

ENIGMA 2000 NEWSLETTER



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©Paul Beaumont 2006

Embassy of the Republic of Serbia situated Budapest, Hungary

Opposite the Square of Seven Heroes

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See last page also.

Editorial

A REMINDER: ENIGMA2000 WILL NOT DISCUSS THE RUSSIAN/UKRAINE MATTER BEYOND TECHNICAL MATTERS

WE WILL NOT BE ANSWERING E MAILS SENT FROM THE PARTICIPATING COUNTRIES CONCERNING OUR SUBJECT MATTER

On 6th May 2023 Britain was host to the Coronation of King Charles III and Queen Camilla. Without going in depth on this matter a Morse message was prepared at Bletchley Park, in the RSGB's National Radio Centre: <https://fb.watch/km1fEZCSyr/>

The last newsletter was produced in quick time; everything came together very quickly and although I was dealing with a serious matter which continues unabated and I missed an excellent set of logs from The Spectre 3000 for which I apologise.

I had thought of sending a supplemental edition of En136 but due to the quality of the logs I have decided to include in this Newsletter.

The start to May 2023 seemed like perfect radio conditions but it seems for the moment, at least, not is all as we would like, As Spring went and Summer arrived so did very changeable solar weather; add lightning and then we have cause for worry. Somebody once wrote to me that he could drive to the antenna site in six minutes should lightning occur. My reply was if lightning strikes then the damage will take less that 500µS. The result was all plugs pulled for unattended operation.

Last Newsletter the cover picture was one of the Russian Embassy in Berlin and we received some comments about FVEY installations in Berlin. Well, 499, myself and one another who must remain anon have been to Berlin with Number Station business on our minds/ We also took time to visit the Russian, US and UK embassies, taking imagery for later use, as ever. We read in Der Spiegel about certain activities involving IR photography of dielectric walls and also of certain roof constructions and we were sad to say our photography did not better these sent in by a reader who seriously must remain 'Herr Anon' :

US Embassy Berlin --- spot the Dielectric Walls:



Not wishing for the UK facility to be left out print this image of the roof construction:



Readers will be heartened to know that when members 499 and 613 attended this site they were well aware of the US [and indeed the UK] constructions. It was much later that Angel Merkel became aware. Nothing said by 419 and 613 although 499 did represent himself to a Turkish street trader as an American millionaire. Most embarrassing, but a good laugh as the trader took the inkling to FO in quick time.

Thanks to 'Herr Anon.'

Whilst we mention Embassy imagery and such like Lewis aka Manchester Ringway has produced a couple of interesting You Tube productions and we give a shameless ad for two of current interest. Some of the images used will raise memories, certainly in the Welsh Branch and should John of Aylesbury have been with us some memories there too:



The Invisible Shortwave Transmissions Of London's Secret Diplomatic World

https://www.youtube.com/watch?v=ii63_EMfpBw&t=206s



London's Web Of Secret Government Communications

<https://www.youtube.com/watch?v=IDJje6sE1-M&t=67s>

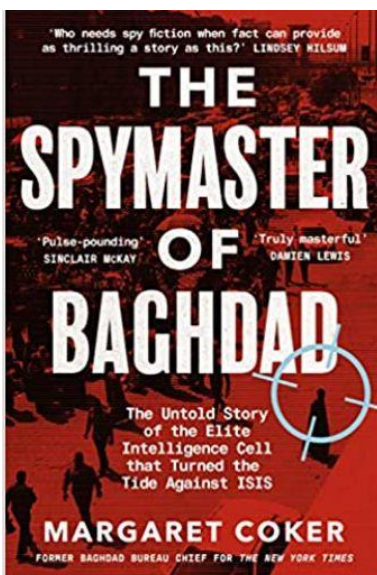
Those not familiar with Lewis' good work need only to open You Tube and use the search term 'Manchester Ringway' to see an impressive plethora of radio oriented video offerings. HF, VHF, UHF, Antennas, Number Stations, Customs, Maritime, Pirating..... you name it, there's probably a video to cover.

Thanks for the contact Lewis and keep up the good work.

Cap Badges

In the last Newsletter we included new cap badges; I couldn't quite see the variation in the RSigs badge [one of which I possess]. The obvious answer is the change of the crown, being apparently different according to King Charles' choice. 'E' wrote he understands that 40+ regt/corps badges have changed following HRH accession and wonders how much that will cost? [Thanks E, solid copy]!

Recommended Reading



The Spymaster of Baghdad by Margaret Coker Penguin Viking ISBN 978 0 241 40909 1

I have not seen many books about Iraq and al Qaeda/ISIS and I particularly biased on my opinion of matters 'Iraq' and WMD's.

We know the two main politicians involved in this vanity war that sent British, US and other countries servicemen to their deaths needlessly. It is not an outlandish statement to say that if Iraq and Libya were left alone, or perhaps their leaders had not been removed then ISIA and aQ in its many forms would not have had the success it has seen.

This book, written by the former Baghdad Bureau Chief for the New York Times, looks at the situation in depth with an historical account and then describes in some detail Iraqi Intelligence. The plot, involved one elite intelligence cell which effectively turned the tide against the fortunes of ISIS. Following one family and their experiences, both side of the divide in Iraq, an exciting and most interesting storyline unfolds.

Splendid book, good read.

Newsround

Australia

An excellent article on ABC where Australia's spies played a crucial part in catching the Bali bombers — but that story has remained mostly a secret. Too long for a cut and paste op. it is a splendid and recommended read:

<https://www.abc.net.au/news/bali-bombers-caught-with-australian-intelligence-involvement/102362158>

China

Malaysia seizes Chinese ship suspected of looting wartime British wrecks Dredger was detained for anchoring illegally in Malaysian waters

Tuesday May 30 2023, 12.45pm, The Times

<https://www.thetimes.co.uk/article/malaysia-seizes-chinese-ship-suspected-of-looting-wartime-british-wrecks-pnp66vbc0>

Malaysian officials found what is believed to be ammunition shells from two sunken Second World War British naval ships on board the Chuan Hong 68

The Malaysian coast guard has seized a Chinese ship on suspicion of looting the sunken wrecks of two British naval vessels from the Second World War.

The Chinese dredger Chuan Hong 68 was detained on Sunday for illegally anchoring in Malaysian waters in the South China Sea.

Items believed to be ammunition shells from the HMS Prince of Wales and HMS Repulse were found aboard, and the ship's crew was being questioned over the alleged plundering of metals including sought-after "pre-war steel", Malaysian officials said.

"Our investigation is now directed to where these cannon shells originated from. Right now, we have officers from multiagencies searching the big ship," Nurul Hizam Zakaria, the chief of the Malaysian Maritime Enforcement Agency in Johor state, said.

The 122-metre long vessel from the eastern Chinese city of Fuzhou had a crew of 32 comprised of 21 Chinese nationals, ten Bangladeshi and one Malaysian, some of whom were detained, Nurul Hizam added. "This case also involves the discovery of explosives," he said.

There have been a number of reported cases of wartime shipwrecks in the South China Sea being plundered over the last decade, including up to six British vessels. The Ministry of Defence has called for an end to the "desecration of any maritime military grave."

Photos and a video shared by the Malaysian coast guard showed large pieces of corroded metal and shells, as well as a large crane and gas torches used to cut metal on board the ship.

Shells produced prior to the detonation of the first atomic bombs, such as those found on board, are made of "low background steel" and are valued for the manufacture of high-precision scientific instruments

The Prince of Wales and the Repulse were sunk by Japanese torpedoes, with the loss of nearly 850 sailors about 60 miles off the coast of Malaysia on December 10 1941, three days after the attack on Pearl Harbour. The ships had been sent to bolster the defence of Malaya, which was to fall to Japan the following year.

Winston Churchill wrote in his memoirs of hearing of the sinkings of the two battleships: "In all the war, I never received a more direct shock. As I turned over and twisted in bed the full horror of the news sank in upon me."

He wrote of his despair at Japanese dominance of the Pacific and Indian oceans at the time, "Across this vast expanse of waters, Japan was supreme, and we everywhere were weak and naked."

Metal produced before the first atomic detonations in the 1940s and 1950s, also known as "low background steel," is prized for scientific instruments such as Geiger counters because newer steel has low levels of radioactive contamination that can interfere with readings. Background radiation levels have fallen in recent decades following the end of atmospheric nuclear weapons testing, resulting in a drop in demand for pre-war steel, but it is still sought after for some very high precision equipment.

Illegal salvage operations have previously targeted high-grade aluminium and brass fixtures from the two British warships.

The presence of the Chinese salvage vessel was reported to Malaysian authorities last month by local fishermen and divers. The ship is understood to have unloaded items including a gun and artillery shells from the Prince of Wales at a private dock in Malaysia. Police seized items, including the unexploded artillery, from a scrapyard in the south of the country.

<https://www.thetimes.co.uk/article/malaysia-seizes-chinese-ship-suspected-of-looting-wartime-british-wrecks-pnp66vbc0>

North Korea

Glimpse of first North Korean 'spy satellite' in new Kim Jong-un pictures Dictator visits assembly facility as state media says satellite will be ready for loading after final checks

Wed 17 May 2023 03.12 BST

<https://www.theguardian.com/world/2023/may/17/glimpse-of-north-korean-spy-satellite-in-kim-jong-un-pictures?s=09>

Kim Jong-un has inspected North Korea's first military spy satellite and given the go-ahead for its "future action plan", according to state media.

Kim met the "non-permanent satellite launch preparatory committee" on Tuesday before viewing the satellite, the Korean Central News Agency (KCNA) said.

A month ago, Kim said construction of the satellite was completed and gave the green light for its launch. That report came about a week after Pyongyang launched what it said was a new solid-fuel intercontinental ballistic missile, marking a major breakthrough in its banned weapons programmes. ICBMs and space launch capabilities use shared technologies.

The satellite appears to be a polygonal cylinder, covered in gold insulating foil and fitted with solar panels. The photographs have been partly blurred. Kim was pictured a month earlier at the "National Aerospace Development Administration" (Nada) in front of a screen showing something similar in shape, also blurred.

On Tuesday, "after acquainting himself in detail with the work of the committee, [Kim] inspected the military reconnaissance satellite No 1, which is ready for loading after undergoing the final general assembly check and space environment test", KCNA said.

Kim accused the US and South Korea of escalating what he called "confrontational moves" against the North and said his country would exercise its right to self-defence.

Kim then "approved the future action plan of the preparatory committee", KCNA added.

The development of a military reconnaissance satellite was one of the key defence projects outlined by Kim in 2021.

In December 2022, North Korea said it had carried out an "important final-stage test" for the development of a spy satellite, which it said it would complete by April this year.

At the time, experts in South Korea quickly raised doubts about the results, saying the quality of black-and-white images released by North Korea – purportedly taken from a satellite – were poor.

Pyongyang has not provided a launch date, though Kim said in April that the satellite would be sent up "at the planned date".

North Korea in 2022 declared itself an "irreversible" nuclear power, seemingly ending the possibility of denuclearisation talks.

Pyongyang would struggle to do satellite reconnaissance with its own technology and without technological help from Russia or China, analysts say.

Still, "since North Korea's reconnaissance satellites are an important factor in the event of a nuclear pre-emptive strike, they pose a significant threat to the South", Yang Moo-jin, president of the University of North Korean Studies in Seoul, told AFP last month.

In an address to South Korea's parliament on Wednesday, Canadian prime minister, Justin Trudeau, said his country was ready to increase military engagement to mitigate threats to regional security, including from North Korea.

Washington and Seoul have ramped up defence cooperation in response, staging joint military exercises with advanced stealth jets and high-profile US strategic assets.

North Korea views such exercises as rehearsals for invasion and described them as "frantic" drills "simulating an all-out war" against Pyongyang.

With Agence France-Presse

<https://www.theguardian.com/world/2023/may/17/glimpse-of-north-korean-spy-satellite-in-kim-jong-un-pictures?s=09>

Norway

Report: Suspected Russian Spy Vessels Operate Out of Faroe Islands

Ester's radioThe hidden radio aboard the Ester. The power supply and receiver appear to be Soviet-era civilian HF radio equipment (Norwegian Police via NRK)
PUBLISHED APR 24, 2023 9:36 PM BY THE MARITIME EXECUTIVE

<https://maritime-executive.com/article/report-suspected-russian-spy-vessels-operate-out-of-faroe-islands>

Recent revelations about covert Russian maritime surveillance are hitting home in the Faroe Islands, where Russian trawlers continue to call despite sanctions over the ongoing war in Ukraine.

The Faroe Islands are technically part of Denmark, but they are not part of the EU and have wide latitude to set their own trade policies. The local government maintains relatively close ties with Russia because of mutual fishing interests, and this diplomatic arrangement includes continued port access rights for Russian fishing vessels. (In the EU, port access is sharply curtailed for Russian-flagged vessels because of sanctions.)

Two of these Russian fishing vessels have recently been outed as likely Russian spy ships, thanks to the efforts of a pan-Scandinavian reporting partnership. Danish public radio network DR has been working with its counterparts in Norway (NRK), Sweden (SVT) and Finland (YLE) to examine covert Russian maritime surveillance operations involving civilian vessels, including research ships and fishing vessels. Its reporting uncovered the recent discovery of suspected military radios in hidden, manned compartments aboard two Russian trawlers, the Lira and the Ester. Both ships had the same covert radio room arrangement, and each of the rooms turned out to be occupied by a guard when Norwegian police opened the compartment for an inspection. The radio device itself is an unassuming Soviet-era HF marine radio, well-used - and usable for multiple purposes.

"The radios can broadcast military messages and information. And receive them the other way," said Johan Roaldsnes, head of the Norwegian Police Security Service in Finnmark, speaking to NRK. "Russia needs these civilian vessels as support for military purposes."

The Lira and Ester have been a near-constant presence in the Faroe Islands for years, making at least 200 visits since 2015. The two ships are nearly homeported in the archipelago, calling there far more frequently than anywhere else. The discovery has created a stir in the Faroe Islands and drawn outrage from top officials in

mainland Denmark. Søren Pape Poulsen, the head of the Conservative party, told DR that the idea of Russian dual-role vessels operating out of the Faroe Islands was "crazy."

"It is not a Faroese matter at all. I don't really care about [their] fisheries agreements when it comes to this. Because if you, as a civilian vessel, have military equipment on board, then it is no longer about trade," he told DR. "Then it is about foreign and security policy, and thus a matter for the Danish government."

The Faroe Islands' deputy prime minister, Høgni Hoydal, has played down the importance of the discovery and called for Denmark not to interfere. "The rumors about the naivety of the Faroe Islands in major political matters and in the world situation we are facing are highly exaggerated," he told a morning radio show on Monday.

<https://maritime-executive.com/article/report-suspected-russian-spy-vessels-operate-out-of-faroe-islands>



The R-160P radio receiver is designed to receive telephone and telegraph radio signals in the HF and VHF ranges.

(Love to know what goes into the shrouded skts, seen on right)



The fact this erstwhile SWL was hidden in a cupboard lead to a rather splendid remark : "I hope they've checked below the water line!"
(Thanks to maleAnon for this information)

United State of America

Navy SEALs' New Mini-Submarine To Be Operational Within Weeks

The Navy is finally getting a mini-submarine that will keep special operators dry during their high stakes underwater transits.

BY

JOSEPH TREVITHICK

UPDATED MAY 11, 2023 11:29 PM EDT

<https://www.thedrive.com/the-war-zone/navy-seals-new-mini-submarine-to-be-operational-within-weeks>

The first examples of a new special operations mini-submarine should be ready for real-world operations before the end of the month, according to U.S. Special Operations Command. The Dry Combat Submersible, or DCS, offers significant benefits over existing designs in U.S. Navy service, known as SEAL Delivery Vehicles, or SDVs, in which individuals have to ride underwater fully exposed to the elements.

Officials from U.S. Special Operations Command offered updates on the status of DCS this week at an annual special operations-focused conference now known as SOF Week. The DCS is derived from the S351 Nemesis, designed by built by MSubs in the United Kingdom. MSubs is part of a team led by Lockheed Martin that has been developing the miniature submersible since 2016.

"This morning we received an operational test report," John Conway, the program manager for Undersea Systems within U.S. Special Operations Command's (SOCOM) Program Executive Office-Maritime (PEO-M), said at a briefing at SOFWeek yesterday. "So that means the Dry Combat Submersible is going to be operational by Memorial Day [May 29, 2023], and we're coming to an end scenario."

Many details about the DCS are classified, but its general capabilities at least are believed to be very similar to that of the 30-ton displacement and 39-foot-long S351. The Nemesis requires a crew of two to operate and has a stated maximum range of approximately 66 nautical miles when traveling at a speed of five knots and using its all-electric propulsion system. It can dive down to depths as deep as around 330 feet (100 meters). Beyond its crew, it can carry eight additional personnel or around a metric ton's worth of cargo.

In general, a submersible like this provides a way for U.S. special operations forces, especially the Navy's elite SEALs, to discreetly get ashore from a submarine, even one that's submerged, or another maritime launch platform and/or exfiltrate from the area. This kind of capability is especially valuable for conducting various kinds of operations, especially ones conducted behind enemy lines or in otherwise sensitive locations. This can include missions conducted entirely underwater, such as infiltrating into an enemy port to plant mines or otherwise sabotage ships or infrastructure, or to gather intelligence.

As already noted, the big benefit of DCS over existing SDVs is the ability to carry its occupants in a totally dry environment. This might sound like a minor issue for special operations forces like the Navy SEALs that are trained to conduct underwater operations of various kinds, but it has significant operational implications.

As it stands now, SEALs and other U.S. special operations forces traveling extended distances below the waves using a 'wet' SDV, even the Navy's latest Mk 11 type, ride the entire way exposed to the water. Even in tropical climates, this can be a cold ride, especially if done at deeper depths that further help personnel evade detection. In colder regions, being exposed to the water the whole time isn't just uncomfortable, it can potentially be dangerous. Furthermore, with a traditional wet SDV, operators then have to conduct whatever their mission might be soaking wet and likely cold, further increasing fatigue and other issues.

With the DCS, special operations forces can travel underwater from their launch point to the objective without being exposed this way. Thanks to a built-in lock-out chamber, they still have the option to get in and out while the craft is submerged. Doing so, of course, would help to reduce their chances of them being spotted as they infiltrate an area, but they would still be exposed to potentially frigid waters for much shorter periods of time.

"That ends a capability gap of 15 years — more than 15 years," Navy Capt. Randy Slaff, the head of SOCOM's PEO-M said during a panel discussion at SOFWeek, according to National Defense magazine, highlighting the importance of the DCS.

Slaff's remark also underscores how the current DCS program is not the first time SOCOM and the Navy have tried to acquire a capability like this. The Navy first outlined requirements for what became known as the Advanced SEAL Delivery System (ASDS) in the 1980s and development of this mini-submarine design got fully underway in the 1990s.

ASDS was roughly twice as big as the S351 and proved to be noisy, under-powered, and otherwise problematic. After years of delays due to technical issues and cost growth, the program suffered an especially bad setback in 2008 when the one prototype that had been built caught fire and was completely destroyed. The program was canceled entirely the following year.

This was followed by a Joint Multi-Mission Submersible program, which was itself canceled in 2010.

DCS has proven to be a much more successful effort.

However, in the six years since Lockheed Martin first received a contract to develop this mini-submarine, other events have transpired and the overall geopolitical environment has changed. Expeditionary and distributed operations, possibly in the context of a future high-end fight against China across the broad expanses of the Pacific, are now at the forefront of many planning considerations.

On top of this, the Navy currently plans to retire its four Ohio class nuclear-guided missile submarines, or SSGNs, before the end of the current decade. These submarines are designed to act, among many other things, as special operations motherships, including with the capability to deploy personnel using SDVs via Dry Deck Shelters (DDS). A number of current Virginia class attack submarines are also fitted with DDSs to conduct special operations support missions and future boats in that class could be even more capable in this role. However, a new dedicated replacement for the Ohio SSGNs is likely decades away, as you can read more about here.

When the development of the DCS began, the design was already too big to fit inside existing Navy DDSs, anyways. Work on an expanded capacity DDS design has been ongoing in parallel, but it's not immediately clear what the status of that project might be.

Given its built-in lock-out chamber, the DCS could conceivably be carried externally on Navy submarines and personnel could then get inside either directly if a suitable hatch arrangement was available or after exiting via a DDS or other lock-out chamber on the mothership submarine. The larger ASDS design presented similar challenges and two submarines, the Los Angeles class attack submarines USS Charlotte and USS Greenville, were specially modified to carry it on its rear deck. Those submarines remain in service today with those hull modifications still in place.

The DCS could be deployed for other maritime platforms, as well, such as the well deck of an amphibious warfare ship. Other vessels capable of deploying boats and submersibles via a crane or a more specialized system might also be configurable into motherships for these special operations mini-submarines.

Regardless, questions about how the DCSs, as well as existing SDVs, will be deployed and employed in future conflicts are clearly emerging. It's unclear how many DCSs SOCOM and the Navy expect to buy in the coming years, but it can be reasonably assumed that the total fleet size will be small. Lockheed Martin's initial contract called for the construction of just three pre-production examples, all of which appear to have been delivered. As another comparison, the Navy only expects to have acquired 10 of its 'wet' Mk 11 SDVs by the end of this year.

What all this means is that there will have to be tactics, techniques, and procedures in place not just for utilizing the new DCSs, but also getting them wherever they might not need to be and in relatively short order. There has at least been one test involving the transport of a DCS inside a shipping container via a U.S. Air Force C-17A Globemaster III cargo jet, which would provide at least one option for getting it closer to the desired operating area on short notice.

SOCOM and the Navy are also already interested in acquiring an improved DCS variant or derivative, originally known as DCS Block II and currently called DCS Next. Details about the requirements for that submersible are also limited, but one goal is to make it deployable from a Virginia class submarine. With this follow-on effort in progress, the current DCS mini-submarine is sometimes referred to as DCS Now.

"We do have an additional area that we're looking at heavily and that's the expeditionary mobility for undersea. It's actually expeditionary mobility for all systems, but we had completed a prototype system proof of concept and it was on our... Mk 11 Seal Delivery Vehicle," Capt. Slaff, the SOCOM PEO-M head, said at a briefing at SOF Week that The War Zone attended. "So, we actually have it, it's out there in front doing its demo."

Slaff did not elaborate on exactly what this additional expeditionary capability for the Mk 11 SDV entailed.

"What we're looking at, obviously, with the SSGNs kinda sunseting here in the [20]26 to [20]28 timeframe, [is] getting the... operational flexibility for expeditionary employment through other means," he added. This "is something that we've been investigating and then rolling that over into... an operational requirement and moving forward with fielding the capability."

There are clearly many questions still to be answered about exactly how SEALs and other U.S. special operations forces will utilize the new DCSs. However, these mini-submarines represent a significant improvement in capability over existing SDVs and look to be just weeks away from finally entering operational service.

<https://www.thedrive.com/the-war-zone/navy-seals-new-mini-submarine-to-be-operational-within-weeks>

Worth opening the URL solely for the imagery; the storyline is also good, UK getting a mention ...think X Craft

Signals intelligence teams reposition to face China, Russia

By Todd South

May 11, 03:38 PM

<https://www.defensenews.com/industry/techwatch/2023/05/11/signals-intelligence-teams-reposition-to-face-china-russia/>

Senior Airman Daniel Robertson, left, a client systems journeyman with the 25th Intelligence Squadron, and Staff Sgt. Divina Castillo, a network administrator and communication systems support NCO with 361st Intelligence Surveillance Reconnaissance Group, connect wires into a Hawkeye lite satellite dish at Hurlburt Field, Fla., Jan. 11, 2017. (Airman Dennis Spain/Air Force)

TAMPA, Fla. — Special operations signals intelligence teams say they need smaller, more versatile gear that gathers and shares data on the breadth of radio frequencies in all domains — land, sea, air and now space.

The mission has shifted dramatically as the United States ratchets up competition in the frequency bands with peer competitors like Russia and China, a far cry from deciphering mobile phone signals from violent extremists, officials said.

That's one request to industry within a small slice of a larger portfolio under U.S. Special Operations Command Program Executive Office-Special Reconnaissance.

On Wednesday, a panel of program managers ticked off the varied sensor, communications and intelligence gear the office wants during the Global SOF Foundation's SOF Week here.

Their efforts to upgrade and improve collection and dissemination of data continues in an ever-more crowded radio frequency spectrum across, and beyond, the globe.

Chris Wilson, acquisition program manager for signals intelligence, spelled out some of the emerging needs as the nation targets peer and near-peer competitors, while it continues to collect information on violent extremist organizations.

The office is developing next-generation sensors and antennas, all domain flexible, tactical sensors, and cross-platform modular payloads for air, surface and subsurface maritime sensors. Their new work includes software-reconfigurable space payloads for satellites and a larger national "reachback" capability for sharing intelligence from the tactical to strategic levels.

The office's portfolio also includes the Joint Threat Warning System-Air, primarily used by U.S. Air Forces Special Operations Command. The drone portion works through payloads on Group 1 to 3 drones. The equipment detects, locates and exploits signals across the radio frequency spectrum. All of this is for threat warning and situational awareness in airborne platforms.

JTWS-Ground serves a similar function on ground vehicles and individual operators. It fields frequency-specific data collection equipment to detect similar threats at the ground level.

The JTWS-Maritime conducts the same functions, but with gear that can be installed on waterborne platforms and removed for use off-platform.

In June, Wilson's team is set to experiment with smaller electronics intelligence hardware that can go on or off boats. The current systems are too heavy to remove from boats for operations, he said.

Another area newly added to the portfolio is space-based payloads for high-altitude frequency detection, including software-defined radios and sensors for satellites.

Wilson told the audience a key focus moving forward is using software “squirts” to remotely update or reconfigure satellite-based hardware for different types of missions or needs.

Lastly, the Silent Dagger package is a scalable intelligence cell type of platform in a box that includes laptops, phones, transceivers and other hardware and gives small teams the connectivity and intelligence usually held by higher-echelon units such as brigades or divisions.

“We have this in a garrison capability, and we have this in deployable systems, so it’s forward deployed with reach back to the national intelligence community’s databases,” Wilson said.

The team is also looking to tie smaller sensors to the system so that at the edge of the tactical footprint, operators can feed into and pull out necessary data from those massive databases, he said.

In the next one to two years, Wilson’s said his team is looking for gear with advanced and complex signals, advanced radio frequency filtering, modular payload-compliant sensors and advanced networking for more precise geolocation.

“For a long time, we were really focused on counter-[violent extremist organizations] and when you’re focused-[counter-VEO, from our perspective, it’s the communications methods that those violent extremist organizations would use,” he said.

His office was “heavy” on those collection methods — radio frequencies in the mobile phone or push-to-talk transmitter’s range, for example.

“As we shift though, we have to look at capabilities that go after the comms methods for any other type of [radio frequency] capabilities that our strategic competitors would use, including machine to machine and things like that,” Wilson said.

In the three to five-year timeframe, the team needs enhanced antennas, which means low profile, and improved performance for those new antennae.

As operators see a more frequency-crowded battlefield, automated signal processing is key to reducing the burden of manual frequency configuration by operators.

They need to be able to process data and signals intelligence in remote locations without connections to more powerful computing present in large formations or stateside.

High altitude and space payloads are key for integrating space assets. And they must be able to hide their own signals transmissions and collections efforts in the radio frequency spectrum.

Beyond the six-year mark, the team is looking for sensor autonomy and sensor data communicating from field locations to vehicles and air or maritime vessels on the move.

<https://www.defensenews.com/industry/techwatch/2023/05/11/signals-intelligence-teams-reposition-to-face-china-russia/>

Ukraine

Clandestine Russian Intelligence Ring in Europe Uncovered, OSINT Group Claims The cover of 167 Russian intelligence officers across Europe has apparently been blown. The best part? It was accomplished by using open-source intelligence (OSINT).

by Jason Jay Smart | May 21, 2023, 10:18 am

<https://www.kyivpost.com/post/17321>

Ukrainian opensource intelligence (OSINT) agency Molfar, has released the data of 167 persons whom they say are employees of the Russian Federation’s foreign intelligence service. The data indicates that most of the spy networks in Western countries were using diplomatic cover, known in spy parlance as “official cover.”

To avoid suspicions, the Russian spooks took day jobs at embassies, worked as journalists, and gained employment in cultural organizations to act as cover for their real goal: to infiltrate organizations to spread disinformation about Ukraine before the full-scale invasion.

According to Artem Starosiek, the CEO of the Molfar OSINT agency, uncovering the identities of Russia’s top spies started with a tip: Someone turned over a database of likely employees of the Russian Foreign Intelligence Service.

Starosiek explained that even though the spies operated under the cloak of secrecy, “some things cannot be hidden even by spies. Especially, when they must conduct at least some public activities while acting as diplomats.”

Suspicious turned to confirmations as Molfar was able to locate the phone numbers of the alleged spies and to check them, using bots, in Telegram. Therein, the sleuths quickly acted to locate other databases, both public and private, that would allow for further confirmation of the story.

Combatting Russia’s spies in Europe is critical for Ukraine, explains Starosiek, as they were agents sent to act as destabilizers in “their host countries and at the international level.”

The spies may seem otherwise normal, such as in the case of Georgii Mikhno, who holds the rank of Ambassador and who graduated from Russia’s Diplomatic Academy and from the prestigious Lomonosov Moscow State University. However, there was more to the Ambassador, as Mikhno is also an officer of the “A” Directorate of the Russian Foreign Intelligence Service where he headed the Department for Pan-European Cooperation.

While working as a diplomat, Mikhno was a member of the Russian delegation to the Council of Europe in Strasbourg, France, and later served as Deputy Permanent Representative of the Russian Federation to international organizations in Vienna, Austria. At various times, he was the head of a division of the Department for Pan-European Cooperation, and Deputy Director of the Department for New Challenges and Threats of the Russian Foreign Ministry.

Earlier, Mikhno served at the Russian Mission to the United Nations in New York where Russia holds a seat on the Security Council. Today, thanks to their leadership role at the UN, Russia can block investigations into things like the kidnapping of Ukrainian children, says Starosiek.

“People all over the world must realize that this problem isn’t just about undermining Ukraine’s credibility among our allies. This problem is far more profound,” explains Starosiek.

“The impact of Russia will touch more and more countries, shifting not only their policy but national security.”

Andrei Grebenshchikov, an employee of the "A" department of the Russian Foreign Intelligence Service, who worked under diplomatic cover as First Secretary of the Russian Embassy in New York, is another spy whose cover was blown by the OSINT experts.

Not using social media, but publicly available files and databases, Molfar was able to establish that Grebenshchikov was the First Secretary of the Multilateral Disarmament Division of the Department for Non-proliferation and Disarmament Affairs before serving as the Second Secretary of the Political Section of the Russian Embassy in Canada.

