

ENIGMA 2000 NEWSLETTER



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Needs no explanation!

See first piece in News round

ISSUE 134
January 2023

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See last page also.

Editorial

A Happy New Year to our readers. Members will doubtless be pleased the subs for this group have been paid so we exist for another year.

Those who bother to visit group will have noticed I have been 'off-watch' on occasion. Personal matters take precedence over ENIGMA2000 matters and I have had the unfortunate incidence of two funerals [two splendid persons, man and wife, who have marked my life with their skills – in context of E2k fast Morse].

Then there's been the other matters of family visits as well as a short break 'up North.' My 'off watch' periods will be seen to continue into and past Christmas and the break from radio will be welcome; as I write this it seems travel to my daughter's house will be difficult thanks to the train companies being affected by those Unions who lead us to believe train drivers and other staff need a pay rise [personally, I suspect most of these strikes, save perhaps Royal Mail are political and designed to damage the Conservative government as voted in by the electorate. Mind you, they haven't helped themselves with the in-fighting and having more PM's than the tramp outside a certain London underground station has had underpants].

On return I was shocked to see the changes of frequencies of certain XPA2 and XPB1 stations making the prediction charts seen at the end of this newsletter, or as seen on Priyom's excellent site somewhat redundant until a full update is available.

Why are these changes occurring? Easy to blame the RUS/UKR conflict out of hand but there is also the matter of propagation; daily surprises with solar weather and extrapolated figures tell a different story for frequency change.

When 'E' kindly sent his logs in he included a little note, a usual thing. He noted something I had seen at Vauxhall Cross when I was enroute to the Oval Cricket Ground. The antennas atop the MI6 building have all gone; I wondered why and suspected use of the internet and a reliance on radio sources elsewhere [Cheltenham sprang to mind and there may well be others too].

Those of you who follow such things will be aware of Euston Tower, once home to MI5 watchers with 16th floor heavily curtained off to stop invasive activities. On the roof were many antennas. Like those on VX, these have also been removed as 'E' writes, ".....I notice all the aerials have disappeared from the roof of Euston Tower and dishes gone from the BT Tower.

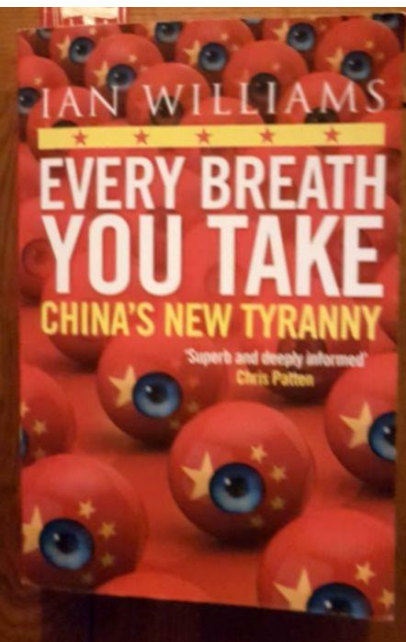
The BT Tower, or Post Office Tower of the 60's was host to massive parabolic antennas, part of the MoD 'Backbone' system to carry messages via microwave. Obviously the internet now does that faster and more reliably via fibre which serves point to point and mostly underground. If antennas are required then there's always the MoD or other official buildings around London to supply the space; for instance, Wellington Barracks or those situated on Kensington Gore, where horses can be seen looking over the first floor balcony into the street. [Thanks for this E, certainly food for thought].

Here's a decent read as you freeze at home: The secret lives of MI6's top female spies. For the first time ever, SIS officers reveal why women often make the best spies for our times

<https://www.ft.com/content/741772c0-ee76-4d3d-bfcd-4fabc1fb405d?signupConfirmation=success>

Well worth a read! Whilst I have your attention take a butcher's at this: <https://virtuoz.com/m/crypto-museum/x/vietnam-war/>

Book Review



Every Breath You Take - China's new tyranny by Ian Williams £16.99

Ian Williams is an award winning journalist and has a grip on China's technological state; perhaps the blurb sums this interesting study in a better way than I ever could. The book is an in depth read, difficult in some parts but paints a rather frightening image of technology in the service on man and beyond Orwell's 1984.

'China is building the world's first digital totalitarian state, a system of hitherto unimaginable control which threatens to make the world of Nineteen Eighty-Four a terrifying reality. Internet freedom has been eliminated and ubiquitous surveillance cameras make use of the latest facial recognition technology. Through flagrant cyber espionage, China has plundered Western technology on a massive scale, bullied foreign tech companies and academics, and intimidated critics. In doing so, it has become a model for aspiring dictators everywhere.

Award winning journalist Ian Williams examines the extraordinary rise of the Chinese surveillance state, and supporting interviews and first-hand accounts highlight the ruthless efficiency with which the government can now act. There are are implications too for the rest of the world: how to deal with an increasingly strident, aggressive Beijing is one of the biggest and most urgent challenges facing the West in what has become a technological Cold War.'

Chris Patten, Governor of Hong Kong 1992-1997 has also written some praise of this book [I might add that as an ex-pat I long for the days when for official duties, especially Trooping the Colour, the Governor would appear, with his bodyguard, splendidly clad in his No1 uniform with coatee, uniform trousers and cock feathered black "silk" bicorn hat with silver braid and silver button].

Mr Patten writes, "Ian Williams has written a superb and deeply informed study. It is a chilling reminder to all who believe in the rule of law and an open society of China's present threats to our way of life."

It's a very decent read; deep in places but forever informing. Recommended read.

News Round

Inside Manchester's top secret spy headquarters above a Greggs and Chinese restaurant The M.E.N. was among the first media to be given a glimpse inside GCHQ's Manchester's station

By Damon Wilkinson Reporter

19:20, 14 NOV 2022 UPDATED 22:19, 14 NOV 2022

<https://www.manchestereveningnews.co.uk/news/greater-manchester-news/inside-manchesters-top-secret-spy-25511143>

Through a glass door next to a Chinese restaurant, in an anonymous 1970s office block above a barbers and a Greggs, lies Manchester's most secretive building.

Heron House is home to signals intelligence agency GCHQ. Inside hundreds of spies carry out the clandestine business of keeping tabs on those who might wish to do the UK harm.

And the Manchester Evening News was among the first media to be given a glimpse inside.

GCHQ's move to Manchester at the back of end of 2019 ushered in a new era for spy chiefs. It signalled a change towards more openness and increased collaboration with universities and private industry as the intelligence community acknowledged the need to stay at the cutting edge of a new age of digital espionage.

Heron House is home to signals intelligence agency GCHQ (Image: Vincent Cole - Manchester Evening News)

The central location, on Albert Square opposite the scaffold-clad town hall, is symbolic of this shift in culture. The part of the building we're permitted to see has the same security rating as most government buildings.

Security checks are still required to get in, but with its open plan design, glass walled meeting rooms, understated grey sofas and plywood panelling it could double up as a trendy Northern Quarter coffee shop. The space means the agency can host things like school visits, meetings and even yoga classes.

But some old habits die hard. While a quick Google search will give you GCHQ's Manchester address, there's no signs outside advertising their presence.

GCHQ's Manchester office includes a space designed to encourage more public engagement (Image: Vincent Cole - Manchester Evening News)

Inside Heron House the windows and walls have enhanced security measures for protection against a number of potential threats.

And while part of the building may be fairly open and accessible, two other floors are classified 'top secret'. There spies - the actual figure is not disclosed, but we're told they number in the hundreds - work on the same intelligence missions as their colleagues at GCHQ's doughnut-shaped headquarters in Cheltenham.

These include defending the UK against potential cyber-attacks from China and Russia and digital surveillance of terrorists and organised crime. So why has the agency chosen Manchester as its base to, partly, come out from the shadows?

"The pace of technological change at the moment is so fast that the old ways of doing it just aren't going to cut it anymore," said Liz, GCHQ's deputy director for Manchester, who declines to give her surname for security reasons.

GCHQ's headquarters in Cheltenham (Image: Manchester Evening News.)

"When the organisation was thinking about where next and some of the challenges we face, Manchester seemed like a really good bet because you've got really strong universities, lots of tech start-ups and some of the really big tech firms.

"In Manchester we have been given a bit of licence to experiment. We are able to work here with industry in a way that you just can't elsewhere.

"And the opportunity of being here just opens us up. We're right in the city centre. This way we can be a little bit more friendly and invite people in."

Liz wouldn't be drawn on the exact nature of the work being done in Manchester, other than to say staff were 'working on all the missions' including 'hostile states, terrorism and serious and organised crime'.

But in a rare public address last month Sir Jeremy Fleming, the head of the agency, gave an insight into the agency's current priorities, when he spoke about the the major risk posed by Chinese technology to the UK's security and prosperity and told how Ukraine's 'courageous action on the battlefield and in cyberspace' was turning the tide in the war against Russia.

GCHQ already has branches in Scarborough, Bude in Cornwall and London. But its Manchester station gives it more opportunities to recruit from outside its traditional white, male, upper and middle-class demographic.

Lots of Cheltenham-based staff initially made the move to Manchester, but they're being steadily joined by new starters from across the north. And as part of that move schools in areas of 'untapped talent' in all 10 boroughs in Greater Manchester have been invited in to spread awareness of the agency among communities that might not have even heard of it.

"There's a bit of mystique around what we do, but this gives us a chance to demystify some of it," said Liz. "We can't really expect people to trust us and want to come and work here unless we give them a bit more."

On Monday 60 kids from St Margaret's primary school in Whalley Range paid a visit for a lesson in code breaking. It was part of the launch of the agency's new book Puzzles for Spies, which includes hundreds of puzzles based on languages, engineering, codebreaking, analysis, maths, coding and cyber security skills.

For the launch GCHQ has teamed up with children's mental health charity. Place2Be. The charity's chief exec Catherine Roche said: "Problem-solving encourages creativity, ingenuity, and imagination - which are all vital skills for growing and thriving into adulthood. Helping children to solve problems for themselves encourages them to develop resilience in the face of adversity, and helps them to become more confident, independent and successful in their own right."

<https://www.manchestereveningnews.co.uk/news/greater-manchester-news/inside-manchesters-top-secret-spy-25511143>

World War Two: Plaque unveiled for codebreaker John Herivel

<https://www.bbc.co.uk/news/uk-northern-ireland-63594671>

A blue plaque to honour a World War Two codebreaker has been unveiled at Methodist College Belfast.

John Herivel, a former pupil at the school, played a key role in efforts to decrypt Germany's Enigma codes.

The work at Bletchley Park helped to decipher key intelligence messages to inform the Allies' war planning.

The unveiling of the plaque took place as Armistice Day commemorations were held across Northern Ireland, including at the Cenotaph in Belfast.

Veterans, dignitaries and members of the public observed a two-minute silence at 11:00 GMT.

Mr Herivel's system for breaking the ciphers in 1940 became known as the Herivel Tip or Herivelismus.

The work at Bletchley Park was kept secret for decades but an official history of British intelligence in the war would later state it had shortened the conflict by between two and four years and without it the outcome would have been uncertain.

Mr Herivel died at the age of 92 in 2011.

The Ulster History Circle plaque for Mr Herivel was unveiled by his daughter Susan Algie Herivel on Friday.

She told BBC News NI's Evening Extra programme that her father would have been pleased by the recognition.

The Herivel Tip was based on an assumption that German code operators would fail to change some Enigma settings at the start of their shift.

Ms Algie Herivel said the idea came to her father when he was half-asleep.

"It was at the beginning of the time at Bletchley Park and he was in digs in the town and the landlady gave him the sitting room after dinner," she said.

"He would sit with his feet up, I think there was a fire, and on one particular evening he went into a strange half-asleep, half-awake [state].

"He had an idea of a German wireless operator who at the beginning of some major offensive would be starting to cut corners and not sticking to the rules entirely.

"He gave the idea back to his boss Gordon Welchman but everybody thought it was unlikely to happen.

"But the thing is it did happen and that's when so many messages came in."

'It was a team sport'

Mr Welchman later wrote that without the idea the Allies "would have been defeated in May 1940".

Dr David Abrutat, a historian at the intelligence agency GCHQ, said Mr Herivel and the other codebreakers at Bletchley Park were under "extreme pressure".

"In May 1940 [the Herivel Tip] worked and they cracked the code," he said.

"It provided real strategic advantage for the allied forces in occupied Europe."

While Alan Turing is the highest profile among the code breakers, Dr Abrutat said the effort across Bletchley Park was a "team sport".

"It wasn't just one individual changing the world," he said.

A silence was held at war memorials across Northern Ireland to mark Armistice Day on Friday

The Ulster History Circle chairman Chris Spurr said Mr Herivel was an insightful mathematician who discovered a way of breaking the Enigma code by hand.

"His ability in maths was encouraged at Methodist College, and the Ulster History Circle is delighted to commemorate this mathematician and codebreaker with a blue plaque," he said.

Mr Herivel attended the school between 1924 and 1936 and lived at Malone Avenue in the city.

After leaving school he won a scholarship to study maths at Cambridge University.

Capturing war-time memories before it's too late

The Ulster History Circle said Mr Herivel received special praise from Sir Winston Churchill during a visit the then-prime minister made to Bletchley Park during the war.

After World War Two Mr Herivel returned to Northern Ireland and took up positions at Campbell College and Queen's University before moving to Oxford.

His daughter was also present when an unofficial commemorative plaque was installed at her father's Lonsdale Road house in Oxford in 2014.

<https://www.bbc.co.uk/news/uk-northern-ireland-63594671>

Thanks NI MaleAnon

British embassy guard admits giving secrets to Russians in Berlin

Prosecutors say David Smith, 58, from Paisley, became disillusioned with west and contacted Russian military

<https://www.theguardian.com/world/2022/nov/11/british-embassy-guard-admits-giving-secrets-to-russians-in-berlin?>

Dan Sabbagh and agencies
Fri 11 Nov 2022 18.33 GMT

A security guard who worked for the British embassy in Berlin has pleaded guilty to passing secret material to a Russian military attache in a rare espionage prosecution.

David Smith, 58, faces up to 14 years in jail after admitting to passing on information about the staff and layout of the British embassy – and other secret material between May 2020 and August the following year.

The guard was caught in a sting operation and extradited back to the UK from Germany in April to be prosecuted at the Old Bailey under the Official Secrets Act. He pleaded guilty to eight counts a week ago, but this can only be reported now after a ninth charge was dropped by prosecutors.

A joint investigation by German and British security services concluded he had been selling information to Russia since spring 2020 after MI5 and its European counterparts trailed him for months.

According to the prosecution, Smith shared with Gen Maj Sergey Chukhurov, the Russian military attache, the identities, addresses and telephone numbers of various British civil servants between October and December 2020.

A police raid on Smith's flat revealed he had taken photographs of staff security passes, organisational charts, posters and whiteboards in the embassy, and had shot a walkthrough video revealing some of the building's layout.

Officers also discovered emails and documents marked "secret" – apparently prepared for passing to his Russian contacts – and €800 in cash which could not be accounted for. Police said Smith was living beyond his means.

Smith, originally from Paisley, Renfrewshire, had been employed at the embassy in Berlin as a security guard for about eight years. At some point, prosecutors said he had become disillusioned with the west and become a supporter of Russia.

At his flat in Potsdam, just outside Berlin, police found a Russian flag in the corner of the living room, a Russian navy crest on the wall and a Soviet military cap carrying the hammer and sickle emblem.

Officers also found a draft letter addressed to Col Sivov, a previous Russian military attache, dated 14 May 2020, in which Smith said he worked at the embassy and wanted to remain anonymous.

The guard then offered to provide a book from the embassy's defence section marked "official sensitive", and suggested the Russian "might be able to make use of it".

Smith's lawyer said prosecutors had exaggerated his motivations, and that his actions were of a disgruntled employee, not a spy.

Matthew Ryder KC, defending, told the hearing on 4 November that "the seriousness of the allegations are disputed by Mr Smith", and that the security guard did not have any "negative intention against the UK".

Prosecutors, however, argued that Smith could have acted differently if he was unhappy in his job. "If Mr Smith had merely wanted to lash out and express his frustrations, he could have provided different information," the prosecution said.

They accused him of trying to damage the British embassy and the UK.

A trial of the facts to determine the length of Smith's sentence is expected to take place in February next year. Smith will be remanded in custody until that hearing is concluded.

<https://www.theguardian.com/world/2022/nov/11/british-embassy-guard-admits-giving-secrets-to-russians-in-berlin?>

The spy was hunted for years - may have sold out Säpo's entire personnel list

John Granlund

PUBLISHED: NOVEMBER 11

<https://www.aftonbladet.se/nyheter/a/wArPOn/misstankte-spionen-peyman-kia-42-jagades-i-aratal>

The security police suspected for years that there was a mole at the heart of the intelligence service - but they failed to stop the spying.

Now Peyman Kia, 42, and his brother Payam Kia, 35, are accused of selling defense secrets to a Russian contact in exchange for dollars and gold.

It appears from the investigation that Russia is suspected of having obtained quantities of top-secret reports - and Säpo's entire personnel list.

According to prosecutor Mats Ljungqvist, the top-secret spy investigation went on "for quite a long time" without anyone having any idea about those who leaked from Säpo .

- There were indications that there was a person within the authorities who could be a spy and based on that, the preliminary investigation worked to try to map who it could be, the prosecutor told Aftonbladet.

But on January 16, 2017, one person could be targeted: Peyman Kia.

At the time, he was employed as security manager at the Swedish Food Agency, and for several nights, Säpo's investigators got into his safe, computers and service rooms at the agency. His bank account was also checked time and time again.

But no sufficient evidence was found then.

PLUS: Peyman was arrested - then the brother broke the hard drive

Only after 4 years and 8 months did they have enough on their feet for an arrest and on September 20, 2021, Säpo attacked Peyman Kia in a dawn raid.

The preliminary investigation shows that he has read many sensitive intelligence reports from the Security Police and the Armed Forces for which he lacked authorization during the years when he worked for the two authorities.

It also appears that he handled a file that contained a "complete personnel list" of the employees of the Security Police.

Among the tasks was to support and produce documents for Säpo's management but also during periods to "run cases". In addition, according to the preliminary investigation, he is said to have retained authorizations for areas he no longer worked with, which provided additional transparency, and he also worked as a supervisor for new Säpo employees, which gave him access to their material.

Before Peyman Kia left Säpo, the reading frequency of sensitive reports must have increased, and among these reports there is material that was considered particularly sensitive within the authority:

- That is an extra sensitive and extra secret matter. You should not search for this type of information and should you happen to come across it, you should immediately go to your immediate manager and tell them what happened, says a Säpo employee in questioning.

The security police state in a press release that the man worked for them in 2014-2015, but the preliminary investigation shows in several places that he was also employed there in 2007-2011.

In questioning, a former Säpo colleague tells of how he had been out and about with Peyman Kia on "operations" but that he was later surprised that Kia sought contact with him after the employment ended.

Peyman Kia also worked at the Military Intelligence and Security Service Must where he is said to have read volumes of reports for which he was not authorized, according to the preliminary investigation, where it is established that the reports were handled on a computer that was manufactured after he left Must.

- It is completely insane, there is absolutely no reason and in that case Peyman has had this information after he left us. This should not happen, says a Must manager in questioning.

Large parts of the preliminary investigation are classified, but some of the suspected methods to escape Säpo's counter-espionage appear:

The security police suspect that Peyman Kia used so-called "dead mailboxes" where spy material can be left and later picked up by another person. In this case, it was about public toilets in the Uppsala area.

A spy camera was found at Peyman's brother Payam Kia, which is supposed to imitate a car key.

Both brothers have encrypted a lot of material on computers and USB sticks and after Peyman Kia was arrested, Säpo's detectives were able to follow how the younger brother destroyed a hard drive which he then threw in a bin. Parts of the hard drive could later be recreated.

The security police and prosecutors allege that the two brothers sold the material to Russia and Vladimir Putin's military spy agency GRU.

In the preliminary investigation, most things about Russia are masked as secrecy, but in a note from the younger brother, he writes about a failed meeting with "Rasski", who the prosecutors believe is the Russian contact.

Prosecutor Mats Ljungqvist does not want to reveal how much money it is suspected that the brothers earned from their business. As evidence, the investigators point to Peyman Kia handling at least 380,000 kroner in cash, dollars, only during the period 2016-2017. They also point to handling of gold to "hide" transactions.

- In our opinion, it is only part of the whole, but we have a clear idea of how much this is about, says Mats Ljungqvist.

PLUS: Peyman was arrested - then the brother broke the hard drive

Peyman Kia's lawyer Anton Strand says that his client "denies everything that is put against him".

- He denies crime. As can be seen, he has worked in a very complex environment and has done his very best and denies that he has done anything wrong.

The time in custody with severe restrictions has been trying, according to the lawyer.

- A detention period of over a year with severe restrictions is, of course, very exhausting for all people. It has been a frustrating time for him.

35-year-old Payam Kia also feels frustration, according to defense lawyer Björn Sandin.

- His attitude is as it has been all along. He denies wrongdoing and disputes responsibility. He has given answers to the questions that the prosecutor and the police had, so he is a little frustrated that the charges are brought against him today.

Why does he write about money and GRU?

- The problem is that I could give an explanation for that part, but it is covered by confidentiality, says Björn Sandin.

Prosecutor Mats Ljungqvist does not want to answer whether there are any additional suspects in the investigation or whether any person from the Russian embassy has been expelled, declared "persona non grata", due to the investigation.

- For reasons of principle, I do not want to comment on it, he says.

The two brothers face life in prison if convicted of the charge of aggravated espionage. The trial is expected to begin in two weeks in the Stockholm District Court.

<https://www.aftonbladet.se/nyheter/a/wArPON/misstankte-spionen-peyman-kia-42-jagades-i-aratal>

[Many thanks BRIXMIS]

In a Wary Arctic, Norway Starts to See Russian Spies Everywhere

December 12, 2022in News

<https://dnyuz.com/2022/12/12/in-a-wary-arctic-norway-starts-to-see-russian-spies-everywhere/>

TROMSØ, Norway — In hindsight, some things just didn't add up about Jose Giammaria.

For one, the visiting researcher at the University of Tromsø, in Norway's Arctic Circle, was ostensibly Brazilian. But he couldn't speak Portuguese. Then there was the fact that he self-funded his visit, an oddity in academia, and even planned to extend it — yet he never talked about his research. But he was always helpful, even offering to redesign the home page for the Center for Peace Studies, where he worked.

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That was until Oct. 24, 2022, when Norway's security police, the PST, arrived with a warrant to search his office. Days later, they announced his arrest as a Russian spy, named Mikhail Mikushin.

The revelation sent a chill through campus, said Marcela Douglas, who heads the Center for Peace Studies, which researches security and conflict. "I started to see spies everywhere."

So is Norway, and much of the rest of Europe, too.

As the war in Ukraine bogs down and Moscow's isolation increases, European nations have grown wary that a desperate Kremlin is exploiting their open societies to deepen attempts at spying, sabotage and infiltration — possibly to send a message, or to probe how far it could go if needed in a broader conflict with the West.

Mr. Mikushin is one of three Russians recently arrested in Europe on suspicion of being "illegals" — spies who embed in a local society for long-term espionage or recruitment. In June, an intern at the International Criminal Court, also with a Brazilian passport, was arrested in The Hague and charged with spying for Russia. In late November, a Swedish raid caught a Russian couple accused of espionage.

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Other suspicious incidents have popped up across Europe: In Germany, drones found flying over military sites where Ukrainians forces were being trained are strongly suspected by German officials of being Russian intelligence. Undersea cables cut in France, while not attributed to malignant intent, have raised suspicions among security analysts. And a hack of fuel distribution networks in Belgian and Germany days before Russia's invasion also raised alarm.

Not all of the incidents can be traced to the Kremlin with certainty, and in many places, heightened vigilance and real concern have become hard to separate from widening paranoia. Russia has called a string of recent Norwegian arrests, mostly of Russian citizens for flying drones, a form of "hysteria."

Norway, however, may have more reasons to worry than most.

Now that Western sanctions have all but cut off Russian fossil fuels to Europe, Norway is the biggest oil and gas supplier to the continent. Off its Arctic coast lie underwater cables that are critical for internet servicing for the financial hub of London, and for passing satellite imagery from the high north, where Norway borders Russia for 123 miles, across the Atlantic to the United States.

That vital role has felt all the more vulnerable since September, when explosions destroyed the Nord Stream pipelines between Russia and Germany, and for which Moscow and Washington have traded blame.

"It was a wake up call. The war is not only in Ukraine. It can also affect us, even if it is hard to attribute," said Tom Røseth, a professor at the Norwegian Defence University College.

A number of more conventional Russian spies have been rounded up and expelled in recent years, possibly making Russia more reliant on sleeper agents, especially as the war in Ukraine stumbles.

The recent surge in cases, Mr. Røseth said, reflected Russia's need for its dormant spies to come through.

"At this point in time in Europe, with the pressure of the situation that Moscow is in, it wants its network to deliver," he said. "Even though these activities have been there before, I think they take higher risks now."

In Norway's case, unease began rising after a military-grade drone was spotted in September over an oil platform in the North Sea. Soon, there were more drone sightings over oil and gas installations, and a power station. In October, the Bergen airport, located near the country's largest naval base, was closed for two hours after drones were observed in the area.

Norwegians began questioning other incidents that had happened earlier in the year: An underwater cable damaged in January, which transmitted satellite images for Western space agencies. A damaged water reserve near several military sites, not far from Tromsø. What if these were not accidents or troublemakers, but Russian sabotage?

"Attacks like that are useful — same as surveillance over oil rigs," said Ole Johan Skogmo, a regional police inspector, who said the PST is still investigating the damaged water reserve. "We don't know exactly who did it. But now, they know that we know someone could do it."

Norwegian citizens have dutifully responded to warnings to be alert, inundating police with calls over drone sightings, or foreigners allegedly acting suspicious.

But now, some worry that hyper vigilance has gone too far, especially in terrain as murky as suspected espionage.

On a recent afternoon, in the pitch black of Arctic winter, Tromsø's tiny regional courthouse was hearing two cases against Russian citizens accused of flying drones.

Neither was accused of spying, which is hard to prove. Instead, they were charged with violating European sanctions that ban Russians from flying aircraft, which Norway is now interpreting to include Russian individuals operating hobby drones.

Seven Russians were arrested in mid-October for flying drones, and four have been put on trial. Two have been convicted and ordered to serve prison sentences of 90 or 120 days.

Among those caught up in the arrests is Andrey Yakunin, the son of Vladimir Yakunin, a longtime ally of Russia's president, Vladimir V. Putin, in a trial closely followed across the country.

The younger Yakunin, a businessman who lives in the United Kingdom and holds British citizenship, has distanced himself from Russia's invasion.

He was arrested after his yacht, the Firebird, was stopped by Norwegian authorities, who asked if he had a drone. He showed them a drone used to capture images of himself and his crew skiing and fishing among the glacial landscapes of Arctic Norway.

Prosecutors are pursuing a 120-day sentence.

“For sure I’m not a spy — though I do own a full collection of James Bond movies,” joked Mr. Yakunin, in an interview after his trial began on Dec. 3.

Speaking to the Times, Mr. Yakunin refused to comment on whether his arrest was political, but argued it was an oddity that he and three other men were all arrested over a short period in October: “As a student of statistics, this does not fit normal distribution.”

Across the hall, in a tiny courtroom away from the cameras, a graying man in denim, Aleksey Reznichenko, a Russian engineer, tearfully pleaded his own case in a much lower profile trial. He was arrested after taking pictures of fences and the parking lot outside the control tower at Tromsø airport.

“It was a gut feeling,” said Ivar Helsing Schrøen, the air control manager, who grew suspicious and called the police. “Something was very strange.”

In court, Mr. Reznichenko teared up as he spoke through a translator in Russian, saying he feared for his family, for whom he was the sole breadwinner.

He was found with photographs of a military helicopter and the nearby Kirkenes airport. He said that taking photos of aircraft and airports is a longtime hobby. But in any case, neither photograph was illegal. Instead, Mr. Reznichenko was charged for flying a drone.

Prosecutors and defense attorneys alike say that in prosecuting such cases Norway has crossed into a legal gray area that challenges its democratic values.

The Mikushin case has sparked a tussle between security analysts and academics over how strictly to monitor and restrict foreign researchers or international collaboration, which could have a chilling effect on important research.

In the drone cases, Mr. Yakunin’s and several other defense lawyers have argued that sanctioning Russians based on nationality is discriminatory, and potentially a human rights violation.

“There is a question whether this is the law — but if the law’s wording covers this, the law is a problem,” said John Christian Elden, Mr. Yakunin’s lead lawyer.

The country itself seems to be conflicted as to how to handle the situation. The judges in both Mr. Yakunin and Mr. Reznichenko’s cases have now decided to acquit them. But prosecutors are appealing both cases. Mr. Yakunin will be back in Tromsø’s court in January.

“I am not out of the woods yet,” he told journalists after being released from custody.

Ola Larsen, Mr. Reznichenko’s lawyer, said Norway’s PST was being unusually aggressive to make a point.

“Politics is playing a role,” she said. “They want to make a statement to the Russians.”

Security jitters in Norway’s Arctic were high before the invasion of Ukraine. The northern frontiers had friendly relations among locals, who trade with one another, but there have been several suspected espionage cases, dating back to the Cold War.

Some espionage cases have bordered on the comical. In 2019 a beluga whale found by Norwegian fisherman in its Arctic waters was widely speculated to be a “spy whale” escaped from Russia’s military. Norwegian media dubbed him “Hvaldimir” — a portmanteau of the Norwegian word for whale and the name Vladimir.

Yet those like Mr. Schrøen, the airport control manager, insist caution is always warranted. Checking the news from his tower, just a few miles from the courthouse, he felt no guilt over sending a man to trial.

Spies, he says, are definitely interested in the Arctic: “You’d have to be naïve to think it was otherwise

<https://dnyuz.com/2022/12/12/in-a-wary-arctic-norway-starts-to-see-russian-spies-everywhere/>

Swedish police drop from the sky to arrest couple for ‘spying’

Oliver Moody

Wednesday November 23 2022, 12.01am, The Times

<https://www.thetimes.co.uk/article/swedish-police-drop-from-the-sky-to-arrest-couple-for-spying-gcj5b3j9p>

The early-morning raid in a Stockholm suburb was conducted in less than a minute to prevent the suspects from destroying incriminating information

A married couple in Sweden have been arrested on suspicion of spying for nearly a decade, days after the authorities exposed two alleged Russian moles in the security services.

The pair, who have not been named but are believed to be in their sixties and to have moved from Russia about 20 years ago, were detained at a villa in a Stockholm suburb. The early-morning raid, in which police abseiled from helicopters, was conducted in less than a minute to prevent the suspects from destroying incriminating information.

Swedish officials have been tight-lipped about the details of the suspected spying. The man is accused of “gross illegal espionage activities” over a period of at least ten years, while his wife is alleged to have assisted him.

Sapo, Sweden’s main counter-intelligence service, said the espionage had been directed against Sweden and several other countries, although it declined to specify which ones.

The investigation had been planned for “some time” by Sapo, the police and the armed forces, according to Stefan Hector, head of the national operations division of the Swedish police.

Sapo insisted the case had nothing to do with the recent arrest of two Iranian-born brothers alleged to have spied for Russia for a decade while working for the armed forces and intelligence services.

Peyman and Payam Kia, 42 and 35, are said to have worked in agencies including the Office for Special Acquisition, the most sensitive part of Sweden’s military intelligence.

Prosecutors believe they were passing information to the Russian GRU military intelligence agency, one of the Kremlin's most powerful espionage wings. One intelligence expert has said the spy scandal has the potential to be the most damaging in Sweden's modern history. Their trial is expected to begin this week.

Counter-intelligence officers are believed to have been monitoring Peyman Kia for at least five years. It is unclear whether the timing of the four arrests was coincidental or reflects a systematic operation to root out suspected moles.

<https://www.thetimes.co.uk/article/swedish-police-drop-from-the-sky-to-arrest-couple-for-spying-gcj5b3j9p>

[Thanks BRIXMIS]

Mossad head reveals how Syria found Eli Cohen, discloses spy's final message

Inaugurating museum named for legendary secret agent, Barnea says Cohen was caught because his cables were 'intercepted and triangulated,' not because he transmitted too frequently

By TOBIAS SIEGAL

12 December 2022, 4:32 pm

<https://www.timesofisrael.com/mossad-head-reveals-how-syria-found-eli-cohen-discloses-spys-final-message/?s=09>

Mossad chief David Barnea on Monday revealed the last message sent out by legendary Israeli spy Eli Cohen on the day of his capture in Syria, along with new information on what led to his arrest.

Amid years of dispute over the circumstances of Cohen's cover being blown, — it has been alleged that he transmitted too often, or was pressured by his handlers — Barnea said new "in-depth" research had definitively established that Cohen was captured "simply because his transmissions were intercepted and triangulated by the enemy."

"Eli Cohen was among our best agents," Barnea said at an event marking the inauguration of the new Eli Cohen Museum in Herzliya.

Barnea praised Cohen's "fighting spirit, courage, values and devotion" and said he serves as "a source of inspiration" for all Mossad personnel.

"We all learn from him, even today, from his Zionism, his sacrifice and his dedication."

By signing up, you agree to the terms

Cohen infiltrated the top echelons of Syria's political leadership in the years leading up to the 1967 Six Day War. The information he obtained is believed to have played a key role in Israel's overwhelming success in that war.

The last transmission received by Israel from Israeli spy Eli Cohen on January 19, 1965, which was revealed by Mossad chief David Barnea during the inauguration ceremony of the Eli Cohen Museum in Herzliya, December 12, 2022. (Mossad)

He was caught in 1965 and hanged in Damascus. But the circumstances surrounding his capture have since been disputed and are a source of an ongoing debate. Some have argued that Cohen failed to follow procedures and had attempted to send out too many messages, which drew the Syrians' attention. Others have blamed Cohen's superiors, saying he had been put under immense pressure to provide new information, which led to his capture.

Nearly 60 years later, Barnea provided an answer, albeit a vague one.

"I will honor this holy place and reveal, for the first time, following in-depth research that was carried out recently, that Eli Cohen was not captured due to the quantity of his transmissions or pressure from headquarters to transmit too frequently," he said.

"Eli Cohen was captured simply because his transmissions were intercepted and triangulated by the enemy," Barnea said. "This is now an intelligence fact."

He also revealed the content of Cohen's last transmission, received on January 19, 1965, the day he was captured.

Cohen's last report was "about a discussion at the Syrian General Staff with the participation of then-president Amin Al-Hafez," Barnea said.

He said the Mossad would donate the original document containing Cohen's transmission to the new museum established in his memory.

Barnea praised Cohen's "contribution to the security of Israel" and said Israel's national intelligence agency would continue to seek more information about the time Cohen spent in Syria.

He also vowed to continue the search for Cohen's remains.

In February 2021, it was reported that Russia, in cooperation with Syrian authorities and under Israeli pressure, was searching the area of the Yarmouk refugee camp in southern Damascus for Cohen's body in order to transfer it to Israel.

From right to left: Mossad chief David Barnea; Nadia Cohen, widow of late Israeli spy Eli Cohen; First Lady Michal Herzog; and President Isaac Herzog seen at the opening ceremony of the Eli Cohen Museum in Herzliya, December 12, 2022. (Avshalom Sassoni/Flash90)

The following month, an object believed to have belonged to Cohen was reportedly transferred to Israel. Quoting an unnamed Syrian government source, Israeli reports said at the time that the item could be a document or an article of Cohen's clothing.

Then-prime minister Benjamin Netanyahu's office denied the reports and it remains unknown whether such an object actually existed

<https://www.timesofisrael.com/mossad-head-reveals-how-syria-found-eli-cohen-discloses-spys-final-message/?s=09>

FBI agents raid home of sleuth on the trail of Area 51's secrets

Keiran Southern - Los Angeles

Taken from the TIMES 18/11/2022

For the past 23 years, Joerg Arnu has been a man on a mission to reveal the top secret military projects to be found in a corner of the Nevada desert known as Area 51.

Arnu, who gives little credence to longstanding claims that aliens may be found at the base, has built up a devoted following for his conspiracy website, Dreamland Resort. On it, he monitors comings and goings at the mysterious test base.

Area 51 was founded in 1955 to test the newly developed U-2 spy aircraft. It is claimed to be the test centre for the next generation of US secret aircraft.

However, it appears Arnu has gone too far after his homes in Rachel, a tiny settlement next to the base, and in Las Vegas were searched by the FBI and the Air Force Office of Special Investigations.

Arnu said that between 15 and 20 agents in riot gear ransacked the properties to “send a message” to other sleuths.

According to Bryon McGarry, spokesman for Nellis air force base in Las Vegas, the authorities seized potential evidence. “This is an open and ongoing law enforcement investigation between the Las Vegas FBI and Air Force OSI,” McGarry said.

Arnu, who described himself as a senior citizen, said they may have been prompted by aerial pictures of Area 51 on his website. He said the experience was “humiliating” for him and his partner.

