

ENIGMA 2000 NEWSLETTER



<http://www.enigma2000.org>



'Yuan Wang 5'
Chinese spy ship



See antennas above



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Editorial

The front cover image shows the Chinese survey ship, Yuan Wang 5, operated by the Chinese PLA. Lots of claim and counter claim about it being a spy ship instead of an oceanographic survey vessel. Here's an interesting take on the equipment that's fitted; worth a look up for the entire article:

About Yuan Wang-5 Built by China's Jiangnan Shipyard and delivered in September 2007, YW-5 is a third generation ship of the Yuan Wang series (the name means 'long view') designed as mobile satellite tracking, telemetry and control stations capable of being deployed anywhere on the high seas. Operated by the PLA's Strategic Support Force, it displaces about 25,000 tons, has a length of over 222 metres, a beam of over 25 metres, and can accommodate 400 people. The ship is driven by diesel engines and can generate sufficient electricity to light up a small town of over 300,000 inhabitants. These figures indicate YW-5 can sustain herself independently in any particular area for months; it only needs the occasional supply of fresh provisions and, more rarely, fuel.

Equipment fitted on board includes C and S band monopulse tracking radars, cinetheodolite ranging and tracking systems, velocimetry systems, onboard computers to track and control spacecraft, inertial, satellite and stellar navigation and positioning systems, as well as HF, VHF, UHF and SATCOM communications via secure telephone, radio, fax and data link[16]. YW-5 is also equipped with meteorological instruments and can download weather satellite images. Its cyber and EW capabilities remain unknown. The missions for which it can be tasked include monitoring and tracking space vehicles such as rockets, spacecraft, launch vehicles, satellites and aircraft over water, and communication with mission centres in real time. Although details about its equipment fit are hard to come by, it could also be a platform for anti-satellite (ASAT) operations. Ships of the class are operated by the PLA Strategic Support Force to track satellite and ICBM launches[17]. The YW-5 is not, however, an oceanographic research vessel.

[16]

http://www.andrewerickson.com/wp-content/uploads/2012/03/Erickson-Publication_Erickson-Chang_Yuanwang-Space-Tracking-Fleet_Proceedings_201204.pdf

[17]

US department of Defense Annual Report to Congress, Military and Security Developments Involving the People's Republic of China 2021, P 84, <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>

<https://www.delhipolicygroup.org/publication/policy-briefs/the-yuan-wang5-affair.html>

CIA museum: Inside the world's most top secret museum [By Gordon Corera Security correspondent, in Virginia]

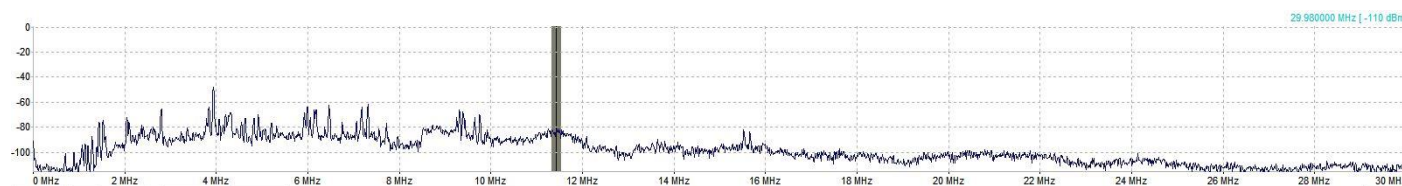
<https://www.bbc.co.uk/news/world-us-canada-63023876>

In keeping with the Chinese offering our Belfast correspondent sends this link. It really is worth a look and without the imagery does not well, but much better with. So just the URL and its description.

Thanks to RC for sending in. A decent piece from Mr Corera.

Propagation: Once again a very variable bag of conditions; the UK, much like Denmark, Belgium and France heavily hit by lightning storms meaning antennas isolated for the duration.

The notable prediction being that made on 27/09 with all freqs designayed as 'poor.' The spectrogram seen below shows not much going on at 0530z 27/09; usual a few more peaks visible beyond 12000kHz at this time. Probably have a bad time with RCI on 17490/17560kHz later, if I get around to it.



Spectrogram 0530z 27/09/2022

Number Stations: Whilst it seems the Morse Stations remain much as was, we have seen the full closure of the E07a series, E07 is now wanting a few more schedules back, notwithstanding the Tuesday/Friday 0700z changing to 1500z series and a surprise closure from the long standing XPA1 Tuesday/Thursday schedule [XPA1 c] which has been monitored by yours truly for years. My own favoured monitoring list is now short of six schedules, but read BRIXMIS' submission a little further on.

I originally thought the Tuesday 1500z E07 schedule is a replacement for XPA1 c, a schedule I have followed for years but with the Friday slot being heard it is obvious there is just a change of times/freqs from the original Tu/Fri 0700z slot.

During the matter of Crimea certain stations appeared on frequencies not generally seen as carrying Number Station schedules; on of them was 10256kHz. Stations heard there were given a temporary designation ie E90, effectively [and correctly] indication these were 'special stations and not expected to last beyond the matter of Crimea.

No surprises when Ary kindly posted detail of 'Lots of digital mode tests from operator 7 today. Mostly on 9142, 10256 and 11431 kHz. Also a very fast E07 on 10256 kHz at 0710z.' Ary also supplied a soundfile of the E07 transmission; which as Ary states is somewhat faster than usual, Jochen noting the voice was the E06 voice. I thought different from the the E07 voice but not totally the E06 almost robotic delivery.

Again no surprises when Ary again posts XPA2 on 10256kHz with only 20 grps:

10256 12-10-2022 0915 XPA2 MFSK-16/20Bd
00279 00020 19085 87241 43322 38726 82944 82323 11918 81939
00662 77213 60124 53071 43275 11573 85316 03995 12192 96455
38910 21861 32075

Courtesy Ary

Followed by:

E07 with an identity crisis :- E06 voice and both the E06 ending (00000) and E07 ending (000 000)

10256 12-10-2022 1100 E07
123 123 123 1 (R) 3167 1 3167 1 00000 000 000

and a very fast one
10256 12-10-2022 1208 E07
123 123 123 1 (R) 312 15 312 15
62028 04768 70784 05786 69464
65666 43713 36103 96333 32501
93588 52509 66505 22160 66030
000 000 Courtesy Ary

[Two sound files available in Group message]

Again in the UKR/RUS matter, much like the Crimean matter, but which Ary suggests [correctly] are because Russians had their October exercises on 10, 11 and 12 Oct with tons of digital modes transmissions, E07 with E06 voice and XPA2. [see Gert's find later but which has continued after the closure of the RUS exercise 14/10].

HM01 seems out of reach to those of us using radio receivers from our QTH and was recently subject by Hugh Stegman in his Utility Planet column in October 2022 entitled 'HF "Numbers" Continue in 2022.' This column is featured on pages 50, 51 and 52 of the very worthwhile and informative 'The Spectrum Monitor.' Written mainly for the American market Hugh concentrates on HM01 with a decent explanation of how HM01 works.

The rest of the stuff CW, Voice and the Asian VC01 et al series fills page 52; all in all a decent read.

There's other things available in The Spectrum Monitor too; it's well worth subscribing to even if you are not American. It beats hands down certain offerings from the UK and elsewhere often offering insights into radio techniques useful to the SWL, licensed amateur or whatever.

The Spectrum Monitor can be ordered from: <https://www.thespectrummonitor.com>

Once in a while a storyline appears that's too good to miss. I was alerted to this storyline by SOE [Tnx] and far from putting it up in its entirety, in which you will miss the tutorial, I post the URL.

There have been three other, earlier reports, but not to this level. This is probably what replaced E05 – you know, that simplistic, out with the dinosaurs, troglodite one time pad etc etc. see what good it did: https://www.reuters.com/investigates/special-report/usa-spies-iran/?utm_source=reddit.com

Or, you could try www.Iraniangoals.com Read the article and you'll know why!

A lot has been written about the closure of complete schedules and whilst the S06s closure may well be down to Rivne being over run I received this excellent account from **BRIXMIS** which puts an entirely new reason for the closure of what seemed to be very regular schedules over the years and mostly well copied at good strength in the UK.

Here is the article **BRIXMIS** discovered and passed on; if you want to see the images then call up the article on the supplied URL:



VGDSH dipole above Russian Embassy in The Hague, Netherlands

Here is what we know about the Russian spies in The Netherlands

<https://nos.nl/1/2448337>

At least twenty Russian official covers - spies in diplomatic services - were still active in The Netherlands at the beginning of this year. Seventeen of them were deported in **March**. * Unlike ordinary diplomats, the intelligence officers are hardly traceable on the Internet. They are not active on social media or stopped being active years ago. Several of their spouses can, however, be found online. Thanks to them, we know a little bit more about the lives of these official covers. We also talked to sources in the intelligence world and submitted the list to the Dossier Center. The Center is an organization financed by Mikhail Khodorkovski, a Russian businessman in exile, with access to databases containing information leaked earlier about the training and background of Russian intelligence officers.

This is what we know.

Their business cards state that they work as attachés or secretaries with the Russian Embassy or the Consulate in The Hague or the commercial representation in Amsterdam. But their real employer is the GRU, the military intelligence service, or the SVR, the foreign intelligence service (one of the successors of the KGB).

Both agencies have more or less the same goal: collecting relevant political, economic or military intelligence. Most of them are expected to go out there and recruit sources. What they do, is kept secret from the regular Embassy staff, as well as from the employees of the other agency. Some of them do full-time spy work, while others have diplomatic duties as well.

Young attachés Kirill Matveev (30) and Aleksey Druzhin (33) held two of the most important positions within the Embassy. They worked in the *referentura*, the secured room at the villa on the Embassy premises, where they and their superior Sergey Pyatnitskiy (52) were among the few who had access. They were SVR encryption experts: they used encryption hardware to encrypt secret messages, send them to the SVR head office in Moscow, and decode the messages coming in from Moscow. The GRU had its own *referentura* at the villa, staffed by the attaché Oleg Korotkov (53).

These men were the only ones who had access to the keys necessary to encode messages. They saw everything that came in or went out. The work they did was so sensitive that encryption experts were not allowed to leave the Embassy premises unaccompanied, for fear that something might happen to them, or that they might come into contact with Western agencies.

According to the Dossier Center, Aleksey Druzhin is the son of a public servant. His father occupies a leading position in ICT at the Kremlin. Aleksey Druzhin himself completed his studies at the Moscow Aviation Institute, an institute where, according to the Dossier Center, more intelligence officers have studied.

According to sources in intelligence, Sergey Pyatnitskiy, the head of the referentura, was at the top of the list to be deported, followed by the other encryption experts. With encryption experts being deported from many Western European countries, it has become much more difficult for the SVR in Moscow to communicate with the spies who are still here - or so intelligence agencies in Western Europe think.

The fact that Pyatnitskiy is a spy was probably not very difficult to find out for the agencies. According to the Dossier Center, he is registered in Moscow at an address where, even during the Cold War, officers of the First Directorate of the KGB (now the SVR) used to live.

The Vice Consul Roman Nefedov (34) and his wife and two small children lived at a stone's-throw from the Embassy. Just as the first secretary Aleksey Frolov (34), he has come from directorate VKR of the SVR. The KR-line is the department of counterintelligence.

Nefedov's and Frolov's duties were to keep an eye on the Dutch intelligence services and, where possible, to recruit sources within those agencies. They also made sure that the other diplomats, including their GRU and SVR colleagues, remained true to the Moscow regime, and they monitored certain Russians in The Netherlands.

Part of Nefedov's email address, which was linked to his Vkontakte profile, may already reveal his background: 'psyopworld@..', or: psychological operations. His job at the Consulate served him well: it gave him access to every visa application for Russia. The position of Vice Consul has most likely been filled by an SVR officer for years. The SVR and the GRU work with slot positions: they agree with the Russian Ministry of Foreign Affairs that certain positions surrounding the Embassy must always be filled by someone within their agency.

As first secretary, Frolov also had to perform ceremonial duties for the Embassy. For example, he can be seen in photographs at an award presentation at the Embassy or visiting the Zaans Museum. The Netherlands may not have been his first post. Social media pictures of his wife show the couple in China, Thailand, Pakistan, and the United Arab Emirates.

The head of the K-line in The Netherlands, the unknown man to the right in the picture, has not been deported. In the picture, we can see him accompanying his colleagues as they depart from Zaventem Airport in Brussels. As head of counterintelligence, he is in charge of security of the Embassy in The Netherlands as well. According to sources in intelligence, it was feared that his deportation would lead to deportation of the Dutch head of security in Moscow. The resident, the head of the SVR in The Netherlands, has not been deported either. We do not know who he is. He was allowed to stay in The Netherlands, because he is the official point of contact for the SVR in this country.

The attaché Maksim Matveev (29) and technician Pavel Nesterov (31) worked for two different technical directorates of the SVR. Nesterov was responsible for intercepting signals using satellite dishes on the roof of the villa - a classic form of espionage called 'signal intelligence'. The directorate where he worked was also responsible for hacking. Maksim Matveev helped his colleagues get spy equipment, such as tapping devices and GPS trackers.

Shortly after their departure from The Netherlands, Matveev's wife posted a poem on a poetry website. "Aircraft, suitcases. Little sense, lots of drama. It's a pity, but life will not change", she wrote.

Just as many other embassies in The Netherlands, the Russians had several diplomats to represent their country to the OPCW, the Organisation for the Prohibition of Chemical Weapons, based in The Hague. Three of the spies had credentials there, but they hardly showed up for sessions or conferences.

One of them, third secretary Stanislav Mokritskiy (39), worked for the KN line of the SVR, the department responsible for chemical and nuclear technology espionage. According to the Dossier Center, he had previously worked for a company that developed, among other things, microchips for the army.

First secretary Ivan Lykov (44) and third secretary Andrey Vedeneev (38) were also registered with the OPCW, but they worked for the military intelligence agency GRU. According to the Dossier Center, Vedeneev graduated cum laude from the Military Academy of the Strategic Missile Forces before he took the GRU training programme. According to sources in intelligence, it is very well possible that he and Mokritskiy were mainly interested in Dutch companies that develop microchips which can be used in the Russian arms industry.

Two years ago, two Russian spies had already been deported from The Netherlands because they were too active approaching possible suppliers of microchips. Last week, it was revealed that a Dutch man had been arrested by the Dutch Fiscal Intelligence and Investigation Service (FIOD) for selling microchips to Moscow. The FIOD did not say how this man had come into contact with the Russians.

Little is known about Lykov, whom we see in the picture, being deported from Zaventem Airport. He had previously worked for the Russian diplomatic mission in Geneva.

As usual, the Russian defence attachés work for the GRU as well. Fifty-something-year-old Mikhail Klimuk, son of a laureate Soviet astronaut, is the military attaché in The Netherlands. In that capacity, he frequents receptions and visits the annual commemoration in Amersfoort for Soviet soldiers who lost their lives in World War II.

He is also the resident, the head of the GRU department at the Embassy. As he is also the contact for the Russian Ministry of Defence for the Dutch Ministry of Defence, he has not been deported. Unlike his assistants Andrey Kolotov (36) and Aleksey Chadin (43). According to the Dossier Center, both took the GRU training programme for military attachés.

Four GRU spies were working at the small commercial representation at Museumplein in The Hague. The commercial attachés working there all lived in an inconspicuous building in the Amsterdam Rivierenbuurt district. The commercial representation was a logical cover, according to sources in intelligence, because the GRU is responsible for the procurement of, or collection of knowledge about, technology for the Russian army.

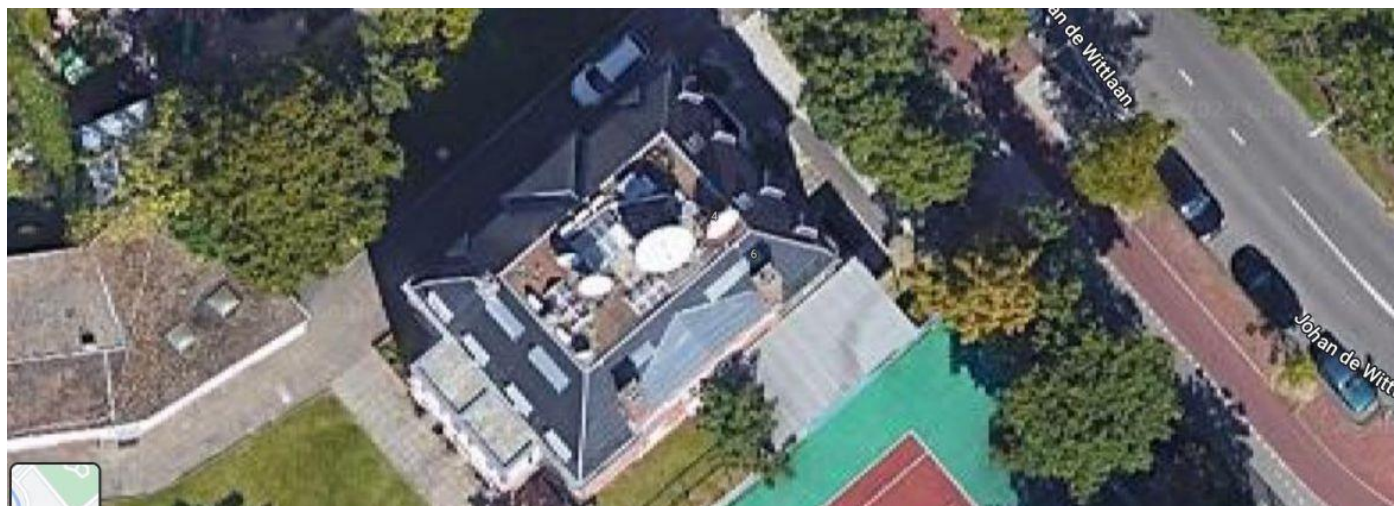
The most striking name is that of the commercial attaché Dmitriy Pichugin (53). At the time of his deportation, he had not yet been in The Netherlands long, and it is unclear why the Russians had sent him to this country in the first place. The fact that, in reality, he is not a commercial attaché, becomes clear from his background: for years, he was a lieutenant colonel with the Moscow criminal investigation service, where he was responsible, among other things, for missing persons. He also worked for an elite unit of the national security service FSB, and served in the Russian army. He was deported because he was allegedly one of the two encryption employees of the GRU in Amsterdam.

The other GRU encryption employee of the GRU in Amsterdam was the commercial attaché Mikhail Milashuk (63). He was the oldest intelligence officer. According to the Dossier Center, he graduated in 1981 from the Military Academy for Radio Electronics. It is unclear what his GRU colleagues, Vadim Eliseev (56), vice head of the commercial representation, and the attaché Boris Mokrov (34) were doing in Amsterdam. Eliseev had previously worked for the Russian representation to the UN in Geneva. According to the Dossier Center, he used to be registered in Moscow under the address "military unit 22177", a code that stands for the Military Diplomatic Academy of the GRU.

<https://nos.nl/2448337>

**Ed: E07 Sunday/Wednesday schedule [last 08/05/2022] and XPA1 c ceasing transmissions 01/09 with last full message repeated from August 2022, E07a transmissions ceased from 02/02/2022.. Apportioning a reason for the apparent closures could be to do with UKR/RUS but for E07a my bet is it served those in the Russian Embassy. Their deportations leading to the end of the entire schedules. Suggestions re the other closures welcome.*

A big thank you to BRIXMIS!



Satellite dishes as mentioned in above article [~south pointing]

With all this espionage going on there's a distinct naval ring to the reports as this, from our NI Member suggests:

Russian ship Akademik Boris Petrov expected to pass north of Ireland

Vessel's movements have prompted some speculation surrounding undersea communications cables

By Maurice Fitzmaurice
12:38, 21 OCT 2022

<https://www.belfastlive.co.uk/news/northern-ireland/russian-ship-akademik-boris-petrov-25321685>

A Russian scientific research vessel is expected to pass close to the north and west of Ireland in the coming days.

The Akademik Boris Petrov's movements have attracted some attention from certain observers who are suggesting the vessel may be monitoring undersea cables used for critical communications infrastructure.

Reports of the ship's movements come in the wake of communications to Shetland being severely disrupted after a subsea cable was damaged. The Akademik Boris Petrov is currently in the area close Shetland, prompting some online bloggers to suggest a possible connection. However no evidence of any such connection has been made public at this stage.

It was reported on Thursday that Scottish police have declared a major incident after the south subsea cable between the islands and the mainland was cut. Repairs to another cable connecting Shetland and Faroe are ongoing after it was damaged last week.

First Minister Nicola Sturgeon said it was an emergency situation for the island. She said the assumption was the damage was accidental, adding: "There is nothing to suggest otherwise, but work is continuing to assess exactly what the cause of the problem has been."

It is understood the vessel is en route to a planned scientific research mission in the South Atlantic.

The 'plentyofships' online blog site has said that "since departing the Skagerrak the vessel has slowly transited past critical underwater infrastructure in the North Sea raising concerns over what her tasking actually is".

The site added: "The Petrov is a state-of-the-art underwater surveillance & intelligence gathering ship and a Vessel-of-Interest (VOI) for Western Navies; her presence around the UK will be monitored closely."

The blog went on to say that 'analysis' suggests that the Petrov will head south passing by the west of Scotland, including Faslane Naval base, before it "skirts waters off north west Ireland where critical transatlantic cable infrastructure is located".

It adds: "This area was almost certainly surveilled by the highly secretive Russian Main Directorate of Deep Sea Research (GUGI) owned & operated underwater spy vessel 'Yantar' in August 2021 and drew a response from the Irish Navy."

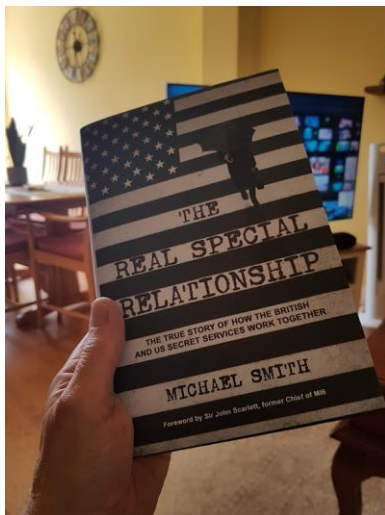
The Irish Times reported at the time that an Irish Naval Service spokesperson confirmed they were "aware of the Russian ship Yantar transiting in the Irish exclusive economic zone off the west of Ireland".

It was reported then that the Yantar is officially an oceanographic research vessel, but carries extensive surveillance equipment.

<https://www.belfastlive.co.uk/news/northern-ireland/russian-ship-akademik-boris-petrov-25321685>

Please note, with the ongoing UKR/RUS matter ENIGMA2000 will remain aloof from this matter, making no comment other than on technical matters.

Book Review



The Real Special Relationship by Michael Smith ISBN 978 1 4711 8679 0
Pun Simon & Schuster

The question is a generally discussed one; ‘Are the US taking us for a ride here?’ It’s a difficult one to answer and that answer is brilliantly supplied by Mr Smith in his book.

If hard intel is your thing there’s plenty of discussion, OSINT the same and anyone with a hankering for SIGINT and ELINT is likewise not disappointed.

Smith goes into great depths; if you expect an easy read you will be very mistaken. The book is written in depth and lists some 52 pages of reference with the fine index 11 pages long.

A former DG of MI6, Sir John Scarlett comment is shown on the rear cover and really sets the pace for the content, then read his 12 page foreword to up the detail.

Bad Aibling, Bletchley, CIA, Diego Garcia, GCHQ is all there.... And more!

In short, a decent book and doubtless a decent request for Christmas.

Finally, here’s a really good and informative visit if you can get there [I did!]:

<https://pkporthcurno.com>

GCHQ

Watcher of the Skies

A new exhibition from GCHQ and PK Porthcurno,
Museum of Global Communications.

Discover the secret history of Cornwall's clifftop
signals intelligence station.

June 2022 – June 2023

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On display at PK: R107 receiver
My second Rx bought at Huggett's 1966 £8.10.00



Yours truly o/s main entrance.
For the mickey takers the walking stick is now a thing of the past,

Before we move onto logs etc Ary posted an interesting link to a YouTube offering featuring a well produced history of the DDR 's G03 transmissions. It can be found here: <https://www.youtube.com/watch?v=4GFE0czWSvY>

This will be the last newsletter of 2022; the list owner and moderators particularly wish all those who have contributed throughout 2022, our members, those of N&O and Priyom and all other readers Compliments of the Season.

Happy Christmas

NEWS Round *and without all the Parliamentary nonsense :*

In these days of expensive oil [Tnx contributing member]

The chairman of Russia's Lukoil oil giant, Ravil Maganov, has died after falling from a hospital window in Moscow, reports say.

The company confirmed his death <https://www.lukoil.com/PressCenter/Pressreleases/Pressrelease?rid=594561> but said only that Maganov, 67, had "passed away following a severe illness".

Russian media said he was being treated at Moscow's Central Clinical Hospital and died of his injuries.

Maganov is the latest of a number of high-profile business executives to die in mysterious circumstances.

Investigating authorities said they were working at the scene to establish how he died. Tass news agency quoted sources saying he had fallen out of a sixth-floor window, adding later that he had taken his own life

Russians expelled from NL were spying on high-tech sector, recruiting informants: report

[See BRIXMIS' submission in Editorial]

FRIDAY, 14 OCTOBER 2022 - 12:34

<https://nltimes.nl/2022/10/14/russians-expelled-nl-spying-high-tech-sector-recruiting-informants-report>

Seventeen Russian diplomats expelled from the Netherlands at the end of March were intelligence officers engaged in encrypting secret messages, counter-espionage, and collecting information about microchips for the Russian Army. NOS, Nieuwsuur, and the Belgian newspaper De Tijd reported that based on their own investigation.

The 17 Russians were registered as diplomats, but evidence showed they were spying for their home country, said Foreign Minister Wopke Hoekstra in a letter explaining the situation to the Tweede Kamer back in March. He said that the reason is that the Dutch domestic and military intelligence services "demonstrated that the persons concerned, accredited as diplomats of the Russian mission in the Netherlands, are secretly active as intelligence officers."

Hoekstra stated, "The Netherlands has taken this decision because of the threat to national security posed by this group. The intelligence threat against the Netherlands remains high and, in a broader sense, the current attitude of Russia makes the presence of these intelligence officers highly undesirable."

According to NOS, the Dutch intelligence services AIVD and MIVD knew that Russian intelligence officers could move freely in the Netherlands. But they tolerated the presence of the spies for years in order to keep Dutch diplomats in Russia. The government assumed that if the Netherlands expelled a Russian diplomat, Russia would expel a Dutch one. And that is exactly what happened. When the Netherlands decided to send the 17 spies away after Russia invaded Ukraine at the end of February, Russia expelled fifteen Dutch diplomats.

Eight of the expelled Russians worked for the intelligence service SVR, and the other nine for the military intelligence service GRU, NOS reported. They posed as trade representatives in Amsterdam, military attache, or diplomats at the OPWC in The Hague.

The top priority for the Netherlands was to expel 52-year-old Sergey Pyatnitskiy, the broadcaster's intelligence sources said. He was in charge of the encryption service at the Russian embassy in The Hague. Both the SVR and GRU had referentura - rooms from which they communicated with Moscow through encrypted messages - on the grounds of the embassy. Six of the deported spies were encryption experts who worked in these referentura.

The other eleven focused on actively gathering intelligence or identifying possible recruits. Two specifically worked on recruiting sources from Dutch intelligence personnel and from foreign services active in the Netherlands, like the CIA. They also watched the Russian embassy personnel for signs of them defecting to the Dutch intelligence services.

At least two others were military technology experts, according to NOS. The broadcaster's sources assume they were gathering information about microchips for the Russian army. Two years ago, the Netherlands deported another Russian too actively involved in this pursuit.

Ben de Jong, an expert in Russian intelligence services and affiliated with Leiden University, told NOS that the Russians weren't necessarily looking for Dutch information. "If a Russian service succeeds here in recruiting someone from Foreign Affairs or Defense, then there's a good chance they will also discover secrets shared with the Netherlands by other countries or organizations. In this way, the Netherlands acts as a back door."

The AIVD and MIVD - the Netherlands' general- and military intelligence services - refused to comment on the names and positions of the expelled Russians. However, the services confirmed that they monitored these individuals for some time. "The attitude of Russia and the support that the Netherlands expressed for Ukraine made the presence of this group in the Netherlands extra undesirable," the services said, parroting Hoekstra's explanation to parliament in March

<https://nltimes.nl/2022/10/14/russians-expelled-nl-spying-high-tech-sector-recruiting-informants-report>



Roof top of CIS Embassy in Netherlands: Note the three verticals, especially the centre loaded version, very common across the world, and the VGDSH dipole too

Norwegian Authorities Arrest Suspected Russian Spy In Tromsø, Norway

By Donald Standeford, SJ Founder/Publisher

October 25, 2022 12:00 am UTC

Modified: 2022-10-25 12:00 am

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NORWAY - A suspected Russian spy was arrested on Monday by Norwegian authorities in Tromsø, according to the Norwegian Police Security Service (PST).

<https://www.ssj.news/news/europe/2022-10-25/norway-arrests-suspected-russian-spy-in-tromsoe.php>

The suspect was employed as a scientist at the University of Tromsø, under the guise of being a Brazilian citizen, but the PST believes that the man is really a Russian working for one of the Russian government intelligence services.

Deputy PST chief Hedvig Moe spoke to Reuters and said that the man poses a "threat to fundamental national interests," and reportedly said that he should be expelled from Norway.

Moe told Reuters that the man is an "illegal agent". Reuters then went on to explain that an "illegal agent" is an intelligence operative who does not possess official links to a government. Someone who takes on a 'covert persona' using either another person's identity or of a person who is no longer living.

Moe reportedly told Reuters, "Typically illegal agents are talent scouts recruiting agents for later, and preparing the ground for other spies to do traditional intelligence work".

The news agency said that the man was a part of a research group working with Norwegian government agencies on "hybrid threats" tied to "Arctic Norway," according to Reuters which cited Moe.

The report said that the suspect had been in Canada previously and that the arrest was made possible by "several" international security services, but did not divulge from which countries they were.

Moe told Reuters, "It is a long-term project to have an illegal agent. It costs a lot of money. Major state actors only use them and it is known Russia has used them in the past."

Norwegian news agency VG reported that the man is suspected of violating section 121 of the Criminal Code for illegal intelligence that may harm fundamental national interests, as well as Section 126b of the Criminal Code dealing with "illegal intelligence that may damage the security interests of other states" citing the PST.

Norwegian news agency NRK was the first agency to report on the matter. Hedvig Moe told NRK (translated from Norwegian): "We have asked that a Brazilian researcher at the University of Tromsø be expelled from Norway because we believe he represents a threat to fundamental national interests."

NRK said that they had reached out to the Russian embassy, but they responded by saying that they are not aware of "who or what it is about," according to the news agency.

The Russian embassy wrote to NRK, "Generally speaking, recently spy mania has been actively promoted in Norway. Mention is made in this context of Russian fishing vessels, Russian research ships, drone flights, photography, and the like".

"It applies to completely different cases, but they have a common subject: everything Russian - whether it is public agencies, private companies or individuals - is suspicious and smells of espionage. The fact that different cases come on a continuous conveyor belt is no doubt no accident. All this is politically ordered," the Russian embassy continued to NRK in a letter.

Norwegian Justice Minister Emilie Enger Mehl reportedly told NRK that the PST requested that the Ministry of Justice consider revoking the residence permit and "deportation" of the man.

NRK reported that the ministry "has done that", and on the basis of the information, they have received "an advance warning has been given of the revocation of the residence permit and of deportation," citing Mehl.

The Ministry of Justice and Emergency Preparedness had sent a notice about the suspect on October 20th, writing that he was a threat to fundamental national interests.

The news agency said that the case was treated as an immigration case and that the court decided the suspect should be detained for up to four weeks while the case is processed.

NRK said that the suspect's lawyer claims (translated) that his client "does not understand the debts [charges?]," and is "opposed to the internment", not agreeing with the basis for it.

The news agency reported that the PST decided to intervene now "because they believed they had enough information to take action now and to interrupt what they believe was an intelligence operation".

Moe was cited by NRK as saying, however, that "On the one hand, we are dependent on obtaining enough information so that we can be sure that this is an intelligence officer, and not a foreign researcher, which we want in Norwegian academia. On the other hand, we must make sure that the work done for Russian intelligence does not go too far."

<https://www.ssj.news/news/europe/2022-10-25/norway-arrests-suspected-russian-spy-in-tromsoe.php>

Above sent Courtesy of BRIXMIS

Suspected Russian spy arrested in Tromsø

The Ministry of Justice believes that the man is a threat to Norwegian interests and notified of his deportation as early as 20 October.

OLE LØKKEVIKYASMIN SFRINTZERISINGRI BERGOSYNNE EGGUM MYRVANGLINE FAUSKOANNA TØRMOEN

Published:

Updated yesterday 17:35

<https://www.vg.no/nyheter/innenriks/i/2BBWbq/mistenkt-russisk-spion-arrestert-i-tromsoe>

The Police Security Service (PST) suspects that the man is in Norway under a false name and false identity, a so-called "illegal", and that he is actually Russian and works for one of the Russian intelligence services.

- We have requested that a Brazilian researcher at the University of Tromsø Norway's Arctic University be expelled from Norway because we believe he represents a threat to fundamental national interests, says Assistant PST chief Hedvig Moe to NRK , which reported on the case first.

- We believe it is a person who has come up with a false identity, and that his real identity is Russian and that his stay in Norway is to work for the Russian authorities, says communications director Trond Hugubakken.

The person is currently suspected of violating Section 121 of the Criminal Code for illegal intelligence that may harm fundamental national interests, and Section 126b of the Criminal Code , which deals with illegal intelligence that may damage the security interests of other states, according to PST.

The man is said to have come to Norway on a research assignment at UiT in autumn 2021 and, among other things, researched hybrid threats.

The man has stayed in Canada in the past, PST's Hugubakken confirms to VG.

TB
He does not want to say anything about why they think he is a spy, but emphasizes that it is a dilemma to find the right time to get involved:

- What I want to say is that the choice of when to stop an ongoing operation is always a dilemma. We must monitor and gather enough information so that we are safe, and at the same time weigh ongoing activity against the harmful effects that activity can have. In this case, we considered it appropriate to terminate the operation now.

- What are the harmful effects?

- The harmful effects for Norway are that it puts the kingdom's security at risk.

- Have you collaborated with other countries on this matter?

- Yes, we have had international cooperation in this matter, but I do not want to say how many countries and which ones, says Hugubakken and adds that PST has a well-established international cooperation network with intelligence services all over the world.

The Russian embassy writes in an e-mail to VG that they are not aware of who the man is or what the case is about.

- Generally speaking, recently spy mania has been actively promoted in Norway. Mention is made in this context of Russian fishing vessels, Russian research ships, drone flights, photography and the like.

- It applies to completely different matters, but they have a common subject: everything Russian - whether it is public agencies, private companies or individuals - is suspicious and smacks of espionage. The fact that different issues come up as if on a conveyor belt is no doubt no accident. All this is politically ordered, writes the embassy.

The man was arrested on Tuesday. According to NRK, he was then on his way to work at the University of Tromsø.

- He does not understand the accusations. That is why he also asked to be released in court today, says his defender Thomas Hansen to VG.

He says that the man has explained what he is doing in Norway and is open about it - namely that he is here as a visiting researcher.

- But I don't know why PST thinks he is a Russian spy, says Hansen.

Both that and the information that the Brazilian identity is false are accusations that the defender does not know what the PST is actually based on.

PST is concerned that he may have acquired a network and information about Norway's policy in the northern regions, says assistant PST chief Moe to NRK.

The information could be misused by Russia, PST fears.

Ministry of Justice: Constitutes a threat

According to the ruling from Nord-Troms and Senja District Court, which came on Tuesday, the Ministry of Justice and Emergency Preparedness notified the man on Thursday last week.

In the notice, it appeared that the Ministry of Justice believes the man "constitutes a threat to fundamental national interests".

Furthermore, the ruling states:

"The department's assessment is based on information that the foreigner is in Norway on assignment for the Russian authorities and that he may be a Russian citizen with incorrect Brazilian identity papers. Nothing has subsequently emerged to indicate that the ministry's assessment is not correct. On the contrary, this is substantiated by the defendant's behavior in court, and the court uses the ministry's assessment as a basis."

The court concludes that there are "concrete grounds for assuming that the foreigner will evade the implementation of a future deportation decision".

Colleague: - Shocked and sad

At UiT, Norway's Arctic university, news of the man's arrest began to spread on Wednesday.

- To be completely honest, I was shocked, says a close colleague to VG on the phone.

- I was both shocked and sad, because I did not want to find out that a colleague of mine is suspected of being a Russian spy.

Received advance notice of deportation

The man's defender, Thomas Hansen, will speak to the man again later on Tuesday to assess what they do next, and whether they should appeal the district court's ruling on detention for four weeks.

The defender explains that this is basically not a police case, but an administrative case, because the police are planning to deport him - which he was warned about when he was arrested on Monday.

DEFENDER: Lawyer Thomas Hansen will consider appealing the district court's ruling together with the man later today. Photo: Terje Mortensen / VG
Interned for four weeks

Police prosecutor in the Troms police district Vegard Hermann Tobiassen was present when the man was brought before the Nord-Troms and Senja District Court on Tuesday.

- Yes, it is true that we have portrayed a foreign citizen with a view to detention today, says Tobiassen to VG.

Because it concerns a foreign case, the man is detained - not remanded in custody, explains the police attorney, who states that the police have been granted permission to detain him for four weeks.

Info

What is detention?

In foreign cases, the term "internment" is used instead of detention, although in practice it is the same.

According to Section 106 of the Immigration Act, a foreigner can, among other things, be arrested and detained when "the foreigner does not cooperate in clarifying his identity in accordance with Section 21 or Section 83 of the Act, or there are concrete grounds for assuming that the foreigner gives an incorrect identity".

If the court decides to detain the person concerned, a deadline must be set. The deadline must be "as short as possible and must not exceed four weeks".

The total period of detention cannot exceed 12 weeks, unless there are special reasons.

See the full text of the law here .

Source: Legal data

- Can you say something about how long this person has been in the police spotlight?

- I have to refer you to PST central, says police attorney Tobiassen to VG.

- Can you say why you suspect that it is a Russian spy?

- Again, I have to refer you to central PST.

- How long have you collaborated with PST on this?

- All further inquiries must be directed to PST centrally.

SUSPECTED SPY: The man was produced before Nord-Troms and Senja District Court on Tuesday. Photo: Terje Mortensen / VG

UiT: Not employed

PST has informed the University of Tromsø (UiT) about what has happened.

- The person in question is a guest researcher at UiT and therefore not employed by the university, says the university's director of administration Jørgen Fossland to VG.

- Due to the ongoing investigation, other questions in the case must be directed to PST.

In 2020, a PST investigation showed that hackers targeted the e-mail of Nordic researchers at UiT.

The university characterized the incident as "serious and unsolved", and the matter was reported to the police, according to NRK

Not the first time

This is the first time that PST has arrested a person they believe to be illegal in Norway. However, it is not the first time a suspected Russian spy has been exposed under the guise of being a Brazilian citizen.

In June this year, Dutch security services revealed that Russian Sergej Vladimirovich Cherkasov had acquired a Brazilian identity under the name Viktor Muller Ferreira, according to the Dutch newspaper Algemeen Dagblad .

Cherkasov had tried to infiltrate through an intern position at the International Criminal Court (ICC). He was arrested at Schiphol airport. According to the newspaper, Cherkasov worked as an agent for the intelligence service GRU.

- It is rare for an intelligence officer of such caliber to be arrested, said director Eirik Akerboom for the Dutch Security Service (AIVD) then.

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<https://www.vg.no/nyheter/innenriks/i/2BBWbq/mistenkt-russisk-spion-arrestert-i-tromsoe>

Thanks once again BRIXMIS!

Chinese Military Drills Around Taiwan are a Bonanza for US Intelligence

by SOFREP

<https://sofrep.com/news/are-chinese-military-drills-around-taiwan-open-invitation-for-us-intelligence-gathering/>

China's military drills around Taiwan are now expected to be the "new normal," Chinese State Media announced. But, is there a silver lining the US intelligence could explore in these military exercises?

According to Singapore-based security analyst Collin Koh, yes, there is.

As China continues to parade its naval warships and missiles, Koh said this could be an opportunity to monitor "key Chinese elements – China's reformed Eastern Theatre Command, its Rocket Force and Strategic Support Force – operating together in a fully coordinated and integrated way."

"I fully expect the US to be collecting from a full spectrum – signals, communications and electronic intelligence – it is just a too good opportunity to miss."

"When you collect this kind of data from the other side, it means you can figure out where the vulnerabilities are, and it helps you create your own counter and jamming systems," Koh told Reuters.

When House Speaker Nancy Pelosi landed in Taiwan, the US Navy moved the USS Ronald Reagan into the Philippines Sea, east of Taiwan. So, ultimately, the US had the proximity to observe and spy on the latest Chinese naval advancements.

Two US military officials also shared they're considering data gathering opportunities during the drills but also cautioned about the limitation of "in-depth intelligence" this could offer.

Of course, an anonymous military official said that China would also be careful in displaying its full force for the world to see. If they will show the world weaponry, it's highly likely that they will only deploy the ones that are already publicly known.

Aside from four US warships, there are less visible surveillance submarines and aircraft around the region from Taiwan, Japan, and the US. The advantage of submarines in this potential intelligence mission is their ability to collect individual "acoustic signatures" for Chinese warships. These invaluable data could help the US Navy if a confrontation happens. US acoustic processing capabilities are advanced enough to identify individual ships and submarines by their sound alone.

Signals intelligence could also be gathered by submarines and aircraft using electromagnetic spectrum using assets like the US RC-135S Cobra Ball aircraft.

As for Taiwan, they launched their very own Albatross drones to get video footage of the Chinese drills.

China-Taiwan: Open-ended Situation

As we keep our eye on new events in this China-Taiwan tension, many experts believe there will be no active confrontation between the two. On Wednesday, Chinese State Media released a paper saying they're looking for "reunification" and are open to having cordial conversations with Taiwan.

"We have now moved into a qualitatively new state of affairs and the resolution of the 'Taiwan question' is actively in motion," Andy Mok, a senior research fellow at the state-backed Center for China and Globalization, told Al Jazeera. "We don't know what the length or magnitude of the drills will be ... some say the blockade has already started."

Additionally, since this region where the drills are happening affects global trade (including multi-billion dollar trade routes for Chinese export), many question if China's ready to foot the bill they'd potentially have to pay if they continue provoking Taiwan.

"Exporters may seek a second-best option if free undisrupted trade in and out of Taiwan becomes difficult," said Chief Analyst at Shipping Intelligence Platform Xeneta Peter Sand.

"For carriers, they will rearrange their service offerings to customers, some will no longer call on Taiwan, some will do so at lower frequency."

"If the Taiwan Strait becomes an area without free passage – all routes will become extended, transit times will go up and goods will take even longer to get to consumers," Sand added. "Freight rates will be most affected in the short term, before a 'new normal' for trade lanes in the region is established."

On the other hand, the US is also looking for options on intervening around the blockade. Elbridge Colby, a former high-ranking US defense official, said the US could work with Asia to protect this trade route in Taiwan.

"This may necessitate challenging China's blockade, but this would be necessary."

Still, there's no way of saying if China's "posturing is just that" or if they would be overly adamant in pushing the "symbolic ideologies" of Taiwan being part of China.

"China will act with caution and I don't expect the present situation to escalate out of control," Sand said. "Having said that, tensions will remain elevated going forward."

However, Mok said the Chinese government is very protective of their political objectives, especially ones that would strengthen their communist beliefs.

"The Chinese government under Xi Jinping has shown a willingness to forego short or even medium-term economic interests for the sake of securing its political objectives."

"Reunification by force does not necessarily mean a full-scale amphibious invasion. What I likely think it will mean first is an aerial and naval blockade of Taiwan." <https://sofrep.com/news/are-chinese-military-drills-around-taiwan-open-invitation-for-us-intelligence-gathering/>

A Chinese Spy Wanted GE's Secrets, But the US Got China's Instead How the arrest of a burned-out intelligence officer exposed an economic-espionage machine.

By Jordan Robertson and Drake Bennett
15 September 2022 at 05:01 BST

<https://www.bloomberg.com/news/features/2022-09-15/china-wanted-ge-s-secrets-but-then-their-spy-got-caught>

In January 2014, Arthur Gau, an aerospace engineer who was nearing retirement age, received an unexpected email from a long-lost acquaintance in China. Years before, Gau had made a series of trips from his home in Phoenix to speak at the Nanjing University of Aeronautics and Astronautics, or NUAA, one of China's most prestigious research institutions. The original invitation had come from the head of a lab there studying helicopter design. Increasingly, however, Gau had heard from someone else, a man who worked at the university in a vague administrative capacity. Little Zha, as the man called himself, was the one who made sure Gau never had to pay his own airfare when he came to give talks. When Gau brought his mother on a 2003 visit, Zha arranged and paid for them to take a Yangtze cruise to see the river's dramatically sculpted middle reaches before they were flooded by the Three Gorges Dam.

The relationship had ended awkwardly, though, when Zha offered Gau money to come back to China with information about specific aviation projects from his employer, the industrial and defense giant Honeywell International Inc. Gau ignored the request, and the invitations stopped.

Now, in 2014, Little Zha was reaching out again. The two started corresponding. In early 2016, Gau, whose interests extended far beyond avionics, said he'd planned a trip to China to visit some friends in the musical theater world. Zha was there that spring to meet him at the airport in Beijing. Waiting with him was a colleague Zha was eager for Gau to meet.

Xu Yanjun was on the tall side, at 5 feet 10 inches, with closely cropped hair, glasses, and a tendency toward bluntness. The three had dinner and met up again before Gau flew back to the US. Over pastries in Gau's hotel room, they discussed Taiwanese politics—Gau grew up there—as well as the engineer's evolving responsibilities at Honeywell. Late in the evening, Xu handed Gau \$3,000 in cash. Gau would later testify that he tried to hand it back, but Xu was insistent. "And then, you know, back and forth, but I took it eventually." The next year, Gau came back to China to give another lecture—this time a private one in a hotel room to several engineers and officials, including Xu. In preparation, Gau had emailed over PowerPoint slides containing technical information, including algorithms and other sensitive design data for the aircraft auxiliary power units Honeywell makes. "Because of the payment, I felt obligated," he would later tell a judge.

Xu paid him \$6,200 more, and two of his associates accompanied the visiting engineer on a two-day sightseeing trip to West Lake, famed for its picturesque gardens, islands, and temples. Gau was planning his next visit when, in the fall of 2018, agents from the FBI appeared at his home in Arizona to execute a search warrant. There would not be another trip. Xu, the agents explained, was not in Nanjing anymore. He wasn't even in China. He was in Ohio, in a county jail awaiting trial.

The issue of Chinese industrial espionage is a fraught one. In November 2018, Jeff Sessions, then the Trump administration's attorney general, announced a program called the China Initiative, intended to combat "the deliberate, systematic, and calculated threats" from Chinese government-directed intellectual-property theft. The program, however, ended up targeting largely academics—not for stealing secrets, but for failing to report affiliations with Chinese research institutions. In some instances, even those charges proved meritless. In February, amid concerns over ethnic profiling and the criminalization of scientific collaboration, the Biden administration shut down the China Initiative, though it vowed to continue pursuing cases involving the country.