While in Ottawa, the spy engaged in propaganda, including writing an article for The Globe and Mail entitled "Co-operate With Russia to End the Ukraine Crisis," which sought to frame Russia's invasion as being the fault of Ukraine and referred to the annexation of Crimea as being a mere "reunification."

The research to confirm that these men were, in fact, Russian spies, reached a crescendo that confirmed Molfar's suspicions: A database of payroll for the Russian SVR showing that the suspects had in fact been receiving salaries from the Russian foreign intelligence service.

“With this investigation, we aim to cut the influence of Russia across the globe. We are grateful for the support from the media,” emphasizes Starosiek.

“Thus, we will continue to conduct investigations covering enemies of Ukraine and proving Russian war crimes on the territory of Ukraine.”

<https://www.kyivpost.com/post/17321>

United Kingdom

UK special forces have operated secretly in 19 countries since 2011 Exclusive: Extensive deployments ‘raise serious concerns about transparency’, says research group Action on Armed Violence

Dan Sabbagh Defence and security editor
Tue 23 May 2023 07.00 BST

<https://www.theguardian.com/uk-news/2023/may/23/uk-special-forces-have-operated-secretly-in-19-countries-since-2011?CMP>

SAS and other British special forces have been involved in covert operations in 19 countries in the past dozen years, including in Nigeria, the Philippines and Russia, as well as in Syria, Ukraine and most recently Sudan, a study reveals.

The elite military units operate in secret, without ministers publicly confirming their activities. But a research group, Action on Armed Violence, has compiled a list of their activities since 2011 based on media leaks.

It paints a picture of members of the SAS, Special Boat Service and Special Reconnaissance Regiment, being repeatedly deployed by the prime minister and defence secretary to conduct high-risk missions, typically where the UK is not at war.

Special forces have been particularly active in Syria, with reports of them entering the country from 2012 to help rebel groups fighting against President Bashar al-Assad. They are also reported to have been sent in 2013 to identify military targets in advance of a bombing campaign that MPs ended up voting against.

Bashar al-Assad (right) meets the Saudi ambassador to Jordan, Nayef al-Sadiri, in Damascus on 10 May to receive an invitation to attend the Arab League Syria's Assad to attend Arab League summit as west opposes rehabilitation
Read more

But such was the obsession with secrecy that when one SAS member, Matt Tonroe, was killed by in Syria in 2018, he was officially described as a member of the Parachute regiment. It later emerged he was not killed by an improvised explosive device but by the accidental detonation of a grenade carried by his US colleague.

Fifty members of UK special forces were listed as being present in Ukraine earlier this year in leaked Pentagon papers, although Britain is not formally party to the conflict; by contrast, the numbers from the US and France were listed as 14 and 15, respectively. Their purpose, however, was not stated.

The authors of the report said that the extensive list of deployments came despite a lack of oversight. While convention dictates that MPs have to vote for a war, special forces can be deployed without Commons approval – and their actions are not subject to investigation by any parliamentary committee.

At one point, shortly after 38 people – including 30 Britons – were killed by a terrorist at a beach hotel in Tunisia in June 2015, it was reported that the SAS had been given “carte blanche” by David Cameron, who was then prime minister, to capture or kill Islamist leaders in the Middle East.

“The extensive deployment of Britain's Special Forces in numerous countries over the past decade raises serious concerns about transparency and democratic oversight,” said Iain Overton, the executive director of AOAV. “The lack of parliamentary approval and retrospective reviews for these missions is deeply troubling.”

This March, however, a public inquiry began into allegations that the SAS were responsible for 54 summary killings in Afghanistan in 2010 and 2011, typically on night raids. Men were separated from their families and reportedly shot dead after being said to have produced a weapon.

Special forces took part in the rescue of two dozen British diplomats and their families from Khartoum in April after the outbreak of fighting in Sudan, evacuating them to an airfield north of the capital, when they were at risk of coming under attack.

At the time, the Tory MP Ben Wallace, who is now defence secretary, praised the military effort involved. However, the Ministry of Defence said the operation involved members of the Parachute regiment, the Royal Marines and the RAF but it did not mention special forces.

Special forces frequently participate in hostage rescues as well as exfiltrations. A group of SBS commandos tried and failed to rescue a Briton and an Italian held by an Islamist group in Nigeria in 2012, but a couple held in the Philippines were successfully rescued in 2019 in a mission that UK special forces helped to plan, and for which it trained the country's military.

The only deployment in Russia mentioned in the media dates back to 2014, when a tabloid newspaper reported that SAS soldiers were “on hand” to protect the security of British athletes at the winter Olympics in Sochi.

The full list of countries also includes Algeria, Estonia, France, Oman, Iraq, Kenya, Libya, Mali, Cyprus, Pakistan, Somalia and Yemen. It was sent to the Ministry of Defence, although the ministry routinely says it does not comment on the activity of special forces.

An MoD spokesperson said: "It is the longstanding policy of successive governments: not to comment on UK Special Forces."

<https://www.theguardian.com/uk-news/2023/may/23/uk-special-forces-have-operated-secretly-in-19-countries-since-2011?CMP>

GCHQ warns of fresh threat from China's hackers

Michael Evans, Peter Chappell

Thursday May 25 2023, 12.30am, The Times

<https://www.thetimes.co.uk/article/gchq-warns-of-fresh-threat-from-chinas-hackers-d7m3rlnxh>

The National Cyber Security Centre issued a warning last night about "malicious" Chinese cyberactivity targeting the national infrastructure networks of western allies after US military bases were attacked.

The government agency, which is part of GCHQ, said Chinese state-sponsored hacking attempts had been observed taking advantage of organisations' administration tools to disrupt large projects.

The warning came after American intelligence agencies and Microsoft said they had uncovered malicious activity by a state-sponsored actor based in China aimed at critical infrastructure organisations in Guam and the United States.

It was discovered that a malicious computer code had been planted into the telecommunications networks in Guam, the US base in the Western Pacific, it was reported last night. The code, a "web shell", was found soon after the incident in which a Chinese spy balloon flying over sensitive sites in the US was shot down in February, according to The New York Times.

The intrusion, traced back to China, was also found in telecommunications systems in the US. China's People's Liberation Army has its own unit dedicated to hacking overseas computers.

The discovery of the malicious code caused alarm in Washington because Guam, which hosts the huge Andersen air force base, would be the main staging post for going to the aid of Taiwan in the event of a Chinese invasion of the breakaway republic.

In an extraordinary move, the US and other members of the Five Eyes intelligence organisation — Britain, Australia, New Zealand and Canada — issued a 24-page guidance document detailing the discovery and the methods required to detect and remove the code.

Microsoft called the Chinese hacking group "Volt Typhoon". The giant US computer company said it was a state-sponsored Chinese programme aimed not only at American critical infrastructure but also maritime operations and transportation.

Microsoft said there was no evidence that the Chinese group had exploited the access provided by the code for any offensive attacks. However, it served as a warning of China's potential ability to strike at crucial telecommunications networks at will.

Microsoft said in its assessment the Volt Typhoon operation was about developing capabilities that could "disrupt critical communications infrastructure between the US and Asia region during future crises".

Volt Typhoon has been active since mid-2021 but the secret hacking operation has only now been made public.

The warning was issued jointly with the US National Security Agency, the US Federal Bureau of Investigation, the Australian Signals Directorate's Australian Cyber Security Centre, the Communications Security Establishment's Canadian Centre for Cyber Security, and the New Zealand National Cyber Security Centre.

The recommendations provided information of what indicators providers should look out for and examples of techniques deployed by hackers, to help providers to identify any malicious activity.

Mao Ning, the Chinese foreign ministry spokeswoman, said: "This is an extremely unprofessional report that has been pieced together and is severely lacking in evidence. It's a collective fake information campaign, which the US launched out of geopolitical purposed with the Five-Eyes countries."

<https://www.thetimes.co.uk/article/gchq-warns-of-fresh-threat-from-chinas-hackers-d7m3rlnxh>

Diversity vital to keep West safe, says spy who aided UK Huda Mukbil was crucial to tracking down terrorists after the 7/7 attacks on London commuters

Fiona Hamilton, Crime and Security Editor

Monday May 29 2023, 12.01am, The Times

<https://www.thetimes.co.uk/article/diversity-vital-to-keep-west-safe-says-spy-who-aided-uk-hqlkqhcdk>

After the July 7 bombings in 2005, detectives and MI5 scrambled to trace extremist networks linked to the devastating terrorist attack.

They had to go 3,000 miles across the Atlantic to find the woman who could help them do it.

Huda Mukbil was a Canadian spy whose expertise in several Arabic dialects was crucial in helping to unpick the terrorist network. She has spoken for the first time about how she was posted to the security service to help secure convictions and track down extremists linked to Britain's worst mainland terrorism atrocity.

"MI5 had the evidence," she recalled, "but they just couldn't interpret all of it. The alert came out — is there anyone who can? Is there anyone with knowledge of anything to do with east Africa, the languages that are spoken there? I was the only one identified. Not in the US, not in Canada. The only one in the whole Five Eyes."

Mukbil was referring to the intelligence partnership between the UK and its four western allies — the United States, Canada, Australia and New Zealand. When Muhammad Siddique Khan and three fellow Islamists blew themselves up on London’s transport network, killing 52 people, expertise was offered from across the system.

London was still reeling when two weeks later copycat terrorists tried and failed to carry out similar attacks. One of them, Hussain Osman, had fled to Italy. MI5 needed help to translate eavesdrop evidence on the July 21 network and to look for clues about his whereabouts and culpability.

It revealed a gap in the agency’s knowledge. Since the September 11 attacks on the US in 2001 the focus had been on Islamist extremism spawned from south Asia but the July 21 attacks involved Muslims of African origin.

Mukbil was a unique spy who could help them to crack the case. The first black Muslim woman to be hired by the Canadian Security Intelligence Service (CSIS), she was of Arab and Ethiopian origin and could speak English, French, Harari and Arabic, including east African dialects. Within hours of CSIS answering MI5’s call for help, she was posted to London. Mukbil describes the experience in her recent book, *Agent of Change: My Life Fighting Terrorists, Spies, and Institutional Racism*.

“This was the biggest challenge for the Met police and MI5, the biggest manhunt,” she said. “They just said: ‘We need you here’. They were thrilled that I spoke Arabic.”

She had been nervous because she felt ostracised at CSIS. She joined after 9/11 to help fight the terrorist threat but says she experienced racism, misogyny and Islamophobia. Her book reveals how she became conflicted by the surveillance and profiling of Muslims, and was considered an “insider threat” when her religious observance increased. She was even asked to take a polygraph test to prove her allegiance. Ultimately she left the agency and won a discrimination settlement.

Mukbil contrasts her treatment at CSIS with the warm reception at MI5 — apart from her first impression. It was days after 21/7 and London’s security teams were jittery. Wearing a blue hijab, she walked up to Thames House in Millbank with her station chief and was surrounded by armed officers who yelled “freeze”. She had been profiled but it was the only negative experience and she said she was otherwise welcomed with open arms.

“My experience was really positive because there was a real realisation that I had skills no one else had,” she said.

She translated, transcribed and interpreted intelligence on the 21/7 network to be used during the questioning of Osman, originally from Ethiopia, and other suspects. She helped provide evidence for his extradition from Italy. Her reports gave insight on his radicalisation and the planning of the attack.

Mukbil’s work became well known in the UK intelligence community. She was handed MI5 merit awards, invited to a reception with Baroness Manningham-Buller, then director-general, and personally thanked by John Prescott, deputy prime minister at the time.

It was, she said, an “exhilarating experience” but also one that underlined the importance of diversity and inclusion at the intelligence agencies. MI5 was predominantly white and, back then, she said Muslim colleagues confided they were not necessarily trusted. The agency now prides itself on its diversity and says it is central to its growth and future.

Mukbil underlined the importance of employing agents who come from all the communities being protected. “You need people that know the region to be able to recruit sources or speak to people in those communities. You can’t have a surveillance team. You need interpreters. You need case officers that are able to go out and recruit sources and speak to people. You can’t do security and intelligence work if you don’t have diversity at all levels.”

Mukbil was asked to brief the Metropolitan Police on Muslim and Middle Eastern culture and questioned why they had no staff of their own to do it.

She was posted back to Canada after several months but became increasingly disillusioned about the prejudice and the misogynistic culture she said she encountered there. She joined a group of five people from CSIS who represented women, the LGBT community, Muslims and minorities, who announced a C\$35 million lawsuit before the agency settled in 2017. She resigned after a “groundbreaking” commitment from the service that it would address systemic racism and she now teaches national security and diversity at the University of Ottawa.

“I don’t give up. My experience running counterterrorism operations really helped. I made sure that we had the right legal representation but we also went and spoke with politicians. It created pressure because this was very serious, the lack of diversity. The Americans call it mission critical. It really is.”

<https://www.thetimes.co.uk/article/diversity-vital-to-keep-west-safe-says-spy-who-aided-uk-hqkqhcdk>

Iran’s ‘suicide drones’ are being developed at British universities Senior MPs express deep concern over JC findings and revelations intensify calls for ban on Iran terror Guards

BY DAVID ROSE & FELIX POPE
JUNE 08, 2023 11:51

<https://www.thejc.com/news/news/iran%27s-%27suicide-drones%27-are-being-developed-at-british-universities-3lUpJ4vPCpCIqRaYwvKRR0>

Scientists at British universities helped the Iranian regime develop technology that can be used in its drone programme and fighter jets, a JC investigation has revealed.

Senior MPs and peers expressed deep concern over the findings, with a government spokesperson saying Britain would “not accept collaborations which compromise our national security”.

At least 11 British universities, including Cambridge and Imperial College London, are involved, with staff producing at least 16 studies with potential Iranian military applications.

The UK bans the export of military and “dual-use” technology to Iran and recently imposed fresh sanctions against Iranian individuals and organisations supplying Russia with kamikaze drones being used in Ukraine.

Iran’s drone and missile arsenal is controlled by the Islamic Revolutionary Guard Corps (IRGC). The government is under increasing pressure to proscribe it as a terrorist organisation.

Yet the JC can reveal that in one project researchers in Britain worked to improve drone engines, boosting their altitude, speed and range. It was funded by Tehran.

Another British university worked with Iranian counterparts to test sophisticated new control systems for jet engines, aimed at increasing their “manoeuvrability and response time” in “military applications”.

Other UK-based scientists have worked with Iran to research the use of unmanned aerial vehicles (UAVs) as mobile base stations to extend the range of communications systems, on special alloys for military aircraft and coatings to upgrade armour plating.

MPs have demanded to know how the research was carried out under the nose of the government’s supposedly tough sanctions regime.

Lord Polak, President of Conservative Friends of Israel, said: “It’s clear that the IRGC controls Iran’s drone programmes, and that these weapons are being used by the Russians in Putin’s war on Ukraine.

“That it has a presence in British universities is yet more evidence — not that any should be needed — that we should have banned the IRGC a long time ago.”

Shadow Foreign Secretary David Lammy said the JC investigation was “deeply troubling” and called on the government to urgently investigate whether sanctions had been breached.

Former Tory cabinet minister David Davis MP questioned whether the government was enforcing compliance with sanctions. He said: “There is little point in having a sanctions regime unless the relevant government departments monitor and enforce it properly.

“It should not be possible for researchers at British universities to effectively assist the Iranian state in enhancing its weapons systems which may be deployed against our allies, or even our own soldiers.”

Alicia Kearns MP, chair of the Commons Select Committee on Foreign Affairs, added: “This is a horrifying collaboration, one that I fear risks breaching sanctions in place around sensitive and dual-use technologies. I shall be writing to the Education Secretary and Science and Technology Secretary to raise the JC’s report with them.

“It is quite possible these collaborations are assisting in the gender apartheid within Iran, and its hostile interference and violence across the Middle East or even helping to massacre civilians in Ukraine.”

Among the leading universities where work with Iran has taken place is Cranfield University, a research institution specialising in science, aerospace and engineering, which has a strategic partnership with the RAF.

Academics there and at other UK universities have co-authored academic papers that acknowledge a military application. Others are working alongside academics at Iranian universities that have been sanctioned by Britain, the US and the European Union.

One of the key pieces of UK-Iran research uncovered by the JC was jointly produced by Ahmad Najjaran Kheirabadi, a researcher at Imperial College, and scientists from Shahrood University of Technology and Ferdowsi University of Mashhad.

It examined upgrading the lightweight, two-stroke engines used to power drones, including its HESA Shahed 136, which is being used by Russia to attack Ukrainian targets.

The study examined the advantages of installing a fuel- injection system into such engines, saying the upgraded propulsion system “has benefits such as high power, low fuel consumption... high flight endurance, tolerance of extreme environmental conditions”.

It added: “In the modern world, unmanned aerial vehicles (UAVs) are widely in operation because of their key and important benefits, and they play a role in the military.”

It continued: “The UAV propulsion is a critical part, and its mission is to overcome the drag to maintain the speed of the UAV and accelerate it, as well as to overcome the gravity to the rising UAV.”

The research, published in March 2019, was “supported by” Iran’s Ministry of Science, Research and Technology, whose former minister, Kamran Daneshjoo, and the current deputy minister, Mohammad Nouri, are both on the UK sanctions list.

An expert on Iran’s military, Farzin Nadimi, senior fellow at the Washington Institute, said Imperial College’s research could have significant military applications. The 30-horsepower engine discussed in the paper could be used in smaller drones, he said.

A second key piece of research — a joint study between the Centre for Propulsion Engineering at Cranfield University and the Iranian University of Science and Technology, Tehran — is also under the spotlight.

Despite having close ties with the UK Ministry of Defence, Cranfield examined the “military applications” of advanced systems known as “fuzzy controllers” in turbojet engines alongside the Iranians.

The 2021 study says: “This controller enables the engine for better manoeuvrability, which is an important aspect for military and unmanned aerial vehicles (UAV) applications.” The research, it added, “confirms the feasibility of the designed controllers for real-world applications”, and “is an appropriate candidate for control of the next generation of military aero-engines”.

It was carried out by Dr Soheil Jafari, a lecturer in Gas Turbine Thermal Management and Control at Cranfield, and Tehran-based Seyed Jalal Mohammadi Doulabi Fard.

Dr Jafari was previously an assistant professor at the Sharif University of Technology in Tehran, Iran’s top technology research institute, which has been on the UK sanctions list since 2012 due to its links to Iran’s nuclear programme.

Nadimi said that Iranian universities have played a “significant role” in the nation’s drone warfare programme since the mid-1980s.

He said: “All engineering faculties receive good funding for drone research. The IRGC have prioritised drone research for several years. Almost all of these universities have signed contracts with the IRGC or the Ministry of Defence for military-related research.”

He added: “Almost all Iranian drones are powered by two-stroke engines, including the Shahed-136, which is extensively used in the Ukrainian war. With regards to drone development, Iran is known to have developed several two-stroke engines... Both suicide and reconnaissance drones use them.”

British sanctions law prohibits the transfer of both military and “dual use” technology to Iran or anyone “connected” with it. It also bans what the regulations call “technical assistance” in the “development, production, assembly [and] testing” of restricted technology, and “any other technical service”.

Providing this to any person or institution based in or connected to Iran is a criminal offence, punishable by up to seven years imprisonment.

Based on an analysis of thousands of papers published in scientific journals since 2017, the JC has unearthed hundreds of projects in which British academics and institutions have collaborated with Iranian universities that have been sanctioned due to their involvement with its nuclear programme.

Most are on non-military subjects, but legal experts said that working with Iranians at these sanctioned universities on non-nuclear topics also risked breaching the sanctions rules.

These rules state that British citizens or residents must not engage in actions that “directly or indirectly” benefit a person or institution that is named on the official sanctions list.

Such benefits, says a Treasury guide to the sanctions, include “assets of every kind — tangible or intangible, movable or immovable, which are not funds”. The legal experts, speaking anonymously, said this could include intellectual property, especially if it led to a commercial product.

Other studies unearthed by the JC include research by Sharif University scientist Abolfazl Azarniya, who published a 2019 paper on the use of lasers to manufacture “high value added parts” made from titanium alloy for the aerospace industry, where it had “a wide range of applications”.

Vitali Klitschko with others look at a crater outside a clinic following a Russian attack, GettyImages-1258346367
Kyiv mayor Vitali Klitschko with others look at a crater outside a clinic following a Russian attack (Photo: Getty Images)

Among his co-authors were researchers at Imperial College and Liverpool. As well as drones, Iran’s aerospace industry makes military helicopters, transport planes and fighter jets, and has been subject to UK sanctions since 2010.

Tehran’s Shahid Beheshti University has been on the UK sanctions list since May 2011, as it “carries out scientific research in relation to Iran’s proliferation-sensitive nuclear activities”. Like Sharif university, it is also on the US sanctions list.

The JC found more than 200 papers jointly written by Shahid Beheshti University and UK-based academics, including one on blocking electronic eavesdroppers.

It was co-authored by members of the Iranian university and Zabih Ghassemlooy, who heads the Optical Communications Research Group at Northumbria University, and is also chief editor of the British Journal of Applied Science and Technology.

Another conference paper concerned the development of futuristic electronic devices that use superconductors and graphene, the carbon material one atom thick whose discovery by UK-based scientists won a Nobel Prize in 2010. It could be used in next-generation wireless communications and “security”, the study said.

The authors included Samane Kalhor, now a researcher at the University of Glasgow, who received her doctorate from Shahid Beheshti; Majid Ghaantshoar, who is still based at the Iranian institution; and several others from the University of Cambridge.

Iran’s weapons industry also manufactures arms, including ballistic missiles that it may one day use against Israel, which the Iranian leader Ayatollah Ali Khamenei has described as a “cancerous tumour” that must be erased.

A government spokesman told the JC: “We will not accept collaborations which compromise our national security. We have made our systems more robust and expanded the scope of the Academic Technology Approval Scheme to protect UK research from ever-changing global threats, and refuse applications where we have concerns.”

A Cranfield University spokesman told the JC: “In an increasingly complex global operating environment, Cranfield University takes a thorough and robust approach to international collaborations and the security of our research “We review our security policies and processes on a continual basis to ensure that research activities fully comply with guidelines and legal obligations.”

A Northumbria University spokesperson said: “In line with our processes to mitigate risks for research projects, we are looking into the information provided to us. To ensure fairness and consistency it will take time to undertake a thorough assessment, so it would be premature to comment further.”

An Imperial College London spokesperson said: “All Imperial research is subject to Imperial’s Ethics Code and we have robust relationship review policies and due diligence processes in place, with our responsibility to UK national security given the utmost importance.”

A Glasgow University spokesperson said: “Research teams work in collaboration with academics, institutions and organisations from a broad spectrum of global sectors.

“All research carried out at the University of Glasgow is underpinned by policies and a Code of Good Practice that ensures it is conducted to the highest standards of academic rigour.”

<https://www.thejc.com/news/news/iran%27s-%27suicide-drones%27-are-being-developed-at-british-universities-3lUpJ4vPCpCIqRaYwvKRR0>



Palestine Embassy, Is Swieqi, Malta

Morse Stations

All frequencies listed in kHz. Freqs are generally +/- 1k

This is a representative sample of the logs received, giving an indication of station behaviour and the range of times/freqs heard. These need to be read in conjunction with any other articles/charts/comments appended to this issue.

Morse - Number Stations

M01/3 XIV MCW, hand (025 sched for May - Aug). Will change to M01/2 sched ID 463 for Sept - Oct.

From the beginning of October 2022, all M01 transmissions sent have used a single carrier vs usual 'Two-Tone' transmission mode.

May 2023:

4903	2000z	02 May	'463' 720 30 == 79843 34578 ... 6156796798 == 720 30	Strong, fast. Second half of msg. random figures	BR/HFD	TUE
	2000z	11 May	'025' 823 30 == 17387 48374 ... 91187 25252 == 823 30	Strong, fast. Errors in start & ending sequences	BR	THU
	2000z	16 May	'025' 963 30 == 76567 32435 ... 32435 65746 == 963 30	Strong, fast. With errors. 6-dot spaced ending	BR	TUE
	2000z	25 May	'025' 341 30 == 27032 01042 ... 25052 21063 == 341 30	Strong, fast. Error grp11-12 11019 14032 14031	BR	THU
5280	1800z	02 May	'463' 645 30 == 67834 65534 ... 8934 834 == 6464	Fair with QSB, fast. Random strings mid-msg.	BR/HFD	TUE
	1800z	04 May	'025' 322 30 == 27032 18094 ... 70510 17013 == 322 30	Weak/Fair, med-fast. Random from mid-msg.	BR/HFD	THU
	1800z	11 May	'025' 745 30 == 24315 84980 ... 22776 33554 == 745 30	Fair with QSB, fast. Error on grp17	BR	THU
	1800z	16 May	'025' 624 30 == 76879 65476 ... 85543 64553 == 624 30	Fair, fast. With errors. 6-dots spaced ending	BR	TUE
	1800z	25 May	'025' 612 30 == 09041 22062 ... 11061 13063 == 612 30	Fair with QSB, fast. Error grp01 09041 00941	BR	THU
6435	1500z	06 May	'025' 481 30 == 60502 32896 == 481 30	Weak/Fair with QSB, fast. Missed first 11 grps.	BR	SAT
	1500z	13 May	'025' Extremely weak - No useful copy		BR	SAT
	1500z	20 May 10039 34045 == 105 30	Weak/Fair. Nothing heard until 1507z in progress	BR	SAT
	1500z	27 May	'025' 426 30 == 3 .718 0912761 18 .1 == 426 30	Weak/Fair with QSB. Poor copy - partial read	BR	SAT
6780	0700z	14 May	'025' 745 30 == 67845....		HFD	SUN

June 2023:

4903	2000z	08 Jun	'025' 712 30 == 89078 56745 ... 23434 56767 == 712 30	Fair, fast with static. Hesitant in places	BR	THU
	2000z	20 Jun	'025' 598 30 == 58678 25413 ... 19898 47566 == 598 30	Good with static, fast. Hesitant in places	BR	TUE
	2000z	27 Jun	'025' 340 30 == 82910 83742 ... 27411 81742 == 340 30	Good, fast. DK/GC sent once at start & end	BR	TUE
5280	1800z	06 Jun	'025' 419 30 == 31653 90 28502 74716 == 419 30	Weak / Fair with QSB. Fast. Poor copy	BR	TUE
	1800z	08 Jun	'025' 249 30 == 45656 67867 ... 89089 45645 == 249 30	Weak. Fast. Difficult copy	BR	THU
6435	1500z	03 Jun	'025' 510 30 == 79834 67845 ... 31290 65498 510 30	Weak/Fair with QSB. Jumbled towards ending	BR	SAT
	1500z	10 Jun	'025' 849 30 == 91023....		HFD	SAT
	1500z	17 Jun	'025' 746 30 == 57466 07980 ... 10988 20209 == 746 30	Weak/Fair with QSB. Poor due to QSB in parts	BR	SAT

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

13426/12126/10226	0210/30/50z	05 May	412 1	(Via SDR Japan)	HFD	FRI
16272/14972/ - - -	0300/20/40z	02 May	299 000	(Via SDR Japan)	HFD	TUE
14975/13875/13475	0300/20/40z	06 Jun	984 1	(Via SDR Japan)	HFD	TUE
		20 Jun	984 1 (645 128) 44812 06883....	(Via SDR Japan)	BR	TUE
15918/14818/13918	0210/30/50z	02 Jun	989 1	(Via SDR Japan)	HFD	FRI

European M12 Logs

May 2023:

New scheds in bold type

8161/9161/10561	0030/0050/0110z	02 May	115 000		HFD	TUE
	0030/0050/0110z	09 May	115 1 (350 37) 83189 59906 ... 24910 78554 000 000		AB	TUE
	0030/0050/0110z	19 May	115 000		Gert	FRI