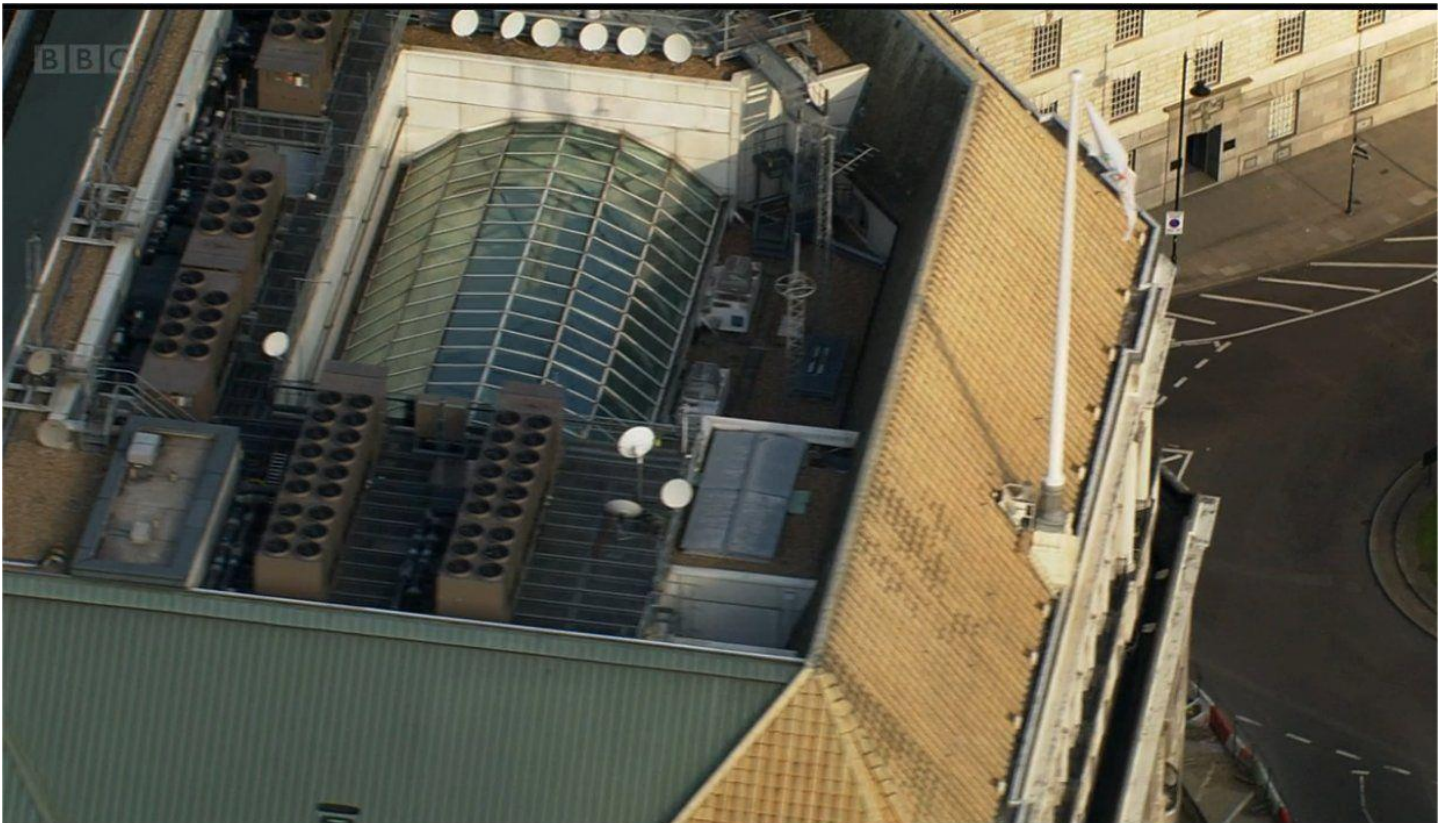
“All my laptops, phones, memory sticks, cameras, drone and other items were seized,” he said on his website. “I was left in Rachel with two broken doors, broken furniture and zero means to communicate. Our Vegas home fared a little better, with a broken front door and torn down blinds.”

Arnu said he had lost “all my data”, including medical documents and financial and tax records. He is facing a bill of at least \$25,000 for repairs and legal costs.

“To the best of my knowledge I have not broken the law,” Arnu said. He added that the search warrant had 40 pages missing and the FBI had not returned his calls.

Area 51 has been the subject of what the US government describes as conspiracy theories involving stories of aliens. Bob Lazar, an Area 51 “whistleblower”, claims he was employed to reverse-engineer alien technology, though critics accuse him of perpetrating a hoax.

Arnu’s website includes a claimed sighting in October last year of a Northrop Grumman RQ-180 drone, a stealth aircraft whose existence has not been acknowledged by the Pentagon.



An image of Thames House roof screened by BBC in the ‘Torchwood’ series

North Korea boasts about new spy satellite pictures - but analysts have some bad news

Grainy black-and-white images of Seoul captured by a new 'military reconnaissance satellite' dismissed as 'useless' by experts
By Julian Ryall IN TOKYO 19 December 2022 • 1:49pm

Images of Seoul that North Korea has boasted were captured by a new “military reconnaissance satellite” have been dismissed as “useless” by analysts.

Grainy black-and-white pictures of the South Korean capital and the port city of Incheon were published in Monday’s edition of the state-run Rodong Sinmun newspaper, along with images of the rocket that launched the satellite into orbit over the weekend.

The North’s National Aerospace Development Administration reported that the launch had been designed to test cameras, control equipment and the transmission of images to a ground station.

A NADA official said the launch had been “an important success” that served as the “final gateway” to the placing of spy satellites in orbit in the future.

Images unlikely to be useful for military

But security analysts are not as impressed.

Soo Kim, a security analyst at the RAND Corporation in California, said the images were unlikely to be good enough to be useful to the army.

“From the images released, the resolution does not appear to be so impressive for military reconnaissance,” Ms Kim told the Associated Press.

Martyn Williams, founder of the North Korea Tech blog, went further.

“The image is 20m [65.6 feet] resolution taken at 500 km [310.7 miles], which is useless for military recon,” he said.

Others described the images released by Pyongyang as “crude” and primarily designed to allow the North to boast about its new intelligence-gathering capability.

A rocket with the test satellite is launched at the Sohae Satellite Launching Ground in North Korea on Sunday CREDIT: KCNA via KNS

The new images come a little over 10 years after the North launched its first satellite, the Kwangmyongsong-3, describing it as “a proud fruition of the Workers’ Party of Korea’s policy of attaching importance to science and technology”.

The satellite achieved orbit and Pyongyang insisted it was operating as planned, although Western sources said it was “tumbling” and probably out of control.

Pyongyang seems to be determined to push ahead with the project, despite international sanctions and much of its population reportedly hungry, with the regime’s space agency announcing, “It would finish the preparations for the first military reconnaissance satellite by April 2023”.

The birthday of Kim Il-sung, the founder of the North Korean nation who died in 1994, falls on April 15 and it is likely that Kim Jong-un, his grandson, will time the launch of a satellite to coincide with that red letter day on the North Korean calendar.

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

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.

From the beginning of October, all M01 transmissions for October were sent using a single carrier vs usual 'Two-Tone' transmission mode. This change has been noted before, possibly due to maintenance or repair of the transmitter normally in use.

November 2022:

4490	2000z	01 Nov	'197' 412 30 == 64738 ... 73543 ==	Good, fast. Well sent grps with two jumbled sequences	BR	TUE
	2000z	03 Nov	'197' 791 30 == 46546 ... 44321 ==	Good, fast. Excellent Morse. Error Grp04 97989 97980	BR/HFD	THU
	2000z	08 Nov	'197' 379 30 == 75675 ... 00132 ==	Strong, fast. Excellent Morse. Error sent grps29-30	BR	TUE
	2000z	10 Nov	'197' 651 30 64753 ... 73739	Good, fast. Irregular. Numerous errors. Both = = omitted	BR	THU
	2000z	15 Nov	NRH		BR	TUE
	2000z	17 Nov	'197' 515 30 == 63001 ... 00123 ==	Good, fast. Excellent Morse. Errors noted grps 03 & 20	BR	THU
	2000z	22 Nov	'197' 344 30 == 57677 ... 50988 098 = =	Strong, fast. Many errors inc. strings. 6-dots spaced end	AB/BR	TUE
	2000z	24 Nov	'197' 409 30 == 78305 ... 95603	Good, fast. Error grp01 & ending 409 409 30 30 = = 000	BR	THU

5320	1800z	01 Nov	'197' 603 30 == 64738 ... 025125 ==	Good, fast. Well sent grps with two jumbled sequences	BR	TUE
	1800z	03 Nov	'197' 789 30 == 46546....		HFD	THU
	1800z	08 Nov	NRH		BR	TUE
	1800z	10 Nov	'197' 117 30 56783 ... 74880	Good, fast. Irregular Morse with errors. Both == omitted	BR	THU
	1800z	15 Nov	NRH		BR	TUE
	1800z	17 Nov	'197' 410 30 == 87463 ... 69814 ==	Good, fast. Excellent Morse. Perfect but only 29 grps sent	BR	THU
	1800z	22 Nov	'197' 143 30 == 11090 9 ==	Good, V.fast. Many errors inc. strings. 6-dots spaced end	AB/BR	TUE
	1800z	29 Nov	'197' 754 30 == 91736 ... 91837 ==	Good, fast. Much repetition in grps. Last 3 grps all 91837	BR	TUE
5465	0700z	06 Nov	'197' 109 30 == 91352....		HFD	SUN
5810	1500z	05 Nov	'197' 585 30 46716 ... 65912	Good, fast. Start & end == omitted. Last 5 grps jumbled	BR/HFD	SAT
	1500z	12 Nov	'197' 541 30 == 54678 ... 89991 ==	Good/ strong. Fast, irregular Morse. Two corrected errors	BR	SAT
	1500z	19 Nov	'197' 656 30 == 67765 ... 10988 ==	Good, Med-fast, irregular. Two errors. Only 28 grps sent	BR	SAT
	1507z	26 Nov	'197' 512 30 == 34256 ... 34268 ==	Late start	AB	SAT

December 2022:

5320	1800z	01 Dec	'197' 729 30 == 85674 ... 23140 ==	Good, fast. Excellent Morse. DK & GC reversed at end	BR	THU
	1800z	08 Dec	'197' 204 30 == 46576 ... 74745644 ==	Good, fast. Many errors inc. strings. 6-dot spaced ending	BR	THU
	1800z	13 Dec	'197' 984 30 == 93847 ... 16342 ==	Good, fast. Errors in 1st half – Perfect for 2 nd half of msg	BR	TUE
	1800z	29 Dec	'197' 317 30 == 01746 ... 87165 ==	30 30 000	AB	THU
4490	2000z	01 Dec	'197' 745 30 == 27596	Fair, fast. Started fair then weak unreadable. Errors noted	BR	THU
	2000z	06 Dec	'197' 365 30 == 19560 ... 01011 ==	Weak, fast. Poor copy	BR	TUE
	2000z	08 Dec	'197' 244 30 == 57656 ... 86100919 ==	Good, fast. Many errors inc. strings. 6-dot spaced ending	BR	THU
	2000z	13 Dec	'197' 142 30 == 18746 ... 41526 ==	Weak, fast. Excellent Morse. Difficult copy with errors	BR	TUE
	2000z	15 Dec	NRH		BR	THU
	2000z	20 Dec	'197' 497 30 == 46535 ... 26354 ==	Strong, fast. Good Morse. Error grp20 short repeat grp	BR	TUE
	2000z	22 Dec	'197' 909 30 == 27032 ... 31093 ==	Strong, fast. Error grp11 67352 07352	BR	THU
5810	1500z	03 Dec	NRH		BR	SAT
	1500z	10 Dec	'197' 713 30 == 34256 ... 34268 ==	Strong, fast. Occasional hesitant delivery. No errors	BR	SAT
	1500z	17 Dec	'197' Station present but swamped by Dutch pirate station on 5810kHz		BR	SAT
	1500z	24 Dec	'197' 415 30 == 57678 ... 1998 ==	Strong, fast. Many errors inc. strings. 6-dot spaced ending	BR	SAT

M01	5810kHz	1507z	26 November 2022	M01	5810kHz	1500z	10 December 2022
197 (R4m)	512	512	30 30 ==	197 (R4m)	713	713	30 30 ==
34256	87965	13250	57683 24649 10947 32658 43520 10342 27032	45712	39602	71805	95402 70361 80903 32709 80115 30501 95402
01042	26082	21072	28091 21022 23111 27110 09041 34278 19342	73836	92785	30502	11374 17920 12805 71803 20964 50107 19703
95647	18465	25638	19678 24365 75649 67598 31746 94581 34268	30802	33507	50181	47309 95732 23804 36961 05407 32809 10491
==				==			
512	512	30	30 000	713	713	30	30 000
			Courtesy AB				Courtesy BR

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

A number of regular schedules have been reported & Logged by Edd Smith – See ENIGMA 2000 Newsletter 116 for details.

Logs are shown as continuous. In practice there are often pauses between lines – Often quite lengthy pauses.

6454	1835z (IP)	13 Dec 333 473 50 28963 97835 ... 08936 75631 = 473 50 000	AB	TUE
			Message repeated		
			111 333 473 50 28963 97835 ... 08936 75631 = 473 50 000	AB	TUE
1850z	13 Dec	Another message at 1850z but too weak to copy.			

M01	6454kHz	1835z (In Progress then repeated)	13 Dec 2022
111	333	=	473 50
28963	97835	90567	54086 73251 75634 08697 53736 94087 75621
94086	75361	28937	18625 37264 36250 08963 73890 67567 38934
76936	75874	37873	93605 76984 38006 37006 93573 64053 76937
62053	93456	76963	76934 76983 38969 87567 97653 38930 08936
21635	16735	16996	88790 86375 93605 74053 76934 08936 75631
=	473	50	000
			Courtesy AB

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.

Asiatic M12 Logs

16184/14784/13484	0300/20/40z	01 Nov	174 1		(Via SDR Japan)	HFD	TUE
	0300/20/40z	17 Nov	174 1 (668 102) 03292 73258....		(Via SDR Japan)	BR	THU
16275/15975/14675	0010/30/50z	07 Nov	296 1		(Via SDR Russia)	HFD	MON
14354/12154/11154	0300/20/40z	13 Dec	311 1 (9890 112) 04325 34057....		(Via SDR Japan)	BR/HFD	TUE
	0300/20/40z	22 Dec	311 000		(Via SDR Japan)	BR	THU
14947/13447/12147	0010/30/50z	19 Dec	941 1 (6643 180) 03609 84771....		(Via SDR Japan)	BR	MON

European M12 Logs

November 2022: New scheds in bold type

6859/7459/7959	2200/20/40z	04 Nov	849 1 (4517 184) 89846 05043....			BR	FRI
	2200/20/40z	05 Nov	849 1 (4517 184) 89846 05043....			Gert/HFD	SAT
	2200/20/40z	11 Nov	849 1 (9029 150) 14753 01375....			BR	FRI
	2200/20/40z	18 Nov	849 1 (9029 150) 14753 01375....			BR	FRI
	2200/20/40z	19 Nov	849 1 (9029 150) 14753 01375....			BR	SAT
	2200/20/40z	25 Nov	849 1 (251 92) 74126 09232....			BR	FRI
	2200/20/40z	26 Nov	849 1 (251 92) 74126 09232....			BR	SAT
6874/8074/9374	0030/0050/0110z	01 Nov	803 1			HFD	TUE
6917/5817/5117	2000/20/40z	02 Nov	981 1 (300 88) 15770 25617....			BR/HFD	WED
	2000/20/40z	04 Nov	981 1 (300 88) 15770 25617....			BR	FRI
	2000/20/40z	09 Nov	981 1 (300 88) 15770 25617....			BR	WED
	2000/20/40z	11 Nov	981 1 (300 88) 15770 25617....			BR	FRI
	2000/20/40z	16 Nov	981 1 (8006 105) 41818 08825....			BR	WED
	2000/20/40z	18 Nov	981 1 (8006 105) 41818 08825....			BR	FRI
	2000/20/40z	23 Nov	981 1 (8006 105) 41818 08825....			BR	WED
	2000/20/40z	25 Nov	981 1 (8006 105) 41818 08825....			BR	FRI
	2000/20/40z	30 Nov	981 000			BR	WED
6937/5737/4537	2210/30/50z	03 Nov	975 000			BR/HFD	THU
	2210/30/50z	07 Nov	975 000			BR	MON
	2210/30/50z	10 Nov	975 000			BR	THU
	2210/30/50z	14 Nov	975 1 (162 69) 52840 78742....			BR	MON
	2210/30/50z	17 Nov	975 1 (162 69) 52840 78742....			BR	THU
	2210/30/50z	24 Nov	971 1 (365 118) 27153 84096....			BR	THU
	2210/30/50z	28 Nov	971 000			BR	MON
10446/9046/7946	2300/20/40z	03 Nov	392 000		Weak	BR/HFD	THU
	2300/20/40z	10 Nov	392 000			BR	THU
	2300/20/40z	17 Nov	392 1 (8866 99) 36779 50950....			BR	THU
	2300/20/40z	24 Nov	392 1 (8866 99) 36779 50950....			BR	THU
11435/10598/9327	1800/20/40z	05 Nov	938 1 (5644 76) 51923 42972....			BR/HFD	SAT
	1800/20/40z	12 Nov	938 1 (6921 72) 74183 43624....			BR	SAT
	1800/20/40z	19 Nov	938 1		Weak	BR	SAT
	1800/20/40z	26 Nov	938 1 (2373 79) 75553 54464....		Weak	BR	SAT
12205/13559/14728	1230/1250/1310z	07 Nov	973 1			HFD	MON
	1230/1250/1310z	14 Nov	973 1 (7609 62) 26083 60191....			BR	MON
	1230/1250/1310z	21 Nov	973 1 (7622 62) 99050 39386....			BR	MON
	1230/1250/1310z	28 Nov	973 1 (1076 58) 10145 42028....			BR	MON
13386/12189/11491	1110/30/50z	03 Nov	725 1			HFD	THU
	1110/30/50z	10 Nov	725 1 (4598 94) 93577 00114....			BR	THU
	1110/30/50z	17 Nov	725 1 (9370 97) 37649 14929....			BR	THU
	1110/30/50z	24 Nov	725 1 (7460 97) 95003 85275....			BR	THU
15946/17446/ - - -	0900/20/40z	01 Nov	942 000			AB/HFD	TUE
	0900/20/40z	04 Nov	942 000			Gert	FRI
	0900/20/40z	15 Nov	942 000			BR	TUE
16292/14892/14392	1400/20/40z	03 Nov	283 1			HFD	THU
	1400/20/40z	17 Nov	283 1 (274 59) 26246 13054....			BR	THU
	1400/20/40z	24 Nov	283 1 (7192 180) 65277 76127....			BR	THU
	1400/20/40z	28 Nov	283 000			BR	MON
17432/18532/ - - -	0800/20/40z	02 Nov	451 000			HFD	WED

December 2022:

5832/6832/7732	2200/20/40z	02 Dec	887 1 (251 92)	74126 09232 ... 04799 17885 000 000	BR/Gert	FRI	
	2200/20/40z	03 Dec	887 1 (251 92)	74126 09232 ... 04799 17885 000 000	Gert	SAT	
	2200/20/40z	09 Dec	887 1 (436 82)	61777 30305....	BR/HFD	FRI	
	2200/20/40z	10 Dec	887 1 (436 82)	61777 30305....	BR/HFD	SAT	
	2200/20/40z	17 Dec	887 1 (436 82)	61777 30305....	BR/Gert	SAT	
	2200/20/40z	23 Dec	887 000		BR	FRI	
	2200/20/40z	24 Dec	887 000		BR	SAT	
	2200/20/40z	31 Dec	887 000		BR	SAT	
6792/5892/5092	2000/20/40z	02 Dec	780 00		BR/Gert/HFD	FRI	
	2000/20/40z	09 Dec	780 1 (315 147)	75100 76284....	BR	FRI	
	2000/20/40z	14 Dec	780 000		BR	WED	
	2000/20/40z	16 Dec	780 000		BR	FRI	
	2000/20/40z	21 Dec	780 1 (5533 165)	69471 36858 ... 68598 84258 000 000	Gert	WED	
	2000/20/40z	23 Dec	780 1 (5533 165)	69471 36858....	BR	FRI	
6832/7532/8132	0030/0050/0110z	02 Dec	851 000		Gert	FRI	
	0030/0050/0110z	13 Dec	851 1 (5081 178)	29340 05191....	BR	TUE	
	0030/0050.0110z	23 Dec	851 000		Gert	FRI	
9134/8134/7534	2300/20/40z	01 Dec	457 000		Very weak	Gert	THU
	2300/20/40z	05 Dec	457 1 (160 113)	86626 91090...	BR	MON	
	2300/20/40z	08 Dec	457 1 (160 113)	86626 91090....	BR/HFD	THU	
	2300/20/40z	12 Dec	457 000		BR	MON	
	2300/20/40z	15 Dec	457 000		BR	THU	
	2300/20/40z	19 Dec	457 1 (441 95)	12761 25110....	BR	MON	
	2300/20/40z	22 Dec	457 1 (441 95)	12761 25110 ... 44579 22342 000 000	Gert	THU	
	2300/20/40z	29 Dec	457 000		BR	THU	
11435/10598/9327	1800/20/40z	10 Dec	938 1 (8923 75)	. .9 . . .2588	Very Weak	BR	SAT
12205/13559/14728	1230/1250/1310z	12 Dec	973 1 (6229 60)	51525 05648....	BR	MON	
	1230/1250/1310z	26 Dec	973 1 (9573 64)	11075 55862....	BR	MON	
13386/12189/11491	1110/30/50z	08 Dec	725 1 (3113 92)	21909 87571....	BR	THU	
	1110/30/50z	15 Dec	725 1 (1707 95)	58085 49856....	BR	THU	
	1110/30/50z	22 Dec	725 1 (8576 98)	39511 07268 ... 91553 13866 000 000	Gert	THU	
14947/13447/12147	0010/30/50z	05 Dec	941 1		HFD	MON	
15842/16142/ - - -	0900/20/40z	02 Dec	812 000		AB/Gert/HFD	FRI	
	0900/20/40z	09 Dec	812 000		Gert	FRI	
	0900/20/40z	23 Dec	812 000		Gert	FRI	
	0900/20/40z	27 Dec	812 000		Gert	TUE	
15909/14609/13909	1400/20/40z	01 Dec	969 000		BR/HFD	THU	
	1400/20/40z	08 Dec	969 1 (245 131)	24079 73010....	BR	THU	
	1400/20/40z	12 Dec	969 000		BR	MON	
	1400/20/40z	15 Dec	969 000		BR	THU	
	1400/20/40z	19 Dec	969 1 (8285 98)	37471 67336 ... 86488 06923 000 000	Gert	MON	
	1400/20/40z	22 Dec	969 1 (8285 98)	37471 67336 ... 86488 06923	Gert	THU	
	1400/20/40z	26 Dec	969 000		BR	MON	
16234/17434/18234	0800/20/40z	04 Dec	242 000		Gert/HFD	SUN	
	0800/20/40z	07 Dec	242 1 (8151 212)	61781 36292 ... 83141 43537 000 000	Gert	WED	
	0800/20/40z	18 Dec	242 1 (8151 212)	61781 36292 ... 83141 43537 000 000	Gert	SUN	
	0800/20/40z	28 Dec	242 000		Gert	WED	

M12 6792/5892/5092kHz 2000/2020/2040z 21 Dec 2022

780 780 780 1 (R2m) 5533 165 5533 165

69471 36858 48390 22065 01748 36349 69193 46795 51535 84937
52977 89351 32586 38498 83905 12220 73631 01513 65159 42783
44642 33702 39350 76510 70687 45587 11150 19921 04880 80422
24223 92898 15764 28434 57878 55297 22597 06302 29172 94188
06533 65237 96769 71398 47854 97152 72939 39005 14502 71297
65207 12284 85958 53785 80270 02944 14296 17214 90017 79442
89070 98551 95140 29606 49258 15410 95468 73861 45785 34212
38127 21702 66799 58486 08153 18467 35189 54390 19834 94128
13998 72433 50707 34292 53680 34939 79676 20690 22896 29365
75690 87465 85762 66142 19092 54653 19937 61610 81199 22001
66917 40743 21941 83497 07019 38409 13126 35397 16480 50421
77745 97492 36024 48056 01134 25360 74737 18167 52753 74257
10260 60349 83820 67944 54075 21125 75422 91306 51625 68317
51629 00324 68532 85724 52344 57248 51209 62489 99017 54332
25153 39285 71045 44566 55484 62274 39855 20948 19772 42633
02013 21048 31850 60002 52857 09794 11848 05281 70142 69182
68868 53136 80155 68598 84258 000 000

*Courtesy Gert***M12 9134/8134/7534kHz 2300/2320/2340z 22 Dec 2022**

457 457 457 1 (2m) 441 95 441 95

12761 25110 31135 72188 48176 99627 88357 28566 29337 34680
84794 66758 20931 10053 50460 66010 75062 24221 19158 94432
36085 24994 51769 69569 10860 96595 42484 89763 65304 25977
44049 91930 79787 83247 05004 04117 80456 05079 27791 02424
31335 54484 14073 27737 57030 83107 22001 64257 17670 22234
24521 53617 52063 35176 92619 50127 12669 41329 42008 24372
27303 75183 15180 86507 56005 23755 36308 83492 29986 96906
89679 81242 28879 67488 89567 57832 65359 39277 54330 04453
74000 86787 67041 75960 55931 73926 52539 73574 94944 33007
47101 51438 06197 44579 22342 000 000

Courtesy Gert

M14 IA MCW / ICW Short 0**November 2022:**

10243	0520z	01 Nov	952 (178 53) = 51732....	(Via SDR Japan)	HFD	TUE
12211	0500z	01 Nov	952 (178 53) = 51732....	(Via SDR Japan)	HFD	TUE

December 2022:

No logs

M23 O ICW**M23 – Very Active from Mid- November through December.**

M23 reappeared in Mid-November & once again we owe a debt to Ary, (AB), for alerting us to its return. Although not the most interesting station to monitor with its repetitive content, it is certainly one of the most intriguing.

Whoever is responsible for these transmissions is going to a lot of trouble to ensure that their message is heard & why are there different transmission times allocated to each separate code or message, with OOO having over twice the air time to that given to 951, for example?

Also noted the characteristic single dash at H+59m every hour on days when the station was active. Ary, (AB) reports that this hourly dash was present 24 hrs a day – except during message transmissions.

5345	1559 - 1722z	18 Nov	OOO (x3) repeated (1hr 22m)	Three letter 'O' (3 dashes) (x3)	AB	FRI
5345	1048 - 1221z	19 Nov	OOO (x3) repeated (1hr 22m)		AB	SAT
	1559 – 1722z	19 Nov	OOO (x3) repeated (1hr 22m)	Followed by single dash on ending	AB/BR	SAT
5345	1048 – 1221z	20 Nov	OOO (x3) repeated (1hr 22m)		AB/BR	SUN
	1559z	20 Nov	NRH		AB/BR	SUN
5345		Mon 21 Nov – Mon 28 Nov (Daily)				
	1419 – 1542z		OOO (x3) repeated (1hr 22m)		AB/BR/Spectre	
	1559 – 1722z		OOO (x3) repeated (1hr 22m)		AB/BR/Spectre	
		Friday 30 Nov				
	1616z		OOO OOO OOO Strong QRN2 QSB2		Spectre	

A change in schedule & content followed on Tuesday, 29 November which continued until Sunday, 04 December;

5345		Tue 29 Nov – Sun 04 Dec (Daily)				
	0959 – 1046z	29 Nov	000 (x3) repeated (47m)	Three zeros (5 dashes) (x3)	AB/BR/HFD	
	1559 – 1646z	29 Nov	000 (x3) repeated (47m)		AB/BR	

Another change for Monday, 05 December - This time sending a number, 951, for the first transmission;

5345	1359 – 1435z	05 Dec	951 (x3) repeated (36m)		AB	MON
	1559 – 1722z	05 Dec	OOO (x3) repeated (1hr 22m)	Three letter 'O' (3 dashes) (x3)	AB/BR	MON

Changing again on Tuesday, 06 December. Same content with added early scheds;

5345	0859 – 0935z	06 Dec	951 (x3) repeated (36m)		AB	TUE
	0959 – 1122z	06 Dec	OOO (x3) repeated (1hr22m)	Three letter 'O' (3 dashes) (x3)	AB/BR/Spectre	WED
	1359 – 1435z	06 Dec	951 (x3) repeated (36m)		AB	TUE
	1559 – 1722z	06 Dec	OOO (x3) repeated (1hr 22m)	Three letter 'O' (3 dashes) (x3)	AB/BR	TUE
5345	0859 – 0935z	07 Dec	951 (x3) repeated (36m)		AB/BR	WED
	0959 – 1122z	07 Dec	OOO (x3) repeated (1hr22m)	Three letter 'O' (3 dashes) (x3)	AB/BR/Spectre	WED
	1359 – 1435z	07 Dec	951 (x3) repeated (36m)		AB/BR	WED
	1559 – 1722z	07 Dec	OOO (x3) repeated (1hr 22m)	Three letter 'O' (3 dashes) (x3)	AB/BR	WED

On Thursday, 08 December. the two later scheds failed to appear. It was also noted that the hourly dashes now ceased;

5345	0859 – 0935z	08 Dec	951 (x3) repeated (36m)		AB/BR	THU
	0959 – 1122z	08 Dec	OOO (x3) repeated (1hr22m)	Three letter 'O' (3 dashes) (x3)	AB/BR	THU

Nothing further was reported for the next three days then M23 reappeared once again with a new sched & a different number, 654;

5345		Mon 12 Dec – Sun 18 Dec				
	0959 - 1046z		000 (x3) repeated (47m)	Three Zeros (5 dashes) (x3)	AB/BR/tiNG	
	1319 - 1404z		654 (x3) repeated (45m)		AB/BR/tiNG	
	1559 - 1646z		000 (x3) repeated (47m)	Three Zeros (5 dashes) (x3)	AB/Anon/BR/tiNG	
	1759 - 1844z		654 (x3) repeated (45m)		AB/Anon/BR/tiNG	

On Monday, 19 December the 654 scheds appeared – But the 000 scheds were missing;

5345		Mon 19 Dec – Sat 31 Dec		
	1319 - 1404z	654 (x3) repeated	(45m)	AB/BR
	1759 - 1844z	654 (x3) repeated	(45m)	AB/BR

Slight time-slip was noted on later transmissions, with transmissions starting & ending approximately a minute earlier.

PoSW also logged M23 at length and posted his log for this, reading much like those above but with some additional interesting comment:

Return of M23 CW on 5345:-

The M23 slow Morse station returned to 5345 kHz in the third week of November with a familiar format:-

21-Nov-22, Monday:- 1712 UTC, sending a slow 3 x 3 dash “OOO”, strong signal. First time I have heard an M23 since mid-June of this year. Stopped shortly after 1721 UTC. Nothing further heard throughout the rest of the evening.

22-Nov-22, Tuesday:- 1508 UTC, in progress with “OOO”, stopped after 1541 UTC.

1559 UTC, starting up with “OOO”, ended at approx 1721:20s UTC, a single long dash heard a few seconds afterwards, looks like two somewhat long transmissions running.

23-Nov-22, Wednesday:- 1419 UTC, just after, “OOO”, stopped after 1541 UTC.

1559:5s UTC, “OOO”, stopped after 1721 UTC followed by the long dash.

These two transmissions lasting over an hour and twenty minutes heard at these times on the following Thursday, Friday, Saturday, Sunday and Monday before changing times and content:-

29-Nov-22, Tuesday:- 1004 UTC, first time heard in the UK morning since re-appearing,

now sending 3 x 5 dash “000”, still on when checked at 1030 and 1040 UTC, had gone when checked at 1058. Heard a short key-down “blip” at approx 1059, a feature noted

at around a minute before the hour over the past few days.

1604 UTC, in progress again with, “000”, stopped at approx 1646 UTC.

30-Nov-22, Wednesday:- 0958:53s UTC, starting up with “000”, stopped just before 1046 followed by a single long dash.

1558:53s UTC, starting up again, pre-transmission blip heard at 1556, missed the ending.

Continued with this format for the first days of December until Sunday the 4th after which things changed again:-

5-Dec-22, Monday:- No sign of M23 on 5345 when monitored just after 1000 UTC but was heard later on with different content:-

1359 UTC approx, starting up with, “951”, still on when checked at 1430z, had gone when checked again at 1445.

1559 UTC, just before, starting up, back to sending the 3 x 3-dash “OOO”, stopped at around 1721 UTC.

6-Dec-22, Tuesday:- 0858:42s UTC, starting up with “951”, a pre-transmission blip heard about three minutes earlier, stopped 0934:41s UTC.

0958:41s, starting up with the 3 x 3 dash “OOO”, still on when checked at 1040z, monitoring ceased, things to do!

1358:41s UTC, “951”, stopped at 1434:39s UTC, as always followed by single dash.

1558:41s, “OOO”, stopped after 1721 UTC.

7-Dec-22, Wednesday:- schedule heard today, rounded off to the nearest minute:-

0859 UTC, just before, “951” until 0935 UTC, just before.

0959 UTC, just before, “OOO” until 1121 UTC, just after.

1359 UTC, just before, “951” until 1435, just before.

1559 UTC, just before, “OOO” until 1721 UTC, just after.

Changed again:- 8-Dec-22, Friday No sign of M23 “OOO” when checked at 1559 UTC

Morse Stations - Not Number Related

M51 XIX

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

3881//6825									
1230 - 1314z	12 Dec	Lundi-Leçon	11-2/1 Codé	11-2/2 Clair,	11-2/3 Codé,	11-2/4 Clair (420 grps/hr)	BR	MON	
1230 - 1301z	13 Dec	Mardi-Leçon	12-2/1 Codé	12-2/2 Clair,	12-2/3 Codé,	12-2/4 Clair (600 grps/hr)	BR	TUE	
1230 - 1306z	14 Dec	Mercredi- Leçon	13-2/1 Codé,	13-2/2 Clair,	13-2/3 Codé,	13-2/4 Clair (720 grps/hr)	BR	WED	
1230 - 1356z	15 Dec	Jeudi- Leçon	14-2/1 Codé,	14-2/2 Clair,	14-2/3 Codé,	14-2/4 Clair (840 grps/hr)	BR	THU	
1230z	16 Dec	NRH					BR	FRI	

M51b Non-stop 5-character groups composed of M51a messages on 3881//6825kHz

3881//6825						
0138z	07 Dec	Non-stop 5-character groups composed of M51a messages		BR	WED	
3881	0206z	18 Dec	Non-stop 5-character groups composed of M51a messages (6825kHz NRH)	BR	SUN	

Found active on 3536kHz in the early hours of Friday, 16 December, also on Saturday, 17 Dec. Presumably frequency unchanged from F9TM Thursday 80m QSO sched;

3536	0203z	16 Dec	Non-stop 5-character groups composed of M51a messages	BR	FRI
	0123z	17 Dec	Non-stop 5-character groups composed of M51a messages	BR	SAT

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).

3578	5541	11155
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New Schedules for Nov / Dec 2022:**From logs submitted from JPL**

4457 New frequency & Round Slip First heard 11 November VVV (x3) Q5Z1 (x3) DE W2XB (x2) (Machine sent)

Chart of M89 Freq & Call signs heard in Nov / Dec 2022**New Schedules shown in Bold Type****From logs submitted from JPL**

<u>Freq in KHz</u>	<u>Call Slip</u>
3596//NRH	V QYE2 (x3) DE 9WFV (x2)
3596//4888	V QYE2 (x3) DE 9WFV (x2)
4457	VVV (x3) Q5Z1 (x3) DE W2XB (x2) VVV (x3) Q5G1 (x3) DE W2XB (x2)
4860// 6840	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K
4888//NRH	V QYE2 (x3) DE 9WFV (x2)
<i>Courtesy JPL</i>	

5541 1552z (IP) 26 Dec NR 3731/EX 2332 RMKS 9608 TO 9475 BT I9N/F2X AR (Remote tuner Novosibirsk JPL MON
NR 5325/EX 2334 RMKS 9475 TO 9608 BT A4E/R5W AR K

11155 0230z (IP) 06 Dec PBL NR 6789 6789 K (Remote tuner Novosibirsk) JPL TUE

M89	11155kHz	0230 (IP) - 0242z	06 December 2022
HR MSG GA K			(IP -0230z)
R			(Other station N/H on this frequency)
QSA ? K			(0235z)
R HR RPT PBL NR 6789 6789 K			
R HR RPT PBL CLS 14 14 K			(0236z)
R HR RPT PBL TIME 1030 1030 K			
R U MSG GA K			
R			(0236z)
AS AS			(0241z)
R AS AS			
QSL 1041 K			(0242z)
R QSL 1041 K			
R SK SK			(0242z)
<i>Courtesy JPL</i>			

M89	5541kHz	1552 - 1556z	26 December 2022
RMKS 9608 TO 9475 BT		I9N/F2X AR	(IP - 1552z)
FF NR 37316 EE			
NR 3731/EX 2332 RMKS 9608 TO 9475 BT			
I9T/F EE BT			
I9N/F2X AR K			
R QSL 2333 K			
HR F GA K			(1553z)
R GA K			
2 F NR 5325/EX 2334 RMKS 9475 TO 9608 BT			
A4E/R5W AR K			
NR RPT K			
R F F NR 5325/EX 2335 RMKS 9475 TO 9608 BT			
AIAE/N EEEE BT A4E/R5W AR K			(1555z)
R QSY 18 ... K			
R K (1556z)			
<i>Courtesy JPL</i>			

M95 O XSV, XSV70, XSV85**M95 Morse Logs (Bold type indicates new logging)**

3642//NRH Call Sign 3A7D (Active daily - only first marker log has been included)

3642//7602 Call Sign 3A7D (Active daily - only first marker log has been included)

4178//NRH Call Sign S2DJ Believe this to be new Round Slip and freq for YHDX DE SAQC
2008z 11 Nov V XP5B (x3) DE S2DJ (x2) (Remote tuner Novosibirsk) JPL FRI

4243//NRH Message number differs from current XSV70 and XSV85 message numbers.