Nonetheless, the remit of Chinese intelligence services does cover industrial secrets as well as military and government ones, and their leadership takes that responsibility seriously. It's what rising economic powers have always done: In the late 18th century, the newly independent US offered bounties for textile workers to smuggle loom designs from the great British cotton mills. Those mills had been built in part to specifications once pilfered from Italian silk spinners. And that industry, in turn, wouldn't have existed without silkworm eggs spirited out centuries before from China.

The modern Chinese industrial espionage apparatus—in its organization, scope, and ambition—far eclipses those predecessors. "We consistently see that it's the Chinese government that poses the biggest long-term threat to our economic and national security," FBI Director Christopher Wray said in a speech in July. Since the 1990s, prosecutors have charged almost 700 people with espionage, IP theft, illegally exporting military technology, and other crimes linked to China. Two-thirds of the cases have led to convictions, according to a database kept by Nick Eftimiades, a former official at the US Department of Defense and a senior fellow at the Atlantic Council; most of the rest are pending or involve fugitives. All are part of an intelligence-gathering apparatus that relies not only on trained spies and officers of China's Ministry of State Security but also on ordinary engineers and scientists. This machinery remains largely opaque to outsiders. Limited to going after the people feeding information to handlers in China, US authorities have been like narcotics investigators pursuing low-level buy-and-busts while the larger criminal infrastructure hums along unscathed.

At least, that was the case until Xu Yanjun's trial last fall. His arrest marked the first time an MSS officer was lured out of China and extradited to the US. And it was more than a symbolic victory, yielding an extraordinary trove of digital correspondence, official Chinese intelligence documents, even a personal journal. When Xu was apprehended, he had with him an iPhone whose contents he'd faithfully backed up to the cloud, a lapse that allowed FBI investigators to recover all the data from Apple Inc. Asked about the case, China's Ministry of Foreign Affairs responded, "The accusations by the US are completely fabricated. We demand the US handle the case in a fair manner and ensure the legitimate rights of Chinese citizens."

Over two and a half weeks from late last October into November, federal prosecutors in a courtroom in Cincinnati drew on the wealth of digital material the 41-year-old Xu had stockpiled to lay out a portrait of him—his training, methods, and ambitions, his vices and private doubts and grievances. Translated from the original Mandarin, it's an unprecedentedly intimate portrait of how China's economic espionage machine works, and what life is like for its cogs.

One of the pieces of evidence presented at Xu's trial is a four-page document from October 2015 whose dry title reads "Cadre Approval/Removal Appointment Application Form." In the top right corner of the first page is a photo of a fresh-faced Xu in uniform, his mouth set but his eyes carrying the hint of a smile. Below, in a box marked "Current Post," it reads, "Deputy Division Director at Sixth Bureau of Jiangsu Province Ministry of State Security."

The document is similar in some respects to Standard Form 86, a questionnaire American intelligence employees are required to complete. But the paperwork of an autocratic one-party state has an added richness, functioning as not only a professional and personal biography but also a political one. Bradley Hull, the FBI special agent who led the investigation of Xu, was asked at one point in his testimony if he'd ever seen such a form. "No," he replied. "No one has."

Xu was born in 1980 in a small town in Jiangsu, a province on the Yellow Sea just north of Shanghai. His father was a manager at an agricultural company, and his mother worked at the county finance bureau. Before Communist rule, Jiangsu had for centuries been a wealthy trading hub. Nanjing, its capital city, had served multiple dynasties as an imperial seat. Deng Xiaoping's economic reforms, whose emergence coincided with Xu's birth, made the province once again a gateway to the wider world. Multinational technology companies such as Hitachi, Philips, and Samsung built manufacturing facilities there, bringing with them jobs and money—and proprietary information. It was natural for the Jiangsu branch of the MSS to develop an industrial focus.

Xu left home for college, studying electrical engineering in Nanjing. He joined the Communist Party and in February 2002 was appointed secretary of a village youth league committee in Yancheng, a city near his hometown. It was his first step up in the vast civil service cadre bureaucracy through which the party runs the country. The MSS promised a different kind of power, though. The next year he was hired there, returning to Nanjing and finding a mentor in Zha Rong—Little Zha, who'd been so helpful as an unofficial travel agent for Arthur Gau. The two MSS officers developed a specialization in aircraft technology work. Xu married a fellow party member and had one child, a son.

By late 2013, Xu had ascended to the rank of section chief, and the portrait of him begins to fill out with other information, some of it extracted from his phone and cloud backup, some of it gathered in other counterespionage investigations by the US and its allies. At the time, Xu was targeting Frederic Hascoet, a project manager for Safran Aircraft Engines of France. In partnership with GE Aviation, Safran was developing an engine called the LEAP for narrowbody jetliners such as the Airbus A320, the Boeing 737, and China's Comac C919. The engine's low-pressure turbine was assembled from steel segments at a plant in Jiangsu's sprawling Suzhou Industrial Park, where more than 150 of the Fortune 500 have operations. Hascoet regularly traveled there to oversee this process, working closely with a local Safran manufacturing engineer named Tian Xi.

Tian, however, was also working with Xu and the MSS. That November, Tian and Xu were deep in discussions over hacking Hascoet's computer. Xu texted on Nov. 19 asking when "the Frenchman" would arrive. Then, on Nov. 27: "I'll bring the horse to you tonight. Can you take the Frenchman out for dinner tonight? I'll pretend I bump into you at the restaurant to say hello." The "horse" was malware known as a Trojan, which allows a computer to be accessed covertly and remotely by a hacker. The handoff at the restaurant doesn't seem to have happened, but Xu was eventually able to get Tian a USB drive with the Trojan on it. On Jan. 25, 2014, after a series of increasingly impatient messages from Xu, Tian texted back, "The horse is planted this morning." Xu confirmed that his malware had evaded Safran's firewalls and was communicating with MSS controlled servers, handed the operation over to colleagues, and headed out on vacation.

For Western intelligence agencies, this may have been among the earliest evidence of Xu's handiwork. When Hascoet returned to France in February, his computer couldn't connect to the Safran website, and the IT department found the malware. At the same time, US officials alerted their French counterparts that they'd picked up the digital beacon the malware was sending out to its remote operators. The General Directorate for Internal Security, France's domestic intelligence and security arm, started an investigation. So did Safran. One employee helping to carry out the company's inquest was Gu Gen, a senior IT infrastructure manager and information security officer at Safran's Suzhou offices.

Unfortunately for the investigation, Gu was another one of Xu's assets. It wasn't from him, however, that Xu learned his malware had been discovered. On Feb. 25, a week and a half after Hascoet's computer stopped beaming back to China, the US cybersecurity company CrowdStrike Holdings Inc. published a blog post revealing the hack.

"Leadership asks you to get the materials of the US F-22 fighter aircraft. You can't get it by sitting at home"

Xu's dismay at the failure of the operation was quickly eclipsed by his outrage at the reaction of his superiors. His division chief angrily called Xu on the carpet and ordered him to have his two sources at Safran contact each other to find out what the company knew. Xu was horrified: Doing that would attract suspicion.

“Isn’t it like putting a noose on his own neck?” he wrote to a colleague. “It feels bitterly disappointing to have leaders like that.” To Xu’s relief, Gu reported a few weeks later that the company’s investigation was going nowhere. The sense of betrayal, though, lingered.

Meanwhile, Xu and Little Zha continued to collaborate. In April 2014 an engineer who had information about the Lockheed Martin F-35 and Northrop Grumman E-2, two American military planes, visited Nanjing from Great Britain. Xu, posing as an official with an anodyne-sounding nonprofit, had invited him to participate in an academic exchange. That night, while Zha was hosting a dinner in the visitor’s honor in a hotel banquet hall, Xu was upstairs breaking into the visitor’s room. The plan was to copy the contents of the laptop and portable hard drives there, with help from MSS cyber specialists. It was taking longer than planned.

“Copying the entire thing needs three hours,” Xu texted from the room.

“It’s too slow,” Zha replied from the dinner. “Speed it up.”

An hour and a half later, Xu had copied what they needed. “Restoring the scene and the documents will take roughly 20 minutes.” And finally: “Restored, and we have left the scene.” The banquet could finally end.

relates to A Chinese Spy Wanted GE’s Secrets, But the US Got China’s Instead

Featured in Bloomberg Businessweek, Sept. 19, 2022. Subscribe now. Photographer: Ina Jang for Bloomberg Businessweek

Opportunities to play cat burglar seem to have been rare, however, especially compared with a section chief’s more mundane duties. One of Xu’s most time-consuming tasks was helping run the local MSS recruiting efforts, sending emails to university officials who helped him disguise intelligence service job postings as coming from a local industry group. In one, Xu outlined the application requirements: “under the age of 25, Party member, male,” with an elite university degree. Résumés were to be sent to the email address jastxyj@gmail.com. (JAST is the Jiangsu Association for Science and Technology, one of Xu’s cover organizations, and XYJ are his romanized initials.) He also corresponded extensively with specialists and managers at the Aviation Industry Corp. of China and other state-owned aerospace companies, discussing exactly what information would be helpful to them. In the evenings there were alcohol-soaked work dinners, card games, and late-night visits with co-workers to massage parlors.

At the end of 2014, Xu’s future at the MSS looked bright. Despite the Safran incident, his cadre approval form shows that his annual evaluation improved from “competent” to “outstanding.” In the spring of 2015 his division chief told him he was in line for the new deputy division director position, and on May 22, Xu’s iCalendar records show, the party committee approved him for the post. Zha, too, was promoted, remaining Xu’s supervisor.

And yet, as Xu’s responsibilities increased, so did his disenchantment with his job. He complained in his diary when he languished in a probationary period before his promotion became official. In February 2016, writing to a friend who worked in a different MSS bureau, he bemoaned his “stupid” decision, years before, to leave his township government job. “I was really tricked.” His superiors were autocratic and demanding, he wrote, and stingy with the expense budget. The next day he messaged an acquaintance at an investment company where Xu had once referred a colleague for a job. “I’m not as capable as he is,” he wrote, “or I would have gone a long time ago.”

Xu’s ambition was curdling into something more cynical. Around this time, as part of a selective MSS professional development program, he enrolled in graduate studies in aeronautical engineering. The program was at NUAA, where MSS officers operate freely—the university is one of the Seven Sons of National Defense, an elite group of public universities that develop advanced military technologies for the People’s Liberation Army.

Xu seems to have treated his graduate classes like one more academic front operation. In a recording he made in December 2016, he’s at a restaurant with a professor from the college of aerospace engineering, sharing fried meat with garlic and braised fish with spicy bean sauce. (Xu, his eye on expenses, suggests they not order too much.) Against his better judgment, the professor has agreed to share information about an upcoming exam; Xu assures him that no one will find out about their “tutoring” sessions. “For a job like mine, we have a lot of friends out there who risk their life to work for us,” he boasts. Still, the professor asks, how is Xu going to master a complex subject such as fluid mechanics, even with help? “Ah, fluid mechanics, that will be easier to pass,” Xu replies. “I know everyone on that floor!”

Gradually the conversation turns to the MSS officer’s work, which seems to intrigue his dinner companion. “We are under great pressure,” Xu says, over the din of the restaurant kitchen and the click of chopsticks. “The leadership asks you to get the materials of the US F-22 fighter aircraft. You can’t get it by sitting at home.”

So you also have to “flip” someone, the professor says, to “travel outside [China] and take the risk.”

“That’s correct,” Xu confirms.

One of Xu’s collaborators at NUAA was Chen Feng, a vice dean with a distinctive pompadour who ran the university’s International Cooperation & Exchange Office. Chen’s duties included issuing speaking invitations to notable foreign technologists, often though not always of Chinese descent. In March 2017 he sent one to an engineer named David Zheng at GE Aviation’s complex outside Cincinnati. “I learned from your online resume that you have accumulated a wealth of engineering experience in well-known companies such as GE Aviation,” it read. The email was a form letter—the only personalization was the name of Zheng’s employer, which Chen had discovered on LinkedIn. But still, Zheng was flattered at the invitation to give his first overseas talk. And he already had a trip to China planned for his college reunion and for a family wedding in his hometown in Anhui province, right next to Jiangsu.

Zheng is a composites expert who worked at GE Aviation on jet engines. The General Electric Co. industrial conglomerate, which once made everything from toasters to television shows, is now in large part a fan and turbine company, and it’s very good at making them. Some are designed to harvest wind energy, and others, locomotive-size, run gas power plants. Still others draw in and compress the air that, when infused with fuel and ignited, propels airplanes.

In GE Aviation’s most advanced engines—such as the \$45 million GE9X, which powers the latest-generation Boeing 777—the fan blades and casings are made from composites: hardened, resin-infused carbon fibers of extraordinary lightness and strength. (The LEAP engine developed with Safran is similarly built.) Lighter engines mean planes can carry more passengers or more freight and fly farther with less fuel. And, over time, composite blades are less likely than titanium ones to weaken from the torque of being spun at thousands of revolutions per minute—and less likely to break and fly loose as projectiles.

Even within GE Aviation, details about the design and materials of these engines are inaccessible to most employees. So are aspects of the modeling and testing methods the company has developed. Certain high-stakes safety tests required for Federal Aviation Administration approval destroy an entire engine. Others require more macabre sacrifices: proving that the assemblage can survive bird strikes involves launching bird carcasses of regulatorily specified sizes into its spinning maw. Competitors such as Rolls-Royce Ltd. and Pratt & Whitney have been trying for decades to bring engines with composite fan blades and casings to market. Newer Chinese manufacturers are also working on the problem.

Over the weeks that followed the initial overture, Zheng and Chen exchanged emails, in Chinese, about timing and logistics. Then, in early May, the vice dean’s messages grew more technical. “Is your work mainly in the design of pod and engine hood, or in the area of blades?” he asked on May 9. Colleagues at NUAA, he relayed, had suggested a title for Zheng’s presentation: “Application, Design, and Manufacturing Technologies of Composite Materials in Aircraft Engines.” The engineer replied a few days later from Cincinnati to say the suggestions were fine. “However, I am required to sign a technical agreement with the company that I work for here,” he wrote. “Therefore, a lot of the work that I have conducted at the company could not be shared.”

In hindsight there were red flags in the email Zheng received next. It wasn't from Chen's university email address, but from jastxyj@gmail.com—the same address to which Xu routinely invited MSS job applicants to submit their résumés. And though signed by Chen, it seemed to have been written by someone who hadn't read all the earlier correspondence.

Xu had actually written the email. The GE Aviation engineer had been handed off from the university official who'd found him on LinkedIn to the intelligence officer who would now handle him. As handoffs go, it was clumsy: Xu was writing to ask Zheng to respond to an email Zheng had, in fact, just responded to. But the engineer just assumed that Vice Dean Chen was busy, or maybe bad about checking his email. By the time Zheng arrived in Nanjing on June 1, he'd been assured that his talk wouldn't be expected to touch on anything sensitive.

The trip went smoothly. The morning after Zheng's arrival, Chen and Xu joined him for tea in the lobby of his hotel on the NUA campus, then took him to lunch. Xu introduced himself as "Qu Hui" and produced a business card identifying him as the deputy secretary-general of the Jiangsu Provincial Association for International Science and Technology Development. In the afternoon the group returned to campus, and Zheng gave his presentation to two dozen people he thought were students and faculty. When questions veered into specific and technical territory, as they often did, he declined to answer. Later, at dinner, Xu presented Zheng with two boxes of tea to go with a \$3,500 speaking fee and travel reimbursement. A little over a week later, Xu, under his alias, messaged Zheng over WeChat to thank him. Zheng replied that he would love to come back for another exchange, "as long as it does not involve any non-public information from the company."

"Feeling agitated in the past couple days. Feeling like I am abandoned by the whole world"

For Xu this was a promising start, especially considering that little else seemed to be going well for him. His iCalendar diary entries throughout the spring and summer of 2017 are shot through with grievance. On March 27 he was livid after Zha rejected a meal receipt and rebuked one of their colleagues. "The ingratitude [of a] person like him is shameless," Xu wrote. "Will revenge." A month later, Xu described his relationship with Zha as having dropped to the "freezing point." Zha, he believed, was actively undermining him. On May 4, Xu reveled in the spectacle of "the big cat fight" between Zha and another higher-up. "Watching the show!" he wrote. By June 12 he'd decided that only further office dysfunction could save his career. "The more chaotic and disorderly within the division," he wrote, "the better."

Things were no better outside the office. In early April, right when he was beginning to cultivate Zheng at GE Aviation, Xu was also WeChatting a woman with whom he seems to have had an affair. There had been a quarrel, and Xu wrote that he wanted to hear her voice and see her in person. "It seems we are back to when we first fell in love passionately," he said. But he was afraid she would cut off contact.

"Don't you work for the Ministry of State Security?" she replied. "Isn't it easy to find me?"

"Why can't we have a normal relationship then?" he pleaded. "Do I have to use special methods?"

On May 19 a morose Xu took stock. "Agitated," he began the day's diary entry. "Feeling agitated in the past couple days. Feeling like I am abandoned by the whole world. Work, relationships, and money are not going in the right direction." As far as Zha was concerned, "we will be using each other to our own ends. I will not help him anymore. It's whatever now." The extramarital romance was a shambles: "She wouldn't even return my text messages. Breakup is real." And he'd lost money in the stock market. "I got myself into this financial hole. I did it to myself. Sigh, not going to talk about these anymore. Feeling so bad. When is the end?"

That summer and fall brought new indignities. At a dinner in July, Zha "went nuts and said I am poor at management." A new woman entered the picture, with predictable results: "Heartless," one entry is titled. "Saw me in the rain yesterday morning, didn't stop and she walked away with her umbrella." Her WeChats were perfunctory. "This morning at breakfast, she did not sit next to me again."

It was amid all of this that Zheng reached out from Cincinnati to propose a second visit. This time Xu, as "Section Chief Qu," volunteered to handle the logistics for the GE Aviation engineer's trip himself. Soon Zheng and Xu were in touch over WeChat, where Qu's account icon was a plump blue cartoon rabbit. Zheng seemed less guarded now. On Jan. 11, 2018, he WeChatted Xu to ask if there was any special research he should do in advance of his next talk, to "try best to meet the need for the exchange."

Two weeks later, however, Zheng sent worrisome news. GE had recently announced a major restructuring, and there was talk of layoffs at subsidiaries including GE Aviation. Zheng was concerned about losing his job. If that were to happen, he at least wanted to be of use to Section Chief Qu while he still could. "That's why I am trying my best to collect as much information as possible," Zheng explained. Xu encouraged his new source to focus on system specifications and design process data.

The document Zheng sent on Feb. 3 made it clear that he'd understood the request. The title was "GE9X Fan Containment Case Design Consensus Review," and it was labeled "CONFIDENTIAL." Zheng, it appeared, had access to high-level secrets about his employer's marquee product. (The GE9X would the next year earn the title of the world's most powerful commercial jet engine.) Two days later, Xu responded with a set of technical questions—"How are the allowed values for 3D braided structural material and allowed value for design obtained? What are the relevant criteria?" It was the starting point for discussions with experts in Nanjing when Zheng came back for a second visit, as he was scheduled to do imminently, around the Lunar New Year. Xu also sent instructions for how Zheng could create and copy a directory of all the files on his GE Aviation computer. A little more than a week later, on Valentine's Day, Zheng sent back the results.

The two were communicating at least every few days, and Zheng's eagerness made him a potential gold mine. It was particularly frustrating, then, when Zheng announced that he couldn't come to China after all, not anytime soon. His boss, he reported, was sending him to France for work in March. "Since there are many things that need to be prepared, he thinks it's inappropriate to take a two-week vacation now," Zheng wrote. "I am so sorry about this!" Xu, a man well versed in the thoughtlessness of bosses, understood. But perhaps, he suggested, they could meet somewhere else? Regrettably, he couldn't come to the US, but if Zheng had time on his France trip, Xu might be able to meet him there.

On Feb. 28 they discussed possibilities over the phone. In France, Zheng would be free on the weekends, and he'd always wanted to visit Belgium, the Netherlands, and Germany. Xu asked whether Zheng would have his work laptop with him. Zheng confirmed that he would, and he could easily export any files of interest. "Is there other information that you guys might be interested in?" he asked. "I mean, I can look around and prepare." Xu said that wasn't necessary. "We really don't need to rush to do everything in one time," he explained, "because, if we are going to do business together, this won't be the last time, right?"

Xu was wrong about that. As Zheng spoke on the phone, he was sitting next to Bradley Hull in the FBI agent's car. Hull was listening to and recording the conversation, and he'd scripted Zheng's half of it. Months before, the MSS officer had himself been handed off.

<https://www.bloomberg.com/news/features/2022-09-15/china-wanted-ge-s-secrets-but-then-their-spy-got-caught>

Met hands out mobiles to keep tabs on officers

Fiona Hamilton - Crime Editor

<https://www.thetimes.co.uk/article/met-hands-out-smartphones-to-keep-tabs-on-officers-mn2xrdxvh>

Every Metropolitan Police officer is to be issued with a work smartphone to help crack down on misconduct and improve their access to technology, The Times has learnt.

In a first for the force, the phones will be handed out before the end of the year under an initiative by Sir Mark Rowley, the new commissioner.

Until now thousands of officers in Britain's biggest force have often had to use their own phones to communicate with each other, conduct basic investigations and collect evidence, such as video.

Being given a phone as part of the job means that their access to technology should be vastly improved and they can be better connected to the Met's internal systems.

However, sources said the move had the dual purpose of allowing senior managers at the force to keep an eye on what the rank and file were up to and that the phones would be monitored for evidence of corrupt behaviour.

Rowley, who took over the reins of the force last week after a string of scandals, has said that one of his priorities was to remove officers involved in misogynistic, racist and homophobic behaviour.

The force was already examining a multimillion-pound investment in advanced technology to monitor computer and phone messages and check officers' movements while they are on police premises.

Ken Marsh, head of the Metropolitan Police Federation, which represents officers up to the rank of chief inspector, said the rollout was a "completely positive" move.

"The cost [of using devices] should not be borne by the employee," he said.

"This is moving the Met into the modern age of 2022, [it] will give officers direct access and the ability to keep in touch."

He added that officers should be fully aware that the phones were not their property, meaning that they can be accessed and checked by senior management, but said he was committed to "complete transparency" and did not have a problem with that.

Forces across England and Wales have been examining how to monitor communications to flush out rogue officers and bring misconduct proceedings against them.

The police watchdog has said that officers have used social media to spread discriminatory messages. In the scandal that ultimately brought down Rowley's predecessor, Dame Cressida Dick, officers at Charing Cross police station said they wanted to rape colleagues and made sexist jokes on WhatsApp.

Earlier this year Sir Steve House, Dick's deputy, said the Met was investing in tens of millions of pounds of software that could check internal emails and messages for "alarming" keywords to find officers whose behaviour did not meet standards.

In his first recorded message to Met officers and staff last week, Rowley, 57, warned that the force had been "too weak" in removing corrupt elements.

He said a minority of officers had been allowed to "corrupt our integrity" and vowed to be "ruthless" in removing those who were prejudiced and engaged in misconduct. His mission is "more trust, less crime, higher standards".

The Met did not respond to requests for comment.

<https://www.thetimes.co.uk/article/met-hands-out-smartphones-to-keep-tabs-on-officers-mn2xrdxvh>

MP's wife with China links joined him at security forum

Geraldine Scott, Political Reporter

Monday October 17 2022, 12.01am, The Times

<https://www.thetimes.co.uk/article/mps-wife-with-china-links-joined-him-at-security-forum-j6q3nqfk3>

A Labour MP's wife who worked for an organisation accused of spying on behalf of China accompanied him to an international intelligence forum, it can be revealed.

Yannan Yu, who is married to Sir Mark Hendrick, was the deputy director of the Confucius institute at London South Bank University (LSBU). Her now-deleted LinkedIn account said she worked there for nearly nine years.

Confucius institutes, which are cultural education programmes funded by an organisation linked to the Chinese government, have been banned in some countries. They have been accused of limiting free speech and spying on Chinese students in the UK.

A list of attendees seen by The Times showed Yannan as accompanying her husband and the MP Mark Pritchard to a meeting of the Parliamentary Intelligence-Security Forum in Paris in June 2019, six months after she left the institute. The forum, which has been praised by Dr Julian Lewis, the chairman of parliament's intelligence and security committee, hosts politicians and experts from around the world.

Andrew Heyn, the former British consul-general in Hong Kong, told Times Radio that there was a "need to be really watchful about how you behaved and all aspects of your life that make you vulnerable to any sort of pressure being put on you". He said: "Basically, that has to be the modus operandi now for people dealing in any way with Chinese institutions."

Rishi Sunak promised during the Conservative leadership contest to close all 27 Confucius institutes. Tom Tugendhat, now a security minister, pledged the same.

Hendrick, the MP for Preston, was the chairman of the all-party parliamentary group on China and has been critical of the hawkish approach to China in Westminster. Last year he told the South China Morning Post that Britain's China policy was being pushed by "flag-waving old Etonians".

The Henry Jackson Society think tank said last week that the Confucius institutes were “a direct extension of the Chinese Communist Party’s (CCP) propaganda department”. In the society’s report, Hendrick is pictured posing with the CCP’s propaganda chief Li Changchun in 2016.

The society said that Hendrick had received £6,000 in donations from the institute and a further £31,904 for China-related activities, all of which were correctly declared. There is no indication of wrongdoing. Hendrick and the Labour Party were approached for comment.

<https://www.thetimes.co.uk/article/mps-wife-with-china-links-joined-him-at-security-forum-j6q3nqfk3>

Just look at Labour’s front bench for a laugh. Forever politicking and sniping at the other side of the House; this one is right up the Party’s fundament.

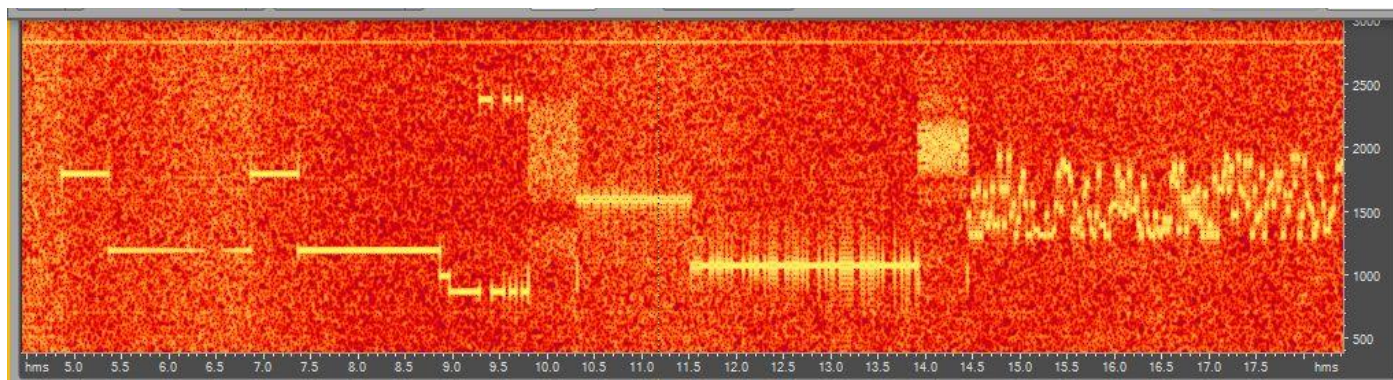
Now onto the Intercepts

Unusually we start with another unknown signal intercepted by Gert:

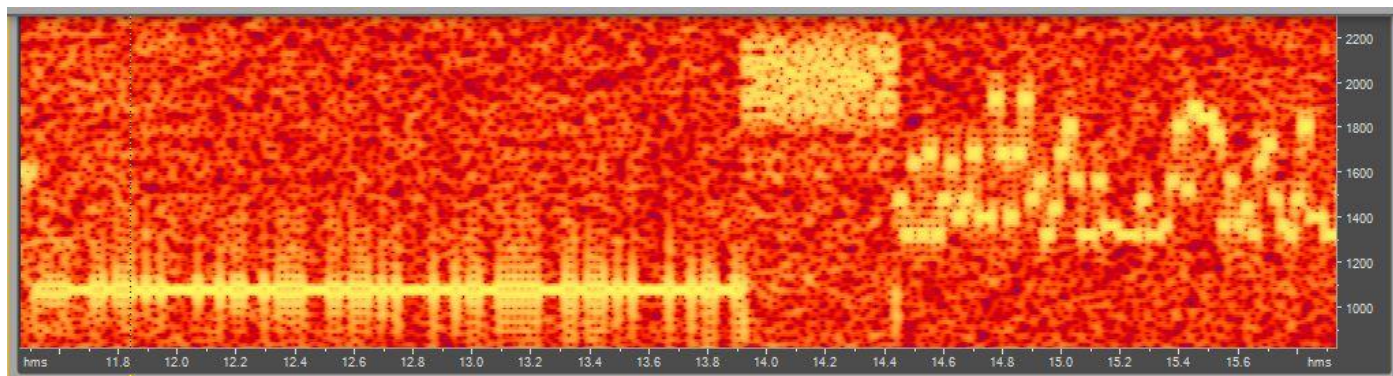
Unknown signal: Polytone style with data blocks ~10s, some motile; Any ideas?

| 10-10-2022: | 11-10-2022: | 12-10-2022 | 18-10-2022 |
|-----------------|------------------------------|-----------------|-----------------|
| 12.10z 10256kHz | 08.00z 12192kHz | 08.30z 12192kHz | 08.10z 10427kHz |
| 12.20z 11431kHz | 08.10z 14712kHz | 10.00z 11431kHz | 08.20z 11431kHz |
| 12.30z 12192kHz | 08.20z nil | 11.20z 11574kHz | 08.30z 9338kHz |
| 12.40z 13439kHz | 08.30z 12192kHz | 11.30z 13964kHz | 08.40z 10427kHz |
| 12.50z 14712kHz | 09.00z 12192kHz | 13.00z 12192kHz | 08.50z 11431kHz |
| 13.10z 10256kHz | 09.10z 13439kHz | 13.10z 14712kHz | |
| 13.20z 11431kHz | 09.20z 14712kHz | 14.00z 10396kHz | |
| 13.30z 12192kHz | 11.10z 14712kHz bandwidth x2 | 14.10z 10159kHz | |
| | 12.40z 13439kHz | 14.20z 13964kHz | |
| | 13.10z 11431kHz | | |

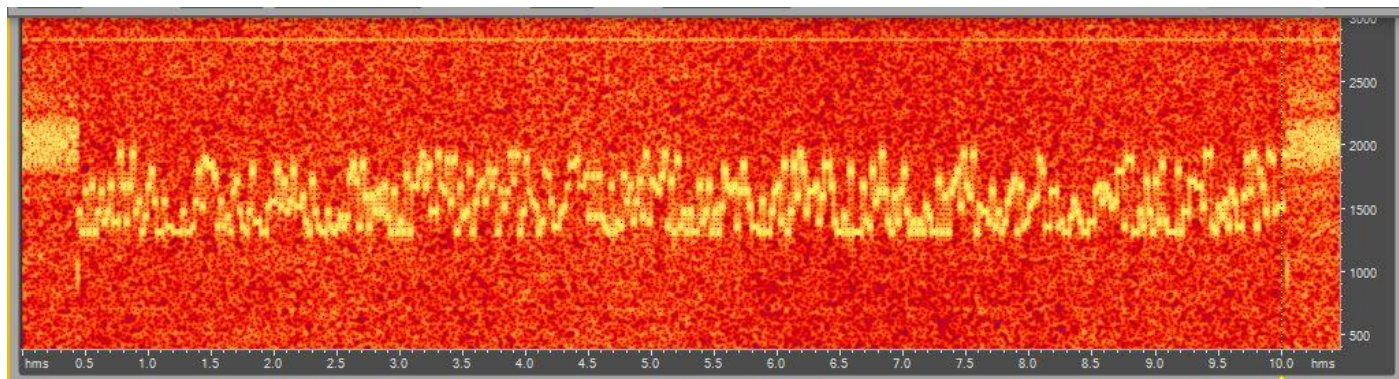
Start:



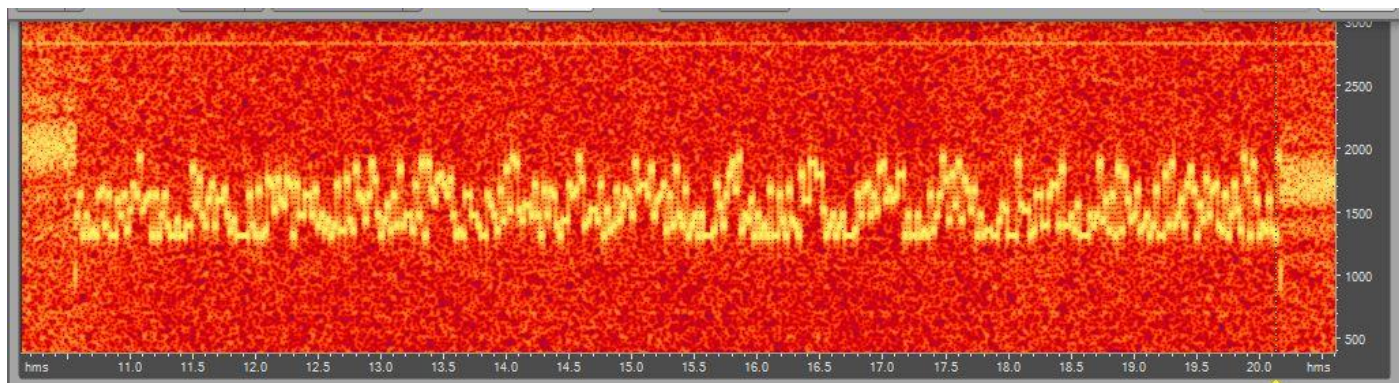
Start Magnified



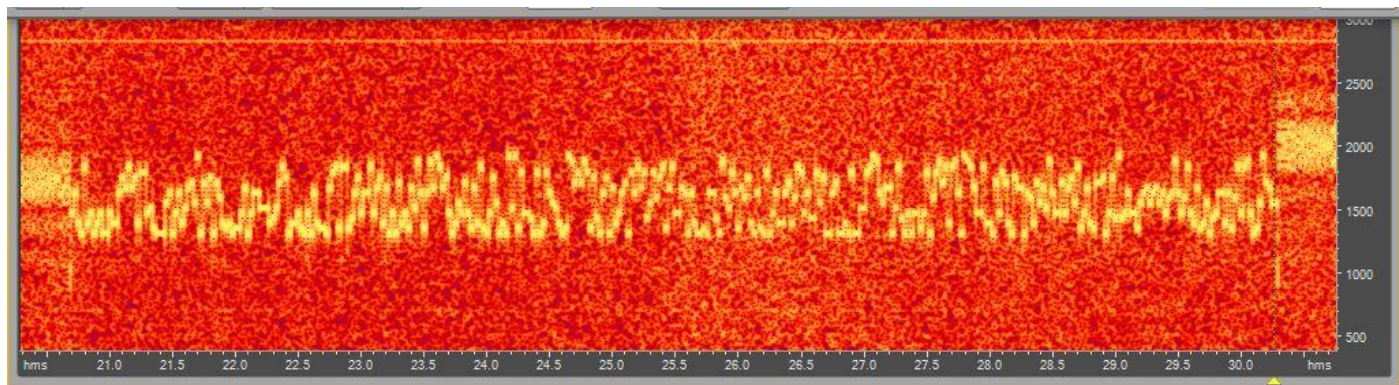
10s



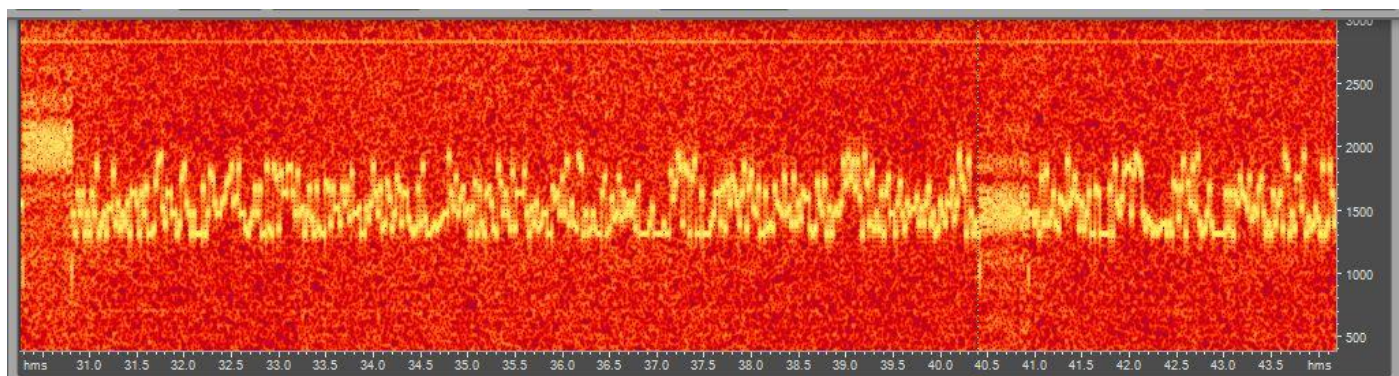
20s



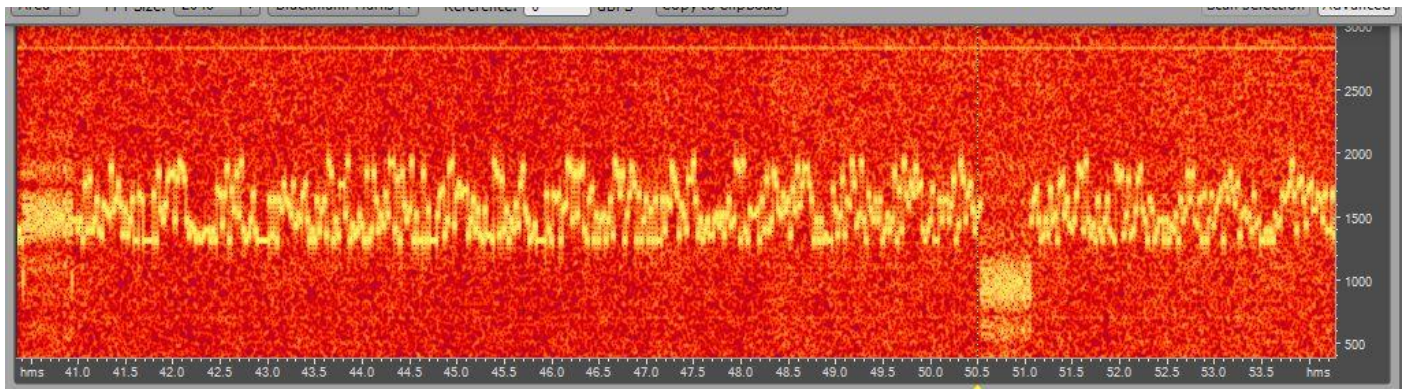
30s



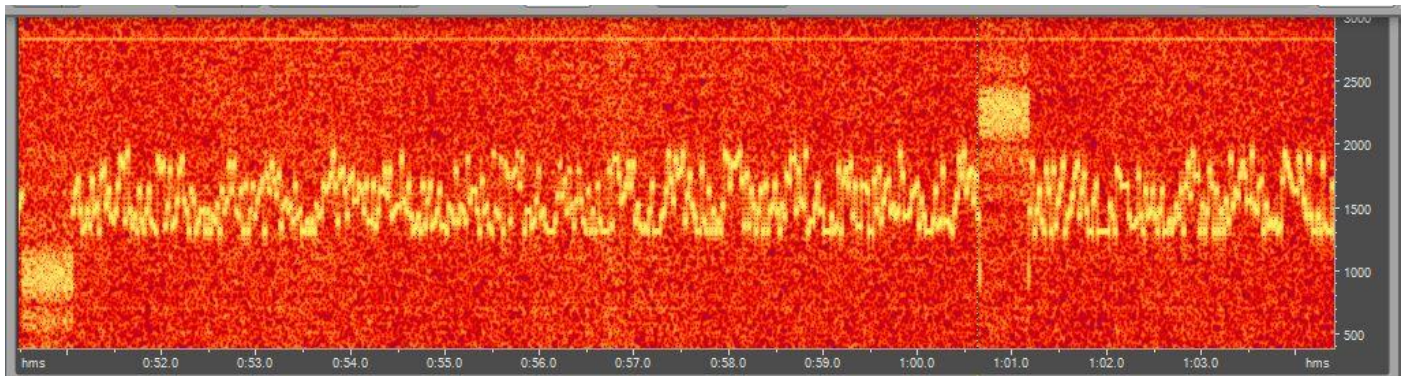
40s



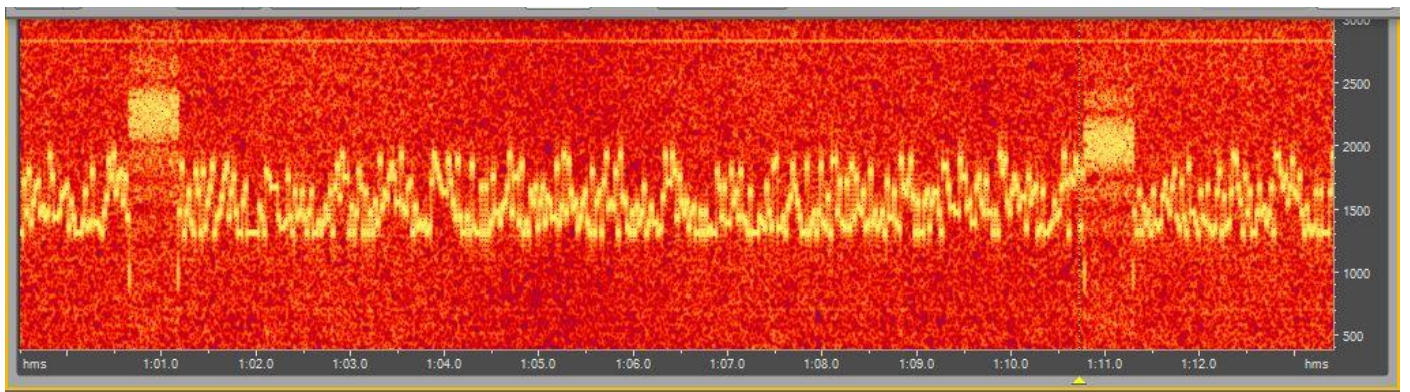
50s



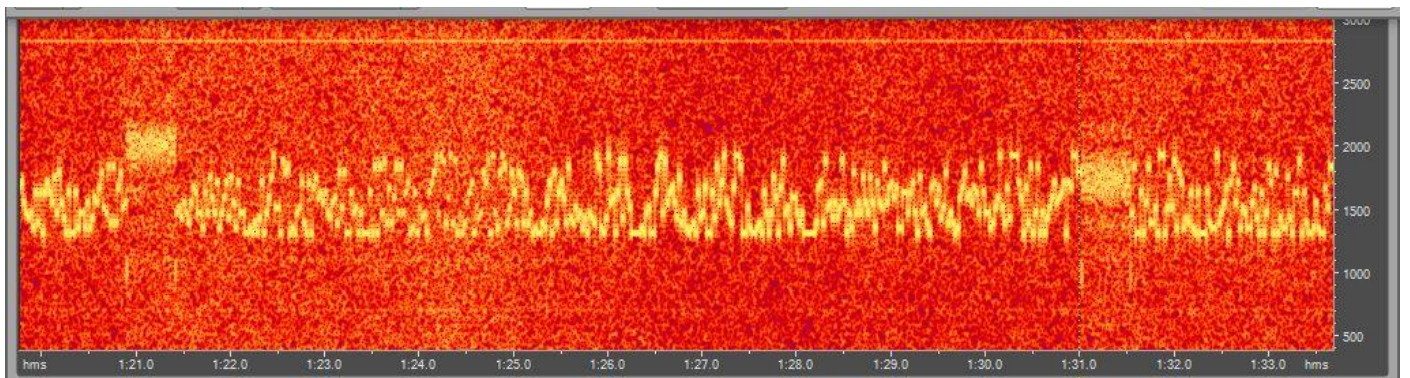
60s



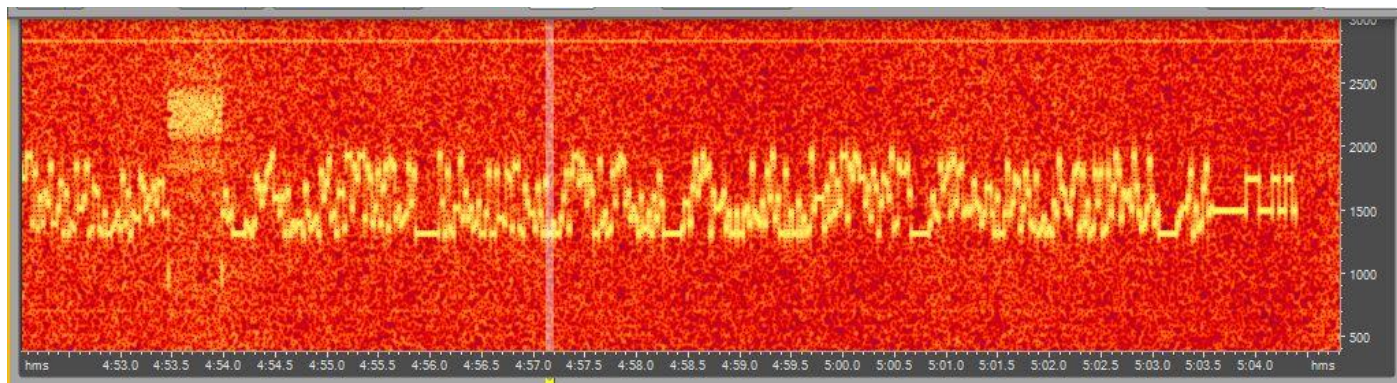
70s



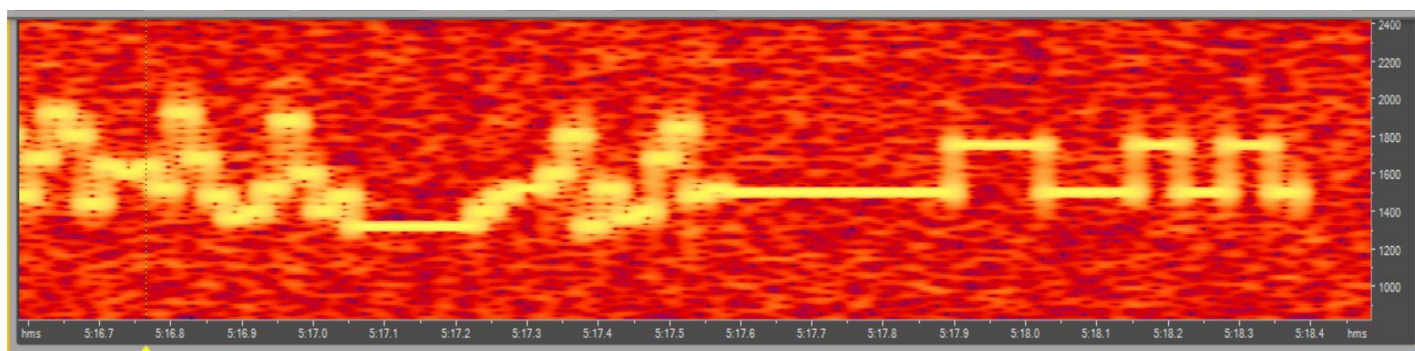
90s



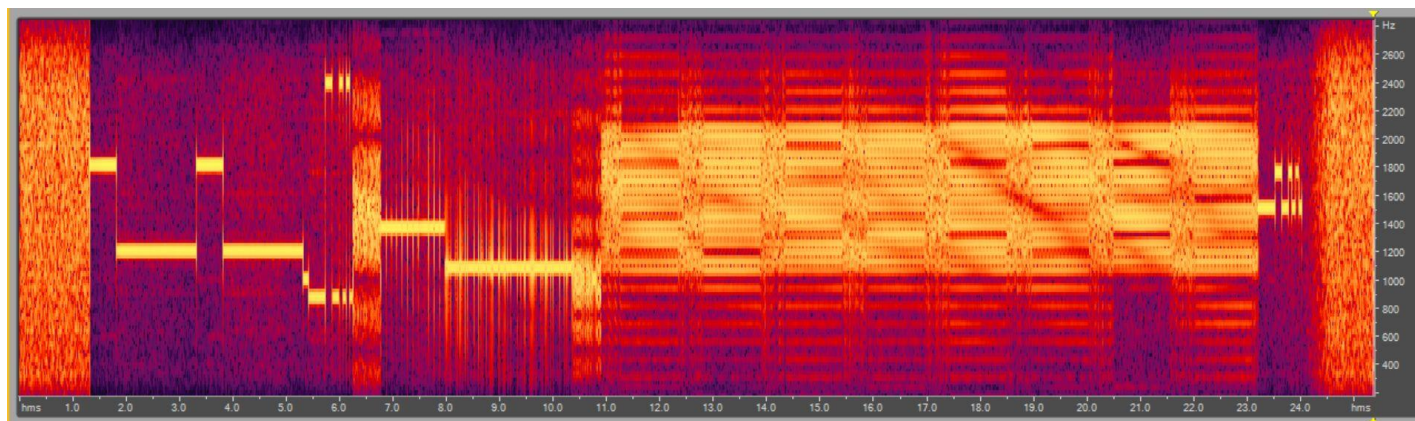
Data Ends



Data Ends Magnified



This latest from Gert, copied on 26/10 at 1503z on 11431kHz seems to be a Null Message:



Any ideas about this MFSK signal?

