrd slightly off freq]	Weak	
23/12	571 1 5689 51 01329 ... 90869 000 000						Weak	
30/12	571 000					[0100z PulseQRM3]	Weak	

V13

11430kHz1330z	06/11	New Star Broadcasting	AB-J	TUE

V15 North Korean Intelligence via Radio Pyongyang

657kHz1546z	08/11 North Korean intelligence via PBS Pyongyang Pansong. Message in Korean //3320kHz		AB-J	THU
657kHz1545z	22/11 North Korean intelligence via PBS Pyongyang Pansong. Message in Korean //3320kHz		AB	THU
3320kHz1546z	08/11 North Korean intelligence via PBS Pyongyang Pansong. Message in Korean //657kHz		AB-J	THU
3320kHz1445z	17/11 Closed 1453z //6400//657kHz	Perseus net- Japan.	SR	SAT
657kHz1545z	13/12 Message in Korean; North Korean intelligence via PBS Pyongyang Pansong//3320//6400kHz		AB	THU
3320kHz1545z	20/12 Martial music; apparently no traffic.	Perseus net- Japan	SR	THU
3320kHz1574z	27/12 March of the Guerrilla Tune not heard, but 5 figure number groups with a pause between third & fourth number format was used by YL USB //6400k. Perseus net- Korea		SR	THU

V24

6310kHz1530z	08/11South Korean Intelligence. Popsong followed by a message in Korean		AB-J	THU
4900kHz1535z	27/12 USB. Perseus net- Korea.		SR	THU

V26

4243kHz2359z	05/11/18[(From M95 sked - USB - Chinese - Female - // 9054) (Remote tuner China)]	JPL	MON
4243kHz1204z	09/11/18[(From M95 sked - USB - Chinese - Female - // N/H) (Remote tuner China)]	JPL	FRI
4243kHz1156z	12/11/18[(From M95 sked - USB - Chinese - Female - // N/H) (Remote tuner New Zealand)]	JPL	MON
4243kHz0020z	15/11/18[(From M95 sked - USB - Chinese - Female - // N/H) (Remote tuner China)]	JPL	THU
4243kHz1201z	09/12/18[(From M95 sked - USB - Chinese - Female - // N/H) (Remote tuner New Zealand)]	JPL	SUN
9054kHz2359z	05/11/18[(From M95 sked - USB - Chinese - Female - // 4243) (Remote tuner China)]	JPL	MON

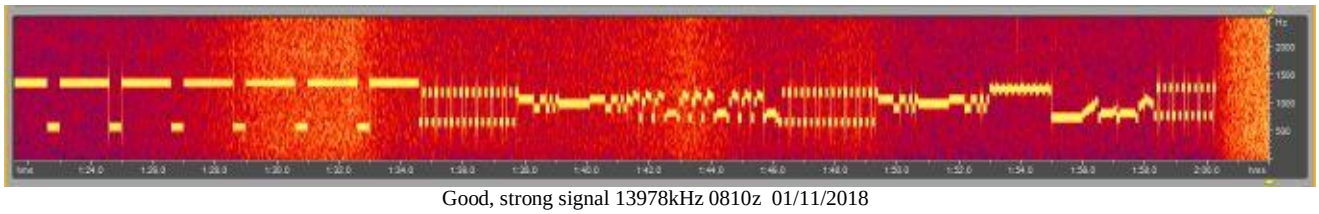
Polytones

XPA

Tuesday/Thursday

November 2018

0810z 13978kHz 0830z 14859kHz 0850z 15871kHz



Good, strong signal 13978kHz 0810z 01/11/2018

01/11	587 000 01235 00001 00000 ... 34654		Very strong
06/11	587 1 08804 00111 10095 ... 07062		Weak, QSB3, poor condx

587 587 587 1 587 587 587 1 587 587 587 1

08004 00111 10095 38746 31842 18624 65910 91379 47440 48519
63017 75543 75565 28473 67093 43421 26871 51485 05550 82356
41985 94572 84584 78272 66291 64887 16716 80117 49532 22605
64075 88269 65381 09555 33548 40101 44397 79192 64551 57105
38086 22415 96614 61593 21311 34566 17281 23826 69965 31444
87008 28620 92001 23243 12251 46592 81772 11592 97744 89018
76488 21560 37793 73924

88710 88188 47393 82899 75352 86306 20152 16020 86077 29644
52802 90976 37872 60837 27844 67025 75898 15945 37136 75817
43280 45761 29729 41296 97176 87737 55214 60301 49594 34014
71159 53515 11573 19013 75475 44181 59765 85414 32558 06840
71967 33621 47808 09488 92540 72450 13250 63901 73018 07062

Courtesy PLdn

08/11	587 1 08004 00111 10095 ... 07062		Strong UK/Fair Cyprus
15/11	587 000 06385 00001 00000 ... 35255	[0830z Fair]	Very strong
20/11	587 1 00571 00135 50615 ... 45173		Very strong

587 587 587 1 587 587 587 1 587 587 587 1

00571 00135 50615 99292 46128 52229 60474 18712 79507 92863
30462 83095 96479 26257 91576 71294 08192 76741 74422 40323
64439 62531 98250 90720 91804 97140 76195 07668 16169 42950
35080 98473 37603 93794 01212 02217 21912 92440 88251 09614
42968 43276 97662 32480 04501 77730 62373 56728 65427 54938
31153 33608 82068 03581 32366 68133 22755 48638 49343 21934
42907 19385 01942 03538

45087 16852 52292 63307 38405 18033 57287 36583 47236 67724
56829 70979 09591 76020 11058 07944 83294 48316 42969 81645
45353 63398 90484 67533 24135 98978 71763 40652 09226 41755
92447 12035 62277 66718 87684 80184 24751 79266 89639 33709
93868 68887 32953 03130 58757 85100 77183 35760 77974 89243
91485 04066 88418 56340 70468 98587 45773 89446 59989 72927
25683 31732 97658 72116

49418 36005 52226 20043 42688 96808 77276 58210 90427 45173

Courtesy PLdn

22/11	587 1 00571 00135 50615 ... 45173	[0850z Strong]	Fair
27/11	587 000 03589 00001 00000 ... 40263	[0810/0850z QSB2]	Very strong
29/11	587 000 03480 00001 00000 ... 33263		Very strong

December 2018

0810z 11531kHz 0830z 12137kHz 0850z 13932kHz

04/12	395 1 00261 00153 25730 ... 43557		Very strong

395 395 395 1 395 395 395 1 395 395 395 1

00261 00153 25730 40941 18014 64099 21562 65715 39095 08519
99155 68659 80584 24602 80690 64485 15531 45305 84870 60166
58212 94672 55765 32857 54039 23455 63202 47655 28915 17166
26792 09092 74105 69929 81825 85532 72034 76938 34049 70844
73849 83242 06569 68942 47644 17304 74477 71970 68269 70818
14443 54766 63472 16168 39772 58520 76961 22973 76633 61281
47408 88352 70578 23374

34178 86283 75892 81768 96931 17639 01045 59133 92204 57302
53759 78855 91163 81507 67161 04616 33716 30446 59581 74513
05210 02397 75311 11761 05181 73786 07720 57351 35996 29010
21909 22271 20734 69255 63059 31281 90620 25063 20027 40262
60207 64343 66908 79383 24870 29031 11954 07780 48260 51211
36055 56746 36602 33525 54236 39786 92037 87004 66683 69279
86250 58376 27844 93387

05119 63864 32155 10265 75527 69701 47031 05041 25284 23681
22025 17236 78645 33785 59955 74306 95688 68115 20805 41488
99585 91124 14655 21032 29723 45585 06002 43557
Courtesy PLdn

06/12	395 1 00261 00153 25730 ... 43557		Very strong
11/12	395 000 08115 00001 00000 ... 34261	[0810z QSB3]	Fair
13/12	395 000 03145 00001 00000 ... 34257	[0810z Weak]	Very strong
18/12	395 1 03923 00141 92988 ... 65232	[Auto 11531kHz only]	Fair QSB3

SDR RX produced: 3m51s message unworkable across schedule, local and XJT QRM and QSB, autorx/indoor antenna better. PLdn

20/12	395 1 03923 00141 92988 ... 65232	[Auto 11531kHz only]	Strong QSB3
25/12	395 1 07712 00097 61921 ... 66750		Strong

395 395 395 1 395 395 395 1 395 395 395 1

07712 00097 61921 09673 15076 09626 89500 88084 59693 33978
64735 98683 01997 30885 94544 69135 90742 50372 24138 24572
66856 94299 33161 14788 99949 42476 09165 81968 09739 30576
21023 87414 49138 38933 79734 08370 30537 48257 06408 01664
07805 58187 82206 68716 55293 65279 82641 61234 76235 37364
15544 45577 40782 87479 40914 48958 45900 27278 06706 54348
10753 21783 73907 32316

19599 10957 56630 80312 85015 48579 47962 96726 94852 24472
89807 86672 88002 62674 01926 08398 92648 77035 42838 98584
93276 73741 78034 54938 64551 81421 03332 88753 62981 99242
18391 75602 83733 15485 44402 66750 *Courtesy PLdn*

27/12	395 1 07712 00097 61921 ... 66750		Strong

XPA2 m

Sunday/Tuesday

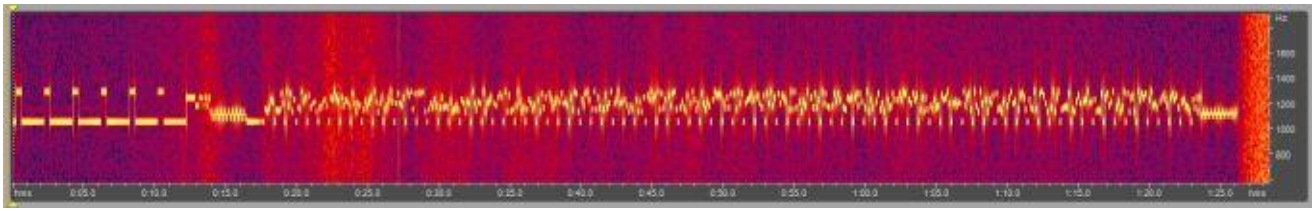
November 2018

1300z 18238kHz 1320z 16238kHz 1340z 14438kHz

04/11	00618 00079 52904 ... 05134	[1320z Pulse QRM2]	Very strong

00618 00079 52904 63749 32743 23610 79663 93844 36797 16228
06389 61054 79218 03913 39133 07645 82014 54660 95394 36487
97632 41630 36372 10442 76244 54648 85139 54714 16883 00817
41189 70671 30302 68674 11112 55133 58873 41045 49056 19495
76608 46448 01174 00055 40156 29401 99950 05554 72547 06488
70688 42671 78567 29023 50429 86049 78390 31047 53083 08826
23088 74561 11044 34494 79942 51007 33525 76066 73041 25216
19238 25831 37662 36106 52635 26831 32051 12639 80251 52834
71115 05134 *Courtesy PLdn*

06/11	00618 00079 52904 ... 05134		Very strong
11/11	03784 00001 00000 ... 36663	[1340zWeak]	Strong Cyprus/NRH UK
13/11	NRH	Using auto remote unit & monitoring in Northern Cyprus – Famagusta - nil required heard	



18/11 00154 00083 92885 ... 51666 Very strong [see image above]

00154 00083 92885 10946 71344 11452 65964 62542 83332 04146
94436 02594 38326 87908 88899 03151 16121 44011 43343 93043
99446 32676 99770 29401 40431 44816 86124 48343 60988 52885
09061 07129 34934 52210 55446 75956 90815 72880 14117 39503
83042 59787 41618 80938 35685 67317 83926 83764 09091 44429
61815 93821 28485 10656 68284 19951 48033 51285 58598 53857
06660 20512 75693 34243 92680 92293 55537 80114 26934 07860
51090 89733 19969 01218 00473 45934 55008 68249 14419 88677
95868 59231 46852 68571 45211 51666 *Courtesy PLdn*