5651//NRH Call sign S2DJ 26 Dec V XP5B (x3) DE S2DJ (x2) (IP - Cont'd) (Remote tuner Novosibirsk) JPL MON

5651//12039 Call sign S2DJ 06 Dec V XP5B (x3) DE S2DJ (x2) (IP - Cont'd) (Remote tuner Novosibirsk) JPL TUE

10180	Call Sign 3A7D	(Active daily - only first marker log has been included)					
10722//NRH	Call Sign 3A7D 1048z	01 May	YHxD (x3)	DE SAQC (x2)	(Remote tuner Khabarovsk)	JPL	FRI

Marker Beacons (MX MXI)

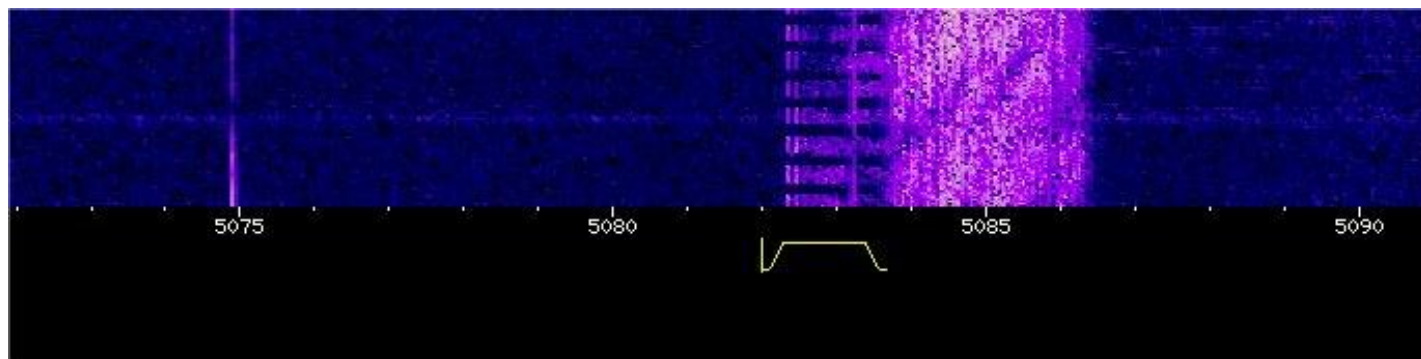
4557.7	2057z	14 Nov	MXI	CW	Beacon "D"	Sevastopol	Weak	BR	MON
5153.7	2043z	07 Nov	MXI	CW	Beacon "D"	Sevastopol		BR	MON
5153.9	2058z	14 Nov	MXI	CW	Beacon "S"	Severomorsk		BR	MON
5154.1	2043z	07 Nov	MXI	CW	Beacon "A"	Astrakhan		BR	MON
5156.8	2100z	14 Nov	MX	CW	Beacon "L"	St Petersburg	Audible under STANAG	BR	MON
5342	0250z	20 Nov	MX	CW	Beacon "V"			BR	SUN
	1326z	25 Nov	MX	CW	Beacon "V"		Weak	BR	FRI
7508.7	2048z	07 Nov	MXI	CW	Beacon "D"	Sevastopol	Weak	BR	MON
7508.8	2049z	07 Nov	MXI	CW	Beacon "P"	Kaliningrad		BR	MON
7508.9	2049z	07 Nov	MXI	CW	Beacon "S"	Severomorsk		BR	MON
7509.1	2050z	07 Nov	MXI	CW	Beacon "A"	Astrakhan		BR	MON
8495.1	2102z	14 Nov	MXI	CW	Beacon "A"	Astrakhan	Audible under STANAG	BR	MON
8497.8	2051z	02 Oct	MX	CW	Beacon "L"	St Petersburg		BR	MON
10871.9	1030z	08 Nov	MXI	CW	Beacon "S"	Severomorsk		BR	TUE
10872.1	2052z	07 Nov	MXI	CW	Beacon "A"	Astrakhan		BR	MON
13527.7	1029z	08 Nov	MXI	CW	Beacon "D"	Sevastopol		BR	TUE
13527.9	1029z	08 Nov	MXI	CW	Beacon "S"	Severomorsk		BR	TUE
16331.7	1027z	08 Nov	MXI	CW	Beacon "D"	Sevastopol		BR	TUE
16331.9	1027z	08 Nov	MXI	CW	Beacon "S"	Severomorsk		BR	TUE
16332.1	1028z	08 Nov	MXI	CW	Beacon "A"	Astrakhan		BR	TUE
20047.7	1025z	08 Nov	MXI	CW	Beacon "D"	Sevastopol		BR	TUE
20047.9	1026z	08 Nov	MXI	CW	Beacon "S"	Severomorsk		BR	TUE
20048.1	10265z	08 Nov	MX	CW	Beacon "A"	Astrakhan		BR	TUEI

Oddities

Unidentified Marker?

Gary reported an unidentified signal on 5082kHz USB on Sunday, 06 November. Signal was reminiscent, but not identical to the Buzzer with a monotone buzzer, spaced at regular intervals, but around twice the speed of that used by the Buzzer. Heard by Gary at his QTH near Cardiff with a long wire aerial into an FRG7700 receiver.

A check on the Twente University SDR showed the signal at good strength, as seen from the screenshot below.



5082kHz 1945z 06 November

Screenshot of Unknown Marker on Twente SDR

Courtesy BR

'The Goose'

3243	0524z	13 Oct	'Goose' Marker – Night Freq	V.weak	USB	chpa	THU
	0453z	04 Dec	'Goose' Marker – Night Freq	Good	USB	chpa	SUN

'The Air Horn'

4930	0200z	18 Dec	Marker signal (Air Horn)		Good	USB	BR	SUN
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'The Alarm'

4770	0527z	13 Oct	Marker Signal (The Alarm)	Minor QSB	Good	USB	chpa	TUE
	0457z	04 Dec	Marker Signal (The Alarm)		V.weak	USB	chpa	SUN

S28 **'The Buzzer'**

4625	0526z	13 Oct	S28	'The Buzzer' Marker	Excellent	USB	chpa	TUE
	0456z	04 Dec	S28	'The Buzzer' Marker	V.weak	USB	chpa	SUN

S30 **'The Pip'**

3756	0455z	04 Dec	S30	'Pip' marker (Night freq)	Good	USB	chpa	SUN
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S32 **'Squeaky Wheel'**

3828	0205z	18 Dec	S32	NRH (Night freq)		USB	BR	SUN
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4182 **'T Marker'**

	0528z	13 Oct		Normal sound from the T Marker	Moderate	USB	chpa	TUE
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All logs from chpa Monitored from Stockholm

Contributors:

AB, Anon, BR, chpa, Gary, Gert, HFD, JPL, tiNG

Thank you all for your logs.

An additional file from Spectre 3000 which missed Brian's write up so included here – Thanks Spectre!

UNID Long Dash (Oddity Station)

Note: Ending Times Unspecified, Appeared To Be Gone By 1900z

UNID Long Dash 6476kHz 15/12/2022 1310z [Long Dash] Weak QRN2 QSB2 THU Spectre

6496kHz	17/12/2022 1345z [Long Dash] Weak QRN2 QSB2 SAT Spectre
6690kHz	14/12/2022 1227z [Long Dash] Weak QRN2 QSB2 WED Spectre 20/12/2022 1524z [Long Dash] Fair QRN2 QSB2 TUE Spectre
6691kHz	03/11/2022 1643z [Long Dash] Fair QRN2 QSB2 THU Spectre 04/11/2022 1627z [Long Dash] Fair QRN2 QSB2 FRI Spectre
6693kHz	05/11/2022 1403z [Long Dash] Fair QRN2 QSB2 SAT Spectre
6698kHz	06/11/2022 1843z [Long Dash] Fair QRN2 QSB2 SUN Spectre
8802kHz	20/12/2022 1525z [Long Dash] Fair QRN2 QSB2 TUE Spectre
8988kHz	15/12/2022 1310z [Long Dash] Fair QRN2 QSB2 THU Spectre 17/12/2022 1346z [Long Dash] Fair QRN2 QSB2 SAT Spectre
8990kHz	14/12/2022 1227z [Long Dash] Fair QRN2 QSB2 WED Spectre
8993kHz	06/11/2022 1943z [Long Dash] Fair QRN2 QSB2 SUN Spectre
8995kHz	03/11/2022 1643z [Long Dash] Fair QRN2 QSB2 THU Spectre 04/11/2022 1627z [Long Dash] Fair QRN2 QSB2 FRI Spectre
8998kHz	05/11/2022 1404z [Long Dash] Fair QRN2 QSB2 SAT Spectre 07/11/2022 1329z [Long Dash] Fair QRN2 QSB2 MON Spectre 09/11/2022 1235z [Long Dash] Fair QRN2 QSB2 WED Spectre
11835kHz	07/11/2022 1328z [Long Dash] Fair QRN2 QSB2 MON Spectre
11930kHz	14/12/2022 1229z [Long Dash] Fair QRN2 QSB2 WED Spectre

11955kHz 05/11/2022 1406z [Long Dash] Fair BCQRM3 QSB2 SAT Spectre

11956kHz 20/12/2022 1526z [Long Dash] Fair BCQRM3 QSB2 TUE Spectre

11967kHz 06/11/2022 1845z [Long Dash] Fair BCQRM3 QSB2 SUN Spectre
09/11/2022 1231z [Long Dash] Fair QRN2 QSB2 WED Spectre

11983kHz 03/11/2022 1643z [Long Dash] Fair QRN2 QSB2 THU Spectre
04/11/2022 1627z [Long Dash] Fair QRN2 QSB2 FRI Spectre

11996kHz 15/11/2022 1311z [Long Dash] Fair QRN2 QSB2 THU Spectre

11999kHz 17/11/2022 1346z [Long Dash] Fair QRN2 QSB2 SAT Spectre

12471kHz 07/11/2022 1326z [Long Dash] Fair QRN2 QSB2 MON Spectre

12489kHz 09/11/2022 1233z [Long Dash] Fair QRN2 QSB2 WED Spectre

12491kHz 03/11/2022 1643z [Long Dash] Fair QRN2 QSB2 THU Spectre
04/11/2022 1627z [Long Dash] Fair QRN2 QSB2 FRI Spectre

12493kHz 05/11/2022 1407z [Long Dash] Fair QRN2 QSB2 SAT Spectre
06/11/2022 1847z [Long Dash] Fair QRN2 QSB2 SUN Spectre

12494kHz 14/12/2022 1229z [Long Dash] Fair QRN2 QSB2 WED Spectre

12499kHz 15/12/2022 1312z [Long Dash] Fair QRN2 QSB2 THU Spectre
17/12/2022 1347z [Long Dash] Fair QRN2 QSB2 SAT Spectre
20/12/2022 1527z [Long Dash] Fair QRN2 QSB2 TUE Spectre

16185kHz 07/11/2022 1324z [Long Dash] Fair QRN2 QSB2 MON Spectre

16191kHz 03/11/2022 1643z [Long Dash] Fair QRN2 QSB2 THU Spectre
04/11/2022 1627z [Long Dash] Fair QRN2 QSB2 FRI Spectre

16194kHz 14/12/2022 1230z [Long Dash] Fair QRN2 QSB2 WED Spectre
15/12/2022 1313z [Long Dash] Fair QRN2 QSB2 THU Spectre

16195kHz 05/11/2022 1408z [Long Dash] Fair QRN2 QSB2 SAT Spectre
06/11/2022 1849z [Long Dash] Fair QRN2 QSB2 SUN Spectre

16198kHz 09/11/2022 1234z [Long Dash] Fair QRN2 QSB2 WED Spectre

16199kHz 17/12/2022 1348z [Long Dash] Fair QRN2 QSB2 SAT Spectre
20/12/2022 1527z [Long Dash] Fair QRN2 QSB2 TUE Spectre

Voice and other modes:

E06 Nov/Dec log

Monday (repeats Tuesday)	0210z	10673kHz	0310z	14398kHz
01/11 '537' 160 34 73201.....etc via KiwiSDR		thanks HfD		
	0210z	9382kHz	0310z	13426kHz
06/12 '537' 268 39 57934.....etc via KiwiSDR		thanks HfD		
Thursday (repeats Friday)	0300z	16163kHz	0400z	13863kHz (frequencies may vary slightly)
10/11 '361' 480 31 93266.....etc via KiwiSDR RUS				
	0300z	14654kHz	0400z	12177kHz
02/12 '361' 259 34 54939.....etc thanks HfD				
First /Third Thursday (repeats Friday)	0600z	18285kHz	0700z	20140kHz
03/11 '507' 892 61 26511 92782 37746 10574 38647 48450 06560 84581 47150 22712 41187 97260 23010 38069 66903 13777 61573 92319 53054 57588 38785 33532 56648 72114 38629 90965 45744 81409 75185 79148 88550 79429 57768 17273 19198 02614 72553 31124 16096 65449 79160 29706 53833 63713 45603 73769 14551 75073 70063 78413 69720 11745 62912 16965 68273 04887 87433 18308 92015 25415 82663 892 61 00000				
17/11 '507' 923 61 35227 80242 76433 12547 23746 90413 37741 92382 20966 92558 77797 84931 73072 40032 50557 29119 13053 20601 83994 85497 22070 07051 51876 47099 61244 59841 05788 93303 09782 61497 65845 37175 70384 87426 93548 83442 27894 42858 95182 39302 72081 20569 29245 45250 20543 59110 16294 18121 02634 06201 74686 23512 90363 16991 30637 19800 87215 41871 76013 40923 10801 923 61 00000				

		0600z	14575khz	0700z	17420kHz
01/12	'923' 768 54	18512 35224 23715 67028 93857 34233 66783 05583 18217 91589 19561 40372 51282 75463 46418 85816 02926 99057 07572 89055			
		14196 69346 21570 36171 57166 30070 98981 14356 14567 03646 70710 47244 25141 61690 59373 45557 05658 78851 67189 40280			
		85528 49622 78799 90540 14954 72828 02478 83380 32544 33489 98148 67616 03349 36715 768 54 00000			
15/12	'923' 604 51	99409 99640 54532 10589 82078 72683 22051 78346 70908 33104 85865 07831 79670 29998 67698 63483 88697 20678 07313 85105			
		76964 74794 01860 77961 43318 24255 74232 48289 52812 38633 68860 76025 69070 30756 98383 41924 58628 22148 89641 51254			
		78186 23032 02421 21274 80699 06569 19382 24651 01268 82013 30635 604 51 00000] 0713z			

Other transmissions:

		1000z	?khz	1030z	14735kHz	1300z	156453kHz	1330z	13547kHz
01/11	'392' 860 47	24811 57598 21916 49342 60318 32683 48274 51721 04745 15427 54806 97173 39610 46027 80457 45238 61696 78863 24555 04643							
		50075 61432 60187 93924 37936 37186 67200 00187 75124 02007 33271 78189 92342 68961 96474 56956 02958 21062 27800 46098							
		03330 56691 77042 59018 57623 57393 30512 860 47 00000] 1043z							

		1440z	13843kHz
11/11	'346' 218 50	19117 61918 06174 52460 02690 41715 70597 80565 67215 54547 36839 77564 58006 21769 60679 42345 44487 40385 51523 18889	
		06298 82306 12463 15303 22244 07777 51132 76860 29186 28888 41054 11488 43318 84136 38165 91118 60613 09951 82194 77379	
		79009 20126 37610 45012 09314 29113 53783 01505 67057 80085 218 50 00000 (Thanks Ary)	

		1900z	9261kHz	2000z	5384kHz
16/11	'853' 149 60	22513 36605 61076 48906 17597 44622 01936 46035 12228 86832 78862 63074 74573 60007 30373 40914 25673 27221 36277 75753			
		07225 75566 99974 99310 26435 59111 57017 90394 57595 25555 02129 78753 05087 50012 51871 27150 57507 24360 85139 02596			
		87583 75593 28680 72682 77585 11620 79811 87949 74908 17929 83546 36222 07525 53588 06287 79861 13977 19983 73298 11865			
		149 60 00000 (Ary, Malc & RNBG)		Repeated Thursday 17th	

		1300z	16318kHz	1330z	13955kHz
22/12	'392' 751 44	31843 06338 00261 98043 57417 79634 07845 11285 49339 13444 75919 86938 04702 79147 65963 30230 13764 23702 66147 23978			
		75457 40990 16864 00005 73183 44452 42605 42273 09261 33162 51130 26464 21528 68562 85847 25649 30508 04016 42364 36782			
		90568 34391 85126 07667 751 44 00000			

Some log analysis and comment from PoSW:

First + Third Thursdays in the Month, 0600 + 0700 UTC Schedule:-

Frequencies shown in prediction list in En127 of Nov-21 hold true for this year too:-

3-Nov-22:- 0706 UTC, 20140 kHz, second sending in progress, suddenly realised over breakfast that this was the first Thursday of a new month, missed 0600z transmission.

Weak signal at first, gradually became stronger, ended around 0714:30s UTC with, "892 892 61 61 00000".

4-Nov-22, Friday:- 0600 UTC, 18285 kHz, repeated on the following day, very weak at first, unreadable, started to become much stronger after 0605z.

17-Nov-22:- Nothing heard of first sending for the first twelve minutes or so:-

0612 UTC, 18285 kHz, E06 emerging from the noise, ended a couple of minutes later with, "923 923 61 61 00000".

0700 UTC, 20140 kHz, calling "507", DK/GC "923 923 61 61", reasonable signal all the way through, S4 to S6.

18-Nov-22, Friday:- Nothing at all heard of the first sending at 0600z on 18285, no doubts someone with a better antenna than mine heard it.

0700 UTC, 20140 kHz, S5 to S7 with some fading. After the end of transmission at around 0714:30s carrier went off - but came back after 30 seconds or so with computer shut-down sound, XP or whatever it is, which used to be a regular feature of the now defunct Thursday and Friday E06 and G06 schedules.

1-Dec-22:- Nothing heard of the 0600 UTC on 14575 kHz, predicted frequency for this month, slightly better copy of the second sending:-

0709 UTC, 17420 kHz, nothing heard until about nine minutes into the transmission, signal came up from out of the noise, rapidly became stronger, ended after 0713z with "768 768 54 54 00000".

2-Dec-22, Friday:- 0700 UTC, 17420 kHz, calling "923", DK/GC "768 768 54 54", weak at first, stronger after a few minutes, nothing readable from the 0600z sending.

15-Dec-22:- 0700 UTC, 17420 kHz, call "923", DK/GC "604 604 51 51", good signal, nothing audible at 0600z on 14575.

16-Dec-22, Friday:- 0700 UTC, 17420 kHz, good signal, again nothing readable at 0600z.

A Thursday Night at Eight E06:-

17-Nov-22, Thursday:- 2000 UTC, 5384 kHz, something of a surprise, very strong carrier noted on 5384 at around 1940 UTC, audio tone followed by single spoken "853", E06 OM, at approx 1949. Started on the hour, 8 pm in these parts, call "853", DK/GC "149 149 60 60". Ended just before 2014:30s UTC, carrier stayed on for a further minute or so before going off. By far the strongest signal in this part of the short-wave spectrum at this time of the evening.

No sign of a repeat on Friday the 18th, nothing found on the Thursday of the following week, the 24th.

E07

Sunday

November 2022

0700z	10268kHz	0720z	11068kHz	0740z	12168kHz
06/11	201 000				0700z Strong 0720z Weak
13/11	201 000				Weak
27/11	201 000				Fair

December 2022

0700z	9326kHz	0720z	10426kHz	0740z	11526kHz
11/12	345 1 379 277 46463 ... 90582 000 000				Weak

Tuesday/Friday

November 2022

1500z	14737kHz	1520z	13537kHz	1540z	12137kHz
04/11	751 000				Fair 1500z QSB4, 1520z PulseQRM2/3
08/11	751 1 331 146 16576 ... 95175 000 000 *751 1 331 146 16576 to 13194 grp97 restart 751 1 3 x then grp98 62836 to 95175 000 000				1500z Weak* 1520z Fair, 1540z Strong
11/11	751 1 331 146 16576 ... 70069 000 000				Fair
15/11	751 000				1500z Weak, 1520z Fair
18/11	751 000				Weak
22/11	751 1 9695 102 97182 ... 93376 000 000				Weak
29/11	751 000				Weak

December 2022

1500z	13539kHz	1520z	12139kHz	1540z	10239kHz
02/12	512 000				Ary FRI
06/12	512 1 287 98 63377 ... 67609 000 000				1520z Fair, rest Weak
09/12	512 1 287 98 63377 ... 67609 000 000				Weak
13/12	512 000				Weak
16/12	512 000				Weak
20/12	512 1 362 118 93600 ... 36389 000 000				Weak
23/12	512 1 362 118 93600 ... 36389 000 000				Weak
27/12	512 000				Weak
30/12	512 000				Weak

Thursday/Saturday

November 2022

1410z	11574kHz	1430z	10274kHz	1450z	9274kHz
03/11	327 000				1410z Fair 1430z Weak
05/11	327 000				Weak
10/11	327 1 6884 49 68919 ... 22830 000 000 1436z: 327 327 327 1 x3 then 14647 to 22830 000 000 out 1439z				Weak; 1450zQRM

12/11	327 1 6884 49 68919 ... 22830 000 000	Weak 1450z QRM
17/11	327 000	Weak
19/11	327 000	Fair, QRN2 QSB2 Spectre [1430z]
24/11	327 1 2774 61 48717 ... 72775 000 000	Weak, 1450z QRM
26/11	327 1 2774 61 48717 ... 72775 000 000	1410z Weak, 1430z Fair, 1450z variable weak to strong

December 2022

1410z	10226kHz	1430z	9226kHz	1450z	8126kHz
01/12	674 000				1410z Weak, 1430z Fair
08/12	674 1 8343 77 62800 ... 96889 000 000				Weak
15/12	674 000				Fair, Dutch SDR
17/12	674 000				Weak
22/12	674 1 126 48 21432 ... 94299 000 000				Weak, Dutch SDR
31/12	674 000				Weak

Saturday

November 2022

1400z	10323kHz	1420z	9123kHz	1440z	8023kHz
05/11	310 000				Strong
12/11	310 000				1400z Weak 1420z Strong
19/11	310 000				Strong, QRN2 QSB2 Spectre [1420z]
27/11	310 000				1400z Fair, 1420z Strong

December 2022

1400z	9143kHz	1420z	8143kHz	1440z	7643kHz
17/12	116 1 379 277 46463 ... 90582 000 000				1400z Very strong, rest Strong Extended transmission length 30m, adjusted start times of 1435z and 1510z
31/12	116 000				Strong

PoSW also sent in his logs with additional notes and analysis:

Saturday Schedule, 1400 UTC Start:-

5-Nov-22:- 1400 UTC, 10323 kHz, "310 310 310 000", strong signal.
1420 UTC, 9123 kHz, also strong.

12-Nov-22:- 1400 UTC, 10323 kHz, "310 310 310 000", weak signal, much weaker than on the 5th.
1420 UTC, 9123 kHz, 6 to 7 on the S-meter.

19-Nov-22:- 1400 UTC, 10323 kHz, "310 310 310 000", weak.
1420 UTC, 9123 kHz, much stronger, pushing the S-meter way over the 9.

26-Nov-22:- 1400 UTC, 10323 kHz and 1420 UTC, 9123 kHz, both strong, over S9, "310 310 310 000".

10-Dec-22:- 1400 UTC, 9143 kHz, "116 116 116 1", message, strong signal. DK/GC "379 277" x 2. Did not end until 1430z.
1435 UTC, 8143 kHz, second sending, very strong.
1510 UTC, 7643 kHz, also very strong.

Here's an interesting fact:- this schedule also sent a message with a group count of 277 in December of last year, Saturdays 4th and 11th of December 2021, with a DK of 968.

Today's message was no doubt transmitted on last Saturday, the 3rd; Sod's Law in operation here, I was not at home to monitor it, must be the first time for several months that this schedule sent a message.

17-Dec-22:- 1400 UTC, 9143 kHz, "116" and "379 277" again, good signal.
1435 UTC, 8143 kHz, very strong signal.
1510 UTC, 7643 kHz, also very strong.

24-Dec-22:- 1400 UTC, 9143 kHz, "116" and "379 277" yet again., very strong signal.
1435 UTC, 8143 kHz and 1510 UTC, 7643 kHz, both also very strong.

Sunday Schedule, 0700 UTC Start:-

Always the same format as transmitted on the Saturday schedule above, and also like the above has moved one hour with the ending of British Summer Time on the last weekend in

October, clocks back one hour, so appears at the same local time in the UK, in this instance 7 am. Also as with the above using the same frequencies as in the same months in past years.

6-Nov-22:- 0700 UTC, 10268 kHz, “201 201 201 000”, weak signal.

0720 UTC, 11068 kHz, much stronger.

13-Nov-22:- 0700 UTC, 10268 kHz, very weak, could just about hear the E07 OM way down in the noise.

0720 UTC, 11068 kHz, much stronger, peaking S9, “201 201 201 000”.

20-Nov-22:- 0700 UTC, 10268 kHz, weak and 0720 UTC, 11068 kHz, much stronger, “201 201 201 000”.

27-Nov-22:- 0700 UTC, 10268 kHz, stronger signal than on previous Sundays in this month,

“201 201 201 000”.

0720 UTC, 11068 kHz, peaking around S7.

4-Dec-22:- 0700 UTC, 9326 kHz, weak signal and local interference making for difficult copy to say the least, “345 345 345 1” (?), if heard correctly means a message which would be the first one from this schedule for some time. Became too weak to copy. Nothing audible from the repeats on predicted frequencies 10426 and 11526.

Update:- Was probably the message with a group count of 277 which took 30 minutes to transmit so listening for the second sending at 0720z and the third at 0740z would not produce results.

11-Dec-22:- 0700 UTC, 9326 kHz, very weak, just able to confirm message.

0735 UTC, 10426 kHz, also very weak, just about detectable.

0810 UTC, 11526 kHz, third sending, good signal, peaking over S9 with occasional fading,

“345 345 345 1”, DK/GC “379 277”, as expected.

18-Dec-22:- 0700 UTC, 9326 kHz, “345 345 345 1”, DK/GC “379 277”, reasonable signal for a change.

0735 UTC, 10426 kHz, also stronger than usual.

0810 UTC, 11526 kHz, strong.

Saturday + Thursday Schedule, 1410 UTC Start:-

Frequencies as shown in the prediction list in En127 of November of last year. Unusually for E07 stays on UTC with the ending of British Summer Time so now starts at 2.10 pm

in the UK so on Saturdays is interleaved, so to speak, with the E07 schedule that starts at 2 pm.

5-Nov-22, Saturday:- 1410 UTC, 11574 kHz, “327 327 327 000”, weak signal.

1430 UTC, 10274 kHz, very weak, only just readable.

10-Nov-22, Thursday:- 1410 UTC, 11574 kHz, “327 327 327 1”, message, DK/GC “6884 49” x 2, weak signal.

1430 UTC, 10274 kHz, very weak.

1450 UTC, 9274 kHz, inside the 31 metre broadcast band, strong station on 9275 making copy difficult.

12-Nov-22, Saturday:- 1410 UTC, 11574 kHz, very weak signal, unreadable.

1430 UTC, 10274 kHz, very weak, could just hear “327..1” preamble.

1450 UTC, 9274 kHz, very weak, strong broadcaster on 9275 making things worse.

17-Nov-22, Thursday:- going from bad to worse, nothing heard on any of the frequencies.

19-Nov-22, Saturday:- 1430 UTC, 10274 kHz, very weak, could just make out the “000” of a no-message transmission, nothing heard at 1410z on 11574.

Nothing audible on any frequency of this schedule on either 24-Nov, Thursday, or 26-Nov, Saturday.

8-Dec-22, Thursday:- Nothing readable at 1410 UTC on predicted frequency 10226 kHz, or at 1430 on 9226. Third sending was much better:-

1450 UTC, 8126 kHz, “674 674 674 1”, DK/GC “8343 77” x 2.

10-Dec-22, Saturday:- 1410 UTC, 10226 kHz and 1430 UTC, 9226 kHz, both very weak, unreadable, again the third sending the only one readable:-

1450 UTC, 8126 kHz, “674” and “8343 77” again.

17-Dec-22, Saturday:- 1410 UTC, 10226 kHz, “674 674 674 000”, stronger than usual.

Nothing readable at 1430z on 9266.

24-Dec-22, Saturday:- 1410 UTC, 10226 kHz, very weak, unreadable, became a bit stronger for a short time around 1414z, message.

1430 UTC, 9226 kHz, “674 674 674 1”, sank into noise, unreadable.

1450 UTC, 8126 kHz, third sending much better as usual, DK/GC “126 48” x 2.

Tuesday + Friday Schedule, 1500 UTC Start:-

A schedule had been noted in October running at the above days and time; took some time to find in November, the expectation was that it would shift by one hour with the ending of British Summer Time so that it would show up at the same UK local time in November as it did in October, 4 pm, which has been the usual routine for E07 schedules in the past. Not so for this one, stayed on UTC so was found still starting at 1500 UTC, 3 pm in the UK, in November.

11-Nov-22, Friday:- 1524 UTC, 13537 kHz, strong E07 message in progress, must be the second sending, interference from a rapidly sweeping carrier. Ended with “000 000” at 1534:40s UTC.

1541 UTC, 12137 kHz, third sending found calling “751 751 751 1”, DK/GC “331 146” x 2, weaker signal than the second sending. Guessing that the first sending is on 14737.

15-Nov-22, Tuesday:- 1500 UTC, 14737 kHz, “751 751 751 000”, weak signal.

1520 UTC, 13537 kHz, stronger with interference.

18-Nov-22, Friday:- 1500 UTC, 14737 kHz, “751 751 751 000”.

1520 UTC, 13537 kHz, second sending with swept carrier interference.

More on the swept carrier:- Looking at YouTube on the computer I saw something posted by “Receiver 1954” - for thus he styles himself - which was a recording of E07 on this very frequency of 13537 complete with the rapidly sweeping carrier interference which, R1954 informs the viewer, is called CODAR wave height coastal radar.

22-Nov-22, Tuesday:- 1500 UTC, 14737 kHz, “751 751 751 1”, message, DK/GC “9695 102”, weak signal.

1520 UTC, 13537 kHz, with the usual interference.

1540 UTC, 12137 kHz, strongest of the three transmissions.

25-Nov-22, Friday:- 1500 UTC, 14737 kHz, “751” and “9695 102” again.

1520 UTC, 13537 kHz and 1540 UTC, 12137 kHz, repeats.

29-Nov-22, Tuesday:- 1500 UTC, 14737 kHz and 1520 UTC, 13537 kHz, “751 751 751 000”.

Took a while to find this one in December:-

16-Dec-22, Friday:- 1501 UTC, 13539 kHz, found in progress with “512 512 512 000”.

Close to the frequency used for the second sending in November and suffering from the same CODAR interference.

1520 UTC, 12139 kHz, second sending, no problem to find, strong signal.

20-Dec-22, Tuesday:- 1500 UTC, 13539 kHz, “512 512 512 1”, message, DK/GC “362 118” x 2, signal strength varying from weak to over S9.

1520 UTC, 12139kHz, weak.

1540 UTC, 10239 kHz, (?), something there, very weak, difficult copy - thought it was going to be on 11239, fairly sure there was E07 way down in the noise on 10239.

23-Dec-22, Friday:- 1500 UTC, 13539 kHz, “512” and “362 118” again, weak signal.

1520 UTC, 12139 kHz, also weak. Nothing readable at 1540z on 10239.

E11 & E11a log Nov/Dec

4505kHz	1910z	02/11 [393/33 18099 91274 06813 11354 28336 81041 40355 64719.....08585 86179]	Brixmis, HfD, PoSW	WED
	1910z	05/11 [399/33 18099....etc] Repeat of Wednesday	Malc	SAT
	1910z	09/11 [393/00] Out 1913z S7	Malc, Brixmis, PoSW	WED
	1910z	12/11 [394/00] Fair	RNGB, Malc, Gary H, Spectre	SAT
	1910z	19/11 [390/00] Strong	Spectre	SAT
	1910z	23/11 [399/00] Out 1913z S5	Malc, PoSW	WED
	1910z	26/11 [396/00] Strong	Spectre	SAT
	1910z	30/11 [390/00] Out 1913z S9	Malc, PoSW	WED
	1910z	03/12 [391/00] Out 1913z S5	Malc, PoSW	SAT
	1910z	07/12 [394/36 68468.....00876] Out 1921z S8	Malc, PoSW	WED
	1910z	17/12 [393/00] Out 1913z S9	Malc, Spectre	SAT
	1910z	21/12 [291/00] Out 1913z S9	Malc	WED
	1910z	28/12 [395/00] Out 1913z S9	Malc	WED
	1910z	31/12 [392/00] Out 1913z S9	Malc	SAT
4909kHz	1300z	03/11 [311/00] Out 1303z S2 (Dutch SDR)	Malc, HfD	THU
	1530z	05/11 [360/00] Out 1533z S3	Malc, HfD	SAT
	1300z	10/11 [316/00] Out 1303z S3 (Dutch SDR)	Malc	THU
	1530z	12/11 [369/00] Out 1533z S5	Brixmis, Malc, Spectre	SAT
	1530z	13/11 [360/00] Out 1533z S4	Malc, Brixmis, Spectre	SUN
	0450z	14/11 [413/00]	HfD	MON
	1300z	17/11 [314/36 18411.....79514] Out 1311z S3 (Dutch SDR)	Malc	THU
	1300z	21/11 [315/00] Weak	Spectre	MON
	1300z	24/11 [313/00] Out 1303z S2	Malc, Spectre	THU
	1530z	27/11 [376/36 15726.....70483] Out 1541z	Malc	SUN
	1530z	28/11 [312/00] Out 0918z S3 (Dutch SDR)	Malc, Spectre	MON
	1300z	01/12 [311/00] Out 1303z S2	Malc	THU
	1530z	03/12 [365/37 19573.....32247] Out 1541z S2	Malc	SAT
	1530z	04/12 [365/37 19573....etc] Repeat of Saturday	Malc	SUN
	1300z	05/12 [311/00] Out 1303z S2 (Dutch SDR)	Malc	MON
	1530z	10/12 [364/00]	Gary H, Spectre	FRI
	1530z	11/12 [369/00]	Gary H	SUN
	1300z	15/12 [315/00] Weak	Spectre	THU
	1530z	17/12 [366/00] Out 1533z S2	Malc, Spectre	SAT
	1530z	18/12 [366/00]	Gary H, Malc	SUN
	1300z	22/12 [315/33 96614.....64600] Out 1310z S4 (Dutch SDR)	Malc	THU
	1300z	24/12 [313/00] Fair	Spectre	THU
	1530z	31/12 [365/00] Out 1533z S5	Malc	SAT

5082kHz	1715z	02/11 [972/00] Out 1718z S9	Malc, Gary H, HfD	WED
	2000z	03/11 [520/34 74735.....10047] Out 2010z S3	Malc, HfD	THU
	1715z	04/11 [977/00] Out 1718z S5	Malc	FRI
	1715z	09/11 [974/39 39392.....63920] Out 1726z S3	Malc	WED
	2000z	10/11 [524/00] Out 2003z S4	Malc, Brixmis	THU
	2000z	13/11 [521/00] Out 2003z S3	Malc, Brixmis, Spectre	SUN
	2000z	17/11 [524/00] Out 2003z S3	Malc , Brixmis	THU
	1715z	18/11 [972/00]	Gary H, Malc	FRI
	2000z	18/12 [524/00] Weak	Spectre	SUN
	2000z	20/11 [522/00]	Gary H	SUN
	1715z	23/11 [976/00] Out 1718z S3	Malc	WED
	2000z	24/11 [521/00] Out 2003z S3	Malc	THU
	1715z	25/11 [972/00] Out 1718z S4	Malc	FRI
	2000z	27/11 [528/00] Out 2003z S3	Malc	SUN
	1715z	30/11 [978/00] Out 1718z S5	Brixmis	WED
	2000z	01/12 [527/00] Out 2003z S6	Malc	THU
	1715z	02/12 [978/00] Out 1718z S4	Malc	FRI
	1715z	07/12 [977/32 01232.....90037] Out 1725z S6	Malc	WED
	2000z	08/12 [527/00] S2	Brixmis	THU
	2000z	11/12 [525/00] Out 2003z S3	Malc, Brixmis	SUN
	1715z	14/12 [976/00] Out 1718z S9	Malc	WED
	2000z	15/12 [521/00] Out 2003z S5	Malc	THU
	1715z	16/12 [975/00] Out 1718z S7	Malc	FRI
	2000z	18/12 [524/00] Out 2003z S4	Malc	SUN
	1715z	21/12 [974/00] Out 1718z S6	Malc, Gary H	WED
	2000z	22/12 [521/35 91473.....76567] Out 2003z S5	Malc	THU
	1715z	23/12 [975/00] Out 1718z S7	Malc	FRI
	1715z	28/12 [977/00] Out 1718z S5	Malc, Gary H	WED
	2000z	29/12 [520/00] Out 2003z S7	Malc	THU
	1715z	30/12 [976/00] Out 1718z S5	Malc	FRI
5149kHz	0820z	03/11 [430/00] Out 0823z S2	Malc, HfD	THU
	0820z	04/11 [430/00] Out 0823z S3	Malc	FRI
	0820z	10/11 [432/00] Fair	RNGB, Malc	THU
	0820z	11/11 [438/00] Out 0823z S2	Malc	FRI
	0820z	17/11 [438/00] Good	RNGB, Malc	THU
	0820z	18/11 [438/00] Out 0823z S2	Malc	FRI
	0820z	24/11 [439/37 24368.....44969] Out 0831z	Malc	THU
	0820z	01/12 [435/00] Out 0823z S2	Malc	THU
	2000z	04/12 [527/00] Out 2003z S4	Malc	SUN
	0820z	02/12 [434/00] Out 0823z S3	Malc	FRI
	0820z	08/12 [431/00] Out 0823z S2	Malc	THU
	0820z	09/12 [431/00] Out 0823z S2	Malc	FRI
	0820z	15/12 [435/00] Out 0823z S2	Malc	THU
	0820z	16/12 [438/00] Good	RNGB, Malc	FRI
	0820z	22/12 [430/32 83036 09380 27299 37812 64961 65111 89613.....03713 05125] Out 0830z S2	RNGB, Malc	THU
5371kHz	0700z	05/11 [490/00] Strong	Spectre	SAT
	0700z	11/12 [490/00] Out 0703z S5	Malc	SUN
	0700z	17/12 [496/36 37040.....13053] Out 0711z S9	Malc	SAT
	0700z	31/12 [495/00] Out 0703z S5	Malc	SAT
5409kHz	1530z	03/11 [264/00] Out 1533z S5	Malc, HfD	THU
	1530z	10/11 [268/00] Strong	RNGB, Malc	THU
	1530z	17/11 [268/00] Out 1533z S5	Malc, Gary H	THU
	1530z	24/11 [269/36 36275.....24565] Out 1546z	Malc	THU
	1530z	01/12 [261/00]	Gary H	THU
	1530z	08/12 [267/00] Out 1533z S5	Malc, Gary H, Brixmis	THU
	1530z	15/12 [269/00] Out 1633z S6 (Dutch SDR)	Malc	THU
5432kHz	1605z	22/12 [260/40 31150 58069 06265 55062 46062 24668 22151.....43551 06222] Out 1341z S9	Gary H, Malc	THU
	1605z	01/11 [232/00] Out 1608z S7	Malc, HfD	TUE
	1605z	08/11 [237/00] Out 1608z S9	Malc, Brixmis, Gary H	TUE
	1605z	13/11 [233/00] Out 1608z S6	Malc , Brixmis, PoSW, Spectre	SUN
	1605z	15/11 [233/00] Out 1608z S9	Malc, Gary H, PoSW	TUE
	1605z	20/11 [238/00]	PoSW	SUN
	1605z	22/11 [232/36 36141.....80316] Out 1615z S7	Malc, PoSW	TUE
	1605z	27/11 [232/36 36141.....etc] Repeat of Tuesday	Malc	SUN
	1605z	29/11 [232/00] Out 1608z S5	Malc, Gary H	TUE
	1605z	04/12 [233/00] Out 1608z S3 (Dutch SDR)	Malc	SUN