10348/11548/12148	0600/20/40z 0600/20/40z 0600/20/40z 0600/20/40z	03 May 10 May 20 May 27 May	351 000 351 1 351 000 351 1 (353 61)		06633 19494....	Gert/HFD HFD Gert Gert	WED WED SAT SAT
10843/10243/9243	2100/20/40z 2100/20/40z 2100/20/40z 2100/20/40z 2100/20/40z	05 May 12 May 13 May 20 May 27 May	822 1 (820 124) 822 1 (1127 186) 822 1 (1127 186) 822 1 (1127 186) 822 1 (2523 202)	82018 75628.... 90659 19789.... 90659 19789.... 90659 19789.... 01930 89698....		BR/HFD BR BR BR BR	FRI FRI SAT SAT SAT
11435/10598/9327	1900/20/40z	04 May	938 1 (2296 60)	48995 70753 ... 89104 35485 000 000		Gert/HFD	THU
	1900/20/40z	11 May	938 1 (7743 58)	13088 91498....		BR	THU
	1900/20/40z	13 May	938 1 (8111 72)	49312 82558....		BR	SAT
	1900/20/40z	18 May	938 1 (4734 55)	20566 11376 ... 15420 29395 000 000		Gert	THU
	1900/20/40z	20 May	938 1 (7992 79)	97294 29078....		BR/HFD	SAT
	1900/20/40z	25 May	938 1 (4192 59)	28471 72844 ... 30092 42521 000 000		Gert	THU
	1900/20/40z	27 May	938 1 (8557 74)	99488 68015....		BR	SAT
13386/12189/11491	1110/30/50z 1110/30/50z 1110/30/50z	04 May 11 May 25 May	725 1 (6727 90) 725 1 (2089 92) 725 1 (2795 92)	45781 03785.... 26807 14783.... 71307 51742....		BR/HFD BR BR	THU THU THU
13459/13959/ - - -	0800/20/40z 0800/20/40z 0800/20/40z 0800/20/40z 0800/20/40z	02 May 05 May 09 May 12 May 23 May	496 000 496 000 496 000 496 000 496 000			BR/HFD BR BR BR BR	TUE FRI TUE FRI TUE
13926/13426/11526	2000/20/40z 2000/20/40z 2000/20/40z 2000/20/40z 2000/20/40z 2000/20/40z	01 May 08 May 11 May 15 May 18 May 22 May 25 May	573 000 573 1 (519 99) 573 1 (519 99) 573 000 573 000 573 1 (345 116) 573 1 (345 116)		03052 11970.... 03052 11970....	HFD BR BR BR Gert BR BR	MON MON THU MON THU MON THU
15936/14736/13536	1900/20/40z 1900/20/40z 1900/20/40z 1900/20/40z 1900/20/40z 1900/20/40z 1900/20/40z	03 May 10 May 12 May 17 May 19 May 24 May 26 May	975 000 975 000 975 000 975 1 (602 104) 975 1 (602 104) 975 1 (153 91) 975 1 (153 91)		44583 14541.... 44583 14541 ... 72295 89519 000 000 95046 65252.... 95046 65252....	BR/HFD BR BR BR Gert BR BR	WED WED FRI WED FRI WED FRI
16113/15813/14813	1600/20/40z 1600/20/40z 1600/20/40z 1600/20/40z 1600/20/40z	03 May 10 May 14 May 17 May 21 May	188 000 188 1 (4622 51) 188 1 (4622 51) 188 1 (154 66) 188 1 (154 66)		91867 10312.... 91867 10312.... 18885 99404.... 18885 99404....	HFD BR BR BR BR	WED WED SUN WED SUN
20282/19482/18382	1400/20/40z 1400/20/40z 1400/20/40z 1400/20/40z 1400/20/40z	01 May 04 May 08 May 15 May 22 May	243 1 243 1 (219 35) 243 000 243 1 (1016 70) 243 000		44540 25041.... 94287 66465....	HFD BR BR BR BR	MON THU MON MON MON
<u>June 2023:</u>							
7857/9157/ - - -	0030/0050/0110z	20 Jun	814 000			HFD	TUE
10216/11516/12216	0600/20/40z 0600/20/40z	03 Jun 10 Jun	252 000 252 1 (5570 79)		87589 92630 ... 52722 36363 000 000	HFD Gert/HFD	SAT SAT
11144/10544/9344	2100/20/40z 2100/20/40z 2100/20/40z 2100/20/40z 2100/20/40z 2100/20/40z 2100/20/40z	02 Jun 03 Jun 10 Jun 16 Jun 17 Jun 24 Jun 30 Jun	153 1 (2523 202) 153 1 (2523 202) 153 1 (8239 112) 153 1 (8239 112) 153 1 (8239 112) 153 1 (3002 88) 153 1 (3002 88)	01930 89698.... 01930 89698 ... 61832 74662 000 000 39253 03155.... 39253 03155.... 39253 03155.... 03044 83876.... 03044 83876....		BR/HFD Gert BR BR BR BR BR	FRI SAT SAT FRI SAT SAT FRI
11435/10598/9327	1920/40z 1800/20/40z 1900/20/40z 1800/20/40z 1800/20/40z 1900/20/40z 1800/20/40z 1900/20/40z	01 Jun 03 Jun 08 Jun 10 Jun 17 Jun 21 Jun 24 Jun 29 Jun	938 1 938 1 (6633 79) 938 1 (2357 53) 938 1 (3827 78) 938 1 (3361 76) 938 1 (8352 64) 938 1 (7396 73) 938 1 (6075 57)		61228 53022 ... 64391 49455 000 000 09545 94184 ... 31289 44702 000 000 69073 88078.... 23828 98365.... 95012 29680.... 49111 48926.... 92343 02496....	HFD Gert Gert BR BR/HFD BR BR BR	THU SAT THU SAT SAT THU SAT THU
13386/12189/11491	1110/30/50z 1110/30/50z	01 Jun 29 Jun	725 1 (4803 93) 725 1 (8925 96)		62011 07839.... 16280 92271....	BR BR	THU THU

[Note 1]

13531/13931/ - - -	0800/20/40z 0800/20/40z	02 Jun 06 Jun	595 000 595 000			Gert/HFD BR	FRI TUE
13892/13392/11592	2000/20/40z 2000/20/40z 2000/20/40z 2000/20/40z 2000/20/40z 2000/20/40z	01 Jun 05 Jun 08 Jun 15 Jun 19 Jun 21 Jun 27 Jun	119 000 119 000 119 1 (442 77) 119 1 (442 77) 119 1 (442 77) 119 000 119 000	69703 51519.... 69703 51519.... 69703 51519....		HFD BR BR BR BR BR	THU MON THU THU MON THU MON
14926/14426/13426	1600/20/40z 1600/20/40z 1600/20/40z 1600/20/40z 1600/20/40z	04 Jun 07 Jun 11 Jun 21 Jun 25 Jun	944 000 944 1 (6231 73) 944 1 (6231 73) 944 1 (269 44) 944 1 (269 44)	95126 87208.... 95126 87208.... 31320 34063.... 31320 34063 ... 94362 00030 000 000		HFD BR BR BR Gert	SUN WED SUN WED SUN
(14975)/13875/13475	0320/40z	01 Jun	984 1			HFD	THU
15823/14823/13923	1900/20/40z 1900/20/40z 1900/20/40z 1900/20/40z 1900/20/40z 1900/20/40z	02 Jun 07 Jun 09 Jun 14 Jun 16 Jun 23 Jun 28 Jun	889 000 889 000 889 1 (238 50) 889 1 (238 50) 889 000 889 1 (1156 29) 889 1 (1156 29)	39635 56736.... 39635 56736.... 45173 50556.... 45173 50556....		HFD BR BR/HFD BR BR BR BR	FRI WED FRI WED FRI FRI WED
17427/16327/14627	1600/20/40z 1600/20/40z 1600/20/40z 1600/20/40z 1600/20/40z	01 Jun 05 Jun 08 Jun 12 Jun 26 Jun	436 000 436 000 436 000 436 1 (2441 80) 436 000	42611 77849....		HFD BR BR BR BR	THU MON THU MON MON

[Note 1] Slower than normal – 23 wpm

M12 8161/9161/10561kHz 0030/0050/0110z 09 May 2023
115 115 115 1 (R2m) 350 37 350 37
83189 59906 36379 25363 97672 56287 11513 77177 07496 09854 87159 72404 79455 90859 93859 20292 88024 09522 61597 41309 29907 67796 45872 57948 78215 00871 19430 54490 63319 96687 95878 33157 24694 81264 51729 24910 78554 000 000
<i>Courtesy AB</i>
M12 11435/10589/9327kHz 1900/1920/1940z 25 May 2023
938 938 938 1 (R2m) 4192 59 4192 59
28471 72844 83498 51986 17941 52923 48075 65786 41817 67717 46882 48066 53510 92632 03112 99775 74748 70150 74111 15717 31396 04662 50318 05022 80024 62900 42691 51787 34525 61021 64499 20040 84568 34493 87249 35878 42694 97798 50378 88831 17092 81995 72255 67629 57407 74551 56457 71765 78741 28712 01646 43914 46380 07688 40061 79995 96430 30092 42521 000 000
<i>Courtesy Gert</i>

M12 11144/10544/9344kHz 2100/2120/2140z 03 June 2023
153 153 153 1 (R2m) 2523 202 2523 202
01930 89698 88007 37298 85600 25671 09642 75539 55338 74196 73503 45762 61750 85968 26693 87244 09568 69669 00992 51282 90078 25786 54869 58083 60311 39701 00849 81657 10137 02665 31787 08223 87963 94842 73748 61581 06780 50638 25102 20670 84191 19016 55910 88884 05924 43597 24890 41396 73496 12898 90618 49276 86691 84008 68065 47928 80367 39620 47572 84212 70876 34171 20986 07497 62700 25766 93348 21696 11775 36071 55889 28611 23413 96254 43182 66406 33302 94701 51780 51410 89687 61668 81774 03290 12843 46347 69750 89183 26871 59548 42631 09845 05209 32563 11067 82896 05405 68500 27668 19978 27478 84464 65006 17779 12137 03237 16146 95005 87333 45599 30752 64871 39253 65938 00918 49951 01033 94750 12764 06385 79960 35654 89938 78645 65177 05224 28113 07382 95328 25630 09763 00876 79066 41303 16819 06719 88820 52792 00269 01755 99019 58738 29856 09134 04422 63747 26709 60995 34167 78437 16097 02780 75652 10398 05282 26681 73407 52754 53761 82405 25868 32888 67409 05921 67906 95800 21847 29549 66523 96953 32599 54751 63847 29567 46226 77583 01159 55401 85893 69047 46834 32762 46046 00321 74234 16081 85351 17123 00639 79391 40942 26353 75240 46406 29247 35430 75923 56665 05084 16206 61832 74662 000 000
<i>Courtesy Gert</i>

M14 IA MCW / ICW Short 0

May 2023:

10243	0520z 0520z	02 May 08 May	952 (607 58) = 68188 NRH	(Via SDR Japan)	HFD AB	TUE MON
12211	0500z 0500z	02 May 08 May	952 (607 58) = 68188 NRH	(Via SDR Japan)	HFD AB	TUE MON

June 2023:

No Reports

M23 O ICW

Following on from the continued activity throughout March & April, daily transmissions continued into May on 5345kHz with the schedule established from 11 April.

On Wednesday, 10 May the two '541' schedules failed to appear followed on Thursday, 11 May by the two '591' transmissions, leaving only the 'SET' schedule still active at 1404z daily.

The time slip on the transmissions daily still noted & by the first week in May, the schedules were all starting approximately a minute earlier than those shown on the chart below.

5345	1256z	15 Mar	541 541 541	QRN3 QSB3	FairSpectre	WED
5345	0800z	01 – 09 May	541 541 541	(R12m)		MON – TUE
	1135z	01 – 09 May	591 591 591	(R12m)		MON – TUE
	1230z	01 – 09 May	541 541 541	(R12m)		MON – TUE
	1405z	01 – 09 May	SET SET SET	(R30m)		MON – TUE
	1700z	01 – 09 May	591 591 591	(R12m)		MON – TUE
5345	1134z	10 May	591 591 591	(R12m)		WED
	1404z	10 May	SET SET SET	(R30m)		WED
	1659z	10 May	591 591 591	(R12m)		WED
5345	1404z	11 – 22 May	SET SET SET	(R30m)		THU – MON

	11 – 30 Apr		01 – 09 May	10 May	11 - 22 May
0800z	541		541		
1135z	591		591	591	
1230z	541		541		
1405z	SET		SET	SET	SET
1700z	591		591	591	

The hourly 'beeps' continue & were noted by Ary, (AB), on 11 June as appearing at H+58, i.e. now running two minutes early. As Ary states, it is time that they resync their clock.

Peter, (PoSW), also monitored the M23 activity & his logs & report follow;

M23 CW on 5345 kHz:- This had been noticed in early March and had been active daily for over two months although the times and content changed several times. In early May the schedule appeared to be:-

- 0800 to 0812 UTC, "541"
- 1135 to 1147 UTC, "591"
- 1230 to 1242 UTC, "541"
- 1405 to 1435 UTC, "SET"
- 1700 to 1712 UTC, "591".

Times rounded off to the nearest minute.

Things started to change in the second week of May:-

10-May-23, Wednesday:- No sign of "541" at 0800 UTC or at 1230z. "591" was heard in progress around 1139z and starting up at 1700z, well before "SET" heard in progress at around 1409z. "541" was not heard again.

The next opportunity to give some attention to M23 was on 13-May, Saturday when nothing was heard of "591" at the expected times, leaving only "SET" starting well before 1405z and ending well before 1435z.

"SET" continued to be heard for a while longer, heard in progress on 22-May-23, Monday, at 1419z, stopped at around 1434z, but there was no sign on Tuesday the 23rd - or on any day since.

"SET" had first been noted on 22-March so if this was the first appearance it ran for two months. *(Indeed it did - Thanks Peter! - Ed)*

Many thanks to AB, BR, HFD, PoSW & Spectre for the logs – With a special mention to Ary, (AB), for the extensive logs.

M76 A detailed analysis can be found in ENIGMA Newsletter 93 – May 2016.

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

M76 Logs

Early Sched

10858	0400z	10 May	HKU2 DE 17LÄ	QTC 408 35 = 26310 00584 ... 79155 02914 NNNNN =	AB	WED				
<p>HKU2 HKU2 HKU2 DE 17LÄ 17LÄ QTC 408 35 = 26310 00584 92080 25530 13481 42641 25614 36411 78601 20925 51352 56258 42238 56503 41362 17150 85131 72643 36361 9XXXX RRRRR 202XX WWWW 72350 47175 08745 527XX DDDDD 25820 90810 76770 50751 79155 02914 NNNNN =</p>										
Further messages sent:			404 58	401 24	400 32	394 40	393 40	392 39	391 39	000 22

Late Sched

10858 1650z 10 May HKU2 17LÄ QTC 409 28 = 26310 15084 ... 49991 5015X NNNNN = AB WED

Followed by several messages

Morse Stations - Not Number Related

M51 XIX

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 - 1213z	22 May	Lundi-Leçon	21-1/1 Codé	21-1/2 Clair,	21-1/3 Codé,	21-1/4 Clair (420 grps/hr)	BR	MON
1130 - 1201z	23 May	Mardi-Leçon	22-2/1 Codé	22-2/2 Clair,	22-2/3 Codé,	22-2/4 Clair (600 grps/hr)	BR	TUE
1130 - 1155z	25 May	Jeudi- Leçon	24-2/1 Codé,	24-2/2 Clair,	24-2/3 Codé,	24-2/4 Clair (840 grps/hr)	BR	THU
1130 - 1203z	26 May	Vendredi- Leçon	25-2/1 Codé,	25-2/2 Clair,	25-2/3 Codé,	25-2/4 Clair (960 grps/hr)	BR	FRI

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

No Reports

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).

4123	5024	5466	7524	8001	9112	10124	11161	12466	16445
4398	5028	5498	7678	8011	9123	10231	11145		
4567	5030	5556	7955	8013	9231	10245			
4646	5041	5561		8063		10255			
4675	5084	5576		8097		10310			
4721	5124	5619		8133		10331			
4778	5145	5645		8141		10347			
4814	5201	5678		8248		10519			
4910	5205	5679		8271		10568			
4966	5233	5681		8338		10587			
	5266	5692		8514		10712			
	5313	5732		8737					
	5352	5739							
	5422	5758							
		5791							

Chart of M89 Freq & Call signs heard in May / Jun 2023 **New Scheds shown in Bold Type** **From logs submitted from JPL**

<u>Freq in KHz</u>	<u>Call Slip</u>
3565//4718	V BSA5 (x3) DE TP4C (x2)
4720//5150	V WNF(x3) DE FXM (x2) (R5) (Hand sent)
4726	V QPL(x3) DE 4WQ (x2) (R5) QSA ? K
4860// 6840	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K
7620//8350	V WNF(x3) DE FXM (x2) (R5) (Hand Sent)

Courtesy JPL

With one of the periodic exercises being carried out during this monitoring period, Jean-Paul, (JPL), has managed to log much extra activity, some of which is listed below;

4123	1751z	23 Jun	IEC BT 862. AR K NR 015 CK 91 60 0623 2310 RMKS 137.. TO 91912 BT	(Exercise related)	(Remote tuner Irkutsk)	JPL	FRI
4646	M3TP	1233z (IP) 03 Jun	QSA 2 K IEC IEC BT BT JYFT K K KAV5 DE M3TP K IEC BT ZFVD AR K	(Exercise related)	(Remote tuner Japan)	JPL	SAT
				DE REP9 QSA 2 K (Appears to be outstations – Control station N/H on this frequency)			

4721		1201z (IP) 01 Jun	NR 1064/EX 2000 BT	VBS/CK0 AR	(Remote tuner Japan)	JPL	THU
5024		1248z (IP) 02 Jun	NR 0050 CK 82 42 0602 2020 RMKS 1733258 TO 1733286 01W BT		(Remote South Korea)	JPL	FRI
5028		1125z (IP) 01 Jun	NR 8031 K	CK 85 K (Other station N/H on this frequency)	(Remote tuner Hong Kong)	JPL	THU
5041		1241z (IP) 03 Jun	NR 0176 CK 81 32 0603 2020 RMKS 1733569 TO 1733567 K		(Remote tuner Japan)	JPL	SAT
		1257z (IP) 03 Jun	NR 0177 CK 81 61 0603 2020 RMKS 1733569 TO 1733567 K		(Remote tuner Japan)	JPL	SAT
5124		1357z (IP) 03 Jun	NR0540/EX 2227 BT	MIN7/QON8 AR	(Remote tuner Japan)	JPL	SAT
			NR 0634/EX 2200 BT	M5C0/W8J7 AR			
			NR 0504/EX 2203 BT	A0B7/D5S8 AR			
			NR 0505/EX 2206 BT	C4K4/Q8W7 AR			
			NR 0508/EX 2209 BT	Q8Y2/W7C0 AR			
			NR 0514/EX 2212 BT	G4J5/MOE9 AR			
			NR 0520/EX 2215 BT	W0D8/Z0T3 AR			
			NR 0532/EX 2224 BT	GUV5/B2Q7 AR			
			NR 0624/EX 2200 BT	HSC0/W8J. AR			
5145	LIX7	1103z (IP) 01 Jun	Calls to various outstations from various call signs		(Remote tuner South Korea)	JPL	THU
			H52K DE LIX7 K	8LFN DE LIX7 K 7LSK DE LIX7 K			
			IW9D DE LIX7 K	P2DL DE 9YWK N63G DE LIX7 K			
			DP2DL DE RM4D	JKWJ DE LIX7 K			
			NR 0051 CK 81 49 0601 1900 RMKS CQ BT		(Exercise related)		
5201		1443z (IP) 09 Jun	NR 7544 CK 91 14 0609 2240 RMKS 2565562 TO 2565556 BT		(Remote tuner Irkutsk)	JPL	FRI
5205		1301z (IP) 03 Jun	NR 613. CK 61 17 0603 2100 RMKS 1879484 TO 1879489 K		(Remote tuner Japan)	JPL	SAT
			NR 568 CK 85 36 0603 2020 RMKS 1733284 TO 1733281 BT				
5233		1207z (IP) 01 Jun	NR 1166/EX 2006 BT	XT3./FM4J	(Remote tuner Japan)	JPL	THU
5266		1210z (IP) 01 Jun	MBY9 MBY9 VVV		(Remote tuner Japan)	JPL	THU
5422		1303z (IP) 02 Jun	MSG / 9051 CK 8165 0602 2020 RMKS 1733098 TO 1733092 K		(Remote tuner South Korea)	JPL	FRI
5561		1213z (IP) 01 Jun	NR 1068/EX 2012 BT	I9F5/PJE6 AR	(Remote tuner Japan)	JPL	THU
5576		1216z (IP) 01 Jun	NR 1101/EX 2020 BT	FG .9/GV70 AR	(Remote tuner Japan)	JPL	THU
5678		1315z (IP) 02 Jun	RMKS 3661573 TO 3661575		(Remote tuner South Korea)	JPL	FRI
5679		1318z (IP) 03 Jun	NR 4137 CK 61 42 0603 2010 RMKS .72.0 TO ...	(Weak copy)	(Remote tuner Japan)	JPL	SAT
5692		1219z (IP) 01 Jun	FNR 178/EX 2021 BT	OFH/BW3 AR	(Remote tuner Japan)	JPL	THU
5732		1325z (IP) 02 Jun	NR 17336726 AR K		(Remote tuner South Korea)	JPL	FRI
			NR 7052 CK 81 73 0602 2100 RMKS 1733672 TO 1733670 K				
5739		1323z (IP) 03 Jun	NR 9071 CK 81 49 0603 2110 RMKS 0733596 TO 1733568 K		(Remote tuner Japan)	JPL	SAT
5758		1325z (IP) 02 Jun	NR 3084 CK 81 72 0602 2100 RMKS 54728079 TO 5472070 BT		(Remote tuner South Korea)	JPL	FRI
7678		1845z (IP) 09 Jun	RMKS 1735828 TO 1735820 BT	5/H.1 K	(Remote tuner Dimapur)	JPL	FRI
			NR 2244/EX 24.. M 1735828 TO 1735820 BT	.WF5/I9.1 AR K			
8063		1854z (IP) 09 Jun	NR 6251/EX 0254 RMKS 2735569 TO 275566 BT		(Remote tuner South Korea)	JPL	FRI
			P0K5/R8C K				
8271		1457z (IP) 09 Jun	RMKS 43..49. TO 4365492 BT		(Remote tuner Irkutsk)	JPL	FRI
10231		1230z (IP) 13 Jun	NR 3..54 CK 61 49 0613 2.20 RMKS 1528949 TO 1528954 BT		(Remote tuner South Korea)	JPL	TUE
10245		1220z (IP) 13 Jun	NR 1923/EX 2024	DK/5K3	(Remote tuner South Korea)	JPL	TUE
10255		1227z (IP) 13 Jun	NR 1166/EX 2027 BT	X2P1/D4Y3 AR	(Remote tuner South Korea)	JPL	TUE
10331		1233z (IP) 13 Jun	R IEC BT 5EP2 AR K (Exercise related)		(Remote tuner South Korea)	JPL	TUE
10341		1206z (IP) 13 Jun	NR 1159/EX 2006 BT	G5D8/L9H0 AR	(Remote tuner South Korea)	JPL	TUE
10347	5MKG	1238z (IP) 13 Jun	KBCT DE 5MKG R QSA 1 QSA ? K		(Remote tuner South Korea)	JPL	TUE
			IEC BT T1GF AR K (Exercise related)				
			NR 29658908 K				
10519		1210z (IP) 13 Jun	NR 1160/EX 2009 BT	IJB8/F9G4 AR	(Remote tuner South Korea)	JPL	TUE
10568		1246z (IP) 13 Jun	NR 1210 CK 61 65 0613 2030 RMKS CQ BT		(Remote tuner South Korea)	JPL	TUE
10587	BQ1Z	1247z (IP) 13 Jun	NR 1167/EX 2047 RMKS CQ BT	G3H8/D4N5 AR	(Remote tuner South Korea)	JPL	TUE
			VV LS2F DE BQ1Z K				
			VV 8GAQ DE BQ1Z K				
			VV BLRC DE BQ1Z K				

10712	FGHB	1253z (IP) 13 Jun	VV MNHV DE FGHK K VV VNBB DE FGHK K	(Remote tuner South Korea)	JPL	TUE
16455		1520z (IP) 09 Jun	NR 3389 CK 66 18 0609 2240 RMKS 4559052 TO 4559051 BT	(Remote tuner Irkutsk)	JPL	FRI

<p>M89 4721kHz 1201 (IP) - 1203z 01 June 2023</p> <p>FFF NR 1064/EX 2000 BT (IP – 1201z) VBS/AK8 AR NR 1064/EX 2000 BT VBS/CK0 AR NR 1064/EX 2000 BT VBS/CK0 AR QSY 04 QSY 04 QSY 04 VVV (1203z)</p> <p>M89 5561kHz 1213 (IP) - 1214z 01 June 2023</p> <p>I9F5/PJE6 AR (IP – 1213z) NR 1068/EX 2012 BT I9F5/PJE6 AR NR 1068/EX 2012 BT I9F5/PJE6 AR QSY LW QSY LW VV (1214z)</p> <p>M89 8063kHz 1845 (IP) - 1857z 09 June 2023</p> <p>FFF NR 6251/EX 0254 RMKS 2735569 TO 275566 BT (IP 1854z) P0K5/R8C K NR 6251/EX 0254 RMKS 2735569 TO 2735560 BT POOKSE/R8C K FF NR 6251/EX 0254 RMKS 2735569 TO 2735560 BT P0K5/R8C AR K (1857z)</p> <p style="text-align: right;"><i>Courtesy JPL</i></p>	<p>M89 5732kHz 1325 (IP) - 1327z 02 June 2023</p> <p>HR WK NR 17536706 K (IP – 1325z) WK NR 17336726 AR K R K (Both stations on this frequency) NHR WK NR 17336726 K NR HR WK NR 7G NR 7052 CK 81 73 0602 2100 RMKS 1733672 TO 1733670 K (1327z)</p> <p>R GA K ... D364 36.7 54AT 653D 36AN 7A53 (Cont'd – 1327z)</p> <p>M89 10587kHz 1247 (IP) - 1250z 13Jun2 2023</p> <p>NR 1167/EX 2047 RMKS CQ BT (IP – 1247z) G3H8/D4N5 AR VV LS2F DE BQ1Z K (1248z) R AS VV 8GAQ DE BQ1Z K R AS VV BLRC DE BQ1Z K (Cont'd – Control station – 1250z)</p> <p style="text-align: right;"><i>Courtesy JPL</i></p>
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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	Believe this to be new Round Slip and freq for YHXD DE SAQC			
	1751z	17 May V XP5B (x3) DE S2DJ (x2)	(Remote tuner Novosibirsk)	JPL	WED
	1241z	02 Jun V XP5B (x3) DE S2DJ (x2)	(Remote tuner Novosibirsk)	JPL	FRI
	1730z	02 Jun V XP5B (x3) DE S2DJ (x2)	(Remote tuner Novosibirsk)	JPL	FRI
4243//NRH	Message number differs from current XSV70 and XSV85 message numbers.				
4243//9054	Message number differs from current XSV70 and XSV85 message numbers.				
	1242 (IP) - 1153z	08 May NR 059 CK 26 35 0508 1522 BT NR 16 CK 126 35 0508 1546 BT	(Remote tuner Taiwan)	JPL	MON
	1145 (IP) - 1156z	01 Jun NR 008 CK 24 35 0601 1531 BT NR 068 CK 22 35 0601 1611 BT NR 02 CK 154 35 0601 1612 BT	(Remote tuner Taiwan)	JPL	THU
	1143 (IP) - 1149z	13 Jun NR 26 CK 110 35 0613 1521 BT	(Remote tuner South Korea)	JPL	TUE
4283//9153	Call sign XSV70				
	1327 - 1329z	03 Jun NR 474 CK 185 35 0603 1542	(Remote tuner Japan)	JPL	SAT
4364//8073	Call Sign XSV85				
	1130 - 1141z	08 May NR 0361 CK 176 35 0508 1607 BT	(Remote tuner Taiwan)	JPL	MON
	1132 - 1141z	01 Jun NR 0421 CK 046 35 0601 1529 BT NR 0422 CK 184 35 0601 1601 BT	(Remote tuner Hong Kong)	JPL	THU
	1130 - 1142z	13 Jun NR 0446 CK 282 35 0613 1606 BT	(Remote tuner Hong Kong)	JPL	TUE
5651//NRH	Call sign S2DJ				
	1744z	03 Jun V XP5B (x3) DE S2DJ (x2) (IP - Cont'd)	(Remote tuner Japan)	JPL	SAT

5651//12039	Call sign S2DJ 1142z	08 May	V XP5B (x3) DE S2DJ (x2) (IP - Cont'd)	(Remote tuner Novosibirsk)	JPL	MON
6166	1751 (IP) – 1813z	17 May	NR 1.9/CCK CK 81 63 0518 0200 RMKS 3782 TO 9537 BT	(Remote Novosibirsk)	JPL	WED
7517	Call sign S2DJ	12 May	V XP5B (x3) DE S2DJ (x2) (IP – cont'd)		RB	FRI
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

M95	4243//9054kHz	1145z (IP)	01 June 2023
(In Progress at 1145z) In Chinese digital 4+4 QPSK 75/3000 LSB 1145z Switched to CW Hand sent 1140z			
VVV HR 7G TO YR PSE CY		(1150z)	
NR 008 CK 24 35 0601 1531 BT		(1150z)	
5AA UTT TTA 3U6 3A4 5T7 5TD 5TN 5AA 75U 35A N3D 353 DN7 36.4 TN4 453 DA3 4 TN3 D4TA44			
AR		(1152z)	
AR 7G AGN			
NR 008 CK 24 35 0601 1531 BT		(Repeats message – 1152z)	
A HR MSG GA			
NR 068 CK 22 35 0601 1611 BT			
UT5 TTA 3U6 3A4 TTA TTU TT3 773 353 N3D			
35U 4AA 345 N3D 4U6		(Cont'd – 1153z)	
AR 7G AGN			
NR 068 CK 22 35 0601 1611 BT		(Repeats message – 1154z)	
AR AHR MSG			
NR 02 CK 154 35 0601 1612 BT			
UTU TTA 3U6 3A4 TTU 773 353		(Cont'd – 1156z)	
M95	6166kHz	1751z (IP)	17 May 2023
R GA (In Progress at 1806z) (Missed QSL time – 1812z)			
MSG NR 1.9/CCK CK 81 63 0518 0200 RMKS 3782 TO 9537 BT			
53TA 564U DA6. 4TA3 U.6T D56N U536 A5AU TTTT TTTT K (1813z)			
R 11W BT 7U3A 7DUN 57DN U64D (Cont'd – 1813z)			
<i>Courtesy JPL</i>			

M95	4364//8073kHz	1132z (IP)	01 June 2023
BNGC DE XSV85			
(In Progress at 1132z) In Chinese digital 4+4 QPSK 75/3000 USB vice LSB 1132z Switched to CW Hand sent 1137z			
V BNGC (x3) DE XSV85 (x2)		(Cont'd – 1137z)	
HR MSGS GA PSE CY		(1140z)	
NR 0421 CK 046 35 0601 1529 BT			
TT6 N5U TTA N53 TAD N54 7TT TA3 746 D4 6T6 6TA TTU 6T4 6AT TA4 6A4 U4N 6A5 U6U 6A6 .. 6A7 TUD 6U4 3UT 74D 6UU TAA N34 TA3 635 4T3 DAU D3T TU4 DAA D5D NU7 DD3 6A. 77 6A5 3TD 6T7 AR A HR MSG			
NR 0422 CK 184 35 0601 1601 BT			
TTA 3U6 3AN 3U7 TAU 773 353 4AA NN3 445 3D3 34T N3D 3DU 4DT (Contd - 1141z)			
M95	4364//8073kHz	1130z	08 June 2023
BNGC DE XSV85			
Into Voice Chinese Female 1130z Switched to Chinese digital 4+4 QPSK 75/3000 USB vice LSB 1132z Switched to CW Hand sent 1138z			
V BNGC (x3) DE XSV85 (x2)		(Cont'd – 1138z)	
HR MSG GA PSE CY		(1140z)	
NR 0361 CK 176 35 0508 1607 BT			
TTD 3U6 3AN 3U7 TAU 773 353 4T3 NN3 436		(Cont'd – 1141z)	
<i>Courtesy JPL</i>			

Marker Beacons (MX MXI)

4031	01 May	MX	CW Beacon "V"		RB	MON
5153.7	01 May	MXI	CW Beacon "D" Sevastopol		RB	MON
5153.8	01 May	MXI	CW Beacon "P" Kaliningrad		RB	MON
5153.9	02 May	MXI	CW Beacon "S" Severomorsk		RB	TUE
5154.1	01 May	MXI	CW Beacon "A" Astrakhan		RB	MON
5156.7	01 May	MX	CW Beacon "L" St Petersburg		RB	MON
7039.4	01 May	MX	CW Beacon "M" Magadan		RB	MON
7508.7	20 May	MXI	CW Beacon "D" Sevastopol		RB	SAT
7508.8	01 May	MXI	CW Beacon "P" Kaliningrad		RB	MON
7508.9	01 May	MXI	CW Beacon "S" Severomorsk		RB	MON
7509.1	01 May	MXI	CW Beacon "A" Astrakhan		RB	MON
8494.7	01 May	MXI	CW Beacon "D" Sevastopol		RB	MON
8494.9	01 May	MXI	CW Beacon "S" Severomorsk		RB	MON
8495	10 May	MXI	CW Beacon "C" Moscow		RB	MON
8495.1	01 May	MXI	CW Beacon "A" Astrakhan		RB	MON

8497.8	01 May	MX	CW	Beacon	"L"	St Petersburg		RB	MAY
10871.7	01 May	MXI	CW	Beacon	"D"	Sevastopol		RB	MON
10871.9	01 May	MXI	CW	Beacon	"S"	Severomorsk		RB	MON
10872	03 May	MXI	CW	Beacon	"C"	Moscow	Irregular	RB	WED
10872.1	01 May	MXI	CW	Beacon	"A"	Astrakhan		RB	MON
10872.4	01 May	MXI	CW	Beacon	"M"	Magadan		AB	MON
13527.7	01 May	MXI	CW	Beacon	"D"	Sevastopol		RB	MON
	19 Jun	MXI	CW	Beacon	"D"	Sevastopol		HFD	MON
13527.9	01 May	MXI	CW	Beacon	"S"	Severomorsk		RB	MON
	19 Jun	MXI	CW	Beacon	"S"	Severomorsk		HFD	MON
13528.1	01 May	MXI	CW	Beacon	"A"	Astrakhan		RB	MON
13528.4	07 May	MXI	CW	Beacon	"M"	Astrakhan		RB	SUN
16331.7	01 May	MXI	CW	Beacon	"D"	Sevastopol		RB	MON
16331.9	01 May	MXI	CW	Beacon	"S"	Severomorsk		RB	MON
16332.0	20 May	MXI	CW	Beacon	"C"	Moscow		RB	SAT
16332.1	01 May	MXI	CW	Beacon	"A"	Astrakhan		BR	MON
16332.3	03 May	MXI	CW	Beacon	"K"			RB	WED

Here are Robert's, (RB), beacon logs in full;

May 2022:

The usual suspects so far this month and a few observations.