20/11 00154 00083 92885 ... 51666 [1300z Weak] Very strong

25/11 03251 00001 00000 ... 32660 [1300z Unworkable] Fair

27/11 03458 00001 00000 ... 37260 [1300z Weak] Fair

December 2018

1300z 14538kHz 1320z 13538kHz 1340z 12138kHz

01/12 01440 00001 00000 ... 33252 Weak Agentine, Strong UK

04/12 00463 00073 35891 … 36154 Very strong

09/12 00463 00073 35881 ... 36154 Strong

00463 00073 35881 60614 14619 51909 88733 61156 93411 17778
18186 85344 81063 77980 31691 71681 76301 16614 01441 34311
13710 46367 01847 83948 31106 87679 54068 43800 33007 77905
44711 64730 65391 07671 37681 84093 49848 34411 08941 10010
36106 53107 18147 03718 99054 55855 55463 53719 40355 06463
96108 11459 10574 39593 34041 63341 08581 49377 01511 73118
19533 13381 68659 80611 34877 44566 10382 12759 46906 67918
11027 92411 67567 18480 00531 36154 *Courtesy PLdn*

11/12 08385 00001 00000 ... 35270 Very strong

16/12 07392 00001 00000 ... 33670 Strong

18/12 07326 00081 76248 ... 73230 [Auto 12138kHz only] Strong QSB2

23/12 07326 00081 76248 ... 73230 [1300z Strong, QRM4, QSB4] Very strong

07326 00081 76248 15466 86462 32781 91115 68864 20967 65746
16691 88505 59619 20247 48707 22041 82794 22187 02153 97080
18537 05447 94526 27561 23480 75482 82824 87521 97771 96946
72011 73169 28884 15272 98088 09958 57362 80464 88816 71429
76379 88092 34998 76712 11380 09651 85802 83346 05809 41058
90875 34691 36880 97337 31441 57288 41143 36482 39206 93008
11427 81940 49676 45685 23504 90898 53157 27646 68614 65008
51311 52095 32367 96028 88329 40660 55489 73790 18182 74483
60033 84431 00744 73230 *Courtesy PLdn*

25/12 08083 00001 00000 ... 32670 [1340z Noisy] Fair

30/12 08141 00001 00000 ... 32264 [1300/1320z Weak,QRM3QSB3] Weak

XPA2 p

Monday/Wednesday

November 2018

0800z 13427kHz 0820z 14627kHz 0840z 15827kHz

05/11 0800z Unworkable, rest NRH

07/11 03352 00167 97942 ... n5003 [Local QRM wiped last grp] Strong

14/11 05739 00001 00000 … 41260 Fair UK/Weak Argentine

19/11 03050 00159 32340 ... 61353 Strong

21/11 03050 00159 32340 ... 61353 [0800z Local QRM3] Strong

26/11 07259 00001 00000 … 36664 Strong

28/11 05805 00001 00000 ... 37655 Very strong

December 2018

0800z 10278kHz 0820z 12178kHz 0840z 13478kHz

03/12 01101 00201 17997 ... 43157 [0800z QSB2] Strong [0840z missed; op program error, SISO!]

05/12 01101 00201 17997 ... 43157 Very strong

01101 00201 17997 05904 89256 05114 34113 31863 04494 88478
80497 93863 20377 46771 94278 18535 76332 00404 57344 21025
26231 06321 19302 70502 11143 53955 74349 87654 66980 93123
91557 19243 24486 00935 96052 35428 99835 16764 72706 21618
31530 36914 99849 66989 07931 08455 57615 73414 61592 54101
05494 61901 63440 69236 59248 05216 16755 49215 58992 65484
05709 98135 08932 02733 28593 98326 76526 05165 35202 69724
10586 45896 06967 04406 77044 61444 01089 36714 54129 92784
09166 04604 06814 47582 08494 79531 00960 67466 94845 45445
10545 64066 89529 88887 74693 61960 44992 65062 84177 78843
52296 11088 25981 90074 11344 84663 37717 74813 76211 88009
90688 29284 26828 51905 54425 94901 40089 01340 70680 21273
27019 42734 86567 60866 16954 93418 28282 12679 95543 24440
09193 05385 03184 33067 86387 24220 99149 28774 74411 16405
02780 72844 13160 93996 18311 34151 73697 27131 08626 75079
88805 54462 50777 08397 40792 99285 40338 33615 64863 45804
24319 91496 63496 35505 63669 52201 62082 86510 44564 34301
07130 19519 95621 22745 56810 50538 64349 48527 57351 98431
05707 25403 73665 73243 30161 07897 28226 89558 54228 24862
71451 60775 61446 19652 45259 65747 30739 50038 10573 07297
85961 11399 58421 43157 *Courtesy PLdn*

10/12 01112 00001 00000 … 32652 Very strong

12/12 09093 00001 00000 ... 32672 Very strong

17/12 03993 00163 41726 ... 53743 [0820z Strong] Very strong

03993 00163 41726 93739 01667 72044 20326 33241 25204 40322
01572 89233 00626 70778 64772 46340 63210 52476 36233 21480
19475 69452 11195 89946 65056 93930 44844 13303 23509 90200
62167 51681 54868 82739 33507 70441 50674 31335 43124 61567
48506 15759 99760 30030 52447 35999 76331 16105 72473 55331
45274 05973 33804 46604 05514 88388 50641 75383 39332 38882
55890 68018 74274 36177 48179 49706 34300 11634 11264 46756
39783 43318 47093 13664 69903 80657 50332 97086 18739 54387
40311 81387 49433 82654 84854 11267 88881 87765 12909 99777
55041 32728 01143 52964 96621 33874 38669 27066 86218 29095
03405 72996 77195 29580 34644 81757 65928 78811 28750 48736
78025 04879 22394 41824 23817 47311 65683 97256 27731 50541
39720 00598 91873 36526 99615 33570 07656 29683 40525 54920
25013 08164 31228 79379 97128 15634 56944 54120 62354 66319
89398 69493 39889 74697 19735 63641 88851 09190 83349 50163
25818 78897 29686 06232 40221 83092 71616 64704 32752 69166
44373 06626 95056 22956 23533 53743 *Courtesy PLdn*

19/12 03393 00163 41726 ... 53743 [Auto 10278kHz only] Strong

24/12 01557 00175 23810 ... 14205 Very strong

01557 00175 23810 25001 48941 44559 99048 50141 47097 87100
69674 14600 61150 60921 86669 66760 88828 90156 55099 64265
90605 01111 09446 38674 78472 94315 76606 78822 80200 06641
64527 99618 65946 85162 23705 69856 37081 57164 25272 71882
66950 27391 00505 12422 64803 34064 53967 21314 59631 31812
89056 11423 95656 49832 89390 24463 95317 09464 81815 84632
90396 71880 66598 66872 16561 32654 92945 43940 35378 47159
61179 63230 62326 41391 27526 29251 83213 48342 36595 08830
31707 29284 44928 80093 55936 10316 95669 94199 60557 71067
40972 87432 42156 02015 12457 98441 94876 75016 50663 75318
10828 45939 04139 75919 55613 33844 50704 20567 97194 97312
53703 39590 80914 04150 96237 89547 90300 20419 95872 59432
47501 75744 41976 36980 63191 24792 27213 30314 08332 69601
85113 50540 66816 17067 68337 05166 02180 95964 74749 49117
87648 06854 66982 88883 89161 74662 19222 94188 98641 00005
22988 98844 28827 06074 62190 89144 44390 15060 10628 86404
92610 77489 56192 22645 17303 98855 64760 42563 25683 34927
83679 30463 24600 59497 39797 09638 88669 14205
Courtesy PLdn

26/12 01557 00175 23810 ... 14205 Strong

31/12 07088 00001 00000 ... 35267 Fair

XPA2 r

Friday/Saturday

November 2018

1400z	**17462kHz**	**1420z**	**16114kHz**	**1440z**	**14828kHz**	
02/11	00395 00099 12003 ... 07030					Weak, QSB3
03/11	00395 00099 12003 ... 07030					Very strong

00395 00099 12003 65902 77912 54199 84751 86564 51090 19667
66147 39594 83222 91565 34552 94586 44757 88207 15652 70211
71847 98703 89586 40888 06919 43940 64464 52942 49611 07107
27323 87217 44936 45670 47829 05443 31044 93114 73186 39916
72964 56844 04880 59864 21812 54427 11990 38776 02605 06405
96695 17045 86448 61660 69699 69927 52321 85713 04752 92708
20918 73585 68957 67482 24715 83704 34602 90647 78699 21920
39241 86370 84854 95271 06577 58483 12225 11980 64734 10778
49551 89949 71653 68598 48812 20663 20230 77257 29710 94549
10212 65372 51270 74974 47390 26544 15872 00368 65499 34623
53018 07030 *Courtesy PLdn*

09/11	03798 00001 00000 ... 40664					Strong
10/11	07817 00001 00000 ... 40660					Strong UK/Weak Argentine
16/11	00312 00125 95863 ... nnnnn				[1400z NRH]	Weak, poor condx, unworkable
17/11	00312 00125 95863 ... 34212				[1400/1420z Unworkable]	Weak, QSB4
23/11	08079 00001 00000 ... 35667				[1420/1440z Unworkable]	Very strong
24/11	03839 00001 00000 ... 41656				[1400/1420z NRH]	Weak
30/11	01688 00001 00000 ... 40261					NRH UK, Weak Argentine

December 2018

1400z	**15967kHz**	**1420z**	**13884kHz**	**1440z**	**12217kHz**	
01/12	04860 00001 00000 ... 35262				[1400z Weak]	Very strong
07/12	09581 00001 00000 ... 34271				[1420z Strong, noisy*]	Very strong UK, weak Argentine
08/12	02703 00001 00000 ... 36252				[1420z Strong, noisy*]	Very strong, weak Argentine
					*Noise believed to be ADSL/Broadband distribution	
14/12	00258 00075 98269 ... 27163				[1440z Fair]	Weak
15/12	00258 00075 98269 ... 27163				[1400z Fair, noisy]	Strong UK, Weak Argentine

00258 00075 98269 59818 45827 07434 54435 15862 73122 39724
31511 24883 60003 60894 45395 50342 29501 83607 04586 96660
74190 26813 52382 69556 07994 93092 77415 53702 48378 39846
61672 98231 28401 27938 68518 83407 59729 94536 00992 78829
12356 80871 11112 22395 36552 98029 61647 48285 55262 01234
57259 31132 12002 09083 94985 23631 53777 65231 31245 35039
71532 57633 44011 70495 08670 68886 08409 60943 13789 66533
31918 04555 45406 85146 50657 28234 97736 27163
Courtesy PLdn

21/12	06442 00001 00000 ... 34262				[Auto 12217kHz only]	Strong QRM2
22/12	09036 00001 00000 ... 34264					Fair
28/12	00208 00093 02257 ... 75651				[Auto all freqs]	Very strong
29/12	00208 00093 02257 ... 75651					Very strong

00208 00093 02257 60726 60150 61494 26193 06195 53376 56894
33850 31732 06219 08604 52257 48111 83605 00792 59337 29643
40979 83720 98333 01249 64189 86933 75830 96249 02124 98153
03062 12208 59750 46276 52094 27980 10652 67029 48724 67278
43921 94684 89760 57187 31089 65873 38141 89399 93652 57748
26576 15597 32948 64424 30364 43495 91871 18442 94213 51992
74813 79038 56576 52554 96011 29519 33746 13796 77083 26223
48613 39193 42777 98072 10078 82028 60344 97307 12300 60176
38714 34988 02821 71374 47730 19421 34405 49197 48041 82341
25156 11793 54166 55138 30883 75651 *Courtesy PLdn*

Hybrids, Tones and FSK

HM01

Following October's hit from Hurricane Michael monitoring didn't get back to normal until late November. Somewhere between our intermittent monitoring on the 1st and 10th of November the callups changed to those listed on the 10th and remained the same until the end of December! On 3/12 and 28/12 the transmissions began with Spanish broadcast stations but apart from that nothing else out of the ordinary was noted.
Only one file was sent with an F1x extension this was 50432004.F1C.

The usual rules applied and the file extension was F1C and the file name started with 50.