	1605z	06/12 [237/36 15787.....47076] Out 1614z S9	Malc	TUE	
	1605z	13/12 [236/00] Out 1608z S4	Malc, dMHz	TUE	
	1605z	18/12 [237/00]	Gary H, Malc	SUN	
	1605z	20/12 [237/00] Out 1608z S6	Malc, Spectre	TUE	
	1605z	27/12 [233/00]	Gary H, Malc	TUE	
5779kHz	1730z	03/11 [415/00] Out 1733z S6	Malc, HfD	THU	
	1730z	17/11 [411/00] Out 1733z S3	Malc	THU	
	1730z	24/11 [412/40 71297.....94437] Out 1741z S4	Malc	THU	
	1730z	01/12 [415/00] Out 1733z S4	Malc	THU	
	1730z	08/12 [410/00] Out 1733z S5	Malc	THU	
	1730z	15/12 [412/00] Out 1733z S6	Malc	THU	
	1730z	22/12 [414/32 54366.....85650] Out 1740z S5	Malc	THU	
6433kHz	1205z	01/11 [463/35 50878 18374 88724 24377 05494 55228 86389.....58193 00771] Out 1215z	RNGB, Malc	TUE	
	1205z	02/11 [463/35 50878.....etc] Repeat of Tuesday	Malc, HfD, Spectre	WED	
	1205z	08/11 [469/00] Out 1208z S3	Malc	TUE	
	1205z	09/11 [463/00] Out 1208z S2	Malc, Spectre	WED	
	1205z	15/11 [466/00] Out 1208z S3 (Dutch SDR)	Malc	TUE	
	1205z	16/11 [461/00] Out 1208z S2	Malc, Spectre	WED	
	1205z	22/11 [466/00] Out 1208z S2	Malc	TUE	
	1205z	23/11 [461/00] Out 1208z S2	Malc, Spectre	WED	
	1205z	29/11 [462/00] Out 1208z S2	Malc	TUE	
	1205z	30/11 [464/00] Out 1208z S3	Malc	WED	
	1205z	06/12 [466/00] Out 1208z S3	Malc	TUE	
	1205z	14/12 [460/00] Weak	Spectre	WED	
	1205z	20/12 [461/00] Out 1208z S4 (Dutch SDR)	Malc, Spectre	TUE	
	1205z	21/12 [466/00] Out 1208z S6 (Dutch SDR)	Malc	WED	
	1205z	28/12 [463/3174837.....88570] Out 1215z S4 (Dutch SDR)	Malc	WED	
6804kHz	0700z	01/11 [577/00] Out 0703z S4	Malc, HfD	TUE	
	0700z	04/11 [571/00] Out 0703z S3	Malc	FRI	
	0700z	08/11 [577/31 79544..... 33344] Out 0709z S4	Malc	TUE	
	0700z	18/11 [579/00] Strong	RNGB, Malc	FRI	
	0700z	25/11 [576/00] Out 0703z S5	Malc	FRI	
	0700z	02/12 [579/00] Out 0703z S3	Malc	FRI	
	0700z	06/12 [571/00] Out 0703z S3	Malc	TUE	
	0700z	20/12 [574/00] Out 0703z S5	Malc	TUE	
	0700z	23/12 [577/00] Out 0703z S5	Malc	FRI	
0700z	27/12 [57?/34 92816.....12043] Out 0710z S5	Malc	TUE		
6849kHz	1900z	03/11 [641/00] Out 1903z S3	Malc, HfD, Spectre	THU	
	1815z	04/11 [927/00] Out 1818z S4	Malc, HfD	FRI	
	1900z	07/11 [646/00] Out 1903z S9	Malc	MON	
	1900z	10/11 [640/00] Out 1903z S3	Malc	THU	
	1815z	11/11 [922/00] Out 1818z S6	Malc	FRI	
	1815z	13/11 [921/00] Out 1818z S6	Malc	SUN	
	1900z	14/11 [644/00] Out 1903z S6	Malc	MON	
	1900z	17/11 [643/00] Out 1903z S5	Malc	THU	
	1815z	18/11 [926/00] Out 1818z S5	Malc	FRI	
	1900z	24/11 [648/33 04950.....14602] Out 1910z S6	Malc	THU	
	1815z	25/11 [924/36] 03639.....21776] Out 1826z S5	Malc	FRI	
	1900z	28/11 [640/00] Out 1903z S2	Malc	MON	
	1900z	01/12 [644/00] Out 1903z S4	Malc	THU	
	1815z	02/12 [929/00] Out 1818z S7	Malc	FRI	
	1815z	04/12 [926/00] Out 1818z S3 (Dutch SDR)	Malc	SUN	
	1900z	05/12 [649/00] Out 1903z S2	Malc	MON	
	1900z	08/12 [641/00] Out 1903z S8	Malc, Brixmis	THU	
	1815z	09/12 [925/33 25430.....78427] Out 1825z S4	Malc	FRI	
	1900z	12/12 [648/00] Out 1903z S2	Malc	MON	
	1900z	15/12 [640/00] Out 1903z S5	Malc	THU	
	1815z	16/12 [925/00] Out 1818z S3	Malc	FRI	
	1815z	18/12 [929/00]	Gary H	SUN	
	1815z	18/12 [925/00] Out 1818z S4	Malc	SUN	
	1900z	22/12 [641/00] Out 1903z S2	Malc	THU	
	1900z	29/12 [647/35 48825.....29536] Out 1910z S5	Malc	THU	
	7469kHz	0930z	02/11 [276/00] Good	RNGB, Malc, HfD	WED
		0930z	03/11 [276/00] Good	RNGB, Malc	THU
		0930z	09/11 [279/00] Out 0933z S4	Malc, Spectre	WED
		0930z	10/11 [275/00] Out 0933z S2	Malc, Spectre	THU
0930z		16/11 [276/34 76510 08343 17996 83823 01592 91121 61763 70984.....66391] Out 0940z S4	Brixmis, Malc	WED	

	0930z	23/11 [273/00] Out 0933z S2		Malc	WED
	0930z	24/11 [278/00] Out 0933z S3		Malc, Spectre	THU
	0930z	30/11 [273/00] Out 0933z S3		Malc, Spectre	WED
	0930z	01/12 [278/00] Good		RNGB, Malc	THU
	0930z	07/12 [278/00] Out 0933z S2		Malc, Spectre	WED
	0930z	14/12 [277/00] Out 0933z S2		Malc, Spectre	WED
	0930z	15/12 [270/00] Good		RNGB	THU
	0930z	21/12 [275/34 60792.....29032] Out 0940z S3		Malc	WED
	0930z	28/12 [279/00] Out 0933z S2		Malc	WED
7840kHz	0645z	01/11 [518/00] Out 0648z S5		Malc, HfD	TUE
7850kHz	0600z	11/11 [355/00] QRM by CHU		HfD	FRI
	0600z	11/12 [354/00]		HfD	SUN
	0600z	16/12 [350/00]		HfD	FRI
9079kHz	1000z	01/11 [309/00] Out 1003z S3		Malc, Brixmis	TUE
	1000z	04/11 [307/00] Out 1003z S3		Malc	FRI
	1000z	08/11 [309/27 99052 82906 74092 44297 18687 65159 89075.....70069] Out 1009z S3		RNGB, Malc	TUE
	1000z	11/11 [309/27 99052.....etc] Repeat of Tuesday		RNGB	FRI
	1000z	15/11 [300/00] Out 1003z S4		Malc, Spectre	TUE
	1000z	18/11 [305/00] Strong		Spectre	FRI
	1000z	22/11 [307/00] Out 1003z S3		Malc	TUE
	1000z	25/11 [302/00] Out 1003z S5		Malc	FRI
	1000z	29/11 [308/00] Out 1003z S5		Malc	TUE
	1000z	02/12 [302/00] Out 1003z S3		Malc, Spectre	FRI
	1000z	06/12 [306/00] Out 1003z S6		Malc	TUE
	1000z	09/12 [308/00] Strong		Spectre	FRI
	1000z	13/12 [307/00] Out 1003z S6		Malc	TUE
	1000z	16/12 [307/00] Good		RNGB, Malc, Spectre	FRI
	1000z	20/12 [302/00] Out 1003z S5		Malc	TUE
	1000z	27/12 [308/21 84248.....61326] out 1008z S4		Malc	TUE
9130kHz	0715z	01/11 [635/00] Out 0718z S5		Malc, Spectre	TUE
	0715z	04/11 [634/00] Out 0718z S5		Malc	FRI
	0715z	08/11 [631/00] Out 0718z S4		Malc, Spectre	TUE
	0715z	11/11 [636/00] Out 0718z S5		Malc	FRI
	0715z	15/11 [630/31 62099.....03875] Out 0725z S6		Malc	TUE
	0715z	22/11 [637/00] Out 0718z S5		Malc	TUE
	0715z	25/11 [635/00] Out 0718z S6		Malc	FRI
	0715z	29/11 [634/00] Out 0715z S6		Malc, Spectre	TUE
	0715z	02/12 [639/00] Out 0718z S6		Malc	FRI
	0715z	06/12 [637/37 85239.....11558] Out 0726z S4		Malc	TUE
	0715z	13/12 [634/00] Out 0718z S4		Malc	TUE
	0715z	16/12 [636/00] Out 0718z S5		Malc	FRI
	0715z	20/12 [631/00] Out 0718z S4		Malc	TUE
	0715z	23/12 [635/00] Out 0718z S5		Malc	FRI
	0715z	27/12 [634/00] Out 0718z S6		Malc	TUE
	0715z	30/12 [631/00] Out 0718z S3		Malc	FRI
10213kHz	0745z	07/11 [268/00] Out 0748z S4		Malc, HfD	MON
	0745z	14/11 [261/00] Out 0748z S4		Malc	MON
	0745z	28/11 [262/00] Out 0718z S4		Malc	MON
	0745z	05/12 [266/00] Out 0748z S5		Malc	MON
	0745z	12/12 [266/00] Out 0748z S3		Malc	MON
10487kHz	1910z	04/11 [610/00] Out 1913z S2		Malc, HfD, Spectre	FRI
	1910z	18/11 [616/00] Out 1913z S2 (Finnish SDR)		Malc	FRI
	1910z	25/11 [610/00] Out 1913z S2 (Finnish SDR)		Malc	FRI
	1910z	27/11 [611/00] Out 1913z S3 (Finnish SDR)		Malc	SUN
	1910z	04/12 [612/00] Out 0913z S2 (Dutch SDR)		Malc	SUN
	1910z	11/12 [610/32 17293.....70665] Out 1920z S2 (Finnish SDR)		Malc	SUN
	1910z	16/12 [618/00] Out 1913z S2		Malc	FRI
	1910z	23/12 [611/00] Out 1913z S2		Malc	FRI
	1910z	30/12 [617/00] Out 1913z S2 (Finnish SDR)		Malc	FRI
11092kHz	0900z	02/11 [538/00] Strong		RNGB, Malc, HfD	WED
	0900z	07/11 [534/00] Out 0903z S4		Malc	MON
	0900z	09/11 [533/00] Out 0903z S4		Malc	WED
	0900z	14/11 [536/00] Good		RNGB	MON
	0900z	14/11 [536/00] Out 0903z S5		Malc	MON
	0900z	16/11 [534/00] Good		RNGB	WED

	0900z	23/11 [532/38 49979.....23000] Out 0911z S3	Malc	WED
	0900z	28/11 [532/00] Out 0903z S4	Malc	MON
	0900z	30/11 [537/00] Out 0903z S3	Malc	WED
	0900z	05/12 [533/00] Out 0903z S4	Malc	MON
	0900z	07/12 [535/00] Out 0903z S4	Malc	WED
	0900z	12/12 [533/00] Out 0903z S3	Malc	MON
	0900z	14/12 [533/00] Out 0903z S3	Malc	WED
	0900z	19/12 [537/38 44453 78959 44055 16014 17484 76809 24619 49041.....90816 79796]	RNGB	MON
	0900z	21/12 [537/38 44453.....etc] Repeat of Monday	Malc	WED
	0900z	28/12 [532/00] Out 0903z S6	Malc	WED
11100kHz	1045z	02/11 [692/00]	Ary, HfD	WED
	1045z	07/11 [696/00] Out 1048z S3	Malc	MON
	1045z	09/11 [698/00] Good	RNGB	WED
	1045z	09/11 [698/00] Out 1048z S4	Malc , Spectre	WED
	1045z	14/11 [696/34 10736.....38170] Out 1055z S4	Malc	MON
	1045z	16/11 [696/34 10736.....etc] Repeat of Monday	Malc	WED
	1045z	23/11 [692/00] Fair	Spectre	WED
	1045z	28/11 [698/00] Out 1048z S6	Malc	MON
	1045z	30/11 [697/00] Out 1048z S9	Malc	WED
	1045z	05/12 [698/00] Out 1048z S5	Malc	MON
	1045z	07/12 [690/00] Out 1048z S4	Malc, Spectre	WED
	1045z	12/12 [696/00] Good	RNGB, Malc	MON
	1045z	21/12 [694/00] Out 1048z S9 (Dutch SDR)	Malc	WED
	1045z	28/12 [692/31 83912.....05003] Out 1055z S4	Malc	WED
11104kHz	0715z	02/11 [752/00] Out 0718z S6	Malc	WED
	0715z	07/11 [751/00] Fair	Spectre	MON
	0715z	16/11 [757/00] Out 0718z S8	Malc	WED
	0715z	23/11 [755/00] Out 0718z S3	Malc	WED
	0715z	30/11 [752/36 20013.....51216] Out 0726z S2	Malc	WED
	0715z	05/12 [751/00] Out 0718z S6	Malc	MON
	0715z	07/12 [751/00] Good	RNGB, Malc	WED
	0715z	12/12 [757/00] Out 0718z S5	Malc	MON
	0715z	14/12 [753/00] Out 0718z S4	Malc	WED
	0715z	21/12 [750/00] Out 0718z S6	Malc, Spectre	WED
	0700z	28/12 [752/32 93642.....72223] Out 0725z S6	Malc	WED
11487kHz	1910z	11/11 [611/35 71953.....32873] Out 1920z S7	Malc	FRI
12067kHz	0845z	02/11 [715/00] Out 0848z S5	Malc, HfD, PoSW	WED
	0845z	07/11 [716/00] Out 0848z S4	Malc, PoSW	MON
	0845z	09/11 [710/00] Out 0848z S5	Malc	WED
	0845z	14/11 [716/00] Out 0848z S5	Malc, PoSW	MON
	0845z	16/11 [713/00] Strong	RNGB	WED
	0845z	21/11 [710/00]	PoSW, Spectre	MON
	0845z	23/11 [714/00] Strong	RNGB, Malc	WED
	0845z	28/11 [711/33 92447.....48229] Out 0855z S4 QSB2	Malc	MON
	0845z	30/11 [711/33 92447 97517 93864 71112 58047 16185 90404 96575.....91829 48229]	RNGB, Malc, PoSW	WED
	0845z	05/12 [715/38 85050.....53019] Out 0856z S3+QRM	Malc, PoSW	MON
	0845z	12/12 [713/00] Out 0848z S2	Malc, PoSW	MON
	0845z	14/12 [710/00] Out 0848z S2	Malc	WED
	0845z	19/12 [713/00] Good	RNGB	MON
	0845z	21/12 [711/00] Out 0903z S7	Malc, PoSW, Spectre	WED
	0845z	28/12 [716/00] Out 0848z S6	Malc	WED
12153kHz	0505z	10/11 [337/38 19868 72998 66231 29859 37940 89293 71180 29905.....11619 57618]	Ary	THU
	0505z	15/11 [330/00]	HfD	TUE
12924kHz	1745z	06/11 [242/00]	HfD	SUN
	1745z	07/11 [245/00] Out 1748z S2 (Dutch SDR)	Malc	MON
	1745z	12/12 [242/00] Out 1748z S2	Malc	MON
	1745z	18/12 [242/00] Out 1748z S3 (Finnish SDR)	Malc	SUN
13046kHz	0845z	01/11 [152/00] Out 0848z S6	Malc, RNGB	TUE
	0845z	03/11 [157/00] Out 0848z S6	Malc	THU
13363kHz	1430z	01/11 [914/00] Out 1433z S5	Malc	TUE
	1430z	05/11 [910/00] Out 1433z S5	Malc, Brixmis, Spectre	SAT
	1430z	08/11 [919/32 07929.....28159] Out 1440z S5	Malc	TUE
	1430z	15/11 [915/00] Out 1433z S5	Malc, Gary H	TUE
	1430z	19/11 [919/00]Fair	Spectre	SAT

1430z	22/11 [912/00] Out 1433z S5	Malc	TUE
1430z	29/11 [910/00] Out 1433z S3	Malc	TUE
1430z	03/12 [915/00] Out 1433z S6	Malc	SAT
1430z	06/12 [914/00] Out 1433z S6	Malc	TUE
1430z	10/12 [917/00]	Gary H, Spectre	SAT
1430z	17/12 [919/00] Out 1433z S5	Malc, Spectre	SAT
1430z	20/12 [915/34 58854.....96337] Out 1440z S6	Malc	TUE
1430z	27/12 [917/00] Out 1433z S4	Malc	TUE
1430z	31/12 [910/00] Out 1433z S6	Malc	SAT
13908kHz	0745z 01/11 [223/00] Out 0748z S6	Malc, PoSW	TUE
	0745z 03/11 [220/00] Fair	RNGB, Malc	THU
	0745z 08/11 [225/00] Out 0848z S5	Malc	TUE
	0745z 10/11 [225/00] Good	RNGB, Malc	THU
	0745z 15/11 [224/00] Out 0748z S5	Malc	TUE
	0745z 17/11 [220/00] Strong	RNGB, Malc	THU
	0745z 22/11 [220/32 62940.....84075] Out 0754z S5	Malc	TUE
	0745z 29/11 [220/00] Out 0748z S2	Malc	TUE
	0745z 01/12 [157/00] Out 0748z S6	Malc	THU
	0745z 06/12 [228/38 05435 51637 05670 69457 29338 20842 05686 87155.....94866 48860]	RNGB, Malc, PoSW	TUE
	0745z 13/12 [220/00] Out 0748z S6	Malc	TUE
	0745z 15/12 [227/00] Out 0748z S4	Malc	THU
	0745z 20/12 [220/00] Out 0748z S3	Malc, PoSW	TUE
	0745z 22/12 [225/00] Out 0748z S5	Malc	THU
	0745z 27/12 [225/00] Out 0748z S4	Malc	TUE
14611kHz	0820z 01/11 [134/00] Out 0823z S8	Malc, Malc	TUE
	0820z 02/11 [130/00] Out 0823z S8	Malc, PoSW	WED
	0820z 08/11 [133/34 38541 88101 20656 51298 25136 39213 66322 13794.....90094 72185] Good	RNGB, Malc	TUE
	0820z 09/11 [133/34 38541.....etc] Repeat of Tuesday	RNGB, Malc	WED
	0820z 15/11 [133/00] Strong	RNGB	TUE
	0820z 15/11 [133/00] Out 0823z S6	Malc, PoSW	TUE
	0820z 16/11 [134/00] Weak	RNGB, PoSW	WED
	0820z 22/11 [130/00] Out 0823z S5	Malc	TUE
	0820z 23/11 [134/00] Out 0823z S3	Malc	WED
	0820z 29/11 [130/00] Out 0823z S7	Malc	TUE
	0820z 30/11 [135/00] Out 0823z S6	Malc	WED
	0820z 06/12 [135/00] Good	RNGB, Malc, PoSW	TUE
	0820z 07/12 [132/00] Out 0823z S4	Malc, PoSW	WED
	0820z 13/12 [134/00] Out 0823z S6	Malc	TUE
	0820z 14/12 [131/00] Out 0823z S4	Malc	WED
	0820z 20/12 [134/00] Good	RNGB, PoSW	TUE
	0820z 21/12 [138/00] Good	RNGB, PoSW	WED
	0820z 27/12 [132/32 01211.....09978] Out 0830z S8	Malc	TUE
14940kHz	0830z 04/11 [183/00] Fair	RNGB, Malc, HfD	FRI
	0830z 07/11 [185/30 48331 54197 36478 62293 49211 53890 50068 85563.....48520 77271] Weak	RNGB, HfD	MON
	0830z 14/11 [180/00] Out 0833z S5	Malc	MON
	0830z 18/11 [188/00] Out 0833z S7	Malc	FRI
	0830z 21/11 [184/00] Fair	RNGB,Spectre	MON
	0830z 25/11 [180/00] Out 0833z S6	Malc	FRI
	0830z 28/11 [184/00] Out 0833z S2	Malc	MON
	0830z 02/12 [185/00] Out 0833z S3	Malc	FRI
	0830z 05/12 [184/00] Strong	RNGB, Malc	MON
	0830z 09/12 [180/00] Out 0833z S5	Malc	FRI
	0830z 12/12 [184/00] Out 0833z S5	Malc	MON
	0830z 16/12 [189/00] Good	RNGB, Malc	FRI
	0830z 19/12 [189/00] Good	RNGB	MON
	0830z 30/12 [185/35 57215 42696 37043 18020 89411 61293 12986 17410.....39666 65965 54870]	RNGB, Malc	FRI
16005kHz	0640z 07/11 [941/00]	HfD	MON
	0640z 19/12 [944/00]	HfD	MON
17378kHz	0745z 02/11 [344/00] Good	RNGB, Malc, HfD	WED
	0745z 04/11 [343/00] Good	RNGB, Malc	FRI
	0745z 09/11 [343/00] Fair	RNGB, Malc	WED
	0745z 11/11 [342/00] Out 0748z S3	Malc	FRI
	0845z 15/11 [155/38 31258.....78717] Out 0854z S9	Malc, HfD	TUE
	0745z 16/11 [347/37 27106 11979 90460 74208 30628 83245 31886 69869.....90381 40496] Weak	RNGB	WED
	0845z 22/11 [152/00] Fair	RNGB	TUE
	0845z 22/11 [152/00] Out 0848z S4	Malc	TUE
	0745z 23/11 [342/00] Fair	RNGB, Malc	WED

0845z	24/11 [152/00] Out 0848z S6	Malc	THU
0745z	25/11 [347/00] Fair	RNGB	FRI
0745z	25/11 [347/00] Out 0748z S6	Malc	FRI
0845z	29/11 [154/00] Strong	RNGB, Malc	TUE
0845z	01/12 [157/00] Strong	RNGB	THU
0745z	30/11 [346/00] Out 0748z S2 (Dutch SDR)	Malc	WED
0845z	01/12 [157/00] Out 0848z S2	Malc	THU
0745z	02/12 [344/00] Out 0748z S4 (Dutch SDR)	Malc	FRI
0745z	06/12 [152/33 75164.....40459] Out 0855z S8	Malc	TUE
0745z	07/12 [342/00] Out 0748z S2	Malc	WED
0845z	08/12 [152/33 75164.....40459] Out 0855z S9	Malc	THU
0745z	09/12 [347/00] Out 0748z S2	Malc	FRI
0845z	13/12 [155/00] Fair	RNGB	TUE
0745z	14/12 [347/00] Fair	RNGB	WED
0845z	13/12 [155/00] Out 0848z S6	Malc	TUE
0745z	14/12 [347/00] Out 0748z S2 (Dutch SDR)	Malc	WED
0845z	15/12 [154/00] Out 0848z S6	Malc	THU
0745z	16/12 [346/00] Out 0748z S2	Malc	FRI
0845z	20/12 [152/00] Fair	RNGB	TUE
0745z	21/12 [342/00] Out 0748z S2	Malc, Spectre	WED
0845z	22/12 [157/00] Out 0848z S8	Malc	THU
0745z	23/12 [347/00] Out 0748z S3	Malc	FRI
0845z	27/12 [151/00] Out 0848z S9	Malc	TUE
0745z	28/12 [343/32 29003.....60425] Out 0755z S2	Malc	WED
0845z	29/12 [159/00] Out 0848z S8	Malc	THU
0745z	30/12 [343/32 29003..... 60425] Out 0755z S3 (Dutch SDR)	Malc	FRI

S06

From PoSW:

First + Third Fridays in the Month Schedule:-

4-Nov-22:- 2000 UTC, 7672 kHz, “319 319 319 00000”, S5 to S6.

2100 UTC, 5457 kHz, much stronger, S9.

Same frequencies as used in January and February.

18-Nov-22:- 2000 UTC, 7672 kHz, calling “319” for a message, weak signal, DK/GC “720 720 51 51”, ended a bit before 2015 UTC.

2100 UTC, 5457 kHz, second sending much stronger signal. Not too many messages from this S06 schedule in recent months, looking back through the log the last occasion appears to be on 20-May of this year and before that, 19-November-2021.

A full messages means a repeat on the following day:-

19-Nov-22, Saturday:- 2000 UTC, 7672 kHz, weak signal, weaker than yesterday.

2100 UTC, 5457 kHz, also weaker, a couple of S-points down on yesterday's transmission.

Moved back by one hour in December:-

2-Dec-22:- 2000 UTC, 5457 kHz, “319 319 319 00000”, good signal, nothing readable from the first sending at 1900z on 7672, no doubt underneath the local RF noise QRM.

16-Dec-22:- 1900 UTC, 7672 kHz, very weak, could just about hear some “nulls”.

2000 UTC, 5457 kHz, “319 319 319 00000”, good signal.

S11a log Nov/Dec

5371kHz	0830z	05/11 [370/00] Konyetz 0833z S5	Malc, HfD	SAT
	0830z	12/11 [376/00] Fair	RNGB	SAT
	0830z	13/11 [370/00] Konyetz 0833z S2	Malc	SUN
	0830z	27/11 [379/00] Konyetz 0833z S5	Malc	SUN
	0830z	03/12 [377/00] Konyetz 0833z S3	Malc	SAT
	0830z	04/12 [372/00] Konyetz 0833z S3	Malc	SUN
	0830z	11/12 [372/00] Good	RNGB	SUN
	0830z	17/12 [376/39 87827.....43031] Konyetz 0842z S5	Malc	SAT
	0830z	18/12 [376/39 87827 72133 22841 85603 88556 90509 60237 17256.....17367 09521 43031]	RNGB	SUN
	0830z	31/12 [371/00] Konyetz 0833z S4	Malc	SAT
6252kHz	1400z	01/11 [427/32 6742081872] Konyetz 1411z S2	Malc, RNGB	TUE
	0915z	04/11 [481/00] Good	RNGB, Malc	FRI
	1400z	04/11 [427/32 67420.....81872]	Malc, HfD	FRI
	0915z	07/11 [483/00] Konyetz 0918z S2+QRM	Malc	MON
	1400z	08/11 [427/00] Konyetz 1403z S2	Malc	TUE
	0915z	11/11 [480/00] Good	RNGB	FRI
	1400z	11/11 [424/00] Konyetz 1403z S3	Malc	FRI
	0915z	14/11 [481/00] Good	RNGB	MON

	0915z	14/11 [481/00] Out 0918z S2		Malc	MON
	1400z	15/11 [420/00] Konyetz 1403z S3		Malc	TUE
	0915z	18/11 [485/00] Konyetz 0918z S2		Malc	FRI
	1400z	18/11 [422/00] Konyetz 1403z S3		Malc	FRI
	1400z	22/11 [420/00] Konyetz 1403z S3		Malc	TUE
	0915z	25/11 [480/35 54963.....38255] Konyetz 0926z S3		Malc	FRI
	1400z	25/11 [425/00] Konyetz 1403z S5		Malc	FRI
	0915z	28/11 [485/00] Konyetz 0918z S2		Malc	MON
	1400z	29/11 [426/00] Konyetz 1403z S3		Malc	TUE
	0915z	02/12 [482/00] Good		RNGB	FRI
	1400z	02/12 [421/00] Konyetz 1403z S4		Malc	FRI
	0915z	05/12 [487/00] Konyetz 0918z S3 (Dutch SDR)		Malc	MON
	1400z	06/12 [425/00] Konyetz 1403z S2		Malc	TUE
	0915z	09/12 [480/00] Konyetz 0918z S4		Malc	FRI
	1400z	09/12 [420/00] Konyetz 1403z S3		Malc	FRI
	0915z	12/12 [483/00] Konyetz 0918z S2		Malc	MON
	1400z	13/12 [425/39 47683.....61905] Konyetz 1412z S3		Malc	TUE
	0915z	19/12 [482/34 66713 76561 83762 70727 52619 21885 53379 47249.....59765 02549]		RNGB	MON
	1400z	20/12 [427/00] Konyetz 1403z S2		Malc	TUE
	0915z	23/12 [482/34 66713.....02449] Konyetz 0926z S3		Malc	FRI
	1400z	23/12 [425/00] Konyetz 1403z S4		Malc	FRI
	1400z	27/12 [427/00] Konyetz 1403z S5 (Dutch SDR)		Malc	TUE
	0915z	30/12 [480/00] Konyetz 0918z S3		Malc	FRI
	1400z	30/12 [424/00] Konyetz 1403z S2		Malc	FRI
9050kHz	0700z	03/11 [477/00]		HfD	THU
	0700z	10/11 [471/38 63615.....40266]		Malc	THU
	0700z	24/11 [477/00] Konyetz 0703z S4		Malc	THU
	0700z	01/12 [470/00] Fair		RNGB, Malc	THU
	0700z	12/12 [471/38 94138.....17624] Konyetz 0712z S6		Malc	MON
	0700z	15/12 [471/38 94138 90598 35584 64623 76435 46193 36065.....77136 74560 17624]		RNGB	THU
	0700z	22/12 [476/00] Konyetz 0703z S5		Malc	THU
9057kHz	0510z	02/11 [657/00]		HfD	WED
	0510z	12/12 [654/00]		HfD	MON
11486kHz	1850z	02/11 [280/32 78655.....ect]		HfD	WED
	1850z	05/11 [280/32 78655.....,86178] Konyetz 1901z		Malc	SAT
	1850z	09/11 [288/00] Konyetz 1853z S3		Malc	WED
	1850z	12/11 [282/00] Fair		RNGB	SAT
	1850z	23/11 [280/00] Konyetz 1853z S2 (Dutch SDR)		Malc	WED
	1850z	07/12 [287/00] Konyetz 1853z S3 (Dutch SDR)		Malc	WED
	1850z	14/12 [284/00] Konyetz 1853z S2 (Dutch SDR)		Malc	WED
	1850z	21/12 [282/31 56251.....67974] Konyetz 1901z S3 (Dutch SDR)		Malc	WED
	1850z	28/12 [282/00] Konyetz 1853z S3		Malc	WED
11559kHz	0445z	01/11 [793/00]		HfD	TUE
12530kHz	0500z	01/11 [381/00]		HfD	TUE

S25a

[See Ary's message on Group 16th November 2022 re S25]

Friday 1st & 3rd		2000z	7672khz	2100z	5457kHz
04/11	'319' 00000				
18/11	'319' 720 51	80068 88044 45888 60323 27454 78904 29549 50589 44167 84721 17689 30393 65303 55621 60609 13959 28187 74630 51112 94256			
		85465 55938 27890 09291 99069 99563 32973 71456 69315 05582 85590 63079 15733 35252 54093 31438 33945 72831 76559 10514			
		63696 91397 57481 01777 79656 34928 99146 07140 69727 08204 02725 720 51 00000			
		1900z	7672khz	2000z	5457kHz
02/12	'319' 00000				
16/12	'319' 00000				

Other transmissions:

10175kHz 23-11-2022 1226z S25a USB
11111 11111 00000 00000
11111 11111 00000 00000
11111 11111 00000 00000
11111 11111 00000 00000

Ary

S06c

13468kHz 24/11 1103z i.p. 11115 (R)

V07

Sunday

November 2022

0100z 15946kHz 0120z 14846kHz 0140z 13486kHz

15946kHz0100z 06/11[984 1 418 106 95232 ... 06938 000 000]

984 984 984 1
418 106
95232 70060 45063 18051 83957
04800 22624 22182 03978 40117
03631 87807 06489 86743 58035
00887 09586 33414 15712 67132
15011 51668 84027 06960 43987
02187 25324 76633 52027 37164
97164 94376 47720 03614 06284
13797 21198 72460 19846 80794
91084 36220 50337 92709 83812
36534 64393 47872 15018 52033
52885 55344 34491 91494 02431
72051 49934 08003 69755 45431
33998 53053 56002 70194 52211
45533 68927 31496 46309 58457
48708 16417 91835 89555 17297
28431 60506 44070 12120 89917
22297 01081 82155 50319 12341
67227 74007 46525 38010 25116
69414 10337 67906 11287 82123
83199 41671 95308 59583 90037
96569 22915 16508 96833 02200
06938 000 000 *Courtesy DanAR*

15964kHz0100z 13/11[984 1 7724 128 80596 ... 18598 000 000]

984 984 984 1
7224 128
80596 38171 69471 18625 88161
40674 18836 32048 48439 54360
08821 95611 88815 97812 27889
90247 04422 97441 63477 92104
97787 51030 83673 92132 48483
16721 60234 90299 84563 65101
63302 00898 61484 12281 19896
97919 92090 10340 33934 23147
34188 35991 92818 55208 39285
07801 20203 17526 93625 78348
58311 05988 60604 86460 95870
78157 48837 72473 40903 00828
22365 60835 10376 75859 56873
88303 54488 90911 23629 88212
45833 44752 10619 77085 29503
76174 83941 44293 57480 22447
05596 78765 02913 15217 73662
49322 19732 12356 85719 42089
02658 00976 86650 44187 51949
64546 45466 47372 99099 65378
71143 19679 92611 14799 90305
42196 33329 64990 54925 01321
45120 65352 77810 29925 17843
31907 21490 08253 31796 40182
50587 30949 41572 77565 41067
69644 58969 18598 000 000
Courtesy DanAR

15946kHz2200z 20/11[984 1 5851 126 19758 ... 61732 000 000]

984 984 984 1
5851 126
19578 61390 27208 14101 96059
45320 92728 72185 03483 26243
01421 54624 09440 02751 58531
57257 66665 46523 61859 27034
28519 18621 84179 36936 61459
39669 21633 49732 70141 65935
19919 96867 25588 26293 88221
92549 20517 83317 26708 93560
17770 85383 77639 25093 22495
59327 66917 22747 69392 49328
47453 25629 96765 11867 58678
72241 66005 43473 09401 55445
15732 03563 80203 11703 78639
25420 96551 97829 92709 66198
33445 02967 67528 20719 47601
50487 30944 71240 34778 11446
58554 50037 47289 11430 27997
81203 80378 65496 13728 54542
05561 27021 73634 42554 18770
21913 42763 87157 58879 93651
52361 67050 80892 44350 70484
52430 45362 13144 99741 51968
94930 58274 40669 16041 63573
03386 75406 36202 40699 80905
06342 11913 01479 87135 56233
61732 000 000 *Courtesy DanAR*

14846kHz0120z 27/11 [984 1 839 104 29819 ... 05788 000 000

Weak

DanAR

SUN

984 984 984 1
839 104
29819 81350 71902 32189 65428
16903 45598 64065 03439 75137
97646 58379 99043 16795 46094
52906 68968 30600 78073 84972
77620 28524 10228 27268 21885
96759 41620 71293 00358 95515
33522 27130 04954 66521 96773
04424 46045 15208 79329 68078
22118 68958 70041 82293 44711
95140 87488 39867 61351 62074
02650 54513 18382 56299 05125
02486 53277 89160 18237 63826
55459 68913 84351 58534 10418
52145 00403 92902 62835 93875
77202 64077 75600 55019 48952
97936 52296 49349 12302 64863
61980 73749 03763 25224 74616
87494 23868 73222 97020 23424
25431 92150 79931 97543 64597
85533 36728 30613 48455 05805
30560 13904 05969 05788
000 000 *Courtesy DanAR*

December 2022

0100z 11594kHz 0120z 10794kHz 0140z 10194kHz

11594kHz0100z 04/12 571 1 6038 90 00882 ... 07892 SDR Japan QSA3 QRM3

DanAR

SUN

571 571 571 1
6038 90
00882 09724 62031 07010 28643
1?692 58?20 28608 78614 82470
24695 46785 70615 17868 38129
41989 23565 68720 58146 24469
7?572 23117 80058 97650 16392
50343 44510 18052 94590 99639
20580 14938 76755 93566 97549
44150 76382 01533 96930 35258
86612 09341 12976 56023 00024
87142 21625 26505 95158 60751
47999 54806 25131 19123 87249
19312 86783 78572 57512 79881
96207 5190? 70849 74437 21668
91658 44806 69414 38132 93440
06743 94461 34400 45754 45282
00258 39580 09661 45679 24099
15192 82697 11450 41165 36408
75512 30611 27123 31825 07892
000 000 *Courtesy DanAR*

HFD managed all the sendings for 04/12 and reports them:

Sun 04.12.2022 0100Z 11594 571:1-6038/90= 90882 via KiwiSDR USA
Sun 04.12.2022 0120Z 10794 571:1 via KiwiSDR USA
Sun 04.12.2022 0140Z 10194 571:1 via KiwiSDR USA

11594kHz0100z 11/12 571 1 3222 9? 31269 52701 175?8 210?3 21776 8872? 19639 13616 43015 86377 000 000 SDR Japan QSA3 QRM5
DanAR SUN

11594kHz0100z 18/12 571 1 7197 104 22??? 27402 17566 16618 43078 13383 51361 000 000 SDR Japan QSA3 QRM5 DanAR SUN

Of the above transmissions Daniel writes, “This schedule has strong interference by a Chinese broadcasting Stn and the signal is too weak in my qth. Even the SDR RX in Japan is a mess.