After 26 days absence Osnova -98 has returned to 4183/4184 kHz. The dits are slightly shorter and closer spaced, suggesting some modifications occurred during the extended downtime. The ailing keying unit of transmitter Moscow/C on 10872 kHz has completely broken down. Poor keying has plagued this transmitter for the last six weeks, apparently without any desire to correct it. One wonders if it is being reported but not acted on, or if there is nobody listening at all (except us of course!).

MX/MXI beacons remained fairly static this month. Moscow/C on 10872 kHz finally off the air after several weeks of faulty keying. 4183 kHz Osnova-98/T returned for 12 days after a lengthy absence but has since disappeared again.

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- 01/5/23 *4031 kHz V. *4183/4184 kHz T/Osнова-98 absent. * 5153 kHz cluster: D,P,A. * 5156.8 KHz L. *7039.4 kHz: M * 7508 kHz Cluster: P,S,A. *8495 kHz cluster: D,S,C,A. *8497.8 kHz: L. * 10871 kHz Cluster: D,S,A,M. 'C' absent. * 13527 kHz cluster: D,S,A. *16332 kHz: D,S,A
- 02/5/23 *4031 kHz V. *4183/4184 kHz T/Osнова-98 absent. * 5153 kHz cluster: D,P,S,A. * 5156.8 KHz L. *7039.4 kHz: M * 7508 kHz Cluster: P,S,A. *8495 kHz cluster: D,S,C,A. *8497.8 kHz: L. * 10871 kHz Cluster: D,S,A. * 13527 kHz cluster: D,S,A. *16332 kHz: D,S.
- 03/5/23 *4031 kHz V. *4183/4184 kHz T/Osнова-98 absent. * 5153 kHz cluster: D,P,S. * 5156.8 KHz L. *7039.4 kHz: M * 7508 kHz Cluster: P,S. *8495 kHz cluster: D,S,C,A. *8497.8 kHz: L. * 10871 kHz Cluster: D,S,C,A,M. Irregular keying on 'C'. * 13527 kHz cluster: D,S,A. *16332 kHz: D,S,K (K now keys constantly rather than in groups of four).
- 04/5/23 *4031 kHz V. *4183/4184 kHz T/Osнова-98 absent. * 5153 kHz cluster: D,P,S,A. * 5156.8 KHz L. *7039.4 kHz: M * 7508 kHz Cluster: P,S. *8495 kHz cluster: D,S,C,A. *8497.8 kHz: L. * 10871 kHz Cluster: D,S,C,A. Irregular keying on 'C'. * 13527 kHz cluster: D,A. *16332 kHz: S,C,A.
- 05/5/23 *4031 kHz V. *4183/4184 kHz T/Osнова-98 absent. * 5153 kHz cluster: D,S. * 5156.8 KHz L. *7039.4 kHz: M * 7508 kHz Cluster: P,S,A. *8495 kHz cluster: D,S,C,A. *8497.8 kHz: L. * 10871 kHz Cluster: D,S,C,A. Irregular keying on 'C'. * 13527 kHz cluster: D,S,A. *16332 kHz: S,A,K.
- 06/5/23 *4031 kHz V. *4183/4184 kHz T/Osнова-98 absent. * 5153 kHz cluster: D,S,A. * 5156.8 KHz L (keying faster than usual). *7039.4 kHz: M * 7508 kHz Cluster: P,S,A. *8495 kHz cluster: D,S,C,A. *8497.8 kHz: L. * 10871 kHz Cluster: D,S,C,A. Irregular keying on 'C'. * 13527 kHz cluster: D,A. *16332 kHz: S.
- 07/5/23 *4031 kHz V. *4183/4184 kHz T/Osнова-98 absent. * 5153 kHz cluster: S,A. * 5156.8 KHz L (keying faster than usual). * 7508 kHz Cluster: P,S,A. *8495 kHz cluster: D,S,C,A. *8497.8 kHz: L. * 10871 kHz Cluster: D,S,C,A. Irregular keying on 'C'. * 13527 kHz cluster: S,A,M. *16332 kHz: S,A,K.
- 08/5/23 *4031 kHz V. *4183/4184 kHz T/Osнова-98 absent. * 5153 kHz cluster: D,P. * 5156.8 KHz L (rapid keying). * 7508 kHz Cluster: P,A. *8495 kHz cluster: D,C,A. *8497.8 kHz: L (rapid keying). * 10871 kHz Cluster: D,C,A. Irregular keying on 'C'. * 13527 kHz cluster: D,A. *16332 kHz: D,S,A.
- 09/5/23 *4031 kHz V. *4183/4184 kHz T/Osнова-98 absent. * 5153 kHz cluster: D,P. * 5156.8 KHz L (rapid keying). * 7508 kHz Cluster: P,A. *8495 kHz cluster: D,C,A. *8497.8 kHz: L (rapid keying). * 10871 kHz Cluster: D,S,C,A. Irregular keying on 'C'. * 13527 kHz cluster: D,A. *16332 kHz: S,C,A.
- 10/5/23 *4031 kHz V. *4183/4184 kHz T/Osнова-98 returns with shorter dits. * 5153 kHz cluster: D,A. * 5156.8 KHz L (rapid keying). * 7508 kHz Cluster: P,A. *8495 kHz cluster: D,C,A. *8497.8 kHz: L (rapid keying). * 10871 kHz Cluster: D,C,A. Irregular keying on 'C'. * 13527 kHz cluster: D,A. *16332 kHz: C.
- 11/5/23 No observations.
- 12/5/23 *4031 kHz V not heard. *4183/4184 kHz T/Osнова-98. * 5153 kHz cluster: D,A. * 5156.8 KHz L (rapid keying). * 7508 kHz Cluster: P. *8495 kHz cluster: D,S,C,A. *8497.8 kHz: L (rapid keying). * 10871 kHz Cluster: D,S,C,A. Irregular keying on 'C'. * 13527 kHz cluster: D,A. *16332 kHz: S. Extra: M95 round slip on 7517 kHz at 22:00 UTC "DE S2DJ"
- 13/5/23 No observations
- 14/5/23 *4031 kHz V. *4183/4184 kHz T/Osнова-98. * 5153 kHz cluster: D,A. * 5156.8 KHz L (rapid keying). * 7508 kHz Cluster: D,S,A. *8495 kHz cluster: P,C. *8497.8 kHz: L (rapid keying). * 10871 kHz Cluster: D,S,C,A. Irregular keying on 'C'. * 13527 kHz cluster: D,A. *16332 kHz: S,C,A.
- 15/5/23 No observations
- 16/5/23 *4031 kHz V. *4183/4184 kHz T/Osнова-98. * 5153 kHz cluster: D,S,A. * 5156.8 KHz L (rapid keying). * 7508 kHz Cluster: P,S,A. *8495 kHz cluster: D,S,C,A. *8497.8 kHz: L (rapid keying). * 10871 kHz Cluster: D,S,C,A. Irregular keying on 'C'. * 13527 kHz cluster: D,S,A. *16332 kHz: S,A.

17/05/23 No observations

16/5/23 *4031 kHz V. *4183/4184 kHz T/Osnova-98. * 5153 kHz cluster: D,S,A. * 5156.8 KHz L (rapid keying). * 7508 kHz Cluster: P,S. *8495 kHz cluster: S,C. *8497.8 kHz: L (rapid keying). * 10871 kHz Cluster: D,S,C,A. Almost continuous carrier on 'C'. * 13527 kHz cluster: D,S,A. *16332 kHz: D,S,A.
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9/5/23 No observations.

20/5/23 *4031 kHz V. *4183/4184 kHz T/Osnova-98. * 5153 kHz cluster: D,A. * 5156.8 KHz L absent. * 7508 kHz Cluster: D,P,S,A. *8495 kHz cluster: C. *8497.8 kHz: L absent. * 10871 kHz Cluster: D,S,C,A. Random keying on 'C'. * 13527 kHz cluster: D,S,A. *16332 kHz: D,S,C,A.

21/5/23 *4031 kHz V. *4183/4184 kHz T/Osnova-98. * 5153 kHz cluster: D,A. * 5156.8 KHz L absent. * 7508 kHz Cluster: P,S,A. *8495 kHz cluster: C. *8497.8 kHz: L absent. * 10871 kHz Cluster: D,S,C,A. Random keying on 'C'. * 13527 kHz cluster: D,S,A. *16332 kHz: D,S,C,A.

22/5 No observations.

23/5/23 *4031 kHz V. *4183/4184 kHz T/Osnova-98. * 5153 kHz cluster: D,A. * 5156.8 KHz L absent. * 7508 kHz Cluster: D,P,S,A. *8495 kHz cluster: C. *8497.8 kHz: L absent. * 10871 kHz Cluster: D,S,A. No signal from 'C'. * 13527 kHz cluster: D,S,A. *16332 kHz: S,C,A.

24/5/23 *4031 kHz V. *4183/4184 kHz T/Osnova-98. * 5153 kHz cluster: D,A. * 5156.8 KHz L absent. * 7508 kHz Cluster: D,P,S,A. *8495 kHz cluster: C. *8497.8 kHz: L absent. * 10871 kHz Cluster: D,S,A. No signal from 'C'. * 13527 kHz cluster: D,S,A. *16332 kHz: S,C,A.

25/5/23 *4031 kHz V. *4183/4184 kHz T/Osnova-98. * 5153 kHz cluster: D,A. * 5156.8 KHz L absent. * 7508 kHz Cluster: D,P,S,A. *8495 kHz cluster: C. *8497.8 kHz: L absent. * 10871 kHz Cluster: D,S,A. No signal from 'C'. * 13527 kHz cluster: D,A. *16332 kHz: S,A.

26/5/23 *4031 kHz V. *4183/4184 kHz T/Osnova-98. * 5153 kHz cluster: D,S,A. * 5156.8 KHz L absent. * 7508 kHz Cluster: D,P,S,A. *8495 kHz cluster: D,S,C,A. *8497.8 kHz: L absent. * 10871 kHz Cluster: D,S,A. No signal from 'C'. * 13527 kHz cluster: D,S,A. *16332 kHz: D,S,C,A.

28/5/23 *4031 kHz V. *4183/4184 kHz T/Osnova-98. * 5153 kHz cluster: D,A. * 5156.8 KHz L absent. * 7508 kHz Cluster: D,P,S,A. *8495 kHz cluster: D,S,C,A. *8497.8 kHz: L absent. * 10871 kHz Cluster: D,S,A. No signal from 'C'. * 13527 kHz cluster: D,S,A. *16332 kHz: D,S,C,A.

29/5/23 *4031 kHz V. *4183/4184 kHz T/Osnova-98 absent. * 5153 kHz cluster: D,S,A. * 5156.8 KHz L returns. * 7508 kHz Cluster: D,S,A. *8495 kHz cluster: S,C. *8497.8 kHz: L returns. * 10871 kHz Cluster: D,S,A. No signal from 'C'. * 13527 kHz cluster: S,C,A. *16332 kHz: D,S,A.

30/5 No Observations

31/5/23 *4031 kHz V. *4183/4184 kHz T/Osnova-98 absent. * 5153 kHz cluster: D,A. * 5156.8 KHz L. * 7508 kHz Cluster: D,P,S,A. *8495 kHz cluster: C. *8497.8 kHz: C. * 10871 kHz Cluster: S,A. * 13527 kHz cluster: D,S. *16332 kHz: D,S,A.

All logs from RB monitored from UK.

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

Voice, Polytone, Tones, Hybrids and FSK

E06

MISSED LOG from The Spectre 3000

E06 9073kHz 04/03/2023 1330z [480 561 55 78430 ... 43347 561 44 00000] 1342z Fair QRN3 QSB4 SAT Spectre
11/03/2023 1330z [480 615 42 70589 ... 64582 615 42 00000] 1342z Strong QRN2 QSB2 SAT Spectre
18/03/2023 1330z [480 216 45 26968 ... 14422 216 45 00000] 1343z Fair QRN3 QSB3 SAT Spectre
25/03/2023 1330z [480 672 41 37428 ... 68700 672 41 00000] 1341z Fair QRN3 QSB3 SAT Spectre

10212kHz 05/03/2023 1000z [480 561 44 78430 ... 43347 561 44 00000] 1012z Strong QRN2 QSB2 SUN Spectre
12/03/2023 1000z [480 615 42 70589 ... 64582 615 42 00000] 1012z Fair QRN3 QSB2 SUN Spectre
19/03/2023 1000z [480 216 45 26968 ... 14422 216 45 00000] 1013z Fair QRN3 QSB3 SUN Spectre
26/03/2023 1000z [480 672 41 37428 ... 68700 672 41 00000] 1011z Fair QRN3 QSB3 SUN Spectre

10755kHz 04/03/2023 1300z [480 561 44 78430 ... 43347 561 44 00000] 1312z Fair QRN3 QSB4 SAT Spectre
11/03/2023 1300z [480 615 42 70589 ... 64582 615 42 00000] 1312z Fair QRN3 QSB4 SAT Spectre
18/03/2023 1300z [480 216 45 26968 ... 14422 216 45 00000] 1313z Fair QRN3 QSB3 SAT Spectre
25/03/2023 1300z [480 672 41 37428 ... 68700 672 41 00000] 1311z Fair QRN3 QSB3 SAT Spectre

E06 10755/9073kHz 11/03/2023 1300/1330z Transcript:

480 615 42
70589 82923 26824 89765 58148 80068 26130 49585 12374 52666
98472 56009 61612 32882 66922 09444 32084 68156 93716 75140
80939 82960 24283 85906 67011 92711 84220 02044 85796 79127
01365 91883 34722 11922 39634 27120 73397 67790 68444 71952
26964 64582 615 42 00000 *Courtesy Spectre*

12093kHz 05/03/2023 0930z [480 561 44 78430 ... 43347 561 44 00000] 0942z Strong QRN2 QSB2 SUN Spectre
 12/03/2023 0930z [480 615 42 70589 ... 64582 615 42 00000] 0942z Fair QRN3 QSB3 SUN Spectre
 19/03/2023 0930z [480 216 45 26968 ... 14422 216 45 00000] 0943z Fair QRN3 QSB3 SUN Spectre
 26/03/2023 0930z [480 672 41 37428 ... 68700 672 41 00000] 0941z Fair QRN3 QSB3 SUN Spectre

E06 12093/10212kHz 19/03/2023 0930/1000z Transcript:

480 216 45
 26968 41395 63128 96786 40981 20337 35927 48027 34648 30416
 98984 84605 62433 92695 18405 48811 46057 69549 98345 46084
 51275 56631 32823 01662 61147 39116 81816 88102 52005 49441
 82278 69397 10380 76271 14863 88731 73774 73536 63766 95243
 28064 45881 72465 94685 14422 216 45 00000 *Courtesy Spectre*

E06 12093/10212kHz 26/03/2023 0930/1000z Transcript:

480 672 41
 37428 93523 64082 66656 82322 41345 47287 45244 79990 55125
 53932 84261 81065 15116 11647 59750 38171 67320 81254 14907
 93502 03509 36186 95310 79960 07326 52160 18011 51109 63456
 71343 84626 12319 77855 15874 69732 20702 50068 21427 56804
 68700 672 41 00000 *Courtesy Spectre*

E06b

E06b 16315kHz 22/03/2023 1300z [695 29185 348 127 20429 ... 77745 348 127 00000] 1325z Strong QRN2 QSB2 WED Spectre

E06b 16315kHz 22/03/2023 1300z Transcript:

695 29185 348 127
 20429 61585 10251 07453 12035 85937 07107 79768 19128 83717
 04136 75027 69015 39270 49080 84291 95827 47894 76527 93732
 83487 98439 36836 58315 68219 61804 89893 79630 42090 84807
 45876 61491 49681 62528 05207 74809 30506 79053 78960 20103
 70286 40725 09610 51591 85460 06739 34517 13904 12824 62657
 94205 69290 09637 19390 42892 63671 73130 47185 81515 35184
 52786 31431 24641 49618 89178 40560 53475 13029 93912 75094
 75281 56487 29306 34740 95276 75946 49485 69505 61858 65912
 23852 05619 76592 48038 42574 09054 80412 51565 56869 26373
 29180 82471 84310 90840 92373 24063 23139 08790 10935 86248
 86475 76238 58156 75214 35379 93752 52460 94723 19529 85236
 13292 74746 47861 10209 74929 43952 09020 85130 23912 36128
 49297 58725 58435 96232 91593 21950 77745 348 127 00000
Courtesy Spectre

Now onto current Logs:

E06 May/June log:

Monday (repeats Tuesday)	0210z	11557kHz	0310z	13803kHz	(frequencies may vary slightly)
19/06 '537' 619 44 78156.....etc	via KiwiSDR J	(Thanks hfd)			
Thursday (repeats Friday)	0300z	14932kHz	0400z	12212kHz	(frequencies may vary slightly)
01/06 '361' 742 38 17778.....etc	(Thanks hfd)				
First/Third Thursday (repeats Friday)	0500z	14565kHz	0600z	16125kHz	
04/05 '460' 928 51 96115 54483 15684 27631 37512 65622 62793 73258 81272 88009 21059 38343 85924 59658 82486 67546 73027 54513 22240 38914 18947 59785 79082 34806 53204 86980 04268 55126 68462 40058 96084 58766 71466 89153 62223 44221 29856 23312 77173 05290 94442 80650 26814 22821 01673 79413 57416 78427 85950 98331 71209 928 51 00000					
18/05 '460' 813 59 10885 95145 29425 05186 28195 01216 65860 60278 80639 10346 56133 85036 22862 70936 93095 72991 43878 09875 95236 11880 33816 09992 12734 07638 72625 97392 82815 54977 51709 93322 07879 21728 64394 10284 54806 39141 26185 97071 98896 15333 10750 62425 60876 14067 12557 31983 10407 66045 72112 18216 34535 04919 24736 08051 94524 45186 58806 97843 19503 813 59 00000					
01/06 '328' 495 60 56207.....etc	0500z	13985kHz	0600z	15830kHz	(Thanks hfd)
15/06 '328' 671 50 79781 59214 15604 29734 66506 32798 58600 96563 42293 31308 07146 09815 13817 78438 06258 02264 58450 03303 87807 39780 13142 03612 80153 38260 02854 06597 06554 24411 88239 26142 64524 01316 37242 39531 03349 04734 50305 32267 41924 61048 93892 84393 94114 82818 21986 96757 93819 62866 90268 80653 671 50 00000					
Saturday	1300z	13547kHz	1330z	11128khz (repeats Sunday on 14735khz / 12207kHz at 0930/1000z)	
06/05 '480' 631 42 85415 05660 12961 99127 86660 43262 00411 46085 73746 95785 34200 61430 67548 96964 43742 38222 82233 19862 36036 44229 96640 58228 64164 97053 71641 44441 06586 08875 20979 70670 05853 69226 10435 27337 32993 35938 53868 48569 32626 22126 84886 01515 631 42 00000					

13/05 '480' 716 43 07833 86229 49643 26658 00630 24239 66754 71222 25406 68514 42102 13665 14101 86553 84810 03156 37918 79230 59749 32740
72604 93390 46472 76509 47464 91755 34140 31170 87099 87476 74804 95315 14409 02521 55044 77254 23497 29008 09380 93249
00790 29330 09572 716 43 00000

20/05 '480' 271 40 18917 65670 07835 69607 17737 44924 20307 49406 37855 77934 68300 25052 87700 01827 19382 93471 31816 00691 33721 03136
60191 55235 55110 92008 10140 45365 59541 89197 92539 64453 29592 99312 05121 16999 77299 80729 51842 18973 30942 57563
271 40 00000

27/05 '480' 257 40 39941 74423 34229 30007 61753 67546 19795 69197 29868 40529 78430 31192 49124 23068 95405 58261 82515 27048 56151 54890
18027 92425 68208 21206 48133 98220 41359 58310 86475 50996 36804 26660 57159 43347 62853 29344 45434 04714 58814 72797
257 40 00000

And from PoSW:

First + Third Thursdays in the Month Schedule. Repeated on the Friday:-

4-May-23:- 0500 UTC, 14565 kHz, call "460", DK/GC "928 928 51 51", fair signal.
Ended 0512:50s UTC.
0600 UTC, 16125 kHz, second sending, weak signal, keeping to the frequencies in the prediction list from last year.

5-May-23, Friday:- 0500 UTC, 14570 kHz, "five up" on yesterday and a much weaker signal.
0600 UTC, 16125 kHz, second sending much stronger.

18-May-23:- 0500 UTC, 14565 kHz, "460" and "813 813 59 59", weak.
0600 UTC, 16125 kHz, much stronger.

19-May-23, Friday:- 0600 UTC, 16125 kHz, weak signal, missed 0500z sending.

Forgot to listen for E06 on the first Thursday in June; I am not at my best first thing in the morning!

2-June-23, Friday:- 0500 UTC, 13985 kHz, call "328", DK/GC "495 495 60 60", weak but readable.
0600 UTC, 15830 kHz, also weak.

15-June-23:- 0500 UTC, 13985 kHz, very weak signal of some kind, unreadable.
0600 UTC, 15830 kHz, much stronger, call "328", DK/GC "671 671 50 50".

16-June-23, Friday:- 0500 UTC, 13985 kHz, weak, difficult copy.
0600 UTC, 15830 kHz, started off weak, became stronger around 0606 UTC.

E07

MISSED LOGS from The Spectre 3000

E07 11143kHz 04/03/2023 1420z [114 114 114 000] 1422z Strong QRN2 QSB2 SAT Spectre
11/03/2023 1420z [114 114 114 000] 1422z Strong QRN2 QSB2 SAT Spectre

12143kHz 11/03/2023 1400z [114 114 114 000] 1402z Strong QRN2 QSB2 SAT Spectre

13384kHz 02/03/2023 1450z [328 1 6085 79 64221 ... 64118 000 000] 1459z Fair QRN2 QSB2 THU Spectre
04/03/2023 1450z [328 1 6085 79 64221 ... 64118 000 000] 1459z Strong QRN2 QSB2 SAT Spectre

14854kHz 02/03/2023 1430z [328 1 6085 79 64221 ... 64118 000 000] 1439z Fair QRN2 QSB2 THU Spectre
04/03/2023 1430z [328 1 6085 79 64221 ... 64118 000 000] 1439z Strong QRN2 QSB2 SAT Spectre
11/03/2023 1430z [328 328 328 000] 1432z Strong QRN2 QSB2 SAT Spectre

16284kHz 02/03/2023 1410z [328 1 6085 79 64221 ... 64118 000 000] 1419z Fair QRN2 QSB2 THU Spectre
04/03/2023 1410z [328 1 6085 79 64221 ... 64118 000 000] 1419z Strong QRN2 QSB2 SAT Spectre
11/03/2023 1410z [328 328 328 000] 1412z Strong QRN2 QSB2 SAT Spectre

E07 16284/14854/13384kHz 02/03/2023 1410z Transcript:

328 1 6085 79
64221 64551 43082 74384 92292 86650 35970 30294 38507 66876
95506 23341 03216 08583 22085 88233 76843 20198 26853 18778
60888 67726 27776 24233 20070 89123 28204 81679 10347 23492
11360 49207 39270 53166 77692 56118 79913 88714 78891 45975
92958 88423 47748 32922 16947 99424 29572 73641 42184 00340
39060 34563 19869 45709 13906 61170 34727 58369 00023 47784
41686 73424 95736 97379 32434 73184 42616 12181 66565 04239
98496 04463 38246 38304 22607 79794 72610 15423 64118
000 000 *Courtesy Spectre*

Now onto current Logs:

From PoSW

Saturday Schedule, 1300 UTC Start:-

6-May-23:- 1300 UTC, 12176 kHz, "152 152 152 000", strong signal.
1320 UTC, 11576 kHz, second sending, weaker.

20-May-23:- 1300 UTC, 12176 kHz, "152 152 152 000", weak.
1320 UTC, 11576 kHz, also weak.

27-May-23:- 1300 UTC, 12176 kHz, "152 152 152 000", back to being a strong signal.
1320 UTC, 11576 kHz, strong.

3-June-23:- 1300 UTC, 12176 kHz, "152 152 152 000", strong.
1320 UTC, 11576 kHz, strong. Continuing with the same frequencies as used in April and May, as in years past.

10-June-23:- 1300 UTC, 12176 kHz, strong and 1320 UTC, 11576 kHz, weaker, "152 152 152 000".

17-June-23:- 1300 UTC, 12176 kHz, "152 152 152 000", strong.
1320 UTC, 11576 kHz, weaker.

24-June-23:- 1300 UTC, 12176 kHz, "152 152 152 000", good signal.
1320 UTC, 11576 kHz, weaker.

Sunday Schedule, 0600 UTC Start:-

Always a repeat of the content of the Saturday 1300 UTC schedule but with a different call.

7-May-23:- 0600 UTC, 10317 kHz, "312 312 312 000", strong enough to be heard over the local RF noise interference, particularly strong between about 8.5 to 11.5 MHz.

0620 UTC, 11117 kHz, second sending.

14-May-23:- 0600 UTC, 10317 kHz, nothing audible from the first sending, presumably underneath the local QRM mentioned above.

0620 UTC, 11117 kHz, "312 312 312 000", strong enough to be heard.

21-May-23:- 0600 UTC, 10317 kHz, "312 312 312 000", weak, only just readable.
0620 UTC, 11117 kHz, stronger.

28-May-23:- 0600 UTC, 10317 kHz, weak, difficult copy and 0620 UTC, 11117 kHz, stronger, "312 312 312 000".

4-June-23:- 0600 UTC, 10317 kHz, very weak, unreadable.
0620 UTC, 11117 kHz, "312 312 312 000", just about readable.

11-June-23:- 0620 UTC, 11117 kHz, "312 312 312 000", weak, nothing readable from the 0600z sending.

25-June-23:- 0620 UTC, 11117 kHz, "312 312 312 000", strong enough to over-ride local RF noise interference, again nothing readable from the 0600z sending.

Saturday + Thursday Schedule, 1410 UTC Start:-

4-May-23, Thursday:- 1410 UTC, 15836 kHz, "157 157 157 000".
1430 UTC, 14536 kHz, second sending, weak signal.

6-May-23, Saturday:- 1410 UTC, 15836 kHz, "157 157 157 000", good signal.
1430 UTC, 14536 kHz, weaker.

13-May-23, Saturday:- 1410 UTC, 15836 kHz, "157 157 157 1", message, DK/GC "3502 58" x 2, started off strong then became weaker.
1430 UTC, 14536 kHz, weak, difficult copy.
1450 UTC, 13536 kHz, weak.

18-May-23, Thursday:- 1410 UTC, 15836 kHz and 1430 UTC, 14536 kHz, both weak, "157 157 157 000".

20-May-23, Saturday:- 1410 UTC, 15836 kHz, "157 157 157 000", S4 to S5 at best.
1430 UTC, 14536 kHz, weaker.

25-May-23, Thursday:- 1410 UTC, 15836 kHz, "157 157 157 1", message, DK/GC "412 69" x 2. S5 to S6 with fading.
1430 UTC, 14536 kHz, weak.
1450 UTC, 13536 kHz, weak, interference from rapidly swept carrier, perhaps CODAR wave measuring?

27-May-23, Saturday:- 1410 UTC, 15836 kHz, "157" and "412 69" again, stronger than usual.
1430 UTC, 14536 kHz, also stronger than of late.
1450 UTC, 13536 kHz, weak with the sweeper interference.

3-June-23, Saturday:- 1410 UTC, 13417 kHz, "603 603 603 000", weak.
1430 UTC, 14717 kHz, stronger.

8-June-23, Thursday:- 1410 UTC, 13417 kHz, "603 603 603 1", weak signal and with an extremely strong FSK signal on the HF side close enough to be a nuisance, at least with a receiver with a 2.4 kHz filter, unable to read the DK/GC.
1430 UTC, 14717 kHz, also too weak to copy, became stronger after a few minutes.
1450 UTC, 15817 kHz, weak, DK/GC "889 71" x 2.

10-June-23, Saturday:- 1410 UTC, 13417 kHz, very weak, FSK on HF side very strong making E07 unreadable.
1430 UTC, 14717 kHz, "603" and "889 71" again, weak but clear.

1450 UTC, 15817 kHz, also weak but clear.

17-June-23, Saturday:- 1410 UTC, 13417 kHz, very weak, FSK on HF side very strong, unreadable.
1430 UTC, 14717 kHz, very weak, sounded like "000" - "no message".

22-June-23, Thursday:- 1410 UTC, 13417 kHz, "603 603 603 1", no sign of the strong FSK on the HF side - at first, suddenly came on at 1411:30s approx rendering E07 unreadable.
1430 UTC, 14717 kHz, weak, clear, DK/GC "2048 53" x 2.
1450 UTC, 15817 kHz, signal up and down.