Logs

HM01 11435kHz 1600z 1/11 [76813 48131 74746 34442 58778 18481] Same callups as previous. THU
HM01 11435kHz 1600z 10/11 [86423 20048 70305 81001 03627 64881] New callups since 1/11. 86423 = 26288642.TXT, 20048 = 50432004.F1C, 70305 = 55787030.TXT, 81001 = 50838100.TXT, 03627 = 30210362.TXT, 64881 = 20216488.TXT. SAT
HM01 11435kHz 1600z 12/11 [86423 20048 70305 81001 03627 64881] Same callups as 10/11. MON
HM01 11435kHz 1600z 23/11 Present but too weak to copy.
HM01 11435kHz 1600z 24/11 [86423 20048 70305 81001 03627 64881] Same callups as 12/11. SAT
HM01 11435kHz 1600z 25/11 [86423 20048 70305 81001 03627 64881] Same callups as yesterday. SUN
HM01 11435kHz 1600z 26/11 [86423 20048 70305 81001 03627 64881] Same callups as yesterday. MON
HM01 11435kHz 1600z 27/11 [86423 20048 70305 81001 03627 64881] Same callups as yesterday. TUE
HM01 11435kHz 1600z 28/11 [86423 20048 70305 81001 03627 64881] Same callups as yesterday. WED
HM01 11435kHz 1600z 29/11 [86423 20048 70305 81001 03627 64881] Same callups as yesterday. THU
HM01 11435kHz 1600z 30/11 [86423 20048 70305 81001 03627 64881] Same callups as yesterday. FRI
HM01 11435kHz 1600z 1/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday. SAT
HM01 11435kHz 1600z 2/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday. SUN
HM01 11435kHz 1600z 3/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday. Started with Spanish Broadcast station. MON
HM01 11435kHz 1600z 4/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday.
HM01 11435kHz 1600z 5/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday.
HM01 11435kHz 1600z 6/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday.
HM01 11435kHz 1600z 8/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday.
HM01 11435kHz 1600z 9/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday.
HM01 11435kHz 1600z 10/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday.
HM01 11435kHz 1600z 11/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday.
HM01 11435kHz 1600z 12/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday.
HM01 11435kHz 1600z 13/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday.
HM01 11435kHz 1600z 14/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday.
HM01 11435kHz 1600z 15/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday.
HM01 11435kHz 1600z 18/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday.
HM01 11435kHz 1600z 19/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday.
HM01 11435kHz 1600z 21/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday.
HM01 11635kHz 1800z 24/12 [86423 20048 70305 81001 03627 64881] Same callups as Friday. MON
HM01 11435kHz 1600z 25/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday. TUE
HM01 11635kHz 2100z 26/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday. WED
HM01 11435kHz 1600z 27/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday. THU
HM01 11435kHz 1600z 28/12 [86423 20048 70305 81001 03627 64881] Started with Spanish broadcast station. Same callups as yesterday. FRI
HM01 11435kHz 1600z 29/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday. SAT
HM01 11435kHz 1600z 30/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday. SUN
HM01 11435kHz 1600z 31/12 [86423 20048 70305 81001 03627 64881] Same callups as yesterday. MON

Others' Logs:

9330kHz0702z	09/12[64881 86423 20048 70305 81001 03627] i/p Weak	PLdn	SUN
0730z	09/12[64881 86423 20048 70305 81001 03627] Weak	PLdn	SUN
0702z	23/12 Very weak	PLdn	SUN
9390kHz0700z	02/11 [86421 20046 70303 08038 03625 12747]		
	Files: 31181274.TXT 30210362.TXT 12470803.TXT 55787030.TXT 50432004.F1C 26288642.TXT	AB	FRI
10715kHz2200z	04/11 (86423 20048 70305 81001 03627 64881) QSA2	DanAR	SUN
11435kHz1600z	01/11 HM01 heard.	SR	THU
1358z	09/11in progress early	SR	FRI
1603z	17/11 late at 1603z; began with message in progress	SR	SAT
1600z	20/12 ip	SR	THU
11530kHz1703z	09/11 carrier on at 1703 utc, off and back on with bcst in progress	SR	FRI
1700z	21/11	SR	WED
1700z	24/11	SR	SAT
1800z	26/11	SR	MON
1700z	19/12	SR	WED
1658z	20/12 ip	SR	THU

11635kHz1758z	09/11 in progress early.	SR	FRI
2100z	12/12	SR	WED
1758z	21/12	SR	FRI
17480kHz2200z	13/11 (86423 20048 70305 81001 03627 64881) QSA2	DanAR	TUE
2200z	22/11 (86423 20048 70305 81001 03627 64881) QSA2	DanAR	THU

Apart from the three intercepts by PLdn and the one from Ary not much was heard from Cuba by those of us in England and Netherlands; DanAr provided his logs from the Argentine but most, as you can see were intercepted by SR who is located conveniently close.
PoSW excelled here and his logs show success in the 9MHz band, much the same as PLdn and Ary:

Results from the HM01 during the last two months of 2018 have been, as always, somewhat variable, has only been received on the four days of the week when frequencies such as 9330, 9065 and 9240 are used, and always with the rapid fading up and down at the most inappropriate moments.

2-Nov-18, Friday:- 0700 UTC, 9330 kHz, “86421 20046 70303 08038 03625 127477, over S9 at times with QSB, in progress when tuned in a couple of seconds before the hour.
0829:38s UTC, 9065 kHz, starting up after the break, S9 with QSB, 5Fs as earlier.

5-Nov-18, Monday:- 0829:30s UTC, 9065 kHz, “86423 20048 70305 81001 03627 64881”,
peaking S9 with the usual fading.
1001 UTC, 9155 kHz, call-up in progress, something of a surprise, don't usually get a usable signal from HM01 this late in the morning, 5Fs as earlier, S7 with QSB, data sounds at 1002:53s UTC.

11-Nov-18, Sunday:- 0801 UTC, 9065 kHz, “86423 20048 70305 81001 03627 64881”, same as when heard on 5-November, S6 with QSB, data sounds at 0802:48s UTC. Nothing had been heard on 9330 at 0700z, very weak signal on 9240 at 0900z.

16-Nov-18, Friday:- 0800 UTC, 9065 kHz, call-up in progress when tuned in, “86423 20048
70305 81001 03627 64881”, again. Voice stopped for a few seconds around 0802:20s, data at 0802:44s.

19-Nov-18, Monday:- 0829:18s UTC, 9065 kHz, “86423 20048 70305 81001 03627 64881”,
peaking S8 to S9, data at 0832:40s UTC, starts a few seconds earlier with each passing day!

21-Nov-18, Wednesday:- 0859:16s UTC, 9240 kHz, “86423 20048 70305 81001 03627 64881”, weak signal, data at 0902:39s UTC.

23-Nov-18, Friday:- 0929:15s UTC, 9240 kHz, starting up after the break, “86423 20048 70305 81001 03627 64881” - still. Peaking S8 to S9 with the usual QSB up and down, data at 0932:37s UTC.

28-Nov-18, Wednesday:- 0829:10s UTC, 9065 kHz, “86423 20048 70305 81001 03627 64881”, over S9 at times.

2-Dec-18, Sunday:- 0809 UTC, 9065 kHz, transmission in progress, S9 with QSB, heard 5Fs
“86423 20048 70305 81001 03627 64881”.

7-Dec-18, Friday:- 0900 UTC, 9240 kHz, start-up routine in progress when tuned in, “86423
20048 70305 81001 03627 64881”, so no change there. Weak signal, data sounds at 0902:42s UTC.

17-Dec-18, Monday:- 0758:50s UTC approx, 9065 kHz, start-up time gets earlier, “86423 20048 70305 81001 03627 64881” - still. Weak signal, but was much stronger when checked again at 0837 UTC.
0858:52s UTC, 9240 kHz, 5Fs as earlier, peaking over S9 with QSB.

24-Dec-18, Monday:- 0728:48s UTC, 9330 kHz, S8 with deep QSB, “86423 20048 70305 81001 03627 64881” yet again.

X06 Mazielka

X06 - «hot stuff» and logs

Logging X06 will be more funny and interesting in these days. Daniel (Danix) from Poland found out very interesting facts about the location of scheduled X06 6-tone transmissions using KIWI SDR and TDoA. On December 14th, he reported to our team about it together with a list of sequences/scales and the locations. He writes:

Now that you can do TDoA with KiwiSDR, pretty much anybody can find out which
Russian diplomatic missions the Mazielka sequences correspond to. There are
two-way contacts before and after nearly every scheduled Mazielka TX (using Perelivt or Serdolik mode), but few
people look for those.

So far I've found these. There is still much to find, especially in Africa and
Asia. The remote ends of those links tend to be tricky to receive.

125643
134265 Tunis, Tunisia
145632 Algiers, Algeria
153624 Damascus, Syria
154263 Rome, Italy
156234
162543 Nicosia, Cyprus
164253 Khartoum, Sudan
164532 Dublin, Ireland

165324
165423 Brussels, Belgium
213546
214356 Amman, Jordan
215346
216354
216435
231654 Abuja, Nigeria
241563
246531 UNID (Africa)
256134 Abidjan, Ivory Coast
256341 UNID (Europe)
261453 Cairo, Egypt
263145 Prague, Czechia
314265
324615 Madrid, Spain
325614
351264
352416
356412 Berlin, Germany
361245 Copenhagen, Denmark
362154 Athens, Greece
364152 New Delhi, India
412356 Budapest, Hungary
421635 Oslo, Norway
431625 Warsaw, Poland
432516 Bern, Switzerland
435621
436512
452163
463125 Rabat, Morocco
465132 Sofia, Bulgaria
521634
532614 Paris, France
534216
542136 Baghdad, Iraq
561243 Helsinki, Finland
564213 Bonn, Germany
612534 Ashgabat, Turkmenistan
615243 Geneva, Switzerland
621543 Lisbon, Portugal
625413 Beirut, Lebanon
641523
645321

This is a real « breakthrough » news in finding out more details about the mystery of X06, and we will find out more. Many thanks to Danix for his findings and information. From the end of December on, the locations will be inserted into the logs in both media, X06 database and E2K reports.

Here are the logs for November and December :

X06 Mazielka (1c) logs section

Date	Day UTC	Freq	Scale	Monitor	Comments
20181129	Thu 1910-1920	6877	645321	Ary/NL	I. p., G419 (new group)
20181202	Sun 1213	14538	1--6--	Schorschi	X06b with S9 before XPA2m
20181202	Sun 1726	6771	1--6--	Schorschi	X06b with S9 before E07
20181209	Sun 1200	13538	1--6--	LU5EMM	Weak X06b before XPA2m
20181209	Sun 1201	14538	1--6--	LU5EMM	Weak X06b before XPA2m
20181214	Fri 1314/1318	12217	1--6--	Ary	X06b before XPA2
20181214	Fri 1315/1318	13884	1--6--	Ary	X06b before XPA2
20181214	Fri 1322	15967	1--6--	Ary	X06b before XPA2
20181215	Sat 1316/1318	15967	1--6--	LU5EMM	Weak X06b before XPA2
20181216	Sun 1219	14538	1--6--	LU5EMM	Weak X06b before XPA2
20181216	Sun 1222-1225	14538	1--6--	LU5EMM	Weak X06b before XPA2
20181217	Mon 0832-0837	11562	432516	Danix	G341, TX to Bern
20181217	Mon 1841	5823	1--6--	Ary	X06b before E07
20181217	Mon 1843	6823	1--6--	Ary	X06b before E07
20181218	Tue 1209-1211	16188	325614	Danix	G400
20181221	Fri 1029	11439	1--6--	Schorschi	X06b with S9 before E07
20181227	Thu 1000-1001	13506	164532	Kopf	G252, TX to Dublin
20181228	Fri 1030-1048	7833	256134	Kopf	G270, TX to Abidjan
20181230	Sun 1159	14538	1--6--	Ary	X06b before XPA2
20181230	Sun 1200	13528	1--6--	Ary	X06b before XPA2
20181230	Sun 1203/1207	14538	1--6--	Ary	X06b before XPA2
20181230	Sun 1204/1208	13528	1--6--	Ary	X06b before XPA2

Many thanks to all contributors to the logs section. I wish all of you a very merry Christmas and a healthy, lucky and successful year 2019, when we will find out more about X06.