First thought to be part of the Russian exercises on 10/11/12 October the transmissions continued past 14th October and recorded again on 18th October so it's not part of that. Interesting is the digital component every 10s or so and its change of position,

Thanks for your input, Gert

Gert intercepted other polytone variations. These can be seen after the Polytone section later in this Newsletter.

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 Stations

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

September 2022:

| | | | | | | | |
|------|-------|--------|-----------------|--------------------|--|--------|-----|
| 5020 | 2000z | 01 Sep | '463' 317 30 | 64781 ... 55546 | Strong, fast. Start & ending = = omitted. Errors grps05/06 | BR/HFD | THU |
| | 2000z | 06 Sep | '463' 404 30 == | 73628 ... 84900 == | Good, fast. Grps05 & 10 incomplete repeat - into next grp | BR | TUE |
| | 2000z | 08 Sep | '463' 921 30 == | 47658 ... 45654 == | Good, fast. Static. Errors inc. 2 corrected at grps16 & 20 | BR | THU |
| | 2000z | 13 Sep | '463' 311 30 == | 71840 ... 65470 == | Good, fast. Corrected error grp23 otherwise perfect | BR | TUE |
| | 2000z | 15 Sep | '463' 152 30 == | 74927 ... 01637 == | Good, fast. Excellent, brisk Morse. Errors grps23 - 24 | BR | THU |
| | 2000z | 20 Sep | '463' 747 30 == | 87576 ... 47676 == | Good, fast. Excellent Morse. No errors in msg. Ended 0000 | BR | TUE |
| | 2000z | 27 Sep | '463' 895 30 == | 37492 ... 25267 == | Strong, fast. Several errors noted mid-message | BR | TUE |
| | 2000z | 29 Sep | '463' 408 30 == | 74673 ... 18594 == | Good, fast. Corrected error grp09. Grp30 18594 184 | BR | THU |
| 5475 | 1800z | 01 Sep | '463' 579 30 | 94632 ... 47182 | Strong, fast. Start & ending = = omitted. [Note 1] | BR/HFD | THU |
| | 1800z | 08 Sep | '463' 717 30 == | 76587 ... 36543 == | Fair, fast. Heavy static present. Errors noted | BR | THU |
| | 1800z | 13 Sep | '463' 821 30 == | 75648 ... 87095 == | Fair, fast. Corrected error grp02 otherwise perfect | BR | TUE |
| | 1800z | 15 Sep | '463' 876 30 == | 47893 ... 17281 == | Fair, fast. Hesitant in places. Errors grp04 - 05 | BR | THU |
| | 1800z | 20 Sep | '463' 650 30 == | 09098 ... 59840 == | Fair, fast. Excellent Morse. Several shortened repeat grps | BR | TUE |
| | 1800z | 22 Sep | '463' 256 30 == | 97364 ... 3487 == | Good, fast. Several grps shortened. Ended 0000 | BR | THU |
| | 1800z | 29 Sep | '463' 671 30 == | 38727 ... 83726 == | Good, fast. Excellent Morse. Corrected errors grp22& 25 | BR | THU |
| 6260 | 1500z | 03 Sep | '463' 397 30 == | 81758... | | HFD | SAT |
| | 1500z | 10 Sep | '463' 592 30 == | 83746 ... 3105 == | Weak, fast. Poor copy - Only partial read possible | BR | SAT |
| | 1500z | 17 Sep | '463' 421 30 == | 34598 ... 64186 == | Fair with QSB, irregular med-fast delivery. No errors | BR | SAT |
| | 1500z | 24 Sep | '463' 248 30 == | 57657 ... 4 ... == | Weak/Fair with QSB. Shortened & random from mid-msg | BR | SAT |
| 6510 | 0700z | 04 Sep | '463' 128 30 == | 27564... | | HFD | SUN |

[Note 1] Call-up started as '025' - paused - changed to '463' (HFD)

October 2022:

| | | | | | | | |
|------|-------|--------|-----------------|--------------------|--|----|-----|
| 5020 | 2000z | 06 Oct | '463' 976 30 == | 93798 ... 34321 == | Strong, fast. Grps26 & 30 sent once only | BR | THU |
| | 2000z | 11 Oct | '463' 717 30 == | 73625 ... 74859 == | Good, fast. Excellent Morse with 3 errors | BR | TUE |
| | 2000z | 13 Oct | '463' 654 30 == | 93812 ... 91746 == | Strong, fast. Hesitant at times. No errors in msg | BR | THU |
| | 2000z | 18 Oct | '463' 102 30 == | 64739 ... 37497 == | Strong, fast. Excellent Morse. Numerous errors | | |
| | 2000z | 25 Oct | '463' 512 30 | 58931 ... 45236 | Good, fast. Errors grps18-20. Start & ending = = omitted | BR | TUE |
| | 2000z | 27 Oct | '463' 271 30 == | 85934 ... 11987 == | Strong, fast. Excellent Morse. Error on repeat grp28 | BR | THU |
| 5475 | 1800z | 06 Oct | '463' 923 30 == | 98798 ... 65465 == | Good, fast. Error in start GC & Grp01 | BR | THU |
| | 1800z | 25 Oct | '463' 256 30 | 83461 ... 45189 | Good, med-fast. No errors. Start & ending = = omitted | BR | TUE |
| | 1800z | 27 Oct | '463' 765 30 == | 48738 ... 95843 == | Good, fast. Excellent Morse. No errors. Perfect sending | BR | THU |
| 6260 | 1500z | 01 Oct | '463' 272 30 == | 98194 == | Fair, fast. Missed start of msg. Good Morse. No errors | BR | SAT |
| | 1500z | 08 Oct | '463' 144 20 == | 63289 ... 67348 == | Good, fast. Excellent, Morse. Errors grp26-27 | BR | SAT |
| | 1500z | 15 Oct | '463' 981 30 == | 10958 ... 73665 == | Fair, fast. Some grps missed STANAG QRM | BR | SAT |
| | 1500z | 29 Oct | '463' 172 30 == | 74636 ... 17431 == | Fair with QSB. Sl. Hesitation grps25/25 otherwise good | BR | SAT |

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.

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.

No Reports

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

| | | | | | | |
|-------------------|-------------|--------|-------|------------------|-----|-----|
| 14942/13942/12142 | 0010/30/50z | 12 Sep | 991 1 | (Via SDR Russia) | HFD | MON |
| 17429/16219/15929 | 0010/30/50z | 24 Oct | 429 1 | (Vis SDR Japan) | HFD | MON |

European M12 Logs

September 2022: New scheds in bold type

| | | | | | | |
|--------------------|-----------------|--------|------------------|--------------------------------------|-------------|-----|
| 6942/8142/9284 | 0030/0050/0110z | 02 Sep | 912 1 (4382 94) | 78549 09069 ... 63106 86360 000 000 | Gert | FRI |
| | 0030/0050/0110z | 06 Sep | 912 000 | | HFD | TUE |
| | 0030/0050/0110z | 09 Sep | 912 000 | | Gert | FRI |
| | 0030/0050/0110z | 16 Sep | 912 1 (900 110) | 38196 70036 ... 68168 57130 000 000 | Gert | FRI |
| | 0030/0050/0110z | 20 Sep | 912 1 (824 118) | 98010 34001 ... 56070 42811 000 000 | Gert | TUE |
| | 0030/0050/0110z | 30 Sep | 912 000 | | Gert | FRI |
| 7961/6861/5861 | 2100/20/40z | 02 Sep | 988 1 (879 98) | 46119 62573.... | BR/HFD | FRI |
| | 2100/20/40z | 02 Sep | 988 1 (879 98) | 46119 62573.... | BR | SAT |
| | 2100/20/40z | 09 Sep | 988 1 (925 96) | 33843 45810.... | BR | FRI |
| | 2100/20/40z | 10 Sep | 988 1 (925 96) | 33843 45810.... | BR | SAT |
| | 2100/20/40z | 16 Sep | 988 1 (925 96) | 33843 45810 ... 36788 18112 000 000 | Gert | FRI |
| | 2100/20/40z | 17 Sep | 988 1 (925 96) | 33843 45810 ... 36788 18112 000 000 | Gert | SAT |
| | 2100/20/40z | 23 Sep | 988 1 (9537 130) | 74681 19916.... | BR | FRI |
| | 2100/20/40z | 24 Sep | 988 1 (9537 130) | 74681 19916.... | BR | SAT |
| | 2100/20/40z | 30 Sep | 988 1 (9537 130) | 74681 19916 93750 21526 | Gert | FRI |
| 9246/8146/6846 | 2110/30/50z | 01 Sep | 218 000 | | HFD | THU |
| | 2110/30/50z | 05 Sep | 218 000 | | BR | MON |
| | 2110/30/50z | 08 Sep | 218 000 | | BR/Gert | THU |
| | 2110/30/50z | 12 Sep | 218 1 (7990 151) | 74025 39324.... | BR | MON |
| | 2110/30/50z | 15 Sep | 218 1 (7990 151) | 74025 39324 ... 52171 59078 000 000 | Gert | THU |
| | 2110/30/50z | 19 Sep | 218 000 | | BR | MON |
| | 2110/30/50z | 22 Sep | 218 000 | | BR | THU |
| | 2110/30/50z | 26 Sep | 218 1 (2281 97) | 81378 18720.... | BR | MON |
| | 2110/30/50z | 29 Sep | 218 1 (2281 97) | 81378 18720 ... 80052 83638] 000 000 | Gert | THU |
| 10836/10136/9136 | 0700/20/40z | 01 Sep | 811 1 | | HFD | THU |
| 11109/10309/9209 | 2000/20/40z | 01 Sep | 385 000 | | BR/HFD | THU |
| | 2000/20/40z | 05 Sep | 385 000 | | BR | MON |
| | 2000/20/40z | 08 Sep | 385 000 | | BR/Gert | THU |
| | 2000/30/40z | 12 Sep | 385 1 (3702 86) | 01914 98484.... | BR | MON |
| | 2000/20/40z | 15 Sep | 385 1 (3702 86) | 01914 98484 ... 29328 34208 000 000 | Gert | THU |
| | 2000/20/40z | 19 Sep | 385 000 | | BR | MON |
| | 2000/20/40z | 22 Sep | 385 000 | | BR | THU |
| | 2000/20/40z | 26 Sep | 385 1 (8804 94) | 91200 81327.... | BR | MON |
| | 2000/20/40z | 29 Sep | 385 1 (8804 94) | 91200 81327 ... 98480 49660 000 000 | Gert | THU |
| 11435/10598/9327 | 1800/20/40z | 03 Sep | 938 1 (7527 73) | 13096 54875.... | BR/HFD | SAT |
| | 1800/20/40z | 10 Sep | 938 1 (9234 75) | 46953 88788.... | BR | SAT |
| | 1800/20/40z | 17 Sep | 938 1 (2434 79) | 32447 83253 ... 13454 97508 000 000 | Gert | SAT |
| | 1800/20/40z | 24 Sep | 938 1 (3706 74) | 75757 79417.... | BR | SAT |
| 11635/14794/ - - - | 0800/20/40z | 20 Sep | 878 000 | | BR | TUE |
| 12205/13559/14728 | 1230/1250/1310z | 05 Sep | 973 1 (9434 60) | 91846 69722 ... 26101 82291 000 000 | BR/Gert/HFD | MON |
| | 1230/1250/1310z | 19 Sep | 973 1 (3319 60) | 70242 79716 ... 74951 67050 000 000 | BR/Gert | MON |
| 12218/11118/10218 | 2210/30/50z | 03 Sep | 212 000 | | HFD | SAT |
| | 2210/30/50z | 07 Sep | 212 1 (859 88) | 78859 26764.... | BR | WED |
| | 2210/30/50z | 10 Sep | 212 1 (859 88) | 78859 26764.... | BR | SAT |
| | 2210/30/50z | 14 Sep | 212 000 | | BR | WED |
| | 2210/30/50z | 18 Sep | NRH | | BR | SUN |
| | 2210/30/50z | 21 Sep | NRH | | BR | WED |
| 13367/12167/10567 | 1900/20/40z | 02 Sep | 315 000 | | AB/BR/HFD | FRI |
| | 1900/20/40z | 07 Sep | 315 000 | | BR | WED |
| | 1900/20/40z | 09 Sep | 315 000 | | BR | FRI |
| | 1900/20/40z | 14 Sep | 315 1 (578 108) | 61948 48390.... | BR/HFD | WED |
| | 1900/20/40z | 16 Sep | 315 1 (578 108) | 61948 48390 ... 27920 39796 000 000 | Gert | FRI |
| | 1900/20/40z | 21 Sep | 315 000 | | BR | WED |
| | 1900/20/40z | 23 Sep | 315 000 | | BR | FRI |
| | 1900/20/40z | 28 Sep | 315 1 (935 88) | 01182 00939 ... 79560 47611 000 000 | BR/Gert | WED |
| | 1900/20/40z | 30 Sep | 315 1 (935 88) | 01182 00939 ... 79560 47611 000 000 | Gert | FRI |
| 13386/12189/11491 | 1110/30/50z | 01 Sep | 725 1 (3050 98) | 92094 50272 ... 88423 85736 000 000 | BR/Gert/HFD | THU |
| | 1110/30/50z | 08 Sep | 725 1 (7720 90) | 70560 58987 ... 27913 92566 000 000 | Gert | THU |
| | 1110/30/50z | 15 Sep | 725 1 (8118 96) | 57144 39455.... | BR | THU |
| | 1110/30/50z | 29 Sep | 725 1 (4878 96) | 21844 51184 ... 31180 02640 000 000 | Gert | THU |
| 13894/14794/ - - - | 0800/20/40z | 02 Sep | 878 000 | | AB/HFD | FRI |
| | 0800/20/40z | 06 Sep | 878 000 | | Gert | TUE |
| | 0800/20/40z | 09 Sep | 878 000 | | Gert | FRI |
| | 0800/20/40z | 27 Sep | 878 000 | | Gert | TUE |
| | 0800/20/40z | 30 Sep | 878 000 | | Gert | FRI |

| | | | | | |
|-----------------------------|---|--|--|---|---|
| 14927/13927/12227 | 1600/20/40z 1600/20/40z 1600/20/40z | 04 Sep 14 Sep 21 Sep | 992 000 992 000 992 1 (672 82) 87437 18700.... | HFD BR BR | SUN WED WED |
| 19546/18446/16346 | 1600/20/40z 1600/20/40z 1600/20/40z 1600/20/40z 1600/20/40z 1600/20/40z | 01 Sep 05 Sep 08 Sep 15 Sep 19 Sep 26 Sep | 543 000 543 1 (3866 108) 03365 50618.... 543 1 (3866 108) 03365 50618.... 543 000 543 1 (955 88) 57484 18087.... 543 000 | HFD BR BR Gert BR BR | THU MON THU THU MON MON |
| <u>October 2022:</u> | | | | | |
| 5794/6794/8094 | 2100/20/40z 2100/20/40z 2100/20/40z 2100/20/40z 2100/20/40z 2100/20/40z 2100/20/40z 2100/20/40z 2100/20/40z | 01 Oct 07 Oct 08 Oct 14 Oct 15 Oct 21 Oct 22 Oct 28 Oct 29 Oct | 770 1 (9537 130) 74681 19916.... 770 1 (5463 142) 24772 90159.... 770 1 (5463 142) 24772 90159 ... 66375 96448 000 000 770 1 (5463 142) 24772 90159.... 770 1 (5463 142) 24772 90159.... 770 1 (4517 184) 89846 05043.... 770 1 (4517 184) 89846 05043.... 770 1 (4517 184) 89846 05043.... 770 1 (4517 184) 89846 05043 ... 67146 83629 000 000 | BR BR/HFD BR/Gert BR BR BR BR BR Gert | SAT FRI SAT FRI SAT FRI SAT FRI SAT |
| 6837/8037/9327 | 0030/0050/0110z 0030/0050/0110z | 11 Oct 18 Oct | 802 1 802 000 | HFD Gert | TUE TUE |
| 8164/6964/5764 | 2110/30/50z 2110/30/50z 2110/30/50z 2110/30/50z 2110/30/50z 2110/30/50z 2110/30/50z 2110/30/50z | 03 Oct 06 Oct 10 Oct 13 Oct 17 Oct 20 Oct 24 Oct 27 Oct | 197 000 197 000 197 1 (954 177) 53645 71298.... 197 1 (954 177) 53645 71298.... 197 000 197 000 197 1 (4308 193) 22020 41153.... 197 1 (4308 193) 22020 41153.... | HFD BR BR BR Gert BR BR BR | MON THU MON THU MON THU MON THU |
| 10318/9218/8118 | 2000/20/40z 2000/20/40z 2000/20/40z 2000/20/40z 2000/20/40z 2000/20/40z 2000/20/40z 2000/20/40z | 03 Oct 06 Oct 10 Oct 13 Oct 17 Oct 20 Oct 24 Oct 31 Oct | 178 000 178 000 178 1 (6470 88) 12541 48931.... 178 1 (6470 88) 12541 48931.... 178 000 178 000 178 1 (932 97) 93485 16274.... 178 000 | HFD BR BR BR Gert BR BR BR | MON THU MON THU MON THU MON MON |
| 11135/10235/9235 | 1900/20/40z 1900/20/40z 1900/20/40z 1900/20/40z 1900/20/40z 1900/20/40z | 05 Oct 07 Oct 12 Oct 14 Oct 19 Oct 21 Oct | 122 1 (7407 124) 52262 60796.... 122 1 (7407 124) 52262 60796.... 122 000 122 000 122 1 (948 144) 34020 29586.... 122 1 (948 144) 34020 29586.... | BR/HFD BR BR BR BR BR | WED FRI WED FRI WED FRI |
| 11435/10598/9327 | 1800/20/40z 1800/20/40z 1800/20/40z 1800/20/40z | 01 Oct 08 Oct 22 Oct 29 Oct | 938 1 (5888 77) 69185 55388.... 938 1 (7080 80) 75315 64449.... 938 1 (3020 78) 65900 90611.... 938 1 (9500 77) 14424 02277.... | BR BR BR BR | SAT FRI SAT SAT |
| 12205/13559/14728 | 1230/1250/1310z 1230/1250/1310z 1230/1250/1310z | 03 Oct 10 Oct 17 Oct | 973 1 (7705 60) 80200 76537.... 973 1 (6055 60) 74026 89571.... 973 1 (8693 55) 68718 24445.... | BR BR BR | MON MON MON |
| 13386/12189/11491 | 1110/30/50z 1110/30/50z 1110/30/50z 1110/30/50z | 06 Oct 13 Oct 20 Oct 27 Oct | 725 1 (3483 94) 91790 99065.... 725 1 (7617 94) 56565 42769.... 725 1 (4888 90) 25724 42549.... 725 1 (3896 91) 06051 09808 ... 19019 62007 000 000 | BR BR BR Gert | THU THU THU THU |
| 14969/15869/ - - - | 0800/20/40z 0800/20/40z | 11 Oct 18 Oct | 981 000 981 000 | Gert/HFD Gert | TUE TUE |
| 17441/18641/19241 | 0800/20/40z 0800/20/40z | 09 Oct 12 Oct | 462 1 (950 66) 76134 26304 ... 44021 63374 000 000 462 000 | Gert/HFD Gert | SUN WED |
| 20168/19468/16268 | 1400/20/40z 1400/20/40z 1400/20/40z 1400/20/40z 1400/20/40z 1400/20/40z | 03 Oct 06 Oct 13 Oct 20 Oct 24 Oct 27 Oct | 142 1 (2843 102) 16842 42770.... 142 1 (2843 102) 16842 42770.... 142 000 142 1 (9842 146) 23129 67750.... 142 000 142 000 | BR/HFD BR BR BR BR BR/Gert | MON THU THU THU MON THU |

| | |
|--|---|
| M12 5794/6794/8094kHz 2100/2120/2140z 08 October 2022 770 770 770 1 (R2m) 5463 142 5463 142 24772 90159 68033 55793 20252 46079 31411 90420 16129 16750 53555 39655 70151 63803 20752 39898 09218 37687 45037 23492 31965 77314 57051 51913 89087 60911 07107 83404 28516 18885 19264 08499 24056 01999 03645 82275 66741 92914 89954 21971 03709 96565 16087 87358 85167 89850 07092 54339 54187 96002 11140 49197 53326 05113 45725 88188 80808 08644 35255 84244 80402 96291 23648 35329 41343 35275 89971 11796 07176 49789 32215 10780 51043 87756 72573 57687 56874 12206 47739 76786 85694 53294 76595 27552 54278 75710 31681 46953 31467 14914 07040 65509 10344 28889 76189 29104 06175 74897 99551 52946 02563 79897 86723 43617 75673 26508 72717 80371 36155 55763 71401 80002 46613 43239 67619 35015 34075 13013 78113 50708 51138 94713 36607 17888 50957 64891 65783 74863 45165 92443 30832 25681 26376 21540 28468 47468 36881 53334 31989 81495 66375 96448 000 000 <i>Courtesy Gert</i> | M12 17441/18641/19241kHz 0800/0820/0840z 09 October 2022 462 462 462 1 (R2m) 950 66 950 66 76134 26304 91760 67577 06880 69059 05145 50790 35249 17057 25316 84767 25226 59827 16531 15756 51696 34414 65083 63836 30196 19489 43839 31905 00415 84347 82508 11677 35406 78730 28688 37065 75612 11641 47559 11350 21635 56240 19008 48622 62042 46349 05340 09459 80642 90458 90420 68697 78430 71708 58801 63189 90399 55628 52782 14464 39571 04723 94526 03858 18697 25852 59480 28305 44021 63374 000 000 <i>Courtesy Gert</i> |
|--|---|

M14 IA MCW / ICW Short 0

September 2022:

| | | | | | | | |
|-------|-------|--------|--|---------------------------|-------------|------|-----|
| 10243 | 0520z | 09 Sep | 952 (637 52) = 07197 49255 ... 93406 48436 | Ending without five nulls | (SDR Korea) | Gert | FRI |
| 12211 | 0500z | 09 Sep | 952 (637 52) = 07197 49255 ... 93406 48436 | Ending without five nulls | (SDR Korea) | Gert | FRI |

October 2022:

| | | | | | | | |
|-------|-------|--------|--|--|----|----|-----|
| 10243 | 0520z | 07 Oct | 480 00000 (631 52) = 02962 42275 ... 04391 53514 = 631 52 00000 | | CW | AB | FRI |
| 12211 | 0500z | 07 Oct | 480 00000 (631 52) = 02962 42275 ... 04391 53514 = 631 52 00000 Slow Morse, break in group 8, then normal speed. Odd preamble. Normal id is 952 | | CW | AB | FRI |

| | |
|---|---|
| M14 12211/10243kHz 0500/0520z 09 October 2022 952 952 952 (R4m) 637 637 52 52 == 07179 07179 49255 49255 02843 02843 09985 09985 82566 82566 59055 59055 80531 80531 63637 63637 85765 85765 94159 94159 73738 73738 28962 28962 63023 63023 04610 04610 01801 01801 23217 23217 78533 78533 75916 75916 89891 89891 35437 35437 68273 68273 16937 16937 02201 02201 61049 61049 56813 56813 62703 62703 49807 49807 10020 10020 41807 41807 15632 15632 90457 90457 74473 74473 75851 75851 73535 73535 62420 62420 66727 66727 00387 00387 17906 17906 19614 19614 63667 63667 11340 11340 60878 60878 60185 60185 18411 18411 61195 61195 74325 74325 65741 65741 25199 25199 27179 27179 49521 49521 93406 93406 48436 48436 == 637 637 52 52 [NOT ending with 5 nulls] <i>Courtesy Gert</i> | M14 10243kHz 0520z 07 October 2022 480 480 480 00000 (R4m) 631 631 52 52 == 02962 42275 28580 67434 16422 50415 67928 29568 14904 86088 83592 99373 46246 78882 50548 61852 61117 85441 43485 22855 25756 96899 92760 82585 58248 64000 28732 51000 74264 69577 62897 47286 53223 03079 79298 50619 60793 1684* 34614 94363 88679 68784 90378 20931 97636 81210 25768 39457 74641 70421 04391 53514 == 631 631 52 52 00000 <i>Courtesy AB</i> |
|---|---|

M23 O ICW

No Reports

Morse Stations - Not Number Related

M42 IC

M42 is a designation originally assigned by the original ENIGMA group & covered a number of formats & modes. The group of stations was later identified as belonging to the Russian government / intelligence / diplomatic services & as such was deleted from the ENIGMA Control List as being outside of the numbers station remit. However, the station still attracts interest and is regularly still monitored & will be featured in all forthcoming newsletters.

Mode is Morse or Baudot ITA2 50/500, (RTTY - FSK) 3rd Cyrillic alphabet with Op. chat in CW both before & after the main message transmission.

Due to space constraints these logs show only main detail of the exchanges logged.

Baudot (RTTY) content shown in **Bold** type.

September 2022:

Thanks to Ary, (AB), & anonymous friend we have a selection of M42 logs from Monday, 26 September, believed to comprise of test & real transmissions.

| | | | | |
|-------|-------|--------|----------------------------|----------------------|
| 9142 | 0730 | 26 Sep | 8x62.5Bd QPSK+250Bd BPSK | Russian intel. |
| 10256 | 0740z | 26 Sep | 8x62.5Bd QPSK+250Bd BPSK | Russian intel. |
| 11431 | 0750z | 26 Sep | 8x62.5Bd QPSK+250Bd BPSK | Russian intel. |
| 9142 | 0800z | 26 Sep | MFSK-16/96tones+250Bd BPSK | Russian diplo/intel. |
| 10256 | 0810z | 26 Sep | MFSK-16/96tones+250Bd BPSK | Russian diplo/intel. |
| 11431 | 0820z | 26 Sep | MFSK-16/96tones+250Bd BPSK | |
| 9142 | 0830z | 26 Sep | 5x10Bd 16FSK+250Bd BPSK | |
| 10256 | 0840z | 26 Sep | 5x10Bd 16FSK+250Bd BPSK | |
| 11431 | 0850z | 26 Sep | 5x10Bd 16FSK+250Bd BPSK | |
| 13423 | 0832z | 26 Sep | MFSK-66 | |
| 9142 | 0900z | 26 Sep | 2x62.5Bd QPSK | |
| 10256 | 0910z | 26 Sep | 2x62.5Bd QPSK | |
| 11431 | 0920z | 26 Sep | 2x62.5Bd QPSK | |
| 9142 | 1140z | 26 Sep | 2x62.5Bd QPSK | |
| 10256 | 1150z | 26 Sep | USB Transmitter noise only | |
| 11431 | 1200z | 26 Sep | 2x62.5Bd QPSK | |
| 9142 | 1210z | 26 Sep | USB Transmitter noise only | |
| 10256 | 1220z | 26 Sep | USB Short 1000Hz beep only | |
| 11431 | 1230z | 26 Sep | 8x62.5Bd QPSK | |
| 9142 | 1250z | 26 Sep | 8x62.5Bd QPSK | |
| 10256 | 1300z | 26 Sep | 8x62.5Bd QPSK | |
| 11431 | 1310z | 26 Sep | 8x62.5Bd QPSK | |

October 2022:

M51 XIX

Normal Activity from M51 Continues

As reported in our last Newsletter 131, following the Easter closedown & subsequent sporadic activity, M51 resumed their scheduled transmissions from 01 August & this has continued to be the case for the last two months – Including the almost continuous clatter of continuous groups on the two core frequencies.

Peter, PoSW, has been following the station over this period & also found them active on 5501kHz for one day in Mid-October. Peter's detailed report follows these regular M51 logs.

3881//6825 100 grp 5-ltr messages with headers

No reports – M51b format in use

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

| | | | | | | | | | |
|------------|--------------|--------|-----------------|-------------|--------------|-------------|----------------------------|----|-----|
| 3881//6825 | 1130 - 1215z | 12 Sep | Lundi-Leçon | 01-2/1 Codé | 01-2/2 Clair | 01-2/3 Codé | 01-2/4 Clair (420 grps/hr) | BR | MON |
| | 1130 - 1202z | 13 Sep | Mardi-Leçon | 02-2/1 Codé | 02-2/2 Clair | 02-2/3 Codé | 02-2/4 Clair (600 grps/hr) | BR | TUE |
| | 1130 - 1206z | 14 Sep | Mercredi- Leçon | 03-2/1 Codé | 03-2/2 Clair | 03-2/3 Codé | 03-2/4 Clair (720 grps/hr) | BR | WED |
| | 1130 - 1156z | 15 Sep | Jeudi- Leçon | 04-2/1 Codé | 04-2/2 Clair | 04-2/3 Codé | 04-2/4 Clair (840 grps/hr) | BR | THU |

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

| | | | | | | |
|------------|-------|--------|---|----------------|------|-----|
| 3881 | 2024z | 15 Sep | Non-stop 5-character groups composed of M51a messages 'KF0LG UCRWT CXARQ MFYRM ----- / .'. VSWFG XASW- | Weak | PLdn | THU |
| 6825 | 2026z | 15 Sep | Non-stop 5-character groups composed of M51a messages 'WKQLA ZPMQH DE--- SJAUL TGDDH 26483 SHBXJ' | Strong | PLdn | T |
| 3881//6825 | 2034z | 24 Sep | Non-stop 5-character groups composed of M51a messages | Good//Fair | BR | SAT |
| | 1951z | 17 Oct | Non-stop 5-character groups composed of M51a messages | Strong//Strong | BR | MON |

Observations on M51 from PoSW

The French CW station continues to be heard on most days, usually a strong signal on 6825 kHz and weaker on 3881. There was some variation from the usual noted in the second week of October:-

11-Oct-22, Tuesday:- 1441 UTC, 5501 kHz, surprised to find fast CW, very strong signal on this frequency just LF of the Shannon VOLMET station on 5505. 5-character groups, had all the characteristics of the traffic usually heard on 6825. A check on this frequency showed this was active with what appeared to be the same content, also very strong. Was on throughout the rest of the day, checked several times, at 1650z 5501 very strong, 6825 weaker; same at 1820z; at 1940z 5501 strong, nothing audible on 6825, no doubt due to changing propagation. The use of 5501 appeared to be for one day only:-

12-Oct-22, Wednesday:- Back in the usual routine:-
0736 UTC, 6825 // 3881 kHz, fast CW groups on the usual frequencies, 6825 strong, 3881 weaker.

A couple of days later there was one of those sessions involving French amateur call-signs on a frequency in the 80 metre band with the net controller also on 6825:-

13-Oct-22, Thursday:- 1723 UTC, 6825 kHz, very strong and 3536, weaker, not the usual M51b mode, at around 1728 UTC sending a list of French amateur call-signs, i.e. F prefixes and later the control with call F9TM was exchanging RST reports with each station in turn. Some of the controller's CW not very good, I thought, the error sign heard several times, still his CW was considerably better than mine! An exercise of this kind has been noted in the past, Thursday seems to be the preferred day, similar was noted on 12-May of this year which was also a Jeudi.

A bit later at around 0830 UTC there was fast CW, 5-character groups, on both 6825 and 3536; propagation had changed by then and 3536 was much the stronger of the two frequencies. Still on when checked at 1905UTC, at 2000 and at 2115. Was still on early the following day:-

14-Oct-22, Friday:- 0547 UTC, 6825 kHz, weak and 3536, much stronger, still sending fast groups of five. Propagation changing; by 0815z 6825 very strong, 3536 weak. Stopped suddenly before 0820.
0830 UTC, approx:- 6825//3536 kHz, starting up with the nice and slow "VVV DE FAV22 QLH 3881/6825 kHz routine - vanished from 3536 after a few seconds and reappeared on the usual parallel 3881. *Thanks Peter for your interesting report, as always*

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).

| | | | |
|----------------------|------|--|------|
| 4034 4853 4985 | 5014 | | 7619 |
|----------------------|------|--|------|

New Schedules for Sep / Oct 2022:

From logs submitted from JPL

| | | | |
|------|-----------------------------------|--------------------------|---------------------------------|
| 4034 | New Round Slip for this Frequency | First heard 06 September | V JM7D (x3) DE CD2D (x2) |
| 6824 | New frequency for this Round Slip | First heard 09 October | V QYE2 (x3) DE 9WV (x2) |
| 4457 | New Round Slip & Round Slip | First heard 30 October | VVV (x3) Q5Z1 (x3) DE W2XB (x2) |

Chart of M89 Freq & Call signs heard in Sep / Oct 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 9WV (x2) |
| 3596// 6824 | V QYE2 (x3) DE 9WV (x2) |
| 3596/NRH | V QYE2 (x3) DE 9WV (x2) |
| 3596//4888 | V QYE2 (x3) DE 9WV (x2) |
| 4034 | V JM7D (x3) DE CD2D (x2) |
| 4457 | VVV (x3) Q5Z1 (x3) DE W2XB (x2) |
| 4720//5150 | V WNF(x3) DE FXM (x2) (R5) (Hand sent) |
| 4860// 6840 | VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K |

Courtesy JPL

| | | | | | | |
|------|------|-------------------|--|----------------------------|-----|-----|
| 4034 | CD2D | 1553z (IP) 24 Sep | V JM7D (x3) DE CD2D (x2) (IP - Cont'd) NR.. RMKS 7601 TO 4839/4888 UGT COMM BT 12592/4839/0100/202NR/7682 AR NR 97 CK .99 212 24 1930 NR 097 CK 409 08 499 1 NR 097 CK 499 21 09 25 000 | (Remote tuner Novosibirsk) | JPL | SAT |
| 4853 | | 1115z (IP) 09 Oct | RPT 1P 36W 4T7D 4T7N K RPT 1P 50W 6N76 6N76 K RPT 2P 08W ATAU ATAU K RPT2P 13W 4T5N 4T5N K R GA K | (Remote tuner Taiwan) | JPL | SUN |

| | | | | | |
|------|-------------------|---|----------------------|-----|-----|
| 4985 | 1214z (IP) 30 Oct | R FF NR 69 4/EX 2014 RMKS 0141 TO 0166 BT (1214z) EF/G75 AR NR 6994/EX 2014 RMKS 0141 TO 0166 BT EF/G75 AR K (1215z) R U F GA K (Other station N/H on this frequency – 1215z) | (Remote tuner Japan) | JPL | SUN |
|------|-------------------|---|----------------------|-----|-----|

| | | | | | |
|------|-------------------|---|--------------------------|-----|-----|
| 7619 | 2238z (IP) 16 Sep | 76NU 3UTN 4765 4TT4 4DNT A5D4 AUA4 3DT7 | (Remote tuner Hong Kong) | JPL | FRI |
|------|-------------------|---|--------------------------|-----|-----|

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//7517 | Call Sign S2DJ | New frequency for this new Round Slip. Believe this to be new Round Slip and freq for YHxD DE SAQC | | | |
| | 1803z | 06 Sep | V XP5B (x3) DE S2DJ (x2) | (Remote tuner Novosibirsk) | JPL TUE |
| | 1615z | 22 Sep | V XP5B (x3) DE S2DJ (x2) | (Remote tuner Novosibirsk) | JPL SAT |
| 4243//NRH | Message number differs from current XSV70 and XSV85 message numbers. | | | | |
| 4243//9054 | Message number differs from current XSV70 and XSV85 message numbers. | | | | |
| | 1156z (IP) | 30 Oct | TT6 773 3UD 353 373 N3D (IP – Cont'd – 1156z) | (Remote tuner Novosibirsk) | JPL SUN |
| 4364//8073 | Call Sign XSV85 | | | | |
| | 1130z | 09 Oct | NR 0767 CK 518 35 1009 1601 BT | (Remote tuner Hong Taiwan) | JPL SUN |
| | 1158z | 30 Oct | NR 0884 CK 622 35 1030 1640 BT | (Remote tuner Novosibirsk) | JPL SUN |
| 4754 | Call Sign (Not known) | (Remote tuner Japan) | | | |
| | 1242 (IP) - 1255z | 30 Oct | NR 263/CCK CK 99 .9 1030 2005 RMKS .590 TO 4561 TO 459. AR K | JPL | SUN |
| 5651//12039 | Call sign S2DJ | | | | |
| | 0053z | 16 Sep | V XP5B (x3) DE S2DJ (x2) (IP - Cont'd) | (Remote tuner Novosibirsk) | JPL FRI |
| | 1052z | 09 Oct | V XP5B (x3) DE S2DJ (x2) (IP - Cont'd) | (Remote tuner Novosibirsk) | JPL SUN |
| | 1207z | 30 Oct | V XP5B (x3) DE S2DJ (x2) (IP - Cont'd) | (Remote tuner Novosibirsk) | JPL SUN |
| 7517 | Call sign S2DJ | | | | |
| | 2214z | 16 Sep | V XP5B (x3) DE S2DJ (x2) (IP - Cont'd) | (Remote tuner Khabarovsk) | JPL FRI |
| 9054 | Call sign XSV85 | | | | |
| | <i>(See also 4243//9054kHz listing)</i> | | | | |
| | 1152z (IP) | 09 Oct | 343 N3U 3D4 TT3 (In progress) (// 4243 N/H) | (Remote tuner Hong Taiwan) | JPL SUN |
| 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 | 2131z | 16 Sep | MXI CW Beacon "D" Sevastopol | BR | FRI |
| 4557.9 | 2131z | 16 Sep | MXI CW Beacon "S" Severomorsk | BR | FRI |
| 5153.8 | 1742z | 14 Sep | MXI CW Beacon "P" Kaliningrad | BR | WED |
| | 0530z | 30 Sep | MXI CW Beacon "P" Kaliningrad | Weak PLdn | FRI |
| 5153.9 | 2106z | 16 Sept | MXI CW Beacon "S" Severomorsk | BR | FRI |
| 5154.1 | 1743z | 14 Sep | MXI CW Beacon "A" Astrakhan | Weak BR | WED |
| 5156.8 | 2018z | 07 Oct | MX CW Beacon " L" St Petersburg | BR | BR |
| 7508.7 | 2127z | 16 Sep | MXI CW Beacon "D" Sevastopol | BR | FRI |
| 7508.8 | 1741z | 14 Sep | MXI CW Beacon "P" Kaliningrad | BR | WED |
| 7508.9 | 1741z | 14 Sep | MXI CW Beacon "S" Severomorsk | BR | WED |
| 7509.1 | 2127z | 16 Sep | MXI CW Beacon "A" Astrakhan | BR | FRI |
| 8494.8 | 1737z | 14 Sep | MXI CW Beacon "P" Kaliningrad | BR | WED |
| 8494.9 | 1737z | 14 Sep | MXI CW Beacon "S" Severomorsk | BR | WED |
| 8497.8 | 1740z | 14 Sep | MX CW Beacon "L" St Petersburg | BR | WED |
| 10871.7 | 1732z | 14 Sep | MXI CW Beacon "D" Sevastopol | BR | WED |
| 10871.9 | 1734z | 14 Sep | MXI CW Beacon "S" Severomorsk | BR | WED |
| 10872.1 | 1734z | 14 Sep | MXI CW Beacon "A" Astrakhan | BR | WED |

| | | | | | | | | | | |
|---------|-------|--------|-----|----|--------|-----|-------------|------|----|-----|
| 13527.7 | 2125z | 16 Sep | MXI | CW | Beacon | "D" | Sevastopol | | BR | FRI |
| 13527.9 | 2126z | 16 Sep | MXI | CW | Beacon | "S" | Severomorsk | | BR | FRI |
| 16331.9 | 1538z | 07 Oct | MXI | CW | Beacon | "S" | Severomorsk | Weak | BR | FRI |
| 20047.7 | 1435z | 07 Oct | MXI | CW | Beacon | "D" | Sevastopol | | BR | FRI |
| 20047.9 | 1436z | 07 Oct | MXI | CW | Beacon | "S" | Severomorsk | | BR | FRI |

Contributors: AB, BR, Gert, HFD, JPL, PLdn, PoSW *Thank you all for your logs.*

Voice Number Stations

E06 Sept/Oct log:

| | | | | | | | | | |
|--|---|-----------------------|--------------|-------|--|-------|----------|-------|----------|
| Monday | | 0210z | 11426kHz | 0310z | 14477kHz | | | | |
| 05/09 | ‘537’ 192 48 48799.....etc | (thanks Hfd) | | | | | | | |
| | | 0210z | 11528kHz | 0310z | 14613khz | | | | |
| 10/10 | ‘53’ 908 31 60572.....etc | (thanks Hfd) | | | | | | | |
| Thursday (repeats Friday) | | 0300z | 13537kHz | 0400z | 11521khz (frequencies may vary slightly) | | | | |
| 01/09 | ‘361’ 598 42 71151.....etc | (thanks Hfd) | | | | | | | |
| | | 0300z | 16219khz | 0400z | 13545kHz | | | | |
| 06/10 | ‘361’ 209 47 05740.....etc | via KiwiSDR RUS | (thanks Hfd) | | | | | | |
| First /Third Thursday (repeats Friday) | | 0500z | 14370kHz | 0600z | 16265kHz | | | | |
| 01/09 | ‘354’ 290 61 40780 46250 47713 08529 19773 35187 50055 47493 45699 94469 65325 71140 65548 27475 27560 10462 13359 74778 66580 24216 06136 12500 93417 94768 66819 85880 61993 05287 53989 76568 99270 59212 03000 27023 21043 27964 08219 70492 75553 37793 01079 39990 82137 31742 03607 54711 57073 67639 62137 07340 43821 38058 90883 00656 89851 23194 80062 06905 37238 12590 48254 290 61 00000 | | | | | | | | |
| 15/09 | ‘354’ 172 60 85277 63541 93169 80732 80027 30819 15845 18808 60221 12414 84664 55700 51525 17490 24620 87237 62443 10428 41866 40460 84513 05521 65954 28530 85554 27005 18721 38921 69433 01604 45775 34621 00761 75786 71524 72990 17972 74914 63666 71991 83225 46471 18101 78472 42553 54569 00177 18183 94696 17899 03236 32219 92082 08340 10372 29581 22361 52386 70351 10528 172 60 00000 | | | | | | | | |
| | | 0600z | 18425khz | 0700z | 20230kHz | | | | |
| 06/10 | ‘186’ 327 50 96406 89146 16171 71582 93262 65719 77980 62760 96822 06921 26303 42409 17564 84747 94140 15650 56659 57868 13879 14595 00623 63611 70963 35500 50819 84268 29167 33823 42527 61148 94619 13137 33238 54826 10798 68826 64879 75018 01657 72499 29658 28530 05097 08073 94195 58698 63951 95440 61656 74781 327 50 00000 | | | | | | | | |
| 20/10 | ‘186’ 490 52 24851 13789 03889 45671 40935 14547 19818 37252 29826 94839 31227 97823 19351 21019 80977 71227 61478 66484 78822 94969 62469 31163 42534 23622 98662 89206 80155 58788 60099 75852 68039 58093 89160 49378 04386 21593 06423 89094 42950 79078 40893 15310 36618 26689 06838 42205 45528 86282 94376 99555 89432 85992 490 52 00000 | | | | | | | | |
| Other transmissions: | | | | | | | | | |
| | | 1000z | 15643khz | 1030z | 13343kHz | 1300z | 14721kHz | 1330z | 12188kHz |
| 25/10 | ‘527’ 608 43 07818 87655 97399 78109 62728 21756 74515 41190 87812 06423 48286 33234 18957 91677 96727 58841 26797 43850 92289 59244 87385 67695 56172 02630 27573 02036 80320 12847 62285 74885 46770 84926 65874 28980 99062 60860 44748 53656 45382 64060 03451 84017 98123 608 43 00000] | 1312z S3 + QRM M8 TUE | | | | | | | |
| 31/10 | ‘527’ 931 45 76304 22372 57530 87247 79491 54264 97072 86833 94138 47788 48244 78476 08912 92532 68277 62275 69010 13304 47252 01397 29114 52613 19297 74682 20882 27422 37555 80963 14689 56478 05117 41008 80289 82380 79085 08060 78095 36705 89983 72888 21748 21646 43674 14294 33689 931 45 00000] | 1343z | | | | | | | |

E07 with an identity crisis :-) E06 voice and both the E06 ending (00000) and E07 ending (000 000)

10256khz 12-10-2022 1100z E07
123 123 123 1 (R) 3167 1 3167 1 00000 000 000

and a very fast one
10256kHz 12-10-2022 1208 E07
123 123 123 1 (R) 312 15 312 15
62028 04768 70784 05786 69464 65666 43713 36103 96333 32501
93588 52509 66505 22160 66030
000 000

Ary

From PoSW:

First + Third Thursdays in the Month 0500 + 0600 UTC Schedule:-

Frequencies for this schedule in the month of September last year were 14370 + 16265 kHz,
as per En126 of September '21.