Original Token in the Mojave Desert offered in reply: ‘Note that the V07 transmissions on Dec 25, 2022, appear to have not happened. Even receivers located very near the transmitter showed no activity.

I searched for other frequencies, and times, that morning, but nothing heard.

Here’s hoping this isn’t yet another station down the pan!

V13

Nil Reports

V15 North Korean Intelligence via Radio Pyongyang

Nil Reports

V24 South Korean Intelligence

Nil Reports

V26

Nil Repotrts

Polytones

XPA1 Wed/Fri

November 2022

Wednesday/Friday

1310z 13875kHz 1330z 13375kHz 1350z 10875kHz

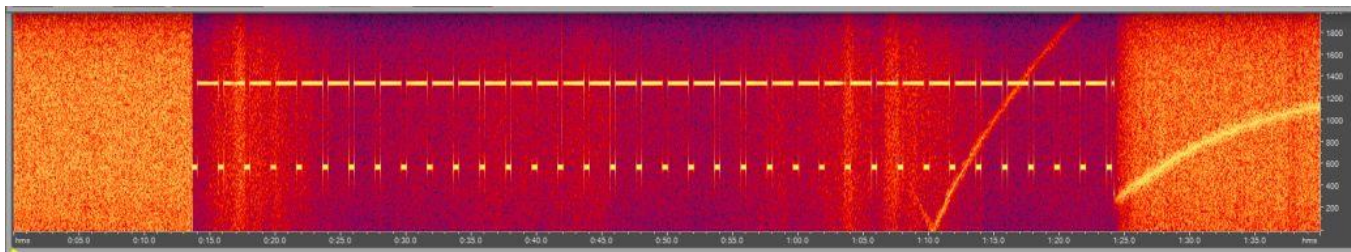
02/11 838 1 00951 00128 54639 ... 25271 1310z Strong, rest Very strong

838 838 838 1 838 838 838 1 838 838 838 1

00951 00128 54639 88954 45531 18268 40592 26989 35100 82188
54459 17775 38044 38312 98159 75953 41898 57117 30522 96783
01904 78386 05263 21817 16467 37173 24441 94514 25670 86156
97880 59275 60606 11054 86599 20108 34229 81691 64185 70829
65544 59193 50305 80343 79701 83285 95488 22570 02298 11950
99091 67904 68912 19051 46770 70436 07327 66025 22543 74479
13396 64562 42373 56214

24188 97032 76756 52513 30347 83863 73789 13907 22383 04438
02587 17653 60312 12643 04309 87107 05927 38327 79087 09852
09991 90136 27512 31641 55171 54312 22060 22455 37834 64392
72044 06140 51882 31210 06520 39359 41459 07245 07754 78640
40511 15793 05610 73032 02686 22631 68826 21807 52315 27290
55943 36521 24917 85717 97086 66108 52747 35328 87122 63710
82565 51883 94280 28901

67558 74325 25271 *Courtesy PLdn*



13375kHz 1330z 04/11 intro only

04/11 838 1 00951 00128 54639 ... 25271 1310z Strong, 1330z Intro only, 1350z Unworkable See above

09/11 838 1 00323 00108 85348 ... 63576 Strong, 1350z Weak QRM2

838 838 838 1 838 838 838 1 838 838 838 1

66889 40446 31447 35297 66900 34864 25460
19201 69240 03256 19586 00639 40736 74406 40643 98643 11610
54461 21236 78767 59740 60808 20820 59619 61083 51122 60765
70683 27554 47384 73592 39747 15478 29644 14249 15033 72588
15149 21527 59611 59678 02490 25571 19928 86511 43572 13923
39083 03702 25415 32606 57628 89878 70575 45445 62052 17187
99386 68286 87266 93952

73102 24362 03303 48820 35103 52147 22504 12831 08714 40524
91092 14817 40917 96438 08290 21965 48929 14851 73789 02193
13277 86338 62867 27257 47232 14416 03169 78127 02193 15024
30841 30170 46477 50581 65787 89949 46472 90720 84891 80656
71787 21343 83119 75212 59826 17111 63576 *Courtesy PLdn*

11/11 838 1 00323 00108 85348 ... 63576 Fair, 1310z QSB3, 1350z Weak

16/11 838 1 00323 00108 85348 ... 63576 Strong, 1350z Weak QRM3 QSB2

838 838 838 1 838 838 838 1 838 838 838 1

00323 00108 85348 66889 40446 31447 35297 66900 34864 25460
19201 69240 03256 19586 00639 40736 74406 40643 98643 11610
54461 21236 78767 59740 60808 20820 59619 61083 51122 60765
70683 27554 47384 73592 39747 15478 29644 14249 15033 72588
15149 21527 59611 59678 02490 25571 19928 86511 43572 13923
39083 03702 25415 32606 57628 89878 70575 45445 62052 17187
99386 68286 87266 93952

73102 24362 03303 48820 35103 52147 22504 12831 08714 40524
91092 14817 40917 96438 08290 21965 48929 14851 73789 02193
13277 86338 62867 27257 47232 14416 03169 78127 02193 15024
30841 30170 46477 50581 65787 89949 46472 90720 84891 80656
71787 21343 83119 75212 59826 17111 63576 *Courtesy PLdn*

18/11	MISSED	
23/11	838 1 00129 00094 39036 ... 51577	Weak, 1350z QSB3
25/11	838 1 00129 00094 39036 ... 51577	Strong, 1350z Weak QRM3
838 838 838 1 838 838 838 1 838 838 838 1 00129 00094 39036 60506 10746 33621 39225 42419 77936 46375 48235 35907 56844 54284 17714 90906 42867 57949 15034 33414 50961 91988 60178 39238 36992 69441 30001 06503 37884 05705 01090 76176 48711 53166 64669 58226 45737 15328 80876 47486 93110 11602 51951 31569 76730 61047 15824 76277 87505 54966 27974 20348 57410 73703 00767 25655 85957 32289 29856 72081 86763 64859 46985 29079 99115 53561 80404 50438 30529 63549 96153 78171 98815 21819 06007 32545 61659 46460 48430 99721 53041 31696 62264 86596 65038 76116 72747 37617 63654 28551 19241 99721 37344 09417 26451 45316 51577 <i>Courtesy PLdn</i>		
December 2022		
1310z	13465kHz	1330z 12165kHz 1350z 10265kHz
02/12	412 000 08083 00001 00000 ... 32670	1310z Fair, 1330z Strong, 1350z QRM5
07/12	412 1 00198 00076 71485 ... 22004	Strong, 1350z QRM5
412 412 412 1 412 412 412 1 412 412 412 1 00198 00076 71485 32301 35040 28100 27317 90335 52314 99170 59599 89135 18819 40240 50036 66104 10219 84924 44540 54859 84741 74473 07434 62152 54050 85562 96364 65582 59997 74540 93820 05171 89601 13073 93291 55688 98421 86144 97766 30540 10862 12285 45271 28646 43541 57159 69912 05180 74424 32710 35676 18631 32086 68930 18177 88589 10276 13519 58621 06289 11825 75196 52460 83517 58942 68935 73243 81592 03751 54395 07533 22269 92804 18719 97979 22558 79870 94283 22004 <i>Courtesy PLdn</i>		
09/12	412 1 00198 00076 71485 ... 22004	1310z Strong, rest Weak 1350z QRM3
14/12	412 1 00198 00076 71485 ... 22004	Fair, 1350z Weak QRM4
16/12	412 1 00198 00076 71485 ... 22004	Weak; 1310z QSB3/4, 1350z QRM5
21/12	412 1 00302 00068 84944 ... 51676	Strong, 1350z QRM5
412 412 412 1 412 412 412 1 412 412 412 1 00302 00068 84944 49623 00633 61675 62490 55691 91713 55157 18355 54455 91613 73436 87703 03330 70860 04224 62927 55055 93928 29585 81737 52695 00990 29376 45707 06917 71714 00220 62740 09715 72412 38406 60392 83202 99965 08961 75136 96925 94937 32163 79589 21292 03657 40513 58042 99095 92247 44279 76388 39691 27462 80034 22481 68611 37028 42859 97265 33861 87987 47425 23675 71332 63910 35762 82094 47980 34938 61536 51676 <i>Courtesy PLdn</i>		
23/12	NOT MONITORED	
28/12	NOT MONITORED	
30/12	412 1 00302 00068 84944 ... 51676	Fair, 1350z QRM5

XPA2 m

Sunday/Tuesday

November 2022

1200z	14783kHz	1220z	13883kHz	1240z	12183kHz
01/11	00969 00166 59782 ... 06071			1200/1240z Strong, 1220z Very strong	
00969 00166 59782 18000 92196 81290 19945 67799 68495 91012 76920 60541 98100 83975 07372 46642 81942 50971 17915 58280 00309 89332 41024 52591 39433 74375 14255 38792 54737 16769 75497 70313 00040 24428 91593 39082 93700 19050 53846 20272 35170 50058 51579 99138 57849 60177 93357 04590 96039 30311 44032 80185 27300 98265 33877 81112 06242 51189 97915 90587 32611 82953 20875 02113 59963 82547 25102 36172 18094 14499 38998 73453 18955 38054 11273 30981 77790 20410 35210 99226 97896 93539 47950 75452 19478 11770 02025 62322 70080 27686 52809 96349 65283 08530 04323 31509 20712 83727 09173 80026 25733 00082 76196 14560 23122 54497 48999 31079 90007 54708 61278 80129 01303 33184 47323 21037 67474 29024 45826 91128 59306 64005 00730 56539 70122 75689 64370 40636 13421 16136 76531 87272 29111 92712 23463 55789 61376 28276 31228 67376 69500 99316 71616 64301 25358 47813 41194 07545 13497 24811 63071 35753 57985 19901 49337 26339 29211 99303 55760 76247 72982 67692 10597 08051 61276 01844 72954 85482 06071 <i>Courtesy PLdn</i>					
06/11	00969 00166 59782 ... 06071			1200/1220z Strong, 1240z Fair QRM4	
08/11	06591 00228 72003 ... 43765			Very strong, 1240z Strong	
06591 00228 72003 44639 43656 44264 12494 86474 02170 27403 03408 19853 81000 87000 35355 29104 46828 50100 51989 29620 57820 23421 96561 67406 58058 20198 77846 07877 10386 34756 67541 78825 93390 56178 63887 27838 32745 69335 85765 32824 91381 00875 73359 25812 99216 15007 79411 95939 31079 73028 79586 67995 08376 05892 38058 92091 43479 26117 67779 11633 75446 44869 35192 27336 23031 86659 60424 77832 95753 97038 39567 63383 43796 35357 04164 84120 74982 45524 33771 53064 63751 72186 21699 03303 07189 47293 81418 71726 94270 17926 04084 69511 20148 38709 77399 61660 14058 06389 50005 24104 98190 86342 83201 31820 39942 39032 14773 06743 44631 27836 61249 80388 41135 41527 75655 39142 76833 52551 11640 65890 53585 75307 33594 64921 84889 03837 38914 63412 22113 82327 42816 87088 25723 66311 22729 92148 74999 56590 40047 64217 47320 31799 76867 21049 54813 79331 81770 36731 55839 95004 95873 14016 08100 66724 47002 23199 49159 67195 41547 35954 14852 36356 60943 37308 47104 55521 83987 86584 21911 53369 31667 11111 87873 04245 54731 62769 32427 94343 19914 03322 93786 02200 72369 60176 88589 10495 79501 56070 74457 16809 31436 43200 51395 25063 00308 54868 78467 83643 33335 22187 48585 90045 36058 13460 45541 77900 91632 00830 06918 49414 30000 03396 40951 14381 98798 03902 69990 81520 70734 23462 25163 29853 24627 45701 34162 87284 14401 26985 31630 11506 43765 <i>Courtesy PLdn</i>					
13/11	06591 00228 72003 ... 43765			Very strong	
15/11	00448 00164 59838 ... 64750			Very strong	
00448 00164 59838 07592 71503 33133 47174 22782 41788 45617 79727 60031 95607 01037 15458 36471 50444 38611 36891 12275 46701 99107 16740 61041 41859 32046 90671 00893 93385 48966 53375 03488 26271 39549 03636 56920 69213 87426 14288 66438 60214 40930 48869 92334 61990 78489 39443 35771 24133 23402 53116 83091 17827 69195 04203 13568 87400 44127 63475 93032 50645 19444 03948 10200 91355 76805 94320 12117 71648 08386 05042 23676 22814 30138 53088 33421 73986 43930 40019 31705 60214 10149 42498 46895 87270 37925 93525 07424 62756 52027 48592 92544 77645 61057 83178 29684 79855 84510 31611 44419 65763 03951 76756 74717 38341 72157 02402 52484 87708 34282 98917 71105 02262 32460 24355 14706 97592 27436 50721 90785 15367 29131 51844 03849 42366 83837 65600 52492 00035 02254 97843 64915 58145 11340 65252 55389 88158 48140 67756 53207 29437 99357 67022 35174 40602 57778 42843 03209 76477 88800 98167 05223 91834 19163 84591 79763 11832 31393 66676 48371 14873 81323 95538 99138 52067 30209 64750 <i>Courtesy PLdn</i>					
20/11	00448 00164 59838 ... 64750			1200z Fair, rest Strong	
22/11	04364 00001 00000 ... 34662			Very strong	
27/11	06896 00001 00000 ... 40267			Strong	

December 2022

1200z	10807kHz	1220z	12207kHz	1240z	13507kHz
04/12	08319 00262 53630 ... 75270				1200z Weak QSB2 1220,1240z Strong
08319 00262 53630 55253 81520 09974 20957 37711 93165 20201 76489 66860 95521 08840 38963 73204 54912 84807 86722 79223 43906 65754 70529 21846 35542 58350 23321 26244 20036 79080 58263 46665 05810 52984 46759 22915 31185 73847 13387 32240 85493 64150 59357 02446 39167 96346 52481 56416 06367 62546 58167 04581 38117 31981 83675 90052 36134 41522 72779 06325 64775 13071 36159 28292 01370 64371 02199 13238 69749 21369 49753 77915 50877 22662 82038 03513 45194 91228 30180 05658 94584 79949 94540 18101 07390 29605 28419 54259 51614 59409 25439 52027 13567 03148 63507 98916 35955 56586 20179 46368 88649 56328 25627 62593 85827 76066 23331 75921 49639 73905 45671 03454 46733 74374 84278 86672 88847 88996 92333 23157 80353 91587 38559 88325 11701 33583 03051 47196 39432 27063 14760 19773 05588 29401 58207 27740 76195 26416 43820 35586 78914 57005 67058 07684 15245 92368 37770 73834 84127 42388 88317 54676 91004 70560 31826 36966 82970 37516 50058 49318 78335 32956 36870 25467 31285 98972 22535 51912 27196 37894 95778 42758 40631 19731 04742 45441 21992 53096 84953 12481 54744 53838 12296 47388 58416 53552 65530 07613 85704 85409 78094 49046 44732 98023 47800 87395 25367 47084 68122 76130 27843 30831 45280 21298 42512 53055 08748 21886 73340 40585 36132 94468 01605 97636 99245 74081 12199 83483 02393 56455 89040 08579 07809 38842 94382 90464 95391 06649 39446 89023 05417 27841 85433 42521 90335 48440 78778 32030 43751 26851 14016 23104 48427 49516 50449 00815 50820 76348 48211 19528 01036 83589 22718 97468 72758 96685 81145 41264 04864 68632 37582 46032 61384 33837 75270 <i>Courtesy PLdn</i>					
06/12	00226 00204 77782 ... 40371				1240z Strong, rest Fair
00226 00204 77782 26649 19522 87613 81755 51319 61629 52098 53227 57561 81091 23953 68425 93082 65209 15227 47333 91744 43671 05902 98415 35162 53477 27066 69713 39792 49019 61863 75204 99889 87436 11871 32964 11755 60924 56112 47429 71703 99001 10297 98819 89744 34296 17981 62985 16675 19555 70684 00022 13818 67497 28120 48616 83835 81629 65998 49617 18476 29816 77701 61971 94966 23985 77581 71360 31839 09801 67301 59966 97378 61435 13843 46595 03266 80713 77181 56723 55148 13467 07904 68174 03939 45516 51307 25988 24662 70791 16651 05066 47918 61401 36700 48999 99908 78534 15165 80120 66842 36490 13116 00007 83476 49586 66246 94168 29871 91411 05214 76048 07757 93587 00326 69111 63158 70908 96110 06524 94442 72775 04492 12613 90800 40210 93428 93461 28786 02462 60771 27170 48280 17154 68597 54225 70409 58177 89981 48791 29619 40106 91292 04136 58504 70400 99920 43531 39222 04176 78320 86807 98736 70944 29804 38807 95867 39305 06617 32715 28487 51658 40211 88237 27297 09317 54518 35476 19095 26532 54737 02306 87052 36106 64520 44187 16400 58700 54649 48135 75891 04079 69761 09268 82821 68565 69780 49727 89239 96008 49856 28246 35069 01147 83671 38581 68775 96000 98471 27176 02787 06259 27185 31317 79320 36703 09000 40371 <i>Courtesy PLdn</i>					
11/12	00226 00204 77782 ... 40371				Very strong, 1220z Strong
13/12	08493 00188 59217 ... 44061				Very strong
18/12	08493 00188 59217 ... 44061				1200z Strong 1220z Fair1240zVery strong
08493 00188 59217 14763 51122 54932 94993 41475 89088 30873 42610 73208 55574 16584 60781 83834 75306 01824 10187 64561 46637 09229 65799 72457 57572 98783 28388 94015 44852 42609 69342 37542 06117 85189 67069 16425 28877 36079 75115 97195 37939 96921 84400 35232 84762 24368 28838 51221 58911 57639 86227 25457 77834 41514 73691 50124 27699 45936 02923 35065 36107 88657 36312 94191 01228 16499 69925 91585 23578 06850 10782 50339 29959 48132 39537 88804 64118 54942 10451 86663 14278 56195 30242 36351 86488 92119 08522 36560 14668 60095 93095 29009 78101 32802 12115 98452 27931 59180 76616 86804 18350 85234 58953 78908 12424 89597 64661 62385 65624 06319 41071 94883 04409 38967 27244 59449 72664 04849 61412 14390 33908 41548 64618 39929 25541 58691 44270 81976 18441 70785 61643 56754 22758 43379 70460 60387 51771 17800 39035 21423 83597 48303 87382 57361 04545 73207 46917 07951 82453 45484 24434 84318 47682 00854 03537 81926 58839 47199 68493 66473 58971 35569 10057 50178 17655 72524 49383 01065 84571 31476 62741 26769 08728 10873 56311 81641 69539 20737 46434 45237 85572 29147 15966 59378 38738 39447 67582 32823 20490 46535 44061 <i>Courtesy PLdn</i>					

00117 00224 02264 87729 15456 87546 91721 08313 88370 53432
62302 39903 97111 29911 88209 45991 28418 13493 23436 71381
64193 94267 86206 82995 33983 70779 71358 37011 32279 67642
68142 18115 12779 09149 30751 00362 11530 05637 41798 94542
56823 40142 05395 73629 83892 15274 25914 54920 62132 48646
09130 34695 12540 09244 66131 43816 64406 54130 38386 53783
37481 53043 60839 71564 22014 98543 86345 98474 34723 68797
91831 97988 96554 12126 78688 99974 76125 88725 32437 33653
31315 47010 07602 51619 34640 66000 95575 71023 40681 37300
19677 98508 83933 00565 16874 95385 67085 42412 49688 09729
13081 27139 17770 42002 01114 51119 29473 59803 81796 45853
40888 67271 72809 39185 03350 38125 82915 76160 61535 19133
95401 20466 56886 28299 92168 36720 29671 54711 29669 48706
29381 57706 07205 10680 11256 74469 43566 61878 55965 81161
23251 48039 80872 16736 30775 24936 16088 72490 35845 62092
97326 24979 65245 47187 33333 47311 28199 90424 37012 43709
34535 18300 25270 95732 94050 64554 07700 96470 52918 07180
29360 32993 37196 97028 46997 25531 02739 01668 90784 05790
09712 91630 24089 34495 43664 84479 77507 27684 64854 21483
01856 47050 12706 86661 58047 07501 31209 63674 15032 27608
94500 15419 51277 63909 23919 12739 62108 58903 08116 29169
24295 39412 39064 58105 79622 87949 16826 07466 19938 33458
69543 76771 22714 85011 03872 45021 20427 *Courtesy PLdn*

XPA2 p

Monday/Wednesday

November 2022

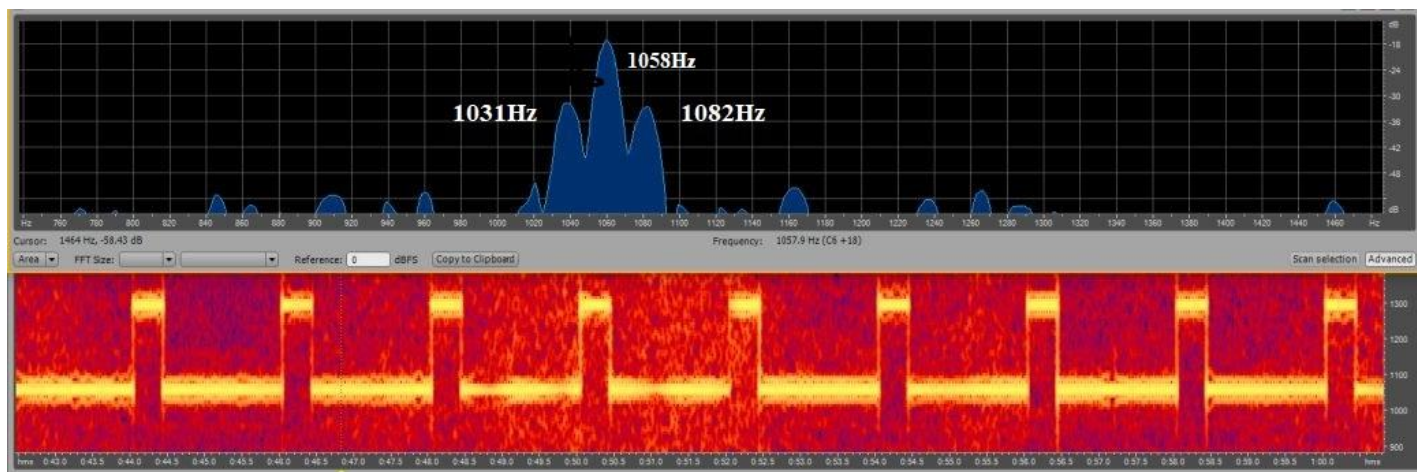
0800z 11529kHz 0820z 13429kHz 0840z 13929kHz

02/11 00965 00212 90163 ... 60653 0800/0840z Strong, 0820z Very strong

00965 00212 90163 36160 55709 41067 02587 54951 01878 83182
48105 24918 91836 75267 26973 10112 40413 09400 22487 92910
92749 92640 97677 63384 79982 97308 80301 44262 17988 02911
11168 50186 68361 42573 84942 40671 46355 00482 60889 84541
80682 69676 29920 31290 47002 49266 10452 91651 19925 10697
40951 90869 14061 48050 56757 30346 62022 55422 91979 11256
83240 08518 50665 66500 94143 90249 74133 93180 19794 59435
73842 22333 21965 69689 04533 38896 14075 71809 04471 19914
44215 38060 28410 44915 80424 33950 43837 36977 11459 31361
61174 28804 90526 23432 66939 73760 90738 86739 83261 84980
14434 72578 19784 41378 76255 78213 39039 12787 32795 59527
85247 20713 50619 92937 22778 09378 14925 02570 13976 71096
67860 46010 11159 94180 82140 73373 34864 21525 76860 59803
32805 62261 84949 98551 28191 30671 45529 48705 58860 65891
31829 42129 93205 14483 92299 41279 82229 31485 36162 85177
10422 19112 14626 68774 16615 90741 54757 24535 08692 33697
95859 02845 82761 27021 15196 29780 85788 19572 03532 46968
72234 64567 90058 09784 68421 32641 81586 79182 86559 08153
94702 04114 68442 60404 11151 50983 00350 10456 61301 86334
53572 48473 26577 31449 15722 95476 79308 89807 98504 63116
46813 71430 55182 63790 35728 39588 32061 80323 33966 99704
55510 36825 76967 44494 60653 *Courtesy PLdn*

07/11 08265 00106 39881 ... 15301 0800z Fair, rest Strong

08265 00106 39881 80799 67481 38256 69717 59084 41971 65253
44458 16317 65365 49493 69601 10256 03326 69960 85090 41018
22401 29908 03120 52095 86694 70640 29518 58392 58930 57851
05013 42570 39130 46093 84700 39456 68714 46773 33928 74951
02398 35572 48736 14462 97603 88569 23167 15308 76239 11163
15944 94483 18733 90667 89742 94926 74518 87037 26215 72789
01765 33822 06332 65962 69470 77891 25352 96652 89999 06514
21395 60848 94296 11623 18424 80475 51667 64505 96980 10145
93787 32775 71709 42490 74466 12065 38171 69044 56032 33411
25565 10658 27859 68629 53504 77496 12897 77651 55672 66891
44182 80573 25735 40467 25532 68815 60158 50720 15301 *Courtesy PLdn*



0820z Strong, poorly set up tx 09/11/2022

09/11	08265 00106 39881 ... 15301	0800z 13s Intro only, 0820z Strong, poorly set up tx, 0840z Strong
14/11	08265 00106 39881 ... 15301	Strong
16/11	08265 00106 39881 ... 15301	Very strong
21/11	00338 00126 85308 ... 72377	Very strong

00338 00126 85308 33938 36644 16176 08476 60899 04464 71961
89615 20027 15242 65832 12886 35242 21652 99862 05302 32308
09078 56592 52345 47719 61454 68189 52628 91122 72614 25388
03286 26287 67445 96708 94724 93300 96668 50955 88778 08726
54334 37092 20687 36904 91975 50517 41152 99308 58414 77887
75416 57685 65409 24352 55965 30709 28812 44231 12891 15594
03738 68414 56689 17064 15544 35155 79497 26180 34090 89434
73617 36006 52944 52434 55488 50039 22066 11746 88936 83114
72856 05832 82626 21184 98377 40657 08591 25508 81879 83848
73144 00107 71451 67428 00893 46055 85208 17789 71779 99283
86263 42683 15302 80979 35006 26019 18217 62547 36903 07804
48555 14841 91457 47651 17912 52724 66570 75832 48267 44091
30687 22950 68310 87833 46168 63819 32378 73776 72377
Courtesy PLdn

23/11	00338 00126 85308 ... 72377	1310z Fair, rest Strong
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December 2022

0800z	11493kHz	0820z	13393kHz	0840z	13993kHz
05/12	00465 00098 34397 ... 14550				Very strong, 0840z Strong QRM2
00465 00098 34397 72889 21929 23223 43317 33254 69539 01602 88664 41026 45865 68366 87794 03135 44337 28189 67998 40015 34822 11254 40338 35739 88036 06622 59163 12795 52123 44118 25189 49424 83485 12868 61334 64573 47086 61408 74740 15665 15847 85774 21230 36566 93828 96067 41767 14773 74634 07068 10572 44444 32797 08685 62179 51181 79954 33308 17781 12632 35945 21410 06936 72937 65636 45672 15988 77972 41576 36491 76188 76520 78586 44582 18212 91255 35367 52355 87725 91847 07147 47691 15236 08081 30321 11834 50843 92364 67920 34971 61139 11933 74478 69430 39879 33418 49596 21497 24160 65992 14550 <i>Courtesy PLdn</i>					
07/12	00465 00098 34397 ... 14550				0840z Very strong, rest Strong
12/12	00465 00098 34397 ... 14550				Very strong, 0800z Fair QSB3
14/12	00465 00098 34397 ... 14550				Very strong
19/12	01372 00001 00000 ... 33660				Very strong
21/12	02113 00001 00000 ... 33253				Very strong

XPA2 Wed/Fri

November 2022

1200z	10968kHz	1220z	12168kHz	1240z	13368kHz
02/11	00411 00208 88876 ... 47464				1200z Strong, rest Very strong
04/11	00411 00208 88876 ... 47464				1240z Strong, rest Fair

00411 00208 88876 59020 53022 87485 14429 28497 55752 45766
88361 74566 88148 58068 72139 45024 04123 96926 41493 65483
66295 75549 64112 31158 99571 54952 06210 78557 19068 32469
69341 45777 99311 11115 53345 70304 84172 57008 01898 21085
31943 12485 18879 36570 22507 02587 52853 23600 29400 59264
02259 79711 39560 85158 85310 39424 77312 30315 58593 99256
42945 88784 77549 41239 08688 76689 83842 54921 03228 90385
50639 68069 01793 36152 80124 34596 50455 47624 33076 48875
79635 59010 43427 81310 80679 52943 90859 27255 20589 36414
64522 30091 59535 68971 30092 59520 04058 81991 94217 05479
05297 94712 41928 91642 21232 37282 57213 62529 48973 66309
04058 25999 25550 50691 90103 79816 26913 29662 08901 36972
39695 76471 64224 55571 21569 88162 74690 67896 21077 28310
60995 68915 47552 92492 35579 05012 13582 54480 13448 51584
79078 57974 51633 16870 41908 60152 40895 71058 53215 75068
11572 24759 35954 45457 28129 70280 26434 73098 18401 51756
02955 75995 27366 15277 19519 42611 70439 15360 10036 81450
16912 94089 32359 19766 94257 66188 59342 77793 81710 14979
99864 96604 48282 78519 00857 04649 12900 41083 62697 82637
50936 10719 20773 24567 08885 45167 29888 81952 24169 97163
08111 80669 87547 59649 45844 33698 15744 53840 05602 08955
47464
Courtesy PLdn

09/11	MISSED
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Change of frequency noted:

1200z 13968kHz 1220z 15968kHz 1240z 17468kHz

11/11 00227 00246 17875 ... 60210 1200/1220z Strong, 1240z Very strong

00227 00246 17875 48985 07722 16403 46147 40414 14091 15454
69930 27929 83579 30545 52896 08957 72255 66563 42047 94677
60800 58206 03364 98205 37704 00111 65921 26890 48388 11925
91862 45143 58683 19470 79794 05388 40166 21520 56776 02848
55759 42644 73024 02046 02212 84628 30958 46006 16188 45013
92836 45292 91969 75748 58192 73548 01443 88041 29304 58601
01726 12753 85029 95534 16165 04341 20280 93140 68887 15679
72270 10092 99106 24833 79989 42264 88355 82211 15717 20272
39412 28123 31676 18009 21127 14514 40117 57408 78654 07730
96418 75413 84159 18774 07909 87284 72153 58128 88193 92620
89751 33905 02017 86021 21489 46144 01104 94181 41558 97231
59028 25613 04011 98827 68073 13083 16134 09833 17049 36174
29247 84342 08764 18365 83876 73487 92462 86986 39866 28902
64621 61166 71060 70113 66984 51779 83285 09614 44885 34984
95781 90494 20259 96336 83974 40972 00171 88886 00155 05724
14117 16949 16521 55052 51018 40755 96427 64666 61308 86048
19044 09497 28550 71332 83291 84663 47987 62989 76145 25142
12631 52765 63420 95898 66256 66275 19918 14099 23551 41009
60897 09720 86442 55548 51182 61177 57125 43603 75517 73973
10653 62087 49944 44039 74265 63713 68022 26219 42498 18881
59706 00689 33089 97848 10015 51965 00174 47392 86455 46027
79800 41875 42279 72118 00766 86831 13447 10608 45204 01542
72766 63033 07708 52466 53294 81180 07849 14687 36924 20009
12689 07684 79963 94332 50452 90201 14579 29119 29527 25718
40082 48635 54217 79846 17669 39009 03962 82297 60210

Courtesy PLdn

16/11 MISSED

18/11 MISSED

23/11 MISSED

25/11 00169 00222 15359 ... 03745 Very strong

00169 00222 15359 87612 42034 88288 01237 45466 91124 34424
31878 25624 81884 83835 77485 36453 16538 00205 86946 93859
00708 02425 15949 31353 55800 64514 36600 78772 10033 28256
28920 88771 51693 29630 64924 93243 54348 81324 35945 70144
35583 48281 87679 72001 16953 27766 19809 40826 47836 44373
84255 28107 99216 93644 71362 16567 80938 25536 70982 88235
67276 47953 40937 24937 42575 11870 03799 43923 86251 57515
09495 99797 83671 39632 58683 97841 71503 05128 97753 59080
04784 35262 08148 20753 70327 49502 54434 89980 00682 20182
86042 57016 11023 18143 63594 27513 96637 03126 42646 85535
07734 06440 06822 85187 96437 21285 76551 85051 01304 75277
17238 39462 37829 88675 03018 13430 12549 96925 42434 34096
75296 53715 46888 49079 70700 32327 12486 61415 94061 20202
22668 67514 46303 57903 33508 49474 19618 22317 84567 89468
36396 32131 48458 66237 72120 02914 76685 95825 91467 36959
51388 82163 44677 00399 47577 38599 95336 56773 62756 66146
46358 85443 42757 00271 05274 98375 89687 72551 42462 52202
98015 36324 65422 91961 22839 71513 25304 62800 32015 88215
92808 38506 07120 75165 94938 78788 91363 39572 88217 54843
03416 52363 28428 54743 46392 65795 88167 29240 00122 94746
70741 31939 18541 88956 11483 15640 19222 71145 24736 23071
10516 18044 25484 46117 25558 17143 77349 33869 00444 20568
19900 45294 02677 29899 03745

Courtesy PLdn

December 2022

1200z 14841kHz 1220z 16241kHz 1240z 18241kHz

02/12 05132 00192 37924 ... 75610 Courtesy Ary

05132 00192 37924 50250 36914 96824 55472 30047 84981 76108
13406 39951 76159 82201 50782 86197 25742 10308 40439 12483
44093 15688 67088 28727 79126 45480 52352 84800 54521 60657
35106 52838 61872 34459 80612 23809 48907 01297 55414 46807
25159 28983 13834 82791 22574 25477 65827 86315 21366 17175
28985 99417 73216 65565 18649 08912 44715 85977 92247 89299
62514 42494 10392 26058 05786 95161 05915 29671 51025 89324
19719 04644 80873 51239 30242 95528 91919 18714 82122 52280
77921 17290 59364 70782 63091 19926 63621 21707 36818 88475
55363 37009 27023 22152 52608 04802 24171 09097 51605 66686
57959 29372 98077 85212 32276 45652 48046 45678 16268 60827
03453 35185 62748 08612 39520 69589 36381 13403 83722 98887
84794 17246 30282 99936 73574 91301 81601 89330 31030 80892
98510 49054 94228 13173 05523 63175 93372 96506 98790 88758
58161 42284 17204 60408 58113 17624 75599 11667 63754 16753
74672 76929 66037 51302 44721 10561 50086 29862 51461 03389
02629 36451 60304 66164 62777 29111 76761 23792 54356 48315
31733 75946 45233 93791 28239 19113 45967 69333 74328 02017
11402 58341 83811 85657 99354 85048 99041 31942 75915 36100
45447 27953 08852 93308 75610

Courtesy Ary

07/12 07065 00258 21124 ... 16241

1200z Very strong 1220z Fair 1240z Weak

07065 00258 21124 97142 66401 56377 38868 90592 34170 61222
63215 12612 34072 17542 40861 22697 30683 94486 07085 13158
40707 91846 99770 06768 29756 89343 89811 12598 52279 05477
63123 21198 63010 08532 97568 59899 78600 05871 26035 82322
87778 62485 46960 01709 42615 45416 52632 68933 06167 50279
44881 82454 15649 96088 99380 54609 62863 23035 36112 02973
18597 95151 90185 42957 46617 11449 74185 48321 95334 30811
67236 70037 29346 65284 79866 84570 25472 01535 00886 79510
72012 30575 57095 07685 35247 52212 48974 94356 24988 70766
27620 62677 87215 23388 74608 46631 46701 27531 16433 41390
38002 10029 00231 37042 84416 27384 59273 07975 49231 79418
52031 85497 75396 59995 15968 06688 81895 42754 44383 73913
28673 79157 22426 80561 72988 21105 62837 40511 85427 06913
18164 06706 03413 89606 93737 17230 27989 17076 60803 86624
48807 72143 90036 69207 17034 71296 89152 33185 48755 49310
37212 68340 97311 27588 09234 46097 04770 54626 40229 37043
79895 38672 54329 57928 09480 59697 04655 50980 23443 43160
50386 04671 74016 99137 29059 78648 28289 18803 80969 00632
17641 28727 76663 24283 89681 84140 71190 80715 20037 01793
60565 16900 26363 40407 55256 32233 56637 69897 81397 84641
45074 65137 30875 93822 80076 19499 63463 36022 38251 02212
25845 25115 32212 03401 33158 93883 67272 15644 32834 16155
34552 28308 24595 86881 13282 20252 56438 47212 21008 30195
87930 79315 45620 25559 01559 62511 72790 06798 50962 20477
73340 25958 52470 87938 65769 37610 07865 39403 02827 03662
24735 89006 53553 07771 91213 30299 01744 64444 64616 39942
16241 *Courtesy PLdn*