Best regards to all

Jochen Schäfer, Numbers-, X06 Database and Teamkopf

FSK sample files

F01

0025z 12101kHz 0035z 9215kHz
0125z 12101kHz 0135z 9215kHz

Danix (Via KiwiSDR USA)

11177 00117 83407 02049 02439

24360 43637 49429 38245 43224 74161 68704 96951 60222 27361
00723 10748 01873 47134 42464 98425 72744 05600 40320 86992
35481 07249 92366 77469 60995 17308 54394 62386 27076 74312
47558 07737 79320 78207 14611 28871 01079 07693 36498 46997
80143 59438 55283 18270 52611 78867 74900 27162 04822 33272
45416 80488 35247 47565 76970 32380 52515 11589 33678 62510
00828 87015 08071 51339 48236 09070 20004 08119 93991 26479
32875 60469 68968 59870 78587 80528 57257 91739 69987 73652
84064 96659 62887 57022 91381 37614 92018 63420 59449 19934
12572 60141 53577 33207 47681 89372 70647 02916 38285 92034
77165 54681 05189 18109 73912 62665 05431 98776 87325 43575
65958 33199 61714 02580 16970 51329 99606 43054 14585 19967
90597 66818 92954 62767 17186 80786 69618 59661 75563 02598
23861 66134 09682 64230 50728 02354 30718 87422 12172 63608
87089 98426 87859 83647 15944 20000 81719 90934 73178 25312
12926 46969 94095 10723 32871 61912 14607 36522 43964 67462
99678 75267 47118 06660 90587 04660 06265 24142 01034 04062
27275 19006 20249 99503 70494 89008 22562 18130 77214 11363
86635 23726 56802 23248 23857 28877 35390 81655 22125 65889
93470 11018 75306 61828 54396 85185 29076 00732 70713 37639
69598 17538 07734 65558 93966 41507 66816 82537 35518 17682
47733 37789 64645 42097 75446 56514 95271 70061 02586 32031
92667 41314 91110 21257 35015 86719 02398 03157 77098 03148
90513 01992 00739 76493 38037 15122 13274 59649 04179 05566
10415 49241 00000 *Courtesy Dannix*

F06 Russian diplo/intel.

0600z 20157kHz 0610z 18239kHz
0620z 16204kHz

Sent on 26-12-2018 [FSK 200/1000]

11166 40122 63742 22009 03279
56528 45595 15650 70201 92789 22107 11637 04297 69139 08526
43532 45111 91522 70092 90152 24787 85953 38422 92264 35612
31131 68310 05365 37654 15364 16121 60363 05951 91252 06940
68120 96930 26562 82693 28768 38766 74722 48404 31750 75334
13402 58782 57528 18484 24570 12336 16879 88286 14520 45188
88730 45966 97255 41787 42475 49190 89702 04703 55679 84411
92168 50688 63159 55950 52501 25201 98324 36501 37365 52564
12757 08750 59098 63969 84942 52798 31561 70488 54104 59070
53430 73298 40067 71397 42375 28300 35100 89966 68547 07315
78666 88821 60821 23059 51015 27594 84236 10068 46574 62171
12052 78763 13044 83972 40886 84865 67170 42523 22346 81305
23106 31021 09604 44862 94308 39577 42354 94683 54910 05822
18583 44892 71498 17558 26593 58464 41248 47151 35721 94556
97331 22358 69181 66492 67558 63247 07484 52561 97166 39942
95839 26854 71724 30836 54027 02297 01053 85992 12124 03083
50133 25406 20561 08682 27914 26809 07928 36626 69977 82726
84968 56245 75977 31452 18215 50552 87812 91629 21671 68460
19452 55150 40017 34514 74360 18026 21745 08335 11459 53942
05676 10957 45562 60179 69293 60245 93213 30576 12333 82582
99885 35236 74058 93019 09451 11659 07673 61059 61880 96988
60291 04280 30107 56056 31917 76979 31978 84910 11867 46021
78250 94536 16063 71077 42552 04419 73653 31453 64259 00674
36378 66683 20220 38405 09130 23082 26255 92995 25143 23439
54397 90005 14250 02049 76775 68378 37641 72255 72104 56625
87563 18713 55710 66697 75402 31527 19021 35211 56579 24492
89477 66729 65696 04589 46787 58777 60385 84944 56457 13292
97272 58432 06563 64174 88516 74106 58664 75650 12353 83659
48830 91116 76069 50078 99685 37163 54874 35702 29448 12457
55069 11859 68855 16180 74982 57274 21958 95703 62091 37434
31685 18189 89771 82090 36137 95799 02122 03110 26543 19218
00278 19823 42805 79144 68680 84100 67588 80480 64719 22310
04876 78867 20187 36364 53943 94277 27993 31025 14666 81349
12573 59687 85128 61141 07414 09325 00000 *Courtesy AB*

Remote and automatic monitoring.

Those that know me will be aware that I use automatic interception to receive some of my preferred stations. There's no secret to how this is done; at my university I had a Ten Tec RX320 in my desk drawer along with a suitable power supply and a static brake in the antenna line. Controlled by the PC on my desk it served me uninterrupted for at least 19 years. Notable was the five months I was off following major surgery from my accident in Cambodia; it continued unabounded.

At home and now retired I rely on my Excalibur SDR and laptop. That connects to my homebrewed quarter wave vertical [9.46M long] and gives decent service despite the electromagnetic interference that increases unabated thanks to the 'head in the sand' awareness from those in the government who should have known better beyond the coffers of big business.

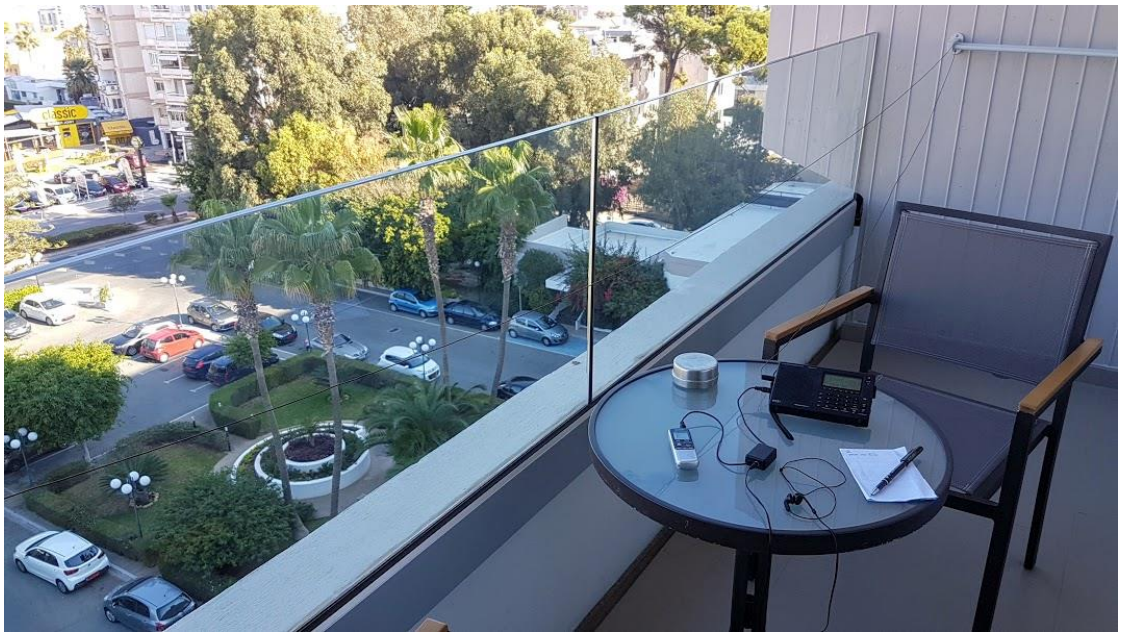
I am not willing to leave my SDR running when I am elsewhere, especially with an external antenna; static and earth protection supplied would never cope with a near or direct strike.

Instead I use a homebrewed timer unit with a Sony Solid State Recorder and the input from my Sony ICF-SW55; an excellent radio rumoured to have been used overseas by certain *servants* of HMG. See above:

The box was a cast off, the timer unit cost me around £6.00, the switches being recycled as were the leads. The timer is powered either by internal 8xAA cells or an external $12vH_2S0_4$ gel cell, the recorder by 2xD cells. The radio relies on its internal 4xAA cells and whilst the use requires programming of two different timers it works extremely well.

The antenna that feeds the radio is 10m long and strung across the ceiling of my shack. It is this set-up that intercepted all my target stations whilst I was in Cyprus recently.

Whilst in Cyprus I put my G3 into good use on the balcony. I always ask for a top floor room for this reason; the balcony is an added bonus. See below:



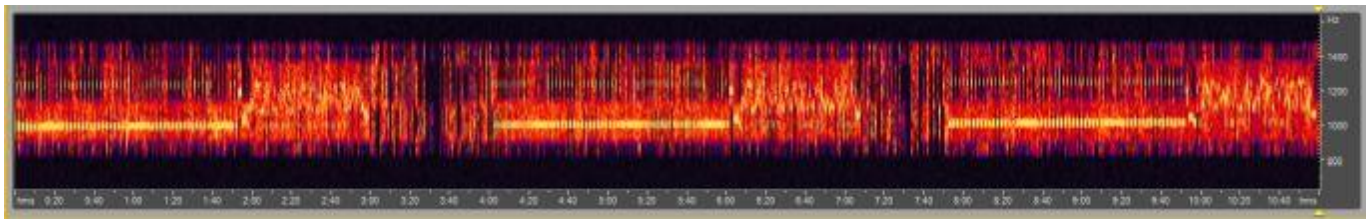
Here you can just see the set with wire antenna strung along the glass front of the balcony as I intercepted XPA and XPA2 m. Both surprisingly good signals.

The recorder is the same as the model used at home on the automatic system, the black box has a simple potential divider to ensure sensible levels of signal into the mic socket as well as slight tonal correction in the earpiece.

When the Chapman Illegals were outed in the British newspapers I was in St Ives, Cornwall with my wife. The couple sharing our table brought the matter to our attention and made reference to communications to them from Russia [was 'Radiogramma' better known to us as XPA] as mentioned in the Daily Telegraph.

Upstairs in our room was the diminutive Sony ICF-SW100 connected to a Sony active antenna. The timers [2] allowed reception of the E06 transmission at 0030 and its repeat 0130 that morning. In the evening at dinner we again discussed the transmissions and I illustrated this by playing the recording from my Sony Cassette-corder TCM-453V; an interesting conversation indeed.

The timer unit and ICF-SW55 did sterling service once again when I dealt with Derek's passing. It was the brief subject of conversation when I had visited him in hospital the week before.

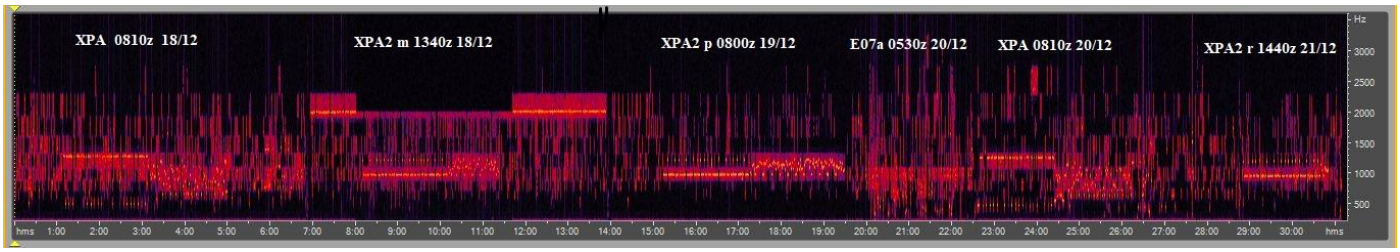


The latter use was the complete automatic intercept of XPA2 m on 4th December due to some business near Gatwick. The above diagram shows the automatic intercepts at 1300, 1320 and 1340z on 14538, 13538 and 12138kHz; the message detail being: 00463 00073 35891 … 36154

In discussion about this unit before his demise DoK noted, 'Built the Beaumont-Fisher way; robust, functional and dependable.'