1-Sept-22:- 0500 UTC, 14370 kHz, calling “354”, started off around 3 to 4 on the S-meter, S7 after a few minutes. DK/GC “290 290 61 61”, ended approx 0514:30s UTC.
Nothing readable at 0600 UTC on 16265.

2-Sept-22, Friday:- 0500 UTC, 14370 kHz, the repeat on the following day, weak signal, difficult copy.
0600 UTC, 16265 kHz, second sending, unlike 24 hours earlier a readable signal.

15-Sept-22:- Nothing readable at 0500 UTC on 14370.
0609 UTC, 16265 kHz, nothing heard until about nine minutes into the transmission, emerged from the noise, ended around 0614 UTC with, “172 172 60 60 00000”.

16-Sept-22, Friday:- 0500 UTC, 14370 kHz, call “354”, DK/GC “172 172 60 60”, weak at first then became stronger.
0600 UTC, 16265 kHz, good signal, up to S9 at times.

Moves forwards by one hour in October.

6-Oct-22:- 0600 UTC, 18425 kHz, predicted frequency for the first sending, very weak signal, unreadable.
Nothing readable at 0700z on 20230, predicted frequency for the second sending.

7-Oct-22, Friday:- 0600 UTC, 18425 kHz, very weak, unreadable.
0700 UTC, 20230 kHz, very weak at first, became stronger around 0708z, ended after 0712 with, “327 327 50 50 00000”.

20-Oct-22:- 0600 UTC, 18425 kHz, call “186”, DK/GC “490 490 52 52”, weak, clear.
0700 UTC, 20230 kHz, much stronger, S-meter up to S8, ended around 0713z.

21-Oct-22, Friday:- 0600 UTC, 18425 kHz, considerably stronger than yesterday, around S7.
0700 UTC, 20230 kHz, good signal, S7 to S8 with occasional fading down.

E07

PoSW opens with his logs and analysis

Saturday Schedule, 1300 UTC Start:-

3-Sept-22:- 1300 UTC, 12176 kHz, “152 152 152 000”, strong signal.
1320 UTC, 11576 kHz, also strong, over-riding local interference.

10-Sept-22:- 1300 UTC, 12176 kHz, “152 152 152 000”, strong.
1320 UTC, 11576 kHz, also strong.

17-Sept-22:- 1300 UTC, 12176 kHz and 1320 UTC, 11576 kHz, both strong, “152 152 152 000”.

24-Sept-22:- 1300 UTC, 12176 kHz, “152 152 152 000”, usual strong signal.
1320 UTC, 11576 kHz, strong. Noticed a very strong “XJT” on the HF side, centred on 11580 approx, not close enough to be a problem to E07 but not observed before.

1-Oct-22:- 1300 UTC, 12176 kHz, “152 152 152 000”, very strong signal.
1320 UTC, 11576 kHz, strong.

8-Oct-22:- 1300 UTC, 12176 kHz and 1320 UTC, 11576 kHz, both strong, “152 152 152 000”.

15-Oct-22:- 1300 UTC, 12176 kHz, strong, “152 152 152 000”.
1320 UTC, 11576 kHz, also strong.

22-Oct-22:- 1300 UTC, 12176 kHz and 1320 UTC, 11576 kHz, both strong, “152 152 152 000”.
A clear run of “no message” for the last couple of months then. The last time this schedule sent a message - making the usual disclaimer that not every single transmission has been monitored but the vast majority have - appears to be in April of this year when one of 140 5F groups was heard, taking the best part of seventeen minutes to transmit.

Sunday Schedule, 0600 UTC Start:-

This Sunday breakfast time schedule always repeats the format of the previous day's

1300 UTC sending.

4-Sept-22:- 0600 UTC, 9261 kHz, "224 224 224 000", weak signal at first, became somewhat stronger over the course of the two-minute transmission.
0620 UTC, 10261 kHz, weak.

11-Sept-22:- 0600 UTC, 9261 kHz, "224 224 224 000", weak.
0620 UTC, 10261 kHz, very weak.

18-Sept-22:- 0600 UTC, 9261 kHz, weak and 0620 UTC, 10261 kHz, very weak, 2224 224 224 000".

25-Sept-22:- 0600 UTC, 9261 kHz, "224 224 224 000", weak.
0620 UTC, 10261 kHz, very weak.

2-Oct-22:- 0600 UTC, 10317 kHz, "312 312 312 000", strong enough to be heard over local interference.
0620 UTC, 11117 kHz, very weak, difficult copy.

9-Oct-22:- 0600 UTC, 10317 kHz:- very weak, unreadable.
0620 UTC, 11117 kHz, "312 312 312 000", weak, only just readable.

16-Oct-22:- 0600 UTC, 10317 kHz, "312 312 312 000", weak signal.
0620 UTC, 11117 kHz, much stronger, unusually, peaking over S9.

Saturday + Thursday Schedule, 1410 UTC Start:-

1-Sept-22, Thursday:- 1410 UTC, 16228 kHz, "594 594 594 1", message, DK/GC "718 72" x 2, strong signal.

1430 UTC, 15928 kHz, second sending, slightly weaker.

1450 UTC, 14928 kHz, weakest.

Frequencies shown in Newsletter 126 of September last year true for this year also.

8-Sept-22, Thursday:- 1410 UTC, 16228 kHz, "594 594 594 000", strong signal.
1430 UTC, 15928 kHz, also strong.

10-Sept-22, Saturday:- 1410 UTC, 16228 kHz, "594 594 594 000", good signal.
1430 UTC, 15928 kHz, weaker.

15-Sept-22, Thursday:- 1410 UTC, 16228 kHz, "594 594 594 1", DK/GC "555 55" x 2; all the fives? Seems a bit unlikely! Is someone having a laugh here? Good signal albeit with some fading.

1430 UTC, 15928 kHz, stronger.

1450 UTC, 14928 kHz, weaker, an indicated S4 to S5.

17-Sept-22, Saturday:- 1410 UTC, 16228 kHz, "594" and "555 55" again, S5 to S6.

1430 UTC, 15928 kHz, stronger, peaking well over S9.

1450 UTC, 14928 kHz, S6 to S7.

22-Sept-22, Thursday:- 1410 UTC, 16228 kHz, "594 594 594 000", S4 to S5.

1430 UTC, 15928 kHz, stronger.

24-Sept-22, Saturday:- 1410 UTC, 16228 kHz, "594 594 594 000", signal up and down.

1430 UTC, 15928 kHz, also varying in strength.

29-Sept-22, Thursday:- 1410 UTC, 16228 kHz, "594 594 594 1", message, DK/GC "780 80" x 2, strong signal.

1430 UTC, 15928 kHz, difficult copy due to very strong wide-band pulse/buzz signal extending from about 15920 to 15940, presumably someone's over-the-horizon radar.

1450 UTC, 14928 kHz, S6 to S7.

1-Oct-22, Saturday:- 1410 UTC, 15849 kHz, "746 746 746 1", DK/GC "780 80" again, good signal.

1430 UTC, 14849 kHz, S5 to S7.

1450 UTC, 13449 kHz, S5 to S6.

6-Oct-22, Thursday:- 1410 UTC, 15849 kHz, "746 746 746 000", strong.

1430 UTC, 14849 kHz, weaker.

8-Oct-22, Saturday:- 1410 UTC, 15849 kHz and 1430 UTC, 14849 kHz, both strong, "746 746 746 000".

13-Oct-22, Thursday:- 1410 UTC, 15849 kHz, "746 746 746 1", message, DK/GC "3362 65". Another example of that wide-band OHR interference here but considerably weaker than E07.

1430 UTC, 14849 kHz, a reasonable S6 to S7.

1450 UTC, 13449 kHz, also S6 to S7.

15-Oct-22, Saturday:- 1410 UTC, 15849 kHz, "746" and "3362 65" again, strong signal.

1430 UTC, 14849 kHz and 1450 UTC, 13449 kHz, repeats, somewhat weaker.

22-Oct-22, Saturday:- 1410 UTC, 15849 kHz, "746 746 746 000", good signal.

1430 UTC, 14849 kHz, weaker.

Also noted an E07 schedule running on Tuesdays, 1500 UTC start, found by chance in the second week of October, can't see it shown in the E2k prediction list:-

11-Oct-22:- 1506 UTC, 17461 kHz, surprised to find the E07 OM in message mode while casually tuning around, as you do. Strong signal, ended a bit before 1512 UTC.

Found the two repeats without too much trouble:-

1520 UTC, 16161 kHz, “413 413 413 1”, DK/GC “301 112” x 2, weaker than the first sending.

1540 UTC, 14361 kHz, third sending, around S5.

18-Oct-22:- 1500 UTC, 17461 kHz, “413 413 413 000”, no message today, strong signal.

1520 UTC, 16161 kHz, also strong.

The thought occurred that this schedule might also run on another day of the week besides Tuesdays, found it on a Friday:-

21-Oct-22:- 1500 UTC, 17461 kHz, “413 413 413 000”, very strong signal.

1520 UTC, 16161 kHz, weaker.

And onto others’ logs

Sunday

September 2022

| 0600z | 9261kHz | 0620z | 10261kHz | 0640z | 11461kHz |
|-------|---------|-------|----------|-------|----------|
| 04/09 | 224 000 | | | | Weak |
| 11/09 | 224 000 | | | | Weak |

October 2022

| 0600z | 10317kHz | 0620z | 11117kHz | 0640z | 12217kHz |
|-------|--------------------------------|-------|----------|-------|------------------------|
| 02/10 | 312 000 | | | | 0600z Fair, 0620z Weak |
| 09/10 | 312 000 | | | | 0600z Weak, 0620z Fair |
| 16/10 | 312 000 | | | | Weak |
| 23/10 | Not Monitored, Lightning storm | | | | |
| 30/10 | 312 000 | | | | 0600z Weak, 0620z Fair |

Tuesday/Friday

September 2022

| 0700z | 16354kHz | 0720z | 18654kHz | 0740z | 19354kHz |
|-------|---------------------------------------|-------|----------|-------|----------------------|
| 02/09 | 363 1 2776 63 98712 ... 67310 000 000 | | | | Weak, 0720z QRM |
| 06/09 | 363 000 | | | | Weak via Finnish SDR |
| 09/09 | NRH | | | | Condx poor |
| 13/09 | NRH | | | | |

SEE BELOW/1500z schedule

October 2022

| 0700z | 15962kHz | 0720z | 17462kHz | 0740z | 18542kHz |
|-------|----------|-------|----------|-------|----------|
|-------|----------|-------|----------|-------|----------|

SEE BELOW/1500z schedule

Tuesday/Friday

September 2022

| 1500z | 17452kHz | 1520z | 16242kHz | 1540z | 14875kHz | Replaces 0700z schedule/see above |
|-------|----------------------|-------|----------|-------|----------|-----------------------------------|
| 20/09 | 428 000 | | | | Weak | |
| 27/09 | 428 1 7247 137 n228n | | | | | rest inaudible, QRN4 |

October 2022

| 1500z | 17461kHz | 1520z | 16161kHz | 1540z | |
|-------|----------|-------|----------|-------|------|
| 04/10 | 413 000 | | | | Weak |
| 07/10 | 413 000 | | | | Weak |

| | | |
|-------|---------------------------------------|--------------------------------------|
| 11/10 | 413 1 301 112 68563 ... 53176 000 000 | 1500z Weak, 1520z Fair, 1540z Strong |
| 14/10 | 413 1 301 112 68563 ... 53176 000 000 | Weak |
| 18/10 | 413 1 301 112 68563 ... 53176 000 000 | Weak |
| 25/10 | 413 1 7240 94 94195 ... 84354 000 000 | Weak |
| 28/10 | 413 1 7240 94 94195 ... 84354 000 000 | Weak |

Thursday/Saturday

September 2022

| 1410z | 16228kHz | 1430z | 15928kHz | 1450z | 14928kHz |
|-------|---|-------|----------|-------|--|
| 01/09 | 594 1 718 72 99831 ... 15866 000 000 | | | | 1450z Fair, rest weak |
| 03/09 | 594 1 718 72 99831 ... 15866 000 000 | | | | 1450z Fair. rest weak & via Finnish SDR |
| 10/09 | 594 000 | | | | Weak |
| 15/09 | 594 1 555 55 17453 ... 66945 000 000 | | | | Fair, 1410z Weak |
| 17/09 | 594 1 555 55 17453 ... 66945 000 000 | | | | 1410z Weak, rest Fair |
| 29/09 | 594 1 780 80 06892 ... <u>74878</u> 000 000 | | | | Fair QSB3, 1430z QRM5 [Uncertain last group] |

October 2022

| 1410z | 15849kHz | 1430z | 14849kHz | 1450z | 13449kHz |
|-------|---------------------------------------|-------|----------|-------|----------------------------|
| 01/10 | 746 1 780 80 06892 ... 74878 000 000 | | | | 1410z Fair, rest Weak QRM3 |
| 06/10 | 746 000 | | | | Weak |
| 08/10 | 746 000 | | | | 1410z Weak, 1430z Fair |
| 13/10 | 746 1 3362 65 60657 ... 39887 000 000 | | | | Weak, 1410z QRM |
| 15/10 | 746 1 3362 65 60657 ... 39877 000 000 | | | | Fair, 1430z Weak |

746 1 3362 65
60657 08376 98148 25247 17758 08084 36210 07982 89653 84903
23300 46272 98516 52181 96481 60291 26655 29600 03555 07952
14285 50257 83014 88858 88583 27845 25504 02721 00130 83414
27749 97091 35734 11101 70361 76295 45119 06807 01067 07737
19703 12496 ?1442 26897 23881 15752 69121 37359 08838 76490
82312 57800 55421 92583 12824 37393 78147 10963 12681 36803
53711 38979 36846 83243 39877 000 000 *Courtesy BRIXMIS*

| | | |
|-------|--------------------------------------|-----------------------------|
| 20/10 | 746 000 | Fair, 1410z QRM3 |
| 22/10 | 746 000 | 1410z Weak, 1430z Fair |
| 29/10 | 746 1 976 58 65737 ... 44636 000 000 | 1410z Fair, 1430/1450z Weak |

Saturday

September 2022

| 1300z | 12176kHz | 1320z | 11576kHz | 1340z | 10276kHz |
|-------|----------|-------|----------|-------|----------|
| 03/09 | 152 000 | | | | Fair |
| 10/09 | 152 000 | | | | Weak |
| 17/09 | 152 000 | | | | Strong |
| 24/09 | 152 000 | | | | Fair |

October 2022

| 1300z | 12176kHz | 1320z | 11576kHz | 1340z | 10276kHz |
|-------|----------|-------|----------|-------|---------------------|
| 01/10 | 152 000 | | | | Fair, 1320z TTYQRM2 |
| 08/10 | 152 000 | | | | Strong |
| 15/10 | 152 000 | | | | Weak |

22/10 152 000 Strong

29/10 152 000 Strong

E11 & E11a log Sept/Oct

E11 & E11a log Sept/Oct

| | | | | | |
|---------|-------|--|--|---------------|-----|
| 4181kHz | 1910z | 03/09 [399/00] Out 1913z S9 | | Malc, HfD | SAT |
| | 1910z | 07/09 [394/00] Out 1913z S9 | | Malc | WED |
| | 1910z | 14/09 [393/00] Out 1913z S9 | | Malc | WED |
| | 1910z | 24/09 [396/36 35771 93723 46081 14524 54313 26021 62454 10187.....40781 53739] S5 | | Brixmis | SAT |
| | 1910z | 01/10 [390/00] | | Gary H | SAT |
| | 1900z | 05/10 [121/31 01056 38450 15055 77658 46500 10101 45653 34655 41435 63010 43011 01501 04561 05547 66010 10147 56318 45634 50560 15646 80014 75658 70006 76001 46510 10356 01845 05785 10468 50105 44808 (The crazy world of 121) | | Ary | WED |
| | 1910z | 05/10 [392/39 65991 68834 33666 84083 03415.....15083] Out 1921z S7 | | Malc | WED |
| | 1910z | 08/10 [392/39 65991.....etc] Repeat of Wednesday | | Brixmis | SAT |
| | 1910z | 12/10 [393/00] Out 1913z | | Brixmis | WED |
| | 1910z | 15/10 [396/00] Out 1913z S4 | | Malc | SAT |
| | 1910z | 19/10 [396/00] Out 1913z S5 | | Malc, Brixmis | WED |
| | 1910z | 22/10 [395/00] Out 1913z S5 | | Brixmis | SAT |
| | 1910z | 26/10 [396/00] Out 1913z S7 | | Malc, Brixmis | WED |
| | 1910z | 29/10 [390/00] Out 1913z S9 | | Malc | SAT |
| 4505kHz | 1530z | 03/09 [368/00] Out 1533z S3 (Finnish SDR) | | Malc, HfD | SAT |
| | 1530z | 04/09 [367/00] Out 1533z S2 (Dutch SDR) | | Malc | SUN |
| | 1530z | 10/09 [369/00] Out 1533z S2 (Dutch SDR) | | Malc | SAT |
| | 1530z | 11/09 [366/00] Out 1533z S3 | | Malc | SUN |
| | 1530z | 17/09 [368/35 88348.....45474] Out 1540z S3 (Dutch SDR) | | Malc | SAT |
| | 1530z | 02/10 [365/00] Out 1533z S2 | | Malc | SUN |
| | 1530z | 08/10 [369/00] Out 1533z S2 | | Malc | SAT |
| | 1530z | 09/10 [369/00] Out 1533z S2 | | Malc | SUN |
| | 1530z | 16/10 [365/00] Out 1533z S2 | | Malc | SUN |
| | 1530z | 23/10 [363/00] | | Gary H, Malc | SUN |
| | 1530z | 29/10 [366/33 19718.....97696] Out 1540z S3 | | Malc | SAT |
| 5176kHz | 1605z | 04/09 [233/00] Out 1608z S2 (Dutch SDR) | | Malc, HfD | SUN |
| | 1605z | 13/09 [237/00] Out 1608z S2 + QRM | | Malc | TUE |
| | 1605z | 20/09 [232/00] Out 1608z S2+QRM | | Malc | TUE |
| | 1605z | 27/09 [232/00] | | Gary H | TUE |
| | 1605z | 02/10 [238/00] Out 1608z S2 | | Malc | SUN |
| | 1605z | 04/10 [231/00] Out 1608z S3 | | Malc | TUE |
| | 1605z | 09/10 [379/00] Out 1608z S3 | | Malc | SUN |
| | 1605z | 11/10 [232/00] Out 1708z S3+QRM | | Malc | TUE |
| | 1605z | 16/10 [233/00] Out 1608z S2+QRM | | Malc | SUN |
| | 1605z | 18/10 [230/40 57803.....02937] Out 1616z S2+QRM | | Malc | TUE |
| | 1605z | 23/10 [230/40 57803 87903....etc] Repeat of Tuesday | | Brixmis | SUN |
| | 1605z | 25/10 [235/00] Out 1608z S6+QRM | | Malc | TUE |
| | 1605z | 30/10 [236/00] Out 1608z S2+QRM | | Malc | SUN |
| 5371kHz | 1300z | 01/09 [319/00] Out 1303z S2 (Dutch SDR) | | Malc, HfD | THU |
| | 0450z | 05/09 [418/00] | | HfD | MON |
| | 1300z | 05/09 [310/30 55451.....87303] Out 1310z S5 (Finnish SDR) | | Malc | MON |
| | 1300z | 15/09 [310/00] Out 1303z S2 (Dutch SDR) | | Malc | THU |
| | 1300z | 03/10 [313/00] Out 1303z S3 (Dutch SDR) | | Malc | MON |
| | 1300z | 06/10 [310/00] Out 1303z S2 | | Malc | THU |
| | 1300z | 10/10 [314/37 00936.....52241] Out 1311z S3 (Dutch SDR) | | Malc | MON |
| | 1300z | 17/10 [316/00] Out 1303z S2 (Dutch SDR) | | Malc | MON |
| | 1300z | 24/10 [319/00] Out 1303z S3 (Dutch SDR) | | Malc | MON |
| | 1300z | 31/10 [319/00] Out 1303z S2 | | Malc | MON |
| 5737kHz | 2000z | 01/09 [520/00] Out 2003z S6 | | Malc, HfD | THU |
| | 2000z | 04/09 [524/00] Out 2003z S5 | | Malc | SUN |
| | 2000z | 11/09 [521/00] Out 2003z S3 | | Malc | SUN |
| | 2000z | 15/09 [524/00] Out 2003z S7 | | Malc | THU |
| | 2000z | 18/09 [525/00] Out 2003z S5 | | Brixmis | SUN |
| | 2000z | 06/10 [524/00] Out 2003z S3 | | Malc | THU |
| | 2000z | 09/10 [525/00] Out 2003z S5 | | Malc | SUN |
| | 2000z | 16/10 [522/00] Out 2003z S3 | | Malc | SUN |
| | 2000z | 20/10 [522/00] Out 2003z S4 | | Malc, Brixmis | THU |

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| | 2000z | 23/10 [521/00] Out 2003z S4 | | Malc | SUN |
| | 2000z | 30/10 [525/38 62951 72235 77382 51010 18037 52060 66248.....62233 56994] Out 2001z S5 | | Brixmis, Malc | SUN |
| 5941kHz | 0820z | 01/09 [432/00] | | RNGB, Malc, HfD | THU |
| | 0820z | 02/09 [439/00] Out 0823z S3 (Dutch SDR) | | Malc, HfD | FRI |
| | 0820z | 09/09 [431/00] Weak | | RNGB, Malc | FRI |
| | 0820z | 16/09 [439/00] | | RNGB, Malc | FRI |
| | 0820z | 22/09 [436/00] Fair | | RNGB | THU |
| | 0820z | 23/09 [439/00] Fair | | RNGB | FRI |
| | 0820z | 06/10 [430/37 08826 83839 00997 98383 06540 22923 59373 43958.....45868 71242] Fair | | RNGB, Malc | THU |
| | 0820z | 07/10 [430/37 08826....etc] Repeat of Thursday | | Malc | FRI |
| | 0820z | 13/10 [435/00] Out 0823z S2 | | Malc | THU |
| | 0820z | 14/10 [430/00] Out 0823z S2 | | Malc | FRI |
| | 0820z | 20/10 [432/00] Fair | | RNGB, Malc | THU |
| | 0820z | 28/10 [438/00] Strong | | RNGB, Malc | FRI |
| 6923kHz | 1715z | 02/09 [975/00] Out 1718z S4 | | Malc, HfD | FRI |
| | 1205z | 06/09 [466/33 60647.....59481] Out 1215z S2 (Dutch SDR) | | Malc, HfD | TUE |
| | 1715z | 07/09 [976/00] Out 1718z S5 | | Malc | WED |
| | 1715z | 09/09 [970/00] Out 1808z S4 | | Malc | FRI |
| | 1205z | 13/09 [465/00] Out 1208z S2 (Dutch SDR) | | Malc | TUE |
| | 1205z | 14/09 [465/00] Out 1208z S3 (Dutch SDR) | | Malc | WED |
| | 1715z | 14/09 [970/00] Out 1718z S4 | | Malc | WED |
| | 1715z | 16/09 [974/00] Out 1718z S6 | | Malc | FRI |
| | 1205z | 20/09 [460/00] Out 1208z S2 | | Malc | TUE |
| | 1205z | 04/10 [469/00] Out 1208z S2 | | Malc | TUE |
| | 1205z | 05/10 [463/00] Out 1208z S3 (Dutch SDR) | | Malc | WED |
| | 1715z | 05/10 [978/35 48725.....65531] Out 1725z S7 | | Malc | WED |
| | 1205z | 11/10 [460/00] Out 1208z S2 | | Malc | TUE |
| | 1205z | 12/10 [461/00] Out 1208z S2 | | Malc | WED |
| | 1715z | 12/10 [975/00] Out 1718z S9 | | Malc | WED |
| | 1715z | 14/10 [976/00] Out 1718z S5 | | Malc | FRI |
| | 1205z | 18/10 [361/00] Out 1308z S4 (Dutch SDR) | | Malc | TUE |
| | 1205z | 19/10 [460/00] Out 1208z S4 (Dutch SDR) | | Malc | WED |
| | 1715z | 19/10 [974/00] Out 1718z S7 | | Malc | WED |
| | 1715z | 21/10 [972/00] | | Gary H | FRI |
| | 1205z | 25/10 [460/32 08397.....21211] Out 1215z S2 | | Malc | TUE |
| | 1205z | 26/10 [460/32 08397....etc] Repeat of Tuesday | | Malc | WED |
| | 1715z | 26/10 [978/00] Out 1718z S4 | | Malc | WED |
| | 1715z | 28/10 [978/00] Out 1718z S2 | | Malc | FRI |
| 6940kHz | 0930z | 01/09 [279/00] Out 0933z S4 (Dutch SDR) | | Malc, HfD | THU |
| | 0930z | 07/09 [273/00] Out 0933z S3 (Dutch SDR) | | Malc | WED |
| | 0930z | 14/09 [279/00] Out 0933z S2 | | Malc | WED |
| | 0930z | 21/09 [279/40 57205 99308 71439 55733 66276 43523 82287 71317.....14509 13497] Fair | | RNGB | WED |
| | 0930z | 22/09 [279/40 57205....etc] Repeat of Wednesday | | RNGB | THU |
| | 0930z | 05/10 [278/00] Fair | | RNGB | WED |
| | 0930z | 06/10 [270/00] Out 0933z S2 | | Malc | THU |
| | 0930z | 12/10 [276/00] Out 0933z S3 (Dutch SDR) | | Malc | WED |
| | 0930z | 13/10 [271/00] Out 0933z S2 | | Malc | THU |
| | 0930z | 19/10 [277/00] Out 0933z S2 | | Malc | WED |
| | 0930z | 20/11 [271/00] Out 0933z S2 | | Malc | THU |
| | 0930z | 26/10 [275/33 77814.....38114] Out 0940z S4 | | Malc | WED |
| 7317kHz | 1900z | 01/09 [649/00] Out 1903z S5 | | Malc, HfD | THU |
| | 1045z | 05/09 [691/00] Out 1048z S2 | | Malc, HfD | MON |
| | 1900z | 05/09 [647/00] Out 1903z S7 | | Malc | MON |
| | 1045z | 07/09 [697/00] Out 1048z S3 (Dutch SDR) | | Malc | WED |
| | 1900z | 12/09 [643/00] Out 1903z S5 (Dutch SDR) | | Malc | MON |
| | 1045z | 14/09 [696/00] Out 1048z S3 (Dutch SDR) | | Malc | WED |
| | 1900z | 15/09 [643/00] Out 1903z S9+10 | | Malc | THU |
| | 1045z | 19/09 [696/00] Out 1048z S2 | | Malc | MON |
| | 1900z | 19/09 [644/00] Out 1903z S5 | | Malc | MON |
| | 2000z | 02/10 [524/00] Out 2003z S3 | | Malc | SUN |
| | 1045z | 03/10 [696/00] Out 1048z S3 (Dutch SDR) | | Malc | MON |
| | 1900z | 03/10 [648/34 92354 36805 96344 79455.....58884] Out 1910z S5 | | Brixmis, Malc | MON |
| | 1045z | 05/10 [692/00] Out 1048z S2 | | Malc | WED |
| | 1900z | 06/10 [648/34 92354....etc] Repeat of Monday | | Malc, KopF | THU |
| | 1045z | 10/10 [694/00] Out 1048z S2 | | Malc | MON |
| | 1900z | 10/10 [649/00] Out 1903z S9 | | Malc | MON |
| | 1045z | 12/10 [692/00] Out 1048z S2 | | Malc | WED |
| | 1900z | 13/10 [646/00] Out 1903z | | Brixmis | THU |

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| | 1900z | 17/10 [464/00] Out 1903z S4 | Malc | MON |
| | 1900z | 20/10 [640/00] Out 1903z S4 | Malc, Brixmis | THU |
| | 1900z | 24/10 [640/00] Out 1903z S3 | Malc, Brixmis | MON |
| | 1900z | 31/10 [646/00] Out 1903z S5 | Malc | MON |
| 7864kHz | 1733z | 01/09 [410/00] Out 1736z S4 (Late start) | Malc, HfD | THU |
| | 1730z | 15/09 [413/35 81736.....55603] Out 1740z S6 | Malc | THU |
| | 1730z | 06/10 [410/00] Out 1733z S4 | Malc | THU |
| | 1730z | 13/10 [415/31 57684.....06982] Out 1740z S9 | Malc | THU |
| | 1730z | 20/10 [414/00] Out 1733z S7 | Malc | THU |
| 8180kHz | 0700z | 02/09 [577/00] | RNGB, Malc, HfD | FRI |
| | 0700z | 06/09 [476/32 18831.....30947] Out 0710z S2 | Malc | TUE |
| | 0700z | 09/09 [576/32 18831.....etc] Repeat of Tuesday | Malc | FRI |
| | 0700z | 13/09 [576/00] Out 0703z S2 | Malc | TUE |
| | 0700z | 16/09 [571/00] | RNGB, Malc | FRI |
| | 0700z | 20/09 [575/00] Strong | RNGB | TUE |
| | 0700z | 23/09 [570/00] Good | RNGB | FRI |
| | 0700z | 27/09 [579/00] Good | RNGB | TUE |
| | 0700z | 04/10 [579/00] Out 0703z S5 | Malc | TUE |
| | 0700z | 07/10 [571/00] Out 0703z S5 | Malc | FRI |
| | 0700z | 11/10 [576/00] Good | RNGB, Malc | TUE |
| | 0700z | 14/10 [575/00] Out 0703z S5 | Malc | FRI |
| | 0700z | 18/10 [575/00] Out 0703z S4 | Malc | TUE |
| | 0700z | 25/10 [573/37 46486.....91624] Out 0711z S4 | Malc | TUE |
| 8423kHz | 0645z | 01/09 [514/00] | RNGB, Malc, HfD | THU |
| | 0645z | 06/09 [514/35 22895.....67036] Out 0655z S3 | Malc | TUE |
| | 0645z | 13/09 [511/00] Out 0648z S3 | Malc | TUE |
| | 0645z | 15/09 [512/00] Out 0748z S3 | Malc | THU |
| | 0645z | 20/09 [519/00] | RNGB | TUE |
| | 0645z | 20/09 [519/00] Out 0648z S3 | Malc | TUE |
| | 0645z | 27/09 [519/00] Good | RNGB | TUE |
| | 0645z | 04/10 [515/00] Out 0648z S5 | Malc | TUE |
| | 0645z | 06/10 [515/00] Out 0648z S4 | Malc | THU |
| | 0645z | 11/10 [512/00] Out 0648z S3 | Malc | TUE |
| | 0645z | 13/10 [518/00] Out 0648z S5 | Malc | THU |
| | 0645z | 18/10 [518/00] Out 0648z S5 | Malc | TUE |
| | 0645z | 20/10 [517/00] Good | RNGB, Malc | THU |
| | 0640z | 25/10 [512/38 01718.....97060] Out 0656z S4 | Malc | TUE |
| 8530kHz | 1910z | 02/09 [610/00] Out 1913z S6 | Malc, HfD | FRI |
| | 1910z | 04/09 [611/00] Out 19123z S8 | Malc, Kopf, Gary H | SUN |
| | 1910z | 09/09 [617/00] Out 1913z S9 | Malc | FRI |
| | 1910z | 11/09 [616/00] Out 1913z S3 | Malc | SUN |
| | 1910z | 16/09 [617/00] Out 1913z S4 | Malc | FRI |
| | 1910z | 02/10 [610/00] Out 1913z S4 | Malc | SUN |
| | 1910z | 07/10 [613/00] | Brixmis | FRI |
| | 1910z | 09/10 [618/00] Out 1913z S6 | Malc | SUN |
| | 1910z | 14/10 [611/40 96918.....24506] Out 1926z S4 | Malc | FRI |
| | 1910z | 16/10 [611/40 96918.....etc] Repeat of Friday | Malc | SUN |
| | 1910z | 23/10 [613/00] Out 1913z S5 | Malc | SUN |
| | 1910z | 28/10 [612/00] Out 1913z S3 | Malc | FRI |
| | 1910z | 30/10 [612/00] Out 1913z S4 | Malc, Brixmis | SUN |
| 8680kHz | 0600z | 02/09 [353/00] | HfD | FRI |
| | 0600z | 04/09 [352/00] Out 0603z S2 | Malc | SUN |
| | 0600z | 11/09 [351/00] Out 0603z S3 | Malc | SUN |
| | 0600z | 09/10 [359/35 25762.....84493] Out 0610z S4 | Malc | SUN |
| | 0600z | 16/10 [358/00] Out 0603z S3 | Malc, HfD | SUN |
| 9079kHz | 0700z | 03/09 [491/00] | RNGB, Malc, HfD | SAT |
| | 0700z | 04/09 [492/00] | RNGB, Malc | SUN |
| | 0700z | 11/09 [497/00] Out 0703z S2 | Malc | SUN |
| | 0700z | 17/09 [496/00] Out 0703z S3 | Malc | SAT |
| | 0700z | 08/10 [496/00] Out 0703z S4 | Malc | SAT |
| | 0700z | 09/10 [398/00] Out 0703z S3 | Malc | SUN |
| | 0700z | 15/10 [498/00] Out 0703z S4 | Malc | SAT |
| | 0700z | 16/10 [497/00] Out 0703z S4 | Malc | SUN |
| | 0700z | 22/10 [491/00] Out 0703z S2 | Brixmis | SAT |
| | 0700z | 29/10 [496/38 59022.....49523] Out 0711z S4 | Malc | SAT |

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| 9951kHz | 1000z | 02/09 [304/00] | RNGB, Malc, HfD | FRI |
| | 1000z | 06/09 [305/00] Out 1003z S3 | Malc | TUE |
| | 1000z | 09/09 [306/00] Good | RNGB, Malc | FRI |
| | 1000z | 13/09 [302/00] Out 1003z S3 | Malc | TUE |
| | 1000z | 16/09 [305/00] Out 1003z S4 (Dutch SDR) | Malc | FRI |
| | 1000z | 20/09 [304/00] Out 1003z S2 | Malc | TUE |
| | 1000z | 23/09 [307/00] Good | RNGB | FRI |
| | 1000z | 27/09 [300/36 88326 45767 56248 95988 04981 84706 54797 40694 57507.....06559 53747] | RNGB | TUE |
| | 1000z | 30/09 [300/36 88326.....etc] Repeat of Tuesday | RNGB | FRI |
| | 0900z | 04/10 [305/00] Out 0903z S2 | Malc | TUE |
| | 1000z | 07/10 [309/00] Out 1003z S4 | Malc | FRI |
| | 1000z | 11/10 [304/22 20613.....17936] Out 1008z S3 | Malc | TUE |
| | 1000z | 18/10 [302/00] Out 1003z S3 | Malc | TUE |
| | 1000z | 28/10 [305/00] Out 1003z S3 | Malc | FRI |
| 9963kHz | 0715z | 02/09 [633/00] | RNGB, HfD | FRI |
| | 0715z | 06/09 [636/00] Out 0718z S2 | Malc | TUE |
| | 0715z | 09/09 [637/00] | RNGB, Malc | FRI |
| | 0715z | 13/09 [634/00] Out 0718z S3 | Malc | TUE |
| | 0715z | 16/09 [634/00] | RNGB, Malc | FRI |
| | 0715z | 20/09 [630/31 87621 15023 12956 50512 02785 84232 14106.....55456] Out 0724z S3 | RNGB, Malc | TUE |
| | 0715z | 23/09 [630/31 87621.....etc] Repeat of Tuesday | RNGB | FRI |
| | 0715z | 27/09 [636/00] Out 0718z S2 | Brixmis | TUE |
| | 0715z | 04/10 [639/36 64657.....40632] Out 0725z S5 | Malc | TUE |
| | 0715z | 07/10 [639/36 64657.....etc] Repeat of Tuesday | Malc | FRI |
| | 0715z | 11/10 [635/00] Out 0718z S3 | Malc | TUE |
| | 0715z | 14/10 [633/00] Good | RNGB | FRI |
| | 0715z | 18/10 [639/00] Out 0718z S4 | Malc | TUE |
| | 0715z | 21/10 [633/00] Good | RNGB | FRI |
| | 0715z | 25/10 [630/00] Out 0718z S4 | Malc | TUE |
| | 0715z | 28/10 [630/00] Out 0718z S5 | Malc | FRI |
| 9968kHz | 0900z | 05/09 [538/00] Out 0903z S3 | Malc | MON |
| | 0900z | 07/09 [534/00] Out 0903z S2 | Malc | WED |
| | 0900z | 12/09 [533/00] Out 0903z S3 | Malc | MON |
| | 0900z | 14/09 [532/00] Out 0903z S4 | Malc | WED |
| | 0900z | 19/09 [538/31 41631.....74692] Out 0910z S2 | Malc | MON |
| | 0900z | 28/09 [530/00] Good | RNGB | WED |
| | 0900z | 03/10 [538/00] Out 0903z S5 | Malc | MON |
| | 0900z | 05/10 [533/00] Good | RNGB | WED |
| | 0900z | 05/10 [533/00] Out 0903z S3 | Malc | WED |
| | 0900z | 10/10 [532/00] Out 0903z S3 | Malc | MON |
| | 0900z | 12/10 [535/00] Out 0903z S3 | Malc | WED |
| | 0900z | 17/10 [537/34 58755.....26331] Out 0910z S4 | Malc | MON |
| | 0900z | 24/10 [534/00] Out 0903z S3 | Malc | MON |
| | 0900z | 26/10 [535/00] Out 0903z S4 | Malc | WED |
| | 0900z | 31/10 [532/00] Out 0903z S5 | Malc | MON |
| 10200kHz | 1045z | 26/10 [696/21 95016.....61052] Out 1052z S6 | Malc | WED |
| | 1045z | 31/10 [691/00] Out 1048z S3 | Malc | MON |
| 10213kHz | 0745z | 05/09 [269/00] | RNGB, Malc, HfD | MON |
| | 0745z | 12/09 [268/33 75931.....03099] Out 0755z | Malc | MON |
| | 0747z | 19/09 [264/00] Out 0750z S4 (3 mins Late) | Malc | MON |
| | 0745z | 26/09 [262/00] Good | RNGB | MON |
| | 0745z | 03/09 [260/00] Good | RNGB | MON |
| | 0745z | 03/10 [260/00] Out 0748z S5 | Malc | MON |
| | 0745z | 10/10 [264/00] Good | RNGB | MON |
| | 0745z | 10/10 [264/00] Out 0748z S6 | Malc | MON |
| | 0745z | 17/10 [261/39 11050.....80390] Out 0756z S5 | Malc, HfD | MON |
| | 0745z | 24/10 [266/00] Strong | RNGB | MON |
| | 0745z | 24/10 [266/00] Out 0748z S9 | Malc | MON |
| | 0745z | 31/10 [268/00] Out 0748z S6 | Malc | MON |
| 10330kHz | 1530z | 01/09 [262/00] Out 1533z S5 | Malc, dMHz, HfD | THU |
| | 1530z | 15/09 [268/33 75931 15499 21682 37495 01012 45459 41819.....59335 03099] Out 1540z | Gary H, Malc | THU |
| | 1530z | 06/10 [261/00] Out 1533z S6 | Malc | THU |
| | 1530z | 13/10 [260/00] Out 1533z S9 | Malc | THU |
| | 1530z | 20/10 [261/39 11050 25941 13831 71619 45969 51203 06626.....84803.80390] Out 1541z S7 | Gary H, Malc, Brixmis | THU |

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| 11092kHz | 0315z | 01/09 [258/00] | | HfD | THU |
| | 0315z | 19/10 [259/38 84839.....etc] | | HfD | WED |
| 11116kHz | 1815z | 02/09 [925/00] Out 1818z S6 | | Malc, HfD | FRI |
| | 1815z | 09/09 [927/00] Out 1818z S2 | | Malc | FRI |
| | 1815z | 16/09 [921/34 97424.....90397] Out 1825z S5 | | Malc | FRI |
| | 1815z | 02/10 [921/00] Out 1818z S3 | | Malc | SUN |
| | 1815z | 07/10 [926/00] Out 1818z S7 | | Malc | FRI |
| | 1815z | 09/10 [925/00] Out 1818z S6 | | Malc | SUN |
| | 1815z | 14/10 [929/00] Out 1818z S3 | | Malc | FRI |
| | 1815z | 16/10 [925/00] Out 1818z S5 | | Malc | SUN |
| | 1815z | 23/10 [924/00] Out 1818z S5 | | Malc | SUN |
| | 1815z | 28/10 [929/36 90912.....02795] Out 1826z S2 | | Malc | FRI |
| 12202kHz | 0845z | 05/09 [710/31 49655.....21447] Out 0854z S3 | (Dutch SDR) | Malc, HfD | MON |
| | 0845z | 07/09 [710/31 49655.....etc] Repeat of Monday | | Malc | WED |
| | 0845z | 12/09 [711/00] Out 0848z S2 | | Malc | MON |
| | 0845z | 14/09 [710/00] Out 0848z S5 | | Malc | WED |
| | 0845z | 21/09 [713/00] Fair | | RNGB | WED |
| | 0845z | 03/10 [710/00] Out 0848z S4 | | Malc | MON |
| | 0845z | 05/10 [719/00] Out 0848z S5 | | Malc | WED |
| | 0845z | 10/10 [715/00] Out 0848z S4 | | Malc | MON |
| | 0845z | 12/10 [713/00] Out 0848z S5 | | Malc | WED |
| | 0845z | 17/10 [719/34 58576.....14188] Out 0855z S4 | | Malc | MON |
| | 0845z | 24/10 [716/00] Out 0848z S6 | | Malc | MON |
| | 0845z | 26/10 [718/00] Out 0848z S7 | | Malc | WED |
| | 0845z | 31/10 [718/00] Good | | RNGB, Malc | MON |
| 12530kHz | 1230z | 01/09 [334/00] Out 1233z S3 | | Malc, HfD | THU |
| | 1230z | 06/09 [220/40 72939.....66726] Out 1241z S3 | | Malc | TUE |
| | 1230z | 13/09 [334/00] Out 1233z S4 | | Malc | TUE |
| | 1230z | 15/09 [337/00] Out 1533z S4 | | Malc | THU |
| | 1230z | 20/09 [331/00] Out 1233z S4 | | Malc | TUE |
| | 1230z | 04/10 [335/00] Out 1233z S5 | | Malc | TUE |
| | 1230z | 06/10 [232/00] Out 1233z S5 | | Malc | THU |
| | 1230z | 11/10 [337/35 98639.....05934] Out 1240z S5 | | Malc | TUE |
| | 1230z | 18/10 [332/00] Out 1233z S6 | | Malc | TUE |
| | 1230z | 20/10 [335/00] Out 1233z S5 | | Malc, Brixmis | THU |
| | 1230z | 25/10 [224/00] Out 1233z S4 | | Malc | TUE |
| | 1230z | 27/10 [331/00] Out 1233z | | Brixmis | THU |
| 13470kHz | 1745z | 04/09 [246/00] Out 1748z S5 | | Malc, HfD | SUN |
| | 1745z | 05/09 [247/00] Out 1748z S2 | | Malc | MON |
| | 1745z | 11/09 [240/00] Out 1748z S5 Out 1755z S8 | | Malc | MON |
| | 1745z | 02/10 [240/00] Out 1748z S3 (Dutch SDR) | | Malc | SUN |
| | 1745z | 03/10 [249/00] Out 1748z S7 | | Malc | MON |
| | 1745z | 09/10 [248/00] Out 1748z S9 | | Malc | SUN |
| | 1745z | 10/10 [246/00] Out 1748z S9 | | Malc | MON |
| | 1745z | 16/10 [240/00] Out 1748z S5 | | Malc | SUN |
| | 1745z | 17/10 [246/00] Out 1748z S4 | | Malc | MON |
| | 1745z | 23/10 [249/00] S5 | | Brixmis, Malc | SUN |
| | 1745z | 24/10 [240/32 91275.....78332] Out 1755z S3 | (Dutch SDR) | Malc | MON |
| | 1745z | 30/10 [240/32 91275.....etc] Repeat of Monday | | Brixmis | SUN |
| | 1745z | 31/10 [249/00] Out 1748z S2+QRM | | Malc | MON |
| 13908kHz | 0845z | 01/09 [157/00] | | RNGB, Malc, HfD | THU |
| | 0845z | 06/09 [156/35 26170.....13120] Out 0855z S5 | | Malc | TUE |
| | 0845z | 13/09 [150/00] Out 0848z S4 | | Malc | TUE |
| | 0845z | 20/09 [154/00] Out 0848z S6 | | Malc | TUE |
| | 0845z | 04/10 [156/00] Out 0848z S4 | | Malc | TUE |
| | 0845z | 06/10 [151/00] Out 0848z S6 | | Malc | THU |
| | 0845z | 11/10 [150/31 08211.....87882] Out 0855z S4 | | Malc | TUE |
| | 0845z | 13/10 [150/31 08211.....etc] Repeat of Tuesday | | Malc | THU |
| | 0845z | 18/10 [150/00] Out 0848z S5 | | Malc | TUE |
| | 0845z | 20/10 [150/00] Good | | RNGB, Malc | THU |
| | 0845z | 25/10 [150/00] Out 0848z S4 | | Malc | TUE |
| 14865kHz | 0745z | 01/09 [223/00] | | RNGB, Malc, HfD | THU |
| | 0640z | 05/09 [949/00] Out 0643z S2 | | Malc, HfD | MON |
| | 0640z | 07/09 [941/00] Out 0643z S4 | | Malc | WED |
| | 0640z | 12/09 [945/00] Out 0643z S2 | | Malc | MON |
| | 0745z | 13/09 [220/00] Out 0748z S5 | | Malc | TUE |