09/12 07065 00258 21124 ... 16241

1200z Very strong, rest Weak

14/12 MISSED

16/12 00189 00164 66705 ... 31152

Very strong

00189 00164 66705 18527 03516 79639 78566 53653 15260 90201
11566 62902 74144 75109 62308 64117 37722 90899 71238 87950
92499 34455 70806 63454 87998 43318 41746 05126 46068 42098
64424 86609 03300 02389 11414 31891 22390 93935 13809 98132
41923 60826 99055 40314 25607 51159 40278 82514 21700 22456
18535 95483 87385 30983 52964 74757 34620 86094 80454 38116
50765 56759 33619 88767 32360 01064 60322 76707 46510 05061
70130 26847 78796 74386 78660 16479 88653 52864 78523 41965
85919 16575 15715 02675 24014 32939 88341 67630 38050 99146
09825 57763 08859 58447 97598 94964 30763 18977 39092 99628
08593 31361 21875 42665 12921 28114 18498 05841 03345 30416
08825 04560 22788 15073 89020 69958 67064 50417 00434 48837
11133 12181 19469 12863 83388 46190 55814 87552 98679 99503
17716 06990 01103 72543 50941 40463 86388 27709 17091 68619
80734 59314 52993 01567 82062 86672 94776 34232 81929 12523
50102 33322 15413 41294 60493 58756 10451 76602 80314 41235
41072 72907 80616 61726 05573 01580 31152 *Courtesy PLdn*

21/12 00175 00120 64251 ... 65224

Very strong

00175 00120 64251 18468 15797 04309 12143 44799 25413 98363
27455 58161 34437 79423 86206 75648 11253 17900 49197 37970
87807 92488 84611 33782 49488 77136 40273 46949 80356 63433
08442 66292 66005 33937 90383 03284 14285 48842 80822 22125
80617 22331 63744 27458 30450 68276 00533 15086 55418 75247
00072 54503 01621 63030 45052 11844 63901 98813 82942 19629
48590 68571 55856 31400 87486 63585 80411 91304 89977 75457
24547 92316 89040 49125 76935 61893 20637 94565 42217 47788
98266 01441 52709 02705 95753 43714 89696 24119 94351 29893
76107 62896 68637 14532 07888 46180 44526 39399 52400 22986
38435 14165 55626 03904 40887 43798 22312 94495 73898 77990
85425 13245 21256 97975 99211 22800 44021 35265 35506 60124
49831 38547 65224 *Courtesy PLdn*

23/12 NOT MONITORED

28/12 NOT MONITORED

30/12 00268 00202 82786 ... 16453

Very strong, 1220z Strong

00268 00202 82786 01736 19844 78706 89629 41524 92557 62517
71946 53368 49024 35037 07739 63372 14251 13968 72099 27435
58454 12877 56036 97493 48040 65622 13943 15809 42729 02914
73144 91890 78307 14480 61018 19198 49567 35932 62452 63908
21000 60512 51116 78864 52971 82723 08824 17094 35260 48285
29892 47249 38691 18256 24180 58878 16499 91677 16301 84116
53206 07452 88859 10883 67105 61835 04045 88928 24004 29470
94689 70834 46515 44390 78325 28347 49880 51269 90750 64711
71763 72403 62693 42360 15526 69670 12481 11031 60665 05073
07247 70240 95228 29824 85502 60208 06449 17414 92138 48705
93050 45851 33234 98933 06480 34201 55189 11646 64007 96246
37246 70871 79032 60117 11085 86934 68462 97631 76043 82707
88075 30789 35967 28295 27667 31496 95027 53197 26550 15964
25587 99391 20455 91788 19700 15612 07431 85216 30969 78534
89104 12956 77521 58628 68161 58249 92138 62566 25110 69333
80010 91986 51265 73870 16032 95463 14821 98281 30540 14322
20819 89981 68621 89434 85537 09674 23914 64788 19197 64000
36574 17511 81043 70699 97020 59608 36089 98811 71172 59582
84408 56046 18673 06549 49834 01632 32962 21971 65575 47727
04045 31807 23746 11264 94451 17632 49225 17646 70212 79443
25059 29266 25985 33575 16453 *Courtesy PLdn*

Other XPA2 scheds

1B XPA2 Courtresy H_FD

Tue 01.11.2022 0600Z 11162 msg
Tue 01.11.2022 0620Z 12162 msg
Tue 01.11.2022 0640Z 13962 msg

Tue 01.11.2022 1100Z 10653 msg
Tue 01.11.2022 1120Z 9353 msg
Tue 01.11.2022 1140Z 8153 msg

Wed 02.11.2022 0910Z 17413 msg
Wed 02.11.2022 0930Z 15852 msg
Wed 02.11.2022 0950Z 13363 msg

Wed 02.11.2022 1100Z 13393 msg
Wed 02.11.2022 1120Z 12193 msg
Wed 02.11.2022 1140Z 11093 msg

Thu 03.11.2022 0910Z 15985 msg
Thu 03.11.2022 0930Z 14885 msg
Thu 03.11.2022 0950Z 13885 msg

Thu 03.11.2022 1600Z 10223 msg
Thu 03.11.2022 1620Z 9223 msg
Thu 03.11.2022 1640Z 8123 msg

Fri 04.11.2022 0900Z 16225 msg via KiwiSDR RUS
Fri 04.11.2022 0920Z 17425 msg via KiwiSDR RUS
Fri 04.11.2022 0940Z 19125 msg via KiwiSDR RUS

Sat 05.11.2022 1600Z 8126 msg
Sat 05.11.2022 1620Z 6826 msg
Sat 05.11.2022 1640Z 5326 msg.

Thu 01.12.2022 0600Z 9281 msg
Thu 01.12.2022 0620Z 10481 msg
Thu 01.12.2022 0640Z 11481 msg

Thu 01.12.2022 1100Z 11579 msg
Thu 01.12.2022 1120Z 10979 msg
Thu 01.12.2022 1140Z 10279 msg

Thu 01.12.2022 1350Z 14461 msg test?
Thu 01.12.2022 1400Z 15856 msg test?
Thu 01.12.2022 1410Z 14767 msg test?

Thu 01.12.2022 1600Z 8184 msg
Thu 01.12.2022 1620Z 7684 msg
Thu 01.12.2022 1640Z 6784 msg

Fri 02.12.2022 0900Z 16347 msg via KiwiSDR RUS
Fri 02.12.2022 0920Z 18247 msg via KiwiSDR RUS
Fri 02.12.2022 0940Z 19547 msg via KiwiSDR RUS

Fri 02.12.2022 1100Z 9265 msg
Fri 02.12.2022 1120Z 8165 msg
Fri 02.12.2022 1140Z 7665 msg

Fri 02.12.2022 1200Z 14841 msg
Fri 02.12.2022 1220Z 16241 msg
Fri 02.12.2022 1240Z 18241 msg

Sat 03.12.2022 0910Z 13919 msg
Sat 03.12.2022 0930Z 11519 msg
Sat 03.12.2022 0950Z 10719 msg

Wed 07.12.2022 0910Z 13562 msg
Wed 07.12.2022 0930Z 11583 msg
Wed 07.12.2022 0950Z 10281 msg

Mon 12.12.2022 1600Z 6984 msg
Mon 12.12.2022 1620Z 5884 msg
Mon 12.12.2022 1640Z 4784 msg

Mon 19.12.2022 1600Z 6984 msgDez
Mon 19.12.2022 1620Z 5884 msg
Mon 19.12.2022 1640Z 4784 msg

Courtesy Ary:

9281	01-12-2022 0600 XPA2	MFSK-16/20Bd	01683 00001 00000 35661	Ary	WED
10481	01-12-2022 0620 XPA2	MFSK-16/20Bd	01683 00001 00000 35661		
11481	01-12-2022 0640 XPA2	MFSK-16/20Bd	01683 00001 00000 35661		

16347	02-12-2022 0900 XPA2	06891 00001 00000 35667	Ary	THU
18043	02-12-2022 0920 XPA2	06891 00001 00000 35667		
18547	02-12-2022 0940 XPA2	06891 00001 00000 35667		

4841	02-12-2022 1200 XPA2	became unreadable at the end	Ary	THU
16251	02-12-2022 1220 XPA2	Off after 2 mins.		

3rd freq not found

00323 00178 31669 60230 08545 16333 72688 05743 35504 66566
08710 24811 29057 75125 79911 21833 94559 61667 23265 17035
98431 16347 13992 03395 17917 87918 87111 33470 98873 85248
16900 68011 39777 26753 73231 10662 40716 93509 04440 75356
65037 33295 92316 74225 92841 23133 18433 47260 69660 31953
48435 13286 27261 89533 75132 54650 57473 38370 58165 21498
56855 74466 88804 25885 92636 54530 54194 17109 49178 86872
44012 19767 46396 54554 44887 32717 84910 37517 45094 54455
25527 29472 55736 74109 86523 46002 77833 62558 71610 26336
04264 80854 93104 70220 02281 71992 13785 28359 24964 78552
35541 89918 25744 88350 94365 42448 49473 02771 12388 00348
17471 25485 02733 37992 39841 03744 93374 90363 60910 61285
09637 23001 62508 80331 00070 13875 81117 73948 15978 61615
24817 75876 59083 95733 69467 27393 93887 11950 74949 15908
50941 59925 43603 29201 54816 33898 35053 77608 33684 30835
35781 77049 52668 72687 53330 65375 80288 54344 12391 61511
02139 23002 19162 24550 45538 00738 32821 83226 01108 32265
35009 12932 67267 unreadable

Courtesy Ary

19169	02-12-2022 1300 XPA2		Ary	THU
17423	02-12-2022 1320 XPA2			

3rd freq not found

06164 00175 52770 99486 51253 03126 24927 58301 42861 74402
33713 07720 27651 13594 05372 33646 58092 86887 71098 65259
48452 80989 71364 46732 44626 94386 81142 73473 86990 68454
08824 91292 36121 60847 01994 74720 10846 92802 50540 15784
69984 88986 44091 38761 31811 95592 27883 10007 12038 10636
38170 41864 23064 65259 38789 11439 99129 46178 02355 82391
57133 40279 37465 31770 03469 15131 87424 18784 33484 27692
74690 22442 99960 62224 43836 69616 38214 40411 83364 44788
94357 35324 26278 16725 67116 19282 12736 84740 86279 10572
77522 23295 32492 09910 69316 95414 04565 47404 42786 62248
11476 73353 69045 97847 34865 41550 63922 90798 13878 51326
83775 72712 57756 20816 99966 95180 28282 25175 63662 36305
43167 84116 11819 65823 78060 63232 31035 96603 73014 54566
87177 52551 52882 91550 08885 38915 18574 60359 60098 55184
38965 99214 72409 67146 88053 97800 86161 28914 78102 46991
73716 58426 10205 11797 88099 06939 28982 59905 33642 65051
39923 93725 99123 31470 11643 41563 45316 38643 12756 42409
41249 13598 77090 35950 54948 93188 17478 66135

Courtesy Ary

Repeats on 03/12 from Ary:

20836 03-12-2022 1100 XPA2 MFSK-16/20Bd
19372 03-12-2022 1110 XPA2 MFSK-16/20Bd
18493 03-12-2022 1120 XPA2 MFSK-16/20Bd
17451 03-12-2022 1130 XPA2 MFSK-16/20Bd
16166 03-12-2022 1140 XPA2 MFSK-16/20Bd
15956 03-12-2022 1150 XPA2 MFSK-16/20Bd
05019 00150 39053 46335 03382 26855 76656 49599 48490 76450
79909 14918 39974 62599 50430 19385 52258 86654 09306 58753
41465 65598 20162 16486 96958 57375 22841 47501 31772 97784
84884 81989 91835 92647 30473 88238 79526 84902 38702 13312
71201 89155 99501 96567 53624 53341 54001 66518 83352 32793
57747 34055 56639 49594 20379 19190 26406 77637 16953 26058
47741 44945 43053 81672 63222 51747 59515 58992 28173 75324
09321 14515 27570 48997 02649 81485 07497 56304 02749 53478
95444 73832 09665 53594 85957 74254 47705 43959 27973 06094
27429 46876 20287 22511 13092 15216 14312 72510 75186 25191
80972 87408 93614 86160 07413 61130 53307 15583 07520 48048
53580 15746 75192 50632 30220 32108 80744 18406 67016 45504
31714 41287 93758 67750 76666 69065 76155 63599 06627 29439
68097 75058 40629 22102 32759 09394 64768 86177 02004 00325
98416 41496 72112 02931 51321 01609 06034 80693 71100 71984
70919 84196 50444

20538 03-12-2022 1200 XPA2 MFSK-16/20Bd
19909 03-12-2022 1210 XPA2 MFSK-16/20Bd
18662 03-12-2022 1220 XPA2 MFSK-16/20Bd
17421 03-12-2022 1230 XPA2 MFSK-16/20Bd
16246 03-12-2022 1240 XPA2 MFSK-16/20Bd
15863 03-12-2022 1250 XPA2 MFSK-16/20Bd
01337 00107 34957 73919 20287 44400 62698 76750 86103 68283

68000 38783 09954 08069 05401 59240 52673 71684 99810 87562
88582 14994 46287 72217 82110 17292 83512 76842 21730 36032
55393 66481 31966 10050 14784 65716 47876 29686 01939 12078
26431 18456 09216 62293 13299 94392 44024 72555 44115 18862
89037 84531 64521 68079 47749 62038 16664 54655 36148 99899
28178 02540 63250 07876 21415 76269 73145 24974 38248 04547
10137 03921 39943 21797 58032 39935 20887 62765 85660 48816
86662 20703 14679 21076 93149 02438 40866 54164 65733 49977
28146 45271 05428 06903 89420 46804 12755 69302 02443 01442
89939 33831 77120 87871 12973 54989 32376 12361 20984 40345

19169 03-12-2022 1300 XPA2 MFSK-16/20Bd
18252 03-12-2022 1310 XPA2 MFSK-16/20Bd
17423 03-12-2022 1320 XPA2 MFSK-16/20Bd
16076 03-12-2022 1330 XPA2 MFSK-16/20Bd
15894 03-12-2022 1340 XPA2 MFSK-16/20Bd
14461 03-12-2022 1350 XPA2 MFSK-16/20Bd
01639 00203 43747 28681 49849 47704 69568 02147 58789 90284
16541 80344 68298 58066 97215 62040 34863 03159 99691 65703
19614 43485 69831 19567 26577 00308 04009 38719 69203 90379
79121 44943 30304 19747 32361 24537 97501 03885 99275 65251
02806 45419 08564 64393 81888 49614 61917 68536 48694 03639
22323 83012 59362 88397 78928 94937 03212 48788 28311 54066
10661 32033 44641 17148 01404 94803 53275 06508 17453 81890
73686 05521 84098 02891 41156 26966 75806 27314 41380 77463
52975 51123 35863 25936 28757 38348 42330 56050 06170 92747
18100 64301 78649 12558 65435 67048 10876 60233 02932 20779
66150 63854 94920 79872 00128 35102 50251 48360 32794 63625
32958 64967 02728 81316 86168 73282 08849 31775 99699 05405
59567 60260 32046 23224 74656 89278 28227 12272 38062 78237
62268 12998 78587 40875 91591 83039 97801 06536 83295 53197
70488 47259 72608 99576 84506 69546 51062 92016 33038 66105
58429 25412 51883 51089 78303 43129 98580 77869 48891 25193
56318 74384 93122 75986 82394 89391 82194 25403 23920 06674
66334 23369 71476 72279 10953 53093 22654 28742 91705 19263
83872 57809 92427 45833 85850 03892 60465 83938 50753 76531
50924 25361 29883 87868 06548 77213 47486 51212 30225 51825
98840 95437 52137 44017 65745 44572

15856 03-12-2022 1400 XPA2 MFSK-16/20Bd
14767 03-12-2022 1410 XPA2 MFSK-16/20Bd
13428 03-12-2022 1420 XPA2 MFSK-16/20Bd
12183 03-12-2022 1430 XPA2 MFSK-16/20Bd
11477 03-12-2022 1440 XPA2 MFSK-16/20Bd
10227 03-12-2022 1450 XPA2 MFSK-16/20Bd
01111 00230 23333 26460 36831 63620 56187 55041 59430 04749
87089 85573 79591 61468 75055 31431 26231 76298 09304 54523
89062 37535 70261 07283 09577 71910 96192 25507 00841 97793
71793 94395 27335 19239 42202 90057 04973 88253 72555 27590
04309 49664 94714 77607 26791 16659 25146 60988 82514 35407
41428 46387 72162 42248 68718 90657 62674 10962 96010 51880
02920 63238 30800 56321 33628 07503 81757 43468 77578 88915
97676 75730 87100 13235 11744 57930 17454 14999 96169 96577
56653 70230 06328 13658 73246 50144 91264 51916 02699 22878
69080 13188 79780 83772 93587 46353 31368 01463 29039 14880
94048 24105 59644 55100 79140 93296 08454 81886 60308 23684
63882 93548 91144 65096 46333 75068 66449 70634 45497 48951
72610 90444 33962 27747 58741 81369 95440 30240 76181 16875
60585 84101 76855 79458 15330 97930 23612 80591 89122 07523
12383 17175 15799 40637 73430 23119 22608 09771 08830 31127
00155 87970 76073 88609 42926 95127 01839 10150 30073 47092
45132 71996 25609 57682 87105 42181 15102 50512 91197 73978
60164 73078 49074 73673 42563 65228 12404 03465 20737 90349
36233 45537 11796 25923 49011 45294 51734 40160 57184 02864
30105 46019 82691 04442 13328 77171 17640 50680 89072 31274
67343 07927 64397 15286 97643 23595 65335 43210 71303 36000
78314 81801 62971 11943 73188 84610 53597 72287 25203 52581
26563 37426 34795 26994 99070 21143 58798 97863 97923 87241
82632 25860 76125

13919/11519/10719 kHz, 08-12, 0910/0930/0950 UTC
00256 00100 98775 22128 34040 27215 68355 43237 18189 22386
63796 93701 54600 41927 39989 04886 19332 90142 36970 87932
06854 88565 17139 93522 23628 54753 11967 84419 39585 33782
45076 89654 10625 51904 11100 89372 24622 98954 61167 09600
96503 67496 88730 04327 51987 07275 23368 56159 66956 87929
82488 11771 46316 99221 00766 01708 74541 30586 27088 24695
82538 80566 72044 28567 59697 36909 69621 64208 35692 33730
34407 99524 77137 45955 91695 29547 15293 96716 74004 46209
55180 25276 00845 35139 02523 29419 10379 63350 23152 90053
72717 44436 06005 62273 59206 79961 10506 06931 95819 01830
86020 00072 43625

11579/10979/10279 kHz, 01-12/07-12/08-12, 1100/1120/1140 UTC
01940 00195 88992 42112 16559 13884 63416 01932 00263 50020
83601 82440 13515 24223 36110 46804 15334 22371 81418 47957
79005 35945 43522 06999 62340 79104 42176 34785 24375 52736
23135 85840 65148 96716 79233 54483 84666 15569 28462 28676
37505 47020 52440 84449 96118 40787 31245 19564 82472 68008
41561 52431 54590 36998 67737 93317 77377 28951 69277 25911
85557 42974 34008 80455 40196 32903 46273 11664 42027 34932
46165 93561 23085 09558 48923 54998 43798 21734 91468 50030

32085 13227 79373 94185 86953 94653 77747 72672 20900 33052
41098 31898 81960 92813 82524 95942 50471 53762 51591 21486
63241 38814 54297 14590 21428 15053 54117 28984 29016 34722
78726 72581 98886 54525 37004 92165 98928 14361 48393 22121
03624 88090 66285 48525 48027 52146 96109 86280 31764 89747
02980 89092 62617 16269 27732 20530 89626 03765 34819 40568
65985 04413 60429 02929 36865 91342 85954 43860 85817 72301
16295 47437 73305 92920 77679 42968 97967 99341 07203 02167
97299 77641 05279 61324 54375 98435 53744 88005 13057 83819
44774 39121 24334 96358 59589 85154 18339 30148 59580 79759
13498 09152 17703 53421 01052 35670 22226 05759 43156 20095
73281 82743 83188 80463 98800 35888 39170 61122

20836/19372/18493/17451/16166/15956 kHz, 08-12, 1100/1110/1120/1130/1140/1150 UTC
08862 00196 07086 98058 75246 51758 78106 95291 28577 63828
45139 31732 16857 25027 36145 90469 13464 17802 87879 60905
03654 74680 26030 81115 47999 57358 81419 86916 70900 16560
48840 33668 90191 12941 12948 47897 92643 92905 40336 69088
97059 29466 54789 74751 82986 19672 57917 21151 08340 03439
11479 78187 32631 85607 52241 08486 84380 33210 39277 71031
46363 99959 83318 89837 42403 50463 88161 11741 33721 06089
83757 22327 94210 01607 72413 14183 99675 51598 97462 91511
80012 58525 70498 98565 96618 97894 99074 88459 66331 82572
06861 23922 80576 80749 14969 32209 72074 30352 59131 50573
75071 66168 90934 50832 76124 12653 26561 21258 79762 40885
52256 13839 49636 35212 47255 89400 13898 04000 93963 72408
98751 80608 18738 01745 95113 07617 55410 26270 07928 05673
54949 46610 03522 64625 48945 15922 50881 16926 60169 61702
69419 74597 87395 94701 95459 37349 07896 66784 60047 96119
14682 15815 91197 08438 37865 95970 75148 51964 07534 49077
01826 35933 65117 40701 98787 61520 94200 56884 01638 55459
32957 14049 20723 13011 81861 82402 07927 74638 16382 93396
15341 23348 99019 51456 77729 27032 49531 53505 41249 25297
88739 37049 42924 93603 15301 55337 65163 62147 53052

20538/19909/18662/17421/16246/15863 kHz, 08-12, 1200/1210/1220/1230/1240/1250 UTC
08712 00199 10876 86670 57993 93991 97047 16534 71379 94406
00541 68504 98835 38394 21223 33104 58920 81531 31585 92915
90454 97317 27558 09527 34081 06464 14944 53371 17458 65995
96742 59643 23776 87013 66815 59495 57414 46428 57948 80790
85768 38596 54788 58521 12727 96327 52596 90730 51562 19053
94478 57488 64210 39818 51216 07006 96898 17701 25944 08369
21878 82318 87429 96339 51706 91775 13404 78110 84523 50654
45063 04708 64666 42381 15230 16571 85220 62763 30023 48858
27842 92762 38089 11350 24747 04995 27098 16891 35140 50122
35256 70462 42709 58198 42346 63241 02762 75421 12176 17044
79147 02899 47052 25171 03886 21574 92794 10282 57537 42654
56334 40375 86040 19000 12245 37512 94939 29450 07533 96126
41542 24870 65255 46747 14500 47806 66257 88506 81743 45079
29644 06547 55703 93677 51689 07066 96114 70707 13030 33603
18393 03754 26888 83666 95696 20376 60924 13173 32254 55242
97934 51331 90088 16536 52833 73141 67857 80588 90863 31372
80977 79606 20824 22519 11647 44199 59413 68089 94426 91511
16171 63402 37701 25798 31620 76487 38088 87696 23966 17403
34637 99974 09638 47822 59725 91058 02353 92708 98956 37671
48188 47378 88384 75109 29833 69261 25333 10468 29920 04008
75589 52074

19169/18252/17423/16076/15894/14461 kHz, 08-12, 1300/1310/1320/1330/1340/1350 UTC
03682 00287 75668 37520 00698 40377 01875 41615 58250 37300
33714 39849 37689 66814 11475 17094 77374 74631 53111 72364
78168 18062 58802 64841 20598 89258 93457 85782 83005 64195
33941 63179 26483 24323 06923 80432 38204 54930 53089 29273
11865 64613 69746 43438 84918 66020 88600 29647 17804 56525
85895 61679 03304 82733 47957 06972 00772 39744 12857 74755
38291 15325 01858 05680 95291 18389 68428 18860 86593 04266
27946 85289 21428 17667 26972 20351 75616 89950 65967 61202
37694 57124 82771 74360 17161 67296 07228 09770 07712 38250
18501 56987 84253 00481 77569 39937 84784 11112 49891 55182
24333 42917 66609 47311 89267 78643 87114 40450 82046 73707
82063 31765 56589 84464 33711 66808 31664 56480 33784 27147
38153 54847 42661 40833 09651 05869 97326 59038 19006 06070
28817 32633 06148 78406 49442 09581 34067 08242 32798 48628
12915 24386 46720 56568 85972 22468 22309 04804 65488 74493
82949 53193 09704 12720 07411 31095 77529 93903 62964 68446
47293 08726 42236 34404 83683 78774 47630 95599 15749 30500
24398 11355 10072 66927 88412 36280 63762 94649 81947 04913
71222 40264 48459 72352 29438 69032 86052 51437 91004 97359
70490 87946 40846 88824 68072 08488 85434 72044 72062 93536
18013 90760 92058 95408 57486 37343 73017 94304 75444 51583
48440 44259 26232 52878 51451 03930 21509 88503 52802 02019
32798 24920 15847 01144 66843 32331 82747 94526 49201 03431
90672 64264 00512 87468 65870 73723 97012 75920 41975 33182
29845 41874 37934 29394 38154 45026 31990 09668 57276 61623
39239 47201 80611 28924 33719 65487 29882 39506 36549 40164
82380 02143 82438 92787 22960 68314 54848 06982 18168 12250
12281 62783 28998 34048 23866 40379 35712 22021 78050 28185
62777 83617 59999 61775 04720 33363 59422 17034 86855 02576

15856/14767/13428/12183/11477/10227 kHz, 08-12, 1400/1410/1420/1430/1440/1450 UTC
01629 00242 75105 60841 47933 85370 06074 11033 34570 04501

05285 23045 62797 05453 40507 02133 30269 44111 81586 16609
49967 00115 01711 69192 63345 34645 36038 30689 33060 64469
15673 06514 63651 40338 63208 33738 80043 89397 74442 96446
60183 83680 78225 63213 57350 28779 79262 89215 52490 81296
63210 86571 05993 76506 61068 33442 06802 36164 13405 92463
26220 53637 42150 37979 05955 36908 09719 33507 90789 82991
23762 76676 94557 55957 91999 97166 16995 72092 77738 55214
22421 04762 95005 24599 24029 24514 45914 81674 34373 17785
19211 82229 68627 45866 17846 71398 47752 42705 69478 48099
59014 31753 79344 91093 17700 13061 90302 56509 34278 76938
37157 81902 00044 65229 25009 75023 54778 19723 36488 33831
13636 77060 21776 63252 77086 50116 37701 27310 38121 19712
90204 43870 65896 54754 89158 95774 63096 24667 99604 89155
71173 09714 85024 24934 07184 93010 94117 42356 27519 38361
30815 90324 79505 34959 01471 22081 19307 95067 48118 32465
99860 16192 70413 85536 83275 10388 07331 10795 24140 44970
86197 56118 13301 06091 78673 42861 70570 45466 59513 91020
73963 00362 28401 17507 42436 72533 31563 30840 32733 64492
25045 59605 75029 12877 08003 24009 27501 71007 44882 82432
36712 35013 18502 99912 92703 69175 09786 50388 11966 68853
82302 19785 33263 11737 96031 72037 80546 76655 62534 78235
50584 22094 89307 28806 54180 60783 99682 75693 45616 79551
90279 09677 25265 82580 61861 98023 75164 87982 79821 93058
43655 71650 19440 74526 11134

8184/7684/6784 kHz, 06-12/08-12, 1600/1620/1640 UTC
05769 00274 38391 55781 13753 94343 42077 06175 89727 39082
53970 23274 60499 08205 57210 33691 24229 41579 27673 55022
45301 24568 83722 15875 54878 38556 25078 11211 86501 61767
48658 60146 01441 35082 77347 54629 89447 83328 35738 51744
31155 20123 98398 98789 81748 94827 04112 53089 09563 47217
57276 94907 75162 57570 42037 98550 56801 72257 02731 09235
11521 58327 07112 37494 61344 14756 73544 53016 88399 88753
08633 38817 52398 98392 90574 57382 99125 94893 39159 09587
38812 16862 75677 21221 40481 60363 13680 74099 56946 24006
61123 77902 41379 99194 53015 46630 21762 81915 50641 10970
05025 30592 51191 73399 15621 50452 93824 14612 68127 51340
73729 34710 13364 49228 09178 52480 79516 16454 16060 59241
99722 87307 05092 06846 79660 11777 77677 41527 75143 14968
50004 94867 02730 50178 65124 72599 17080 14606 60153 74752
16228 94952 74104 94555 12776 18577 82601 51344 25770 56472
90899 14222 76795 05831 67151 38624 95948 99555 86764 75341
28524 90590 42138 18603 65268 11956 89787 23891 49855 50826
63164 37685 37133 24969 04626 96820 79077 14155 77074 61593
64201 89170 46966 28080 72370 80909 81607 21230 87274 51067
76592 98884 98313 21354 11224 37585 13286 64327 50018 94551
92159 65849 17475 88616 91048 00430 35858 20901 85302 55191
39934 78512 66506 16193 03728 50996 50486 51811 18162 78553
53106 28938 73278 27309 91550 85270 76945 78425 91495 87579
60846 54039 02166 03597 61887 80005 51387 27975 04294 83953
80579 42229 42335 96568 88488 78239 82872 02685 75087 30821
80710 52405 79843 08933 81995 81448 01725 30188 63819 37369
85797 11430 82346 24374 61538 12573 61959 74073 50472 92936
65987 78187 05791 09298 11756 19806 43426

9281/10481/11481 kHz, 13-12, 0600/0620/0640 UTC
05640 00001 00000 34261

9265/8165/7665 kHz, 13-12, 1100/1120/1140 UTC
09806 00161 57075 49773 53967 97869 26145 35195 70732 20253
08052 75201 45072 86799 30574 29361 49599 22212 14436 92124
88544 28810 90244 08289 78377 79310 77554 97784 05493 46276
12610 69034 20520 85509 95265 26192 00533 94844 33980 68119
87385 23925 97041 27122 20122 75488 64194 37712 79530 44288
81760 61283 37400 81578 76990 45412 54467 10814 71881 05344
41994 71792 71769 92719 76432 67028 33977 41396 21928 52508
98219 27395 26301 33611 00043 49170 27072 46119 74256 56733
90776 33031 59106 74331 40532 92468 80951 02753 00093 44134
02060 69133 61554 29121 26676 54837 45553 38744 90241 98873
06825 07824 78037 60680 82100 14712 13969 50882 71977 03905
32656 10309 53450 78190 42230 91221 88331 69481 56034 70163
21901 29933 03995 99596 17408 64831 98954 34811 48392 46044
34087 59083 67092 33393 59403 26149 03289 82668 89917 42051
55843 98151 53311 43898 55034 21910 90799 96045 70502 73658
03854 17367 95415 12528 08928 20837 38187 87606 34011 55914
89146 58434 16880 32656

20836/19372/18493/17451/16166/15956 kHz, 13-12, 1100/1110/1120/1130/1140/1150 UTC
01106 00135 23484 10918 35144 87781 69254 01680 88246 50663
76567 96770 02585 20844 93019 43788 71054 94584 33979 62393
42223 36463 59982 91045 85090 53213 10754 59821 39858 34159
42844 91217 93231 52337 03831 86517 12728 91315 36641 97532
11779 14525 26146 66051 48273 36311 11185 05926 55053 75274
36928 28935 40313 14296 16786 98646 84577 51902 15671 51921
22312 78069 42476 04638 95265 69960 79433 51450 60207 90901
05542 70666 79451 58131 80132 82195 50950 13006 54882 76791
19692 04113 48700 69959 27065 31204 24274 64929 72871 77786
77299 38938 82071 85054 29652 99348 64447 42271 74630 51152
17233 70670 34542 47696 72236 73346 78727 82008 45578 29116
75084 85865 37202 47263 26592 17454 81289 27878 33356 73553
56574 00162 10227 24409 78579 82935 81828 16438 15247 21173
17355 71775 80714 92946 60028 25096 60202 47624

10807/12207/13507 kHz, 13-12, 1200/1220/1240 UTC
08493 00188 59217 14763 51122 54932 94993 41475 89088 30873
42610 73208 55574 16584 60781 83834 75306 01824 10187 64561
36637 09229 65799 72456 57572 88783 28388 94015 44851 42609
69342 37542 06117 85189 67069 16425 27877 36079 75115 97195
37939 96920 84400 35232 84762 24368 28838 51221 58911 57639
86227 25457 66834 41514 73691 50124 27699 45936 02923 45165
36107 88657 36312 94191 01228 16499 69924 91585 23578 06850
10782 50339 29959 48132 39537 88804 64118 54942 10451 86664
14278 56095 30242 36351 86488 92119 07522 36570 14668 60085
93095 29009 78101 32802 12005 98452 27931 59181 76616 86804
18350 85234 58953 78908 12424 89598 64661 62385 65624 06319
41071 94883 04409 38967 27244 59449 72664 04849 61412 14390
33908 41548 64618 39929 25541 58691 44270 81976 18441 70785
61643 56754 22758 43379 70460 60387 51771 17800 39035 21423
83597 48303 87382 57361 04545 73207 46917 07951 82453 45484
24434 84318 47682 00854 03537 80926 58839 47199 68493 66473
58971 35569 10057 50178 17655 72524 49383 01065 84571 31476
62731 26769 08728 10873 56311 81641 69539 20637 35434 45237
85572 29147 15966 59378 38738 39447 67582 32823 20499 46535
44061

20538/19909/18662/17421/16246/15863 kHz, 13-12, 1200/1210/1220/1230/1240/1250 UTC
05259 00212 03807 42621 87196 50598 37062 94803 52009 84378
05728 16410 34882 22278 03595 67098 16808 79870 28708 03286
52588 68872 35528 66703 23465 06583 25112 80820 80156 63513
56234 28837 03920 83299 67585 21809 71458 63880 00551 50857
30516 71371 09840 88343 54489 41960 13325 65391 59060 13152
67411 86722 51770 75583 35428 63877 00433 48007 08165 31353
58319 02125 47941 56436 83403 54874 40332 27332 26952 28650
77994 14273 63470 44528 83004 24880 77377 60380 84596 81148
82462 46852 65466 80703 30610 36045 02492 43653 00863 30927
74114 75368 65492 30432 54261 21076 27768 51244 89066 56838
26600 32482 65685 97806 28883 63605 52674 61745 36328 33007
88876 36765 96437 38859 80352 65790 23537 63800 93086 71945
45518 85250 89763 50160 80749 49495 46245 78448 12302 05350
70237 47014 80205 26305 75779 67629 85897 44971 07390 09350
32302 13440 70725 21321 87695 92778 64125 62866 08564 90036
85032 55352 86753 38469 83650 82855 91288 03700 09347 41921
05447 69533 25893 63762 90468 09175 63745 37702 08477 30400
14391 91767 68776 88349 95531 16783 85064 20735 20036 30607
57800 58979 33817 07034 90086 83178 09628 25858 30032 82865
50357 56043 26288 36535 58540 80656 63403 86042 63326 78058
06618 65859 59576 82068 76009 15382 08165 06116 36556 68558
48460 54528 02018 57805 00023

19169/18252/17423/16076/15894/14461 kHz, 13-12, 1300/1310/1320/1330/1340/1350 UTC
02865 00141 91977 96933 71187 90317 76234 83387 07222 82255
03047 77532 86264 28529 53063 09069 68855 46666 98068 33488
97950 72316 78835 08799 61859 72379 63169 98339 11609 09608
57683 78353 59610 47146 14208 35869 75394 87221 15713 26495
37246 05509 29665 95671 64824 67065 71815 93933 31239 18054
69688 89090 34942 11505 66348 43422 76428 74036 02920 82717
03998 06193 64753 69654 70245 36049 24353 47538 12099 65393
95170 91545 45701 21229 84372 49249 72100 62544 22084 65087
43105 42356 99157 13695 95786 63435 98464 41055 38084 30502
28137 95248 18096 05403 02141 05942 58412 17095 88664 58013
86472 96616 36812 24865 34554 15406 24704 84783 41921 29541
00450 41820 31644 98863 87931 24241 20085 29100 75489 24571
40903 30148 98407 31782 96866 32148 79527 10052 18610 81405
17641 72239 18661 03126 21160 00668 28186 92000 98661 31009
49142 06031 76657 07570

15856/14767/13428/12183/11477/10227 kHz, 13-12, 1400/1410/1420/1430/1440/1450 UTC
08447 00265 31042 98478 71036 42433 27423 04764 35352 26623
28830 05705 35255 57702 51834 28413 75100 49023 46600 73806
59508 00598 20567 74240 56577 84726 90448 80110 44130 30033
30390 84739 52329 16179 63036 15173 74483 86440 42814 11848
79336 00029 22092 18481 52765 35985 96786 81013 86148 12893
27033 42682 41170 55234 97243 90283 16942 26441 55288 64442
60554 54594 40751 81657 81718 45466 45867 11407 81496 57770
58863 52369 90830 82170 66689 76753 68650 57121 88807 82097
36973 92066 84722 03324 10961 77501 45870 09911 37453 30577
49746 26365 17952 26022 04111 45427 71736 57307 36259 57920
70356 97632 72088 99587 42948 41515 66129 68176 71080 16460
61055 41872 82475 01782 18810 22046 77819 46665 59348 57330
08548 72852 20304 03270 35037 14435 59746 81421 18033 45207
14526 57277 38407 32945 88968 54692 51353 03581 19758 33060
26848 25930 00241 15976 97034 91475 23099 93960 54270 07246
83391 55509 11178 70242 85261 44324 29017 89084 37978 43583
94717 21686 02257 20990 79408 06477 19494 81835 63213 15306
33585 99737 56805 17218 02533 47267 53414 73544 83460 04162
32215 07251 26151 12767 72860 67823 05533 21253 91032 12949
76595 14618 28920 61729 09127 61538 48435 30682 85071 02826
04758 74219 98234 34566 54991 59417 33377 91857 88593 92727
56150 65733 80045 55565 26088 79061 21141 71771 34419 87137
46175 96272 65110 68628 47841 71999 98697 60491 18044 83202
01853 68667 87373 88144 53706 56402 48879 79061 74813 45316
01866 64887 94642 08685 87526 15572 93231 39103 31181 37492
59567 26604 09067 51229 17551 75602 41647 08669 73152 30505

15101 73940 69570 93687 75631 85928 60550 07462

8184/7684/6784 kHz, 13-12, 1600/1620/1640 UTC
09055 00001 00000 33666

15856/13428/11477kHz 14.00/20/40utc 20221223 Via Ary

08062 00146 81136 68473 78825 87547 21478 46743 01250 59962
09716 61310 13540 67342 01942 56319 88926 34301 23531 76754
85431 89280 08111 33286 23339 66634 98871 34618 31401 41328
44981 52144 23931 10407 97192 08314 52340 48956 02165 01189
46349 73950 69999 09437 30847 65541 97420 98953 09440 13264
16806 48973 18531 84780 20996 45335 22890 29366 18111 23131
66362 17842 84510 90529 80128 38774 04029 68178 41938 62002
18833 65188 39191 43324 09834 70732 07642 25792 16385 59924
39762 29485 57868 52679 86493 36088 71598 10029 21837 38700
33225 65838 69698 42876 41487 78119 49075 38242 62733 24843
10935 19458 73634 79844 59440 24154 20688 49624 44754 25385
36397 16422 67906 77740 72699 01808 60290 56607 74497 75786
58987 19407 97445 65990 00672 38722 54932 81319 62637 00031
16785 51164 32172 47017 42894 83302 28411 87187 60676 30912
20856 87737 17141 48063 76130 45030 74279 29842 20054

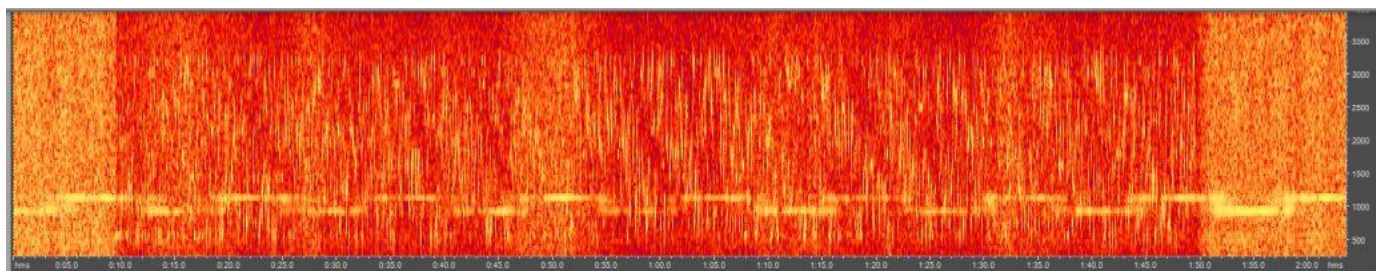
Thanks Ary! For logs after 23/12/2022 please visit Group.