"Well, it might be a little cumbersome to program but it works with some certainty." It certainly did when I was called to Cambridge with no receiver allowed.

The Auto unit coped well with E07a and all my polytones as can be seen on the image below:



The only problem was data QRM within the passband of the receiver which was near to the XPA2 m 1340z intercept of 18/12. That was removed post intercept allowing analysis of the tones without any problem.

The unit sits in the corner of my shack [*Set Room for Derek*] connected to my SW55 and happily functions on the connected wire antenna around the ceiling of my shack, 8m horizontal and 1.75m vertical plus 0.25m lead in

The programming was:

Radio Memory number/Freq:

1] 11531kHz 2] 12138kHz 3] 10278kHz 4] 5111kHz 5] 12217kHz

All set for respective operation times with a duration of ten minutes. The radio clock was 1 minute ahead of time to ensure start up captured.

Timer was set as:

Tues 0809 [XPA] 1339 [XPA2 m]

Wed 0759 [XPA2 p]

Thu 0529 [E07 a] 0809 [XPA]

Fri 1439 [XPA2 r]

State of the art it isn't and I've also used the timer to capture satellites in conjunction with my AoR AR-3000A scanner.

Gizza Job ……..


GCHQ
CAREERS
Developers & Programmers
Across our UK sites
gchq-careers.co.uk


GCHQ
CAREERS
Intelligence Analysts
Registration of Interest
gchq-careers.co.uk


GCHQ
CAREERS
Language Opportunities
Mandarin
gchq-careers.co.uk

PoSW's Items of Interest in the Media:-

British spooks not up to the job; at least, that is the general impression given by an article in *The Times* newspaper of 23-November with the headline, "MI5 had terrorists on radar but still failed to stop attacks", written by Fiona Hamilton and Crime and Security Editor Gabriella Swerling, which says, "Victims of the Manchester Arena terrorist attack said they felt 'disappointed and let down' yesterday after a report revealed that MI5 missed opportunities to stop the suicide bomber.

Salman Abedi, 22, who killed 22 people at a pop concert in May last year, first appeared on the security service radar in 2010 but was not properly monitored despite visiting an Islamic State recruiter in prison and frequently travelling to Libya. A report by parliament's intelligence and security committee said that a further matter had raised 'serious concern' about Abedi, but this could not be revealed for national security reasons.

The committee said that police and security services had failed to learn lessons from atrocities dating back to the 2005 attacks on the London transport system and that the Abedi failings meant that potential opportunities to prevent the bombings were missed.

Sean Gardner, 52, who was in the arena's foyer when the bomb exploded, said that victims had a right to know the facts and that failings were being dealt with. 'Knowing that things are being kept back isn't helpful and leaves unanswered questions. I feel disappointed and let down,' he added. Dan Hett, whose brother Martyn, 29, died, told the BBC that the security services had to learn from the 'litany of mistakes'.

After first coming to the attention of MI5, Abedi was investigated in 2014 but was not monitored more closely. His case was flagged for review and officials were due to meet on May 31 last year to discuss the threat he posed. The bombing took place on May 22.

The committee questioned why he was never referred to the Prevent programme for extremists. MI5 admitted it should have placed travel monitoring on Abedi, who returned from Libya in the days before the attack. MI5 and police said that they were operating at unprecedented pace to head off the threat after five attacks last year and 17 foiled plots. There are about 3,000 active 'subjects of interest' (SOI) and 20,000 closed SOIs who have featured in terrorism investigations.

Dominic Grieve, the committee's chairman, said it was striking that many of the failures had been highlighted in reviews of the 7/7 London bombings and the murder of Fusilier Lee Rigby at Woolwich in 2013.

Khuram Butt, the ringleader of last year's London Bridge attacks, and Khalid Masood, who killed five people at Westminster, were part of the group of 20,000 closed SOIs.

When Butt was arrested over a fraud allegation in 2016, police found files on his computer that could have been used in a terrorism prosecution. However, the matter was not pursued.

The committee also highlighted a 'litany of errors' in the case of the Parson's Green bomb on a District Line train train in September last year. Ahmed Hassan, an 18-year-old Iraqi refugee, was on the Channel programme for hardened extremists and had revealed in an interview that he had been trained by Islamic State. Mr Grieve said that the committee had been unable to investigate the case properly because of an 'unacceptable' failure by the Home Office to provide evidence."
And as a reminder of what has taken place in this increasingly dysfunctional nation, *The Times* prints a list with the headline, "Missed opportunities" to jog our memories:-

Salman Abedi:- On the radar since 2014 but visits to an Islamic State recruiter in prison were not properly investigated.

London Bridge:- Ringleader Khuram Butt could have been prosecuted for terrorist propaganda found on his computer eight months before the attack.

Westminster:- Took MI5 more than six years to identify Khalid Masood as a threat.

Parsons Green:- Ahmed Hassan, an Iraqi refugee, said in asylum interview he had been trained to kill at an Isis camp in Iraq, but was not investigated by MI5.

Another story concerning MI5 appeared in *The Times* of 31-October; this has to do with the ongoing investigations over the alleged paedophile activities of those at the very top of the festering dung-hill that is the British elite.
There have been rumours about this for years, supposedly involving the abuse of children by individuals in both houses of Parliament, the judiciary, the aristocracy and who knows where else.

It seems that in the upper echelons of British society, freedom to indulge themselves in this manner is regarded as one of the perks of the job, a bit like being given a company car to those lower down the scale.

The idea that MI5 are going offer any useful input about this does not seem very likely. However, for what it is worth, the short article in *The Times* said the following under the headline, "Secret service to testify on 'political paedophiles'":- "Britain's spy agencies are to give evidence about suspected paedophiles in Westminster to the Independent Inquiry into Child Sex Abuse.
MI5, MI6 and GCHQ have already provided files and documents to the inquiry, which is investigating the failure to pursue and prosecute child abusers in the establishment. Andrew O'Connor, QC, counsel to the inquiry, said that some material may have to be heard in secret for reasons of national security.

Hearings are scheduled for March. Claims about a Westminster paedophile group that led to the inquiry being set up are no longer under consideration..... Other cases, including those of the late former Members of Parliament Cyril Smith, Victor Montagu and Peter Morrison, will be investigated.

Disruption at Gatwick Airport - what was really going on here? The suspension of all flights at Gatwick, London's second airport, as the pre-Christmas rush was under way, supposedly because one or more drones had been sighted close by was a very strange event indeed; it must have been bad enough for all those poor souls travelling cattle class anyway without the misery of having their flights cancelled.

Equally strange was the business of the couple arrested on suspicion of being involved in some way, their house searched and turned upside down by a whole load of fat, sweaty coppers, their personal details released to the press and plastered all over the front pages of the red-top tabloids and all without any evidence whatsoever other than the fact that the man concerned was a model aircraft enthusiast and owned a remote control model helicopter.

Having had all this done to them the couple were released with no charges.

The couple were both white so I guess they should consider themselves lucky that Fat Plod omitted to plant evidence in their property in order to falsely incriminate them – there is a widespread belief in some quarters that this has happened in other cases, the British Establishment are most keen to propagate the idea of a threat from "Far Right" and "White Supremacist" groups in order to divert attention away from all the other crap going on in this country.

Lots of speculation that the security services had received information that an Islamic terrorist group were planning to shoot down an airliner, possibly with some kind of missile, and all this pantomime was some kind of cover for an anti- terrorist operation.
What is strange is that this has disappeared from the media almost as if it never happened - some of us were looking forward to hearing that the couple had hired a top lawyer who was now in the process of suing those who had put them through all this for a very substantial sum of money by way of compensation.
Perhaps that is to come once the holiday shut-down is over and done with. There has also been speculation that certain parts of story are now under a "D-notice", a procedure whereby the government requests media editors to suppress specified news stories, supposedly "voluntarily", but those involved in the media, especially newspaper editors and their proprietors know full well that if they want their peerages, knighthoods and the other baubles the Political Class hand out to their faithful lap-dogs later in life, then they had better do as they are told.

Peter Hitchens in his column in the *Mail on Sunday* contrasted the way things are dealt with in this country with his time as a reporter in Russia some time ago:-
"One of the things I enjoyed most about living in Russia was the absence of prissy health and safety …..... on ferociously freezing days when any Western airline would have given up, Russian internal flights took off without hesitation and arrived on time.

This has nothing to do with communism or tyranny. Israel is much the same. Russia (how can I put this?) is still a rather masculine society, in which the influence of lawyers and social workers is minimal. And I rather think that if anyone was fool enough to fly a drone over one of Moscow's major airports today, two things would happen within about half an hour. The drone would be shot out of the sky, and the person involved would be in the slammer, contemplating a lengthy spell in Siberia. If the airport had ever closed (which I doubt), it would soon be opened again.

When I lived there, in the 1990s, this aspect reminded me of the post-war society in which I grew up.

'Just get on with it' was a good rule, in my view, and it served us much better than our current attitude. No doubt the health and safety frenzy created by Margaret Thatcher and John Major (who licensed ambulance chasers here) saves some lives. But it also makes us so gutless that our very survival as a country is in question.

There's another worrying thing about the wet response to the Gatwick drone. Here we are,
with our own burgeoning KGB-type organisations. There's the ludicrous MI5, lavished with public money, and constantly claiming to be saving us from the supposed menace of terror.
Then there's the so-called 'British FBI', the National Crime Agency. And MI6, which also claims to know everything. We also have the gigantic secret doughnut of GCHQ, supposedly plucking the plots of the wicked from the airwaves with fantastically sophisticated devices. Not to mention the police who, having forgotten how to walk, maintain their own air force instead.

And then there is the huge industry of 'airport security' which forces innocent people to shuffle through humiliating searches, in which they must remove their clothes and have their private parts photographed by scanners, before they can get near a plane.

But all these organisations and 'security' personnel can't find a way to deal with what is,
in effect, a large remote-controlled toy helicopter buzzing about near the runway. It is nothing to do with the resources available to them. It is just that they have all gone soft, like supermarket apples.
It is rather lucky that we don't actually have any serious enemies at the moment, isn't it?"

Point to ponder:- "Laws are like cobwebs, which may catch small flies, but let wasps and hornets break through." - Jonathan Swift

Thanks Peter; excellent take on the news as ever.

The Spectre's News articles

The Telegraph 03/11/2018

https://www.telegraph.co.uk/technology/2018/11/03/dozens-us-spies-killed-iran-china-uncovered-cia-messaging-service/

Dozens of US spies killed after Iran and China uncovered CIA messaging service using Google

Dozens of American spies were killed in Iran and China after a flawed communications service that allowed foreign foes to see what the agents were up to using Google, official sources have claimed.

Between 2009 and 2013 the US Central Intelligence Agency suffered a "catastrophic" secret communications failure in a website used by officers and their field agents around the world to speak to each other, according to a report in Yahoo News, which heard from 11 former intelligence and government officials about the previously unreported disaster.

"We're still dealing with the fallout," said one former national security official. "Dozens of people around the world were killed because of this."

The internet-based communications platform was first used in the Middle East to communicate with soldiers in war zones and had not been intended for widespread use but due to its ease of use and efficacy, it was adopted by agents despite its lack of sophistication, the sources claimed.ozens of American spies were killed in Iran and China after a flawed communications service that allowed foreign foes to see what the agents were up to using Google, official sources have claimed.

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Cracks only began to show when Iran, angered that the government under Barack Obama had discovered a secret Iranian nuclear weapon factory, went out with a fine tooth comb to find moles.

It discovered the existence of one of the websites used by US agents using Google. US officials believe that Iranian spies were able to use Google as a search tool to find secret CIA websites, unbeknown to those using them.

By 2011, Iran had infiltrated the CIA spy network and in May it announced that they had broken up a 30-strong ring of American spies.

Some informants were executed and others imprisoned as a result, the sources claimed.

This was corroborated by a report on ABC news at the time, which referred to a compromised communications system after a tip off from the CIA.

Meanwhile in China 30 agents working for the US were executed by the government after compromising the spy network using a similar means. Beijing had managed to break into a second temporary communications system, splintered from the initial platform and were able to see every single agent the CIA had placed in the country, the sources told Yahoo.