| | | | | | |
|----------|-------|--|-------------|-----------------------|-----|
| | 0640z | 14/09 [944/00] Out 0643z S2 | | Malc | WED |
| | 0745z | 15/09 [224/00] | | RNGB, Malc | THU |
| | 0640z | 19/09 [949/26 19374.....27346] Out 0648z S2 | (Dutch SDR) | Malc | MON |
| | 0745z | 20/09 [225/00] Strong | | RNGB | TUE |
| | 0745z | 22/09 [223/00] Fair | | RNGB | THU |
| | 0745z | 20/09 [225/00] Out 0748z S9 | | Malc | TUE |
| | 0745z | 27/09 [227/00] Fair | | RNGB | TUE |
| | 0745z | 29/09 [224/00] Good | | RNGB | THU |
| | 0640z | 03/10 [942/00] Out 0643z S2 | | Malc | MON |
| | 0745z | 04/10 [225/00] Out 0748z S2 | | Malc | TUE |
| | 0640z | 05/10 [949/00] Out 0643z S3 | (Dutch SDR) | Malc | WED |
| | 0745z | 06/10 [220/00] Out 0748z S2 | | Malc | THU |
| | 0640z | 10/10 [946/00] Out 0643z S2 | | Malc | MON |
| | 0745z | 11/10 [227/00] Out 0748z S4 | | Malc | TUE |
| | 0640z | 12/10 [940/00] Out 0643z S3 | | Malc | WED |
| | 0745z | 13/10 [221/00] Out 0748z S8 | | Malc | THU |
| | 0640z | 17/10 [942/36 34141.....19110] Out 0650z S7 | | Malc | MON |
| | 0745z | 18/10 [225/00] Out 0748z S9 | | Malc | TUE |
| | 0640z | 19/10 [942/36 34141.....19110] Out 0650z S3 | | Malc | WED |
| | 0645z | 20/10 [227/00] Good | | RNGB, Malc | THU |
| | 0745z | 25/10 [223/31 42372 16899 63754 34549 27544 54268 97919 35081 83622..... | | RNGB | TUE |
| | 0640z | 24/10 [942/00] Out 0643z S2 | | Malc | MON |
| | 0745z | 25/10 [223/31 43272.....19819] Out 0754z S9 | | Malc | TUE |
| | 0640z | 26/10 [946/00] Out 0643z S6 | | Malc | WED |
| 14972kHz | 1430z | 03/09 [910/00] Out 1433z S2 | | Malc, HfD | SAT |
| | 1430z | 06/09 [912/00] Out 1433z S2 | (Dutch SDR) | Malc | TUE |
| | 1430z | 10/09 [919/00] Out 1433z S2 | (Dutch SDR) | Malc | SAT |
| | 1430z | 13/09 [911/00] Out 1433z S5 | | Malc | TUE |
| | 1430z | 17/09 [919/00] Out 1433z S7 | | Malc | SAT |
| | 1430z | 20/09 [918/37 09996.....78921] Out 1441z S7 | | Malc | TUE |
| | 1430z | 01/10 [910/00] | | Gary H | SAT |
| | 1430z | 04/10 [917/00] Out 1433z S9 | | Malc | TUE |
| | 1430z | 11/10 [914/00] Out 1433z S4 | | Malc, Gary H | TUE |
| | 1430z | 15/10 [912/00] Out 1433z S6 | | Malc | SAT |
| | 1430z | 25/10 [915/40 77571 06814 97057 23738 69315 34702 63342 95984.....48122 95124] Out 1441z | | Brixmis, Gary H, Malc | TUE |
| 15632kHz | 0715z | 05/09 [755/00] Out 0718z S2 | (Dutch SDR) | Malc, HfD | MON |
| | 0715z | 07/09 [750/00] Weak | | RNGB | WED |
| | 0715z | 07/09 [750/00] Out 0718z S3 | | Malc | WED |
| | 0715z | 12/09 [751/00] Out 0718z S2 | | Malc | MON |
| | 0715z | 14/09 [750/00] Out 0718z S2 | | Malc | WED |
| | 0715z | 21/09 [754/34 32391 71997 58039 37004 96368 45618 01011 61841.....89754 58378] | | RNGB | WED |
| | 0715z | 28/09 [759/00] Fair | | RNGB | WED |
| | 0715z | 03/10 [752/00] Out 0718z S2 | | Malc | MON |
| | 0715z | 05/10 [754/00] Out 0718z S2 | | Malc | WED |
| | 0715z | 10/10 [753/00] Out 0718z S2 | | Malc | MON |
| | 0715z | 12/10 [751/00] Out 0715z S9 | | Malc | WED |
| | 0715z | 17/10 [755/33 11473.....95003] Out 0726z S5 | | Malc | MON |
| | 0715z | 24/10 [757/00] Out 0718z S2 | | Malc | MON |
| | 0715z | 26/10 [754/00] Fair | | RNGB, Malc | WED |
| | 0715z | 31/10 [752/00] Out 0718z S8 | | Malc | MON |
| 15905kHz | 0830z | 02/09 [189/00] Out 0833z S3 | | Malc, HfD | FRI |
| | 0830z | 05/09 [189/37 09807 20476 77042 04585 22645 76789 32000 10952.....20473 10457] | | RNGB | MON |
| | 0830z | 09/09 [189/37 09807.....etc] repeat of Monday | | Malc | FRI |
| | 0830z | 12/09 [181/00] Out 0833z S3 | | Malc | MON |
| | 0830z | 16/09 [188/00] Out 0833z S2 | | Malc | FRI |
| | 0830z | 19/09 [188/00] Out 0833z S5 | | Malc | MON |
| | 0830z | 03/10 [183/00] Out 0833z S2 | | Malc | MON |
| | 0830z | 07/10 [180/00] Out 0833z S5 | | Malc | FRI |
| | 0830z | 10/10 [184/30 72280.....04423] Out 0839z S5 | | Malc | MON |
| | 0830z | 14/10 [184/30 72280.....etc] Repeat of Monday | | Malc | FRI |
| | 0830z | 17/10 [184/00] Out 0833z S4 | | Malc | MON |
| | 0830z | 24/10 [189/00] Out 0833z S5 | | Malc | MON |
| | 0830z | 28/10 [189/00] Fair | | RNGB, Malc | FRI |
| | 0830z | 31/10 [180/00] Out 0833z S5 | | Malc | MON |
| 17410kHz | 0745z | 02/09 [342/00] | | RNGB, Malc | FRI |
| | 0745z | 07/09 [342/00] | | RNGB, HfD | WED |
| | 0745z | 09/09 [347/00] | | RNGB | FRI |
| | 0745z | 07/09 [342/00] Out 0748z S3 | | Malc | WED |

| | | | | |
|----------|--|--|------------|-----|
| 0745z | 09/09 [347/00] Out 0748z S2 | (Dutch SDR) | Malc | FRI |
| 0745z | 14/09 [348/00] Out 0748z S2 | (Dutch SDR) | Malc | WED |
| 0745z | 16/09 [347/00] Weak | | RNGB, Malc | FRI |
| 0745z | 28/09 [344/31 76016 62345 51706 08941 87937 42093 61690 77756.....32478 39659] | | RNGB | WED |
| 0745z | 05/10 [342/00] Good | (Polish SDR) | RNGB | WED |
| 0745z | 05/10 [342/00] Out 0748z S2 | (Dutch SDR) | Malc | WED |
| 0745z | 07/10 [343/00] Out 0748z S3 | (Dutch SDR) | Malc | FRI |
| 0745z | 12/10 [347/00] Out 0745z S2 | | Malc | WED |
| 0745z | 14/10 [347/00] Weak | | RNGB, Malc | FRI |
| 0745z | 19/10 [342/00] Out 0748z S7 | | Malc | WED |
| 0745z | 26/10 [346/34 98914.....48459] Out 0755z S7 | | Malc | WED |
| 19184kHz | 0820z | 06/09 [133/00] | HfD | TUE |
| | 0820z | 13/09 [132/00] (Polish SDR) | RNGB, Malc | TUE |
| | 0820z | 14/09 [135/00] Out 0823z S2 | Malc | WED |
| | 0820z | 20/09 [131/00] Out 0823z S2 | Malc | TUE |
| | 0820z | 21/09 [134/00] | RNGB | WED |
| | 0820z | 28/09 [132/30 71998 48137 43752 01926 38804 04928 34870 93827.....62895 94454] | RNGB | WED |
| | 0820z | 04/10 [130/33 79606.....81942] Out 0830z S2 | Malc | TUE |
| | 0820z | 05/10 [130/33 79606....etc] Repeat of Tuesday | Malc | WED |
| | 0820z | 12/10 [135/00] Out 0823z S3 | Malc | WED |
| | 0820z | 18/10 [133/00] Out 0823z S3 | Malc | TUE |
| | 0820z | 19/10 [138/00] Out 0823z S2 | Malc | WED |
| | 0820z | 25/10 [131/00] Out 0823z S7 | Malc | TUE |
| | 0820z | 26/10 [136/00] Fair | RNGB | WED |

From PoSW we have:

A few of the E11 transmissions over the past two months, the vast majority being of the “no message” variety lasting just over three minutes, those heard with a message had a group count in the thirties which results in a transmission time in the region of ten minutes, give or take.

4181 kHz:-

Always a strong - or very strong - signal.

10-Sept-22, Sat:- 1910 UTC, “395/00”.

14-Sept-22, Wed:- 1910 UTC, “393/00”.

17-Sept-22, Sat:- 1910 UTC, “391/00”.

24-Sept-22, Sat:- 1910 UTC, “396/36”, message.

28-Sept-22, Wed:- 1910 UTC, “391/00”.

1-Oct-22, Sat:- 1910 UTC, “390/00”, continues to be a strong signal.

12-Oct-22, Wed:- 1910 UTC, “393/00”.

19-Oct-22, Wed:- 1910 UTC, “396/00”.

22-Oct-22, Sat:- 1910 UTC, “395/00”.

5737 kHz:-

4-Sept-22, Sun:- 2000 UTC, “524/00”.

11-Sept-22, Sun:- 2000 UTC, “521/38”, message, very strong.

18-Sept-22, Sun:- 2000 UTC, “525/00”.

22-Sept-22, Thu:- 2000 UTC, “527/00”.

25-Sept-22, Sun:- 2000 UTC, “525/00”.

2-Oct-22, Sun:- 2000 UTC, “524/00”.

6-Oct-22, Thu:- 2000 UTC, “524/00”.

7317 kHz:-

5-Sept-22, Mon:- 1900 UTC, “647/00”.

15-Sept-22, Thu:- 1900 UTC, “643/00”.

22-Sept-22, Thu:- 1900 UTC, “646/00”.

29-Sept-22, Thu:- 1900 UTC, “643/36”, message.

3-Oct-22, Mon:- 1900 UTC, “648/34”, message.

6-Oct-22, Thu:- 1900 UTC, “648/34”, same as on the 3rd.

17-Oct-22, Mon:- 1900 UTC, “646/00”.

8180 kHz:-

13-Sept-22, Tue:- 0700 UTC, “576/00”.

16-Sept-22, Fri:- 0700 UTC, “571/00”.

20-Sept-22, Tue:- 0700 UTC, “575/00”.

23-Sept-22, Fri:- 0700 UTC, “570/00”.

18-Oct-22, Tue:- 0700 UTC, “575/00”.

21-Oct-22, Fri:- 0700 UTC, “570/00”.

8530 kHz:-

16-Sept-22, Fri:- 1910 UTC, “617/00”.

18-Sept-22, Sun:- 1910 UTC, “617/00”.

30-Sept-22, Fri:- 1910 UTC, “617/00”.

2-Oct-22, Sun:- 1910 UTC, “610/00”.

7-Oct-22, Fri:- 1910 UTC, “613/00”.

21-Oct-22, Fri:- 1910 UTC, “610/00”.

12202 kHz:-

28-Sept-22, Wed:- 0845 UTC, “718/00”.

3-Oct-22, Mon:- 0845 UTC, “710/00”.
 10-Oct-22, Mon:- 0845 UTC, “715/00”.
 12-Oct-22, Wed:- 0845 UTC, “713/00”.
 17-Oct-22, Mon:- 0845 UTC, “719/34”, message, good signal, “Out” just before 0855z.
 19-Oct-22, Wed:- 0845 UTC, “719/34” again.

13908 kHz:-
 6-Sept-22, Tue:- 0845 UTC, “156/35”, message, weak signal.
 4-Oct-22, Tue:- 0845 UTC, “156/00”.
 11-Oct-22, Tue:- 0845 UTC, “150/31”, message, weak.
 18-Oct-22, Tue:- 0845 UTC, “150/00”.

14972 kHz:-
 17-Sept-22, Sat:- 1430 UTC, “919/00”.
 24-Sept-22, Sat:- 1430 UTC, “918/37”, message, “Out” 1440:43s UTC.
 1-Oct-22, Sat:- 1430 UTC, “910/00”.
 8-Oct-22, Sat:- 1430 UTC, “919/00”.
 15-Oct-22, Sat:- 1430 UTC, “912/00”.
 22-Oct-22, Sat:- 1430 UTC, “917/00”.

S06

S06 log Sept/Oct 2022

Friday 1st & 3rd

| | | 1900z | 9268khz | 2000z | 6775kHz |
|-------|-------------|--------------|----------------|--------------|----------------|
| 02/09 | ‘319’ 00000 | | | | |
| 16/09 | ‘319’ 00000 | | | | |
| | | 2000z | 9268kHz | 2100z | 6775kHz |
| 07/10 | ‘319’ 00000 | | | | |

Other transmissions:

| | | 1615z | 10755khz |
|-------|---|--------------|-----------------|
| 05/09 | ‘975’ 864 52 81569 39225..... (The message started at 1615z but it was too weak to copy) Thanks Ary Restart copied by HfD at 1623z | | |

| | | 1500z | 13896kHz | 1600z | 10381kHz |
|-------|--|--------------|-----------------|--------------|-----------------|
| 06/09 | ‘387’ 901 2 11111 00056 901 2 ‘387’ 156 42 20030 91036 73166 87576 44872 14725 91648 93372 06699 17674 23400 76924 47160 27142 74815 95669 55760 77252 24484 57467 21393 35396 98987 18354 14829 83430 22629 49912 19351 39596 70768 24717 51715 32096 81461 93282 40645 60268 05092 50952 55012 04300 156 42 00000 | | | | |

From PoSW we have:

First + Third Fridays in the Month Schedule:-

As we move into the autumn this schedule uses the same frequencies as in the springtime months, as in previous years.

2-Sept-22:- 1900 UTC, 9268 kHz, “319 319 319 00000”, good signal.
 2000 UTC, 6775 kHz, strong.

16-Sept-22:- 1900 UTC, 9268 kHz, “319 319 319 00000”, much weaker than last time, difficult copy.
 2000 UTC, 6775 kHz, strong signal.

Shifted forwards by one hour in October:-

7-Oct-22:- 2000 UTC, 9268 kHz, very weak signal, unreadable, only detected by tuning slightly LF in USB mode to produce a heterodyne from S06 carrier. Went off after 2004z, suggests “no message”.
 2100 UTC, 6775 kHz, much stronger, “319 319 319 00000”.

21-Oct-22:- 2000 UTC, 9268 kHz, “319 319 319 00000”, over-riding local RF interference.
 2100 UTC, 6775 kHz, good signal

Spectre 3000 offers a S06b log

| | | | |
|---------------|--|-----|---------|
| 12203kHz1425z | 26/10 [583 409 2 11111 00058 409 2 00000] 1430z Fair QRN2 QSB2 | WED | Spectre |
|---------------|--|-----|---------|

S11a log Sept/Oct

| | | | | |
|----------|-------|--|-----------------|-----|
| 6433kHz | 0830z | 03/09 [376/00] | RNGB, Malc, HfD | SAT |
| | 0830z | 10/09 [371/34 97623 75981 94716 78481 92192 55581 39931.....14481 47020 46069] | RNGB, Malc | SAT |
| | 0830z | 11/09 [371/34 97623.....etc] | Malc | SUN |
| | 0830z | 17/09 [378/00] Konyetz 0833z S3 | Malc | SAT |
| | 0830z | 08/10 [372/00] Konyetz 0833z S3 | Malc | SAT |
| | 0830z | 09/10 [379/00] Konyetz 0833z S3 | Malc | SUN |
| | 0830z | 15/10 [372/00] Konyetz 0833z S2 | Malc | SAT |
| | 0830z | 16/10 [379/00] Konyetz 0833z S2 | Malc | SUN |
| | 0830z | 29/10 [371/00] Konyetz 0833z S3 | Malc | SAT |
| | 0830z | 30/10 [379/00] Konyetz 0833z S5 | Malc | SUN |
| | | | | |
| 6480kHz | 0915z | 02/09 [485/00] | RNGB, Malc, HfD | FRI |
| | 0915z | 05/09 [486/00] | RNGB, Malc | MON |
| | 0915z | 09/09 [483/00] Good | RNGB | FRI |
| | 0915z | 09/09 [483/00] Out 0918z S4 (Dutch SDR) | Malc | FRI |
| | 0915z | 12/09 [486/37 60206.....41610] | Malc | MON |
| | 0915z | 16/09 [486/37 60206.....etc] Repeat of Monday | Malc | FRI |
| | 0915z | 19/09 [482/00] Konyetz 0918z S2 | Malc | MON |
| | 0915z | 23/09 [481/00] Weak | RNGB | FRI |
| | 0915z | 03/10 [480/00] Konyetz 0918z S4 | Malc | MON |
| | 0915z | 07/10 [485/00] Konyetz 0918z S2+QRM | Malc | FRI |
| | 0915z | 10/10 [481/00] Konyetz 0918z S2 + QRM | Malc | MON |
| | 0915z | 14/10 [482/00] Konyetz 0918z S2 | Malc | FRI |
| | 0915z | 17/10 [483/00] Konyetz 0918z S2+QRM | Malc | MON |
| | 0915z | 24/10 [484/33 52817 88320 95149 03484 13099 89036 02777.....00139 26911] Konyetz 0926z | RNGB, Malc | MON |
| | 0915z | 28/10 [484/33 52817.....etc] Repeat of Monday | RNGB | FRI |
| | 0915z | 31/10 [480/00] Konyetz 0918z S3 | Malc | MON |
| | | | | |
| 6797kHz | 1400z | 02/09 [427/00] Konyetz 1403z S3 (Dutch SDR) | Malc, HfD | FRI |
| | 1400z | 06/09 [429/00] Konyetz 1403z S2 | Malc | TUE |
| | 1400z | 09/09 [421/00] Out 1403z S2 (Dutch SDR) | Malc | FRI |
| | 1400z | 13/09 [420/33 32146.....91320] Konyetz 1411z S3 (Dutch SDR) | Malc | TUE |
| | 1400z | 16/09 [420/32 32146.....etc] Repeat of Tuesday | Malc | FRI |
| | 1400z | 20/09 [422/00] Konyetz 1403z S2 | Malc | TUE |
| | 1400z | 07/10 [421/00] Konyetz 1403z S2 | Malc | FRI |
| | 1400z | 11/10 [424/00] Konyetz 1403z S2 | Malc | TUE |
| | 1400z | 14/10 [422/00] Konyetz 1403z S4 (Dutch SDR) | Malc | FRI |
| | 1400z | 18/10 [425/00] Konyetz 1403z S5 (Dutch SDR) | Malc | TUE |
| | 1400z | 25/10 [427/35 66395.....36082] Konyetz 1412z S3 + QRM (Jamming) | Malc | TUE |
| | | | | |
| | | | | |
| 8597kHz | 0700z | 01/09 [471/00] | RNGB, Malc, HfD | THU |
| | 0700z | 05/09 [476/31 37861 31245 35833 25701 34376 02440 04076 89948.....50297 10308] | RNGB, Malc | MON |
| | 0700z | 12/09 [476/00] Konyetz 0703z S2 | Malc | MON |
| | 0700z | 15/09 [476/00] Konyetz 0703z S2 | Malc | THU |
| | 0700z | 19/09 [470/00] Konyetz 0703z S2 | Malc | MON |
| | 0700z | 29/09 [478/00] Good | RNGB | THU |
| | 0700z | 03/10 [476/00] Konyetz 0703z S4 | Malc | MON |
| | 0700z | 06/10 [475/00] | RNGB, Malc | THU |
| | 0700z | 10/10 [476/00] Konyetz 0703z S3 | Malc | MON |
| | 0700z | 13/10 [470/00] Konyetz 0703z S3 | Malc | THU |
| | 0700z | 17/10 [476/34 99633.....93807] Konyetz 0711z S5 | Malc | MON |
| | 0700z | 24/10 [476/00] Konyetz 0703z S4 | Malc | MON |
| | 0700z | 31/10 [465/00] Konyetz 0703z S5 | Malc | MON |
| | | | | |
| 10213kHz | 1850z | 03/09 [285/00] Konyetz 1853z S9 | Malc, HfD | SAT |
| | 1850z | 07/09 [288/39 86288.....18843] Konyetz 1902z S9 | Malc | WED |
| | 1850z | 10/09 [288/39 86388.....etc] Repeat of Wednesday | Malc | SAT |
| | 1850z | 14/09 [280/00] Konyetz 1853z S9 | Malc | WED |
| | 1850z | 17/09 [288/00] Konyetz 1853z S9 | Malc | SAT |
| | 1850z | 05/10 [281/00] Konyetz 1853z S6 | Malc | WED |
| | 1850z | 08/10 [284/00] Konyetz 1853z S5 | Malc | SAT |
| | 1850z | 12/10 [288/32 51396.....45085] Konyetz 1900z S9 | Malc | WED |
| | 1850z | 15/10 [288/32 51396.....etc] Repeat of Wednesday | Malc | SAT |
| | 1850z | 19/10 [285/00] Konyetz 1853z S5 | Malc | WED |
| | 1850z | 26/10 [282/00] Konyetz 1853z S5 | Malc | WED |
| | 1850z | 29/10 [280/00] Konyetz 1853z S9 | Malc | SAT |
| | | | | |

| | | | | |
|----------|-------|-----------------------------|----------|-----|
| 10728khz | 0445z | 01/09 [793/00] | Ary, HfD | THU |
| | 0445z | 18/10 [791/00] | HfD | TUE |
| 11116khz | 0510z | 05/09 [652/00] | HfD | MON |
| | 0510z | 10/10 [655/33 66578....etc] | HfD | MON |
| 14769kHz | 0500z | 01/09 [381/00] | HfD | THU |
| | 0500z | 11/10 [389/00] | HfD | TUE |

V07

Sunday

September 2022

| 0100z | 13535kHz | 0120z | 12135kHz | 0140z | 11135kHz | | | |
|-------|----------|--|----------|-------|----------|-----------|------|--|
| 0100z | 04/09 | 511 1 4869 102 58369 ... 53967 000 000 | | | 0100z | SDR Japan | Weak | |

511 511 511 1
4869 102
58369 96719 97361 25068 91950
96094 16416 78338 50618 60173
90051 12420 29230 62348 99652
25868 92002 54843 69004 58824
38162 81637 25793 12052 08985
76929 36683 35000 06912 44829
26910 44697 86598 21150 11218
73886 82932 29390 18620 20209
25489 17387 76545 35615 45996
12553 21312 20078 55431 49249
90369 85750 38619 50199 34785
72529 04910 71773 24201 98821
81797 74349 66905 68665 61291
02154 39083 96184 79887 17412
91642 76966 10336 60052 90255
45233 19590 80709 49348 44701
48345 51478 33725 13882 32027
85887 19185 27387 95874 14380
56294 18407 57938 34875 46793
17110 21534 41569 99310 06862
53967 02404 000 000

Courtesy DanAR

| | | | | | | | | |
|-------|-------|---------------------------------------|--|--|-------|-----------|------|--|
| 0100z | 11/09 | 511 1 5355 66 97607 ... 83294 000 000 | | | 0100z | SDR Japan | Weak | |
|-------|-------|---------------------------------------|--|--|-------|-----------|------|--|

511 511 511 1
5355 66
97607 61619 17832 82650 20684
86666 15667 47165 63689 98135
49919 16541 06342 68812 09886
98824 45434 95928 53860 72974
32701 56265 52560 71096 84696
44530 16628 55601 72733 54569
15550 70474 38984 61518 66408
38207 21729 51169 49970 18997
73498 80098 48536 99427 13506
84075 87747 82232 81409 62738
11669 45225 26940 62191 70139
59816 18421 03991 02192 92876
17205 34910 82147 93967 27030
83294 000 000

Courtesy DanAR

| | | | | | | | | |
|-------|-------|--|--|--|------------|-----------|------|--|
| 0100z | 18/09 | 511 1 7346 120 52576 ... 52423 000 000 | | | 0100z only | SDR Japan | Weak | |
|-------|-------|--|--|--|------------|-----------|------|--|

511 511 511 1
7346 120
52576 20635 67209 49063 94178
76434 54404 87213 00019 28921
53019 98933 38768 98319 22231
99968 31906 82610 76726 16162
30532 01812 71030 41372 84038
24813 05803 84237 27424 12584
81976 01267 84950 21307 12095
07535 91913 09360 84894 86664
11486 39880 91067 51416 56481
24822 01880 29302 96073 46232
91888 55282 04538 22849 36573
31352 09575 83018 44998 30630
06926 36608 01595 47128 52724
00628 00121 89589 40974 92578
50555 22664 77768 99497 57585
71010 02749 62744 82488 77047
66500 46726 72492 15074 37744
72483 30613 12943 72029 66228
56190 61645 49950 60932 28547
02837 08996 08763 23940 16185
90905 62014 67006 91087 38389
42988 69176 09197 16160 74059
84739 27296 02617 49636 23818
07435 36488 81079 45427 52423
000 000

Courtesy DanAR

From DanAR

| | | | | | | |
|--|--------------------------------------|---------------------------------------|--------------|-----------------|------|-----------|
| 0100z | 25/09 | 511 1 819 126 17014 ... 64657 000 000 | 0100z only | Weak | | |
| 511 511 511 1 819 126 17014 63642 09940 27646 73843 60293 90299 65438 09419 07472 37348 83559 73240 99640 80504 88286 41587 22933 27521 69677 52555 18453 70887 33601 19150 19349 23725 68926 46045 76362 16332 18079 31944 87356 67942 29293 09469 88999 20576 07452 59769 72730 50809 54806 24121 28210 77209 06708 55120 82493 90309 48422 62550 72015 50713 24387 28518 38222 30857 96161 84673 01578 03318 45778 74865 92161 00273 41375 46622 46397 13822 55217 05805 11210 64183 50835 02514 19476 89977 69508 46768 29172 65471 23950 50111 07609 88385 45469 38758 72701 18656 14104 39374 88356 81249 42439 17163 11271 58819 02283 25502 44223 49796 39728 89430 19382 37254 81383 17852 29550 02509 10948 72685 98410 89862 63395 08286 42443 60977 23957 52439 91730 60020 68615 67699 64657 000 000 <i>Courtesy DanAR</i> | | | | | | |
| October 2022 | | | | | | |
| 0100z | 15925kHz | 0120z 14725kHz | 0140z | 13425kHz | | |
| 02/10 | 974 1 208 84 44031 ... 7770? 000 000 | | [0120z only] | | Weak | |
| 974 974 974 1 208 84 44031 57428 32884 20025 03837 65991 73931 98404 78238 57746 44635 96013 15592 01162 59858 79409 39219 17999 77179 16747 45669 15440 24793 99494 27029 70974 96328 58430 12375 08160 89308 47630 04637 38502 35717 63385 14237 61947 64791 02535 35201 27548 35842 49898 84961 85194 40007 44724 78885 38797 26709 29820 13725 31167 96585 52527 29954 54233 61805 95403 59049 64434 99263 70899 66703 93465 39862 79570 32968 87053 20486 88995 30980 98394 91978 76073 43917 98400 99179 74311 83296 15859 31772 7770? 000 000 <i>Courtesy DanAR</i> | | | | | | |
| 09/10 | 974 1 362 66 73174 ... 09250 000 000 | | [0120z only] | | Weak | |
| 974 974 974 1 362 66 73174 74923 86911 41338 00865 86436 27282 83766 49185 12912 81775 53943 99910 70493 79804 25262 16662 22426 53590 06946 76933 40205 67133 35280 22528 63334 64274 99230 64443 67849 54550 95875 21800 28287 38799 29838 86320 11655 50172 00316 63574 86974 31203 84201 70022 67728 88472 66297 16858 86866 50086 37017 85382 07732 43815 99000 07997 83043 46109 97233 90272 14796 03312 22813 71667 09250 000 000 <i>Courtesy DanAR</i> | | | | | | |
| 15925kHz0100z | 16/10 | 974 1 5923 46 14628 ... 08495 000 000 | | | Weak | DanAr SUN |
| 974 974 974 1 5923 46 14628 49417 11586 94532 92059 11143 16603 50349 99300 72570 77696 90388 91903 11807 56350 19839 68188 54353 83188 27937 84592 07547 38525 57512 82550 64056 68019 11993 17111 11589 17221 40898 55320 98890 48755 18777 98888 98895 02580 58367 90741 90448 28723 88031 59498 08495 000 000 <i>Courtesy DanAR</i> | | | | | | |

| | | | | | |
|--|-------|-------------------------------------|------|-------|-----|
| 15925kHz0100z | 23/10 | 974 1 546 58 24842 ...03727 000 000 | Weak | DanAr | SUN |
| 974 974 974 1 546 58 24842 72651 95147 62804 29598 51469 07875 12769 51917 38907 35323 32368 17071 45220 73589 91707 88025 11072 00850 87557 48705 00966 66736 73205 22037 81956 10456 96515 42190 33315 63044 40979 51349 16047 48784 48967 26881 83931 76313 58487 89621 23529 41470 88993 72886 66048 18248 10527 88193 49323 89584 35207 85897 77182 46129 33095 40143 03727 000 000 <i>Courtesy DanAR</i> | | | | | |

| | | | | | |
|--|-------|--------------------------------------|------|-------|-----|
| 15925kHz0100z | 30/10 | 974 1464 122 40654 ... 18871 000 000 | Weak | DanAR | SUN |
| 974 974 974 1 464 122 40654 70830 93893 64730 70847 97206 70820 99187 49139 06714 69614 43558 10141 89305 47723 30863 08299 50556 84716 11335 01455 75827 34732 61957 31439 96313 45788 30238 82515 54080 34894 61464 75887 17051 27893 66234 24121 35757 80898 35502 39061 94895 88663 01367 42032 67667 04378 26617 50224 53626 25714 05478 90492 27057 91123 23736 24824 20143 25153 55577 27024 87139 68672 15571 81752 79890 42323 40840 29336 63950 37582 97444 98912 06433 71595 46508 35097 66153 91373 61243 42719 91022 53589 47343 89214 90388 27233 85671 92521 78336 78484 21563 23664 50324 17727 25736 64806 23081 69474 24997 68237 84054 78663 46933 38591 03278 46152 30922 51053 80855 02907 19273 72702 28557 94105 23048 01312 77639 29003 76506 30899 18871 000 000 <i>Courtesy DanAR</i> | | | | | |

V13

Nil Reports

V26

Nil Reports

Polytones

XPA1 c

Tuesday/Thursday

September 2022

| 0710z | 10682kHz | 0730z | 11571kHz | 0750z | 12216kHz |
|-------|-------------------------------------|-------|----------|-------|---|
| 01/09 | 761 000 01350 00001 00000 ... 32656 | | | | 0710z NRH, 0730z Weak QSB3, 0750z Fair |
| 06/09 | NRH | | | | Condx not particularly good |
| 08/09 | NRH | | | | Condx poor |
| 13/09 | NRH | | | | Freq search, no trace. [Condx poor] |
| 15/09 | NRH | | | | Freq search, no trace. [Condx changeable] |

Freqs searched, rest of month, no trace.

October 2022

0710z **12167kHz** **0730z** **13437kHz** **0750z** **14972kHz**

All days, various times, freqs searched, no trace

THIS STATION NOW BELIEVED TO HAVE CLOSED

XPA1 Wed/Fri

Wednesday/Friday

September 2022

| 1210z | 12137kHz | 1230z | 11137kHz | 1250z | 10237kHz |
|-------|-----------------------------------|-------|----------|-------|---|
| 02/09 | 112 1 07428 00174 56960 ... 55367 | | | | 1210z Weak, rest unworkable |
| 07/09 | 112 1 07428 00174 56960 ... 55367 | | | | 1210z Weak QSB3/4, rest unworkable QSB5 |
| 09/09 | 112 1 07428 00174 56960 ... 55367 | | | | 1210z Unworkable 1230z NRH, 1240z Weak QSB3/4 |
| 14/09 | 112 1 00914 00098 98309 ... nnnnn | | | | 1210z Weak QSB4, rest unworkable |
| 16/09 | 112 1 00914 00098 98309 ... 46110 | | | | 1210, 1230z Weak QSB4 1240z Unworkable |
| 21/09 | 112 1 00914 00098 98309 ... 46110 | | | | 1210z Weak, rest Unworkable |
| 23/09 | 112 1 00914 00098 98309 ... 46110 | | | | 1210, 1250z Weak, QRM2, 1230z Unworkable |
| 28/09 | 112 1 04962 00088 52679 ... 41525 | | | | 1210z Fair QSB4, rest unworkable |
| 30/09 | 112 1 04962 00088 52679 ... 41525 | | | | 1250z Weak QRM3, rest unworkable |

October 2022

| 1210z | 14564kHz | 1230z | 13564kHz | 1250z | 11464kHz |
|-------|------------|-------|----------|-------|------------|
| 05/10 | Unworkable | | | | [3m10s lg] |

With H-FD found to be:

Wed 05.10.2022 1210Z 14564 msg via KiwiSDR RUS
Wed 05.10.2022 1230Z 13564 msg via KiwiSDR RUS
Wed 05.10.2022 1250Z 11464 msg via KiwiSDR RUS

| | | | |
|-------|-----------------------------------|------------------------------------|------------|
| 07/10 | 554 1 04962 00088 52679 ... 41525 | 1210, 1230z Fair, 1250z Unworkable | [3m19s lg] |
|-------|-----------------------------------|------------------------------------|------------|

554 554 554 1 554 554 554 1 554 554 554 1

04962 00088 52679 61822 12903 76679 70920 75638 45842 67061
18874 53801 94988 85834 85561 82238 57238 04859 21774 57128
11529 02198 18233 31799 73344 58671 73602 08335 83722 60632
26583 77794 27893 12589 25090 88374 95621 10355 36593 94202
78320 76370 68161 10643 20600 46025 75901 70448 70161 59715
38407 40609 35287 21323 12384 48671 57742 25487 51194 62351
70260 33710 04740 48552

68977 07476 36941 89248 44746 59455 47930 05174 26706 46140
26265 67367 48992 65270 64273 36498 48641 24497 11195 50867
93453 41643 68901 28766 73557 20237 41525 *Courtesy PLdn*

| | | |
|-------|-----------------------------------|-------------------------------------|
| 12/10 | 554 1 05166 00102 09504 ... 35543 | 1210, 1230z Strong, 1250z Weak QSB4 |
|-------|-----------------------------------|-------------------------------------|

554 554 554 1 554 554 554 1 554 554 554 1

05166 00102 09504 34248 36556 64685 85053 15426 37840 15070
62940 82616 90798 93396 04287 40182 50775 55508 58840 62393
70578 18404 17353 24177 30639 46661 88374 80696 65256 97407
27786 31292 18123 95869 34703 78382 15169 71066 60793 32314
64644 17094 28290 94736 45634 36971 85361 87521 81513 84529
65758 13017 56034 61253 42811 96176 53598 80403 05576 23171
72855 21541 80403 16184

66208 14073 07801 73866 83603 26019 91061 42265 67636 44696
78595 69402 83810 14751 64619 18159 25721 46452 67343 28297
85800 41588 66290 19183 94085 61377 72079 30288 57878 59721
60840 75917 17885 83469 86758 19545 53641 43210 31675 89874
35543 *Courtesy PLdn*

| | | |
|-------|-----------------------------------|------------------------------|
| 14/10 | 554 1 05166 00102 09504 ... 35543 | 1210, 1230z Fair, 1250z Weak |
|-------|-----------------------------------|------------------------------|

| | | |
|-------|-----------------------------------|----------------------------|
| 19/10 | 554 1 05166 00102 09504 ... 35543 | Fair QSB3, 1250z Weak QSB3 |
|-------|-----------------------------------|----------------------------|

21/10 554 1 05166 00102 09504 ... 35543

1210/1230z Strong, 1250z Weak QSB3

26/10 554 1 00951 00128 54639 ... 25271

1210/1230z Strong, 1250z Unworkable

554 554 554 1 554 554 554 1 554 554 554 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*

28/10 554 1 00951 00128 54639 ... 25271

1210z Weak 1230,1250z Fair

XPA2 m

Sunday/Tuesday

September 2022

1200z 13914kHz 1220z 15814kHz 1240z 16314kHz

04/09 00276 00226 10110 ... 05035 2100z Fair, rest Strong

00276 00226 10110 38111 61695 80733 63328 41879 37985 41466
61097 43108 06986 11227 18162 78358 45489 28548 50582 41701
59282 30531 84693 48407 97071 62441 31194 79712 01560 83678
77459 05265 30499 36966 81083 07819 75934 77171 44022 92505
08389 34992 33051 82519 30365 20540 46104 52572 25217 05932
17823 46903 01557 20483 79036 89282 52043 44612 57952 90240
98072 26291 57664 96151 36522 31262 35560 65173 25624 68279
81153 42329 56156 04284 95334 71237 03946 19777 48005 57799
11127 55833 16463 83653 48543 95133 81817 04708 73224 34992
10149 82699 18069 30672 26000 40345 17883 15673 97479 37177
46290 13374 57060 28020 92112 25337 99589 19952 32021 05030
59378 43109 92336 36253 09560 31328 36145 89091 23518 60000
12528 06373 41446 93659 91329 84524 01810 67992 44688 32736
63828 59583 89258 59684 50828 43337 20289 94553 29939 85772
94683 85829 31216 40950 52882 55565 89894 60365 59521 23154
44941 48776 65520 74149 78954 66815 00442 04031 16957 99492
95343 25613 52533 73484 25874 13829 79555 44117 65430 29921
34968 61239 21398 89710 16002 40781 68457 96331 60304 44662
70517 48442 28659 12058 85112 62910 99254 55703 68356 81083
66990 11807 87031 15230 43520 58102 80827 34944 28734 39422
01880 68901 84810 59113 68499 31091 67260 02121 44842 34968
75738 79604 35106 32074 67012 29106 88643 39154 21613 32234
80826 85458 84613 23988 58460 66516 04259 24688 05035

Courtesy PLdn

06/09 05292 00001 00000 ... 33266

1200, 1220z Fair,1240z Strong 1200zQRM3

11/09 07942 00001 00000 ... 34270

Fair, 1220z QRM3/4, 1240z QSB4

13/09 nnnnn 00001 00000 ... 37263

Unworkable, poor condx

18/09 05173 00001 00000 ... 33264

1200z Strong, rest Fair QRM2

20/09 00942 00288 99456 ... 75666

1200, 1240z Fair, 1220z Weak

00942 00288 99456 43942 72741 30902 06400 66118 99969 95671
64343 26756 29736 66722 64966 62065 46340 22740 87352 79343
99211 68702 10907 90229 82196 91851 35655 00183 85413 66187
95179 30096 67789 38647 55979 46568 41876 99788 67869 48489
60920 10558 32712 81132 50734 71661 68034 84401 38666 59849
65814 68512 23091 35535 44419 50809 61610 01310 81348 18478
13530 82792 98286 29647 21210 12693 93606 05429 66676 79919
69970 08653 39296 00541 09096 98932 08625 63961 06244 45671
82036 87510 56276 73583 23300 10754 30637 54527 44341 12034
66276 10708 26876 70108 07890 50758 14797 04735 76786 75571
03385 23310 43957 21283 37090 27207 18969 91298 77672 25663
01298 62355 23938 81767 96738 00448 98405 31688 13986 43904
50304 59658 59143 19655 87796 87548 66791 57124 53618 20492
04805 62822 29067 94583 47185 38367 17329 49642 44294 16998
39784 86158 75847 38144 13638 36754 69139 42721 49786 76815
89726 48146 01845 52521 61096 26100 72929 21990 65099 61215
28915 74799 38553 52507 84994 35779 51721 40862 55706 20676
04457 84421 63658 79219 56951 36592 59041 39336 72680 92051
23294 01085 93342 01159 17139 29456 74509 36816 11865 61006
75637 94586 27177 91677 68944 20122 28803 08883 85071 37374
68463 85948 66590 16192 44711 19714 31373 23514 10444 33262
36363 59090 69655 51963 31892 12869 91067 95558 01643 44058
76508 46165 97165 59706 93231 66428 17095 07577 78837 46555
56669 53874 94640 44626 11164 75655 03447 92991 90665 37345
68386 95676 51223 77903 92972 24153 70230 32682 11611 70050
93635 90671 14735 59997 27396 01596 92752 51025 53288 00496
75684 59950 00232 15402 46753 66606 96249 18743 21994 41693

94512 45089 88804 47601 11968 31768 12891 02215 94435 65808
17325 16520 24308 42869 79949 72657 50361 72506 35244 06547
75666
Courtesy PLdn

24/09 Not monitored, off watch

27/09 05195 00214 24315 ... 53716 1200z Very strong, rest Strong

05195 00214 24315 69860 97823 27451 17911 47094 02484 84493
16017 56730 81730 57192 15694 24622 33416 22418 57741 28649
25541 05402 17109 26033 71303 28843 11148 05031 47382 86032
65421 02479 72180 01307 32708 46693 62508 46209 71122 96562
99211 16477 58201 15918 93976 81767 02865 65680 28711 78492
11227 75762 04776 93436 28359 98862 95420 30346 33401 76555
51178 67264 31542 76813 20596 12413 14881 47437 56598 36319
68622 03981 27453 43492 65053 93069 72632 09561 56276 29760
83338 53120 17096 28598 33365 81256 51656 05245 28064 14215
22700 10053 30838 68932 80515 92205 59311 94207 02463 49154
84489 42294 44240 50423 49850 98772 99844 67694 78521 79207
25214 30163 79162 42224 66212 00660 32668 95428 38951 50496
24777 61944 13174 63299 18924 10691 61870 24699 49330 21799
66052 57499 51125 03599 13157 57024 51876 91902 65542 16513
38794 73380 33209 49253 55679 51587 44098 14486 47505 40151
02177 83329 98495 75701 50200 20276 43102 15335 16398 61845
84316 81944 74215 00341 87152 55973 56394 47027 97522 12440
78006 38076 12075 20072 48974 30300 52787 74848 34848 77441
30578 44991 78028 88433 89283 07583 15949 98734 88303 34340
68780 27794 26057 33888 19378 35504 57992 18909 76925 62220
30665 61540 21672 66051 08014 32943 15801 82978 84511 50297
47307 70750 51304 77045 29058 68358 53716
Courtesy PLdn

October 2022

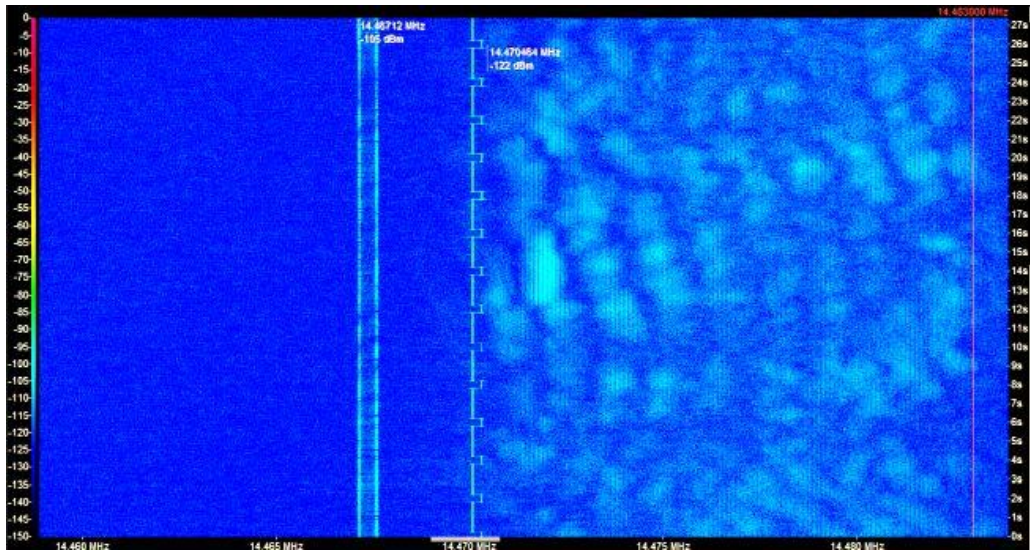
| 1200z | 14469kHz | 1220z | 16169kHz | 1240z | 17469kHz |
|-------|-----------------------------|-------|----------|-------|--|
| 02/10 | 05195 00214 24315 ... 53716 | | | | Very strong |
| 04/10 | 08272 00192 40669 ... 42553 | | | | 1200, 1220z Weak, 1240z Very strong [Variable condx] |
| 09/10 | 08272 00192 40669 ... 42553 | | | | 1200, 1220z Very strong, 1240z Strong |

08272 00192 40669 76692 01595 59625 95420 16413 06028 69234
29317 53636 46868 22305 30459 64454 16878 16115 25954 07927
73188 88733 95256 02282 81993 33049 97498 82564 92853 00199
61453 77882 05021 00064 59821 41681 35980 17618 23482 59155
65550 18626 11241 52041 65998 80845 82428 16348 12308 31657
59804 44491 47762 27344 40307 34657 80091 50181 64097 40251
72750 25881 85231 66254 56406 55571 11636 68880 90264 88230
55359 43198 00781 81624 06632 72134 59378 74521 96816 58367
20433 23117 31487 34057 50104 50702 71766 70621 02182 08234
33260 66996 80420 44251 40384 49749 97010 92161 43794 46478
99781 97254 79357 26869 01029 29695 47814 60905 09158 65588
83489 28069 79464 90520 33071 28863 63275 66241 58510 06702
00918 02994 95863 56689 08545 37090 80272 53554 51577 64149
15166 90083 13431 91877 23689 25851 13159 21931 77142 11725
27202 97310 61828 20316 34241 87219 95907 37501 01388 43855
13570 79565 10216 41421 55035 63061 39594 64195 21437 48624
94461 79041 91654 52296 93212 61690 36351 74553 77370 19541
61606 79453 73195 58925 96412 17711 94544 83815 51071 63100
61470 63552 16497 77615 94415 01829 71741 01864 45079 17869
89507 00668 41707 06175 42553
Courtesy PLdn

11/10 00904 00232 70219 ... 03530 Very strong

00904 00232 70219 50160 63185 96191 98842 47465 01115 16455
42272 21515 58791 75836 82469 61665 56971 99034 76967 00184
15207 61012 20077 97943 84605 26905 56745 05372 59019 32798
33956 23721 52684 65274 29180 44033 54831 80627 31120 35445
51361 04493 10220 19786 50959 51835 74431 67846 18295 27285
60160 70931 30677 33728 58107 12824 53573 12172 34404 69742
33090 41392 80909 78730 32728 40068 51342 71704 19961 90684
02886 73130 81987 87323 76495 66847 63357 44868 62965 54756
15863 82787 78947 19902 14430 56645 20199 27092 21612 43502
14613 94723 10571 10953 95380 97682 61637 57034 22828 15293
65066 40044 98047 67032 95161 83436 68095 18802 11582 71454
90619 96533 24864 49442 76663 05510 76285 92769 89955 96362
08030 13501 96599 55812 13140 39452 69652 86718 08617 28867
76706 07619 46202 71908 52562 79008 22501 31277 36876 15170
15633 97799 41368 94834 98103 14775 42319 68767 27051 07215
40658 42322 65788 22672 33953 14244 45189 60699 14425 12288
74349 25117 70196 38071 38096 32954 94763 02735 83153 74456
65639 72769 82906 26146 95124 15322 37702 03583 90768 83266
34368 94205 85019 74596 35141 83159 58506 56335 43486 09582
40346 29201 58942 23445 81242 85011 84756 05336 31288 66670
08820 74798 94057 44427 86477 60222 86747 81988 92557 61625
20789 52688 57291 61288 87205 64567 69640 90364 77348 37754
48659 08714 82004 40874 52875 93381 41615 54146 52692 82529
81067 66509 70386 77740 03530
Courtesy PLdn

16/10 1200z Live msg Fair HJH SUN



14469kHz 1200z 18/10/2022

Nearby sigs

18/10 00959 00218 29104 ... 30021

1240z Very strong, rest: Strong

00959 00218 29104 35494 89651 76710 93188 29929 61066 81932
42286 30002 16643 09731 16568 76810 72784 58886 65196 34604
11678 63368 12241 01400 50117 21641 13434 76354 86915 66938
79185 74039 39395 68842 82351 44773 61461 82325 45630 39013
10169 87645 49373 83522 30191 16790 66085 33664 80777 01997
71097 59496 53891 43482 70284 21126 27751 12679 96340 25543
37555 43661 30831 09876 85444 25567 76123 52684 60925 31563
80557 90223 97287 71412 56919 58655 21727 77587 92795 33352
39098 47716 93598 21561 85531 60434 75232 86516 62935 98895
30582 49359 98817 07210 62590 07682 38161 27826 07241 12100
88369 12636 08488 17801 09108 58185 89476 71598 59669 57953
61393 38540 15430 18476 08754 86429 34711 82081 33602 79937
16703 10374 72809 84861 39053 59393 02425 10216 73558 28915
52760 22467 36909 22090 04723 72345 04030 25173 84336 89644
04111 62619 16748 97167 95018 30036 41972 21265 22962 10282
71287 85632 91892 04646 51801 87954 89199 72416 18549 53108
92526 88973 24592 48939 70842 11543 90819 43615 76671 71825
18071 40387 42330 06440 22808 53934 57956 47435 90061 59875
91813 25517 70021 38928 50735 19083 25152 72661 96627 53284
46053 64738 60085 15747 86816 59647 06306 55954 83419 75349
35692 70069 10359 03201 41031 91600 18020 64783 44728 42084
14635 92376 00578 97611 30914 28167 23944 42967 63339 34243
30021

Courtesy PLdn

23/10 00959 00218 29104 ... 30021

Very strong

25/10 00933 00180 29353 ... 61311

Very strong

30/12 00933 00180 29353 ... 61311

Very strong

00933 00180 29353 33953 68323 75091 67825 75132 70413 44273
81136 67729 29156 31028 05571 06393 90921 31404 17931 06404
50956 02138 26352 10747 16955 46430 81769 24596 12799 78978
18843 71593 62551 74964 10221 82532 40626 27854 39775 20725
79347 17916 01125 10424 12542 48523 74805 56416 26394 70497
46442 72093 98221 78276 56356 58652 45854 79433 72294 54353
65787 01306 69662 88330 49779 89898 56838 78225 44754 10442
63966 79399 46602 46957 83176 56412 12140 20601 39508 75245
83328 03493 02112 19212 39858 16837 46325 02457 85251 23566
88502 54135 73184 43543 44573 64406 37180 95245 86318 49595
65159 06213 16135 96173 01180 01133 29580 06533 11997 60818
36190 57500 11937 78668 67041 68869 70435 19535 04226 30167
25954 31805 64201 57690 19965 97717 39015 32891 98435 73887
87327 29822 55628 73268 26262 43373 71501 62512 02860 62707
42380 64549 39778 70259 43488 24546 43830 90728 26095 00598
02493 01586 96190 27871 22778 20322 95866 00208 49475 48738
36435 77943 92688 87954 91840 28357 19092 30279 20197 67417
75384 58298 92833 21082 54654 56373 50402 83134 02835 47311
34383 43695 61311

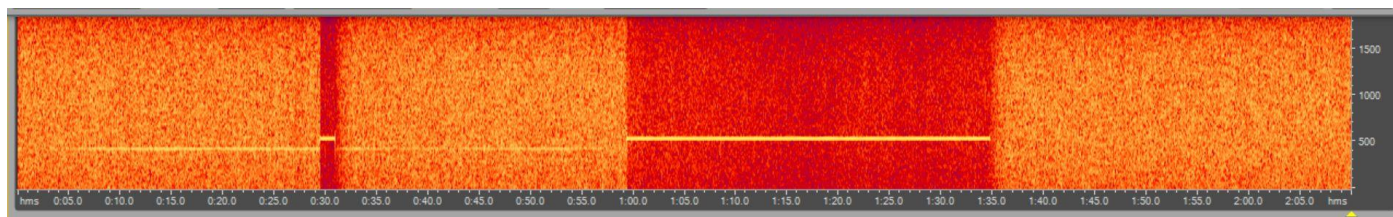
Courtesy PLdn

XPA2 p

Monday/Wednesday

September 2022

0700z 12152kHz 0720z 13552kHz 0740z 13952kHz



13552kHz 0720z 05/09/22 Carrier only

05/09 08477 00096 31621 ... 51131

0700z Very strong, 0740z Fair QRM2
0720z Carrier only 36s lg, Fair. See above.