XPB1

Sunday/Tuesday

November 2022

7876kHz2000z	02/11	Strong	1m40s			PLdn	TUE
7576kHz2010z	02/11	V.strong	1m40s			PLdn	TUE
6876kHz2020z	02/11	Fair	1m40s	QRM2	See image below	PLdn	TUE
5876kHz2030z	02/11	Fair	1m40s			PLdn	TUE
5376kHz2040z	02/11	Fair	1m40s			PLdn	TUE
4476kHz2050z	02/11	Strong	1m40s			PLdn	TUE



6876kHz 2020z 02/11 Fair QRM2

7876kHz2000z	06/11	Fair	1m40s			PLdn	SUN
7576kHz2010z	06/11	Fair	1m40s			PLdn	SUN
6876kHz2020z	06/11	Fair	1m40s			PLdn	SUN
5876kHz2030z	06/11	Fair	1m40s			PLdn	SUN
5376kHz2040z	06/11	Strong	1m40s			PLdn	SUN
4476kHz2050z	06/11	Strong	1m40s			PLdn	SUN
7876kHz2000z	08/11	Weak	1m40s			PLdn	TUE
7576kHz2010z	08/11	Weak	1m40s			PLdn	TUE
6876kHz2020z	08/11	Strong	1m40s			PLdn	TUE
5876kHz2030z	08/11	Strong	1m40s			PLdn	TUE
5376kHz2040z	08/11	Strong	1m40s			PLdn	TUE
4476kHz2050z	08/11	Strong	1m40s			PLdn	TUE
7876kHz2000z	13/11	NRH				PLdn	SUN
7576kHz2010z	13/11	NRH				PLdn	SUN
6876kHz2020z	13/11	NRH				PLdn	SUN
5876kHz2030z	13/11	NRH				PLdn	SUN
5376kHz2040z	13/11	NRH				PLdn	SUN
4476kHz2050z	13/11	NRH				PLdn	SUN
7876kHz2000z	15/11	NRH	Search – No trace			PLdn	TUE
7576kHz2010z	15/11	NRH	Search – No trace			PLdn	TUE
6876kHz2020z	15/11	NRH	Search – No trace			PLdn	TUE
5876kHz2030z	15/11	NRH	Search – No trace			PLdn	TUE
5376kHz2040z	15/11	NRH	Search – No trace			PLdn	TUE
4476kHz2050z	15/11	NRH	Search – No trace			PLdn	TUE

7876kHz 2000z	20/11	NRH	Search – No trace	PLdn	SUN
7576kHz 2010z	20/11	NRH	Search – No trace	PLdn	SUN
6876kHz 2020z	20/11	NRH	Search – No trace	PLdn	SUN
5876kHz 2030z	20/11	NRH	Search – No trace	PLdn	SUN
5376kHz 2040z	20/11	NRH	Search – No trace	PLdn	SUN
4476kHz 2050z	20/11	NRH	Search – No trace	PLdn	SUN
7876kHz 2000z	22/11	NRH	Search – No trace	PLdn	TUE
7576kHz 2010z	22/11	NRH	Search – No trace	PLdn	TUE
6876kHz 2020z	22/11	NRH	Search – No trace	PLdn	TUE
5876kHz 2030z	22/11	NRH	Search – No trace	PLdn	TUE
5376kHz 2040z	22/11	NRH	Search – No trace	PLdn	TUE
4476kHz 2050z	22/11	NRH	Search – No trace	PLdn	TUE

December 2022

Believed discontinued on these days. [We note Tues/Friday schedule]

Monday/Saturday

November 2022

13984kHz 1100z	05/11	Fair	2m15s	PLdn	SAT
13394kHz 1110z	05/11	Fair	2m15s	PLdn	SAT
12194kHz 1120z	05/11	Fair	2m15s	PLdn	SAT
11494kHz 1130z	05/11	Weak	2m15s	PLdn	SAT
11094kHz 1140z	05/11	Weak	2m15s	PLdn	SAT
10494kHz 1150z	05/11	Weak	2m15s	PLdn	SAT
13984kHz 1100z	07/11	Weak	4m28s	PLdn	MON
13394kHz 1110z	07/11	Weak	4m28s	PLdn	MON
12194kHz 1120z	07/11	Fair	4m28s	PLdn	MON
11494kHz 1130z	07/11	Weak	4m28s	PLdn	MON
11094kHz 1140z	07/11	Weak	4m28s	PLdn	MON
10494kHz 1150z	07/11	Weak	4m28s	PLdn	MON
13984kHz 1100z	12/11	Weak	4m28s	PLdn	SAT
13394kHz 1110z	12/11	Fair	4m28s	PLdn	SAT
12194kHz 1120z	12/11	Weak	4m28s	PLdn	SAT
11494kHz 1130z	12/11	Weak	4m28s	PLdn	SAT
11094kHz 1140z	12/11	Weak	4m28s	PLdn	SAT
10494kHz 1150z	12/11	Weak	4m28s	PLdn	SAT
13984kHz 1100z	14/11	Fair	1m40s	PLdn	MON
13394kHz 1110z	14/11	Strong	1m40s	PLdn	MON
12194kHz 1120z	14/11	Fair	1m40s	PLdn	MON
11494kHz 1130z	14/11	Strong	1m40s	PLdn	MON
11094kHz 1140z	14/11	Fair	1m40s	PLdn	MON
10494kHz 1150z	14/11	Fair	1m40s	PLdn	MON
13984kHz 1100z	19/11		MISSED	PLdn	SAT
13394kHz 1110z	19/11		MISSED	PLdn	SAT
12194kHz 1120z	19/11		MISSED	PLdn	SAT
11494kHz 1130z	19/11		MISSED	PLdn	SAT
11094kHz 1140z	19/11		MISSED	PLdn	SAT
10494kHz 1150z	19/11		MISSED	PLdn	SAT
13984kHz 1100z	21/11		MISSED	PLdn	MON
13394kHz 1110z	21/11		MISSED	PLdn	MON
12194kHz 1120z	21/11		MISSED	PLdn	MON
11494kHz 1130z	21/11		MISSED	PLdn	MON
11094kHz 1140z	21/11		MISSED	PLdn	MON
10494kHz 1150z	21/11		MISSED	PLdn	MON
13984kHz 1100z	26/11	Fair	1m40s	PLdn	SAT
13394kHz 1110z	26/11	Fair	1m40s	PLdn	SAT
12194kHz 1120z	26/11	Fair	1m40s	PLdn	SAT
11494kHz 1130z	26/11	Weak	1m40s	PLdn	SAT
11094kHz 1140z	26/11	Weak	1m40s	PLdn	SAT
10494kHz 1150z	26/11	Weak	1m40s	PLdn	SAT

December 2022

14483kHz 1100z	03/12	Weak	4m30s	PLdn	SAT
13983kHz 1110z	03/12	Weak	4m30s	PLdn	SAT
13483kHz 1120z	03/12	Fair	4m30s	PLdn	SAT
12183kHz 1130z	03/12	Fair	4m30s	PLdn	SAT
11583kHz 1140z	03/12	Weak	4m30s	PLdn	SAT
10983kHz 1150z	03/12	Weak	4m30s	PLdn	SAT

14483kHz 1100z	05/12	Weak	2m15s		PLdn	MON
13983kHz 1110z	05/12	Weak	2m15s		PLdn	MON
13483kHz 1120z	05/12	Weak	2m15s		PLdn	MON
12183kHz 1130z	05/12	Weak	2m15s		PLdn	MON
11583kHz 1140z	05/12	Unworkable			PLdn	MON
10983kHz 1150z	05/12	Weak	2m15s		PLdn	MON
14483kHz 1100z	10/12	Weak	2m15s		PLdn	SAT
13983kHz 1110z	10/12	Weak	2m15s		PLdn	SAT
13483kHz 1120z	10/12	Fair	2m15s		PLdn	SAT
12183kHz 1130z	10/12	Fair	2m15s		PLdn	SAT
11583kHz 1140z	10/12	Weak	2m15s		PLdn	SAT
10983kHz 1150z	10/12	Weak	2m15s		PLdn	SAT
14483kHz 1100z	12/12	Weak	2m15s		PLdn	MON
13983kHz 1110z	12/12	Weak	2m15s		PLdn	MON
13483kHz 1120z	12/12	Weak	2m15s		PLdn	MON
12183kHz 1130z	12/12	Fair	2m15s		PLdn	MON
11583kHz 1140z	12/12	Weak	2m15s		PLdn	MON
10983kHz 1150z	12/12	Weak	2m15s		PLdn	MON
14483kHz 1100z	17/12	Fair	2m15s		PLdn	SAT
13983kHz 1110z	17/12	Fair	2m15s		PLdn	SAT
13483kHz 1120z	17/12	Fair	2m15s		PLdn	SAT
12183kHz 1130z	17/12	Fair	2m15s		PLdn	SAT
11583kHz 1140z	17/12	Weak	2m15s		PLdn	SAT
10983kHz 1150z	17/12	Weak	2m15s		PLdn	SAT
14483kHz 1100z	19/12	Fair	4m29s		PLdn	MON
13983kHz 1110z	19/12	Fair	4m29s		PLdn	MON
13483kHz 1120z	19/12	Fair	4m29s		PLdn	MON
12183kHz 1130z	19/12	Fair	4m29s		PLdn	MON
11583kHz 1140z	19/12	Weak	4m29s		PLdn	MON
10983kHz 1150z	19/12	Weak	4m29s		PLdn	MON

THE TRANSMISSIONS BETWEEN 19/12 & 30/12 NOT MONITORED

14483kHz 1100z	31/12	Fair	4m28s		PLdn	SAT
13983kHz 1110z	31/12	Weak	4m28s		PLdn	SAT
13483kHz 1120z	31/12	Weak	4m28s		PLdn	SAT
12183kHz 1130z	31/12	Weak	4m28s		PLdn	SAT
11583kHz 1140z	31/12	Weak	4m28s		PLdn	SAT
10983kHz 1150z	31/12	Weak	4m28s		PLdn	SAT

Wednesday/Saturday

November 2022

Wed 02.11.2022 1200Z 16353 MFSK-16 4:30					H-FD	WED
Wed 02.11.2022 1210Z 15953 MFSK-16						
Wed 02.11.2022 1220Z 14953 MFSK-16						
Wed 02.11.2022 1230Z 13453 MFSK-16						
Wed 02.11.2022 1240Z 12153 MFSK-16						
Wed 02.11.2022 1250Z 11453 MFSK-16						
16353kHz 1200z	05/11	Strong	4m28s		PLdn	SAT
15953kHz 1210z	05/11	Strong	4m28s		PLdn	SAT
14953kHz 1220z	05/11	MISSED			PLdn	SAT
13453kHz 1230z	05/11	Strong	4m28s		PLdn	SAT
12153kHz 1240z	05/11	Weak	4m28s		PLdn	SAT
11453kHz 1250z	05/11	Fair	4m28s		PLdn	SAT
16353kHz 1200z	09/11		MISSED		PLdn	WED
15953kHz 1210z	09/11		MISSED		PLdn	WED
14953kHz 1220z	09/11		MISSED		PLdn	WED
13453kHz 1230z	09/11		MISSED		PLdn	WED
12153kHz 1240z	09/11		MISSED		PLdn	WED
11453kHz 1250z	09/11		MISSED		PLdn	WED
16353kHz 1200z	12/11	Weak	4m28s		PLdn	SAT
15953kHz 1210z	12/11	Fair	4m28s		PLdn	SAT
14953kHz 1220z	12/11		MISSED		PLdn	SAT
13453kHz 1230z	12/11	Strong	4m28s		PLdn	SAT
12153kHz 1240z	12/11	Strong	4m28s		PLdn	SAT
11453kHz 1250z	12/11	Fair	4m28s		PLdn	SAT

16353kHz	1200z	16/11		MISSED		PLdn	WED
15953kHz	1210z	16/11		MISSED		PLdn	WED
14953kHz	1220z	16/11		MISSED		PLdn	WED
13453kHz	1230z	16/11		MISSED		PLdn	WED
12153kHz	1240z	16/11		MISSED		PLdn	WED
11453kHz	1250z	16/11		Fair, HJH, Cardiff		PLdn	WED

16353kHz	1200z	19/11		MISSED		PLdn	SAT
15953kHz	1210z	19/11		MISSED		PLdn	SAT
14953kHz	1220z	19/11		MISSED		PLdn	SAT
13453kHz	1230z	19/11		MISSED		PLdn	SAT
12153kHz	1240z	19/11		MISSED		PLdn	SAT
11453kHz	1250z	19/11		MISSED		PLdn	SAT

16353kHz	1200z	23/11		MISSED		PLdn	WED
15953kHz	1210z	23/11		MISSED		PLdn	WED
14953kHz	1220z	23/11		MISSED		PLdn	WED
13453kHz	1230z	23/11		MISSED		PLdn	WED
12153kHz	1240z	23/11		MISSED		PLdn	WED
11453kHz	1250z	23/11		MISSED		PLdn	WED

16353kHz	1200z	26/11	Strong	4m28s		PLdn	SAT
15953kHz	1210z	26/11	Strong	4m28s		PLdn	SAT
14953kHz	1220z	26/11	V.strong	4m28s		PLdn	SAT
13453kHz	1230z	26/11	V.strong	4m28s		PLdn	SAT
12153kHz	1240z	26/11	Weak	4m28s		PLdn	SAT
11453kHz	1250z	26/11	Weak	4m28s		PLdn	SAT

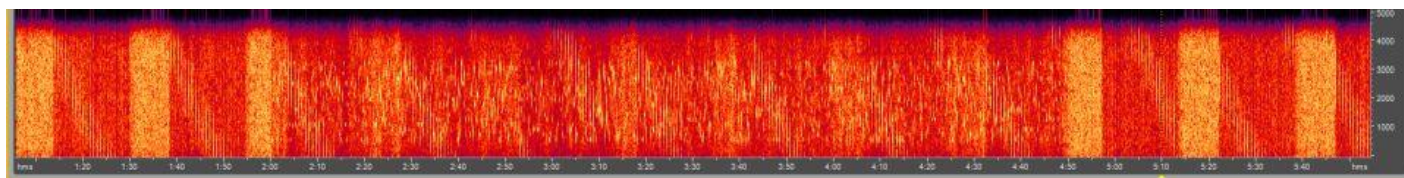
December 2022

14978kHz	1200z	03/12	Weak	2m50s	QRM	PLdn	SAT
13978kHz	1210z	03/12	Weak	2m50s		PLdn	SAT
13378kHz	1220z	03/12	Fair	2m50s		PLdn	SAT
12178kHz	1230z	03/12	Fair	2m50s		PLdn	SAT
11078kHz	1240z	03/12	Weak	2m50s		PLdn	SAT
10278kHz	1250z	03/12	Weak	2m50s		PLdn	SAT

14978kHz	1200z	07/12	MISSED			PLdn	WED
13978kHz	1210z	07/12	MISSED			PLdn	WED
13378kHz	1220z	07/12	MISSED			PLdn	WED
12178kHz	1230z	07/12	MISSED			PLdn	WED
11078kHz	1240z	07/12	MISSED			PLdn	WED
10278kHz	1250z	07/12	MISSED			PLdn	WED

14978kHz	1200z	10/12	Fair	2m50s		PLdn	SAT
13978kHz	1210z	10/12	Fair	2m50s		PLdn	SAT
13378kHz	1220z	10/12	Fair	2m50s		PLdn	SAT
12178kHz	1230z	10/12	Fair	2m50s		PLdn	SAT
11078kHz	1240z	10/12	Weak	2m50s		PLdn	SAT
10278kHz	1250z	10/12	Weak	2m50s		PLdn	SAT

14978kHz	1200z	14/12	MISSED			PLdn	WED
13978kHz	1210z	14/12	MISSED			PLdn	WED
13378kHz	1220z	14/12	MISSED			PLdn	WED
12178kHz	1230z	14/12	MISSED			PLdn	WED
11078kHz	1240z	14/12	MISSED			PLdn	WED
10278kHz	1250z	14/12	MISSED			PLdn	WED



13378kHz 1220z 17/12 QRM2 present on XPB1 signal

14978kHz	1200z	17/12	Fair	2m50s		PLdn	SAT
13978kHz	1210z	17/12	Fair	2m50s		PLdn	SAT
13378kHz	1220z	17/12	Strong	2m50s	QRM2	PLdn	SAT
12178kHz	1230z	17/12	Weak	2m50s		PLdn	SAT
11078kHz	1240z	17/12	Weak	2m50s		PLdn	SAT
10278kHz	1250z	17/12	Weak	2m50s		PLdn	SAT

THE TRANSMISSIONS BETWEEN 17/12 & 30/12

NOT MONITORED

14978kHz	1200z	31/12	Weak	4m28s		PLdn	SAT
13978kHz	1210z	31/12	Weak	4m28s		PLdn	SAT
13378kHz	1220z	31/12	Fair	4m28s		PLdn	SAT
12178kHz	1230z	31/12	Fair	4m28s		PLdn	SAT
11078kHz	1240z	31/12	Weak	4m28s		PLdn	SAT
10278kHz	1250z	31/12	Weak	4m28s		PLdn	SAT

XPB1 Other schedules:

XPB1 Tue/Fri Courtesy H-FD
Tue 01.11.2022 1200Z 20021 MFSK-16 1:44
Tue 01.11.2022 1210Z 19521 MFSK-16
Tue 01.11.2022 1220Z 18421 MFSK-16
Tue 01.11.2022 1230Z 17421 MFSK-16
Tue 01.11.2022 1240Z 16321 MFSK-16
Tue 01.11.2022 1250Z 15921 MFSK-16

XPB1 Tue/Fri Courtesy Ary
20044 02-12-2022 1300 XPB1
19344 02-12-2022 1310 XPB1
18544 02-12-2022 1320 XPB1
17444 02-12-2022 1330 XPB1
16244 02-12-2022 1340 XPB1
14944 02-12-2022 1350 XPB1

XPB1 Tue/Fri Courtesy H-FD
Fri 02.12.2022 1300Z 20044 MFSK-16 4:30
Fri 02.12.2022 1310Z 19344 MFSK-16
Fri 02.12.2022 1320Z 18544 MFSK-16
Fri 02.12.2022 1330Z 17444 MFSK-16
Fri 02.12.2022 1340Z 16244 MFSK-16
Fri 02.12.2022 1350Z 14944 MFSK-16

XPB1 Tue/Fri Courtesy H-FD
Mon 05.12.2022 0600Z 12118 MFSK-16 1:42
Mon 05.12.2022 0610Z 13418 MFSK-16
Mon 05.12.2022 0620Z 13918 MFSK-16
Mon 05.12.2022 0630Z 14418 MFSK-16
Mon 05.12.2022 0640Z 14918 MFSK-16
Mon 05.12.2022 0650Z 15918 MFSK-16

Hybrids and Tones

HM01

11435 kHz 08-11-2022 1600 UTC HM01 AM/RDFT Ary TUE
Radio Habana Cuba till 1624z.
HM01 at 1625z
Groups: 33181 11747 11183 82285 71264 87747
Files: 10323318.TXT 50721174.FIC 30161118.TXT 36048228.FIG 01667126.TXT 36858774.FIG
Repeat of 23 June 2021

X06 Mazielka

X06 Mazielka (1c) logs section

Date	Day UTC	Freq	Scale	Monitor	Comments
20221101	Tue	0910-0917	13411	165423 Dave/AU	Alert 2 (TX to Brussels, G12) 1
20221101	Tue	0917-0918	12157	165423 Dave	2.2
20221101	Tue	0928-0942	15687	154263 Spectre/UK, Ary/NL, RX39	Alert 2 (TX to Rome, G7) 1(7)
20221101	Tue	0940-0945	20336	246531 Andrew, Ary, Spectre	TX to Accra, G16(5)
20221101	Tue	0942-0946	14358	154263 Andrew, Ary, Spectre	2.2(5)
20221101	Tue	1151(?)	16188	325614 Dave	TX to Nairobi, G392
20221101	Tue	1853-1854	4476	1--6-- Spectre	X06b before XPB1(4)
20221101	Tue	1853-1854	5376	1--6-- Spectre	X06b before XPB1(4)
20221101	Tue	1853-1854	5876	1--6-- Spectre	X06b before XPB1(4)
20221101	Tue	1853-1854	6876	1--6-- Spectre	X06b before XPB1(9)
20221101	Tue	1853-1854	7576	1--6-- Spectre	X06b before XPB1(4)
20221101	Tue	1853-1854	7876	1--6-- Spectre	X06b before XPB1(4)
20221101	Tue	1857-1858	4476	1--6-- Spectre	X06b before XPB1(4)
20221101	Tue	1857-1858	5376	1--6-- Spectre	X06b before XPB1(4)
20221101	Tue	1857-1858	5876	1--6-- Spectre	X06b before XPB1(4)
20221101	Tue	1857-1858	6876	1--6-- Spectre	X06b before XPB1(9)
20221101	Tue	1857-1858	7576	1--6-- Spectre	X06b before XPB1(4)
20221101	Tue	1857-1858	7876	1--6-- Spectre	X06b before XPB1(4)
20221102	Wed	0930-0936	17445	362154 Ary, Spectre	TX to Athens, G32(5)

20221102	Wed	1009-1010	11093	1-26--	Spectre	X06b before XPA2(4)
20221102	Wed	1010-1011	12193	1-26--	Spectre	X06b before XPA2(4)
20221102	Wed	1011-1012	13393	1-26--	Spectre	X06b before XPA2(4)
20221102	Wed	1014-1015	13393	1--6--	Spectre	X06b before XPA2(4)
20221102	Wed	1108-1110	16115	215346	Spectre	TX to Mumbai, G25(4)
20221102	Wed	1225-1227	18245	231654	Spectre	TX to Abuja, G422(5)
20221103	Thu	0705-0708	21825	314265	RX39,Spectre	TX to Antananarivo, G380(8)
20221103	Thu	0812	15985	1--6--	Andrew/SE	X06b before XPA2
20221103	Thu	0920-0933	20837	645321	Andrew, Ary,	
				Spectre	TX to Ho Chi Minh City, G410(1)(5)	
20221103	Thu	0927-0945	20627	436512	RX39, Ary,	
				Spectre	TX to Harare, G44(5)	
20221103	Thu	1015	12192	1--6--	Andrew	X06b before XPA2
20221105	Sat	1009-1011	10494	1--6--	Spectre	X06b before XPB1(4)
20221105	Sat	1010-1012	11094	1--6--	Spectre	X06b before XPB1(4)
20221105	Sat	1011-1013	11494	1--6--	Spectre	X06b before XPB1(4)
20221105	Sat	1012-1014	12194	1--6--	Spectre	X06b before XPB1(4)
20221105	Sat	1013-1015	13394	1--6--	Spectre	X06b before XPB1(4)
20221105	Sat	1014-1016	13894	1--6--	Spectre	X06b before XPB1(4)
20221105	Sat	1310-1311	8023	1--6--	Spectre	X06b before E07(4)
20221105	Sat	1311-1312	9123	1--6--	Spectre	X06b before E07(4)
20221105	Sat	1312-1313	10323	1--6--	Spectre	X06b before E07(4)
20221106	Sun	0656-0705	14595	452163	Spectre,	
				Andrew	TX to Kabul, G66(4)	
20221106	Sun	0728-0729	17425	1--6--	Spectre	X06b(5)
20221106	Sun	0732-0733	19125	1--6--	Spectre	X06b(4)
20221106	Sun	0734-0735	16126	1--6--	Spectre	X06b(8)
20221106	Sun	1108-1109	12183	1--6--	Spectre	X06b before XPA2(5)
20221106	Sun	1109-1110	13883	1--6--	Spectre	X06b before XPA2(5)
20221106	Sun	1110-1111	14783	1--6--	Spectre	X06b before XPA2(5)
20221106	Sun	1904	4476	1--6--	Spectre	X06b before XPB1(4)
20221106	Sun	1904	5376	1--6--	Spectre	X06b before XPB1(4)
20221106	Sun	1904	5876	1--6--	Spectre	X06b before XPB1(4)
20221106	Sun	1905	6876	1--6--	Spectre	X06b before XPB1(9)
20221106	Sun	1905	7576	1--6--	Spectre	X06b before XPB1(4)
20221106	Sun	1905	7876	1--6--	Spectre	X06b before XPB1(4)
20221107	Mon	0804	14377	432516	Dave	TX to Bern, G6
20221107	Mon	0805	12122	165324	Ary	TX to Vienna, G1
20221107	Mon	0926-0934	13395	532614	Spectre,Dave	TX to Paris, G4(2)(5)
20221107	Mon	1308	14392	1-----	Spectre	X06d before M12(4)
20221107	Mon	1309	14892	1-----	Spectre	X06d before M12(4)
20221107	Mon	1310	16292	1-----	Spectre	X06d before M12(4)
20221108	Tue	0757-0759	13420	534216	Andrew	TX to Bagdad, G87
20221108	Tue	0817-0822	17523	542136	Ary, Andrew	TX to Beijing, G88
20221108	Tue	1004-1010	13510	612534	Spectre,	
				Andrew	TX to Ashgabat, G89(4)	
20221108	Tue	1011-1014	20813	216354	Spectre,	
				Ary, Andrew	TX to Chennai, G388(3)(8)	
20221109	Wed	1013	11093	1--6--	Spectre	X06b before XPA2(5)
20221109	Wed	1013	12193	1--6--	Spectre	X06b before XPA2(5)
20221109	Wed	1013	13393	1--6--	Spectre	X06b before XPA2(5)
20221109	Wed	1129	11453	1--6--	Spectre	X06b before XPB1(4)
20221109	Wed	1129	12153	1--6--	Spectre	X06b before XPB1(4)
20221109	Wed	1129	13453	1--6--	Spectre	X06b before XPB1(4)
20221109	Wed	1129	14953	1--6--	Spectre	X06b before XPB1(5)
20221109	Wed	1129	15953	1--6--	Spectre	X06b before XPB1(5)
20221109	Wed	1129	16353	1--6--	Spectre	X06b before XPB1(5)
20221110	Thu	0743-0745	18177	164253	Spectre	TX to Addis Ababa, G395(8)
20221110	Thu	0817	13885	1--6--	Andrew	X06b
20221110	Thu	0818-0823	14550	153624	Andrew, Ary	TX to Damascus, G249
20221110	Thu	0946-0956	16223	164532	Spectre,	
				Andrew, RX39,		
				Ary	TX to Dublin, G106(4)	
20221110	Thu	1011	11093	1--6--	Spectre	X06b before XPA2(5)
20221110	Thu	1011	13393	1--6--	Spectre	X06b before XPA2(5)
20221110	Thu	1011-1012	12193	1--6--	Andrew,	
				Spectre	X06b before XPA2(5)	
20221110	Thu	1014	13393	1--6--	Andrew	X06b before XPA2
20221111	Fri	0935-0941	12177	356412	Ary, Spectre	TX to Berlin, G126(4)
		20221111	Fri	1009	8153	1--6-- Spectre X06b before XPA2(4)
20221111	Fri	1009	9353	1--6--	Spectre	X06b before XPA2(4)
20221111	Fri	1009	10653	1--6--	Spectre	X06b before XPA2(4)
20221113	Sun	1011	12193	1--6--	Spectre	X06b before XPA2(5)
20221113	Sun	1011	13393	1--6--	Spectre	X06b before XPA2(5)
20221113	Sun	1111	12183	1--6--	Spectre	X06b before XPA2(5)
20221113	Sun	1111	13883	1--6--	Spectre	X06b before XPA2(5)
20221113	Sun	1111	14783	1--6--	Spectre	X06b before XPA2(5)
20221113	Sun	1134-1136	15710	261453	Andrew	TX to Cairo, G138
20221113	Sun	1415	6821	1--6--	Schorschi	X06b with S9
20221114	Mon	0937-0941	13517	463125	Spectre	TX to Rabat, G77(4)
20221114	Mon	1007-1008	10494	1--6--	Spectre	X06b before XPB1(4)
20221114	Mon	1008-1009	11094	1--6--	Spectre	X06b before XPB1(4)
20221114	Mon	1009-1010	12194	1--6--	Spectre	X06b before XPB1(4)
20221114	Mon	1011-1012	13394	1--6--	Spectre	X06b before XPB1(4)

20221114	Mon	1012-1013	13894	1--6--	Spectre	X06b before XPB1(4)
20221114	Mon	1238-1253	13467	364152	Ary	TX to New Delhi, G73
20221115	Tue	0902	11462	165423	Ary	TX to Brussels, G151
20221115	Tue	0925-0931	14358	154263	Ary, Eddy/AU, Spectre	TX to Rome, G148(5)
20221115	Tue	0933-0937	20336	246531	Ary, Spectre	TX to Accra, G153(5)
20221116	Wed	0739-0742	15819	256341	Spectre	TX to Beirut, G169(4)
20221116	Wed	0920-1041	11560	1--161	Spectre	Very long X06b(4)
20221116	Wed	0958	11093	1--6--	Spectre	X06b before XPA2(4)
20221116	Wed	0958-0959	12193	1--6--	Spectre	X06b before XPA2(4)
20221116	Wed	0959-1000	13393	1--6--	Spectre	X06b before XPA2(4)
20221116	Wed	1103-1113	16115	215346	Spectre	TX to Mumbai, G167(4)
20221116	Wed	1109	13968	16-161	Spectre	X06b before XPA2(4)
20221116	Wed	1109	15968	16-161	Spectre	X06b before XPA2(4)
20221116	Wed	1109	17468	16-161	Spectre	X06b before XPA2(4)
20221116	Wed	1209-1254	10340	16-161	Spectre, Schorschi	Very long X06b, S9 in DE(4)
20221116	Wed	1224-1228	18245	231654	Spectre	TX to Abuja, G423(5)
20221117	Thu	0928-0931	20837	645321	Spectre	TX to Ho Chi Minh City, G417(5)
20221117	Thu	1015	11093	1--6--	Spectre	X06b before XPA2(4)
20221117	Thu	1016	12193	1--6--	Spectre	X06b before XPA2(5)
20221117	Thu	1017	13393	1--6--	Spectre	X06b before XPA2(5)
20221117	Thu	1330-1336	17468	436512	Spectre	TX to Harare, G180(5)
20221118	Fri	1007	8153	1--6--	Spectre	X06b before XPA2(4)
20221118	Fri	1008	9353	1--6--	Spectre	X06b before XPA2(4)
20221118	Fri	1009	10653	1--6--	Spectre	X06b before XPA2(4)
20221118	Fri	1034-1038	12194	625413	Spectre	TX to Tel Aviv, G193(5)
20221118	Fri	1100	13968	1--6--	Spectre	X06b before XPA2(4)
20221118	Fri	1101	15968	1--6--	Spectre	X06b before XPA2(4)
20221118	Fri	1102	17468	1--6--	Spectre	X06b before XPA2(4)
20221118	Fri	1204	10875	1--6--	Spectre	X06b before XPA1(5)
20221118	Fri	1205	13375	1--6--	Spectre	X06b before XPA1(5)
20221118	Fri	1206	13875	1--6--	Spectre	X06b before XPA1(5)
20221120	Sun	1117	12183	1--6--	Spectre	X06b before XPA2(5)
20221120	Sun	1118	13883	1--6--	Spectre	X06b before XPA2(5)
20221120	Sun	1119	14783	1--6--	Spectre	X06b before XPA2(5)
20221121	Mon	0802-0805	11638	165324	Ary, Spectre	TX to Vienna, G145(4)
20221121	Mon	0845-0853	12152	432516	Spectre, Ary	TX to Bern, G341(4)
20221121	Mon	1016	11094	1--6--	Spectre	X06b before XPB1(4)
20221121	Mon	1017	10494	1--6--	Spectre	X06b before XPB1(4)
20221121	Mon	1017	11494	1--6--	Spectre	X06b before XPB1(4)
20221121	Mon	1018	12194	1--6--	Spectre	X06b before XPB1(4)
20221121	Mon	1019	13394	1--6--	Spectre	X06b before XPB1(4)
20221121	Mon	1020	13894	1--6--	Spectre	X06b before XPB1(4)
20221121	Mon	1324	14392	1-----	Spectre	X06b before M12(4)
20221121	Mon	1325	14892	1-----	Spectre	X06d before M12(4)
20221121	Mon	1326	16292	1-----	Spectre	X06d before M12(4)
20221122	Tue	0815	16257	542136	Ary	TX to Beijing, G88
20221122	Tue	1010	13510	612534	Ary	TX to Ashgabat, G234
20221123	Wed	0834	11483	412356	Ary	TX to Budapest, G243
20221123	Wed	1209	13875	465132	Spectre	TX to Sofia, G246(6)
20221123	Wed	1210	10875	1--6--	Spectre	X06b before XPA1(5)
20221123	Wed	1211	13375	1--6--	Spectre	X06b before XPA1(5)
20221123	Wed	1212	13875	1--6--	Spectre	X06b before XPA1(5)
20221124	Thu	0941-0945	16223	164532	Spectre	TX to Dublin, G252(5)
20221124	Thu	0958	11093	1--6--	Spectre	X06b before XPA2(4)
20221124	Thu	0959	12193	1--6--	Spectre	X06b before XPA2(4)
20221124	Thu	1000	13393	1--6--	Spectre	X06b before XPA2(4)
20221124	Thu	1011-1012	11491	1-----	Spectre	X06d before M12(4)
20221124	Thu	1012-1013	12189	1-----	Spectre	X06d before M12(4)
20221124	Thu	1013-1014	13368	1-----	Spectre	X06d before XPA2(4)
20221124	Thu	1117	13968	1--6--	Spectre	X06b before XPA2(4)
20221124	Thu	1118	15968	1--6--	Spectre	X06b before XPA2(4)
20221124	Thu	1119	17468	1--6--	Spectre	X06b before XPA2(4)
20221124	Thu	1213	16291	6-----	Schorschi	X06d
20221125	Fri	0957-1003	12177	356412	Ary, Spectre	TX to Berlin, G271(5)
20221125	Fri	1023-1028	19611	256134	Spectre	TX to Abidjan, G270(5)
20221125	Fri	1110-1111	13968	1--6--	Spectre	X06b before XPA2(5)
20221125	Fri	1111-1112	15968	1--6--	Spectre	X06b before XPA2(5)
20221125	Fri	1112-1113	17468	1--6--	Spectre	X06b before XPA2(5)
20221127	Sun	1110-1113	15810	145632	Spectre	TX to Algiers, G284(5)
20221128	Mon	0934-0940	13517	463125	Ary, Spectre	TX to Rabat, G222(5)
20221201	Thu	1346	17468	436512	Ary	TX to Harare, G44
20221202	Fri	1010-1011	7665	1--6--	Spectre	X06b before XPA2(4)
20221202	Fri	1011	8165	1--6--	Spectre	X06b before XPA2(4)
20221202	Fri	1012	9265	1--6--	Spectre	X06b before XPA2(4)
20221205	Mon	0838	12152	432516	Ary	TX to Bern, G6
20221206	Tue	0930-0936	14358	154263	Spectre	TX to Rome, 7(5)
20221206	Tue	0958-1004	20336	246531	Spectre	TX to Accra, G16(5)
20221206	Tue	1030	17421	246531	Ary	TX to Accra, G16
20221207	Wed	0732	14683	364152	Ary	TX to New Delhi, R
20221207	Wed	1126-1131	14650	215346	Spectre	TX to Mumbai, G25(5)
20221207	Wed	1231	10550	1-21--	Spectre	V. long X06b, end time missing(4)
20221207	Wed	1250	15550	1-21--	Spectre	V. long X06b, end time missing(5)

20221208	Thu	0811	16153	153624	Ary	TX to Damascus, G249
20221208	Thu	0847	7988	561243	Ary	TX to Helsinki, G117
20221209	Fri	0925-0931	12177	356412	Ary, Spectre	TX to Berlin, G126(5)
20221210	Sat	1116	13378	1--6--	Schorschi	X06b before XPB1
20221210	Sat	1116	12178	1--6--	Schorschi	X06b before XPB1
20221211	Sun	1047-1052	15810	145632	Ary, Spectre	TX to Algiers, G135(5)
20221212	Mon	0905	11424	421635	Ary	TX to Oslo, G74
20221212	Mon	1012	16117	463125	Ary	TX to Rabat, G77
20221213	Tue	0823	16257	542136	Ary	Alert 2 (TX to Beijing, G88) 1
20221213	Tue	0834	14861	542136	Ary	2.2
20221214	Wed	0948-0950	14812	263145	Spectre	TX to Prague, G428(4)
20221216	Fri	1018-1024	14820	625413	Ary, Spectre	Alert 2 (Tel Aviv, G193) 1(4)
20221216	Fri	1024-1031	14824	625413	Ary, Spectre	2.2(5)
20221216	Fri	1312	16320	241563	Ary	TX to Karachi, G187
20221219	Mon	0750	12112	165324	Ary	TX to Vienna, G145
20221219	Mon	1150	12430	1--6--	Schorschi	X06b
20221220	Tue	0941	14358	154263	Ary	TX to Rome, G148
20221220	Tue	0944	17421	246531	Ary	TX to Accra, G153
20221220	Tue	1152	16188	325614	Ary	TX to Nairobi, G400
20221221	Wed	0740-0744	15819	256341	Spectre	TX to Beirut, G169(4)
20221221	Wed	1131-1136	16115	215346	Ary, Spectre	TX to Mumbai, G167(5)
20221222	Thu	0754	12126	521634	Ary	TX to Bucharest, G261
20221222	Thu	0810	16153	153624	Ary	TX to Damascus, G249
20221223	Fri	1008	17463	256134	Ary	TX to Abidjan, G270
20221224	Sat	1330	8126	1--6--	Schorschi	X06b before E07
20221228	Wed	0838	11483	412356	Ary	Alert 2 (TX to Budapest, G243) 1
20221228	Wed	0838	11431	412356	Ary	2.2 Spurious
20221228	Wed	0854	18245	134265	Ary	Alert 7 (TX to Tunis, G90) 1
20221228	Wed	0855	16116	134265	Ary	7.2
20221228	Wed	0930	11153	465132	Ary	TX to Sofia, G246
20221228	Wed	0938	18245	134265	Ary	7.3
20221228	Wed	1023	18240	61-616	Ary	X06b
20221230	Fri	1539	5091	1-----	Schorschi	X06d

- 1) Carrier up until 0944
- 2) Break between 0931 and 0932 UTC
- 3) Serdolik v2 on 20816 kHz at 1013 UTC
- 4) Fair QRM2 QSB2 in UK
- 5) Strong QRM2 QSB2 in UK
- 6) The code for Sophia was a mistake, it was supposed to send an X06b 111666 code instead as this was on an XPA2 schedule frequency (Specctre)
- 7) BC QRM3 QSB2 in UK
- 8) Weak QRM3 QSB3
- 9) Fair RTTYQRM3 QSB2

Many thanks to all contributors. I wish you a happy, healthy, success- and especially peaceful year 2023.