The sources said that it the general consensus was that that Iran and China had traded technical information with each other to form a two-pronged attack.

A CIA agent in Russia who was warned about the attacks were able to change communication channels before anyone was uncovered.

The government had already been warned about the hackability of the system by a defence contractor named John Reidy, whose job it was to hire human sources for the CIA in Iran. He alerted authorities in 2008. His official statement claimed that 70 percent of operations at the time may have been compromised already and that any agents using versions of the system were in danger. “The design and maintenance of the system is flawed,” he said.

Mr Reidy was later fired for “conflicts of interests”. According to Yahoo’s report, there is anger among the intelligence community that there has been no accountability for the failure, despite being discussed in a secret hearing at the House and Senate Intelligence committee. One former official claiming that “our biggest insider threat is our own institution”.

BBC News 17/11/2018

https://www.bbc.co.uk/news/uk-46228163

Vienna, nest of spies: Why Austria is still centre for espionage

I watched from a distance as a chartered maroon and white plane from New York, carrying 10 Russian spies, parked on the runway at Vienna airport next to a Russian plane with four more agents on board.

It was July 2010 and I was reporting on the biggest spy swap between Russia and the United States since the Cold War.

It came as little surprise that Vienna had been chosen as the site for the exchange.

The city's long tradition as a hotbed of international espionage continues up to the present day.

The latest case has come as a particular embarrassment to Austria.

A retired Austrian colonel is being investigated by prosecutors on allegations that he had been spying for Russia since the 1990s.

Austria is seen as one of Russia's few friends in the EU. Only months ago, Russian President Vladimir Putin flew in as a surprise guest for the wedding of Foreign Minister Karin Kneissl.

Among the spies exchanged on the tarmac at Vienna airport in 2010 was Sergei Skripal, poisoned in Salisbury this year.

A Russian military intelligence officer, he had been working as a British double agent.

Another was Anna Chapman, a glamorous red-headed Russian agent who had been deported from the United States.

Vienna's reputation as a centre for spies is partly geography.

Austria and the 'business' of spying
Situated close to the Iron Curtain, neutral Austria was a convenient listening post during the Communist era, according to Siegfried Beer, historian and founder of the Austrian Center for Intelligence, Propaganda and Security Studies.

"Being based in Vienna during the Cold War, meant intelligence services could organise all kinds of things into Yugoslavia, into Hungary, into Czechoslovakia, even as far as Poland," he says.

"The Austrian government was eager to remain neutral. So it developed an atmosphere in which everybody was pretty cosy and profited from each other. It was a business, you know.

"Espionage was a business. It still is. It brings a lot of people with a lot of money and a lot of support into the country."

Who was who in the Vienna airport spy swap
Russia faces wave of diplomatic expulsions after poisoning
Austria and Germany in 'spying' row
The classic Cold War movie, The Third Man, shows how occupied post-war Vienna was divided into four Allied zones, controlled by the British, the Americans, the French and the Soviets.

Although the story of The Third Man is more focused on black market racketeering than espionage, Siegfried Beer says it was inspired by an Austrian journalist, Peter Smolka, who worked for British intelligence and who was also a Soviet mole.

'Hundreds of spies'
Today the Iron Curtain has gone, but the spies remain.

These days, Vienna is home to one of the headquarters of the United Nations, and the European security body, the Organization for Security and Co-operation in Europe (OSCE).

That means that many countries have not just an embassy, but up to two more diplomatic missions to the international organisations. These provide both diplomatic immunity and cover for spies.

The annual report of the Austrian Federal Office for the Protection of the Constitution and Counterterrorism (BVT) says Austria is a "favoured area of operations" for foreign spies and the number of intelligence agents remains "high".

When the report was issued earlier this year, the head of the BVT, Peter Gridling, would not be drawn on exact numbers of foreign agents operating here, but said it was "a community of hundreds of people".

However, he also noted that there is now "a greater density of so-called intelligence services from outside the EU in Brussels" than in Vienna.

'I was courted by Russia and MI6'
Gerhard Mangott, Professor of International Relations at the University of Innsbruck, says it is common knowledge that these agents often try to recruit Austrian informants.

He was surprised that the Austrian government decided to go public with the recent allegations against the retired colonel, particularly given Vienna's close ties with Russia.

"The Secret Services are very active in Austria on a bilateral basis, trying to win over informants from various institutions," he said.

Professor Mangott was himself courted by both the Russian and the British intelligence services.

"I was contacted by a Russian secret service person in the 1990s to work for the Russian side and I also have to say that MI6 contacted me in the 1990s to work as an informant."

"I'm sure that there are many more [Austrian} people out there who work for foreign secret services," he said. "The fact that this political spy was uncovered should be no surprise for the Austrian government."

Siegfried Beer agrees. "Politicians should know by now that espionage is an international business in which everybody is involved.

"Instead of blaming the Russians, the Austrians should have looked at their own set-up and asked how we could have had a spy in our ranks for 25 years."

The Japan Times 30/11/2018

https://www.japantimes.co.jp/news/2018/11/30/world/fearing-espionage-u-s-considers-tighter-rules-chinese-students/#.XB_sRdL7TIU

Fearing espionage, U.S. considers bringing in tighter rules for Chinese students

WASHINGTON - The Trump administration is considering new background checks and other restrictions on Chinese students in the United States over growing espionage concerns, U.S. officials and congressional sources said.

In June, the State Department shortened the length of visas for Chinese graduate students studying aviation, robotics and advanced manufacturing to one year from five. U.S. officials said the goal is to curb the risk of spying and theft of intellectual property in areas vital to national security.

But now the Trump administration is weighing whether to subject Chinese students to additional vetting before they attend a U.S. school. The ideas under consideration, previously unreported, include checks of student phone records and scouring of personal accounts on Chinese and U.S. social media platforms for anything that might raise concerns about students' intentions in the United States, including affiliations with government organizations, a U.S. official and three congressional and university sources said.

U.S. law enforcement is also expected to provide training to academic officials on how to detect spying and cybertheft that it provides to people in government, a senior U.S. official said.

"Every Chinese student who China sends here has to go through a party and government approval process," one senior U.S. official said. "You may not be here for espionage purposes as traditionally defined, but no Chinese student who's coming here is untethered from the state."

The White House declined comment on the new student restrictions under review. Asked what consideration is being given to additional vetting, a State Department official said: "The department helps to ensure that those who receive U.S. visas are eligible and pose no risk to national interests."

The Chinese government has repeatedly insisted that Washington has exaggerated the problem for political reasons. China's ambassador to the United States said the accusations are groundless and "very indecent."

"Why should anybody accuse them as spies? I think that this is extremely unfair for them," Ambassador Cui Tiankai said.

Trump and Chinese President Xi Jinping are scheduled to meet at a G20 summit in Argentina this week.

Greater scrutiny of Chinese students would be part of a broader effort to confront Beijing over what Washington sees as the use of sometimes illicit methods for acquiring rapid technological advances that China has made a national priority. The world's two biggest economies also are in a trade war and increasingly at odds over diplomatic and economic issues.

Any changes would seek to strike a balance between preventing possible espionage while not scaring away talented students in a way that will harm universities financially or undercut technological innovation, administration officials said.

But that is exactly what universities- ranging from the Ivy League's Harvard, Yale and Princeton universities to state-funded schools such as University of Illinois at Urbana-Champaign fear most. They have spent much of 2018 lobbying against what they see as a broad effort by the administration to crack down on Chinese students with the change in visas this summer and a fear of more restrictions to come.

At stake is about $14 billion of economic activity, most of it tuition and other fees generated annually from the 360,000 Chinese nationals who attend U.S. schools, that could erode if these students look elsewhere for higher education abroad.

Many Ivy League schools and other top research universities, such as the Massachusetts Institute of Technology (MIT) and Stanford University, have become so alarmed that they regularly share strategies to thwart the effort, according to three people familiar with the discussions.

U.S. authorities see ample reason for closer scrutiny, pointing to recently publicized cases of espionage, or alleged espionage, linked to former students from Louisiana State University and Duke University and the Illinois Institute of Technology in Chicago.

FBI Director Christopher Wray told a Senate hearing this year that his agents across the country are seeing "non-traditional collectors (of intelligence), especially in the academic setting."

White House adviser Stephen Miller proposed a ban early this year on student visas for all Chinese nationals, according to a report in the Financial Times and confirmed by Reuters.

But the new measures will stop well short of such a ban, according to multiple sources. Terry Branstad, a former Iowa governor who is now ambassador to China, helped convince Trump to reject the Miller idea during a meeting in the Oval Office in the spring, one administration source said. Branstad argued that a ban will hurt schools across the United States, not just the elite universities many Republicans view as excessively liberal.

U.S. Rep. Judy Chu of California warned the administration is at risk of overreach.

"Our national security concerns need to be taken seriously, but I am extremely concerned about the stereotyping and scapegoating of Chinese students and professors," Chu, a Democrat who chairs the Congressional Asian Pacific American Caucus, said in a telephone interview.

Already worried about restrictions, universities have mounted a pressure campaign focused on the White House, State Department and Congress and held multiple meetings with the FBI, according to lobbyists, university officials and congressional aides.

Terry Hartle, senior vice president at the American Council on Education, said that Chinese students risk becoming "pawns" in the U.S.-China rivalry.

MIT President L. Rafael Reif and Andrew Hamilton, president of New York University, are among several top university officials who published opinion columns recently addressing the perceived growing threat to their Chinese students.

Reif said that academic institutions recognize the threat of espionage, but any new policy needs to "protect the value of openness that has made American universities wellsprings of discovery and powerhouses of innovation."

The Japan Times 08/12/2018

https://www.japantimes.co.jp/news/2018/12/08/national/crime-legal/japanese-woman-gets-six-year-prison-term-china-spying/#.XB_qM9L7TIU

Japanese woman gets six-year prison term in China for spying

SHANGHAI - A Chinese court has sentenced a Japanese woman to six years in prison for spying, a source privy to bilateral relations said Saturday.

The Shanghai Intermediate People's Court, which handed down the ruling on Friday, also seized 50,000 yuan ($7,273) in assets from the 57-year-old woman, who is of Chinese origin, according to the source.

The woman, an executive at a Tokyo-based Japanese-language school, was detained in Shanghai in June 2015 on suspicion of engaging in espionage. She was indicted in July 2016.

The source, however, said the specifics of what she did remain unknown.

China has been tightening its watch over foreign individuals and organizations, with arrests of Japanese and other nationals on similar allegations increasing since a counterespionage law came into force in 2014 and a new national security law took effect the following year.

The court in Shanghai has also decided to deport the woman after she serves out her sentence, the source said.

The Japan Times 11/12/2018

https://www.japantimes.co.jp/news/2018/12/11/world/crime-legal-world/possible-plea-deal-accused-russian-secret-agent-case-resolved/#.XB_pJtL7TIU

In possible plea deal, accused Russian secret agent case is 'resolved'

WASHINGTON - A woman accused of being a secret agent for the Russian government has likely taken a plea deal, prosecutors indicated Monday in a court filing that said her case has been "resolved."

The information was included in a filing in the case against Maria Butina. Her lawyers and federal prosecutors have asked for a hearing as soon as Tuesday morning.

Prosecutors have alleged Butina, 30, gathered intelligence on American officials and political organizations and worked to develop relationships with American politicians through her contacts with the National Rifle Association.

They have charged that her work was directed by a former Russian lawmaker who was sanctioned by the U.S. Treasury Department for his alleged ties to Russian President Vladimir Putin.

Butina, who was arrested in July, was charged with conspiracy and acting as an unregistered foreign agent for Russia. Her lawyer has argued that Butina is a student interested in American politics and better U.S.-Russian relations.

The documents did not provide details about the resolution. However, for several weeks, prosecutors and Butina's lawyer have indicated in court papers that they were negotiating and may have been nearing a plea deal.

The charges against Butina were brought by federal prosecutors in Washington, D.C., and her case is unrelated to special counsel Robert Mueller's investigation into Russian interference in the 2016 election.