08477 00096 31621 50456 27591 81051 22750 63267 69259 20561
83098 27100 51417 72102 24853 13775 76675 92011 68979 60677
92430 56464 44372 57504 56675 79780 84280 00798 86668 16538
77244 13701 10314 17120 52467 55294 79800 23692 79117 49585
79244 03650 30178 98608 14838 41742 51389 21512 74240 18612
91000 44981 48046 89859 09160 99040 56129 14021 57594 77033
80683 15056 15818 34604 03379 62496 54376 65561 22652 90681
46941 66717 05165 99211 58276 46880 09250 91951 05514 46490
29980 00905 36475 25725 53746 16540 00293 39894 64726 74174
87543 99680 48534 82898 90552 55313 06552 27972 51131

Courtesy PLdn

07/09 08477 00096 31621 ... 51131

0700z MISSED, 0720, 0740z Fair

12/09 00922 00114 54152 ... 72330

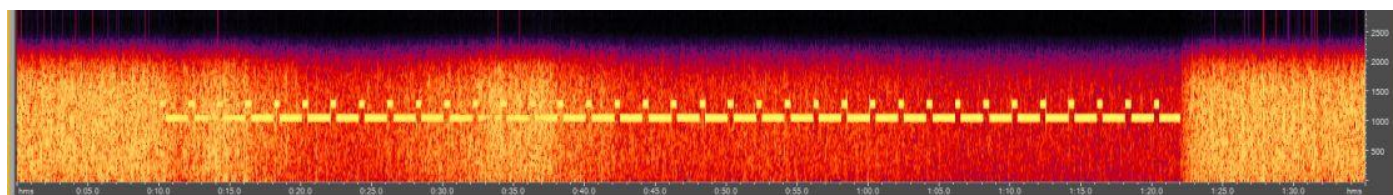
0700, 0720z Strong, 0740z Fair. QRM3 0720z

00922 00114 54152 47674 54766 64989 59129 52177 92118 31857
70912 55164 16994 59650 52576 67968 14583 36751 35642 39518
19428 32950 95174 80018 62437 93756 38198 40985 30143 75579
03315 89556 78809 89407 06634 09352 65532 67283 44743 80343
99907 49475 34471 00951 34027 09110 39855 48794 05910 75385
47156 39998 69996 88968 75778 65684 94658 45487 16379 92082
43429 16558 96023 60009 60940 54001 51851 84796 02737 27190
81503 72403 10231 48503 82952 76536 26490 87539 13485 36764
90419 24045 10936 92211 95672 68247 00439 50133 85543 71299
71294 61724 29244 58233 29743 07694 02654 30747 55977 44417
87847 82551 23062 97402 48108 31349 17027 53884 31686 66582
26718 63881 89342 64738 84036 49534 72330

Courtesy PLdn

14/09 00922 00114 54152 ... 72330

Strong, 0740z QRM3



0720z 19/09/2022 1m12s of start up only

19/09 00922 00114 54152 ... 72330

0700/0740z Weak QSB4, 0720z 1m12s start only [See above]

21/09 00922 00114 54152 ... 72330

Fair, 0700z Weak, 0740z QRM2

26/09 09327 00140 97908 .. 30404

Strong

09327 00140 97908 19919 06296 48949 00607 31855 11600 14640
87955 17539 58800 44063 47624 72437 43186 87135 50942 13465
02643 56365 32712 83561 96699 96345 94537 94862 63581 95143
36091 65002 12265 23193 19811 24991 70401 80417 38512 76746
47111 05400 41414 32160 03019 68188 24278 72464 11766 58253
36136 86069 74734 36658 33755 67657 36438 26598 28924 69547
38362 89756 34137 46768 44117 33161 35236 78348 07684 69414
71459 21523 72531 04377 17461 82307 63485 87267 51686 44591
65715 18586 42313 93694 44498 51650 30627 14426 55310 96671
84443 06536 38240 98933 64452 48798 64044 18564 07419 95622
93189 11127 55977 38655 96579 20916 97723 64469 54975 06808
11763 75242 82994 80836 87238 02419 08652 67825 62892 48355
70912 93282 22274 97653 10692 99008 04776 28194 95418 02525
62227 51722 93943 62301 09862 49176 37644 03454 90480 30138
50481 56143 30404

Courtesy PLdn

28/09 09327 00140 97908 ... 30404

Very strong, 0740z QRM2

October 2022

| 0700z | 13372kHz | 0720z | 14672kHz | 0740z | 15872kHz |
|--|-----------------------------|-------|----------|-------|---|
| 03/10 | 09327 00140 97908 ... 30404 | | | | 0700z Very strong, 0720/0740z Strong QRM2 |
| 05/10 | 09327 00140 97908 ... 30404 | | | | Very strong |
| 09327 00140 97908 19919 06296 48949 00607 31855 11600 14640 87955 17539 58800 44063 47624 72437 43186 87135 50942 13465 02643 56365 32712 83561 96699 96345 94537 94862 63581 95143 36091 65002 12265 23193 19811 24991 70401 80417 38512 76746 47111 05400 41414 32160 03019 68188 24278 72464 11766 58253 36136 86069 74734 36658 33755 67657 36438 26598 28924 69547 38362 89756 34137 46768 44117 33161 35236 78348 07684 69414 71459 21523 72531 04377 17461 82307 63485 87267 51686 44591 65715 18586 42313 93694 44498 51650 30627 14426 55310 96671 84443 06536 38240 98933 64452 48798 64044 18564 07419 95622 93189 11127 55977 38655 96579 20916 97723 64469 54975 06808 11763 75242 82994 80836 87238 02419 08652 67825 62892 48355 70912 93282 22274 97653 10692 99008 04776 28194 95418 02525 62227 51722 93943 62301 09862 49176 37644 03454 90480 30138 50481 56143 30404 <i>Courtesy PLdn</i> | | | | | |
| 10/10 | 05276 00188 33781 ... 53723 | | | | 0700,0720z Very strong 0740z Strong |
| 05276 00188 33781 68079 45937 08292 85029 20022 88354 91325 68021 70131 97302 39718 24039 96106 86336 77415 67779 82629 65840 39096 19081 32795 64838 08876 97182 82055 84369 90499 78654 55262 95611 20274 83959 99648 49062 01339 20117 81516 75121 85939 13298 37881 31856 72644 72690 65170 08468 18589 11450 90937 46191 22625 76471 21643 71207 85629 85402 36930 78595 11100 12722 76349 78897 41354 05191 21381 78654 76503 51205 39589 65599 85332 80415 13313 80650 20815 88683 38680 89896 61721 29086 01049 03931 21996 71675 98937 43031 40701 27700 69989 81006 67032 03286 17992 87589 07366 14232 60241 25941 51847 32614 41806 44700 30188 38982 96060 68745 31963 90588 45992 70524 94301 33915 21110 00637 16045 98197 68540 82436 05376 34609 36110 95258 24841 89794 19618 68782 51931 37696 43970 86051 90131 15656 17803 93438 05519 81405 77930 98313 03820 48898 03242 69713 02863 36210 24966 47996 44549 73648 78432 41154 66408 81806 11761 51774 23687 06956 76669 34963 56814 56135 65738 87605 89763 53583 78795 44588 57626 81135 53303 28700 16337 46307 57713 73160 02496 41034 70074 64171 79246 56605 26137 98331 42497 91249 11479 99721 03430 53723 <i>Courtesy PLdn</i> | | | | | |
| 12/10 | 05276 00188 33781 ... 53723 | | | | Very strong |
| 17/10 | Not monitored | | | | |
| 19/10 | 05276 00188 33781 ... 53723 | | | | Very strong |
| 24/10 | 00965 00212 90163 ... 60653 | | | | 0700/0720z Strong, 0740z Fair |
| 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 <i>Courtesy PLdn</i> | | | | | |
| 26/10 | 00965 00212 90163 ... 60653 | | | | Strong, 0700z QSB2 |
| 31/10 | 00965 00212 90163 ... 60653 | | | | Very strong |

XPA2 Wed/Fri

Wednesday/Friday

September 2022

| 1200z | 13484kHz | 1220z | 14684kHz | 1240z | 15984kHz |
|-------|-----------------------------|-------|----------|-------|--|
| 02/09 | 05476 00226 23313 ... 10525 | | | | 1200z MISSED, 1220z Strong, 1240z Weak |
| 07/09 | 03n84 00240 01017 ... 10062 | | | | 1200z NRH 1220z Unworkable QSB5, 1240z Weak QSB3/4 |

09/09 03284 00240 01017 ... 10062

1200z NRH 1220z Weak QSB3/4, 1240z Strong

14/09 01995 00242 70531 ... 34230

1200z NRH, rest Strong

01995 00242 70531 44000 85939 20821 56974 69371 15290 10049
53660 16025 41244 11812 03962 67449 19332 92494 45104 08427
35353 15033 59944 04923 93759 92414 76485 08537 75991 94038
83169 88664 21360 59231 68048 86097 85773 32055 96466 19458
28241 64474 70267 17883 30556 55747 29849 00085 00553 55026
85092 83375 20380 41377 01150 62367 50408 95694 11680 46351
19808 17664 96077 22092 29697 67927 47297 90838 96389 21357
25824 62851 71322 77316 12289 76444 58835 72095 56310 06336
51246 30880 92179 58637 07306 18540 86535 60342 73838 54360
76950 42054 61424 09717 12862 27948 75878 52653 08634 06238
53046 54032 89847 75305 41308 27382 02587 51072 38356 76743
56336 27672 79252 57810 94150 74379 78253 98393 55583 57920
79713 57943 51711 06550 56655 91513 21240 30228 31793 55733
66495 10775 60526 30499 89305 78241 76135 24846 02117 31344
39365 46128 49723 76884 87103 66062 32529 00062 69586 99255
55501 34579 07456 88168 10990 29356 16687 70549 40622 64866
34699 74342 46940 71821 80953 22001 00018 85167 99207 99594
40098 58398 02207 06946 05358 02570 88886 82172 71564 63024
04106 72950 97299 11052 98009 94444 86606 80077 15477 44961
32317 80179 84786 72972 14739 79229 81458 12246 55332 87401
92842 32803 22779 32782 17692 99606 57235 99884 96681 80723
92711 26053 03871 40585 01766 16824 91232 97010 39010 62527
87664 51564 21879 96518 16275 27513 50866 81246 17273 28877
32665 54880 64803 81608 37837 75495 34078 98354 27495 86769
43846 42844 73796 96453 34230

Courtesy PLdn

16/09 01995 00242 70531 ... 34230

1200z NRH 1220, 1240z Fair

21/09 07861 00188 31570 - 56442

1200z Not monitored, rest Fair

23/09 07861 00188 31570 - 56442

1200z Very strong, rest Strong

07861 00188 31570 62256 98639 12897 97631 82662 57832 88920
53506 74293 65389 73383 59918 91889 26289 16029 58867 97343
06017 80315 18125 03966 84514 04742 02523 70400 11786 71693
58487 10348 52237 81055 39781 52553 98457 71413 79879 02258
04300 89660 24418 24640 72482 99609 94563 60212 93797 80340
67893 70031 38387 44681 30950 86229 15162 40043 84950 72386
92955 32952 53674 75425 57202 88139 39835 50533 77516 81827
41307 58444 28527 82029 31118 51707 42216 62487 46687 80129
20308 32333 87846 85267 02499 91978 51272 14288 87168 36734
73742 47453 06296 22265 07206 84680 73289 82441 38547 12377
13860 44769 68770 88982 15139 98691 29909 98565 74649 99571
95423 64990 01732 34808 12482 09073 80889 09105 25514 68091
94332 04135 65888 82868 51171 89279 19508 08576 27058 81680
00062 23086 30069 79358 07943 76413 54831 64485 74187 13698
40332 82232 56486 26541 14169 25591 64588 47293 50831 20949
83045 75919 61334 71903 28978 18096 27798 48924 13561 59828
87717 03427 21896 82470 45647 43549 18810 94613 62413 84335
35754 54006 90332 67906 52546 44704 06115 17708 83547 88514
46411 08930 94853 71161 16539 72726 88674 55601 54172 45826
56442

Courtesy PLdn

28/09 00853 00218 87406 ... 72502

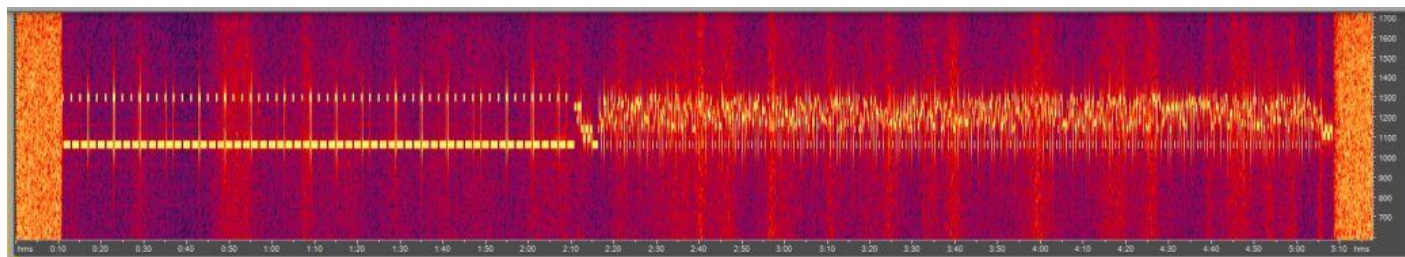
Very strong

00853 00218 87406 85203 94296 08020 67818 70787 03893 37662
35671 65748 78867 85017 30302 62306 97998 20959 07759 14024
54187 09117 26770 05119 90607 15033 16716 42386 97663 66400
83718 78499 19370 29254 36383 23520 40674 10509 79648 37616
52407 35580 81380 61689 23923 60341 38368 41256 86375 95122
26585 51319 80420 09608 90538 31868 12411 95474 33431 24041
07817 62168 26762 59023 81158 16221 58671 92057 25312 52751
55021 91752 57698 77568 04480 40198 51978 51367 23358 65955
03111 83679 64301 68773 06983 55434 65214 20345 14206 19112
92040 43950 15532 35084 23266 51775 87388 96440 23945 73599
22903 84613 20708 50878 89644 40063 67612 42417 28077 32039
16622 12792 31041 93277 80531 67117 18526 35961 50265 32667
69301 14684 34997 10302 68138 96744 44922 90958 57535 23988
36075 13944 80197 87456 07219 86935 68482 19572 45483 14848
57774 09750 11010 01723 84914 78500 88314 24920 44185 74478
32477 80141 27037 29358 27022 86059 80172 86789 35711 89583
00984 56601 16062 05171 71784 26286 29555 90446 00820 82979
87811 98966 50153 83546 65774 68466 64685 16403 67312 06760
67937 48185 84565 01868 17486 78567 78759 03059 32696 63424
88575 46919 60003 40482 46973 47403 06516 78168 27064 56628
02981 01070 81158 22065 51048 26626 62327 73826 23978 26791
38661 84343 81546 82814 95614 62929 01718 16320 06454 55221
72502

Courtesy PLdn

30/09 00853 00218 87406 ... 72502

1200,1220z Very strong, 1240z Strong



13484kHz 1200z 30/09/2022

Full transmission

October 2022

1200z 13452kHz 1220z 14452kHz 1240z 15852kHz

05/10 00801 00186 73242 ... 57726

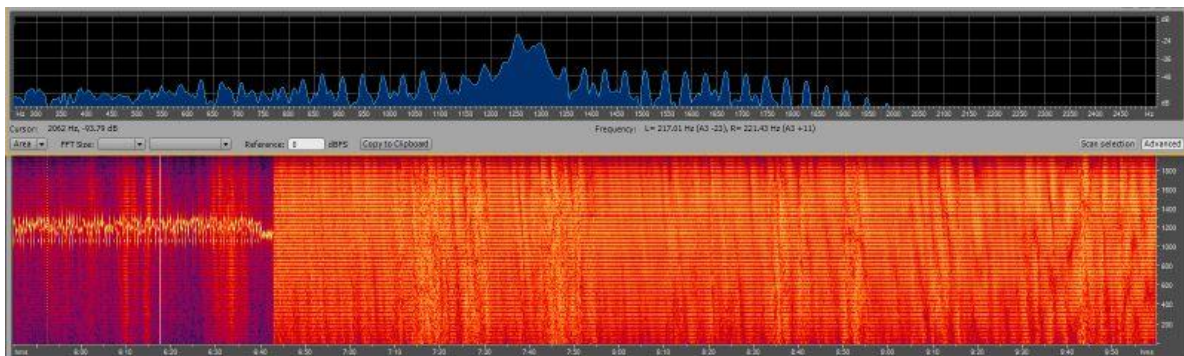
1200,1220z Weak, 1240z Fair

00801 00186 73242 09779 98289 85501 76810 91253 52577 79006
14168 67983 92592 25412 29069 00663 55961 22318 50490 41136
22390 65339 61650 57752 41988 44383 79878 48879 24821 71415
69364 86781 15901 78190 29147 58479 04783 44995 25324 59874
29729 56063 08867 64941 18402 34727 90761 93205 62356 30798
85399 87601 28282 25346 44723 93937 69320 87225 24318 14611
68393 51021 23525 88011 10524 15969 96803 23112 13309 47105
19406 83885 20200 98942 66339 37579 50996 78084 12603 53211
44543 41396 85233 45007 05811 75584 69559 44510 32309 44884
46409 78051 26793 13698 22229 21691 87090 00522 75086 55412
77388 04680 60406 93255 05185 94898 21202 61192 44271 98242
48315 82146 81860 05226 35401 67928 76087 44887 51413 23785
40378 43061 15336 01727 04890 51267 15671 95095 19934 17507
96555 55926 44303 65535 83555 34006 19538 08764 43005 82901
45909 30976 13607 58986 39432 32729 21310 50772 68487 40661
60289 60159 38951 74460 26301 40719 10208 79129 63074 27427
14773 54563 07106 31439 98616 89765 48252 84195 66678 02057
82577 61816 01019 74083 52207 61991 14842 44868 47381 32973
45263 28722 47686 31947 10410 32493 39167 50040 57726

Courtesy PLdn

07/10 00801 00186 73242 ... 57726

1200,1220z Very strong 1240z Strong



15852kHz 1240z 12/10/2022 QRM2, sound of 'ticks'[White line at 17s sample; Spectral image above shows QRM effect]

12/10 00957 00228 65438 ... 11623

Very strong, 1240z QRM2, see above

00957 00228 65438 44679 17486 85779 50771 39688 27077 11318
48590 48699 52810 22373 52735 90220 68149 96620 41753 93514
16278 48237 99822 52082 74301 94576 62273 15168 53125 56749
32529 22321 25965 65246 94807 01808 73629 33541 11369 60179
37945 79289 13466 19255 15311 80097 61774 07136 42628 90292
20656 06943 91456 71635 67304 62414 25014 38563 20569 90725
98063 36544 14059 64406 92611 15778 97542 89968 07071 47950
39449 90588 92820 15976 84822 01391 04869 11244 13757 69219
84197 50086 24892 69645 62506 54455 52392 42481 73259 39053
08000 46861 48652 86873 93105 23833 33057 58927 77780 57795
02737 62384 74274 05036 84206 14195 00895 91410 58123 16037
78920 68463 69477 25232 46958 36169 58061 34945 08734 81894
38922 88935 30684 62870 43193 54861 40909 69569 05963 88198
23869 63173 55203 95624 07742 53428 62228 65371 67400 13603
85723 49221 16239 80900 90444 69849 70336 80989 92290 47825
10012 66701 29549 14621 40706 99857 10989 78740 09607 86122
11494 02176 20681 56341 58543 53686 85917 72838 35489 71414
19250 77003 67539 73200 28837 96618 40973 95402 91212 85674
14456 44445 54980 39604 57595 62213 21493 14013 95627 06697
56933 91834 16423 39238 99826 55609 40101 61848 92913 57647
22842 28697 53863 03584 71891 50303 57092 73732 76715 57741
65487 81982 89075 08360 82448 43754 90492 79185 26063 53047
93886 20924 65253 27680 26528 89975 99674 74616 68114 61425
11623

Courtesy PLdn

14/10 00957 00228 65438 ... 11623

Very strong

19/10 04237 00208 78685 ... 40507

Very strong

04237 00208 78685 29159 94418 99414 79319 39555 57969 90454
80839 79181 97376 87374 67273 94081 43772 37537 77157 99563
29732 58066 40587 80786 44731 34240 80668 65111 55587 00960
15101 85733 04403 19486 52460 80004 25590 22297 17342 03928
68330 29759 86826 77959 18589 02742 10498 23424 72689 13686
23213 39011 48228 17692 13844 61453 08486 07638 87165 61990
32678 39877 78349 55741 44929 32709 20890 67960 59687 90506
19070 32717 83226 31476 94271 60194 93816 34759 96796 19160
26759 12282 59074 82284 30540 29363 18474 55412 69637 64182
70484 57487 41390 16037 35477 16942 65121 25381 08852 76118
12639 10514 67197 86848 19858 60479 70974 12500 62123 30853
45272 34864 52226 90647 57350 92850 33410 72879 60611 56999
64974 31821 23643 65131 60776 83995 50348 65618 25238 85735
52204 68730 33230 28808 70919 67192 08099 67797 88858 32233
14786 88719 35530 18335 77683 26218 61910 37139 47606 50066
83333 81351 53343 52303 95176 65347 98450 64749 38781 08476
76432 42015 86425 16029 55204 18246 35179 29586 68830 48086
22396 84144 98021 68054 80027 49181 08141 29339 46922 03494
27974 45512 36699 58334 30992 91919 24876 15569 78479 36057
70057 20772 04252 63875 16115 98095 17804 64118 44369 03305
39881 42019 25321 26777 90228 89431 42291 47709 28824 16113
40507

Courtesy PLdn

| | | |
|-------|-----------------------------|-------------|
| 21/10 | 04237 00208 78685 ... 40507 | Very strong |
| 26/10 | 00967 00184 52520 ... 35556 | Very strong |

00967 00184 52520 24576 50817 45668 92254 18784 52330 91576
35010 37019 96896 51983 77935 70730 24037 12990 53964 76730
17465 87723 48452 95243 66287 71048 70793 14612 17553 10356
37323 94830 74800 57985 54041 38533 37719 79451 26379 85183
33483 73552 86663 96562 43823 56146 27004 39302 63066 31821
43386 85960 75961 38823 01199 47433 24876 18607 78907 97720
36696 55220 42763 57347 52924 22486 19207 41923 46062 17834
27927 23050 27584 51227 21479 85937 96918 02980 41056 17316
82350 24495 32967 28319 62485 03706 50270 14263 82439 63735
23714 04398 46894 75218 50502 93433 30292 57376 40127 15781
78381 09289 56618 99291 42910 38343 16552 10173 81078 18243
55842 05481 61034 59448 34920 61125 32191 72877 97495 67903
05436 51774 33271 40966 31687 75148 41992 63725 53272 68473
11512 29651 28910 43039 35539 10511 37409 91410 91734 30481
71480 61131 98086 05069 62677 80812 26610 40949 50058 46545
61765 10241 77217 72385 62888 28993 73489 90961 02922 72327
68237 91745 37853 04702 27604 24214 46049 88439 87163 45592
96514 31170 24726 09904 63518 64762 60852 47275 51037 88695
87270 33890 52349 03634 39113 47906 35556 *Courtesy PLdn*

| | | |
|-------|-----------------------------|-------------|
| 28/10 | 00967 00184 52520 ... 35556 | Very strong |
|-------|-----------------------------|-------------|

Additional XPA2 schedules from H-FD:

Thu 06.10.2022 0500Z 10238 msg
Thu 06.10.2022 0520Z 11138 msg
Thu 06.10.2022 0540Z 12138 msg

Sat 08.10.2022 1500Z 13906 msg
Sat 08.10.2022 1520Z 12106 msg
Sat 08.10.2022 1540Z 10906 msg

Sun 09.10.2022 0800Z 15958 msg

Mon 09.10.2023 0820Z 17458 msg

Sun 09.10.2022 0840Z 18758 msg

Mon 10.10.2022 0910Z 17471 msg
Mon 10.10.2022 0930Z 16149 msg
Mon 10.10.2022 0950Z 14406 msg

Tue 11.10.2022 1100Z 14537 msg
Tue 11.10.2022 1120Z 13437 msg
Tue 11.10.2022 1140Z 10737 msg

Wed 12.10.2022 1100Z 14672 msg
Wed 12.10.2022 1120Z 13472 msg
Wed 12.10.2022 1140Z 12172 msg

Thu 13.10.2022 0910Z 17438 msg
Thu 13.10.2022 0930Z 16338 msg
Thu 13.10.2022 0950Z 15938 msg

Tue 25.10.2022 1600Z 13542 msg
Tue 25.10.2022 1600Z 11442 msg
Tue 25.10.2022 1620Z 12142 msg

Other XPA

Additional XPA1 [Friday]

10256 kHz 28-10-2022 0805 UTC XPA1 MFSK-20/10Bd
 1 1 1 1 1 1 1 1
 02471 00046 92117 08157 48097 27566 23799 33829 15820 83600
 97148 39020 84162 96053 44211 75700 77959 35131 51816 89728
 55939 74589 06827 10844 17095 11172 41274 46088 43278 80496
 67282 45692 00894 53625 33494 53392 07732 01297 41906 22036
 29386 44133 21321 12102 47232 53282 67966 76050 24611

Courtesy Ary

Gert had been looking further into these transmissions and tabulated his findings as well as sending variant recordings:

| Freq (kHz) | 10 oct Time (utc) | 11 oct Time (utc) | 12 oct Time (utc) | 18 oct Time (utc) | 19 oct Time (utc) | 21 oct Time (utc) | 25 oct Time (utc) | 26 oct Time (utc) | 27 oct Time (utc) |
|------------|----------------------|----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 8154 | | | | | 14.30 | | | | |
| 9142 | | | | | | | 12.25 | | 13.15 |
| 9338 | | | | 08.30 | 07.40/08.40 | 08.40 | | | |
| 10159 | | | 14.10 | | | | | | |
| 10256 | 12.10/13.10 | | | | | | 12.10 | | 10.50 |
| 10396 | | | 14.00 | | | | | | |
| 10427 | | | | 08.10/08.40 | | | | | |
| 11431 | 12.20/13.20 | 13.10 | 10.00 | 08.20/08.50 | 07.50/08.50 | 08.50 | 12.15/12.35 | 15.03 | 09.15/10.55/11.45 |
| 11574 | | | 11.20 | | | | | | |
| 12192 | 12.30/13.30 | 08.00/08.30/09.00 | 08.30/13.00 | | | | | | |
| 13439 | 12.40 | 09.10/12.40 | | | | | | | |
| 13964 | | | 11.30/14.20 | | | | | | |
| 14469 | | 12.00 08.10/09.20/11.10 | 13.10 | | | | | | |

These are the stations I heard today, 28/10:

08.05z 10256kHz XPA (10Bd)
 08.10z 11431kHz XPA (10Bd)
 08.25z 10256kHz XPA (10Bd)
 08.30z 11431kHz XPA (10Bd)
 09.05z 10256kHz
 09.10z 11431kHz
 10.40z 9142kHz
 10.45z 10256kHz
 10.50z 11431kHz
 11.05z 10256kHz
 11.10z 11431kHz

The 08.05/08.10z are repeats, just like 08.25/08.30z

Here is the 08.05/08.10z transcript:

Block Sync

4444444444

Block Sync

1 1 1 1 1 1 1 1

Block Sync

4444444444

Block Sync

6

Message Start

02471 00046 92117 08157 48097 27566 23799 33829 15820 83600 97148 39020 84162 96053 44211
 75700 77959 35131 51816 89728 55939 74589 06827 10844 17095 11172 41274 46088 43278 80496
 67282 45692 00894 53625 33494 53392 07732 01297 41906 22036 29386 44133 21321 12102 47232
 53282 67966 76050 24611

And the 08.25/08.30z transcript:

Block Sync

4444444444

Block Sync

1 1 1 1 1 1 1 1

Block Sync

4444444444

Block Sync

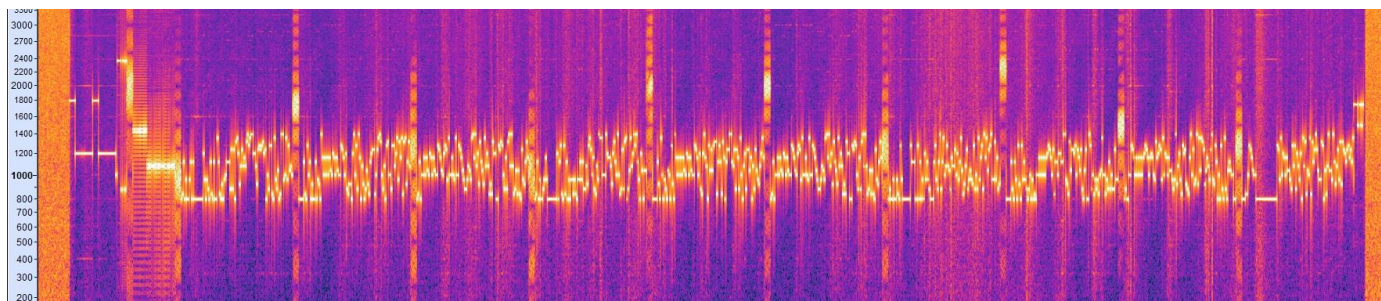
6

Message Start 02630 00001 00000 10140

So far, I noticed six different digital formats

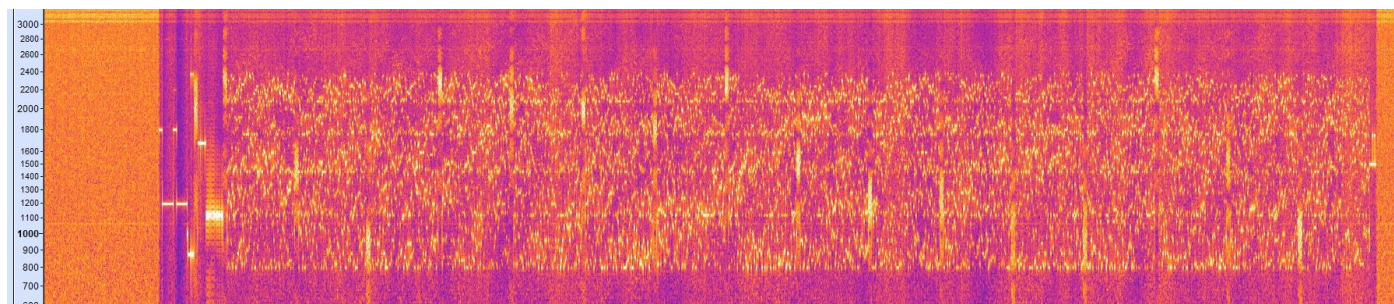
Variant 01

14712kHz 1210z 11/10/2022



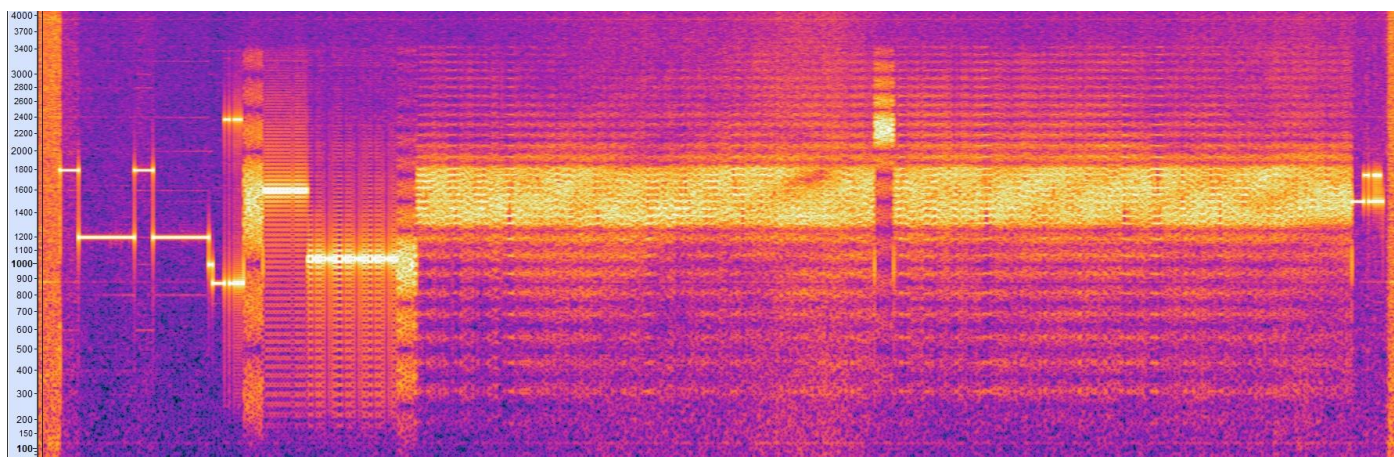
Variant 02

10256kHz 1045z 28/10/2022 =



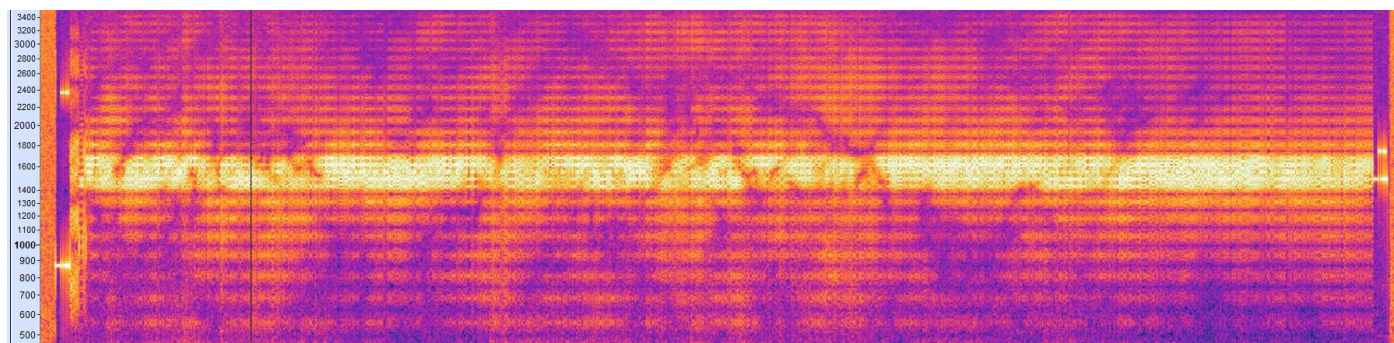
Variant 03

11431kHz 1110z 28/10/2022



Variant 04

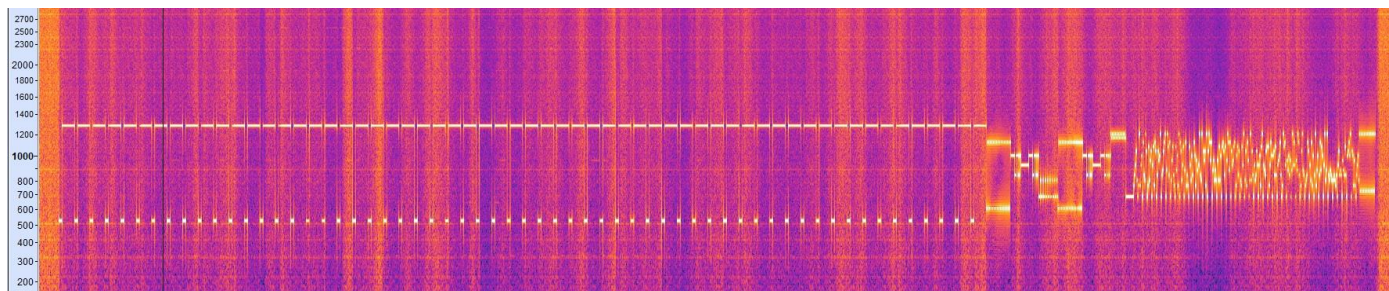
11431kHz 0910z 28/10/2022



Variant 05

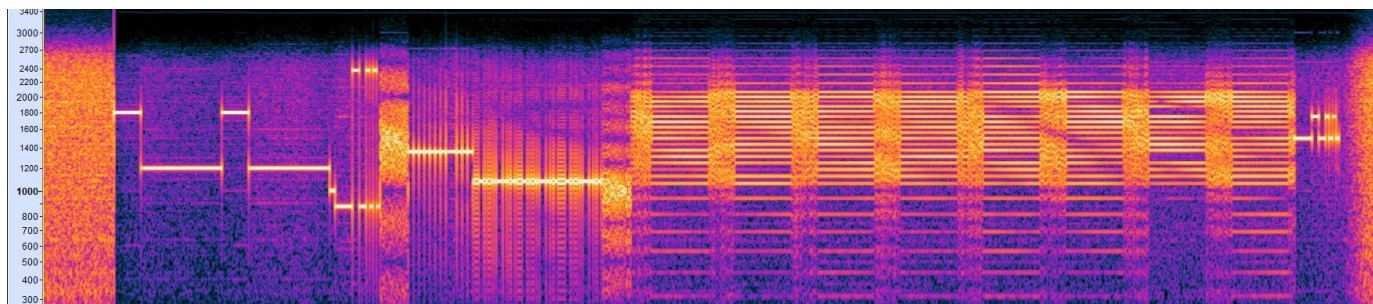
11431kHz 0810z 28/10/2022

XPA1 10Bd



Variant 06

11431kHz 1303z 26/10/2022



Thank you Gert; excellent stuff

Any reader who wishes to make sensible comment please do so via Group; if not a member please contact via Website facility initially

XPA2

| | | | | | | |
|-------|-----------------|------|--------------|-------------------------|-----|-----|
| 14374 | 02-09-2022 0800 | XPA2 | MFSK-16/29Bd | 01392 00001 00000 33662 | Ary | Fri |
| 14974 | 02-09-2022 0820 | XPA2 | MFSK-16/29Bd | 01392 00001 00000 33662 | | |
| 16274 | 02-09-2022 0840 | XPA2 | MFSK-16/29Bd | 01392 00001 00000 33662 | | |

14374/14974/16274kHz 08.00/20/40z Gert FRI

09/09 03631 00096 73855 .. 33615

03631 00096 73855 14896 78156 13441 43735 41135 40978 73461
71566 07074 39171 99551 78085 58398 07530 17116 98645 88657
41801 50609 71678 19161 74868 41569 63116 53380 50640 11958
85048 15193 91531 75639 57811 65443 33579 41094 18433 99396
18163 15659 06894 16991 30939 43791 44183 94514 16636 18401
44907 37015 78835 94086 57614 60583 76430 85168 33835 49476
69931 37549 88167 36162 19711 88512 44975 89823 31916 34808
66105 23784 83174 14976 00449 64846 13847 66232 21851 18916
72258 45993 45858 94881 81066 66666 77381 69114 58140 12966
04587 66611 52965 36831 61016 71099 74958 33615

Courtesy Gert

XPA2 18206/16329/15824kHz 09.10/30/50utc 20220919 [00852 00180 73175 ..] MON

Below some specials or tests?