24-June-23, Saturday:- 1410 UTC, 13417 kHz, unreadable due to the FSK signal on close frequency - although E07 became stronger and more audible around 1414z
1430 UTC, 14717 kHz, "603" and "2048 53" again, good signal.
1450 UTC, 15817 kHz, also a good signal.

Tuesday + Friday Schedule, 1500 UTC Start:-

"Search" says the prediction list, pleasantly surprised to find it early on in May, not so quickly found in June:-

2-May-23, Tuesday:- 1520 UTC, 18232 kHz, second sending, found almost straight away, strong signal. "124 124 124 1", DK/GC "5701 97" x 2.
1540 UTC, 19432 kHz, third sending, strong.

5-May-23, Friday:- 1500 UTC, 16132 kHz, "124" and "5701 97" again, first sending, though it was going to be on 17132, wrong again, then!
1520 UTC, 18232 kHz, not as strong as on the 2nd.
1540 UTC, 19432 kHz, strongest of the three transmissions.

9-May-23, Tuesday:- 1500 UTC, 16132 kHz, "124 124 124 000", strong.
1520 UTC, 18232 kHz, slightly weaker.

16-May-23, Tuesday:- 1500 UTC, 16132 kHz, "124 124 124 1", message, DK/GC "3054 139" x 2, good signal.
1520 UTC, 18232 kHz, strong.
1540 UTC, 19432 kHz, unusually weak.

19-May-23, Friday:- 1500 UTC, 16132 kHz, "124" and "3054 139" again.
1520 UTC, 18232 kHz.
1540 UTC, 19432 kHz, wide variations in signal strength on all three transmissions.

23-May-23, Tuesday:- 1500 UTC, 16132 kHz, "124 124 124 000", good signal.
1520 UTC, 18232 kHz, signal strength up and down.

26-May-23, Friday:- 1500 UTC, 16132 kHz and 1520 UTC, 18232 kHz, "124 124 124 000".

30-May-23, Tuesday:- 1500 UTC, 16132 kHz, "124 124 124 1", message, DK/GC "6970 96" x 2 5 to 6 indicated on the S-meter.
1520 UTC, 18232 kHz, strong signal.
1540 UTC, 19432 kHz, much weaker.

Couldn't find this one in June until the second half of the month:-

16-June-23, Friday:- 1504 UTC, 14945 kHz, transmission in progress with a message – which means two more transmissions, S5 to S6.
1526 UTC, 16145 kHz, second sending, weak, took a while to find.
1544 UTC, 18245 kHz, S6 to S7.

20-June-23, Tuesday:- 1500 UTC, 14945 kHz, "912 912 912 000", weak signal.
1520 UTC, 16145 kHz, also weak.

23-June-23, Friday:- 1500 UTC, 14945 kHz, "912 912 912 000", peaking S6 to S7.
1520 UTC, 16145 kHz, slightly weaker.

Onto others' logs

Sunday

May 2023

0600z	10317kHz	0620z	11117kHz	0640z	12217kHz
07/05	312 000				Weak
21/05	312 000				Weak
28/05	312 000				0600z Weak, 0620z Fair

June 2023

0600z	10317kHz	0620z	11117kHz	0640z	12217kHz
04/06	312 000				Fair
11/06	312 000				Fair

18/06	312 000	Weak
25/06	312 000	0600z Weak, 0620z Fair

Tuesday/Friday

May 2023

1500z	16132kHz	1520z	18232kHz	1540z	18432kHz
05/05	124 1 5701 97 43937 ... 27587 000 000				Weak
09/05	124 000				Weak
12/05	124 000				Weak
16/05	124 1 3054 139 57797 ... 61955 000 000				1520z Strong, rest Weak. 1540z via Finnish SDR
19/05	124 1 3054 139 57797 ... 61955 000 000				1540z Fair, rest Weak
23/05	124 000				Weak
26/05	124 000				Fair [M8] Weak [PLdn]
30/05	124 1 6973 96 51959 ...				Rest under QRM4

June 2023

1500z	14945kHz	1520z	16145kHz	1540z	18245kHz
02/06	NOT MONITORED				
06/06	912 000				Very weak
09/06	912 000				1500z NRH, 1520z Very weak
13/06	912 1 8415 120 02166 ... 93245 000 000				1450z Fair, rest Weak
16/06	NOT MONITORED				
20/06	912 000				Weak
23/06	912 000				Weak
27/06	912 1 9969 78 05999 ... 24780 000 000				Weak, 1520z restart at 1523z

Thursday/Saturday

May 2023

1410z	15836kHz	1430z	14636kHz	1450z	13536kHz
04/05	157 000				Weak
06/05	157 000				Weak
11/05	157 1 3502 58 32007 ... 52352 000 000				1410z Fair, rest Weak
13/05	157 1 3502 58 32007 ... 52352 000 000				Weak, 1450z via Dutch SDR
18/05	157 000				Weak
20/05	157 000				Weak
25/05	157 1 412 69 18382 ... 42993 000 000				Weak, 1450z QRM
27/05	157 1 412 69 18382 ... 42993 000 000				Weak

June 2023

1410z	13417kHz	1430z	14717kHz	1450z	15817kHz
08/06	603 1 889 71 63557 ... 38532 000 000				Weak
10/06	603 1 889 71 63557 ... 38532 000 000				Weak, 1410z QRM
22/06	603 1 2048 53 16945 ... 33658 000 000				Weak, 1410z QRM
24/06	603 1 2048 53 16945 ... 33658 000 000				Weak 1410z TTYQRM4, 1450z NRH

29/06 603 000 Weak, 1410z QRM

Saturday

May 2023

1300z	12176kHz	1320z	11576kHz	1340z	10276kHz
06/05	152 000				Weak
13/05	152 000				Fair
20/05	152 000				Weak
27/05	152 000				Fair

June 2022

1300z	12176kHz	1320z	11576kHz	1340z	10276kHz
03/06	152 000				1300z Strong, 1320z Fair
10/06	152 000				1300z Strong, 1320z Fair
17/06	152 000				Fair
24/06	152 000				Weak

E11&E11a log May/June

MISSED LOGS from The Spectre 3000

E11 4505kHz 04/03/2023 1530z [365/00] 1533z Weak QRN3 QSB4 SAT Spectre

5371kHz 02/03/2023 1300z [315/00] 1303z Weak QRN3 QSB5 THU Spectre

5737kHz 09/03/2023 2000z [520/00] 2003z Fair QRN2 QSB2 THU Spectre

6923kHz 01/03/2023 1205z [461/00] 1208z Fair QRN3 QSB4 WED Spectre
14/03/2023 1205z [466/00] 1208z Fair QRN2 QSB3 TUE Spectre

6940kHz 08/03/2023 0930z [275/00] 0933z Fair QRN3 QSB3 WED Spectre
09/03/2023 0930z [276/00] 0933z Fair QRN3 QSB3 THU Spectre
22/03/2023 0930z [271/00] 0933z Strong QRN2 QSB2 WED Spectre

9951kHz 03/03/2023 1000z [305/00] 1003z Strong QRN2 QSB2 FRI Spectre
14/03/2023 1000z [306/00] 1003z Strong QRN2 QSB2 TUE Spectre

9968kHz 17/04/2023 0900z [533/00] 0903z Fair QRN2 QSB2 MON Spectre

10200kHz 01/03/2023 1045z [698/00] 1048z Strong QRN2 QSB2 WED Spectre
15/03/2023 1045z [691/00] 1048z Strong QRN2 QSB2 WED Spectre
20/03/2023 1045z [698/00] 1048z Strong QRN2 QSB2 MON Spectre
22/03/2023 1045z [698/00] 1048z Strong QRN2 QSB2 WED Spectre

12202kHz 17/04/2023 0845z [713/00] 0848z Fair QRN2 QSB2 MON Spectre

12530kHz 02/03/2023 1230z [335/00] 1233z Strong QRN2 QSB2 THU Spectre
09/03/2023 1230z [333/00] 1233z Strong QRN2 QSB2 THU Spectre

14972kHz 04/03/2023 1430z [915/00] 1433z Strong QRN2 QSB2 SAT Spectre
11/03/2023 1430z [912/00] 1433z Strong QRN2 QSB2 SAT Spectre

MISSED LOGS from The Spectre 3000

E11a 6923kHz 22/03/2023 1205z [460/39 Attention 90854 ... 47021 Out] 1215z Fair QRN2 QSB3 WED Spectre

E11a 6923kHz 22/03/2023 1205z Transcript:

460/39 Attention
90854 71715 21255 32402 77563 81636 11730 40699 99995 91097
33202 21042 86011 27684 18512 05053 94236 70129 13233 30023
15881 28035 29092 13967 06081 68897 11123 17638 24178 62573
26521 79131 55609 39552 85236 71819 90392 48202 47021 Out

6940kHz 02/03/2023 0930z [273/40 Attention 03089 ... 58200 Out] 941z Fair QRN2 QSB2 THU Spectre

E11a 6940kHz 02/03/2023 0930z Transcript:

273/40 Attention
03089 51574 41662 37079 02662 54982 35522 81121 09454 80707
60501 21996 27490 61312 88731 10910 37623 02446 44793 99855
99151 52749 35710 38504 61066 45579 31022 97447 31360 35011
51501 03148 50824 48747 01810 68991 52075 49874 36402 58200
Out

9951kHz 24/03/2023 1000z [302/25 Attention 19426 ... 35533 Out] 1008z Strong QRN2 QSB2 FRI Spectre

E11a 9951kHz 24/03/2023 1000z Transcript:

302/25 Attention
19426 30749 79365 44392 71171 02807 23416 47751 99030 40801
20444 61486 34852 05982 00642 62503 63935 86817 22401 75853
86445 61910 84756 30034 35533 Out

10200kHz 06/03/2023 1045z [691/32 Attention 57832 ... 94411 Out] 1055z Strong QRN2 QSB2 MON Spectre
08/03/2023 1045z [691/32 Attention 57832 ... 94411 Out] 1055z Strong QRN2 QSB2 WED Spectre

E11a 10200kHz 06/03/2023 1045z Transcript:

691/32 Attention
57832 32753 25204 69932 15034 31041 45604 92174 46405 87160
39747 44510 03059 56429 17395 55740 75109 80100 32867 15351
87271 26129 60994 98429 04201 36584 31651 80721 74185 38506
05656 94411 Out

15632kHz 22/03/2023 0715z [753/32 Attention 56788 ... 52517 Out] 0725z Fair BCQRM3 QSB2 WED Spectre

E11a 15632kHz 22/03/2023 0715z Transcript:

753/32 Attention
56788 25807 20292 98263 06503 79498 79108 38330 99470 44460
17727 23647 41720 45337 98375 91233 52723 40445 89908 23056
25402 52807 53648 10611 45029 90453 06781 24034 35427 00842
50823 52517 Out

Now onto current Logs

PoSW writes, Some of the stronger transmissions heard from this busy number station during the last two months:-

4783 kHz:-

3-May-23, Wed:- 1910 UTC, "391/00"
6-May-23, Sat:- 1910 UTC, "392/00".
17-May-23, Wed:- 1910 UTC, "395/38", message, "Out" at 1920:45s UTC.
24-May-23, Wed:- 1910 UTC, "393/00", this frequency is often subjected to interference, loud noise of a couple of seconds duration several times a minute, was particularly strong this evening.
31-May-23, Wed:- 1910 UTC, "396/00".
3-June-23, Sat:- 1910 UTC, "399/00".
7-June-23, Wed:- 1910 UTC, "396/00".
21-June-23, Wed:- 1910 UTC, "391/37", message
24-June-23, Sat:- 1910 UTC, "391/37" again.
The interference described above was very strong in June.

5409 kHz:-

4-May-23, Thu:- 2000 UTC, "527/00".
11-May-23, Thu:- 2000 UTC, "521/36", message.
14-May-23, Sun:- 2000 UTC, "521/36" again, "Out" at 2010:30s UTC approx.
21-May-23, Sun:- 2000 UTC, "525/00".
25-May-23, Thu:- 2000 UTC, "528/00".
28-May-23, Sun:- 2000 UTC, "525/00"
8-June-23, Sat:- 2000 UTC, "528/00".
22-June-23, Thu:- 2000 UTC, "525/00".
29-June-23, Thu:- 2000 UTC, "520/00".

7600 kHz:-

4-May-23, Thur:- 1900 UTC, "649/00". There is a broadcast station on this frequency, somewhat outside the recognised international broadcast bands, a bit of on-line research suggests it might be Radio Afghanistan relayed from Tashkent. Whatever it is, it is always weaker than E11.
25-May-23, Thu:- 1900 UTC, "648/33", message, "Out" at before 1910 UTC.
29-May-23, Mon:- 1900 UTC, "646/00".
5-June-23, Mon:- 1900 UTC, "648/32", message.
12-June-23, Mon:- 1900 UTC, "649/00".

12815 kHz:-

8-May-23, Mon:- 0845 UTC, "714/00".
 10-May-23, Wed:- 0845 UTC, "715/00".
 5-June-23, Mon:- 0845 UTC, "714/00".
 12-June-23, Mon:- 0845 UTC, "718/38", message.
 19-June-23, Mon:- "713/00".

12984 kHz:-

2-May-23, Tue:- 1430 UTC, "914/35", message, "Out" at 1440:20s UTC.
 6-May-23, Sat:- 1430 UTC, "914/35" again.
 13-May-23, Sat:- 1430 UTC, "915/00".
 20-May-23, Sat:- 1430 UTC, "910/00".
 23-May-23, Tue:- 1430 UTC, "914/00".
 27-May-23, Sat:- 1430 UTC, "911/00".
 30-May-23, Tue:- 1430 UTC, "919/00".
 3-June-23, Sat:- 1430 UTC, "912/00".
 10-June-23, Sat:- 1430 UTC, "912/00".
 17-June-23, Sat:- 1430 UTC, "912/00".
 24-June-23, Sat:- 1430 UTC, "914/32", message.

14940 kHz:-

2-May-23, Tue:- 0745 UTC, "221/00".
 4-May-23, Thu:- 0745 UTC, "227/00".
 11-May-23, Thu:- 0745 UTC, "229/00".
 27-June-23, Tue:- 0745 UTC, "229/00".

15720 kHz:-

3-May-23, Wed:- 0745 UTC, "344/33", message.
 5-May-23, Fri:- 0745 UTC, "344/33" again.
 12-May-23, Fri:- 0745 UTC, "348/00".
 26-May-23, Fri:- 0745 UTC, "342/00".
 31-May-23, Wed:- 0745 UTC, "344/00".
 2-June-23, Fri:- 0745 UTC, "346/00".
 7-June-23, Wed:- 0745 UTC, "342/39", message.
 9-June-23, Fri:- 0745 UTC, "342/39" again.
 14-June-23, Wed:- 0745 UTC, "348/00".
 21-June-23, Wed:- 0745 UTC, "347/00".

Leading is nicely into the logs submitted via RNGB

4783kHz	1910z	03/05 [391/00] Out 1913z S9		Malc, HfD	WED
	1910z	06/05 [392/00] Out 1903z S9		Malc	SAT
	1910z	10/05 [393/00] Out 1913z S6		Brixmis	WED
	1910z	17/05 [395/38 07739.....52098] Out 1921z S9		Malc	WED
	1910z	24/05 [393/00] Out 1913z S9	(Dutch SDR)	Malc	WED
	1910z	27/05 [392/00] Out 1913z S9		Malc	SAT
	1910z	07/06 [396/00] Out 1913z S7		Malc	WED
	1910z	10/06 [390/00] Out 1911z S7		Malc	SAT
	1910z	14/06 [392/00] Out 1913z S7		Malc	WED
	1910z	28/06 [390/00] Out 1913z S9		Malc	WED
4909kHz	0820z	04/05 [430/00] Out 0823z S2	(Finnish SDR)	Malc, HfD	THU
	0820z	11/05 [434/00] Out 0823z S7	(Finnish SDR)	Malc	THU
	0820z	12/05 [439/00] Out 0823z S4		Malc	FRI
	0820z	18/05 [439/00] Out 0823z S2	(Dutch SDR)	Malc	THU
	0820z	19/05 [430/00] Out 0823z S4	(Finnish SDR)	Malc	FRI
	0820z	25/05 [436/35 21156.....99441] Out 0823z S3	(Finnish SDR)	Malc	THU
	0820z	09/06 [431/00] Out 0823z S7	(Finnish SDR)	Malc	FRI
	0820z	22/06 [436/00] Out 0823z S4	(Finnish SDR)	Malc	THU
	0823z	23/06 [432/00] Out 0826z S4	(Finnish SDR) Late Start	Malc	FRI
0820z	29/06 [438/00] Out 0823z S3	(Finnish SDR)	Malc	THU	
5082kHz	1530z	06/05 [366/00] Out 1533z S3	(Dutch SDR)	Malc, HfD	SAT
	1530z	07/05 [367/00] Out 1533z S4	(Finnish SDR)	Malc	SUN
	1530z	13/05 [366/00] Out 1533z S4	(Finnish SDR)	Malc	SAT
	1530z	21/05 [360/30 50937.....60404] Out 1539z S4	(Finnish SDR)	Malc	SUN
	1530z	27/05 [360/00] Out 1533z S2	(Dutch SDR)	Malc	SAT
	1530z	28/05 [368/00] Out 1533z S4	(Dutch SDR)	Malc	SUN
	1530z	10/06 [368/00] Out 1533z S4		Malc	SAT
1530z	24/06 [360/00] Out 1533z S3		Malc	SAT	
5231kHz	1605z	02/05 [235/00] Out 1608z S3	(Dutch SDR)	Malc, HfD	TUE
	1605z	07/05 [235/00] Out 1608z S3	(Dutch SDR)	Malc	SUN

1605z	09/05 [233/00] Out 1608z S2		Malc	TUE	
1605z	16/05 [238/00] Out 1608z S2		Malc	TUE	
1605z	21/05 [237/00] Out 1608z S3	(Finnish SDR)	Malc	SUN	
1605z	28/05 [238/38 76296.....56899] Out 1616z S5	(Dutch SDR)	Malc	SUN	
1605z	11/06 [238/32 02993.....27458] Out 1615z S3	(Dutch SDR)	Malc	SUN	
1605z	18/06 [237/00] Out 1608z S3	(Dutch SDR)	Malc	SUN	
1605z	20/06 [236/00] Out 1608z S4	(Finnish SDR)	Malc	TUE	
1605z	27/06 [238/00] Out 1608z S3	(Dutch SDR)	Malc	TUE	
5409kHz	2000z	04/05 [527/00] Out 2003z S7	Malc, HfD	THU	
	2000z	07/05 [521/00] Out 2003z S7	Malc, Brixmis	SUN	
	2000z	11/05 [521/36 38841 86743 86085 86724 44048 30880 04856 33603.....20265 79606] S6	Brixmis	THU	
	2000z	18/05 [522/00] Out 2003z S5	Malc	THU	
	2000z	21/05 [525/00] Out 2003z S5	Malc, Gary H	SUN	
	2000z	25/05 [528/00] Out 2003z S9	Malc	THU	
	2000z	28/05 [525/00] Out 2003z S5	Malc	SUN	
	2000z	01/06 [527/32 91481 07656 63666 50494 95290 52191 75346 85162.....69254 77927]	Gary H	THU	
	2000z	11/06 [524/00] Out 2003z S8	Malc	SUN	
	2000z	18/06 [521/00] Out 2003z S4	Malc	SUN	
	2000z	22/06 [525/00] Out 2003z S3	Malc	THU	
	2000z	25/06 [524/00] Out 2003z S4	Malc	SUN	
	2000z	29/06 [520/00] Out 2003z S4	Malc	THU	
5737kHz	1300z	01/05 [311/00]	HfD	MON	
	1300z	11/05 [310/00] Out 1303z S4	(Finnish SDR)	Malc	THU
	1300z	15/05 [312/35 94437.....71824] Out 1303z S5	(Finnish SDR)	Malc	MON
	1300z	22/05 [314/00] Out 1303z S3	(Dutch SDR)	Malc	MON
	1300z	05/05 [310/00] Weak	RNGB	MON	
	1300z	08/06 [311/00] Out 1303z S2	(Dutch SDR)	Malc	THU
	1300z	12/06 [315/00] Out 1303z S5	(Finnish SDR)	Malc	MON
	1300z	29/06 [316/35 48978.....79454] Out 1310z S5	(Finnish SDR)	Malc	THU
6304kHz	1205z	02/05 [465/00] Out 1208z S5	(Finnish SDR)	Malc, HfD	TUE
	1205z	03/05 [469/00] Out 1208z S5	(Finnish SDR)	Malc	WED
	1205z	10/05 [466/39 39712.....50395] Out 1216z S7	(Finnish SDR)	Malc	WED
	1205z	16/05 [461/00] Out 1308z S7	(Finnish SDR)	Malc	TUE
	1205z	17/05 [466/00] Out 1208z S7	(Finnish SDR)	Malc	WED
	1205z	24/05 [460/00] Out 1208z S5	(Finnish SDR)	Malc	WED
	1205z	07/06 [469/00] Out 1208z S2	(Finnish SDR)	Malc	WED
	1205z	13/06 [460/00] Out 1208z S6	(Finnish SDR)	Malc	TUE
	1205z	14/06 [466/00] Out 1208z S7	(Finnish SDR)	Malc	WED
	1205z	20/06 [462/00] Out 1208z S5	(Finnish SDR)	Malc	TUE
	1205z	21/06 [469/00] Out 1208z S5	(Finnish SDR)	Malc	WED
	1205z	28/06 [469/39 27194.....53553] Out 1216z S3	(Finnish SDR)	Malc	WED
6923kHz	0930z	03/05 [279/00]	HfD	WED	
	0930z	04/05 [273/00] Out 0933z S3	(Finnish SDR)	Malc	THU
	0930z	10/05 [278/00] Good	RNGB, Malc	WED	
	0930z	11/05 [278/00] Out 0933z S2	(Dutch SDR)	Malc	THU
	0930z	17/05 [278/00] Out 0933z S2		Malc	WED
	0930z	24/05 [279/39 73563.....63570] Out 0942z S5	(Finnish SDR)	Malc	WED
	0930z	07/06 [271/32 78893.....30969] Out 0940z S3	(Dutch SDR)	Malc	WED
	0930z	14/06 [278/00] Out 0933z S5	(Dutch SDR)	Malc	WED
	0930z	21/06 [273/00] Out 0933z S3	(Finnish SDR)	Malc	WED
	0930z	22/06 [276/00] Out 0933z S3	(Dutch SDR)	Malc	THU
	0930z	28/06 [275/00] Out 0933z S5	(Finnish SDR)	Malc	WED
	0930z	29/06 [276/00] Out 0933z S3		Malc	THU
7469kHz	0450z	01/05 [415/00]	HfD	MON	
7377kHz	0700z	06/05 [495/00] Out 0703z S2	Malc, HfD	SAT	
	0700z	07/05 [491/00] Out 0703z S3	Malc	SUN	
	0700z	20/05 [490/00] Out 0703z S4	(Dutch SDR)	Malc	SAT
	0700z	21/05 [491/00] Out 0703z S4		Malc	SUN
	0700z	27/05 [490/00] Out 0703z S2		Malc	SAT
	0700z	28/05 [490/00] Out 0703z S3		Malc	SUN
	0700z	10/06 [492/00] Out 0703z S3		Malc	SAT
	0700z	11/06 [492/00] Out 0703z S2		Malc	SUN
	0700z	18/06 [491/35 20078 01537 63791 45844 42683 63542 05506 93123.....00754 59344] Fair	RNGB	SUN	
	0700z	24/06 [496/00] Out 0703z S2	Malc	SAT	
	0700z	25/06 [495/00] Good	RNGB, Malc	SUN	

7600kHz	1900z	01/05 [640/00] Out 1903z S5 + QRM	Malc, HFD	MON
	1900z	04/05 [649/00] Out 1903z S9	Malc	THU
	1900z	08/05 [641/00] Out 1903z S9+QRM	Malc	MON
	1900z	15/05 [645/00] Out 1903z S4+QRM	Malc	MON
	1900z	18/05 [641/00] Out 1903z S5	Malc	THU
	1900z	22/05 [648/33 06562.....25441] Out 1910z S9 + QRM	Malc	MON
	1900z	12/06 [649/00] Out 2003z S4	Malc	MON
	1900z	22/06 [248/00] Out 1903z S5	Malc	THU
	1900z	29/06 [644/00] Out 1903z S3	Malc	THU
7863kHz	1715z	03/05 [970/00] Out 1718z S4	Malc, HFD	WED
	1715z	10/05 [977/36 30339.....28934] Out 1726z S3	Malc	WED
	1715z	17/05 [975/00] Out 1718z S6	Malc	WED
	1715z	19/05 [975/00] Out 1718z S3	Malc	FRI
	1715z	26/05 [970/00] Out 1718z S7	Malc, Gary H	FRI
	1715z	07/06 [977/32 88925.....45214] Out 1724z S4	Malc	WED
	1715z	14/06 [972/00] Out 1718z S6	Malc	WED
	1715z	23/06 [974/00] Out 1718z S4	Malc	FRI
1715z	28/06 [976/00] Out 1718z S6	Malc	WED	
8088kHz	1730z	04/05 [413/00] Out 1733z S5	Malc, HFD	THU
	1730z	11/05 [415/00] Out 1733z S5	Malc	THU
	1730z	18/05 [411/31 02835.....23472] Out 1740z S5	Malc	THU
	1730z	25/05 [414/00] Out 1733z S4	Malc	THU
	1730z	08/06 [413/35 13610.....80738] Out 1740z S4	Malc	THU
	1730z	22/06 [412/00] Out 1733z S3	Malc	THU
1730z	29/06 [412/00] Out 1733z S4	Malc	THU	
8091kHz	0645z	02/05 [514/30 62840.....39846] Out 0654z S3	Malc, HFD	TUE
	0645z	09/05 [519/00] Good	RNGB, Malc	TUE
	0645z	11/05 [510/00] Good	RNGB	THU
	0645z	16/05 [518/00] Out 0648z S3	Malc	TUE
	0645z	18/05 [515/00] Fair	RNGB, Malc	THU
	0645z	25/05 [515/00] Out 0648z S3 (Dutch SDR)	Malc	THU
	0645z	06/06 [517/36 78588 14749 68450 01654 52772 71325 74524 63538.....19715 79624] Good	RNGB	TUE
	0645z	13/06 [517/00] Out 0648z S2	Malc	TUE
	0645z	15/06 [519/00] Good	RNGB	THU
	0645z	20/06 [518/00] Good	RNGB, Malc	TUE
	0645z	22/06 [515/00] Out 0648z S3	Malc	THU
	0645z	27/06 [518/00] Good	RNGB, Malc	TUE
0645z	29/06 [514/00] Good	RNGB, Malc	THU	
8680kHz	0700z	02/05 [579/31 34510 28706 37092 45922 43236 51007 75290 52137.....34142 81445] Good	RNGB, HFD	TUE
	0700z	09/05 [570/00] Good	RNGB, Malc	TUE
	0700z	12/05 [571/00] Out 0703z S2	Malc	FRI
	0700z	16/05 [573/00] Good	RNGB, Malc	TUE
	0700z	19/05 [571/00] Good	RNGB, Malc	FRI
	0700z	26/05 [571/00] Out 0703z S2	Malc	FRI
	0700z	06/06 [571/33 91302 68371 91082 64667 09086 35380 40208 82811.....42677 15446] Good	RNGB	TUE
	0700z	13/06 [573/00] Good	RNGB	TUE
	0700z	16/06 [579/00] Good	RNGB	FRI
	0700z	20/06 [577/00] Out 0703z S2	Malc	TUE
	0700z	23/06 [573/00] Good	RNGB, Malc	FRI
	0700z	27/06 [570/00] Out 0703z S3	Malc	TUE
	9052kHz	0900z	01/05 [535/00] Good	RNGB, HFD
0900z		03/05 [538/00] Out 0903z S3	Malc	WED
0900z		08/05 [535/00] Out 0903z S9	Malc	MON
0900z		10/05 [537/00] Out 0903z S3	Malc	WED
0900z		15/05 [533/31 58131.....58914] Out 0710z S3	Malc	MON
0900z		22/05 [535/00] Out 0903z S7	Malc	MON
0900z		24/05 [536/00] Out 0903z S3	Malc	WED
0900z		07/06 [536/38 12283.....47133] Out 0910z S4	Malc	WED
0900z		12/06 [538/00] Out 0903z S3	Malc	MON
0900z		14/06 [536/00] Out 0903z S5	Malc	WED
0900z		28/06 [530/00] Out 0903z S2	Malc	WED
9150kHz	0600z	14/05 [359/00]	HFD	SUN
	0600z	21/05 [359/00] Out 0603z S2	Malc	SUN
	0600z	28/05 [355/00] Out 0603z S3	Malc	SUN
	0600z	09/06 [359/00] Good	RNGB	FRI
	0600z	11/06 [358/00] Out 0603z S3	Malc	SUN