The Japan Times 12/12/2018

https://www.japantimes.co.jp/news/2018/12/12/world/crime-legal-world/putin-claims-heard-alleged-russian-spy-maria-butina-july-arrest-u-s/#.XB_pwtL7TIU

Putin claims he only heard of alleged Russian spy Maria Butina after her July arrest in U.S.

MOSCOW - Russian President Vladimir Putin said on Tuesday that he had never heard of a woman who is accused of spying for Moscow in the United States until her July arrest.

U.S. prosecutors have alleged that Maria Butina gathered intelligence and worked to develop relationships with American politicians through the National Rifle Association. They also alleged that a former Russian lawmaker who was subject to U.S. sanctions for alleged ties to Putin directed Butina's activities.

Butina is charged with conspiracy and acting as an unregistered foreign agent for the Russia government. U.S. prosecutors indicated in a court filing Monday that she has accepted a plea deal.

Putin said at a meeting of the presidential human rights council on Tuesday that he asked Russian intelligence services for information about 30-year-old Butina after he heard about the "poor girl" who faces 15 years in prison.

"When I heard that something is happening to her, I just went to all intelligence chiefs and asked who she was," he said in televised remarks after a council member raised the issue of defending the rights of Russians abroad. "No one knows anything about her."

Butina, who was arrested in July and has been in custody since, was charged with conspiracy and acting as an unregistered foreign agent for Russia. Her lawyer has argued that Butina is a student interested in American politics and U.S.-Russian relations.

The Japan Times 18/12/2018

https://www.japantimes.co.jp/news/2018/12/18/business/czech-agency-issues-warning-huawei-zte-security-threat/#.XB_rIdL7TIU

Czech agency issues warning over Huawei, ZTE security 'threat'

PRAGUE - A Czech cybersecurity agency on Monday warned against using the software and hardware of China's Huawei and ZTE companies, saying they posed a threat to state security.

"The main issue is a legal and political environment of the People's Republic of China, where (the) aforementioned companies primarily operate," the Czech National Cyber and Information Security Agency said in a statement.

"China's laws, among other things, require private companies residing in China to cooperate with intelligence services, therefore introducing them into the key state systems might present a threat," the agency added.

Huawei's Czech branch slammed the report and asked the agency to offer facts instead of tarnishing its reputation, said the Czech News Agency (CTK).

The warning comes on the heels of a Czech intelligence report that warned about increased spying activities of Chinese diplomats in the EU and NATO member state of 10.6 million people.

Huawei has faced increasing scrutiny over its alleged links to Chinese intelligence services, prompting countries including the United States, Australia and Japan to block it from building their next-generation, super-fast 5G internet networks.

But the Czech Republic's western neighbor Germany refused to follow suit earlier this month, saying it had no evidence Huawei could use its equipment to spy for Beijing.

Thanks Spectre 3000

Chart Section Index

January 2019

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jan kHz, ID, ...	Feb kHz, ID, ...
		x	x				0315		E11	03	5779 25#	5779 25#
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	x		x		x		0500		HM01	18	11462	11462
x	x	x	x	x			0500		M14	01A	18041 952	18041 952
	x						0530		M01A	14	9441 751	9441 751
		x					0530		M01A	14	9129 498	9129 498
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	x						0600/0610		S06S	01A	16145/14240 438	16145/14240 438
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		x					0710		M01A	14	9175 146	9175 146
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	x						1000/1010		S06S	01A	6440/ 5660 893	6440/ 5660 893
		x					1000/1010		S06S	01A	12365/14280 729	12365/14280 729
			x			x	1010/1030/1050		M12	01B	13369/14669/15969 369	13369/14669/15969 369
x			x				1015		S11A	03	11559 47#	11559 47#
	x			x			1020		S11A	03	7600 42#	7600 42#
x		x					1045		E11	03	7984 69#	7984 69#
	x						1100/1110		S06S	01A	5035/5975 754	5035/5975 754
	x			x			1100/1120/1140		E07	01B	13523/12123/10623 516	16161/14661/13361 163
x	x	x	x	x	x	x	1200		V13	0	9276	8169
		x					1200/1300	1/2	G06	01A	x4920/ 4042 938, **search**	x4920/ 4042 938
			x				1200/1210		S06S	01A	12155/10920 425	12155/10920 425
	x	x					1205		E11	03	7317 46#	7317 46#

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jan kHz, ID, ...	Feb kHz, ID, ...
x				x			1225		E11	03	20167 52#	20167 52#
x	x	x	x	x	x	x	1300		V13	0	9276	8169
			x				1300	1/3	G06	01A	4460 329	4460 329
			x		x		1300		E11	03	11116 58#	11116 58#
x							1300/1310		S06S	01A	8420/10635 831	8420/10635 831
	x					x	1300/1320/1340		XPA2m	01B	16138/14438/13438	
x				x			1310/1330/1350		M12	01B	search	search
	x				x		1345		E11	03	14666 91#	14666 91#
x	x	x	x	x	**x**	x	1400		M08A	18	8096	8096
x		x					1400/1420/1440		M12	01B	10547/ 9047/ 7547 505	13362/11562/10362 353
				x	x		1400/1420/1440		XPA2r	01B	16167/14664/13924	18667/17419/16212
			x		x		1410/1430/1450		E07	01B	search	search
					x		1500		M01	14	5810 197	5810 197
	x						1500/1510		S06S	01A	6845/ 9170 537	6845/ 9170 537
	x					x	1500/1520/1540		XPA2m	01B		16338/14538/13538
			x		x		1510/1530/1550		E07	01B	search	search
			x				1530		E11	03	5409 26#	5409 26#
		x			x		1540		S11A	03	10728 56#	10728 56#
x	x	x	x	x	x	**x**	1557		HM01	18	11435	11435
	x	x					1600	1/3	M14	01A	4025 725	4025 725
	x					x	1605		E11	03	4505 23#	4505 23#
				x			1610/1630/1650		E07A	01B	7632/ 6832/ 5832 688	9347/ 8147/ 6847 318
		x				x	1625		E11	03	10448 97#	10448 97#
	x		x				1645		E11	03	11493 33#	11493 33#
				x		x	1650		E11	03	16335 92#	16335 92#
x							1700/1800	1/2	G06	01A	x3750/ 4490 938, **search**	x3750/ 4490 938
x	x	x	x	x	x	**x**	1657		HM01	18	11530	11530
			x				1700/1720/1740		M12	01B	14377/13461/12114 317	14377/13461/12114 317
				x			1700/1800	1/3	M14	01A	5374/ 4975 382	5374/ 4975 382
		x			x		1705		E11	03	9443 39#	9443 39#
		x			x		1730		E11	03	8545 40#	8545 40#
			x				1730		E11	03	5779 41#	5779 41#

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jan kHz, ID, ...	Feb kHz, ID, ...
x						x	1745		E11	03	12924 24#	12924 24#
	x		x				1800		M01	14	5320 197	5320 197
x	x	x	x	x	x	**x**	1757		HM01	18	11635	11635
		x				x	1800/1820/1840		E07	01B	x8194/ 6794/ 5294 172, search	x10219/ 9119/ 7519 215, search
	x						1820	2/4	M14	01A	4636 186	4636 186
			x				1830	2/4	G06	01A	4519 271	4519 271
		x			x		1850		S11A	03	11486 28#	11486 28#
x			x				1900		E11	03	6849 64#	6849 64#
		x					1900/1920/1940		M12	01B	8047/ 6802/ 5788 463	8047/ 6802/ 5788 463
x			x				1900/1920/1940		M12	01B	10343/ 9264/ 8116 124	10343/ 9264/ 8116 124
				x			1900/2000	1/3	S06	01A		7523/ 5305 483
				x		x	1910		E11	03	10487 61#	10487 61#
x							1910		M01B	14	2435, 3519 853	2435, 3519 853
		x					1920	2/4	M14	01A	4761 748	4761 748
	x		x				1925		E11	03	12067 55#	12067 55#
				x			1930	2/4	G06	01A	4792 436	4792 436
			x				1932		M01B	14	2470, 3545 910	2470, 3545 910
	x			x			1940/1950/2000	1	F01	01A	7629/ 6783/ 4030	8156/ 6844/ 4527
		x		x			1955		S11A	03	5815 37#	5815 37#
	x		x				2000		M01	14	4490 197	4490 197
x	x	x	x	x	x	x	2000		M08A/ V02A	18	7554	7554
x							2000/2020/2040		M12	01B	10343/ 9264/ 8116 463	10343/ 9264/ 8116 463
x		x					2000/2020/2040		E07	01B	6776/ 5767/ 5067 770	8157/ 6857/ 5257 182
				x			2000/2100	1/3	S06	01A	7523/ 5305 483	
					x		2000/2100	1/3	S06	01A	3897/ 3302 263	3897/ 3302 263
				x			2002		M01B	14	2655, 3195 866	2655, 3195 866
					x	x	2005		E11	03	11107 36#	11107 36#
x							2015		M01B	14	2427, 3205 375	2427, 3205 375

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jan kHz, ID, ...	Feb kHz, ID, ...
			x				2030	1/3	E06	01A	4836 321	4836 321
			x				2042 (2040 ?)		M01B	14	2485, 3160 382	2485, 3160 382

M01 FREQUENCY LIST

Frequencies may vary by a few kHz

JAN FEB NOV DEC M01/1 197

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

MAR APRIL SEPT OCT M01/2 463

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

MAY JUNE JULY AUG M01/3 025

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

Time UTC			Freq kHz			ID	M	T	W	T	F	S	S
Jan													
0600	0620	0640	5838	7438	9238	842						X	
10**10**	10**30**	10**50**	13369	14669	15964	369				X			X
13**10**	13**30**	13**50**	7692	6792	5892	678				X		X	
1400	1420	1440	10547	9047	7547	505	X		X				
1800	1820	1840	9176	7931	6904	257			X				
1900	1920	1940	8046	6802	5788	463			X				
2200	2220	2240	5361	4461	4061	340			X				
Feb													
0600	0620	0640	7637	9137	10237	612						X	
10**10**	10**30**	10**50**	13569	14869	16269	582				X			X
13**10**	13**30**	13**50**	9162	8062	7462	104				X		X	
1400	1420	1440	13362	11562	10362	353	X		X				
1800	1820	1840	9176	7931	6904	257			X				
1900	1920	1940	8047	6802	5788	463			X				
2200	2220	2240	5429	4629	4029	460			X				
22**10**	22**30**	22**50**	6937	5737	- - -	975	X			X			
Mar													
0600	0620	0640	8158	9258	10658	126						X	
10**10**	10**30**	10**50**	14769	16269	18169	721				X			X
13**10**	13**30**	13**50**	12214	10814	9214	282				X		X	
1400	1420	1440	16276	14876	13376	283	X		X				
1800	1820	1840	9176	7931	6904	257			X				
1900	1920	1940	8047	6802	5788	463			X				
2200	2220	2240	5763	5163	4463	714			X				

Time UTC			Freq kHz			ID	M	T	W	T	F	S	S
Apr													
0500	0520	0540	8176	9376	10476	134						X	
10**10**	10**30**	10**50**	14769	16269	18169	721				X			X
13**10**	13**30**	13**50**	14468	13568	12178	451				X		X	
1400	1420	1440	18524	17424	15824	548	X		X				
2100	2120	2140	6793	5893	4593	785			X				
May													
0500	0520	0540	9167	10267	11567	125						X	
13**10**	13**30**	13**50**	13926	12126	10926	919				X		X	
1400	1420	1440	17451	15951	- - -	494	X		X				
2100	2120	2140	9241	7541	6841	258			X				
Jun													
0500	0520	0540	9282	10982	12182	291						X	
1400	1420	1440	16117	14717	13417	174	X		X				
1700	1720	1740	14377	13461	12114	317				X			
2100	2120	2140	9986	9086	7386	903			X				
July													
0500	0520	0540	9217	10617	12217	262						X	
1400	1420	1440	15821	13921	12221	892	X		X				
1700	1720	1740	14377	13461	12114	317				X			
2100	2120	2140	9379	7979	6879	398			X				