XPA2 10256kHz 10.10utc 20220919 [09527 00055 14974 ..]MON

XPA2 11431kHz 10.20utc 20220919 [09527 .. rest too weak to copy]MON

XPA2 10256kHz 10.40utc 20220919 [Too weak to copy]MON

XPA2 10256kHz 11.10utc 20220919 [00001 00000 37661]MON

[illegible]

XPA2 11431kHz 13.10utc 20220919 [repeat of 13.00utc]MON

More XPA2 from H-FD:

```
1B XPA2
Thu 01.09.2022 0500Z 10221 msg
Thu 01.09.2022 0520Z 11121 msg
Thu 01.09.2022 0540Z 12221 msg
```

Thu 01.09.2022 0910Z 15859 msg
Thu 01.09.2022 0930Z 14659 msg
Thu 01.09.2022 0950Z 13459 msg

Fri 02.09.2022 0800Z 14374 msg
Fri 02.09.2022 0820Z 14974 msg
Fri 02.09.2022 0840Z 16274 msg

Fri 02.09.2022 1100Z 13431 msg
Fri 02.09.2022 1120Z 12131 msg
Fri 02.09.2022 1140Z 11431 msg

Tue 06.09.2022 1600Z 13887 msg
Tue 06.09.2022 1620Z 13387 msg
Tue 06.09.2022 1640Z 11587 msg

Wed 07.09.2022 0910Z 18206 msg
Wed 07.09.2022 0930Z 16329 msg
Wed 07.09.2022 0950Z 15824 msg

Wed 07.09.2022 1100Z 16117 msg
Wed 07.09.2022 1120Z 14917 msg
Wed 07.09.2022 1140Z 13517 msg

Sat 24.09.2022 1500Z 14373 msg
Sat 24.09.2022 1520Z 13373 msg
Sat 24.09.2022 1540Z 11573 msg

And for October 2022:

| | | | | | |
|-------|----------------------|--------------|-------------------------|-----|-----|
| 15958 | 02-10-2022 0800 XPA2 | MFSK-16/20Bd | 07895 00001 00000 37670 | Ary | SUN |
| 17458 | 02-10-2022 0820 XPA2 | MFSK-16/20Bd | 07895 00001 00000 37670 | | |
| 18758 | 02-10-2022 0840 XPA2 | MFSK-16/20Bd | 07895 00001 00000 37670 | | |

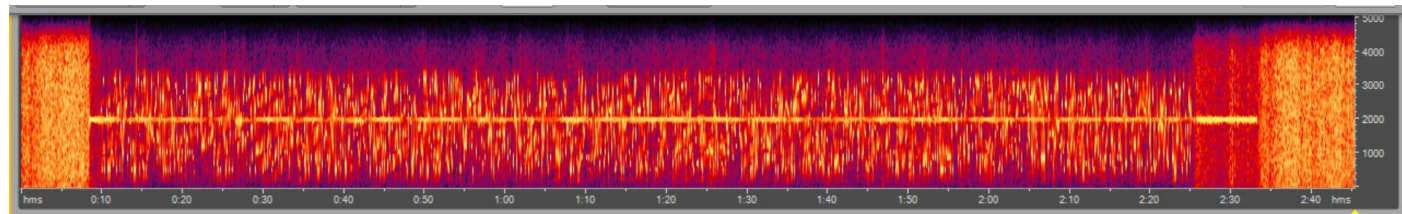
| | | | | | |
|-------|----------------------|--------------|--|-----|-----|
| 10238 | 04-10-2022 0500 XPA2 | MFSK-16/20Bd | | Ary | TUE |
| 11138 | 04-10-2022 0520 XPA2 | MFSK-16/20Bd | | | |
| 12138 | 04-10-2022 0540 XPA2 | MFSK-16/20Bd | | | |

00943 00133 09907 44008 41610 52029 42395 00910 22928 99598
40593 16372 02278 24746 68901 11336 69299 33454 78158 40074
70389 50082 51828 84194 85422 10980 10342 46378 46661 53541
66208 46312 71016 08045 01477 93392 33482 46477 01533 00453
96981 53846 53421 07435 36906 00541 55433 58986 51317 47814
58591 11739 65154 80990 43797 71292 13067 40820 54871 32348
20280 88497 96068 41515 86130 42083 62995 36726 96784 31509
71999 58687 19975 62642 80563 33995 61913 47174 96122 10809
29445 61352 33959 60805 48716 06222 11682 89389 84356 53660
14288 14240 61394 51337 00554 94293 73455 42742 30355 87712
74484 02565 88670 29852 59333 75391 86356 49676 66616 08364
15684 45523 82075 10318 52077 88808 41108 70971 42885 78986
13536 05624 33008 33803 56838 77441 15881 75667 04186 33972
47771 35535 51909 77126 02008 07464 *Courtesy Ary*

XPB1

Sunday/Tuesday

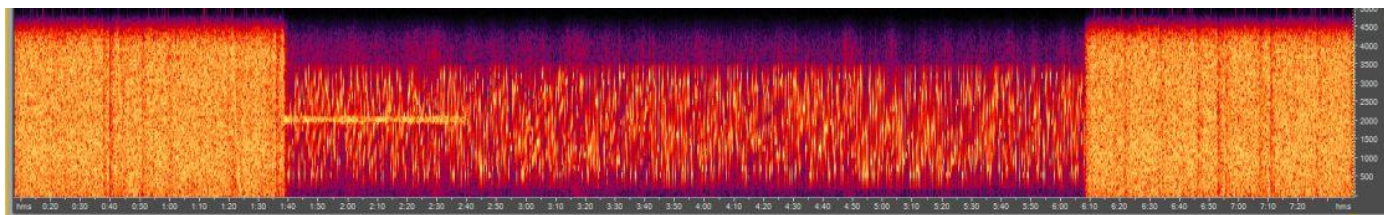
Sept 2022



6939kHz 1940z 04/09/22 Carrier present [2.04kHz]

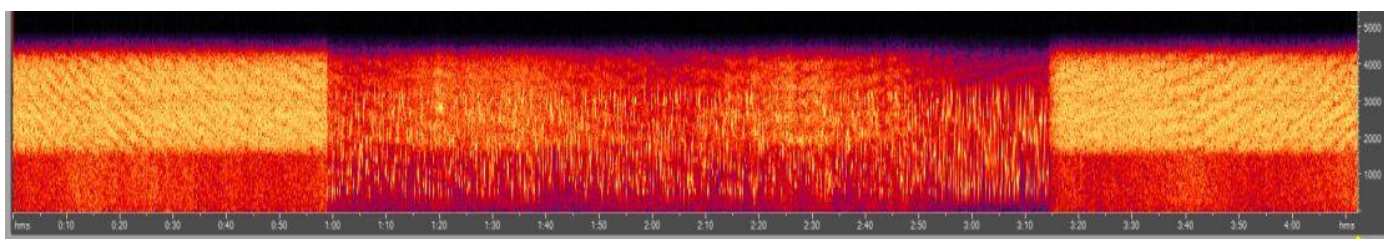
| | | | | | |
|----------|-------|-------|---|------|-----|
| 12139kHz | 1900z | 04/09 | Very strong 2m15s | PLdn | SUN |
| 10939kHz | 1910z | 04/09 | Strong 2m15s | PLdn | SUN |
| 9339kHz | 1920z | 04/09 | Strong 2m15s | PLdn | SUN |
| 8139kHz | 1930z | 04/09 | Very strong 2m15s | PLdn | SUN |
| 6939kHz | 1940z | 04/09 | Very strong 2m15s 2.04kHz carrier present | PLdn | SUN |
| 5839kHz | 1950z | 04/09 | Very strong 2m15s | PLdn | SUN |
| 12139kHz | 1900z | 06/09 | Lightning, Antenna unplugged | PLdn | TUE |
| 10939kHz | 1910z | 06/09 | Lightning, Antenna unplugged | PLdn | TUE |
| 9339kHz | 1920z | 06/09 | Lightning, Antenna unplugged | PLdn | TUE |
| 8139kHz | 1930z | 06/09 | Lightning, Antenna unplugged | PLdn | TUE |
| 6939kHz | 1940z | 06/09 | Lightning, Antenna unplugged | PLdn | TUE |
| 5839kHz | 1950z | 06/09 | Lightning, Antenna unplugged | PLdn | TUE |

| | | | | | | |
|----------------|-------|----------|-------|----------------------------------|------|----------------|
| 12139kHz 1900z | 11/09 | Weak | 4m30s | | PLdn | SUN |
| 10939kHz 1910z | 11/09 | Strong | 4m30s | | PLdn | SUN |
| 9339kHz 1920z | 11/09 | Strong | 4m30s | | PLdn | SUN |
| 8139kHz 1930z | 11/09 | V.strong | 4m30s | | PLdn | SUN |
| 6939kHz 1940z | 11/09 | V.strong | 4m30s | 2.04kHz carrier, for 2m fm start | PLdn | SUN see below. |
| 5839kHz 1950z | 11/09 | V.strong | 4m30s | | PLdn | SUN |



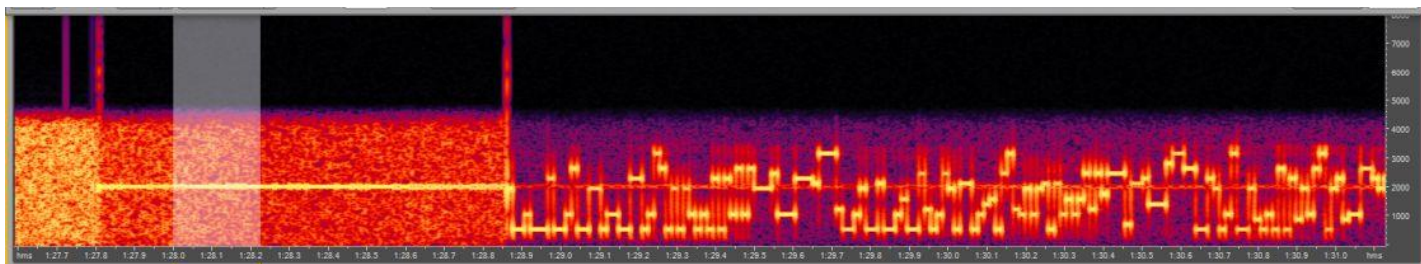
Carrier present

| | | | | | | |
|----------------|-------|-----------|-------|----------------------------------|------|-----|
| 12139kHz 1900z | 14/09 | Strong | 4m30s | | PLdn | TUE |
| 10939kHz 1910z | 14/09 | Strong | 4m30s | | PLdn | TUE |
| 9339kHz 1920z | 14/09 | Strong | 4m30s | | PLdn | TUE |
| 8139kHz 1930z | 14/09 | V.strong | 4m30s | | PLdn | TUE |
| 6939kHz 1940z | 14/09 | V. strong | 4m30s | 2.04kHz carrier present fm start | PLdn | TUE |
| 5839kHz 1950z | 14/09 | V.strong | 4m30s | | PLdn | TUE |



QRM as seen 1930z 18/09

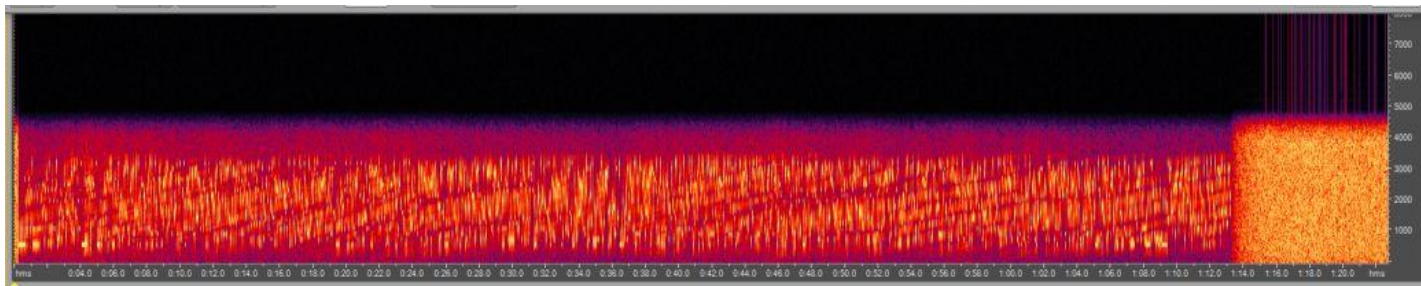
| | | | | | | |
|----------------|-------|----------|-------|-----------------------------|------|-----|
| 12139kHz 1900z | 18/09 | Strong | 2m15s | | PLdn | SUN |
| 10939kHz 1910z | 18/09 | Strong | 2m15s | | PLdn | SUN |
| 9339kHz 1920z | 18/09 | Strong | 2m15s | | PLdn | SUN |
| 8139kHz 1930z | 18/09 | Strong | 2m15s | QRM2 See above | PLdn | SUN |
| 6939kHz 1940z | 18/09 | Strong | 2m15s | 2.04kHz carrier | PLdn | SUN |
| 5839kHz 1950z | 18/09 | Strong | 2m15s | | PLdn | SUN |
| 12139kHz 1900z | 20/09 | Strong | 1m41s | | PLdn | TUE |
| 10939kHz 1910z | 20/09 | Fair | 1m41s | | PLdn | TUE |
| 9339kHz 1920z | 20/09 | V.strong | 1m41s | | PLdn | TUE |
| 8139kHz 1930z | 20/09 | V.strong | 1m41s | | PLdn | TUE |
| 6939kHz 1940z | 20/09 | V.strong | 1m41s | 2.04kHz carrier, 1m lg | PLdn | TUE |
| 5839kHz 1950z | 20/09 | V.strong | 1m41s | | PLdn | TUE |
| 12139kHz 1900z | 25/09 | Weak | 1m40s | | PLdn | SUN |
| 10939kHz 1910z | 25/09 | Fair | 1m40s | | PLdn | SUN |
| 9339kHz 1920z | 25/09 | Strong | 1m40s | | PLdn | SUN |
| 8139kHz 1930z | 25/09 | Strong | 1m40s | QRM2 | PLdn | SUN |
| 6939kHz 1940z | 25/09 | Strong | 1m40s | 2.04kHz carrier | PLdn | SUN |
| 5839kHz 1950z | 25/09 | V.strong | 1m40s | | PLdn | SUN |
| 12139kHz 1900z | 27/09 | Weak | 1m40s | | PLdn | TUE |
| 10939kHz 1910z | 27/09 | Weak | 1m40s | | PLdn | TUE |
| 9339kHz 1920z | 27/09 | Strong | 1m40s | | PLdn | TUE |
| 8139kHz 1930z | 27/09 | Strong | 1m40s | | PLdn | TUE |
| 6939kHz 1940z | 27/09 | V.strong | 1m40s | 2.06kHz carrier [see below] | PLdn | TUE |
| 5839kHz 1950z | 27/09 | V.strong | 1m40s | | PLdn | TUE |



Carrier starting before transmission [Query tx fault]? 6939kHz 1940z 27/09 V.strong 1m40s 2.06kHz carrier

October 2022

| | | | | | |
|---------------|-------|----------|-------------------------|------|-----|
| 9323kHz 1900z | 02/10 | V Strong | 1m40s | PLdn | SUN |
| 8123kHz 1910z | 02/10 | V Strong | 1m40s | PLdn | SUN |
| 7723kHz 1920z | 02/10 | V Strong | 1m40s | PLdn | SUN |
| 6923kHz 1930z | 02/10 | V Strong | 1m40s | PLdn | SUN |
| 5823kHz 1940z | 02/10 | V Strong | 1m40s | PLdn | SUN |
| 5123kHz 1950z | 02/10 | V Strong | 1m13s Truncated sending | PLdn | SUN |



5123kHz 1950z 02/10 V Strong 1m13s Truncated sending

| | | | | | |
|------------------------------|-------|----------|--------------------------|------|-----|
| 9323kHz 1900z | 04/10 | Strong | 4m30s | PLdn | TUE |
| 8123kHz 1910z | 04/10 | V Strong | 4m30s | PLdn | TUE |
| 7723kHz 1920z | 04/10 | V Strong | 4m30s | PLdn | TUE |
| 6923kHz 1930z | 04/10 | V Strong | 4m30s | PLdn | TUE |
| 5823kHz 1940z | 04/10 | V Strong | 4m30s | PLdn | TUE |
| 5123kHz 1950z | 04/10 | V Strong | 4m30s | PLdn | TUE |
| | | | | | |
| 9323kHz 1900z | 09/10 | Strong | 4m30s | PLdn | SUN |
| 8123kHz 1910z | 09/10 | V Strong | 4m30s | PLdn | SUN |
| 7723kHz 1920z | 09/10 | V Strong | 4m30s | PLdn | SUN |
| 6923kHz 1930z | 09/10 | V Strong | 4m30s | PLdn | SUN |
| 5823kHz 1940z | 09/10 | V Strong | 4m30s | PLdn | SUN |
| 5123kHz 1950z | 09/10 | V Strong | 4m30s | PLdn | SUN |
| | | | | | |
| 9323kHz 1900z | 11/10 | Weak | 4m30s QRM3 | PLdn | TUE |
| 8123kHz 1910z | 11/10 | Strong | 4m30s | PLdn | TUE |
| 7723kHz 1920z | 11/10 | V Strong | 4m30s | PLdn | TUE |
| 6923kHz 1930z | 11/10 | V Strong | 4m30s | PLdn | TUE |
| 5823kHz 1940z | 11/10 | V Strong | 4m30s | PLdn | TUE |
| 5123kHz 1950z | 11/10 | V Strong | 4m30s | PLdn | TUE |
| | | | | | |
| 9323kHz 1900z | 16/10 | | Not Monitored, off watch | PLdn | SUN |
| 8123kHz 1910z | 16/10 | | Not Monitored, off watch | PLdn | SUN |
| 7723kHz 1920z | 16/10 | | Not Monitored, off watch | PLdn | SUN |
| 6923kHz 1930z | 16/10 | | Not Monitored, off watch | PLdn | SUN |
| 5823kHz 1940z | 16/10 | | Not Monitored, off watch | PLdn | SUN |
| 5123kHz 1950z | 16/10 | | Not Monitored, off watch | PLdn | SUN |
| [Monitored as active by Ary] | | | | | |
| | | | | | |
| 9323kHz 1900z | 19/10 | V.strong | 2m15s | PLdn | TUE |
| 8123kHz 1910z | 19/10 | Strong | 2m15s | PLdn | TUE |
| 7723kHz 1920z | 19/10 | Strong | 2m15s | PLdn | TUE |
| 6923kHz 1930z | 19/10 | V.strong | 2m15s | PLdn | TUE |
| 5823kHz 1940z | 19/10 | V.strong | 2m15s | PLdn | TUE |
| 5123kHz 1950z | 19/10 | V.strong | 2m15s | PLdn | TUE |



Lightning across UK etc. PLdn QTH somewhere in red circle. [23/10]

| | | | | | |
|---------------|-------|----------|------------------------------------|------|-----|
| 9323kHz 1900z | 23/10 | | Not Monitored, Lightning, as above | PLdn | SUN |
| 8123kHz 1910z | 23/10 | | Not Monitored, Lightning | PLdn | SUN |
| 7723kHz 1920z | 23/10 | | Not Monitored, Lightning | PLdn | SUN |
| 6923kHz 1930z | 23/10 | | Not Monitored, Lightning | PLdn | SUN |
| 5823kHz 1940z | 23/10 | | Not Monitored, Lightning | PLdn | SUN |
| 5123kHz 1950z | 23/10 | | Not Monitored, Lightning | PLdn | SUN |
| 9323kHz 1900z | 25/10 | Strong | 2m15s | PLdn | TUE |
| 8123kHz 1910z | 25/10 | V.strong | 2m15s | PLdn | TUE |
| 7723kHz 1920z | 25/10 | V.strong | 2m15s | PLdn | TUE |
| 6923kHz 1930z | 25/10 | V.strong | 2m15s | PLdn | TUE |
| 5823kHz 1940z | 25/10 | V.strong | 2m15s | PLdn | TUE |
| 5123kHz 1950z | 25/10 | V.strong | 2m15s | PLdn | TUE |
| 9323kHz 1900z | 30/10 | Fair | 2m15s | PLdn | SUN |
| 8123kHz 1910z | 30/10 | Strong | 2m15s | PLdn | SUN |
| 7723kHz 1920z | 30/10 | Strong | 2m15s | PLdn | SUN |
| 6923kHz 1930z | 30/10 | Strong | 2m15s | PLdn | SUN |
| 5823kHz 1940z | 30/10 | Strong | 2m15s | PLdn | SUN |
| 5123kHz 1950z | 30/10 | Strong | 2m15s | PLdn | SUN |

Monday/Saturday

Sept 2022

| | | | | | |
|----------------|-------|------------|--------------------------|------|-----|
| 14462kHz 1200z | 03/09 | Weak | 4m28s | PLdn | SAT |
| 13962kHz 1210z | 03/09 | Weak | 4m28s | PLdn | SAT |
| 13462kHz 1220z | 03/09 | Weak | 4m28s | PLdn | SAT |
| 12162kHz 1230z | 03/09 | Weak | 4m28s | PLdn | SAT |
| 11562kHz 1240z | 03/09 | NRH | | PLdn | SAT |
| 10962kHz 1250z | 03/09 | NRH | | PLdn | SAT |
| 14462kHz 1200z | 05/09 | Unworkable | | PLdn | MON |
| 13962kHz 1210z | 05/09 | Weak | 1m40s | PLdn | MON |
| 13462kHz 1220z | 05/09 | Weak | 1m40s | PLdn | MON |
| 12162kHz 1230z | 05/09 | Weak | 1m40s | PLdn | MON |
| 11562kHz 1240z | 05/09 | Weak | 1m40s | PLdn | MON |
| 10962kHz 1250z | 05/09 | Unworkable | | PLdn | MON |
| 14462kHz 1200z | 10/09 | Weak | 1m40s | PLdn | SAT |
| 13962kHz 1210z | 10/09 | Weak | 1m40s | PLdn | SAT |
| 13462kHz 1220z | 10/09 | Weak | 1m40s | PLdn | SAT |
| 12162kHz 1230z | 10/09 | Weak | 1m40s | PLdn | SAT |
| 11562kHz 1240z | 10/09 | Weak | 1m40s | PLdn | SAT |
| 10962kHz 1250z | 10/09 | Weak | 1m40s | PLdn | SAT |
| 14462kHz 1200z | 12/09 | Weak | 4m28s | PLdn | MON |
| 13962kHz 1210z | 12/09 | Weak | 4m28s | PLdn | MON |
| 13462kHz 1220z | 12/09 | Weak | 4m28s | PLdn | MON |
| 12162kHz 1230z | 12/09 | V.weak | 4m28s | PLdn | MON |
| 11562kHz 1240z | 12/09 | V.weak | 4m28s | PLdn | MON |
| 10962kHz 1250z | 12/09 | Weak | 4m28s | PLdn | MON |
| 14462kHz 1200z | 17/09 | Weak | 4m30s QRM3 | PLdn | SAT |
| 13962kHz 1210z | 17/09 | Weak | 4m30s QRM3 | PLdn | SAT |
| 13462kHz 1220z | 17/09 | Fair | 4m30s QRM3 | PLdn | SAT |
| 12162kHz 1230z | 17/09 | Weak | 4m30s QRM3 | PLdn | SAT |
| 11562kHz 1240z | 17/09 | Weak | 4m30s QRM3 | PLdn | SAT |
| 10962kHz 1250z | 17/09 | Weak | 4m30s | PLdn | SAT |
| 14462kHz 1200z | 19/09 | Weak | 2m15s | PLdn | MON |
| 13962kHz 1210z | 19/09 | Weak | 2m15s | PLdn | MON |
| 13462kHz 1220z | 19/09 | Fair | 2m15s | PLdn | MON |
| 12162kHz 1230z | 19/09 | Weak | 2m15s | PLdn | MON |
| 11562kHz 1240z | 19/09 | Weak | 2m15s | PLdn | MON |
| 10962kHz 1250z | 19/09 | Weak | 2m15s | PLdn | MON |
| 14462kHz 1200z | 24/09 | | Not monitored, off watch | PLdn | SAT |
| 13962kHz 1210z | 24/09 | | Not monitored, off watch | PLdn | SAT |
| 13462kHz 1220z | 24/09 | | Not monitored, off watch | PLdn | SAT |
| 12162kHz 1230z | 24/09 | | Not monitored, off watch | PLdn | SAT |
| 11562kHz 1240z | 24/09 | | Not monitored, off watch | PLdn | SAT |
| 10962kHz 1250z | 24/09 | | Not monitored, off watch | PLdn | SAT |
| 14462kHz 1200z | 26/09 | Weak | 4m30s | PLdn | MON |
| 13962kHz 1210z | 26/09 | Weak | 4m30s | PLdn | MON |
| 13462kHz 1220z | 26/09 | Strong | 4m30s | PLdn | MON |
| 12162kHz 1230z | 26/09 | Fair | 4m30s | PLdn | MON |
| 11562kHz 1240z | 26/09 | Weak | 4m30s | PLdn | MON |
| 10962kHz 1250z | 26/09 | Weak | 4m30s | PLdn | MON |

October 2022

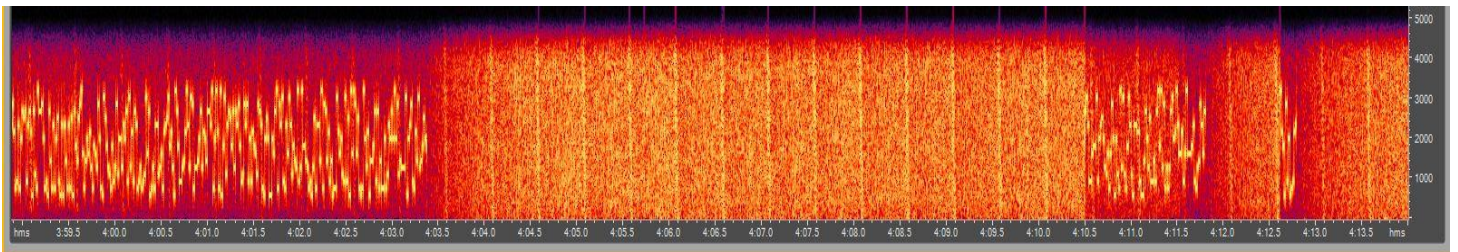
| | | | | | | | |
|------------------------------|-------|-------|--------|--------------------------|------|------|-----|
| 14462kHz | 1200z | 01/10 | Weak | 4m28s | | PLdn | SAT |
| 13962kHz | 1210z | 01/10 | Weak | 4m28s | | PLdn | SAT |
| 13462kHz | 1220z | 01/10 | Fair | 4m28s | | PLdn | SAT |
| 12162kHz | 1230z | 01/10 | Weak | 4m28s | | PLdn | SAT |
| 11562kHz | 1240z | 01/10 | Weak | 4m28s | | PLdn | SAT |
| 10962kHz | 1250z | 01/10 | Weak | 4m28s | | PLdn | SAT |
| | | | | | | | |
| 14462kHz | 1200z | 03/10 | Weak | 2m15s | | PLdn | MON |
| 13962kHz | 1210z | 03/10 | Weak | 2m15s | | PLdn | MON |
| 13462kHz | 1220z | 03/10 | Fair | 2m15s | | PLdn | MON |
| 12162kHz | 1230z | 03/10 | Fair | 2m15s | | PLdn | MON |
| 11562kHz | 1240z | 03/10 | Weak | 2m15s | | PLdn | MON |
| 10962kHz | 1250z | 03/10 | Weak | 2m15s | | PLdn | MON |
| | | | | | | | |
| 14462kHz | 1200z | 08/10 | Weak | 2m15s | | PLdn | SAT |
| 13962kHz | 1210z | 08/10 | Weak | 2m15s | QRM4 | PLdn | SAT |
| 13462kHz | 1220z | 08/10 | Weak | 2m15s | | PLdn | SAT |
| 12162kHz | 1230z | 08/10 | Fair | 2m15s | | PLdn | SAT |
| 11562kHz | 1240z | 08/10 | Weak | 2m15s | | PLdn | SAT |
| 10962kHz | 1250z | 08/10 | Weak | 2m15s | | PLdn | SAT |
| | | | | | | | |
| 14462kHz | 1200z | 10/10 | Strong | 4m30s | QRM2 | PLdn | MON |
| 13962kHz | 1210z | 10/10 | Fair | 4m30s | | PLdn | MON |
| 13462kHz | 1220z | 10/10 | Fair | 4m30s | | PLdn | MON |
| 12162kHz | 1230z | 10/10 | Fair | 4m30s | QRM2 | PLdn | MON |
| 11562kHz | 1240z | 10/10 | Weak | 4m30s | | PLdn | MON |
| 10962kHz | 1250z | 10/10 | Weak | 4m30s | | PLdn | MON |
| | | | | | | | |
| 14462kHz | 1200z | 15/10 | | Not Monitored, off watch | | PLdn | SAT |
| 13962kHz | 1210z | 15/10 | | Not Monitored, off watch | | PLdn | SAT |
| 13462kHz | 1220z | 15/10 | | Not Monitored, off watch | | PLdn | SAT |
| 12162kHz | 1230z | 15/10 | | Not Monitored, off watch | | PLdn | SAT |
| 11562kHz | 1240z | 15/10 | | Not Monitored, off watch | | PLdn | SAT |
| 10962kHz | 1250z | 15/10 | | Not Monitored, off watch | | PLdn | SAT |
| [Monitored as active by Ary] | | | | | | | |
| | | | | | | | |
| 14462kHz | 1200z | 17/10 | | Not Monitored, off watch | | PLdn | MON |
| 13962kHz | 1210z | 17/10 | | Not Monitored, off watch | | PLdn | MON |
| 13462kHz | 1220z | 17/10 | | Not Monitored, off watch | | PLdn | MON |
| 12162kHz | 1230z | 17/10 | | Not Monitored, off watch | | PLdn | MON |
| 11562kHz | 1240z | 17/10 | | Not Monitored, off watch | | PLdn | MON |
| 10962kHz | 1250z | 17/10 | | Not Monitored, off watch | | PLdn | MON |
| | | | | | | | |
| 14462kHz | 1200z | 22/10 | Fair | 1m40s | | PLdn | SAT |
| 13962kHz | 1210z | 22/10 | Fair | 1m40s | | PLdn | SAT |
| 13462kHz | 1220z | 22/10 | Fair | 1m40s | | PLdn | SAT |
| 12162kHz | 1230z | 22/10 | Fair | 1m40s | | PLdn | SAT |
| 11562kHz | 1240z | 22/10 | Weak | 1m40s | | PLdn | SAT |
| 10962kHz | 1250z | 22/10 | Weak | 1m40s | | PLdn | SAT |
| | | | | | | | |
| 14462kHz | 1200z | 24/10 | Weak | 4m28s | | PLdn | MON |
| 13962kHz | 1210z | 24/10 | Fair | 4m28s | | PLdn | MON |
| 13462kHz | 1220z | 24/10 | Fair | 4m28s | | PLdn | MON |
| 12162kHz | 1230z | 24/10 | Weak | 4m28s | | PLdn | MON |
| 11562kHz | 1240z | 24/10 | Weak | 4m28s | | PLdn | MON |
| 10962kHz | 1250z | 24/10 | Weak | 4m28s | | PLdn | MON |
| | | | | | | | |
| 14462kHz | 1200z | 29/10 | Fair | 4m28s | | PLdn | SAT |
| 13962kHz | 1210z | 29/10 | Fair | 4m28s | | PLdn | SAT |
| 13462kHz | 1220z | 29/10 | Fair | 4m28s | | PLdn | SAT |
| 12162kHz | 1230z | 29/10 | Strong | 4m28s | | PLdn | SAT |
| 11562kHz | 1240z | 29/10 | Strong | 4m28s | | PLdn | SAT |
| 10962kHz | 1250z | 29/10 | Fair | 4m28s | | PLdn | SAT |
| | | | | | | | |
| 14462kHz | 1200z | 31/10 | | Not Monitored, off watch | | PLdn | MON |
| 13962kHz | 1210z | 31/10 | | Not Monitored, off watch | | PLdn | MON |
| 13462kHz | 1220z | 31/10 | | Not Monitored, off watch | | PLdn | MON |
| 12162kHz | 1230z | 31/10 | | Not Monitored, off watch | | PLdn | MON |
| 11562kHz | 1240z | 31/10 | | Not Monitored, off watch | | PLdn | MON |
| 10962kHz | 1250z | 31/10 | | Not Monitored, off watch | | PLdn | MON |

Wednesday/Saturday

Sept 2022

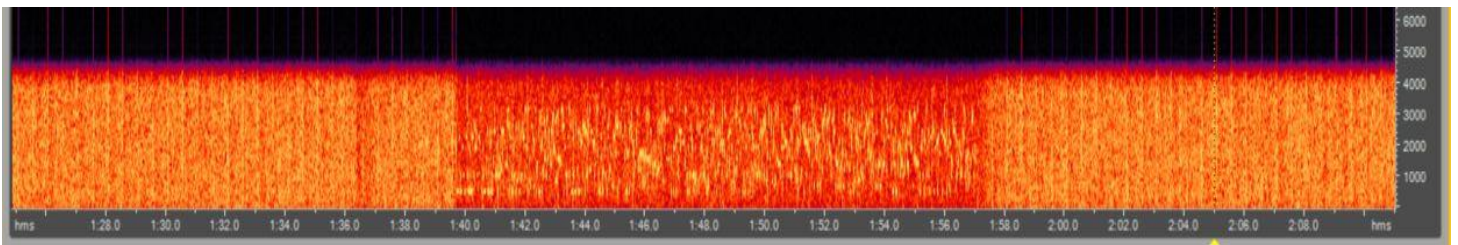
| | | | | | | | |
|----------|-------|-------|------|-------|------|------|-----|
| 13521kHz | 1100z | 03/09 | Fair | 2m27s | QRM3 | PLdn | SAT |
| 13421kHz | 1110z | 03/09 | Fair | 2m27s | | PLdn | SAT |
| 12221kHz | 1120z | 03/09 | Weak | 2m27s | | PLdn | SAT |
| 11521kHz | 1130z | 03/09 | NRH | | | PLdn | SAT |
| 11021kHz | 1140z | 03/09 | Weak | 2m27s | | PLdn | SAT |
| 10521kHz | 1150z | 03/09 | Weak | 2m27s | | PLdn | SAT |

| | | | | | | |
|----------------|-------|--------|-------|------|------|-----|
| 13521kHz 1100z | 07/09 | Weak | 2m27s | | PLdn | WED |
| 13421kHz 1110z | 07/09 | Weak | 2m27s | | PLdn | WED |
| 12221kHz 1120z | 07/09 | Weak | 2m27s | | PLdn | WED |
| 11521kHz 1130z | 07/09 | Weak | 2m27s | | PLdn | WED |
| 11021kHz 1140z | 07/09 | Weak | 2m27s | | PLdn | WED |
| 10521kHz 1150z | 07/09 | Weak | 2m27s | | PLdn | WED |
| | | | | | | |
| 13521kHz 1100z | 10/09 | Weak | 4m30s | QRM2 | PLdn | SAT |
| 13421kHz 1110z | 10/09 | Fair | 4m30s | | PLdn | SAT |
| 12221kHz 1120z | 10/09 | Weak | 4m30s | | PLdn | SAT |
| 11521kHz 1130z | 10/09 | Weak | 4m30s | | PLdn | SAT |
| 11021kHz 1140z | 10/09 | Weak | 4m30s | | PLdn | SAT |
| 10521kHz 1150z | 10/09 | Weak | 4m30s | | PLdn | SAT |
| | | | | | | |
| 13521kHz 1100z | 14/09 | Strong | 4m30s | | PLdn | WED |
| 13421kHz 1110z | 14/09 | Strong | 4m30s | | PLdn | WED |
| 12221kHz 1120z | 14/09 | Weak | 4m30s | | PLdn | WED |
| 11521kHz 1130z | 14/09 | Weak | 4m30s | | PLdn | WED |
| 11021kHz 1140z | 14/09 | Weak | 4m30s | | PLdn | WED |
| 10521kHz 1150z | 14/09 | NRH | | | PLdn | WED |



13521kHz 1100z 17/09 Note timings [scale correct]

| | | | | | |
|----------------|-------|--------|--|------|-----|
| 13521kHz 1100z | 17/09 | Strong | SHORT with breaks, incomplete: See above | PLdn | SAT |
| 13421kHz 1110z | 17/09 | Strong | 4m30s | PLdn | SAT |
| 12221kHz 1120z | 17/09 | Strong | 4m30s | QRM3 | SAT |
| 11521kHz 1130z | 17/09 | Weak | 4m30s | PLdn | SAT |
| 11021kHz 1140z | 17/09 | Weak | 4m30s | PLdn | SAT |
| 10521kHz 1150z | 17/09 | Weak | 4m30s | PLdn | SAT |



13521kHz 1100z 21/09 17s of transmission only

| | | | | | |
|----------------|-------|------------|--------------------------|------|-----|
| 13521kHz 1100z | 21/09 | Weak | 17secs only, see above | PLdn | WED |
| 13421kHz 1110z | 21/09 | Weak | 4m30s | PLdn | WED |
| 12221kHz 1120z | 21/09 | Weak | 4m30s | QRM2 | WED |
| 11521kHz 1130z | 21/09 | Weak | 4m30s | PLdn | WED |
| 11021kHz 1140z | 21/09 | Unworkable | | PLdn | WED |
| 10521kHz 1150z | 21/09 | Unworkable | | PLdn | WED |
| | | | | | |
| 13521kHz 1100z | 24/09 | | Not monitored, off watch | PLdn | SAT |
| 13421kHz 1110z | 24/09 | | Not monitored, off watch | PLdn | SAT |
| 12221kHz 1120z | 24/09 | | Not monitored, off watch | PLdn | SAT |
| 11521kHz 1130z | 24/09 | | Not monitored, off watch | PLdn | SAT |
| 11021kHz 1140z | 24/09 | | Not monitored, off watch | PLdn | SAT |
| 10521kHz 1150z | 24/09 | | Not monitored, off watch | PLdn | SAT |
| | | | | | |
| 13521kHz 1100z | 28/09 | Fair | 4m30s | PLdn | WED |
| 13421kHz 1110z | 28/09 | Strong | 4m30s | PLdn | WED |
| 12221kHz 1120z | 28/09 | Fair | 4m30s | PLdn | WED |
| 11521kHz 1130z | 28/09 | Weak | 4m30s | PLdn | WED |
| 11021kHz 1140z | 28/09 | Weak | 4m30s | PLdn | WED |
| 10521kHz 1150z | 28/09 | Weak | 4m30s | PLdn | WED |

October 2022

| | | | | | |
|----------------|-------|------|-------|------|-----|
| 16225kHz 1100z | 01/10 | NRH | | PLdn | SAT |
| 15825kHz 1110z | 01/10 | Fair | 4m28s | PLdn | SAT |
| 14925kHz 1120z | 01/10 | Fair | 4m28s | PLdn | SAT |
| 13525kHz 1130z | 01/10 | Fair | 4m28s | PLdn | SAT |
| 12125kHz 1140z | 01/10 | Fair | 4m28s | PLdn | SAT |
| 11425kHz 1150z | 01/10 | Weak | 4m28s | PLdn | SAT |

| | | | | | | |
|------------------------------|-------|-------|------------|--------------------------|------|-----|
| 16225kHz | 1100z | 05/10 | NRH | | PLdn | WED |
| 15825kHz | 1110z | 05/10 | Weak | 4m30s | PLdn | WED |
| 14925kHz | 1120z | 05/10 | Weak | 4m30s | PLdn | WED |
| 13525kHz | 1130z | 05/10 | Weak | 4m30s | PLdn | WED |
| 12125kHz | 1140z | 05/10 | Fair | 4m30s | PLdn | WED |
| 11425kHz | 1150z | 05/10 | Unworkable | | PLdn | WED |
| | | | | | | |
| 16245kHz | 1100z | 08/10 | Weak | 4m30s | PLdn | SAT |
| 15825kHz | 1110z | 08/10 | Weak | 4m30s | PLdn | SAT |
| 14925kHz | 1120z | 08/10 | Fair | 4m30s | PLdn | SAT |
| 13525kHz | 1130z | 08/10 | Strong | 4m30s | PLdn | SAT |
| 12125kHz | 1140z | 08/10 | Fair | 4m30s | PLdn | SAT |
| 11425kHz | 1150z | 08/10 | Weak | 4m30s | PLdn | SAT |
| | | | | | | |
| 16245kHz | 1100z | 12/10 | NRH | | PLdn | WED |
| 15825kHz | 1110z | 12/10 | Weak | 4m30s | PLdn | WED |
| 14925kHz | 1120z | 12/10 | Fair | 4m30s | PLdn | WED |
| 13525kHz | 1130z | 12/10 | Fair | 4m30s | PLdn | WED |
| 12125kHz | 1140z | 12/10 | Fair | 4m30s | PLdn | WED |
| 11425kHz | 1150z | 12/10 | Weak | 4m30s | PLdn | WED |
| | | | | | | |
| 16245kHz | 1100z | 15/10 | | Not Monitored, off watch | PLdn | SAT |
| 15825kHz | 1110z | 15/10 | | Not Monitored, off watch | PLdn | SAT |
| 14925kHz | 1120z | 15/10 | | Not Monitored, off watch | PLdn | SAT |
| 13525kHz | 1130z | 15/10 | | Not Monitored, off watch | PLdn | SAT |
| 12125kHz | 1140z | 15/10 | | Not Monitored, off watch | PLdn | SAT |
| 11425kHz | 1150z | 15/10 | | Not Monitored, off watch | PLdn | SAT |
| [Monitored as active by Ary] | | | | | | |
| | | | | | | |
| 16245kHz | 1100z | 19/10 | MISSED | | PLdn | WED |
| 15825kHz | 1110z | 19/10 | Strong | 4m28s | PLdn | WED |
| 14925kHz | 1120z | 19/10 | Strong | 4m28s | PLdn | WED |
| 13525kHz | 1130z | 19/10 | Strong | 4m28s | PLdn | WED |
| 12125kHz | 1140z | 19/10 | Fair | 4m28s | PLdn | WED |
| 11425kHz | 1150z | 19/10 | Weak | 4m28s | PLdn | WED |
| | | | | | | |
| 16245kHz | 1100z | 22/10 | Strong | 4m28s | PLdn | SAT |
| 15825kHz | 1110z | 22/10 | Strong | 4m28s | PLdn | SAT |
| 14925kHz | 1120z | 22/10 | Strong | 4m28s | PLdn | SAT |
| 13525kHz | 1130z | 22/10 | Strong | 4m28s | PLdn | SAT |
| 12125kHz | 1140z | 22/10 | Strong | 4m28s | PLdn | SAT |
| 11425kHz | 1150z | 22/10 | Fair | 4m28s | PLdn | SAT |
| | | | | | | |
| 16245kHz | 1100z | 26/10 | Fair | 4m28s | PLdn | WED |
| 15825kHz | 1110z | 26/10 | Fair | 4m28s | PLdn | WED |
| 14925kHz | 1120z | 26/10 | Fair | 4m28s | PLdn | WED |
| 13525kHz | 1130z | 26/10 | Fair | 4m28s | PLdn | WED |
| 12125kHz | 1140z | 26/10 | Fair | 4m28s | PLdn | WED |
| 11425kHz | 1150z | 26/10 | Weak | 4m28s | PLdn | WED |
| | | | | | | |
| 16245kHz | 1100z | 29/10 | Weak | 4m28s | PLdn | SAT |
| 15825kHz | 1110z | 29/10 | Weak | 4m28s | PLdn | SAT |
| 14925kHz | 1120z | 29/10 | Weak | 4m28s | PLdn | SAT |
| 13525kHz | 1130z | 29/10 | Fair | 4m28s | PLdn | SAT |
| 12125kHz | 1140z | 29/10 | Fair | 4m28s | PLdn | SAT |
| 11425kHz | 1150z | 29/10 | Weak | 4m28s | PLdn | SAT |

Other XPB1 Courtesy H-FD

Mon 05.09.2022 0500Z 13435 msg 4:29
Mon 05.09.2022 0510Z 13935 msg
Mon 05.09.2022 0520Z 14435 msg
Mon 05.09.2022 0530Z 14835 msg
Mon 05.09.2022 0540Z 15935 msg
Mon 05.09.2022 0550Z 16235 msg

Additional XPB1[Friday]

18175 28-10-2022 1320 XPB1 MFSK-16
17475 28-10-2022 1330 XPB1 MFSK-16
16275 28-10-2022 1340 XPB1 MFSK-16
14975 28-10-2022 1350 XPB1 MFSK-16
Courtesy Ary

NEW TUESDAY/FRIDAY SCHEDULE FOUND [Tnx Ary]:

20075 18-10-2022 1300 XPB1 MFSK-16
19575 18-10-2022 1310 XPB1 MFSK-16
18175 18-10-2022 1320 XPB1 MFSK-16
17475 18-10-2022 1330 XPB1 MFSK-16
16275 18-10-2022 1340 XPB1 MFSK-16
14975 18-10-2022 1350 XPB1 MFSK-16

20075 21-10-2022 1300 XPB1 MFSK-16
 19575 21-10-2022 1310 XPB1 MFSK-16
 18175 21-10-2022 1320 XPB1 MFSK-16
 17475 21-10-2022 1330 XPB1 MFSK-16
 16275 21-10-2022 1340 XPB1 MFSK-16
 14975 21-10-2022 1350 XPB1 MFSK-16

20075 25-10-2022 1300 XPB1 MFSK-16
 19575 25-10-2022 1310 XPB1 MFSK-16
 18175 25-10-2022 1320 XPB1 MFSK-16
 17475 25-10-2022 1330 XPB1 MFSK-16
 16275 25-10-2022 1340 XPB1 MFSK-16
 14975 25-10-2022 1350 XPB1 MFSK-16

20075 28-10-2022 1300 XPB1 MFSK-16
 19575 28-10-2022 1310 XPB1 MFSK-16
 18175 28-10-2022 1320 XPB1 MFSK-16
 17475 28-10-2022 1330 XPB1 MFSK-16
 16275 28-10-2022 1340 XPB1 MFSK-16
 14975 28-10-2022 1350 XPB1 MFSK-16

F01

Tue 11.10.2022 1015Z 11129 FSK 200/500 7:55
 Tue 11.10.2022 1025Z 9082 FSK 200/500
 Tue 11.10.2022 1035Z 7344 FSK 200/500

H-FD
 H-FD
 H-FD

TUE
 TUE
 TUE

F06

16329 03-09-2022 2100 F06a FSK 200/1000 Russian diplo/intel. File 04436 Ary SAT
 12217 03-09-2022 2115 F06a FSK 200/1000 Russian diplo/intel. File 04436 Ary SAT
 11125 03-09-2022 2130 F06a FSK 200/1000 Russian diplo/intel. File 04436 Ary SAT

14621 01-10-2022 1500 F06a FSK 200/1000 Russian diplo/intel. File 04440 Ary SAT
 11057 01-10-2022 1515 F06a FSK 200/1000 Russian diplo/intel. File 04440 Ary SAT
 9369 01-10-2022 1530 F06a FSK 200/1000 Russian diplo/intel. File 04440 Ary SAT

HM01/SK01 Hybrid

11435 kHz 01-09-2022 1645z HM01 AM/WinDRM i.p. new groups/files after 11 days repeating August 20th messages Ary THU

Groups
 85741 57617 00448 28703 14543 05248

Files
 13780524.TXT
 43008574.TXT
 81765761.TXT
 36730044.FIG
 54862870.TXT
 20271454.TXT

Callsign: QWERTY01

Ary writes, HM01 is back. They have been off the air since the hurricane hit Cuba.

11435 kHz 05-10-2022 1600z HM01 AM/WinDRM Ary WED

Groups sent in voice 21351 63642 70712 36055 42289 85331

Files sent in WinDRM
 82522135.TXT
 24626364.TXT
 50547071.F1C
 27423605.TXT
 67464228.TXT
 36768533.FIG

Callsign QWERTY01

11435 07-10-2022 1600 HM01 AM/WinDRM
 Radio Habana Cuba. At 1604z HM01, already in progress
 21351 63642 70712 36055 42289 85331 (repeat of 5 Oct)

Ary

FRI

11435 kHz 11-10-2022 1617z HM01 AM/WinDRM i.p.