	0600z	16/06 [359/00] Weak	RNGB	FRI
	0600z	18/06 [350/00] Out 0603z S3	Malc	SUN
	0600z	23/06 [359/36 88499 11711 113338 50338 17569 64188 58791 92681.....26971 75047 71305]	RNGB	FRI
	0600z	30/06 [355/00] Good	RNGB	FRI
9610kHz	0745z	01/05 [267/00] Good	RNGB, HfD	MON
	1910z	05/05 [612/00]	HfD	FRI
	0745z	08/05 [260/00] Good	RNGB, Malc	MON
	1910z	12/05 [617/32 30981.....11215] Out 1920z S5+QRM	Malc	FRI
	0745z	15/05 [269/38 86111.....9839?] Out 0756z S6	Malc	MON
	1910z	19/05 [614/00] Out 1913z S6	Malc	FRI
	1910z	21/05 [614/00] Out 1913z S4 + QRM	Malc	SUN
	0745z	22/05 [264/00] Out 0748z S7	Malc	MON
	1910z	26/05 [612/00] Out 1913z S6+QRM	Malc	FRI
	1910z	28/05 [613/00] Out 1913z S3+QRM	Malc	SUN
	0745z	06/06 [267/37 27378 85043 22669 16384 76623 14031 74101 31021 65318.....45057 91346]	RNGB	MON
	1910z	09/06 [618/00] Out 1913z S4 +QRM	Malc	FRI
	0745z	12/06 [268/00] Out 0755z S5	Malc	MON
	1910z	18/06 [616/00] Out 1913z S4	Malc	SUN
	1910z	23/06 [614/30 04680.....19997] Out 1919z S5+QRM	Malc	FRI
10356kHz	1530z	04/05 [261/00] Out 1533z S4	Malc, Gary H	THU
	1530z	11/05 [260/00] Out 1533z S4	Malc, Gary H	THU
	1530z	18/05 [269/38 86111 40510 00929 55066 86680 70858 71352 03489.....97575 29839] Out 1541z	Gary H, Malc	THU
	1530z	25/05 [264/00] Out 1533z S3	Malc	THU
	1530z	01/06 [262/00] Strong	dMHz	THU
	1530z	08/06 [260/37 27378.....91346] Out 1541z S7	Malc	THU
	1530z	15/06 [269/00]	Gary H	THU
	1530z	22/06 [262/00] Out 1533z S6	Malc	THU
	1530z	29/06 [266/00] Out 1533z S3	Malc	THU
10429kHz	0715z	02/05 [636/36 54429 97308 35057 95834 97945 85869 14229 32041.....34798 39594] Good	RNGB, HfD	TUE
	0715z	09/05 [639/00] Strong	RNGB, Malc	TUE
	0715z	12/05 [634/00] Out 0718z S3	Malc	FRI
	0715z	16/05 [635/00] Out 0718z S2	Malc	TUE
	0715z	19/05 [630/00] Good	RNGB, Malc	FRI
	0715z	26/05 [631/00] Out 0718z S4	Malc	FRI
	0715z	09/06 [635/00] Out 0715z S7	Malc	FRI
	0715z	20/06 [630/00] Out 0718z S4	Malc	TUE
	0715z	23/06 [630/00] Out 0718z S3	Malc	FRI
	0715z	30/06 [635/38 25833 00269 65968 28109 55942 03222 64668 70663.....42142 56167] Good	RNGB	FRI
12089kHz	1045z	01/05 [690/00] Strong	dMHz, HfD	MON
	1045z	03/05 [693/00] Out 1048z S3	Malc	WED
	1045z	08/05 [692/00] Out 1048z S7	Malc	MON
	1045z	10/05 [690/00] Out 1048z S9	Malc	WED
	1045z	15/05 [690/40 12576.....87103] Out 1056z S9	Malc	MON
	1045z	22/05 [698/00] Out 1048z S6	Malc	MON
	1045z	24/05 [698/00] Out 1048z S6	Malc	WED
	1045z	29/05 [690/00]	dMHz	MON
	1045z	07/06 [691/00] Out 1048z S6	Malc	WED
	1910z	11/06 [618/00] Out 1913z S3+QRM	Malc	SUN
	1045z	12/06 [696/22 48665.....07243] Out 1052z S4	Malc	MON
	1045z	21/06 [693/00] Out 1048z S7	Malc	WED
12153kHz	1000z	02/05 [306/30 85129.....50849] Out 1009z	Malc	TUE
	1000z	09/05 [300/00] Out 1003z S4	Malc	TUE
	1000z	12/05 [304/00] Out 1003z S6	Malc	FRI
	1000z	16/05 [306/00] Out 1003z S5	Malc	TUE
	1000z	19/05 [304/00] Out 1003z S7	Malc	FRI
	1000z	26/05 [306/00] Out 1003z S4	Malc	FRI
	1000z	09/06 [300/27 71826.....91324] Out 1008z S4	Malc	FRI
	1000z	20/06 [302/00] Out 1003z S4	Malc	TUE
	1000z	23/06 [305/00] Out 1003z S4	Malc	FRI
	1000z	27/06 [306/00] Out 1003z S2	Malc	TUE
12229kHz	1815z	07/05 [927/34 24652 22547 27873 28096 29383 95949 53067 15731.....77549 12802] Out 1825z	Brixmis, Malc, HfD	SUN
	1815z	12/05 [921/00] Out 1818z S7	Malc	FRI
	1815z	19/05 [924/00] Out 1818z S5	Malc	FRI
	1815z	21/05 [924/00] Out 1818z S5	Malc	SUN
	1815z	26/05 [927/00] Out 1818z S9	Malc	FRI
	1815z	09/06 [929/00] Out 1818z S6	Malc	FRI

	1815z	11/06 [922/00] Out 1818z S4	Malc	SUN
	1815z	18/06 [922/00] Out 1818z S7	Malc	SUN
	1815z	23/06 [922/40 30299.....70191] Out 1826z S6	Malc	FRI
12815kHz	0845z	01/05 [715/34 21449 09000 69511 15166 91630 03146 71454 62029.....93731 50796]	RNGB, HfD	MON
	0845z	08/05 [714/00] Out 0848z S3	Malc	MON
	0845z	10/05 [715/00] Out 0848z S4	Malc	WED
	0845z	15/05 [714/00] Out 0848z S7	Malc	MON
	0845z	17/05 [719/00] Out 0848z S3	Malc	WED
	0820z	24/05 [132/00] Out 0823z S4	Malc	WED
	0845z	07/06 [718/00] Out 0848z S3	Malc	WED
	0845z	12/06 [718/33 24701.....95335] Out 0856z S4	Malc	MON
	0845z	21/06 [715/00] Out 0848z S5	Malc	WED
	0845z	28/06 [718/00] Out 0848z S3	Malc	WED
12984kHz	1430z	02/05 [914/35 26422.....50874] Out 1440z S7	Malc, HfD	TUE
	1430z	09/05 [914/00] Out 1433z S5	Malc	TUE
	1430z	13/05 [915/00] Out 1433z S4	Malc	SAT
	1430z	16/05 [919/00] Out 1433z S5	Malc	TUE
	1430z	20/05 [910/00] Out 1433z S2 QSB1	Malc	SAT
	1430z	27/05 [911/00] Out 1433z S5	Malc	SAT
	1430z	10/06 [912/00] Out 1433z S3	Malc	SAT
	1430z	13/06 [915/00] Out 1433z S3	Malc	TUE
	1430z	20/06 [914/32 48082.....08307] Out 1440z S3	Malc	TUE
	1430z	27/06 [918/00] Out 1433z S3	Malc	TUE
14410kHz	1745z	01/05 [242/00] Out 1748z S6	Malc, HfD	MON
	1745z	07/05 [248/00] S5	Brixmis	SUN
	1745z	08/05 [244/00] Out 1748z S7	Malc	MON
	1745z	15/05 [245/36 44832.....64529] Out 1756z S6	Malc	MON
	1745z	22/05 [246/00] Out 1748z S3 QSB2	Malc	MON
	1745z	28/05 [246/00]	Gary H	SUN
	1745z	11/06 [245/35 76764.....88099] Out 1756z S6+QRM	Malc	SUN
	1745z	12/06 [240/00] Out 1748z S7	Malc	MON
	1745z	18/06 [245/00] Out 1748z S2	Malc	SUN
	1745z	25/06 [240/00] Out 1748z S4	Malc	SUN
14575kHz	1645z	02/05 [337/00] Out 1648z S5	Malc, HfD	TUE
	1645z	04/05 [332/00] Out 1648z S2	Malc	TUE
	1645z	09/05 [338/00] Out 1648z S2	Malc	TUE
	0315z	10/05 [250/00]	HfD	WED
	1645z	16/05 [330/00] Out 1648z S3 (Finnish SDR)	Malc	TUE
	1645z	18/05 [331/00] Out 1748z S5	Malc	THU
	1645z	25/05 [331/39 58093 61933 35883 52417 21694 93105 60543 82103..... 68751 74628] Out 1656z	Gary H, Malc	THU
	1645z	08/06 [330/35 00414.....00420] Out 1654z S4	Malc	THU
	1645z	20/06 [338/00] Out 1648z S3	Malc	TUE
	1645z	22/06 [334/00] Out 1648z S4	Malc, Gary H	THU
	1645z	27/06 [332/00] Out 1648z S4	Malc	TUE
14940kHz	0745z	02/05 [221/00] Fair	RNGB, HfD	TUE
	0745z	04/05 [227/00] Out 0748z S6	Malc, HfD	THU
	0745z	09/05 [221/00] Weak	RNGB, Malc	TUE
	0745z	11/05 [229/00] Fair	RNGB	THU
	0745z	18/05 [224/33 42793 83232 60609 11734 78769 86465 42933 46486.....92578 48714] Fair	RNGB, Malc	THU
	0745z	25/05 [220/00] Good	RNGB, Malc	THU
	0745z	06/06 [228/00] Good	RNGB	TUE
	0745z	08/06 [221/00] Out 0748z S9	Malc	THU
	0745z	20/06 [225/35 40287.....54506] Out 0755z S4	Malc	TUE
	0745z	27/06 [229/00] Out 0748z S3	Malc	TUE
	0745z	29/06 [220/00] Good	RNGB, Malc	THU
15720kHz	0745z	03/05 [344/33 83891.....46552] Out 0755z S3	Malc, HfD	WED
	0745z	10/05 [347/00] Out 0748z S2	Malc	WED
	0745z	12/05 [348/00] Out 0748z S2	Malc	FRI
	0745z	17/05 [343/00] Out 0748z S3	Malc	WED
	0745z	19/05 [346/00] Good	RNGB, Malc	FRI
	0745z	24/05 [343/00] Out 0748z S3	Malc	WED
	0745z	26/05 [342/00] Out 0748z S3	Malc	FRI
	0745z	07/06 [342/39 9741695401] Out 0756z S4	Malc	WED
	0745z	14/06 [348/00] Out 0748z S6	Malc	WED
	0745z	21/06 [347/00] Out 0748z S6	Malc	WED
	0745z	28/06 [346/00] Out 0748z S3	Malc	WED
	0745z	30/06 [349/00] Weak	RNGB	FRI

16335kHz	0830z	01/05 [183/00]		Ary, HfD	MON
	0830z	08/05 [184/22 38155 85629 04680 14609 73578 72804 43095.....20587 66545]	Good	RNGB, Malc	MON
	0830z	15/05 [184/00]	Out 0833z S2	Malc	MON
	0830z	19/05 [180/00]	Out 0833z S5	Malc	FRI
	0830z	22/05 [185/00]	Out 0833z	Malc	MON
	0830z	26/05 [183/00]	Out 0833z S4	Malc	FRI
	0830z	06/06 [188/00]	Good	RNGB	MON
	0830z	09/06 [183/00]	Out 0833z S6	Malc	FRI
	0830z	12/06 [185/33 90642.....07399]	Out 0840z S6	Malc	MON
	0830z	23/06 [180/00]	Out 0833z S4	Malc	FRI
17378kHz	0820z	02/05 [131/00]	Weak	RNGB	TUE
	0820z	03/05 [133/00]	Out 0823z S2	Malc, HfD	WED
	0820z	09/05 [135/00]	Weak	RNGB, Malc	TUE
	0820z	10/05 [135/00]	Out 0823z S2 (Dutch SDR)	Malc	WED
	0820z	16/05 [131/34 30039.....56797]	Out 0830z S2	Malc	TUE
	0820z	24/05 [132/00]	Out 0823z S4	Malc	WED
	0820z	07/06 [132/34 88645.....34186]	Out 0830z S2	Malc	WED
	0820z	13/06 [131/00]	Out 0823z S2	Malc	TUE
	0820z	14/06 [138/00]	Out 0823z S2	Malc	WED
	0820z	20/06 [134/00]	Out 0823z S3	Malc	WED
	0820z	21/06 [138/00]	Out 0823z S4	Malc	WED
	0820z	27/06 [133/00]	Out 0823z S3	Malc	TUE
	0820z	28/06 [134/00]	Out 0823z S3	Malc	WED
18030kHz	0715z	01/05 [753/00]	Fair	RNGB, HfD	MON
	0715z	03/05 [755/00]	Out 0718z S2	Malc	WED
	0715z	08/05 [753/00]	Out 0718z S2	Malc	MON
	0715z	10/05 [753/00]	Out 0718z S2	Malc	WED
	0715z	15/05 [755/00]	Good	RNGB	MON
	0715z	17/05 [755/00]	Fair	RNGB, Malc	WED
	0715z	22/05 [757/00]	Good	RNGB, Malc	MON
	0715z	24/05 [755/00]	Fair	RNGB, Malc	WED
	0715z	05/06 [755/00]	Fair	RNGB	MON
	0715z	07/06 [759/00]	Out 0718z S4	Malc	WED
	0715z	12/06 [752/00]	Out 0718z S5	Malc	MON
	0715z	14/06 [755/00]	Out 0718z S2+QRM	Malc	WED
	0715z	19/06 [753/00]	Good	RNGB	MON
	0715z	21/06 [757/00]	Out 0718z S4	Malc	WED
	0715z	28/06 [753/00]	Out 0718z S4 (Dutch SDR)	Malc	WED
19184kHz	0845z	04/05 [156/30 80912.....39918]	Out 0854z S4 (Finnish SDR)	Malc, HfD	THU
	0845z	09/05 [150/00]	Out 0848z S2	Malc	TUE
	0845z	11/05 [156/00]	Out 0848z S4	Malc	THU
	0845z	16/05 [157/00]	Out 0838z S1 (Dutch SDR)	Malc	THU
	0845z	08/06 [154/00]	Out 0848z S5	Malc	THU
	0845z	13/06 [151/00]	Out 0848z S2	Malc	TUE
	0845z	20/06 [159/00]	Out 0848z S4	Malc	TUE
	0845z	22/06 [152/00]	Out 0848z S3	Malc	THU
	0845z	27/06 [151/24 23499.....50201]	Out 0853z S2	Malc	TUE

S06

MISSED LOGS from The Spectre 3000

S06 6985kHz 18/03/2023 2100z [637 637 637 00000] 2104z Fair QRN2 QSB2 THU Spectre

10463kHz 22/03/2023 1008z [8733] 1015z Strong QRN2 QSB2 WED Spectre (This appeared to be a pirate transmission, with a fast delivery)

S06c

S06c 17521kHz 22/03/2023 1047z [11038] 1049z Strong QRN2 QSB2 WED Spectre

S06e

S06e 7887kHz 22/03/2023 1600z [409 865 11 56874 ... 47945 865 11] 1606z Strong QRN2 QSB2 WED Spectre
7887kHz 22/03/2023 1606z [409 512 34 52089 ... 33451 34 00000] 1613z Strong QRN2 QSB2 WED Spectre

S06e 7887kHz 22/03/2023 1600z Transcript:

409 865 11
56874 46792 46278 68737 39859 64713 45269 78463 13531 54327

	0915z	12/06 [487/00] Konyetz 0918z S2		Malc	MON
	0915z	23/06 [480/35 05964.....56368] Konyetz 0926z S2		Malc	FRI
9339kHz	0700z	01/05 [479/00] Good		RNGB	MON
	0700z	04/05 [472/00] Strong		RNGB, Malc	THU
	0700z	08/05 [471/00] Strong		RNGB, Malc	MON
	0700z	11/05 [470/00] Konyetz 0703x S3		Malc	THU
	0700z	15/05 [472/00] Konyetz 0703z S2		Malc	MON
	0700z	18/05 [471/00] Good		RNGB, Malc	THU
	0700z	22/05 [478/31 45232 00484 23374 86768 37721 45646 29710.....89350 00803]		RNGB, Malc	MON
	0700z	06/06 [479/00] Good		RNGB	MON
	0700z	08/06 [476/00] Konyetz 0703z S3		Malc	THU
	0700z	12/06 [478/00] Konyetz 0703z S3		Malc	MON
	0700z	19/06 [472/35 83389 83199 18873 73859 88119 81362 76136 58479.....51842 07376 01224]		RNGB	MON
	0700z	29/06 [479/00] Good		RNGB, Malc	THU
9448kHz	1400z	09/05 [429/00] Konyetz 1403z S2		Malc	TUE
	1400z	12/05 [422/00] Konyetz 1403z S3		Malc	FRI
	1400z	16/05 [421/00] Konyetz 1403z S2		Malc	TUE
	1400z	19/05 [427/00] Konyetz 1403z S2		Malc	FRI
	1400z	26/05 [421/00] Konyetz 1403z S3		Malc	FRI
	1400z	09/06 [420/00] Konyetz 1403z S2		Malc	FRI
	1400z	13/06 [424/33 64383.....58479] Konyetz 1411z		Malc	TUE
	1400z	20/06 [424/00] Konyetz 1403z S3		Malc	TUE
	1400z	23/06 [426/00] Konyetz 1403z S2		Malc	FRI
	1400z	27/06 [424/00] Konyetz 1403z S4 (Dutch SDR)		Malc	TUE
12457kHz	1850z	03/05 [285/35 68409.....79212] Konyetz 1902z S9		Malc	WED
	1850z	10/05 [281/00] Konyetz 1853z S7		Malc	WED
	1850z	17/05 [286/00] Konyetz 1853z S9		Malc	WED
	1850z	20/05 [282/00] Konyetz 1853z S5		Malc	SAT
	1850z	24/05 [282/00] Konyetz 1853z S4 (Dutch SDR)		Malc	WED
	1850z	27/05 [288/00] Konyetz 1853z S7		Malc	SAT
	1850z	07/06 [281/38 50496.....60407] Konyetz 1902z S9+10		Malc	WED
	1850z	21/06 [280/00] Konyetz 1853z S5		Malc	WED
	1850z	28/06 [284/00] Konyetz 1853z S9		Malc	WED
20905kHz	0725z	23/06 [381/00] Konyetz 0728z S3		Malc	FRI
	0725z	28/06 [381/37 95421.....15245] Konyetz 073z S3 (Finnish SDR)		Malc	WED

V06

MISSED LOG from The Spectre 3000

V06 10755kHz 10/03/2023 0931z [975 In Progress End With 00000] 1006z Fair QRN3 QSB3 FRI Spectre

V07

With thanks from Daniel, DanAR

On Sunday 07/05 Daniel noted V07 0300z schedule as NRH; original T! posted a change of frequencies and times to a more managble 0700z schedule and stated 'Far Eastern V07 has used the 0700/0720/0740 time slots before, but never an even (0200) and odd (0700) time slot in the same year. It last used the 0700 slots in 2018.'

14469 kHz 0700z 07/05/23 (431 431 431 1 6636 58) T! Sun
 13369 kHz 0720z 07/05/23 (431 431 431 1 6636 58) T! Sun
 12169 kHz 0720z 07/05/23 (431 431 431 1 6636 58) T! Sun

May 2023

0700z	14469kHz	0700z	13369kHz	0700z	12169kHz	
07/05	431 1 6636 58 ...					Tnx T!
14/05	431 1 8099 62 ... 77025 000 000			Weak		[DanAR, Ary]

431 431 431 1
 8099 62
 56729 49461 22771 18711 57967
 54367 34564 68709 73782 92552
 52336 68748 90622 13511 89808
 39455 34502 66030 90974 65043
 62016 75961 94036 85169 76017
 84578 08918 82244 64088 41039
 00287 43890 35124 36037 49957
 98465 33957 58887 11225 07734
 59589 19365 81390 69610 47809
 39207 72586 73762 11457 22919

95916 47106 90991 54624 68669
92974 35496 75628 67880 87450
66590 77025 000 000

Courtesy DanAR, Ary

21/05 431 1 1106 84 69563 ... 55762 000 000 Weak [DanAR]

431 431 431 1
1106 84
69563 95744 04696 05182 43080
94249 11744 44089 82151 76342
56386 16053 72534 05318 69031
99783 72951 48009 65919 68009
27687 24934 67717 84780 65175
66888 33948 88558 65341 10443
41937 33188 58860 78781 53970
17885 42991 82269 21025 93246
07082 79901 43460 00057 08015
17788 48154 86318 58564 12015
60437 17186 67235 90201 72920
46900 73862 83801 54770 09364
66565 54853 81245 43717 01221
27193 97651 32936 15937 08422
01235 45557 03820 00672 29388
73986 21311 46887 03634 37448
84217 07159 04249 55762
000 000 Courtesy DanAR

28/05 431 1 657 112 70597 ... 68901 000 000 Weak

431 431 431 1
657 112
70597 95534 99296 66529 83247
51846 18079 70290 19873 73801
37527 44013 05912 18256 79510
53852 22171 24700 23463 82679
96928 39066 95500 84000 33385
21441 63587 91848 86030 13998
63941 34379 01196 30885 46735
57249 83649 57971 57680 93546
44198 69308 09427 81885 73612
07943 85906 84573 34052 34222
72114 98912 75460 44343 50508
15399 55601 54358 56932 24299
21222 87783 90610 68065 42772
98124 07669 15115 55246 62741
50908 07001 29299 56257 24109
09879 23948 57438 06951 58115
40852 64947 08851 35528 53414
09566 19665 87982 77129 32846
39926 64439 17168 90284 33071
44072 11816 89469 62390 48943
54102 13275 43566 38743 81529
36715 15056 78033 44283 54829
10585 68901 000 000
Courtesy DanAR

June 2023

0700z 14469kHz 0720z 13427kHz 0740z 12127kHz

11/06 942 1 402 90 35429 ... 74878 000 000 [0700z only] Weak

942 942 942 1
402 90
35429 68663 01610 00481 60586
45311 65292 65044 08650 48022
51043 56779 57317 79434 93244
61505 84519 29205 65914 46315
78301 54260 66402 77541 69664
86022 20438 64894 56845 82826
43145 51685 16874 26536 93680
34536 94111 90357 51820 47816
38970 94603 38721 19749 73673
87970 26987 99847 82609 72078
06578 46830 92527 16378 25422
38935 46498 86470 84701 57482
54643 19261 16905 07628 45327
60641 84003 45497 76480 95532
85393 51316 33971 09845 61726
62353 83445 33665 70154 85087
66165 73006 81469 80444 38029
29642 34806 57163 16259 78478
000 000 Courtesy DanAR

18/06 942 942 942 000 000 [0700z only] Weak

V13

MISSED LOG from The Spectre 3000

7688kHz 01/03/2023 1300z [New Star Broadcasting Program #2] 1325z Fair QRN4 QSB3 WED Spectre (Remote KiwiSDR California)
05/03/2023 1300z [New Star Broadcasting Program #2] 1325z Fair QRN4 QSB3 SUN Spectre (Remote KiwiSDR Russia)
05/03/2023 1330z [New Star Broadcasting Program #2] 1355z Fair QRN4 QSB3 SUN Spectre (Remote KiwiSDR California)
10/03/2023 1330z [New Star Broadcasting Program #2] 1355z Fair QRN3 QSB3 FRI Spectre (Remote KiwiSDR Russia)
14/03/2023 1300z [Carrier Signal Only No Audio] 1355z TUE Spectre (Remote KiwiSDR California)
22/03/2023 1330z [New Star Broadcasting Program #2] 1351z Fair QRN3 QSB3 WED Spectre (Remote KiwiSDR California)

9276kHz 26/03/2023n 1200z [New Star Broadcasting Program #2] 1221z Fair BCQRM3 QSB3 SUN Spectre (Remote KiwiSDR Russia)

11430kHz 03/03/2023 1300z [New Star Broadcasting Program #1] 1325z Fair QRN2 QSB2 FRI Spectre (Remote KiwiSDR California)
04/03/2023 1330z [New Star Broadcasting Program #1] 1355z Fair QRN2 QSB2 SAT Spectre (Remote KiwiSDR Russia)
05/03/2023 1300z [Transmitter Malfunction No Audio] 1325z SUN Spectre
05/03/2023 1330z [Transmitter Malfunction No Audio] 1355z SUN Spectre
10/03/2023 1300z [New Star Broadcasting Program #1] 1325z Fair QRN2 QSB2 FRI Spectre (Remote KiwiSDR Russia)
14/03/2023 1300z [New Star Broadcasting Program #1] 1325z Fair QRN2 QSB2 TUE Spectre (Remote KiwiSDR Russia)
14/03/2023 1330z [New Star Broadcasting Program #1] 1355z Fair QRN2 QSB2 TUE Spectre (Remote KiwiSDR Russia)

13974kHz 05/03/2023 1200z [Transmitter Malfunction No Audio] 1225z SUN Spectre
08/03/2023 1200z [New Star Broadcasting Program #1] 1225z Strong QRN2 QSB2 WED Spectre (Remote KiwiSDR Russia)
09/03/2023 1200z [New Star Broadcasting Program #1] 1225z Fair QRN2 QSB2 THU Spectre (Remote KiwiSDR Russia)
11/03/2023 1200z [New Star Broadcasting Program #1] 1225z Fair QRN3 QSB3 SAT Spectre (Remote KiwiSDR California)
11/03/2023 1230z [New Star Broadcasting Program #1] 1255z Fair QRN3 QSB2 SAT Spectre (Remote KiwiSDR California)
14/03/2023 1200z [New Star Broadcasting Program #1] 1225z Strong QRN2 QSB2 TUE Spectre (Remote KiwiSDR Russia)
14/03/2023 1230z [New Star Broadcasting Program #1] 1255z Strong QRN2 QSB2 TUE Spectre (Remote KiwiSDR Russia)
16/03/2023 1200z [New Star Broadcasting Program #1] 1225z Fair QRN3 QSB3 THU Spectre (Remote KiwiSDR California)
20/03/2023 1200z [New Star Broadcasting Program #1] 1221z Fair QRN3 QSB3 MON Spectre (Remote KiwiSDR Russia)
20/03/2023 1230z [New Star Broadcasting Program #1] 1251z Fair QRN3 QSB3 MON Spectre (Remote KiwiSDR Russia)
22/03/2023 1200z [New Star Broadcasting Program #1] 1221z Strong QRN2 QSB2 WED Spectre (Remote KiwiSDR Russia)
22/03/2023 1230z [New Star Broadcasting Program #1] 1251z Strong QRN2 QSB2 WED Spectre (Remote KiwiSDR Russia)
24/03/2023 1200z [New Star Broadcasting Program #1] 1221z Fair QRN2 QSB2 FRI Spectre (Remote KiwiSDR Russia)
24/03/2023 1230z [New Star Broadcasting Program #1] 1251z Fair QRN2 QSB2 FRI Spectre (Remote KiwiSDR Russia)
17/04/2023 1200z [New Star Broadcasting Program #1] 1221z Fair QRN3 QSB4 MON Spectre (Remote KiwiSDR Russia)
17/04/2023 1230z [New Star Broadcasting Program #1] 1251z Fair QRN4 QSB3 MON Spectre (Remote KiwiSDR California)

V15 North Korean Intelligence via Radio Pyongyang

Nil Reports

V24

Nil Reports

V26

Nil Reports

Polytones

XPA1 Wed/Fri

May 2023

1210z	13419kHz	1230z	12219kHz	1250z	11419kHz
03/05	424 1 03060 00188 43677 ... 45237				1210z TTYQRM5, 1230z Weak QSB4, 1250z NRH
05/05	NRH				
10/05	Not monitored; Lightning				
12/05	424 1 00444 00106 05174 ... 07133				1230z Fair QRM3, 1210z TTYQRM5, 1250z Unworkable

424 424 424 1 424 424 424 1 424 424 424 1

00444 00106 05174 26095 79656 64015 21185 00555 85158 75245
41395 29284 71746 13454 24359 28423 17351 16513 37071 13102
12932 55182 09042 23838 62238 28469 26957 56476 72227 85315
50219 08381 65003 13668 98338 96142 35764 64101 90816 52548
70153 27170 97488 06709 36060 87189 51778 62010 21150 32601
34771 76108 60876 50099 57122 93956 8u273 15142 72455 59855
36718 87415 41901 40827

85554 35476 61633 51287 24450 58107 85454 15712 35718 49600
06528 48168 74988 91839 03568 01628 56005 04034 57475 89838
73023 71137 87796 17938 10778 83171 09909 25506 06395 47876
44507 48722 45970 22733 55595 39420 54348 32529 83148 67287
01591 09431 19500 37398 07133 *Courtesy PLdn*

17/05 NOT MONITORED

19/05 NOT MONITORED

24/05 424 1 00221 00098 96380 ... 35510 1250z Unworkable, rest weak, 1210z TTYQRM4/5

26/05 424 1 00221 00098 96380 ... 35510

1210z TTYQRM4/5, rest Weak, 1210z QSB4

424 424 424 1 424 424 424 1 424 424 424 1

00221 00098 96380 41943 48033 58498 20159 92687 03580 68681
33808 18427 23375 17505 53553 51412 43740 06387 17907 79108
10965 03984 81434 76288 39835 18927 56937 09447 25811 14616
22057 39956 71611 26768 20054 58950 54564 60686 42032 96297
68391 00338 01596 79357 80752 64023 61035 80343 30115 80081
46082 78191 34375 49254 89027 52069 93261 94226 82791 18218
16831 18866 10626 82680

33160 72408 54081 77801 41713 79032 03087 09764 88311 52164
65258 83324 94322 30062 50078 05610 33174 48162 14312 92204
77669 44005 19632 81547 41977 11672 31494 59089 72364 98627
32536 85816 29114 03391 01055 77059 35510 *Courtesy PLdn*

31/05 424 1 00221 00098 96380 ... 35510

Weak, 1230z QSB4

June 2023

1210z 13545kHz 1230z 12145kHz 1250z 11145kHz

02/06 Unworkable across schedule,

QSB4/5

07/06 511 1 00167 00078 06783 ... 74043

1250z Unworkable, rest Weak QSB4 [Not the best of condx]

09/06 511 1 00167 00078 06783 ... 74043

1230z Fair, rest Weak QSB3

14/06 511 1 00167 00078 06783 ... 74043

1230z Fair, rest Weak QSB4/5

511 511 511 1 511 511 511 1 511 511 511 1

00167 00078 06783 48396 02390 63080 04874 20822 69148 33055
88708 74790 20586 99295 43693 63051 65162 93522 08478 53668
05706 15095 22750 64883 54898 41831 29162 64301 56468 52326
64948 37939 17796 01541 07521 55474 01188 97473 53864 30273
25979 71910 82089 72321 28904 48852 22333 59789 32090 52517
66830 63404 34771 35763 45459 51404 63395 17996 01746 01886
80468 02131 64528 13984

52668 23606 40525 49906 56572 64173 14216 53717 21012 92418
43316 86021 00526 31543 99240 41282 74043 *Courtesy PLdn*

21/06 511 1 00471 00090 04223 ... 52464

1210z Fair, 1320z Weak, 1250z NRH

511 511 511 1 511 511 511 1 511 511 511 1

00471 00090 04223 70521 11689 47443 03787 51670 52684 96353
08798 80452 97907 20254 75809 64435 48354 36583 31540 69300
25285 83587 86225 83045 70142 44178 68787 45061 56678 35776
60278 51354 53454 79740 60715 49065 21494 00746 40002 92318
51999 41251 09578 65386 77400 46229 46755 74002 98752 79866
54584 29680 00599 55328 81247 91674 50535 51006 18989 95002
11243 19039 09796 27672

57801 38763 44398 30207 07471 39675 30708 00212 58204 36869
86759 77041 53414 46500 30528 59728 26783 86560 46505 20048
13178 55517 71840 01908 08250 51631 76307 93554 52464
Courtesy PLdn

24/06 511 1 00471 00090 04223 ... 52464

Weak 1250z QSB3/4

28/06 511 1 00471 00090 04223 ... 52464

1210z Fair, QRM4. 1230z Unworkable, 1250z NRH

30/06 NOT MONITORED

XPA2 m

Lots of Null transmissions in June..... Someone been caught somewhere?