Good-bye till the next issue

Jochen Schäfer, Numbers-, X06 Database and Teamkopf

Spectre 3000 sent a theory about X06b transmissions:

Theory For X06b Transmissions 1 Hour Before XPA1, XPA2, E07 & XPB1 Schedules.

I do have some theories to why X06b transmissions happen on Russian Operator 7 number station transmissions, one hour before sending.

1 They are merely test transmissions.

2 They may identify the priority of the message before receiving. If this is true then a full 6 tone X06 would be classified as high priority, an X06b 3 tone variant would be classified as medium priority. And lastly an X06b 2 tone variant would be classified as low priority.

3 All Russian 7 Operator number station transmissions which do have an X06b transmission 1 hour before actual message, are targeted to Russian Embassies. Warning the Embassy that a transmission is going to happen, very much like the X06 6 tone Embassy targeted transmissions. As standard procedure.


4 All of the Russian 7 Operator number station transmissions which do not have an X06b transmission 1 hour before an actual message, are targeted to agents working in the field. They would be no need to have an X06b transmission for these messages, just the standard 10-minute test tone before message to let the agent know that they are transmitting. Since a few Russian 7 Operator transmissions appear to not have an X06b transmission 1 hour before the actual message.

In reply Jochen states:

To Spectre's theories I think, that the X06b transmissions 1 hour before the family Ib TXs are tests or introductions. The real 6 tone stations are informations to Russian embassies in the field, where we could find out most of the targets. These 6 tone stations are mostly followed by traffic in other modes like Serdolik.

Gizza Job!

```
1 import java.util.Arrays;
2 public class Job {
3     public static void main(String[] whatIKnow){
4         String[] languages={"JavaScript","C++","Java","Python"};
5         for(String language : whatIKnow){
6             if(Arrays.asList(languages).contains(language)){
7                 System.out.println("Apply here");
8                 System.exit(0);
9             }
10        }
11        System.out.println("Give it a go apply here");
12    }
13 }
```



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Thanks 'E' for sending this, excellent!



Somali Language
Specialist
Language Analysts



Pashto Language
Specialist
Language Analysts



PROBLEM SOLVER?
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WE MIGHT BE THE RIGHT SOLUTION FOR YOU.

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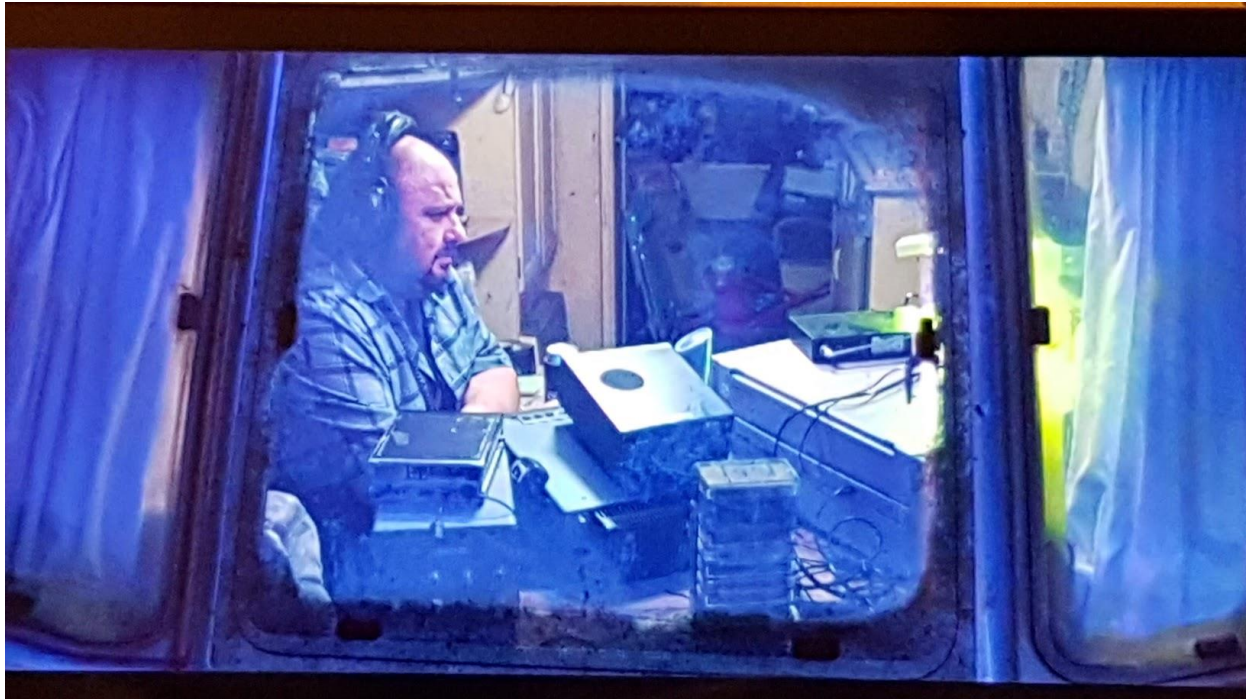
 **SECURITY SERVICE
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The poster features a smiling woman with long dark hair wearing a yellow sweater. Behind her are faint, colorful portraits of other people. The background is a gradient of light blue and yellow. There are small color calibration bars in the top left and bottom right corners.

Those tapes!

Anyone for Netflix 'The Crown' Series 5, to be correct? There's been a lot written about this latest series, a fiction allegedly, and its inaccuracies. I was surprised at the attempts by the producers to include the King Charles and Camilla aspect of the analogue intercept that made so much news once released by the media.

The amount of kit and the image of the intercepting listener was not good and neither were the technicalities. FRG-9600 receiver, Vector Phase unit, caravan, beer and heavens knows what else on the table top inside a caravan complete with 'amateur!' [Note Mr Reenan never held a call sign I'm told].



Screen grab looking inside caravan...see pile of cassettes.



Inside caravan



Tuning FRG-9600 Receiver [602MHz inside TV band not analogue Cellular band – 904 to 945MHz I believe]

The infamous taped phone call behind Squidgygate

It was a standard evening when a 23-minute phone call took place, containing chat so risqué it would rock the royal family to its core.

<https://www.news.com.au/lifestyle/real-life/true-stories/the-infamous-taped-phone-call-behind-squidgygate/news-story/74a4c6f27899e2b6317cf7e4866844ab>

“And so, darling, what other lows today?” a man can be heard asking.

“I was very bad at lunch and I nearly started blubbing,” a woman responds.

“I thought: Bloody hell, the things I have done for this f***ing family.”

And so starts a 23-minute tape, a tape containing such explosive content it would rock the royal family and shock the world. A tape clouded in claims of espionage.

It was New Year’s Eve in 1989 and Diana, Princess of Wales was at Sandringham with the extended royal family. The man on the other end of the line was James Gilbey, a Lotus salesman and heir to a gin fortune.

The duo had known each other for a decade, long before Diana had met Prince Charles. According to reports, the pair had been set to go out on a date when the dashing Gilbey stood her up. Enraged, Diana and one of her flatmates covered his Alfa Romeo in a flour and egg mix, Tina Brown writes in *The Diana Chronicles*.

Fast forward to 1989 and the duo were reintroduced, this time at the 30th birthday of a mutual friend.

By the end of the ’80s, Diana’s royal dream had long faded. Her marriage to Prince Charles was in tatters and since 1986 she had been enjoying an affair with her riding instructor, James Hewitt.

Quite what happened between Gilbey and Diana remains a mystery: Andrew Morton has called it a “dalliance” while Brown has pegged it as an “affair.” (Gilbey himself has denied they had an affair.)

No matter what the exact nature of their relationship was, thanks to an incredibly strange series of events, we know there was a definite intimacy between the two.

On that night in 1989, as the clock ticked down towards a new decade, Diana and Gilbey chatted away, ruminating on everything from their day to the young Princes to Gucci loafers. It is by turns moving and inane. But as they idly gossiped, something else, unbeknown to them, was going on. Someone, somewhere was listening and recording everything.

It was a fairly depressing New Year’s Eve for the most famous woman in the world. On December 31, Diana was at Sandringham, the red brick Georgian pile beloved by the Windsors’, where the royal family religiously spends the holidays. No popping champagne corks and fireworks for her.

On the tape, she can be heard telling a staff member that she would like dinner on a tray in her room. “Just some salad with yoghurt. Like when I was ill in bed. That would be wonderful — about eight o’clock,” she says. It is a dismal image: A princess stuck in icy Norfolk country manor forking up salad.

Gilbey, we know, was on his mobile phone, hundreds of kilometres away and headed out to a quite jolly-sounding dinner party for 30.

Throughout the course of their conversation, they chat about friends, such as Mara Berni, the famed owner of San Lorenzo restaurant, horoscopes and even Gilbey’s decade-old Gucci shoes. Essentially, it’s the sort of idle chatter one imagines two upper class chums might indulge in.

Then things get a bit lustier. They repeatedly make kissing noises at one another and plan for Gilbey to keep his mobile close at hand so they can stay in touch.

“Kiss me, please (sound of kisses). Do you know what I’m going to be imagining I’m doing tonight, at about 12 ‘o clock? Just holding you close to me. It’ll have to be delayed action, for 48 hours!” Gilbey says.

During the call, Gilbey calls Diana “darling” 53 times and “Squidgy” 14 times.

Later he tells her: “No, I haven’t played with myself, actually. Not for a full 48 hours.”

Meanwhile, in Oxfordshire, Cyril Reenan, a 70-year-old retired bank manager was out for the night. The ham radio enthusiast claimed on January 4, four days after Gilbey and Diana's scandalous chat, to have heard and recorded the conversation via his home set-up. Then, on January 8, he contacted The Sun, selling the tape for about \$10,000.

"We put the cassette in and listened to it almost mesmerised for 20 minutes," Stuart Higgins, the paper's then royal correspondent, has said. "The content was so explosive we knew we had a major, major story."

Higgins then approached Gilbey who "went completely white, got in his car, and drove off". "Clearly we had the right man," Higgins said.

Gilbey reportedly then told Diana and both knew that it was explosive stuff. The only question was when the story would break.

THE SECOND RECORDING

Reenan wasn't the only person who had heard the future Queen and the car salesman's intimate chitchat. Jane Norgrove, a 25-year-old typist, had also allegedly recorded the conversation from her home, which was only about 12km away from that of Cyril Reenan.

Supposedly, both Reenan and Norgrove had been able to inadvertently pick up the frequency of the phone call, though they made their recordings days apart.

Norgrove has said that she didn't listen to the tape for a year after she recorded it however by early 1991, copies had found their way to Richard Kay at the Daily Mail and the National Enquirer's London bureau.

(Despite having the bombshell tapes, The Sun had decided not to publish the information).

In August, 1992, the Enquirer broke the story in the US with British publications soon following suit.

The entire transcript of Diana and Gilbey's chatter was published and readers could even call up a special premium phone line to pay to listen to the audio.

Of all the places to be when the news broke, Diana was at Balmoral, the royal family's beloved Scottish pile and was "shattered," according to Brown. Others have suggested she was more embarrassed than anything, and her then-bodyguard Ken Wharfe later claimed that Diana herself had called the paid line to listen to her own conversation.

SPY GAMES

Squidgygate, as the scandal came to be known, was blown out of the water only a few months later in November 1992 with the publication of an accidentally intercepted (and taped) conversation between Prince Charles and Camilla Parker Bowles.

The Camillagate tapes hit the front page, with the truly gobsmacking revelation the future king had idly mused about being his beloved Camilla's tampon.

Both of these incidents could have been written off as nothing more than scurrilous chapters in the royal family's history if not for what happened 16 years later.

In 2008, during the inquest into Diana's death, her former protection officer Ken Wharfe claimed that Diana and Gilbey's tete-a-tete had actually been recorded by the British secret service and that it had then been broadcast on a loop with the hope a radio enthusiast might pick them up.

"Diana did say to me on a number of occasions she felt she and other members of the family were being monitored," Wharfe told the hearing. (He also alleged that the Queen had asked MI5 to look into the matter at the time.)

The Princess was not the only one who was worried about who might be listening into her calls. Diana reportedly told her friend, Harper's Bazaar editor Liz Tilberis that strange clicks and noises during phone calls were the secret service and another longtime friend had bought the Princess a scrambler for her phone.

There is also the unexplained question of how two amateur enthusiasts managed to capture the same conversation, several days apart, using unsophisticated technology.

John Nelson, a communications expert who had studied the Squidgygate tapes for the Sunday Times, has said that he believes that "the truth is, Diana's phone was bugged. That call had to have been recorded off a landline."

Which, in turn, means that someone had bugged Diana's phone line inside Sandringham, a royal residence, the implications of which are startling.

There is also evidence that the Squidgygate recording had been altered.

(However, it is believed that the Camillagate call was genuinely intercepted by hobbyists.)

The following year, Diana covertly hired electronic surveillance experts (as did Sarah Ferguson) to sweep her Kensington Palace apartment, getting them into the royal residence by having them pose as carpet fitters, the Telegraph has reported. Quite what they might have found, we will never know — when the four men tried to access the telephone exchange they were detained.

Daniela Elser is a royal expert and freelance writer with 20 years' experience who has written for some of Australia's best print and digital media brands. Continue the conversation @DanielaElser

<https://www.news.com.au/lifestyle/real-life/true-stories/the-infamous-taped-phone-call-behind-squidgygate/news-story/74a4c6f27899e2b6317cf7e4866844ab>



Icom IC-R7000 as used by Mr Cyril Reenan

This Icom IC-R7000 belongs to PLdn. Freq tuned to a local Mosque call to prayer 454.7938MHz

Chart Section Index

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XPA1 Wednesday/Friday schedules
5. M12 Yearly Repeats 2021to 2022

January 2023

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Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jan kHz, ID, ...	Feb kHz, ID, ...
x	x	x	x	x			0000		F01	01A	17471	17471
x	x	x	x	x	x	x	0000		V13	0	15890	
x				x			0010/0030/0050		M12	01B	16253/15953/13453 294	17461/16161/15861 418
x				x			0025/0035		F01	01A	13452/11106	15803/18040
	x			x			0030/0050/0110		M12	01B	5886/ 6786/ 7486 874	5734/ 6834/ 7634 786
x	x	x	x	x	x	x	0100		V13	0	18040	18040
x				x			0125/0135		F01	01A	13452/11106	15803/18040
						x	0100/0120/0140		V07	01B	15893/14693/13893 868	15874/14474/13874 878
			x			x	0110/0130/0150		M12	01B	11439/10339/ 9239 432 deleted?	11464/10464/ 9164 441 deleted?
x	x	x	x	x	x	x	0200		V13	0	18040	18040
x	x						0210/0310 tue, when msg		E06	01A	9349/13413 537	10628/14364 537
			x	x			0300/0400		E06	01A	14918/12218 361	15683/13373 361
x	x	x	x	x	x	x	0300		V13	0	18040	18040
	x		x				0300/0320/0340		M12	01B	search	search
		x	x				0315		E11	03	9052 25#	9052 25#
x	x	x	x	x	x	x	0400		V13	0	18040	18040
x	x	x	x	x			0400/0420		S06	01A	11616/ 9322 480	11616/ 9322 480
	x		x				0445		S11A	03	11559 79#	11559 79#
x							0450		E11	03	4909 41#	4909 41#
x		x		x		x	0455		HM01	18	10860	10860
	x		x		x		0455		HM01	18	11462	11462
x	x	x	x	x	x	x	0500		V13	0	11430	11430
	x		x				0500		S11A	03	12530 38#	12530 38#
x	x	x	x	x			0500/0520		M14	01A	12211/10243 952	12211/10243 952
	x		x				0505		E11	03	12153 33#	12153 33#
x		x					0510		S11A	03	9057 65#	9057 65#
	x			x			0530		M01A	14	9441 751	9441 751
		x	x				0530		M01A	14	9129 or 9192 498	9129 or 9192 498
		x	x				0540		M01A	14	7692 536	7692 536
x		x		x		x	0555		HM01	18	10345	10345
	x		x		x		0555		HM01	18	14375	14375
				x		x	0600		E11	03	7850 35#	7850 35#
x	x	x	x	x	x	x	0600		V13	0	11430	11430
x	x						0600/0610/0620 0630/0640/0650		XPB1	01B	12187/13387/13887 14487/14987/15887	13443/13943/14443 14943/15843/16343
	x		x				0600/0620/0640		XPA2	01B	search	search

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jan kHz, ID, ...	Feb kHz, ID, ...
			x	x			0600/0700	1/3	E06	01B	13960/16350 139	17480/20085 702
	x			x			0620		M01A	14	10233 or 10235 354/458	10233 or 10235 354/458
		x	x				0620		M01A	14	9421 135	9421 135
	x			x			0630		M01A	14	9447 143/796	9447 143/796
		x	x				0630		M01A	14	8111 902/536	8111 902/536
x		x					0640		E11	03	16005 94#	16005 94#
	x		x				0645		E11	03	7840 51#	7840 51#
x		x		x		x	0655		HM01	18	9330	9330
	x		x		x		0655		HM01	18	13435	13435
x			x				0700		S11A	03	9050 47#	9050 47#
	x			x			0700		E11	03	6804 57#	6804 57#
					x	x	0700		E11	03	5371 49#	5371 49#
x	x	x	x	x	x	x	0700		V13	0	8169, 7502	8169, 7502
						x	0700		M01	01B	5465 197	5465 197
						x	0700/0720/0740		E07	01B	9326/10426/11526 345	9326/10426/11526 345
	x			x			0710		M01A	14	10651 297/358	10651 297/358
		x	x				0710		M01A	14	9175 146/208	9175 146/208
x		x					0715		E11	03	11104 75#	11104 75#
	x			x			0715		E11	03	9130 63#	9130 63#
	x			x			0720		M01A	14	9151 728	9151 728
x							0745		E11	03	10213 26#	10213 26#
	x		x				0745		E11	03	13908 22#	13908 22#
		x		x			0745		E11	03	17378 34#	17378 34#
x		x		x		x	0755		HM01	18	9065	9065
	x		x		x		0755		HM01	18	11365	11365
x	x	x	x	x	x	x	0800		V13	0	8169, 7502	8169, 7502
		x				x	0800/0820/0840		M12	01B	16357/17457/18357 343	17415/18215/18715 427
		x					0800/0820/0840		XPA2	01B	11493/13393/13993	13387/13887/14787
	x	x					0820		E11	03	14611 13#	14611 13#
			x	x			0820		E11	03	5149 43#	5149 43#
x				x			0830		E11	03	14940 18#	14940 18#

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jan kHz, ID, ...	Feb kHz, ID, ...
					x	x	0830		S11A	03	5371 37#	5371 37#
x		x					0845		E11	03	12067 71#	12067 71#
	x		x				0845		E11	03	17378 15#	17378 15#
		x		x		x	0855		HM01	18	9240	9240
	x		x		x		0855		HM01	18	11462	11462
x		x					0900		E11	03	11092 53#	11092 53#
	x			x			0900/0920/0940		M12	01B	search	search
				x		x	0900/0920/0940		XPA2	01B	search	search
x		x					0910/0930/0950		XPA2	01B	14977/13971/13371	16102/14951/13991
			x		x		0910/0930/0950		XPA2	01B	14794/13994/12194	16146/15846/14446
x				x			0915		S11A	03	6252 48#	6252 48#
		x	x				0930		E11	03	7469 27#	7469 27#
						x	0930/1000		S06	01A	9946/8095 480	10423/ 8167 480
x		x		x		x	0955		HM01	18	9155	9155
	x		x		x		0955		HM01	18	12180	12180
	x			x			1000		E11	03	9079 30#	9079 30#
	x	x	x	x			1015/1025/1035		F01	01A	11079/ 9162/ 7509 deleted?	12184/10169/ 8079 deleted?
x		x					1045		E11	03	11100 69#	11100 69#
x					x		1100/1110/1110 1130/1140/1150		XPB1	01B	14769/14369/13969 13369/12169/11169	15814/14814/14414 13914/13414/12214
		x			x		1100/1110/1110 1130/1140/1150		XPB1	01B		
	x			x			1100/1120/1140		XPA2	01B	10231/ 9331/ 8131	12147/10347/ 9247
		x	x				1100/1120/1140		XPA2	01B	13384/12184/10984	13967/13367/11567
			x				1110/1130/1150		M12	01B	13386/12189/11491 725	13386/12189/11491 725
x	x	x	x	x	x	x	1200		V13	0	7688	9276,13974
		x			x		1200/1210/1210 1230/1240/1250		XPB1	01B	15425/14825/13425 12125/10425/ 9325	14873/14373/13873 13373/12173/11173
	x					x	1200/1220/1240		XPA2	01B	10921/12221/13521	11163/13363/14563
		x		x			1200/1220/1240		XPA2	01B	x10726/11426/ 12226 search	x11575/13375/ 13975 search
	x	x					1205		E11	03	6433 46#	6433 46#
x							1230/1250/1310		M12	01B	12205/13559/14728 973	12205/13559/14728 973
x			x				1300		E11	03	4909 31#	4909 31#
x	x	x	x	x	x	x	1300		V13	0	7688	7688,11430
	x			x			1300/1310/1310 1330/1340/1350		XPB1	01B	search	search
					x		1300/1330		S06	01A	7377/ 5410 480	8116/ 5410 480

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jan kHz, ID, ...	Feb kHz, ID, ...
		x		x			1310/1330/1350		XPA1	01B	14852/13952/11552 895	14374/13374/11474 334
	x			x			1400		S11A	03	6252 42#	6252 42#
x			x				1400/1420/1440		M12	01B	17418/16318/15918 439	19373/17473/16173 341
					x		1400/1420/1440		E07	01B	10323/ 9123/ 8023 310	11464/10764/ 9264 472
			x		x		1410/1430/1450		E07	01B	11593/10293/ 9293 916	13368/12168/11168 745
	x				x		1430		E11	03	13363 91#	13363 91#
					x		1500		M01	14	5810 197	5810 197
	x			x			1500/1520/1540		E07	01B	search	search
			x				1530		E11	03	5409 26#	5409 26#
					x	x	1530		E11	03	4909 36#	4909 36#
x	x	x	x	x	x	x	1555		HM01	18	11435	11435
					x		1600/1620/1640		XPA2	01B	9317/ 8117/ 7517	11461/10261/ 9161
	x		x				1600/1620/1640		XPA2	01B	10465/ 9165/ 8065	12173/11373/ 9373
	x					x	1605		E11	03	5432 23#	5432 23#
x	x	x	x	x	x	x	1655		HM01	18	11530	11530
		x		x			1715		E11	03	5082 97#	5082 97#
			x				1730		E11	03	5779 41#	5779 41#
x						x	1745		E11	03	12924 24#	12924 24#
x	x	x	x	x	x	x	1755		HM01	18	11635	11635
	x		x				1800		M01	14	5320 197	5320 197
					x		1800/1820/1840		M12	01B	11435/10598/ 9227 938	11435/10598/ 9227 938
				x		x	1815		E11	03	6849 92#	6849 92#
		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			1900/2000	1/3	S06	01A		7672/ 5457 319
		x			x		1910		E11	03	4505 39#	4505 39#
				x		x	1910		E11	03	10487 61#	10487 61#
	x			x			1940/1950/2000	1	F01	01A	7629/ 6783/ 4030	8156/ 6844/ 4527
			x			x	2000		E11	03	5082 52#	5082 52#

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jan kHz, ID, ...	Feb kHz, ID, ...
	x		x				2000		M01	14	4490 197	4490 197
		x		x			2000/2020/2040		M12	01B	6782/ 5882/ 5182 781	7674/ 6874/ 5774 687
				x			2000/2100	1/3	S06	01A	7672/ 5457 319	
x		x		x		x	2055		HM01	18	11635	11635
	x		x		x		2055		HM01	18	16180	16180
x		x		x		x	2155		HM01	18	10715	10715
	x		x		x		2155		HM01	18	17480	17480
				x	x		2200/2220/2240		M12	01B	5778/ 6778/ 8178 771	5832/ 6832/ 7732 887
			x				2210/2230/2250		M12	01B	6937/ 5737/ 4537 975	6937/ 5737/ 4537 975
					x		2230/2240		F01	01A	17411/15956	20741/18401
x			x				2300/2320/2340		M12	01B	11079/10279/ 9179 136	9362/ 8062/ 7462 451
					x		2330/2340		F01	01A	17411/15956	20741/18401

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

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	9052 25#	9052 25#	9052 25#	9052 25#	since 01/14, last log 12/22
	x		x				0445		S11A	03	11559 79#	11559 79#	11559 79#	11559 79#	since 05/22, last log 12/22
x							0450		E11	03	4909 41#	4909 41#	4909 41#	4909 41#	since 02/10, last log 12/22 2nd transmission Thu 1730z
	x		x				0500		S11A	03	12530 38#	12530 38#	12530 38#	12530 38#	since 05/14, last log 12/22
	x		x				0505		E11	03	12153 33#	12153 33#	12153 33#	12153 33#	since 10/11, last log 12/22 Mar/Apr/Sep/Oct at 1230z, Mai-Aug at 1645z
x		x					0510		S11A	03	9057 65#	9057 65#	9057 65#	9057 65#	since 08/19, last log 12/22
				x		x	0600		E11	03	7850 35#	7850 35#	7850 35#	7850 35#	since 04/15, last log 12/22
x		x					0640		E11	03	16005 94#	16005 94#	16005 94#	16005 94#	since 07/17, last log 12/22
	x		x				0645		E11	03	7840 51#	7840 51#	7840 51#	7840 51#	since 07/09, last log 12/22
x			x				0700		S11A	03	9050 47#	9050 47#	9050 47#	9050 47#	since 04/10, last log 12/22
	x			x			0700		E11	03	6804 57#	6804 57#	6804 57#	6804 57#	since 01/12, last log 12/22
					x	x	0700		E11	03	5371 49#	5371 49#	5371 49#	5371 49#	since 07/15, last log 12/22
x		x					0715		E11	03	11104 75#	11104 75#	11104 75#	11104 75#	since 06/21, last log 12/22
	x			x			0715		E11	03	9130 63#	9130 63#	9130 63#	9130 63#	since 02/11, last log 12/22
x							0745		E11	03	10213 26#	10213 26#	10213 26#	10213 26#	since 03/14, last log 12/22 2nd transmission Thu 1530z
	x		x				0745		E11	03	13908 22#	13908 22#	13908 22#	13908 22#	since 01/20, last log 12/22
		x		x			0745		E11	03	17378 34#	17378 34#	17378 34#	17378 34#	since 06/17, last log 12/22
	x	x					0820		E11	03	14611 13#	14611 13#	14611 13#	14611 13#	since 12/18, last log 12/22
			x	x			0820		E11	03	5149 43#	5149 43#	5149 43#	5149 43#	since 10/09, last log 12/22
x				x			0830		E11	03	14940 18#	14940 18#	14940 18#	14940 18#	since 07/15, last log 12/22
					x	x	0830		S11A	03	5371 37#	5371 37#	5371 37#	5371 37#	since 02/14, last log 12/22
x		x					0845		E11	03	12067 71#	12067 71#	12067 71#	12067 71#	since 09/10, last log 12/22
	x		x				0845		E11	03	17378 15#	17378 15#	13046 15#	17378 15#	since 07/17, last log 12/22
x		x					0900		E11	03	11092 53#	11092 53#	11092 53#	11092 53#	since 10/05, last log 12/22
x				x			0915		S11A	03	6252 48#	6252 48#	6252 48#	6252 48#	since 04/19, last log 12/22
		x	x				0930		E11	03	7469 27#	7469 27#	7469 27#	7469 27#	since 02/14, last log 12/22
	x			x			1000		E11	03	9079 30#	9079 30#	9079 30#	9079 30#	since 11/16, last log 12/22
x		x					1045		E11	03	11100 69#	11100 69#	11100 69#	11100 69#	since 03/18, last log 12/22
	x	x					1205		E11	03	6433 46#	6433 46#	6433 46#	6433 46#	since 03/10, last log 12/22
x			x				1300		E11	03	4909 31#	4909 31#	4909 31#	4909 31#	since 07/14, last log 12/22
	x			x			1400		S11A	03	6252 42#	6252 42#	6252 42#	6252 42#	since 02/10, last log 12/22
	x				x		1430		E11	03	13363 91#	13363 91#	13363 91#	13363 91#	since 10/15, last log 12/22
			x				1530		E11	03	5409 26#	5409 26#	5409 26#	5409 26#	since 06/14, last log 12/22 2nd transmission Mon 0745z
					x	x	1530		E11	03	4909 36#	4909 36#	4909 36#	4909 36#	since 03/14, last log 12/22
	x					x	1605		E11	03	5432 23#	5432 23#	5432 23#	5432 23#	since 11/15, last log 12/22
		x		x			1715		E11	03	5082 97#	5082 97#	5082 97#	5082 97#	since 02/15, last log 12/22
			x				1730		E11	03	5779 41#	5779 41#	5779 41#	5779 41#	since 03/10, last log 12/22 2nd transmission Mon 0450z
x						x	1745		E11	03	12924 24#	12924 24#	12924 24#	12924 24#	since 04/18, last log 12/22
				x		x	1815		E11	03	6849 92#	6849 92#	6849 92#	6849 92#	since 05/16, last log 12/22
		x			x		1850		S11A	03	11486 28#	11486 28#	11486 28#	11486 28#	since 06/17, last log 12/22
x			x				1900		E11	03	6849 64#	6849 64#	6849 64#	6849 64#	since 05/16, last log 12/22
		x			x		1910		E11	03	4505 39#	4505 39#	4505 39#	4505 39#	since 02/14, last log 12/22
				x		x	1910		E11	03	10487 61#	10487 61#	10487 61#	10487 61#	since 04/17, last log 12/22
			x			x	2000		E11	03	5082 52#	5082 52#	5082 52#	5082 52#	since 05/15, last log 12/22

XPA1 Sched c and XPA2[Sched m & p] Russian Intelligence and/or Diplomatic Multitone Systems
[Radiogramma] Transmission Schedules.

Zulu >	XPA1 Sched c			XPA2 Sched m			XPA2 Sched p		
Month v	Tuesday/Thursday H+10 H+30 H+50 0710 / 0810z			Sunday/Tuesday H 00 H+20 H+40 1200/2100			Monday/Wednesday H 00 H+20 H+40 0700 / 0800z		
Jan	12157	13462	14374	10921	12221	13521	11493	13393	13993
Feb	13397	14413	15972	11163	13363	14563	13387	13887	14787
Mar	12132	13453	14576	13384	13984	14984	13931	14831	16131
Apr	10428	11431	13441	14442	15842	16342	11409	12209	13409
May	11169	12179	13431	13376	11576	10776	12148	13448	13948
June	11421	12151	13972	13427	12227	10827	12148	13448	13948
July	10446	11474	12175	13394	12194	10794	12148	13448	13948
Aug	10234	11511	12117	12159	11559	10559	12152	13552	13952
Sept	10862	11571	12216	13914	15814	16314	12152	13552	13952
Oct	12167	13437	14972	14469	16169	17469	13372	14672	15872
Nov	13978	14859	15871	14783	13883	12183	11529	13429	13929
Dec	11531	12137	13932	10807	12207	13507	11493	13393	13993

XPA1 and XPA2 Wednesday/Friday schedules

Zulu >	XPA1 Wed/Fri Schedule			XPA2 Wed/Fri Schedule		
Month v	H+10 1210 / 1310z	H+30	H+50	H 00 1200/2100z	H+20 ITALICS UNDER REVIEW	H+40
Jan	14852	13952	11552	13878	14978	16278
Feb	14374	13374	11474	11575	13375	13975
Mar	14451	13451	12151	12139	13539	14639
Apr	13368	12168	11168	14377	14977	15977
May	13419	12219	11419	12124	11124	10624
June	13545	12145	11145	13462	12162	11562
July	13368	12168	11168	12124	11124	10624
Aug	13491	12191	10691	13919	14719	16219
Sept	12137	11137	10237	13484	14684	15984
Oct	14564	13564	11464	13452	14452	15852
Nov	13875	13375	10875	13968	15968	17468
Dec	13465	12165	10265	14841	16241	18241

[illegible]

[illegible]

Thanks to all our contributors:

Ary, BR, Brixmis, chpa, DanAR, DG, E, GaryH, Gert, HfD, Jochen, JPL, Malc, PLdn, PoSW, RNGB, Spectre, tiNG

Apologies to anyone missed.



MESSAGES:

E: **A Happy New Year to you and yours! Hope your visits go well.**

RELEVANT WEBSITES

ENIGMA 2000 Website:

www.enigma2000.org

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/>

2022

Source: Vertex42.com

January						
Su	M	Tu	W	Th	F	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

February						
Su	M	Tu	W	Th	F	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

March						
Su	M	Tu	W	Th	F	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

April						
S	M	T	W	Th	F	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

May						
S	M	T	W	Th	F	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

June						
Su	M	Tu	W	Th	F	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

July						
Su	M	Tu	W	Th	F	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

August						
Su	M	Tu	W	Th	F	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

September						
Su	M	Tu	W	Th	F	Sa
					1	2
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

October						
Su	M	Tu	W	Th	F	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

November						
Su	M	Tu	W	Th	F	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

December						
Su	M	Tu	W	Th	F	Sa
					1	2
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

2023

Source: Vertex42.com

January

Su	M	Tu	W	Th	F	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

February

Su	M	Tu	W	Th	F	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

March

Su	M	Tu	W	Th	F	Sa
			1	2	3	
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

April

Su	M	Tu	W	Th	F	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

May

Su	M	Tu	W	Th	F	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

June

Su	M	Tu	W	Th	F	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

July

Su	M	Tu	W	Th	F	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

August

Su	M	Tu	W	Th	F	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

September

Su	M	Tu	W	Th	F	Sa
						1
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

October

Su	M	Tu	W	Th	F	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

November

Su	M	Tu	W	Th	F	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

December

Su	M	Tu	W	Th	F	Sa
						1
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

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