Ary

TUE

Groups

33852 73622 11271 50084 03638 14241

Files

84763385.TXT
 72847362.TXT
 24351127.TXT
 50475008.FIC
 61410363.TXT
 46331424.TXT

Callsign QWERTY01

X06 Mazielka (1c) logs section

| Date | Day | UTC | Freq | Scale | Monitor | Comments |
|----------|-----|-----------|-------|--------|--------------|------------------------------------|
| 20220901 | Thu | 0411 | 12221 | 1--6-- | Andrew/SE | X06b |
| 20220901 | Thu | 0553 | 12216 | 1--6-- | Andrew | X06b |
| 20220901 | Thu | 0719-0722 | 13448 | 162543 | Andrew | TX to Nicosia, G39 |
| 20220901 | Thu | 0728-0741 | 19511 | 314265 | Andrew | Alert 1 (Antananarivo, G380) 1 |
| 20220901 | Thu | 0741-0746 | 17517 | 314265 | Andrew | 2.2 |
| 20220901 | Thu | 0920-0925 | 18197 | 645321 | XAH | TX to Ho Chi Minh City, G410(1) |
| 20220901 | Thu | 1134-1155 | 18575 | 352416 | Andrew | Alert 3 (Dar es Salaam, G43) 1 |
| 20220901 | Thu | 1155-1158 | 16132 | 352416 | Andrew | 3.2 |
| 20220901 | Thu | 1158-1207 | 19405 | 352416 | Andrew | 3.3 |
| 20220901 | Thu | 1337-1344 | 17468 | 436512 | Andrew | Alert 2 (TX to Harare, G44) 1 |
| 20220901 | Thu | 1344 | 16277 | 436512 | Andrew | 2.2 I. p. |
| 20220902 | Fri | 1042-1049 | 14824 | 625413 | Andrew | Alert 2 (TX to Tel Aviv, G56) 1 |
| 20220902 | Fri | 1059 | 13547 | 625413 | Ary/NL | 2.2 I. p., no end time |
| 20220905 | Mon | 0729-0730 | 12152 | 432516 | Dave/AU | TX to Bern, G6 (SDR) (1) |
| 20220905 | Mon | 0825-0828 | 11438 | 532614 | Andrew | TX to Paris, G4 |
| 20220905 | Mon | 0922-0934 | 18750 | 641523 | Dave | Alert 2 (TX to Lusaka, G5) 1 (SDR) |
| 20220905 | Mon | 0934-0938 | 20675 | 641523 | Dave | 2.2 (SDR) |
| 20220905 | Mon | 1118 | 13462 | 6-1613 | Andrew | X06b with odd scale |
| 20220906 | Tue | 0753-0756 | 16197 | 165423 | Andrew | TX to Brussels, G12 |
| 20220906 | Tue | 0804-0813 | 14615 | 125643 | Andrew | TX to Ulanbatar, G317 |
| 20220906 | Tue | 0835-0843 | 14358 | 154263 | Andrew | TX to Rome, G7 |
| 20220906 | Tue | 0928-0939 | 18206 | 246531 | Andrew, Dave | TX to Accra, G16 |
| 20220906 | Tue | 1148-1202 | 16188 | 325614 | Andrew | Alert 2 (TX to Nairobi, G392) 1 |
| 20220906 | Tue | 1202-1238 | 18523 | 325614 | Andrew | 2.2 |
| 20220907 | Wed | 0706-0710 | 15819 | 256341 | Andrew | TX to Beirut, G311 |
| 20220907 | Wed | 0817-0832 | 14631 | 362154 | Andrew, Ary | TX to Athens, G32 |
| 20220907 | Wed | 1057-1101 | 16115 | 215346 | Andrew | Alert 1 (TX to Mumbai, G25) 1 |
| 20220907 | Wed | 1106 | 14684 | 1--6-- | Andrew | X06b |
| 20220907 | Wed | 1117 | 13484 | 6-16-- | Andrew | X06b with odd scale |
| 20220907 | Wed | 1122-1127 | 16115 | 215346 | Andrew | 1,2 |
| 20220907 | Wed | 1248-1256 | 15676 | 231654 | Andrew, Ary | TX to Abuja, G422 |
| 20220907 | Wed | 1310 | 9311 | 1-6--- | Andrew | X06b |
| 20220908 | Thu | 0957 | 13506 | 164532 | Ary | Alert 2 (TX to Dublin, G106) 1 |
| 20220908 | Thu | 1010 | 16223 | 164532 | Ary | 2.2 |
| 20220909 | Fri | 0748 | 12213 | 615243 | Ary | TX to Geneva, G127 |
| 20220911 | Sun | 1125-1133 | 16060 | 261453 | Dave | TX to Cairo, G138 (SDR) |
| 20220919 | Mon | 0712-0716 | 11158 | 263514 | Dave | Alert 4 (G425) 1 (SDR) |
| 20220919 | Mon | 0716-0724 | 13415 | 263514 | Dave | 4.2 (SDR) |
| 20220919 | Mon | 0725-0728 | 12133 | 263514 | Dave | 4.3 (SDR) |
| 20220919 | Mon | 0728-0730 | 11638 | 165324 | Andrew | TX to Vienna, G145 |
| 20220919 | Mon | 0729-0733 | 10175 | 263514 | Dave | 4.4 (SDR) |
| 20220919 | Mon | 0730-0737 | 11562 | 432516 | Andrew | TX to Bern, G341 |
| 20220119 | Mon | 0900-0904 | 11431 | 1--6-- | Dave | Some X06b signals(2) |
| 20220919 | Mon | 0915-0924 | 18750 | 641523 | Dave | Alert 2 (TX to Lusaka, G337) 1 SDR |
| 20220919 | Mon | 0925-0930 | 20675 | 641523 | Dave | 2.2 (SDR0) |
| 20220920 | Tue | 1000-1003 | 9450 | 165423 | XAH | TX to Brussels, i. p., S9, G151 |
| 20220920 | Tue | 1015-1028 | 15989 | 125643 | XAH | TX to Ulanbatar, S9, G383 |
| 20220920 | Tue | 1032-1035 | 14358 | 154263 | XAH | TX to Rome, S9, G148 |
| 20220922 | Thu | 0945-0949 | 13506 | 164532 | XAH | TX to Dublin, S9, G252 |
| 20220926 | Mon | 0825 | 20690 | 156234 | Ary | TX to Kampala, G203 |
| 20220926 | Mon | 0827 | 11424 | 421635 | Ary | TX to Oslo, G220 |

| | | | | | | |
|----------|-----|-----------|-------|--------|-----------|------------------------------------|
| 20220926 | Mon | 1246 | 15656 | 364152 | Ary | TX to New Delhi, G73 |
| 20221004 | Tue | 0926-0936 | 13401 | 154263 | RX39 | TX to Rome, G7 |
| 20221010 | Mon | 0822-0831 | 17475 | 156234 | Dave | TX to Kampala, G68 |
| 20221011 | Tue | 1258 | 13530 | 1--6-- | XAH | X06b with S9 and QRM3 (BCDX+radar) |
| 20221011 | Tue | 1450 | 16340 | 6----- | XAH | X06d with S9 in CW |
| 20221011 | Tue | 1450 | 16340 | 1--6-- | XAH | X06b with S9 in USB |
| 20221013 | Thu | 0812-0815 | 16153 | 153624 | Dave | TX to Damascus, G249 |
| 20221013 | Thu | 0958-1011 | 13506 | 164532 | Dave, Ary | TX to Dublin, G106 |
| 20221017 | Mon | 0647-0656 | 11638 | 165324 | Dave, Ary | TX to Vienna, G145 |
| 20221017 | Mon | 0923-0927 | 18750 | 641523 | Dave, Ary | TX to Lusaka, G337 |
| 20221022 | Sat | 1100/1207 | 12176 | 1--6-- | Brixmis | X06b before E07 |
| 20221022 | Sat | 1330? | 15849 | 1--6-- | Brixmis | X06b before E07 (approx. time) |
| 20221024 | Mon | 1011-1021 | 16117 | 154263 | RX39 | TX to Rome, R |
| 20221024 | Mon | 1245-1247 | 15656 | 364152 | Dave | TX to New Delhi, G73 |
| 20221025 | Tue | 1020-1022 | 20813 | 216354 | Dave | TX to Chennai, G228 |
| 20221026 | Wed | 0739 | 10814 | 412356 | Ary | TX to Budapest, G243 |
| 20221026 | Wed | 0928 | 16116 | 134265 | Ary | TX to Tunis, G90 |
| 20221027 | Thu | 0825 | 16153 | 153624 | Ary | TX to Damascus, G249 |
| 20221028 | Fri | 1053-1113 | 14250 | 123456 | Ary | X06c |
| 20221028 | Fri | 1211 | 17463 | 256134 | Ary | TX to Abidjan, G270 |

1) MFSK66 at 0931 UTC

2) First 2 times with "1--6--", the last was "6---1--"

Many thanks as usual to all contributors.

Till the next issue I say: Good-bye, and stay healthy!

Jochen Schäfer, Numbers-, X06 Database and Teamkopf – for 20 years on the E2K board!

Thanks Jochen and all his contributors

This time an excellent set of logs, just in from Spectre 3000 :

X06 Logs Sept/Oct 2022

X06

10814kHz 26/10/2022 0734z [412356 Budapest] 0737z Strong QRN2 QSB2 WED Spectre

11424kHz 26/09/2022 0828z [421635 Oslo] 0830z Strong QRN1 QSB1 MON Spectre

11438kHz 03/10/2022 0838z [532614 Paris] 0842z Strong QRN1 QSB1 MON Spectre

11545kHz 25/10/2022 0759z [534216 Baghdad] 0804z Strong QRN2 QSB2 TUE Spectre

11638kHz 19/09/2022 0728z [165324 Vienna] 0734z Strong QRN1 QSB1 MON Spectre

12171kHz 14/10/2022 0838z [356412 Berlin] 0840z Strong QRN1 QSB1 FRI Spectre

12177kHz 23/09/2022 0832z [356412 Berlin] 0835z Strong QRN1 QSB1 FRI Spectre
 10/10/2022 1251z [364152 New Delhi] 1254z Strong QRN2 QSB1 MON Spectre
 14/10/2022 0840z [356412 Berlin] 0844z Strong QRN2 QSB2 FRI Spectre
 28/10/2022 0854z [356412 Berlin] 0857z Strong QRN2 QSB2 FRI Spectre

13401kHz 04/10/2022 0829z [154263 Rome] 0833z Strong QRN1 QSB1 TUE Spectre

13419kHz 26/10/2022 0820z [465132 Sophia] 0822z Strong QRM3 QSB2 WED Spectre

13506kHz 22/09/2022 0943z [164532 Dublin] 0947z Strong QRN1 QSB1 THU Spectre
 13/10/2022 1000z [164532 Dublin] 1013z Strong QRN1 QSB1 THU Spectre

13510kHz 25/10/2022 0954z [612534 Ashgabat] 0958z Strong QRN2 QSB2 TUE Spectre

13506kHz 27/10/2022 0949z [164532 Dublin] 0958z Fair QRN2 QSB2 THU Spectre

13547kHz 21/10/2022 1029z [625413 Tel Aviv] 1033z Strong QRN2 QSB2 THU Spectre

13985kHz 26/10/2022 0903z [134265 Tunis] 0913z Strong QRN2 QSB2 WED Spectre

14358kHz 18/10/2022 0845z [154263 Rome] 0848z Strong QRN1 QSB1 TUE Spectre

14595kHz 16/10/2022 0725z [452163 Kabul] 0728z Strong QRN1 QRN2 SUN Spectre

14655kHz 26/10/2022 0803z [164253 Addis Ababa] 0806z Strong QRN2 QSB2 WED Spectre

14812kHz 26/10/2022 0911z [263145 Prague] 0915z Strong QRN2 QSB2 WEB Spectre

14824kHz 21/10/2022 1024z [625413 Tel Aviv] 1028z Strong QRM3 QSB2 FRI Spectre

15656kHz 26/09/2022 1245z [364152 New Delhi] 1249z Strong QRN1 QSB1 MON Spectre
 24/10/2022 1244z [364152 New Delhi] 1247z Fair QRM3 QSB3 MON Spectre

15676kHz 07/09/2022 1247z [231654 Abuja] 1252z Strong QRN1 QSB1 WED Spectre

16060kHz 23/10/2022 1134z [261453 Cairo] 1138z Strong QRN2 QSB1 SUN Spectre

16103kHz 20/10/2022 0929z [645321 Ho Chi Minh City] 0933z Strong QRN1 QSB1 THU Spectre

16115kHz 21/09/2022 1115z [215346 Mumbai] 1118z Strong QRN1 QSB1 WED Spectre
 19/10/2022 1100z [215346 Mumbai] 1103z Strong QRN1 QSB1 WED Spectre

16116kHz 26/10/2022 0922z [134265 Tunis] 0932z Strong QRN2 QSB2 WED Spectre
 26/10/2022 0945z [134265 Tunis] 0955z Strong QRN2 QSB2 WED Spectre

16117kHz 24/10/2022 1007z [463125 Rabat] 1017z Strong QRN2 QSB2 MON Spectre

16153kHz 27/10/2022 0824z [153624 Damascus] 0829z Fair QRN2 QSB2 THU Spectre

17463kHz 28/10/2022 1052z [256134 Abidjan] 1102z Strong QRN2 QSB2 FRI Spectre

17475kHz 10/10/2022 0823z [156234 Kampala] 0827z Strong QRN2 QSB2 MON Spectre

17506kHz 19/10/2022 1228z [231654 Abuja] 1231z Strong QRN1 QSB1 WED Spectre

18206kHz 18/10/2022 0929z [246531 Accra] 0933z Strong QRN2 QSB1 TUE Spectre

18245kHz 26/10/2022 0936z [134265 Tunis] 0946z Strong QRN2 QSB2 WED Spectre

18750kHz 19/09/2022 0919z [641523 Lusaka] 0923z Strong QRN1 QSB1 MON Spectre

19611kHz 28/10/2022 1015z [256134 Abidjan] 1024z Strong QRN2 QSB2 FRI Spectre
 28/10/2022 1055z [256134 Abidjan] 1057z Strong QRN2 QSB2 FRI Spectre

20336kHz 20/09/2022 0921z [246531 Accra] 0925z Strong QRN1 QSB1 TUE Spectre
 04/10/2022 0928z [246531 Accra] 0934z Weak QRN3 QSB3 TUE Spectre

20676kHz 19/09/2022 0926z [641523 Lusaka] 0929z Strong QRN1 QSB1 MON Spectre

20690kHz 24/10/2022 0822z [156234 Kampala] 0825z Strong QRN1 QSB1 MON Spectre

20812kHz 25/10/2022 1016z [216354 Chennai] 1021z Fair QRN2 QSB2 TUE Spectre

X06b

13330kHz 18/10/2022 0916z [111666] 0919z Strong QRN1 QSB1 TUE Spectre

13550kHz 13/10/2022 0938z [111666] 0948z Strong QRN2 QSB1 THU Spectre

X06c

14250kHz 28/10/2022 1102z [123456] 1112z Strong QRN2 QSB2 FRI Spectre

X06d

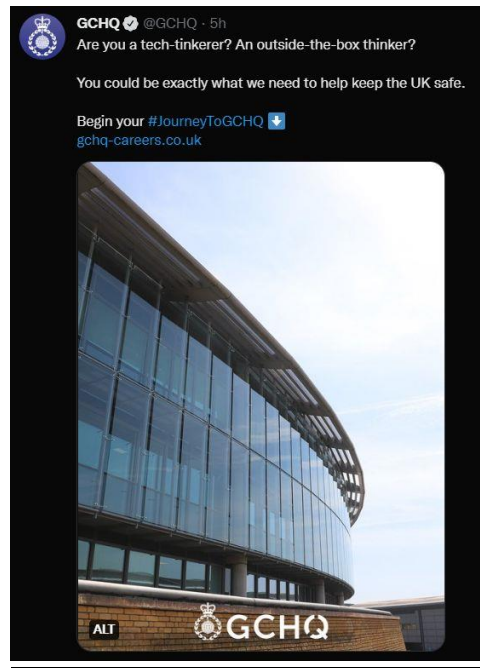
12177kHz 23/09/2022 0846z [666666] 0854z Strong QRN1 QSB1 FRI Spectre

14639kHz 22/09/2022 0937z [666666] 0945z Strong QRN1 QSB1 THU Spectre

16340kHz 22/09/2022 1042z [666666] 1051z Strong QRN1 QSB1 THU Spectre

Thank you to all our contributors

Giv us a Job!



GCHQ seeks to increase number of female coders to tackle threats

UK intelligence service funding 'nano-degree' courses in effort to improve diversity in technology roles

Robert Booth Social affairs correspondent
Mon 29 Aug 2022 10.54 BST

https://www.theguardian.com/uk-news/2022/aug/29/gchq-female-coders-boost-nano-degree-courses?CMP=share_btn_link

Britain's intelligence services want to boost the number of female coders in their ranks, warning they need to improve diversity to tackle threats ranging from foreign states to child online safety.

GCHQ, the UK's intelligence, security and cyber agency, is funding 14-week "nano-degrees" in data and software to help women who might have previously been put off coding to make a career change. The agency celebrates the birthday of Ada Lovelace, the daughter of the poet Lord Byron credited by some as writing the first computer programme in the early 1840s. But in 2022 only a third of staff at the agency are women, and fewer are in technology roles.

"We have been working hard to increase that number so we have more diverse teams and better get across the threats we need to today," said Jo Cavan, the director of strategy policy and engagement at the agency, which has bases in Cheltenham, London and Manchester.

GCHQ's missions include counterterrorism, serious and organised crime, countering hostile states and cybersecurity. Cavan said counterterrorism mission teams that have improved their gender balance have been performing better as a result.

"We haven't got the right mix of minds to get across some of these threats," Cavan said. "If you look at China, for example, and how technology is moving east and China is looking to impose non-western values on technology, there is some really important work for us to do there to make sure we are at the forefront of shaping those international technology standards and norms. So it is important to have a diverse team looking at those threats and the opportunities that come from some of those technologies.

"We know that if we get the right mix of minds it will give us a competitive advantage and that's why we talk labour diversity as being mission critical."

The agency is working with training organisation Code First Girls, which is also teaching coding to women under arrangements with security contractors, including BAE Systems and Rolls-Royce. Many participants in the programme are women in their late 20s and early 30s deciding to switch careers into technology, said Anna Brailsford, the chief executive of Code First. A recent survey found 80% of women who had gone through the scheme said a career in technology was neither mentioned nor encouraged while they were at school.

Women remain significantly underrepresented in digital technology roles, making up just 18% of workers, according to the most recent Office for National Statistics data.

Brailsford said that with defence intelligence systems increasingly using artificial intelligence and machine learning to replicate human decision making, the importance of reducing bias in the way those systems are designed is crucial to gaining a security advantage.

In a recent GCHQ paper on the ethics of artificial intelligence, the agency states: "In using AI we will strive to minimise and where possible eliminate biases, whether around gender, race, class or religion. We know that individuals pioneering this technology are shaped by their own personal experiences and backgrounds. Acknowledging this is only the first step – we must go further and draw on a diverse mix of minds to develop, apply and govern our use of AI."

https://www.theguardian.com/uk-news/2022/aug/29/gchq-female-coders-boost-nano-degree-courses?CMP=share_btn_link



From Russia with Love? MI5, MI6 and GCHQ desperate to recruit Russian-speaking spies in wake of Putin's war with Ukraine

The UK's top security agencies want applicants to help combat espionage

The roles are based in the UK - but degree-level or advanced Russian is required
Only British nationals or those with UK dual-citizenship can apply for the roles
It comes as global tensions continue to heighten over Putin's war with Ukraine

By ELIZABETH HAIGH FOR MAILONLINE

PUBLISHED: 09:15, 8 September 2022 | UPDATED: 09:41, 8 September 2022

https://www.dailymail.co.uk/news/article-11192519/MI5-MI6-GCHQ-recruit-Russian-speaking-spies-wake-Putins-war-Ukraine.html?ito=native_share_article-top

Advanced Russian speakers are being sought by the UK's top security agencies in a Bond-style 'spy' recruitment drive amid the war in Ukraine.

The UK's security services MI5, MI6 and GCHQ are all seeking to recruit Russian-speaking language analysts to help combat threats such as cyber attacks and espionage.

Hopefuls can expect a salary ranging from £30,831 per year if based at GCHQ, or £36,350 per year if employed by MI5 or MI6.

But applicants must have C1 Russian, equivalent to degree level, and can expect a long process which could take up to nine months including vetting.

Security services are only looking to hire British nationals, or those who hold dual British citizenship.

Successful applicants could play a leading role in developing UK policy, driving forward security investigations, identifying important information and even handling the services' agents.

It comes amid high tensions across Europe following Vladimir Putin's invasion of Ukraine in February of this year.

The Russian recruitment drive comes amid high tensions due to war in Ukraine after Putin invaded the country in February

Roles at MI5 and MI6 are based in London, and roles at GCHQ are based in Cheltenham.

GCHQ gathers and monitors huge amounts of intelligence from around the world.

The UK government says working at any of three agencies is an opportunity to 'safeguard Britain's people, interests and businesses from various threats at home, overseas and online, including cyber-attacks, espionage, terrorism, and organised crime.'

The job advert reads: 'What mark would you give your Russian? If you answered 'пятерку', we want you to use your skills to protect the UK.

'The Intelligence Agencies are offering you an exciting opportunity to put your Russian expertise to valuable use in one of our organisations.'





It adds: 'You'll use your language and analytical skills to provide intelligence insights that often have direct impact on UK government policy and decision-making.

'Your challenge is to seek out the important information from Russian language material and make that material accessible and understandable to others.

https://www.dailymail.co.uk/news/article-11192519/MI5-MI6-GCHQ-recruit-Russian-speaking-spies-wake-Putins-war-Ukraine.html?ito=native_share_article-top

Bring your background to the foreground,
and help keep the UK safe.


JOIN OUR SUMMER DIVERSITY INTELLIGENCE INTERNSHIP
£4,295 or £5,444 depending on location | London and Cheltenham | Includes paid accommodation

| | | | |
|---|--|--|---|
|  <p>Language Talent Programme - Russian, Mandarin & Turkish Language Analysts</p> <p>Manchester, Cheltenham</p> <p>View Details</p> |  <p>CyberFirst Student Bursary and Development Scheme Student Bursary</p> <p>London, Cheltenham, Bude, Scarborough, Manchester</p> <p>View Details</p> |  <p>Summer Diversity Intelligence Internship Summer Placements</p> <p>London, Cheltenham</p> <p>View Details</p> |  <p>Cyber Operation Roles Computer Network Operations</p> <p>Cheltenham</p> <p>View Details</p> |
|---|--|--|---|

With the amount of riff raff that's landing on our beaches without let or hindrance and our pathetic woke bollocks human rights crap intervening with no checks made on this flotsam Putin has probably landed two battalions of Spetsnaz and other specialist troop and we've given them £1200 a month, a council house and full welfare to keep them fit whilst they await to be 'awoken' by Moscow Central.

An **exceptional** career awaits_

ASD



Finally, that Russian Spy [sorry, scientific research] ship near Ireland:



Scientific Vessel "Akademik Boris Petrov" (photograph: Shipspotting.com)

Read even more, and with decent graphics: <https://www.the-sun.com/news/6496338/putin-undersea-cables-spy-ship-royal-navy/> or there's more:

Russian intelligence ship likely to increase UK tension around cable cutting in the North Sea

<https://plentyofships.blogspot.com/2022/10/russian-intelligence-ship-likely-to.html>

The Russian Academy of Sciences, PP Shirshov Institute of Oceanology owned & operated scientific research vessel "Akademik Boris Petrov" has indicated it intends to pass close to the UK on its way to an announced scientific cruise in the South Atlantic.

The provocative change of route is almost certainly strategic messaging to the United Kingdom & is highly likely intended to raise tensions in the Northern Isles after essential underwater cable infrastructure was inexplicably severed between the Faroe & Shetland island chains earlier in the week causing a major incident alert which Scottish First Minister Nicola Sturgeon described as an "emergency situation" for the islands.

Akademik Boris Petrov departed homeport Kaliningrad on 17 October 2022 for a programmed scientific expedition to the South Atlantic Ocean off Brazil. The original navigation track (NAVTRK) passed through the English Channel into the Atlantic however, since departing the Skagerrak the vessel has slowly transited past critical underwater infrastructure in the North Sea raising concerns over what her tasking actually is. The Petrov is a state-of-the-art underwater surveillance & intelligence gathering ship and a "Vessel-of-Interest (VOI) for Western Navies; her presence around the UK will be monitored closely.

Analysis of the Petrov's latest NAVTRK on 21 October indicates the vessel intends to pass through the Orkney Gap, in to the Minches & through sensitive waters off the Faslane Naval base, home to Britain's nuclear-submarine based deterrent.

Furthermore, the follow-on NAVTRK skirts waters off north west Ireland where critical transatlantic cable infrastructure is located. This area was almost certainly surveilled by the highly secretive Russian Main Directorate of Deep Sea Research (GUGI) owned & operated underwater spy vessel "Yantar" in August 2021 and drew a response from the Irish Navy

The tentacles of Russia's illegal war in Ukraine are seemingly moving west & whilst this NAVTRK change is almost certainly just strategic messaging, it remains a stark reminder that when it comes to controlling the critical underwater infrastructure upon which Western economies depend, it is Russia that holds all the cards.

Akademik Boris Petrov transited the Shetland - Orkney Gap during the afternoon 21 October 2022 & was located 18NM north of Noup Head lighthouse during the 1800Z hour continuing westwards towards a Minches transit likely during the forenoon, 22 October.

Dutch warship HNLMS Tromp maneuvered to a position 32NM NE of the Isle of Lewis likely to intercept & escort Akademik Boris Petrov should it continue on its stated NAVTRK through the Minches towards UK sensitive waters.

Akademik Boris Petrov changed NAVTRK overnight 21/22 October and did not transit the Minches as previously indicated by her intended AIS signal. Instead, the vessel transited to the north west of the Isle of Lewis some 50NM off the coast at all times. It is not known if the Dutch Navy vessel HNLMS Tromp (or other NATO warship) conducted surveillance against Akademik Boris Petrov during her transit. Boris Petrov will now pass well outside UK sensitive waters & well to the west of cables surveilled by Yantar in 2021.

There is absolutely no suggestion that Akademik Boris Petrov was involved in the Faroe-Shetland cable incident this week but given the huge interest & sensitivity regarding underwater infrastructure, it is highly likely this transit was simply strategic messaging to the UK at a time of heightened interest in undersea infrastructure. Her distraction job done, Akademik Boris Petrov continues on her scientific mission (Cruise Nr. 52) to the South Atlantic.

<https://plentyofships.blogspot.com/2022/10/russian-intelligence-ship-likely-to.html>

Image of Plaque erected at site of the ‘Bridge over the River Kwae’ where allied prisoners of war were used as slave labour by Imperial Japanese Forces



Plaque erected by the Kanchanaburi Municipality of Thailand in Remembrance of those souls who perished and whose remains are interred in the War Graves nearby

Chart Section Index

1. Prediction Chart
2. M01 Schedule
3. Family III
4. XPA1 Wed/Fri, XPA2 schedules
m, p and Wed/Fri

November 2022

The charts in this publication remain the intellectual property of the originator with whom the original Copyright is retained

| Mon | Tue | Wed | Thu | Fri | Sat | Sun | UTC | wk | Stn | Fam | Nov kHz, ID, ... | Dec kHz, ID, ... |
|-----|-----|-----|-----|-----|-----|-----|----------------------------------|-----|------|-----|--|--|
| x | x | x | x | x | | | 0000 | | F01 | 01A | 17471 | 17471 |
| x | | | | x | | | 0010/0030/0050 | | M12 | 01B | 16275/15975/14675 296 | 14947/13447/12147 941 |
| x | | | | x | | | 0025/0035 | | F01 | 01A | 12101/ 9215 | 10884/ 8157 |
| | x | | | x | | | 0030/0050/0110 | | M12 | 01B | 6874/ 8074/ 9374 803 | 6832/ 7532/ 8132 851 |
| | x | | x | | | | 0100/0120/0140 | | M12 | 01B | 15831/14431/13431 844 | 15956/14756/13456 974 |
| x | | | | x | | | 0125/0135 | | F01 | 01A | 12101/ 9215 | 10884/ 8157 |
| | | | | | | x | 0100/0120/0140 | | V07 | 01B | 15946/14846/13486 984 | 11594/10794/10194 571 |
| | | | x | | | x | 0110/0130/0150 | | M12 | 01B | 11054/10754/ 9254 972 | 9379/ 8179/ 7479 314 |
| x | x | x | x | x | x | x | 0200 | | V13 | 0 | 13750 | 13750 |
| x | | | | | | | 0210/0310 | | E06 | 01A | 10673/14398 537 | 9382/13426 537 |
| | | | x | x | | | 0300/0400 | | E06 | 01A | 16163/13863 361 | 14654/12177 361 |
| x | x | x | x | x | x | x | 0300 | | V13 | 0 | 13750 | 13750 |
| | | x | x | | | | 0315 | | E11 | 03 | 9052 25# | 9052 25# |
| x | x | x | x | x | x | x | 0400 | | V13 | 0 | 11430 | 11430 |
| x | x | x | x | x | | | 0400/0420 | | S06 | 01A | 11616/ 9322 480 | 11616/ 9322 480 |
| | x | | x | | | | 0445 | | S11A | 03 | search | search |
| 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 | 15388 |
| | 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 | | | | 0500/0520/0540 | | XPA2 | 01B | search | search |
| 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 | 15388 |
| | x | | | | | | 0600/0610 | | S06S | 01A | 16145/14240 438 | 16145/14240 438 |
| x | x | | | | | | 0600/0610/0620 0630/0640/0650 | | XPB1 | 01B | 13446/14446/14946 15846/16146/17446 | 12118/13418/13918 14418/14918/15918 |
| | | | x | x | | | 0600/0700 | 1/3 | E06 | 01B | 18285/20140 507 | 14575/17420 923 |

| Mon | Tue | Wed | Thu | Fri | Sat | Sun | UTC | wk | Stn | Fam | Nov kHz, ID, ... | Dec kHz, ID, ... |
|-----|-----|-----|-----|-----|-----|-----|----------------|----|------|-----|---------------------------|---------------------------|
| | 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 | | | | | | | 0630/0640 | | S06S | 01A | 13470/16515 462, check | 13470/16515 462 |
| 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 | 15250 | 18040 |
| | | | | | | x | 0700 | | M01 | 01B | 5465 197 | 5465 197 |
| | x | | | | | | 0700/0710 | | S06S | 01A | 5250/ 6320 452 | 5250/ 6320 452 |
| | | | | | | x | 0700/0720/0740 | | E07 | 01B | 10268/11068/12168 201 | 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 | x | | | | | | 0730/0740 | | S06S | 01A | 7410/11532 427 | 7410/11532 427 |
| 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 | 15250 | 18040 |
| | | | x | | | | 0800/0810 | | E17Z | 01A | 11170, 9820 217 | 11170, 9820 217 |
| | x | | | | | | 0800/0810 | | S06S | 01A | 11945/13195 127 | 11945/13195 127 |

| Mon | Tue | Wed | Thu | Fri | Sat | Sun | UTC | wk | Stn | Fam | Nov kHz, ID, ... | Dec kHz, ID, ... |
|-----|-----|-----|-----|-----|-----|-----|----------------|----|------|-----|--|--|
| | | | | | x | | 0800/0810 | 1 | S06S | 01A | 8680/ 8260 132 | 8680/ 8260 132 |
| | | x | | | | x | 0800/0820/0840 | | M12 | 01B | 17432/18532/19132 451 | 16234/17434/18234 242 |
| | | x | | | | | 0800/0820/0840 | | XPA2 | 01B | 11529/13429/13929 | 11493/13393/13993 |
| | | | | x | | x | 0800/0820/0840 | | XPA2 | 01B | search | search |
| | x | | x | | | | 0810/0830/0850 | | XPA1 | 01B | 13978/14859/15871 deleted? | 11531/12137/13932 deleted? |
| | 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# |
| | | | | | x | x | 0830 | | S11A | 03 | 5371 37# | 5371 37# |
| | | | | | | | 0830/0840 | | S06S | 01A | 8057/ 8530 764 | 8057/ 8530 764 |
| x | | x | | | | | 0830/0840 | | S06S | 01A | 7062/10532 464 | 7062/10532 464 |
| x | | | x | | | | 0830/0840 | | S06S | 01A | 11535/11830 172 | 11535/11830 172 |
| | | | | x | | | 0830/0840 | | S06S | 01A | 11040/12153 156 | 11040/12153 156 |
| x | | | x | x | | | 0830/0930 | | S06 | 01A | 19875/16067 842 deleted? | 17435/14375 842 deleted? |
| x | | x | | | | | 0845 | | E11 | 03 | 12067 71# | 12067 71# |
| | x | | x | | | | 0845 | | E11 | 03 | 13046 15# | 13046 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 | | | | | | | 0900/0910 | | S06S | 01A | 14675/12830 232 | 14675/12830 232 |
| | | | | x | | | 0900/0910 | | S06S | 01A | 5765/ 6315 239 | 5765/ 6315 239 |
| | x | | | x | | | 0900/0920/0940 | | M12 | 01B | search | search |
| x | | x | | | | | 0910/0930/0950 | | XPA2 | 01B | 17413/15852/13363 | 13562/11583/10281 |
| | | | x | | x | | 0910/0930/0950 | | XPA2 | 01B | 15985/14885/13885 | 13919/11519/10719 |
| x | | | | x | | | 0915 | | S11A | 03 | 6252 48# | 6252 48# |
| x | x | x | x | x | x | x | 0930 | | M14 | 01A | 17458 617, only 10.+25. when msg repeat 15994 on 11.+26. deleted? | 17458 617, only 10.+25. when msg repeat 15994 on 11.+26. deleted? |
| | | x | x | | | | 0930 | | E11 | 03 | 7469 27# | 7469 27# |
| x | | | x | | | | 0930/0940 | | S06S | 01A | 8812/ 9540 698 | 8812/ 9540 698 |

| Mon | Tue | Wed | Thu | Fri | Sat | Sun | UTC | wk | Stn | Fam | Nov kHz, ID, ... | Dec kHz, ID, ... |
|-----|-----|-----|-----|-----|-----|-----|----------------------------------|----|------|-----|--|--|
| | | | | | | x | 0930/1000 | | S06 | 01A | | 9463/ 7377 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 | | | | | | 1000/1010 | | S06S | 01A | 6440/ 5660 427 | 6440/ 5660 427 |
| | | x | | | | | 1000/1010 | | S06S | 01A | 12365/14280 276, check | 12365/14280 276 |
| | x | x | x | x | | | 1015/1025/1035 | | F01 | 01A | 12177/10671/ 8024 | 12164/10336/ 8016 |
| x | | x | | | | | 1045 | | E11 | 03 | 7984 69# | 7984 69# |
| | x | | | | | | 1100/1110 | | S06S | 01A | 5035/5975 265 | 5035/5975 265 |
| x | | | | | x | | 1100/1110/1110 1130/1140/1150 | | XPB1 | 01B | 13894/13394/12194 11494/11094/10494 | 14483/13983/13483 12183/11583/10983 |
| | x | | | x | | | 1100/1120/1140 | | XPA2 | 01B | 10653/ 9353/ 8153 | 9265/ 8165/ 7665 |
| | | x | x | | | | 1100/1120/1140 | | XPA2 | 01B | 13393/12193/11093 | 11579/10979/10279 |
| | | | x | | | | 1110/1130/1150 | | M12 | 01B | 13386/12189/11491 725 | 13386/12189/11491 725 |
| x | x | x | x | x | x | x | 1200 | | V13 | 0 | 9276, 15890 | 7688 |
| x | | | x | | | | 1200/1210 | | S06S | 01A | 12155/10920 175 | 12155/10920 175 |
| | | x | | | x | | 1200/1210/1210 1230/1240/1250 | | XPB1 | 01B | 16353/15953/14953 13453/12153/11453 | 14978/13978/13378 12178/11078/10278 |
| | x | | | | | x | 1200/1220/1240 | | XPA2 | 01B | 14783/13883/12183 | 10807/12207/13507 |
| | | x | | x | | | 1200/1220/1240 | | XPA2 | 01B | 10968/12168/13368 | 9389/10289/11589 |
| | 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 | 7502, 11430 | 7688 |
| x | | | | | | | 1300/1310 | | S06S | 01A | 8420/10635 149 | 8420/10635 149 |
| | | | | | x | | 1300/1330 | | S06 | 01A | | 6792/ 5380 480 |
| | | x | | x | | | 1310/1330/1350 | | XPA1 | 01B | 13875/13375/10875 838 | 13465/12165/10265 412 |
| | x | | | x | | | 1400 | | S11A | 03 | x6252 42# search | 42# |
| x | | | x | | | | 1400/1420/1440 | | M12 | 01B | 16292/14892/14392 283 | 15909/14609/13909 969 |
| | | | | | x | | 1400/1420/1440 | | E07 | 01B | 10323/ 9123/ 8023 310 | 9326/10426/11526 345 |
| | | | x | | x | | 1410/1430/1450 | | E07 | 01B | 11574/10274/ 9274 327 | 10226/ 9226/ 8126 674 |
| | x | | | | x | | 1430 | | E11 | 03 | 13363 91# | 13363 91# |
| | | | | | x | | 1500 | | M01 | 14 | 5810 197 | 5810 197 |
| | x | x | x | | | | 1500/1600 | | S06 | 01A | 13397/ 9194 387 | |

| Mon | Tue | Wed | Thu | Fri | Sat | Sun | UTC | wk | Stn | Fam | Nov kHz, ID, ... | Dec kHz, ID, ... |
|-----|-----|-----|-----|-----|-----|-----|----------------------------------|-----|------|-----|--------------------------------------|--------------------------------------|
| | 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 | 8126/ 6826/ 5326 | 6984/ 5884/ 4784 |
| | x | | x | | | | 1600/1620/1640 | | XPA2 | 01B | 10223/ 9223/ 8123 | 8184/ 7864/ 6784 |
| | x | | | | | x | 1605 | | E11 | 03 | 5432 23# | 5432 23# |
| | x | | x | | | | 1645 | | E11 | 03 | 33# search | 33# search |
| 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 | 8172/ 6791/ 4546 | 7684/ 5326/ 4029 |
| | | | x | | | x | 2000 | | E11 | 03 | 5082 52# check | 5082 52# |
| | x | | x | | | | 2000 | | M01 | 14 | 4490 197 | 4490 197 |
| | x | | | | | x | 2000/2010/2010 2030/2040/2050 | | XPB1 | 01B | 7876/ 7576/ 6876 5876/ 5376/ 4476 | 8058/ 7558/ 5858 5158/ 4858/ 4458 |
| | | x | | x | | | 2000/2020/2040 | | M12 | 01B | 6917/ 5817/ 5117 981 | 6792/ 5892/ 5092 780 |
| | | | | 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 |

| Mon | Tue | Wed | Thu | Fri | Sat | Sun | UTC | wk | Stn | Fam | Nov kHz, ID, ... | Dec kHz, ID, ... |
|-----|-----|-----|-----|-----|-----|-----|----------------|----|-----|-----|--------------------------|-------------------------|
| | | | | x | x | | 2200/2220/2240 | | M12 | 01B | 6859/ 7459/ 9959 849 | 5832/ 6832/ 7732 887 |
| | | | x | | | | 2210/2230/2250 | | M12 | 01B | 6937/ 5737/ 4537 975 | 6937/ 5737/ 4537 975 |
| | | | | | x | | 2230/2240 | | F01 | 01A | 20741/18702 | 18169/15765 |
| x | | | x | | | | 2300/2320/2340 | | M12 | 01B | 10446/ 9046/ 7946 392 | 9134/ 8134/ 7534 457 |
| | | | | | x | | 2330/2340 | | F01 | 01A | 20741/18702 | 18169/15765 |

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 | Sep kHz, ID, ... | Oct kHz, ID, ... | Nov kHz, ID, ... | Dec kHz, ID, ... | Remarks |
|-----|-----|-----|-----|-----|-----|-----|------|----|------|-----|---------------------|---------------------|---------------------|---------------------|---|
| | | x | x | | | | 0315 | | E11 | 03 | 11092 25# | 11092 25# | 9052 25# | 9052 25# | since 01/14, last log 10/22 |
| | x | | x | | | | 0445 | | S11A | 03 | 10728 79# | 10728 79# | search | search | since 05/22, last log 10/22 |
| x | | | | | | | 0450 | | E11 | 03 | 5371 41# | 5371 41# | 4909 41# | 4909 41# | since 02/10, last log 10/22 2nd transmission Thu 1730z |
| | x | | x | | | | 0500 | | S11A | 03 | 14769 38# | 14769 38# | 12530 38# | 12530 38# | since 05/14, last log 10/22 |
| x | | x | | | | | 0510 | | S11A | 03 | 11116 65# | 11116 65# | 9057 65# | 9057 65# | since 08/19, last log 10/22 |
| | | | | x | | x | 0600 | | E11 | 03 | 8680 35# | 8680 35# | 7850 35# | 7850 35# | since 04/15, last log 10/22 |
| x | | x | | | | | 0640 | | E11 | 03 | 14865 94# | 14865 94# | 16005 94# | 16005 94# | since 07/17, last log 10/22 |
| | x | | x | | | | 0645 | | E11 | 03 | 8423 51# | 8423 51# | 7840 51# | 7840 51# | since 07/09, last log 10/22 |
| x | | | x | | | | 0700 | | S11A | 03 | 8597 47# | 8597 47# | 9050 47# | 9050 47# | since 04/10, last log 10/22 |
| | x | | | x | | | 0700 | | E11 | 03 | 8180 57# | 8180 57# | 6804 57# | 6804 57# | since 01/12, last log 10/22 |
| | | | | | x | x | 0700 | | E11 | 03 | 9079 49# | 9079 49# | 5371 49# | 5371 49# | since 07/15, last log 10/22 until 02/22 0730z |
| x | | x | | | | | 0715 | | E11 | 03 | 15632 75# | 15632 75# | 11104 75# | 11104 75# | since 06/21, last log 10/22 |
| | x | | | x | | | 0715 | | E11 | 03 | 9963 63# | 9963 63# | 9130 63# | 9130 63# | since 02/11, last log 10/22 |
| x | | | | | | | 0745 | | E11 | 03 | 10213 26# | 10213 26# | 10213 26# | 10213 26# | since 03/14, last log 10/22 2nd transmission Thu 1530z |
| | x | | x | | | | 0745 | | E11 | 03 | 14865 22# | 14865 22# | 13908 22# | 13908 22# | since 01/20, last log 10/22 |
| | | x | | x | | | 0745 | | E11 | 03 | 17410 34# | 17410 34# | 17378 34# | 17378 34# | since 06/17, last log 10/22 |
| | x | x | | | | | 0820 | | E11 | 03 | 19184 13# | 19184 13# | 14611 13# | 14611 13# | since 12/18, last log 10/22 |
| | | | x | x | | | 0820 | | E11 | 03 | 5941 43# | 5941 43# | 5149 43# | 5149 43# | since 10/09, last log 10/22 |
| x | | | | x | | | 0830 | | E11 | 03 | 15905 18# | 15905 18# | 14940 18# | 14940 18# | since 07/15, last log 10/22 until 02/22 0730z |
| | | | | | x | x | 0830 | | S11A | 03 | 6433 37# check | 6433 37# | 5371 37# | 5371 37# | since 02/14, last log 10/22 |
| x | | x | | | | | 0845 | | E11 | 03 | 12202 71# | 12202 71# | 12067 71# | 12067 71# | since 09/10, last log 10/22 |
| | x | | x | | | | 0845 | | E11 | 03 | 13908 15# | 13908 15# | 13046 15# | 13046 15# | since 07/17, last log 10/22 |
| x | | x | | | | | 0900 | | E11 | 03 | 9968 53# | 9968 53# | 11092 53# | 11092 53# | since 10/05, last log 10/22 |
| x | | | | x | | | 0915 | | S11A | 03 | 6480 48# | 6480 48# | 6252 48# | 6252 48# | since 04/19, last log 10/22 |
| | | x | x | | | | 0930 | | E11 | 03 | 6940 27# | 6940 27# | 7469 27# | 7469 27# | since 02/14, last log 10/22 |
| | x | | | x | | | 1000 | | E11 | 03 | 9951 30# | 9951 30# | 9079 30# | 9079 30# | since 11/16, last log 10/22 |
| x | | x | | | | | 1045 | | E11 | 03 | 7317 69# | 7317 69# | 7984 69# | 7984 69# | since 03/18, last log 10/22 |
| | x | x | | | | | 1205 | | E11 | 03 | 6923 46# | 6923 46# | 6433 46# | 6433 46# | since 03/10, last log 10/22 |
| | x | | x | | | | 1230 | | E11 | 03 | 12530 33# | 12530 33# | | | since 10/11, last log 10/22 Nov-Feb & May-Aug at 1645z |
| x | | | x | | | | 1300 | | E11 | 03 | 5371 31# | 5371 31# | 4909 31# | 4909 31# | since 07/14, last log 10/22 |
| | x | | | x | | | 1400 | | S11A | 03 | 6797 42# | 6797 42# | x6252 42# search | 42# | since 02/10, last log 10/22 |
| | x | | | | x | | 1430 | | E11 | 03 | 14972 91# | 14972 91# | 13363 91# | 13363 91# | since 10/15, last log 10/22 |
| | | | x | | | | 1530 | | E11 | 03 | 10330 26# | 10330 26# | 5409 26# | 5409 26# | since 06/14, last log 10/22 2nd transmission Mon 0745z |
| | | | | | x | x | 1530 | | E11 | 03 | 4505 36# | 4505 36# | 4909 36# | 4909 36# | since 03/14, last log 10/22 |
| | x | | | | | x | 1605 | | E11 | 03 | 5176 23# | 5176 23# | 5432 23# | 5432 23# | since 11/15, last log 10/22 |
| | x | | x | | | | 1645 | | E11 | 03 | | | 33# search | 33# search | since 10/11, last log 08/22 Mar/Apr/Sep/Oct at 1230z |
| | | x | | x | | | 1715 | | E11 | 03 | 6923 97# | 6923 97# | 5082 97# | 5082 97# | since 02/15, last log 10/22 |
| | | | x | | | | 1730 | | E11 | 03 | 7864 41# | 7864 41# | 5779 41# | 5779 41# | since 03/10, last log 10/22 2nd transmission Mon 0450z |
| x | | | | | | x | 1745 | | E11 | 03 | 13470 24# | 13470 24# | 12924 24# | 12924 24# | since 04/18, last log 10/22 |
| | | | | x | | x | 1815 | | E11 | 03 | 11116 92# | 11116 92# | 6849 92# | 6849 92# | since 05/16, last log 10/22 |
| | | x | | | x | | 1850 | | S11A | 03 | 10213 28# | 10213 28# | 11486 28# | 11486 28# | since 06/17, last log 10/22 |
| x | | | x | | | | 1900 | | E11 | 03 | 7317 64# | 7317 64# | 6849 64# | 6849 64# | since 05/16, last log 10/22 |
| | | x | | | x | | 1910 | | E11 | 03 | 4181 39# | 4181 39# | 4505 39# | 4505 39# | since 02/14, last log 10/22 |
| | | | | x | | x | 1910 | | E11 | 03 | 8530 61# | 8530 61# | 10487 61# | 10487 61# | since 04/17, last log 10/22 |
| | | | x | | | x | 2000 | | E11 | 03 | 5737 52# | 5737 52# | 5082 52# check | 5082 52# | since 05/15, last log 10/22 |

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

| Zulu > | XPA2 Sched m | | | XPA2 Sched p | | |
|------------|---|-------|-------|--|-------|-------|
| Month v | Sunday/Tuesday H 00 H+20 H+40 1200 / 2100 | | | Monday/Wednesday H 00 H+20 H+40 0700 / 0800z | | |
| Jan | 10921 | 12221 | 13521 | 11493 | 13393 | 13993 |
| Feb | 11163 | 13363 | 14563 | 13387 | 13887 | 14787 |
| Mar | 13384 | 13984 | 14984 | 13931 | 14831 | 16131 |
| Apr | 14442 | 15842 | 16342 | 11409 | 12209 | 13409 |
| May | 13376 | 11576 | 10776 | 12148 | 13448 | 13948 |
| June | 13427 | 12227 | 10827 | 12148 | 13448 | 13948 |
| July | 13394 | 12194 | 10794 | 12148 | 13448 | 13948 |
| Aug | 12159 | 11559 | 10559 | 12152 | 13552 | 13952 |
| Sept | 13914 | 15814 | 16314 | 12152 | 13552 | 13952 |
| Oct | 14469 | 16169 | 17469 | 13372 | 14672 | 15872 |
| Nov | 14783 | 13883 | 12183 | 11529 | 13429 | 13929 |
| Dec | 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 | H+40 |
| Jan | 14852 | 13952 | 11552 | 10726 | 11426 | 12226 |
| 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 | 10968 | 12168 | 13368 |
| Dec | 13465 | 12165 | 10265 | 9389 | 10289 | 11589 |

SPECIAL MATTERS

Thanks to all our contributors:

‘E’ Thanks for your continual support. A hearty Christmas and a good New Year for you and yours.

RELEVANT WEBSITES

ENIGMA 2000 Website:

<http://www.enigma2000.org>

Mystery Signals

<http://www.mysterysignals.signalshed.com/>

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 | February | 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 | 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 | 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 | May | June |
| 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 | 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 | 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 | August | September |
| 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 | 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 | 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 |
| October | November | December |
| 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 | 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 | 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 |

2023

Source: Vertex42.com

| January | February | 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 | 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 | 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 | May | 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 | 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 | 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 | August | September |
| 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 | 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 | 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 |
| October | November | December |
| 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 | 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 | 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 |

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