Sunday/Tuesday

May 2023

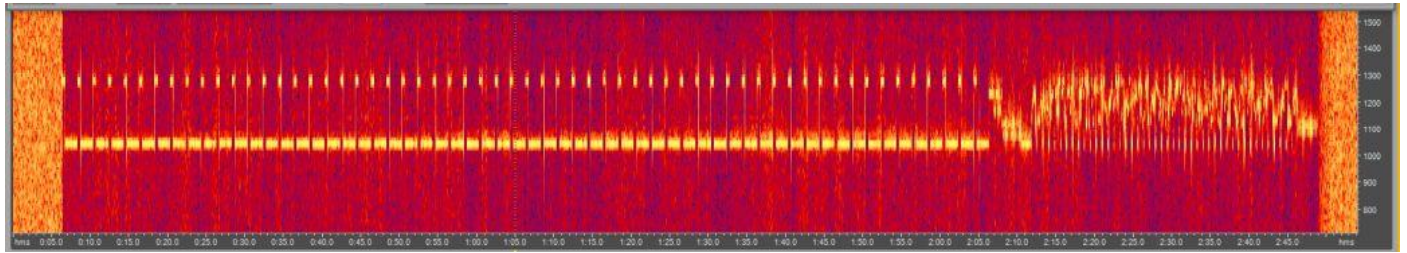
2100z 13376kHz 2120z 11576kHz 2140z 10776kHz

02/05 04338 00100 36777 ... 04151

2140z Fair, rest Strong

04338 00100 36777 34863 21038 27984 54249 63868 03123 82188
43599 56619 41999 65726 23625 08439 30084 01006 63122 53091
52256 69430 08844 27983 95107 46278 28187 96028 56781 81282
82393 72866 98791 05465 35365 26406 97982 60748 23611 41324
38396 83409 41807 84894 44252 58784 51520 99398 52726 16968
43513 02486 71944 04809 88106 99306 54375 37012 85028 82775
95114 09173 51943 36798 12172 04635 11654 76317 57218 67906
42825 74000 99729 16122 47285 84787 00362 51008 73116 30153
39914 26455 66342 03370 61671 58687 75506 07219 39605 51435
22280 67357 30500 21875 73011 39619 96755 83790 34286 77571
62415 29154 04151 *Courtesy PLdn*

07/05	04338 00100 36777 ... 04151	Very strong
09/05	NOT MONITORED Lightning	
14/05	NOT MONITORED	
21/05	NOT MONITORED	



10776kHz 2140z 23/05/2023 Entire sending ---- 2m42s lg

23/05	04655 00042 52503 ... 42672	2140z Strong, rest Weak
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04655 00042 52503 71569 62729 67911 67627 91199 61696 99977
 94478 70708 49320 34673 49549 91993 42384 55565 79277 18690
 03535 87614 14663 29682 36879 79256 27524 51855 30310 28325
 33049 64077 59835 06067 73220 37777 97256 96831 34036 04846
 76960 00024 24638 88220 42672 *Courtesy PLdn*

28/05	04655 00042 52503 ... 42672	2100z Very strong, rest Strong
30/05	09140 00001 00000 ... 31665	Very strong

June 2022

2100z 13427kHz 2120z 12227kHz 2140z 10827kHz

04/06	02940 00001 00000 ... 35656	2100z Fair, rest Strong
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06/06	08583 00063 95820 ... 00501	2100z Strong, rest Fair
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08583 00063 95820 59645 10282 30755 77747 34200 18547 11876
 85494 18001 47953 04683 99686 90534 83309 32295 87891 92917
 31301 17040 70529 95029 07143 74860 59722 23173 28927 44396
 03675 93594 64123 43806 12363 72560 61691 57116 54542 51748
 31540 72051 52574 03144 64606 34537 95036 11133 88799 55818
 84313 50569 55129 70490 06515 34588 28806 78424 73246 26297
 36181 91954 57502 57053 72675 00501 *Courtesy PLdn*

11/06	08583 00063 95820 ... 00501	2100z Fair, rest Strong
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13/06	02364 00001 00000 ... 34660	Very strong
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18/06	01434 00001 00000 ... 35254	2100z Weak, rest Fair
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20/06	05652 00001 00000 ... 35262	2120z Very strong, rest Strong
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25/06	00474 00044 98926 ... 24251	Very strong, 2120z Strong QRM2
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00474 00044 98926 88207 53610 80728 13636 26239 70999 32308
 19682 21267 01740 77267 19475 81269 74178 66282 31812 19635
 74906 07314 51693 19460 13060 32605 82996 13700 10238 07176
 43041 07068 59885 22778 25672 20480 57560 99808 89665 98248
 37356 44264 37189 37732 84072 06295 24251 *Courtesy PLdn*

27/06	00474 00044 98926 ... 24251	Strong
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XPA2 p

Monday/Wednesday

May 2023

0700z 12148kHz 0720z 13448kHz 0740z13948 kHz

01/05	05902 00218 61069 ... 17774	0740z Fair, rest Weak, 0700z QRM4
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05902 00218 61069 42404 94084 72868 90638 70573 18378 70145
 14149 46649 03064 62125 90671 98652 79420 31506 54804 87488
 33624 13148 52995 00387 41015 94067 36423 69389 50032 94817
 74749 60880 45001 39598 95151 92934 60802 55696 92934 22521
 97553 92640 42044 70064 12056 96195 79378 08648 39763 10280
 45037 15336 06131 08720 51889 88202 22442 98219 20530 23109
 48923 62490 91853 29069 80213 00353 15107 87145 81239 61236

80256 21463 04527 35759 36737 76019 10450 45560 05213 98305
 72726 04773 32385 77614 59229 08368 17725 24933 38471 40885
 60240 46192 66564 16153 84787 79763 86553 14717 03972 35962
 28813 28386 80054 46664 69693 01663 11253 35166 83239 35293
 37646 36638 21920 81982 56235 69965 28959 34532 62242 63664
 15371 65144 83930 73190 08567 82928 70121 83728 52777 35569
 39789 53427 39042 62858 92205 92104 63685 17494 12845 97664
 42858 99410 98042 01312 50221 76549 75038 88091 41123 20273
 45727 21805 78247 16548 57769 61565 31158 74879 58453 46301
 82298 83267 38827 06187 13555 31948 27080 08970 00096 65820
 46028 76165 26999 56243 11954 43811 36624 76618 05627 71862
 68755 09740 40728 27549 39218 65155 35794 14752 80837 56776
 96341 34021 83428 30805 80413 60118 02314 01106 51619 42863
 88224 75605 03603 73591 18456 39734 24957 53426 28264 62619
 59626 58395 26610 26886 72308 68303 25754 25629 71106 82046
 17774 *Courtesy PLdn*

03/05 05902 00218 61069 ... 17774 Weak
 08/05 09360 00104 26275... 03202 Weak, 0740z NRH
 10/05 NOT MONITORED Lightning
 15/05 NOT MONITORED
 22/05 NOT MONITORED
 24/05 03828 00116 05254 ... 14614 Fair, 0700z Weak, QSB2

03828 00116 05254 31382 93302 14620 89390 70167 79089 34942
 21017 11154 20745 85888 52057 47815 57185 31902 89366 20000
 14961 35340 97657 10799 38236 02221 62477 13154 29250 86165
 33304 88299 97756 55789 18714 62677 80963 69385 82579 90152
 91075 58103 03362 13122 55469 24876 16061 84161 78109 90163
 15380 08375 84299 72558 30283 24101 27504 98794 83721 22197
 15074 38761 85801 56006 23421 29146 74367 74316 22916 85936
 50031 82263 15508 59121 46867 16339 63045 91276 77018 58124
 87035 63195 29343 09728 62053 62943 83504 97023 32026 91892
 54098 05717 41952 48871 23904 19481 05742 31664 92650 92241
 67944 30118 07683 16734 84035 76515 83527 48529 17127 98447
 88425 54780 11069 15706 32997 94849 37504 59363 14614
Courtesy PLdn

29/05 03828 00116 05254 ... 14614 Weak
 31/05 03828 00116 05254 ... 14614 Fair, 0720/0740z QRM3

June 2023

0700z 12148kHz 0720z 13448kHz 0740z 13948 kHz

05/06 06072 00090 16147 ... 02232 Fair

06072 00090 16147 65507 16736 06328 57331 96148 40535 74940
 46638 72874 13926 74224 00864 96840 02328 15307 78875 94935
 11936 87989 97979 99716 90460 43557 30638 79973 64592 95214
 64622 13541 99924 58939 14572 67824 23267 42335 34262 10412
 76567 43222 35086 72185 11834 36491 88470 06854 83383 87033
 86882 42767 24712 79979 32684 66937 44453 35175 51971 64201
 68229 36215 28710 56941 09859 18823 58927 79236 11078 58791
 19636 82413 55845 06620 29920 96938 20757 01789 68665 60276
 29943 80736 77747 29409 89736 86230 34726 23461 63599 29621
 86207 38426 02232 *Courtesy PLdn*

07/06 06072 00090 16147 ... 02232 0740z Fair, rest Weak
 12/06 06072 00090 16147 ... 02232 0700z Unworkable, rest Weak, 0720z QSB3
 19/06 00105 00110 29861 ... 27735 Fair, 0720/0740z QSB2

00105 00110 29861 33408 45069 30371 67174 01914 16120 60789
 81280 47914 42685 59024 95911 53850 39498 86605 77839 23382
 51199 20794 43354 77012 67354 24811 38397 14953 86095 96589
 49446 37067 14265 12418 13603 72923 60243 63677 26078 41655
 79194 88704 54932 74261 21275 17602 80861 19629 59529 42040
 33416 72606 69115 95844 32180 65954 49911 96300 14296 26589
 05675 42076 08480 07220 59033 73724 51772 36038 41080 48760
 45544 57411 94066 72789 42990 45405 03383 07943 41039 10953
 79344 55145 73454 90614 58075 11367 55376 83451 74753 92847
 49104 25470 15476 88378 02417 53874 40460 98118 95351 08547
 15612 25096 50980 73500 06807 43045 85632 74486 75069 41102
 91696 96053 27735 *Courtesy PLdn*

21/06 00105 00110 29861 ... 27735 Weak, 0700z QRM3
 26/06 00105 00110 29861 ... 27735 0740z Fair, rest Weak QRM4
 28/06 00105 00110 29861 ... 27735 Strong
 30/06 NOT MONITORED

Other XPA2

From H-FD MAY 2023

Mon 01.05.2023 0910Z 17431 msg
 Mon 01.05.2023 0930Z 15841 msg
 Mon 01.05.2023 0950Z 13934 msg

Mon 01.05.2023 1500Z 15938 msg
 Mon 01.05.2023 1520Z 14538 msg
 Mon 01.05.2023 1540Z 13438 msg

Tue 23.05.2023 1100Z 16159 msg
 Tue 23.05.2023 1120Z 14359 msg
 Tue 23.05.2023 1140Z 13459 msg

Tue 30.05.2023 1100Z 16147 msg
 Tue 30.05.2023 1120Z 15847 msg
 Tue 30.05.2023 1140Z 14747 msg

Thu 04.05.2023 0500Z 11168 msg
 Thu 04.05.2023 0520Z 12168 msg
 Thu 04.05.2023 0540Z 13368 msg

Thu 18.05.2023 0910Z 14794 msg
 Thu 18.05.2023 0930Z 13994 msg
 Thu 18.05.2023 0950Z 12194 msg

Thu 18.05.2023 1600Z 13538 msg
 Thu 18.05.2023 1620Z 14438 msg
 Thu 18.05.2023 1640Z 14938 msg

Fri 19.05.2023 0800Z 13942 msg
 Fri 19.05.2023 0820Z 14942 msg
 Fri 19.05.2023 0840Z 15942 msg

From H-FD JUNE 2023

Thu 01.06.2023 0500Z 10315 msg
 Thu 01.06.2023 0520Z 11115 msg
 Thu 01.06.2023 0540Z 12215 msg

Thu 01.06.2023 1100Z 15982 msg
 Thu 01.06.2023 1120Z 14982 msg
 Thu 01.06.2023 1140Z 13882 msg

Thu 01.06.2023 1600Z 13417 msg
 Thu 01.06.2023 1620Z 15917 msg
 Thu 01.06.2023 1640Z 15917 msg

Fri 02.06.2023 0800Z 13373 msg
 Fri 02.06.2023 0820Z 13973 msg
 Fri 02.06.2023 0840Z 14973 msg

Sat 03.06.2023 0910Z 13527 msg
 Sat 03.06.2023 0930Z 12227 msg
 Sat 03.06.2023 0950Z 11427 msg

Mon 05.06.2023 1500Z 14892 msg
 Mon 05.06.2023 1520Z 13492 msg
 Mon 05.06.2023 1540Z 12192 msg

Wed 07.06.2023 0910Z 17417 msg
 Wed 07.06.2023 0930Z 15812 msg
 Wed 07.06.2023 0950Z 14504 msg

Fri 09.06.2023 1100Z 15874 msg
 Fri 09.06.2023 1120Z 14474 msg
 Fri 09.06.2023 1140Z 13374 msg

XPB1

MON/SAT

May 2023

16329kHz 1200z	01/05	Weak	4m28s		PLdn	MON
15929kHz 1210z	01/05	Weak	4m28s		PLdn	MON
14829kHz 1220z	01/05	Weak	4m28s		PLdn	MON
14429kHz 1230z	01/05	Weak	4m28s		PLdn	MON
13929kHz 1240z	01/05	Weak	4m28s		PLdn	MON
13529kHz 1250z	01/05	Weak	4m28s		PLdn	MON

16329kHz 1200z	06/05	Strong	4m28s		PLdn	SAT
15929kHz 1210z	06/05	Strong	4m28s		PLdn	SAT
14829kHz 1220z	06/05	Weak	4m28s		PLdn	SAT
14429kHz 1230z	06/05	Weak	4m28s		PLdn	SAT
13929kHz 1240z	06/05	Weak	4m28s		PLdn	SAT
13529kHz 1250z	06/05	Weak	4m28s QRM3		PLdn	SAT

Monday 08/05 NOT MONITORED

16329kHz 1200z	13/05	Weak	1m40s	'S' on freq	PLdn	SAT
15929kHz 1210z	13/05	Weak	1m40s		PLdn	SAT
14829kHz 1220z	13/05	NRH			PLdn	SAT
14429kHz 1230z	13/05	Weak	1m40s		PLdn	SAT
13929kHz 1240z	13/05	Weak	1m40s		PLdn	SAT
13529kHz 1250z	13/05	Weak	1m40s		PLdn	SAT

Monday 22/05 NOT MONITORED

16329kHz 1200z	27/05	Weak	1m40s		PLdn	SAT
15929kHz 1210z	27/05	Weak	1m40s		PLdn	SAT
14829kHz 1220z	27/05	Weak	1m40s		PLdn	SAT
14429kHz 1230z	27/05	Fair	1m40s		PLdn	SAT
13929kHz 1240z	27/05	Strong	1m40s		PLdn	SAT
13529kHz 1250z	27/05	Strong	1m40s		PLdn	SAT

16329kHz	1200z	29/05	Weak	4m28s	'S' on freq	PLdn	MON
15929kHz	1210z	29/05	Weak	4m28s		PLdn	MON
14829kHz	1220z	29/05	Weak	4m28s		PLdn	MON
14429kHz	1230z	29/05	Weak	4m28s		PLdn	MON
13929kHz	1240z	29/05	Weak	4m28s		PLdn	MON
13529kHz	1250z	29/05	Weak	4m28s	QRM3	PLdn	MON

June 2023

15876kHz	1200z	03/06	Weak	4m28s		PLdn	SAT
14876kHz	1210z	03/06	Weak	4m28s		PLdn	SAT
14376kHz	1220z	03/06	Weak	4m28s		PLdn	SAT
13976kHz	1230z	03/06	Weak	4m28s		PLdn	SAT
13376kHz	1240z	03/06	Weak	4m28s		PLdn	SAT
12176kHz	1250z	03/06	Weak	4m28s		PLdn	SAT

15876kHz	1200z	05/06	Weak	4m29s		PLdn	MON
14876kHz	1210z	05/06	Fair	4m29s		PLdn	MON
14376kHz	1220z	05/06	Weak	4m29s		PLdn	MON
13976kHz	1230z	05/06	Weak	4m29s		PLdn	MON
13376kHz	1240z	05/06	Weak	4m29s	QSB3	PLdn	MON
12176kHz	1250z	05/06	Weak	4m29s	QSB4	PLdn	MON

15876kHz	1200z	10/06	Weak	1m40s		PLdn	SAT
14876kHz	1210z	10/06	Weak	1m40s		PLdn	SAT
14376kHz	1220z	10/06	Weak	1m40s		PLdn	SAT
13976kHz	1230z	10/06	Weak	1m40s		PLdn	SAT
13376kHz	1240z	10/06	Weak	1m40s		PLdn	SAT
12176kHz	1250z	10/06	Weak	1m40s		PLdn	SAT

15876kHz	1200z	12/06	Weak	1m40s		PLdn	MON
14876kHz	1210z	12/06	Weak	1m40s		PLdn	MON
14376kHz	1220z	12/06	Weak	1m40s		PLdn	MON
13976kHz	1230z	12/06	Weak	1m40s		PLdn	MON
13376kHz	1240z	12/06	Weak	1m40s		PLdn	MON
12176kHz	1250z	12/06	Weak	1m40s		PLdn	MON

15876kHz	1200z	17/06		NOT MONITORED		PLdn	SAT
14876kHz	1210z	17/06		NOT MONITORED		PLdn	SAT
14376kHz	1220z	17/06		NOT MONITORED		PLdn	SAT
13976kHz	1230z	17/06		NOT MONITORED		PLdn	SAT
13376kHz	1240z	17/06		NOT MONITORED		PLdn	SAT
12176kHz	1250z	17/06		NOT MONITORED		PLdn	SAT

15876kHz	1200z	19/06	Weak	4m28s		PLdn	MON
14876kHz	1210z	19/06	Weak	4m28s		PLdn	MON
14376kHz	1220z	19/06	Weak	4m28s		PLdn	MON
13976kHz	1230z	19/06	Weak	4m28s		PLdn	MON
13376kHz	1240z	19/06	Weak	4m28s		PLdn	MON
12176kHz	1250z	19/06	Weak	4m28s		PLdn	MON

15876kHz	1200z	24/06	Weak	1m30s		PLdn	SAT
14876kHz	1210z	24/06	Weak	1m30s		PLdn	SAT
14376kHz	1220z	24/06	Weak	1m30s		PLdn	SAT
13976kHz	1230z	24/06	Weak	1m30s		PLdn	SAT
13376kHz	1240z	24/06	Weak	1m30s		PLdn	SAT
12176kHz	1250z	24/06	Weak	1m30s		PLdn	SAT

15876kHz	1200z	26/06	Fair	1m30s		PLdn	MON
14876kHz	1210z	26/06	Weak	1m30s		PLdn	MON
14376kHz	1220z	26/06	Weak	1m30s		PLdn	MON
13976kHz	1230z	26/06	Weak	1m30s		PLdn	MON
13376kHz	1240z	26/06	Weak	1m30s		PLdn	MON
12176kHz	1250z	26/06	Weak	1m30s		PLdn	MON

WED/SAT

May 2023

13961kHz	1100z	03/05	Weak	3m07s		PLdn	WED
13361kHz	1110z	03/05	Weak	3m07s		PLdn	WED
12161kHz	1120z	03/05	Strong	3m07s		PLdn	WED
11461kHz	1130z	03/05	Fair	3m07s		PLdn	WED
10761kHz	1140z	03/05	NRH			PLdn	WED
10161kHz	1150z	03/05	NRH			PLdn	WED

13961kHz	1100z	06/05	Weak	4m28s		PLdn	SAT
13361kHz	1110z	06/05	Weak	4m28s		PLdn	SAT
12161kHz	1120z	06/05	Weak	4m28s		PLdn	SAT
11461kHz	1130z	06/05	Weak	4m28s		PLdn	SAT
10761kHz	1140z	06/05	Weak	4m28s		PLdn	SAT
10161kHz	1150z	06/05	Weak	4m28s		PLdn	SAT

Wednesday 10/05

NOT MONITORED

13961kHz 1100z	13/05	NRH			PLdn	SAT
13361kHz 1110z	13/05	Fair	4m28s	QSB3	PLdn	SAT
12161kHz 1120z	13/05	Fair	4m28s		PLdn	SAT
11461kHz 1130z	13/05	Weak	4m28s		PLdn	SAT
10761kHz 1140z	13/05	NRH			PLdn	SAT
10161kHz 1150z	13/05	NRH			PLdn	SAT

17/05 NOT MONITORED

20/05 NOT MONITORED

13961kHz 1100z	24/05	Fair	2m50s		PLdn	WED
13361kHz 1110z	24/05	Fair	2m50s		PLdn	WED
12161kHz 1120z	24/05	Fair	2m50s		PLdn	WED
11461kHz 1130z	24/05	Weak	2m50s		PLdn	WED
10761kHz 1140z	24/05	Weak	2m50s		PLdn	WED
10161kHz 1150z	24/05	Weak	2m50s		PLdn	WED

13961kHz 1100z	27/05	Fair	2m50s		PLdn	SAT
13361kHz 1110z	27/05	Strong	2m50s		PLdn	SAT
12161kHz 1120z	27/05	Weak	2m50s		PLdn	SAT
11461kHz 1130z	27/05	Weak	2m50s		PLdn	SAT
10761kHz 1140z	27/05	Weak	2m50s		PLdn	SAT
10161kHz 1150z	27/05	Weak	2m50s		PLdn	SAT

13961kHz 1100z	31/05	Weak	2m50s		PLdn	WED
13361kHz 1110z	31/05	Weak	2m50s		PLdn	WED
12161kHz 1120z	31/05	Weak	2m50s		PLdn	WED
11461kHz 1130z	31/05	Weak	2m50s		PLdn	WED
10761kHz 1140z	31/05	NRH			PLdn	WED
10161kHz 1150z	31/05	NRH			PLdn	WED

June 2023

13876kHz 1100z	03/06	Weak	4m28s		PLdn	SAT
13376kHz 1110z	03/06	Fair	4m28s		PLdn	SAT
12176kHz 1120z	03/06	Weak	4m28s		PLdn	SAT
11576kHz 1130z	03/06	Weak	4m28s		PLdn	SAT
10676kHz 1140z	03/06	Weak	4m28s		PLdn	SAT
10276kHz 1150z	03/06	NRH			PLdn	SAT

13876kHz 1100z	07/06	Weak	4m28s		PLdn	WED
13376kHz 1110z	07/06	Weak	4m28s		PLdn	WED
12176kHz 1120z	07/06	Weak	4m28s	QRM3	PLdn	WED
11576kHz 1130z	07/06	NRH			PLdn	WED
10676kHz 1140z	07/06	NRH			PLdn	WED
10276kHz 1150z	07/06	NRH			PLdn	WED

13876kHz 1100z	10/06	Strong	4m28s		PLdn	SAT
13376kHz 1110z	10/06	Fair	4m28s		PLdn	SAT
12176kHz 1120z	10/06	Weak	4m28s		PLdn	SAT
11576kHz 1130z	10/06	Weak	4m28s		PLdn	SAT
10676kHz 1140z	10/06	NRH			PLdn	SAT
10276kHz 1150z	10/06	NRH			PLdn	SAT

13876kHz 1100z	14/06	Weak	4m29s		PLdn	WED
13376kHz 1110z	14/06	Weak	4m29s		PLdn	WED
12176kHz 1120z	14/06	Fair	4m29s		PLdn	WED
11576kHz 1130z	14/06	Weak	4m29s		PLdn	WED
10676kHz 1140z	14/06	V.weak	4m29s		PLdn	WED
10276kHz 1150z	14/06	NRH			PLdn	WED

13876kHz 1100z	17/06	Weak	4m29s		PLdn	SAT
13376kHz 1110z	17/06	Weak	4m29s		PLdn	SAT
12176kHz 1120z	17/06	Weak	4m29s		PLdn	SAT
11576kHz 1130z	17/06	Weak	4m29s		PLdn	SAT
10676kHz 1140z	17/06	Weak	4m29s		PLdn	SAT
10276kHz 1150z	17/06	Weak	4m29s		PLdn	SAT

13876kHz 1100z	21/06	Fair	4m28s		PLdn	WED
13376kHz 1110z	21/06	Fair	4m28s		PLdn	WED
12176kHz 1120z	21/06	Weak	4m28s		PLdn	WED
11576kHz 1130z	21/06	Unworkable			PLdn	WED
10676kHz 1140z	21/06	NRH			PLdn	WED
10276kHz 1150z	21/06	Weak	4m28s		PLdn	WED

13876kHz 1100z	24/06	Weak	4m28s	PLdn	SAT
13376kHz 1110z	24/06	Weak	4m28s	PLdn	SAT
12176kHz 1120z	24/06	Weak	4m28s	PLdn	SAT
11576kHz 1130z	24/06	Weak	4m28s	PLdn	SAT
10676kHz 1140z	24/06	Weak	4m28s	PLdn	SAT
10276kHz 1150z	24/06	Weak	4m28s	PLdn	SAT
13876kHz 1100z	28/06	Fair	4m28s	PLdn	WED
13376kHz 1110z	28/06	Weak	4m28s	PLdn	WED
12176kHz 1120z	28/06	Weak	4m28s	PLdn	WED
11576kHz 1130z	28/06	Weak	4m28s	PLdn	WED
10676kHz 1140z	28/06	NRH		PLdn	WED
10276kHz 1150z	28/06	NRH		PLdn	WED

Other XPB1 fm H-FD:

May 2023	
Tue 16.05.2023 0500Z 13435 MFSK-16 1:30	
Tue 16.05.2023 0510Z 13935 MFSK-16	
Tue 16.05.2023 0520Z 14435 MFSK-16	
Tue 16.05.2023 0530Z 14835 MFSK-16	
Tue 16.05.2023 0540Z 15935 MFSK-16	
Tue 16.05.2023 0550Z 16225 MFSK-16	
Tue 16.05.2023 1300Z 20061 MFSK-16 1:30	
Tue 16.05.2023 1310Z 19361 MFSK-16	
Tue 16.05.2023 1320Z 18261 MFSK-16	
Tue 16.05.2023 1330Z 17461 MFSK-16	
Tue 16.05.2023 1340Z 16261 MFSK-16	
Tue 16.05.2023 1350Z 14961 MFSK-16	

June 2023
Mon 12.06.2023 0500Z 11559 MFSK-16 1:41
Mon 12.06.2023 0510Z 12159 MFSK-16
Mon 12.06.2023 0520Z 13459 MFSK-16
Mon 12.06.2023 0530Z 13959 MFSK-16
Mon 12.06.2023 0540Z 14459 MFSK-16
Mon 12.06.2023 0550Z 14959 MFSK-16

Tones, Hybrids and FSK

HM01

It seems that HM01 has reappeared with some verve, Ary, E, PLdn and Spectre amongst others have offered logs:

MISSED LOG from The Spectre 3000

HM01

9155kHz 26/03/2023 0958z [18648 52778 03155 71663 40125 52433] 1027z Fair QRN3 QSB3 SUN (Remote WebSDR In America)
26/03/2023 1028z [18648 52778 03155 71663 40125 52433] 1057z Fair QRN3 QSB3 SUN (Remote WebSDR In America)

11462kHz 28/03/2023 0858z [18648 52778 03155 71663 40125 52433] 0927z Strong QRN2 QSB2 TUE (Remote KiwiSDR In America)
28/03/2023 0928z [18648 52778 03155 71663 40125 52433] 0957z Strong QRN2 QSB2 TUE (Remote KiwiSDR In America)

Other HM01 logs sent in by KW who makes no claims to them are these:

10715kHz 2218z 14/05
2218z 22/05
2225z 26/05

11462kHz 0745z 23/05

HM01 [fm Ary]

11530 kHz, 01-05/13-05. Repeat of April 6th
Groups: 87418 78747 55075 45445 75137 33064
Files: 24058741.TXT 71447874.TXT 20435507.TXT 72184544.TXT 32507513.TXT 52323306.TXT
Callsign: QWERTY01

11530 kHz, 14-05, 1700 UTC
Groups: 53754 55202 58841 28087 52722 05217
File: 14756622.TXT sent after each group

Callsign: QWERTY01

11435 kHz, 15-05, 1612 UTC

Groups: 53755 55203 58841 80441 52723 05218

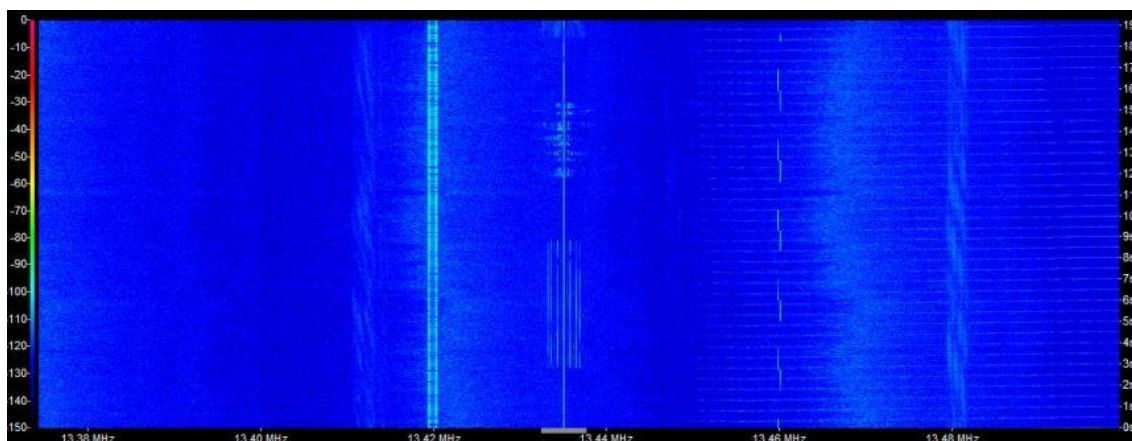
Files: 58315375.TXT 27635520.TXT 81825884.TXT 64488044.TXT 07325272.TXT 76730521.TXT

Callsign: QWERTY01

16-05/19-05. Repeat of May 15th

11435 kHz, 19-05, 1556 UTC

Briefly Radio Habana Cuba, then 53755 55203 58841 80441 52723 05218 (repeat of 15 May)



53755 55203 58841 80441 52723 05218

13435kHz 0706z 30/05 AM Fair with localQRM3: 53755 55203 58841 80441 52723 05218 [as above] PLdn TUE

'E'

9064kHz 0806z 01/05 45445 55nn5

10345kHz 0733z 05/05 Under QRM

11462kHz 0531z 29/04 7nn37 RTTYQRM at 559z continuous 5f SS
0536z 04/05 n8n4n 55075 45445 45137 33064 8n418 repeated at 0710z

13435kHz 0713z 22/04 55065 7513n 33nn4 68n47
0907z 29/04 Faint tones

In addition from PoSW I received this comment and further HM01 logs: "I noted the comment in the last newsletter on the subject of the lack of reports on the HM01 mixed-mode station; I discovered by chance while tuning around in the early morning in mid-May that this station was being heard with reasonable signal strength on Saturdays, Tuesdays and Thursdays, as per the prediction list, log enclosed, but was not heard in the last week of June."