M12 Yearly Repeat Schedules 2017 - 2018 **Brian S.E. England**

Time UTC			Freq kHz			ID	M	T	W	T	F	S	S
Aug													
0500	0520	0540	9167	10267	11567	125						X	
1400	1420	1440	15983	14683	13383	963	X		X				
1700	1720	1740	14377	13461	12114	317				X			
19**50**	20**10**	20**30**	16148	14748	13448	174			X		X		
2100	2120	2140	8123	6923	5823	198			X				
Sep													
0500	0520	0540	8176	9376	10476	134						X	
1400	1420	1440	16348	14848	13448	384	X		X				
1700	1720	1740	14377	13461	12114	317				X			
1900	1920	1940	10343	9264	8116	124				X			
19**50**	20**10**	20**30**	13375	11575	- - -	352			X		X		
2000	2020	2040	10343	9264	8116	124	X						
2100	2120	2140	6793	5893	4593	785			X				
21**10**	21**30**	21**50**	9246	8146	- - -	218				X			
Oct													
0500	0520	0540	6832	7932	9232	892						X	
1400	1420	1440	18639	17439	15839	648	X		X				
1700	1720	1740	14377	13461	12114	317				X			
1900	1920	1940	10343	9264	8116	124				X			
19**50**	20**10**	20**30**	10984	9384	8084	930			X		X		
2000	2020	2040	10343	9264	8116	124	X						
2100	2120	2140	5814	5214	4614	826			X				

Time UTC			Freq kHz			ID	M	T	W	T	F	S	S
Nov													
0600	0620	0640	7637	9137	10237	612						X	
1400	1420	1440	16296	14796	13396	273	X		X				
1900	1920	1940	10343	9264	8116	124				X			
2000	2020	2040	10343	9264	8116	124	X						
20**50**	21**10**	21**30**	7536	6836	5136	581			X		X		
2200	2220	2240	5429	4629	4029	460			X				
Dec													
0600	0620	0640	5784	7584	9184	751						X	
10**10**	10**30**	10**50**	14769	16269	18169	721				X			X
1400	1420	1440	13371	11571	10271	352	X		X				
1900	1920	1940	10343	9264	8116	124				X			
2000	2020	2040	10343	9264	8116	124	X						
20**50**	21**10**	21**30**	6908	5808	- - -	985			X		X		
2200	2220	2240	5312	4512	4012	350			X				

Mid-year repeats were severely reduced from April 2018 by the usual annual changes made to many of the regular schedules.

2016 saw the lowest activity from M12 seen for many years. Since then activity has increased considerably, although not to the levels seen previously.

However, this still bodes well for the future of M12 as Morse remains a major part of this groups output.

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jan kHz, ID, ...	Feb kHz, ID, ...	Nov kHz, ID, ...	Dec kHz, ID, ...	Remarks
		x	x				0315		E11	03	5779 25#	5779 25#	5779 25#	5779 25#	since 01/14, last log 12/18
x							0450		E11	03	4909 41#	4909 41#	4909 41#	4909 41#	since 02/10, last log 11/18 2nd transmission Thu 1730z
	x			x			0455		S11A	03	x4828 32#	x4828 32#	x4828 32#	x4828 32#	since 09/14, last log 10/18
x				x			0600		E11	03	9200 18#	9200 18#	9200 18#	9200 18#	since 07/15, last log 12/18
x		x					0640		E11	03	11450 94#	11450 94#	11450 94#	11450 94#	since 07/17, last log 12/18
	x		x				0645		E11	03	7840 51#	7840 51#	7840 51#	7840 51#	since 07/09, last log 12/18
	x			x			0700		E11	03	6804 57#	6804 57#	**6804** 57#	6804 57#	since 01/12, last log 12/18
					x	x	0710		E11	03	4505 49#	4505 49#	4505 49#	4505 49#	since 07/15, last log 11/18
	x			x			0715		E11	03	9130 63#	9130 63#	9130 63#	9130 63#	since 02/11, last log 12/18
	x		x				0735		S11A	03	x10246 38#	x10246 38#	**14753** 38#	14753 38#	since 01/18, last log 12/18
x							0745		E11	03	10213 26#	10213 26#	10213 26#	10213 26#	since 03/14, last log 12/18 2nd transmission Thu 1530z
		x		x			0745		E11	03	17378 34#	17378 34#	17378 34#	17378 34#	since 06/17, last log 12/18
					x	x	0805		E11	03	7377 31#	7377 31#	7377 31#	7377 31#	since 07/14, last log 12/18
x			x				0820		E11	03	4909 43#	4909 43#	**4909** 43#	4909 43#	since 10/09, last log 12/18
	x		x				0845		E11	03	11104 15#	11104 15#	11104 15#	11104 15#	since 07/17, last log 12/18
x		x					0900		E11	03	8597 53#	8597 53#	**8597** 53#	8597 53#	since 10/05, last log 12/18
		x	x				0930		E11	03	8180 27#	8180 27#	8180 27#	8180 27#	since 02/14, last log 12/18
	x			x			1000		E11	03	8800 30#	8800 30#	8800 30#	8800 30#	since 11/16, last log 12/18
x			x				1015		S11A	03	11559 47#	11559 47#	11559 47#	11559 47#	since 04/10, last log 12/18
	x			x			1020		S11A	03	7600 42#	7600 42#	**7600** 42#	7600 42#	since 02/10, last log 12/18
x		x					1045		E11	03	7984 69#	7984 69#	**7984** 69#	7984 69#	since 03/18, last log 12/18
	x	x					1205		E11	03	7317 46#	7317 46#	7317 46#	7317 46#	since 03/10, last log 12/18 2nd transmission Mon 0450z
x				x			1225		E11	03	20167 52#	20167 52#	20167 52#	20167 52#	since 05/15, last log 12/18
			x		x		1300		E11	03	11116 58#	11116 58#	8680 58#	**11116** 58#	since 02/16, last log 12/18
	x				x		1345		E11	03	14666 91#	14666 91#	14666 91#	14666 91#	since 10/15, last log 12/18
			x				1530		E11	03	5409 26#	5409 26#	5409 26#	5409 26#	since 06/14, last log 12/18 2nd transmission Mon 0745z
		x			x		1540		S11A	03	10728 56#	10728 56#	10728 56#	10728 56#	since 03/16, last log 12/18
	x					x	1605		E11	03	4505 23#	4505 23#	4505 23#	4505 23#	since 11/15, last log 12/18
		x				x	1625		E11	03	10448 97#	10448 97#	10448 97#	10448 97#	since 02/15, last log 12/18
	x		x				1645		E11	03	11493 33#	11493 33#	11493 33#	11493 33#	since 06/17, last log 12/18
				x		x	1650		E11	03	16335 92#	16335 92#	16335 92#	16335 92#	since 05/16, last log 12/18
		x			x		1705		E11	03	9443 39#	9443 39#	9443 39#	9443 39#	since 02/14, last log 12/18
		x			x		1730		E11	03	8545 40#	8545 40#	8545 40#	8545 40#	since 06/16, last log 12/18
			x				1730		E11	03	5779 41#	5779 41#	5779 41#	5779 41#	since 03/10, last log 12/18 2nd transmission Mon 0450z
x						x	1745		E11	03	12924 24#	12924 24#	**12924** 24#	12924 24#	since 04/18, last log 12/18
		x			x		1850		S11A	03	11486 28#	11486 28#	11486 28#	11486 28#	since 06/17, last log 12/18
x			x				1900		E11	03	6849 64#	6849 64#	6849 64#	6849 64#	since 05/16, last log 12/18
				x		x	1910		E11	03	10487 61#	10487 61#	**10487** 61#	10487 61#	since 04/17, last log 12/18
	x		x				1925		E11	03	12067 55#	12067 55#	12067 55#	12067 55#	since 07/15, last log 12/18
		x		x			1955		S11A	03	5815 37#	5815 37#	5815 37#	5815 37#	since 02/14, last log 12/18
					x	x	2005		E11	03	11107 36#	11107 36#	11107 36#	11107 36#	since 03/14, last log 12/18 2nd transmission Thu 1530z

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jan kHz, ID, ...	Feb kHz, ID, ...	Nov kHz, ID, ...	Dec kHz, ID, ...	Remarks
x							0800	1/3	G06	01A	5320 329	5320 329	5320 329	5320 329	since 07/10, last log 12/18 repeat at Thu 1300Z
		x					1200/1300	1/2	G06	01A	x4920/ 4042 938, **search**	x4920/ 4042 938	4920/ 4042 938	4920/ 4042 938	since 10/14, last log 12/18 yearly changing frequencies + id
			x				1300	1/3	G06	01A	4460 329	4460 329	4460 329	4460 329	since 09/11, last log 11/18 repeat from Mon 0800Z
x							1700/1800	1/2	G06	01A	x3750/ 4490 938, **search**	x3750/ 4490 938	3750/ 4490 938	3750/ 4490 938	since 04/10, last log 12/18 yearly changing frequencies + id
			x				1830	2/4	G06	01A	4519 271	4519 271	4519 271	4519 271	since 05/01, last log 12/18 repeat at Fri 1930Z
				x			1930	2/4	G06	01A	4792 436	4792 436	4792 436	4792 436	since 04/01, last log 12/18 repeat from Thu 1830Z

XPA and XPA2[Sched m, p, r] Russian Intelligence and/or Diplomatic Multitone Systems [Radiogramma] Transmission Schedules.

Zulu > / Month v	XPA Tuesday/Thursday H+10	XPA H+30	XPA H+50	XPA2 Sched m Various Sun/Tue H 00	XPA2 Sched m H+20	XPA2 Sched m H+40	XPA2 Sched p Monday/Wednesday H 00	XPA2 Sched p H+20	XPA2 Sched p H+40	XPA2 Sched r Various Fri/Sat H 00	XPA2 Sched r H+20	XPA2 Sched r H+40
	0710 / 0810z			1300,1500,1800,2000,2100			0700 / 0800z			1400, 1900, 2100		
Jan	12157	13462	14374	16138	14438	13438	11493	13393	14793	16167	14663	13923
Feb				16338	14538	13538	12137	13937	14737	18667	17419	16212
Mar				16138	14438	13438	12192	13892	14892	18667	17419	16212
Apr				14538	13538	12138	11167	12167	13567	17462	16114	14824
May				14538	13538	12138	11541	13441	14941	17462	16114	14824
June				14738	13438	12138	10324	11524	13524	16167	14663	13923
July				14538	13538	12138	11167	12167	13567	15967	13884	12217
Aug				14738	13438	12138	10278	12178	13478	16167	14663	13923
Sept				14538	13538	12138	10324	11524	13524	16167	14663	13923
Oct	12167	13437	14972	16338	14538	13538	12192	13892	14892	17462	16114	14828
Nov	13978	14859	15871	18328	16238	14438	13427	14627	15827	17462	16114	14828
Dec	11531	12137	13932	14538	13538	12138	10278	12178	13478	15967	13884	12217

Notes:

XPA Under construction due to change/end of old c schedule. Usually as strong as previous schedule.. [ID does not match freq 100kHz]

XPA2 m Repetitive frequency triplets, appears robust, generally strong into UK
XPA2 r Schedule appears robust; generally very strong signals to UK
XPA2 p Schedule revised from 6 day to two day [Oct2017]. Sigs to UK variable.
Null Messaage: Long tones used in place of repeat character [15Hz below 0] whilst ending of 10140 is now variable. [First seen11/12/2017 XPA2 t]

Updated: 03012019

SPECIAL MATTERS

Thanks to all our contributors:
Ary, BR, Cyp, DanAr, Danix, DG, E, Edd, HH, HJH, JkC, Jochen, KW, KoB, Malc, MaleAnon, PoSW, PLdn, RNGB, SloRoll, , Welshpool [stay warm in BFPO 655]

Apologies to anyone missed.

Operation Jallaa: Now stood down.

MESSAGES:

E: A Happy New Year to you and yours!

The 'Pafos' op: Excellent advice – thanks. Last month's setting AZOD did not decode correctly. Confirm January setting is ASOZ. Msg txt: ZDQQP Checked OK at source.

RELEVANT WEBSITES

ENIGMA 2000 Website:	http://www.enigma2000.org.uk
Frequency Details can be downloaded from:	http://www.cvni.net/radio/
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