The Cuban mixed mode data and voice station used to be very well received with strong signals on Sundays, Mondays, Wednesdays and Fridays when frequencies such as 9065 and 9330 are used in the early morning UK time. So strong in fact that good reception was often possible using a cheap transistor radio with its own short telescopic antenna. However, two or three years ago HM01 started to become somewhat weaker and then there was a sudden increase in local RF noise interference at my QTH, apparently being radiated from the local phone lines which are on poles, which is particularly fierce - like S9+ - at several chunks of the radio spectrum, including from about 8.5 to 11.5 MHz and signals have to be really strong to be heard. Having said that, it has recently been noticed that at the moment there is reasonable reception of HM01 on Saturdays, Tuesdays and Thursdays when frequencies in the 14 and 13 MHz bands, relatively interference free, are used:-

16-May-23, Tuesday:- 0557 UTC, 14375 kHz, HM01 starting up, "53755 55203 58841 80441 52723 05218", if my understanding of numbers in Spanish is correct, good signal, data sounds started at 0600:15s UTC.
0658 UTC, 13435 kHz, weak signal, difficult copy.

18-May-23, Thursday:- 0627 UTC, 14375 kHz, starting up after the break, "53755 55203 58841 80441 52723 05218", data at 0630z approx, went off air around 0655.
0657 UTC, 13435 kHz, starting up on this frequency, much weaker than earlier.

23-May-23, Tuesday:- nothing heard on 14375 or on 13435 this morning.

25-May-23, Thursday:- 0554 UTC, 14375 kHz, appeared to be in progress with data when tuned in about six minutes before the hour, stopped at around 0556z then start-up preamble
"53755 55203 58841 80441 52723 05218", good signal at first, became weaker.
0657 UTC, 13435 kHz, 5Fs as earlier.

27-May-23, Saturday:- nothing heard on 14375 at 0557 UTC, left RX on frequency, carrier came up at approx 0611z then HM01 in data mode, 5Fs "53755 55203 58841 80441 52723 05218". Stopped around 0626z, a short pause then 5Fs preamble and data sounds after 0630z.
Stopped at 0656z then about a minute later started up again on 14375, did not QSY to 13435. Still on 14375 when monitoring stopped at 0715 UTC

30 May-23, Tuesday:- 0557 kHz, 14375 kHz, "53755 55203 58841 80441 52723 05218", strong signal this morning.
0657 UTC, 13435 kHz, strong, 5Fs as earlier.

1-June-23, Thursday:- nothing heard on 14375 at 0557 UTC but was in progress when checked at 0608, 5Fs "53755 55203 58841 80441 52723 05218".

3-June-23, Saturday:- nothing heard on 14375 kHz at the expected time, carrier came up at 0605 UTC then a few seconds of what appeared to be a broadcast station, YL voice, then preamble “53755 55203 58841 80441 52723 05218”, data sounds after 0609z. Looks like someone overslept this morning!
0658 UTC, 13435 kHz, starting up, weak signal, difficult copy.

6-June-23, Tuesday:- 0558 UTC, 14375 kHz, “53755 55203 58841 80441 52723 05218”, these 5F groups remain remarkably constant, data sounds just after 0600z, *7 ante meridian* here. Not as strong as usual.
0757 UTC, stayed on 14375, starting up, somewhat stronger than earlier, data after 0700z.
0757 UTC, still on 14375, starting up with 5Fs as earlier, data sounds after 0800. Still on at 0815z but had gone when checked at 0820.

8-June-23, Thursday:- No sign of HM01 on 14375 when monitored from 0557 to 0605 UTC. Returned at approx 0612 to find transmission in progress, good signal with rapid QSB, heard 5Fs “53755 55203 58841 80441 52723 05218”.
0728 UTC, 13435 kHz, starting up after the break, 5Fs as earlier.

10-June-23, Saturday:- No sign at 0557 UTC on 14375 kHz, left a receiver running to await developments:-
0612 UTC, carrier came on then HM01 transmission, stopped at approx 0625 UTC for the break then started up again with 5Fs, “53755 55203 58841 80441 52723 05218”.
0657 UTC, stayed on 14375, 5Fs as earlier, data sounds after 0700, still on at 0716 UTC, gone when checked at 0721.
0721 UTC:- Now on 13425 kHz, weak signal.

13-June-23, Tuesday:- Nothing heard on 14375 when monitored from 0557 to 0615z.
Nothing heard on 13435 when monitored from 0657 to 0720z.

15-June-23, Thursday:- nothing heard at 0557 UTC on 14375, showed up later:-
0615 UTC, carrier noted, heard “05218”, appeared to go off air and then returned with transmission, 5Fs “53755 55203 58841 80441 52723 05218”.
0657 UTC, 13435 kHz, starting up, 5Fs as earlier, data sounds after 0700z.

17-June-23, Saturday:- 0557 UTC, 14375 kHz, appeared to have already started when tuned in at around 0555z, heard data sounds and “05218”.
Paused then started up with “53755 55203 58841 80441 52723 05218”, not too strong this morning.
0657 UTC, 13435 kHz, 5Fs as earlier, weak signal.

20-June-23, Tuesday:- 0557 UTC, 14375 kHz, “53755 55203 58841 80441 52723 05218”, data sounds after 0600z.
0657 UTC, 14375 kHz, still on this frequency, plain carrier, went off air just after 0707z.
0709 UTC, 13435 kHz, carrier came up approx 0709, weak, no audio, appeared to be in progress when checked again at 0715z.

22-June-23, Thursday:- 0600 UTC, just before, 14375 kHz, plain carrier with no audio of any kind, monitored until 0612, returned around 0650z still plain carrier. Still on this frequency at 0710z, nothing on 13435, gave up!

24-June-23, Saturday:- nothing heard at the expected times on either 14375 or 13435, not even a weak carrier.

27-June-23, Tuesday:- nothing heard at either 0557 UTC on 14375 or at 0657 UTC on 13435, monitored for several minutes past the hour.

29-June-23, Thursday:- again, nothing heard of these two transmissions, either propagation is extremely poor or HM01 is taking some time off.

X06 Mazielka (1c) logs section

MISSED LOGS from The Spectre 3000

X06

12177kHz 10/03/2023 0941z [356412 Berlin] 0951z Strong QRN2 QSB2 FRI Spectre
24/03/2023 0930z [356412 Berlin] 0935z Strong QRN2 QSB2 FRI Spectre

12194kHz 03/03/2023 1022z [625413 Tel Aviv] 1031z Fair QRN3 QSB3 FRI Spectre (First Alert)

12207kHz 01/03/2023 1137z [215346 Mumbai] 1139z Strong QRN2 QSB2 WED Spectre (Second Alert)

13556kHz 03/03/2023 0920z [324615 Madrid] 0922z Strong QRN2 QSB2 FRI Spectre (Transmitter Malfunction)

13979kHz 01/03/2023 1125z [215346 Mumbai] 1136z Strong QRN2 QSB2 WED Spectre (First Alert)

14595kHz 05/03/2023 0654z [452163 Kabul] 0659z Strong QRN2 QSB2 SUN Spectre

14631kHz 01/03/2023 0927z [362154 Athens] 0923z Strong QRN2 QSB2 WED Spectre

14824kHz 03/03/2023 1032z [625413 Tel Aviv] 1040z Fair QRN3 QSB3 FRI Spectre (Second Alert)

15810kHz 26/03/2023 1039z [145632 Algiers] 1043z Strong QRN2 QSB2 SUN Spectre

16115kHz 15/03/2023 1120z [215346 Mumbai] 1123z Fair QRN3 QSB3 WED Spectre

16277kHz 02/03/2023 1330z [436512 Harare] 1337z Strong QRN2 QSB2 THU Spectre

17470kHz 14/03/2023 1013z [216354 Chennai] 1018z Fair BCQRM3 QSB3 TUE Spectre

18197kHz 16/03/2023 0927z [645321 Ho Chi Minh City] 0929z Strong QRN2 QSN2 THU Spectre

20950kHz 22/03/2023 0733z [435621 Maputo] 0746z Weak QRN3 QSB3 WED Spectre

X06b

5864kHz 09/03/2023 2005z [111666] 2005z Fair QRN2 QSB2 THU Spectre
09/03/2023 2008z [111666] 2008z Fair QRN2 QSB2 THU Spectre

6783kHz 09/03/2023 2005z [111666] 2005z Fair QRN2 QSB2 THU Spectre
09/03/2023 2008z [111666] 2008z Fair QRN2 QSB2 THU Spectre

7518kHz 09/03/2023 2006z [111666] 2006z Fair BCQRM3 QSB2 THU Spectre
09/03/2023 2008z [111666] 2008z Fair BCQRM3 QSB2 THU Spectre

8161kHz 09/03/2023 2006z [111666] 2006z Strong QRN2 QSB2 THU Spectre
09/03/2023 2008z [111666] 2008z Strong QRN2 QSB2 THU Spectre

9379kHz 09/03/2023 2006z [111666] 2006z Strong QRN2 QSB2 THU Spectre
09/03/2023 2009z [111666] 2009z Strong QRN2 QSB2 THU Spectre

10244kHz 09/03/2023 2006z [111666] 2006z Strong QRN2 QSB2 THU Spectre
09/03/2023 2009z [111666] 2009z Strong QRN2 QSB2 THU Spectre

10421kHz 01/03/2023 1105z [111666] 1106z Fair QRN2 QSB2 WED Spectre
04/03/2023 1041z [111666] 1041z Strong QRN2 QSB2 SAT Spectre
22/03/2023 1101z [661616] 1101z Fair QRN3 QSB2 WED Spectre
22/03/2023 1103z [111666] 1103z Fair QRN3 QSB2 WED Spectre
25/03/2023 1109z [111666] 1109z Fair QRN2 QSB2 SAT Spectre
25/03/2023 1112z [111666] 1112z Fair QRN2 QSB2 SAT Spectre

11121kHz 01/03/2023 1106z [111666] 1107z Fair QRN2 QSB2 WED Spectre
04/03/2023 1041z [111666] 1041z Strong QRN2 QSB2 SAT Spectre
22/03/2023 1101z [661616] 1101z Fair QRN2 QSB2 WED Spectre
22/03/2023 1104z [111666] 1104z Fair QRN2 QSB2 WED Spectre
25/03/2023 1109z [111666] 1109z Fair QRN2 QSB2 SAT Spectre
25/03/2023 1112z [111666] 1112z Fair QRN2 QSB2 SAT Spectre

12121kHz 01/03/2023 1107z [111666] 1107z Strong QRN2 QSB2 WED Spectre
04/03/2023 1042z [111666] 1042z Strong QRN2 QSB2 SAT Spectre
22/03/2023 1102z [661616] 1102z Fair QRN2 QSB2 WED Spectre
22/03/2023 1104z [111666] 1104z Fair QRN2 QSB2 WED Spectre
25/03/2023 1109z [111666] 1109z Fair QRN2 QSB2 SAT Spectre
25/03/2023 1112z [111666] 1112z Fair QRN2 QSB2 SAT Spectre

12139kHz 03/03/2023 1006z [111666] 1006z Fair QRN2 QSB2 FRI Spectre
03/03/2023 1008z [111666] 1008z Fair QRN2 QSB2 FRI Spectre
24/03/2023 1052z [166611] 1052z Fair QRN3 QSB3 FRI Spectre

12139kHz 14/03/2023 0958z [111666] 0958z Fair QRN2 QSB2 TUE Spectre
14/03/2023 1002z [111666] 1002z Fair QRN2 QSB2 TUE Spectre

12151kHz 01/03/2023 1210z [111666] 1210z Strong QRN2 QSB2 WED Spectre
10/03/2023 1206z [223311] 1206z Fair QRN2 QSB2 FRI Spectre
10/03/2023 1209z [111666] 1209z Fair QRN2 QSB2 FRI Spectre
24/03/2023 1204z [166611] 1204z Strong QRN2 QSB2 FRI Spectre
24/03/2023 1207z [111666] 1207z Strong QRN2 QSB2 FRI Spectre

13874kHz 17/04/2023 1110z [511616] 1110z Fair QRN2 QSB3 MON Spectre
17/04/2023 1117z [116166] 1117z Fair QRN2 QSB3 MON Spectre

13384kHz 02/03/2023 1255z [111666] 1256z Fair QRN2 QSB2 THU Spectre
02/03/2023 1258z [616116] 1258z Fair QRN2 QSB2 THU Spectre
05/03/2023 1108z [111666] 1108z Strong QRN2 QSB2 SUN Spectre
05/03/2023 1112z [111666] 1112z Strong QRN2 QSB2 SUN Spectre
14/03/2023 1048z [111666] 1048z Strong QRN2 QSB2 TUE Spectre
14/03/2023 1054z [111666] 1054z Strong QRN2 QSB2 TUE Spectre

13421kHz 01/03/2023 1108z [111666] 1108z Strong QRN2 QSB2 WED Spectre
04/03/2023 1042z [111666] 1042z Strong QRN2 QSB2 SAT Spectre
22/03/2023 1102z [661616] 1102z Strong QRN2 QSB2 WED Spectre
22/03/2023 1105z [111666] 1105z Strong QRN2 QSB2 WED Spectre
25/03/2023 1109z [111666] 1109z Fair QRN2 QSB2 SAT Spectre
25/03/2023 1113z [111666] 1113z Fair QRN2 QSB2 SAT Spectre

13431kHz 01/03/2023 0958z [111666] 0958z Fair QRN2 QSB2 WED Spectre
01/03/2023 1001z [111666] 1001z Fair QRN2 QSB2 WED Spectre
02/03/2023 1004z [111666] 1006z Strong QRN2 QSB2 THU Spectre
02/03/2023 1009z [616116] 1010z Strong QRN2 QSB2 THU Spectre
09/03/2023 1002z [111666] 1002z Fair RTTYQRM3 QSB2 THU Spectre
09/03/2023 1006z [111666] 1006z Fair RTTYQRM3 QSB2 THU Spectre
15/03/2023 1002z [111666] 1002z Fair QRN2 QSB2 WED Spectre
15/03/2023 1007z [111666] 1007z Fair QRN2 QSB2 WED Spectre
16/03/2023 1003z [111666] 1005z Fair RTTYQRM3 QSB3 THU Spectre
16/03/2023 1018z [111666] 1018z Fair RTTYQRM3 QSB3 THU Spectre
22/03/2023 1004z [661616] 1004z Fair QRN3 QSB2 WED Spectre
22/03/2023 1009z [111666] 1010z Fair RTTYQRM3 QSB2 WED Spectre

23/03/2023 1008z [661666] 1008z Fair RTTYQRM3 QSB3 THU Spectre
23/03/2023 1013z [111666] 1013z Fair RTTYQRM3 QSB3 THU Spectre

13451kHz 01/03/2023 1211z [111666] 1211z Strong QRN2 QSB2 WED Spectre
10/03/2023 1207z [223311] 1207z Fair QRN2 QSB2 FRI Spectre
10/03/2023 1210z [111666] 1210z Fair QRN2 QSB2 FRI Spectre
24/03/2023 1205z [166611] 1205z Strong QRN2 QSB2 FRI Spectre
24/03/2023 1208z [111666] 1208z Strong QRN2 QSB2 FRI Spectre

13539kHz 14/03/2023 0959z [111666] 0959z Fair CODARQRM3 QSB2 TUE Spectre
14/03/2023 1003z [111666] 1003z Fair CODARQRM3 QSB2 TUE Spectre
24/03/2023 1052z [166611] 1052z Fair QRN3 QSB3 FRI Spectre

13553kHz 06/03/2023 1009z [111666] 1009z Fair QRN2 QSB2 MON Spectre
06/03/2023 1015z [111666] 1015z Fair QRN2 QSB2 MON Spectre
11/03/2023 1014z [111666] 1017z Fair QRN2 QSB2 SAT Spectre
25/03/2023 0958z [111666] 0958z Fair QRN2 QSB2 SAT Spectre
25/03/2023 1005z [111666] 1005z Fair QRN2 QSB2 SAT Spectre

13921kHz 01/03/2023 1108z [111666] 1109z Strong QRN2 QSB2 WED Spectre
04/03/2023 1043z [111666] 1043z Strong QRN2 QSB2 SAT Spectre
22/03/2023 1103z [661616] 1103z Strong QRN2 QSB2 WED Spectre
22/03/2023 1105z [111666] 1105z Strong QRN2 QSB2 WED Spectre
25/03/2023 1110z [111666] 1110z Fair QRN2 QSB2 SAT Spectre
25/03/2023 1113z [111666] 1113z Fair QRN2 QSB2 SAT Spectre

13984kHz 05/03/2023 1107z [111666] 1107z Strong QRN2 QSB2 SUN Spectre
05/03/2023 1111z [111666] 1111z Strong QRN2 QSB2 SUN Spectre
14/03/2023 1047z [111666] 1047z Strong QRN2 QSB2 TUE Spectre
14/03/2023 1052z [111666] 1052z Strong QRN2 QSB2 TUE Spectre

14353kHz 06/03/2023 1010z [111666] 1010z Fair QRN2 QSB2 MON Spectre
06/03/2023 1016z [111666] 1016z Fair QRN2 QSB2 MON Spectre
11/03/2023 1018z [111666] 1018z Fair QRN2 QSB2 SAT Spectre
25/03/2023 1000z [111666] 1000z Fair QRN2 QSB2 SAT Spectre
25/03/2023 1006z [111666] 1006z Fair QRN2 QSB2 SAT Spectre

14374kHz 17/04/2023 1111z [511616] 1111z Fair QRN2 QSB3 MON Spectre
17/04/2023 1118z [116166] 1118z Fair QRN2 QSB3 MON Spectre

14431kHz 01/03/2023 0959z [111666] 0959z Strong QRN2 QSB2 WED Spectre
01/03/2023 1002z [111666] 1002z Strong QRN2 QSB2 WED Spectre
02/03/2023 1007z [111666] 1007z Strong QRN2 QSB2 THU Spectre
02/03/2023 1011z [616116] 1112z Strong QRN2 QSB2 THU Spectre
09/03/2023 1003z [111666] 1003z Strong QRN2 QSB2 THU Spectre
09/03/2023 1007z [111666] 1007z Strong QRN2 QSB2 THU Spectre
15/03/2023 1004z [111666] 1004z Strong QRN2 QSB2 WED Spectre
15/03/2023 1008z [111666] 1008z Strong QRN2 QSB2 WED Spectre
16/03/2023 1006z [111666] 1006z Strong QRN2 QSB2 THU Spectre
16/03/2023 1019z [111666] 1019z Strong QRN2 QSB2 THU Spectre
22/03/2023 1005z [661616] 1005z Strong QRN2 QSB2 WED Spectre
22/03/2023 1011z [111666] 1011z Strong QRN2 QSB2 WED Spectre
23/03/2023 1009z [661666] 1009z Fair QRN3 QSB3 THU Spectre
23/03/2023 1014z [111666] 1014z Fair QRN3 QSB3 THU Spectre

14451kHz 01/03/2023 1211z [111666] 1212z Strong QRN2 QSB2 WED Spectre
10/03/2023 1208z [223311] 1208z Strong QRN2 QSB2 FRI Spectre
10/03/2023 1211z [111666] 1211z Strong QRN2 QSB2 FRI Spectre
24/03/2023 1206z [166611] 1206z Strong QRN2 QSB2 FRI Spectre
24/03/2023 1209z [111666] 1209z Strong QRN2 QSB2 FRI Spectre

14571kHz 14/03/2023 1400z [111666] 1400z Fair QRN2 QSB2 TUE Spectre
14/03/2023 1402z [111666] 1402z Fair QRN2 QSB2 TUE Spectre

14621kHz 01/03/2023 1109z [111666] 1109z Strong QRN2 QSB2 WED Spectre
04/03/2023 1043z [111666] 1044z Strong QRN2 QSB2 SAT Spectre
22/03/2023 1103z [661616] 1103z Strong QRN2 QSB2 WED Spectre
22/03/2023 1105z [111666] 1105z Strong QRN2 QSB2 WED Spectre
25/03/2023 1110z [111666] 1110z Strong QRN2 QSB2 SAT Spectre
25/03/2023 1113z [111666] 1113z Strong QRN2 QSB2 SAT Spectre

14639kHz 14/03/2023 1000z [111666] 1000z Fair QRN2 QSB2 TUE Spectre
14/03/2023 1005z [111666] 1005z Fair QRN2 QSB2 TUE Spectre
24/03/2023 1052z [166611] 1052z Fair QRN2 QSB3 FRI Spectre

14854kHz 02/03/2023 1256z [111666] 1256z Strong QRN2 QSB2 THU Spectre
02/03/2023 1259z [616116] 1259z Strong QRN2 QSB2 THU Spectre

14861kHz 11/03/2023 0813z [116611] 0813z Fair QRN2 QSB2 SAT Spectre
11/03/2023 0817z [111666] 0817z Fair QRN2 QSB2 SAT Spectre
11/03/2023 0822z [116611] 0822z Fair QRN2 QSB2 SAT Spectre

14953kHz 06/03/2023 1011z [111666] 1011z Strong QRN2 QSB2 MON Spectre

06/03/2023 1017z [111666] 1017z Strong QRN2 QSB2 MON Spectre
11/03/2023 1019z [111666] 1019z Fair QRN2 QSB2 SAT Spectre
25/03/2023 1001z [111666] 1001z Strong QRN2 QSB2 SAT Spectre
25/03/2023 1007z [111666] 1007z Strong QRN2 QSB2 SAT Spectre

14956kHz 03/03/2023 1113z [111666] 1113z Strong PLUTOIIRM4 QSB2 FRI Spectre
03/03/2023 1117z [611666] 1117z Strong PLUTOIIRM4 QSB2 FRI Spectre
08/03/2023 1112z [111666] 1112z Strong QRN2 QSB2 WED Spectre
08/03/2023 1115z [111666] 1115z Strong QRN2 QSB2 WED Spectre
10/03/2023 1035z [223311] 1036z Strong QRN2 QSB2 FRI Spectre
10/03/2023 1039z [111666] 1040z Strong QRN2 QSB2 FRI Spectre

14972kHz 10/03/2023 1144z [111666] 1144z Strong QRN2 QSB2 FRI Spectre
10/03/2023 1147z [223311] 1147z Strong QRN2 QSB2 FRI Spectre
14/03/2023 1127z [111666] 1127z Fair QRN2 QSB2 TUE Spectre
14/03/2023 1132z [111666] 1132z Fair QRN2 QSB2 TUE Spectre
24/03/2023 1148z [111666] 1148z Fair QRN2 QSB2 FRI Spectre

14974kHz 17/04/2023 1112z [511616] 1112z Fair QRN2 QSB3 MON Spectre
17/04/2023 1119z [116166] 1119z Fair QRN2 QSB3 MON Spectre

14984kHz 05/03/2023 1106z [111666] 1106z Strong BCQRM3 QSB2 SUN Spectre
05/03/2023 1110z [111666] 1110z Strong BCQRM3 QSB2 SUN Spectre
14/03/2023 1046z [111666] 1046z Strong QRN2 QSB2 TUE Spectre
14/03/2023 1051z [111666] 1051z Strong QRN2 QSB2 TUE Spectre

15851kHz 14/03/2023 1400z [111666] 1400z Fair QRN2 QSB2 TUE Spectre
14/03/2023 1402z [111666] 1402z Fair QRN2 QSB2 TUE Spectre

15861kHz 01/03/2023 1000z [111666] 1000z Strong QRN2 QSB2 WED Spectre
01/03/2023 1003z [111666] 1003z Strong QRN2 QSB2 WED Spectre
02/03/2023 1008z [111666] 1008z Strong QRN2 QSB2 THU Spectre
02/03/2023 1012z [616116] 1113z Strong QRN2 QSB2 THU Spectre
09/03/2023 1004z [111666] 1004z Strong QRN2 QSB2 THU Spectre
09/03/2023 1008z [111666] 1008z Strong QRN2 QSB2 THU Spectre
15/03/2023 1006z [111666] 1006z Strong QRN2 QSB2 WED Spectre
15/03/2023 1009z [111666] 1009z Strong QRN2 QSB2 WED Spectre
16/03/2023 1007z [111666] 1007z Strong QRN2 QSB2 THU Spectre
16/03/2023 1020z [111666] 1020z Strong QRN2 QSB2 THU Spectre
22/03/2023 1006z [661616] 1006z Strong QRN2 QSB2 WED Spectre
22/03/2023 1012z [111666] 1012z Strong QRN2 QSB2 WED Spectre
23/03/2023 1010z [661666] 1010z Strong QRN2 QSB2 THU Spectre
23/03/2023 1015z [111666] 1015z Strong QRN2 QSB2 THU Spectre

15953kHz 06/03/2023 1012z [111666] 1012z Strong QRN2 QSB2 MON Spectre
06/03/2023 1018z [111666] 1018z Strong QRN2 QSB2 MON Spectre
11/03/2023 1020z [111666] 1020z Fair QRN2 QSB2 SAT Spectre
25/03/2023 1002z [111666] 1002z Strong PULTOIIRM4 QSB2 SAT Spectre
25/03/2023 1008z [111666] 1008z Strong PLUTOIIRM4 QSB2 SAT Spectre

15961kHz 11/03/2023 0815z [116611] 0815z Strong QRN2 QSB2 SAT Spectre
11/03/2023 0818z [111666] 0818z Strong QRN2 QSB2 SAT Spectre
11/03/2023 0822z [116611] 0822z Strong QRN2 QSB2 SAT Spectre

15974kHz 17/04/2023 1113z [511616] 1113z Fair QRN2 QSB3 MON Spectre
17/04/2023 1120z [116166] 1120z Fair QRN2 QSB3 MON Spectre

16261kHz 11/03/2023 0816z [116611] 0816z Strong QRN2 QSB2 SAT Spectre
11/03/2023 0819z [111666] 0819z Strong QRN2 QSB2 SAT Spectre
11/03/2023 0823z [116611] 0823z Strong QRN2 QSB2 SAT Spectre

16272kHz 10/03/2023 1145z [111666] 1145z Strong QRN2 QSB2 FRI Spectre
10/03/2023 1148z [223311] 1148z Strong QRN2 QSB2 FRI Spectre
14/03/2023 1127z [111666] 1127z Fair QRN2 QSB2 TUE Spectre
14/03/2023 1133z [111666] 1133z Fair QRN2 QSB2 TUE Spectre
24/03/2023 1149z [111666] 1149z Fair QRN2 QSB2 FRI Spectre

16274kHz 17/04/2023 1114z [511616] 1114z Strong QRN2 QSB2 MON Spectre
17/04/2023 1121z [116166] 1121z Strong QRN2 QSB2 MON Spectre

16284kHz 02/03/2023 1257z [111666] 1257z Strong QRN2 QSB2 THU Spectre
02/03/2023 1300z [616116] 1300z Strong QRN2 QSB2 THU Spectre

16356kHz 03/03/2023 1112z [111666] 1112z Strong QRN2 QSB2 FRI Spectre
03/03/2023 1116z [611666] 1116z Strong QRN2 QSB2 FRI Spectre
08/03/2023 1111z [111666] 1111z Strong QRN2 QSB2 WED Spectre
08/03/2023 1114z [111666] 1114z Strong QRN2 QSB2 WED Spectre
10/03/2023 1034z [223311] 1034z Strong QRN2 QSB2 FRI Spectre
10/03/2023 1038z [111666] 1039z Strong QRN2 QSB2 FRI Spectre

17451kHz 14/03/2023 1359z [111666] 1359z Fair QRN2 QSB2 TUE Spectre
14/03/2023 1401z [111666] 1401z Fair QRN2 QSB2 TUE Spectre

17453kHz 06/03/2023 1013z [111666] 1013z Strong QRN2 QSB2 MON Spectre
06/03/2023 1020z [111666] 1020z Strong QRN2 QSB2 MON Spectre
11/03/2023 1021z [111666] 1021z Strong QRN2 QSB2 SAT Spectre
25/03/2023 1003z [111666] 1003z Strong BCQRM2 QSB2 SAT Spectre
25/03/2023 1009z [111666] 1009z Strong BCQRM3 QSB2 SAT Spectre

17456kHz 03/03/2023 1110z [111666] 1110z Strong QRN2 QSB2 FRI Spectre
03/03/2023 1114z [611666] 1114z Strong QRN2 QSB2 FRI Spectre
08/03/2023 1109z [111666] 1110z Strong QRN2 QSB2 WED Spectre
08/03/2023 1113z [111666] 1113z Strong QRN2 QSB2 WED Spectre
10/03/2023 1032z [223311] 1033z Strong QRN2 QSB2 FRI Spectre
10/03/2023 1037z [111666] 1037z Strong QRN2 QSB2 FRI Spectre

17472kHz 10/03/2023 1146z [111666] 1146z Strong QRN2 QSB2 FRI Spectre
10/03/2023 1149z [223311] 1149z Strong QRN2 QSB2 FRI Spectre
14/03/2023 1128z [111666] 1128z Strong BCQRM3 QSB2 TUE Spectre
14/03/2023 1134z [111666] 1134z Strong BCQRM3 QSB2 TUE Spectre
24/03/2023 1150z [111666] 1150z Fair QRN2 QSB2 FRI Spectre

17474kHz 17/04/2023 1115z [511616] 1116z Strong QRN2 QSB2 MON Spectre
17/04/2023 1122z [116166] 1122z Strong QRN2 QSB2 MON Spectre

18253kHz 06/03/2023 1014z [111666] 1014z Fair QRN2 QSB2 MON Spectre
06/03/2023 1021z [111666] 1021z Fair QRN2 QSB2 MON Spectre
11/03/2023 1022z [111666] 1022z Strong QRN2 QSB2 SAT Spectre
25/03/2023 1004z [111666] 1004z Strong QRN2 QSB2 SAT Spectre
25/03/2023 1010z [111666] 1010z Strong QRN2 QSB2 SAT Spectre

18372kHz 10/03/2023 1147z [111666] 1147z Strong QRN2 QSB2 FRI Spectre
10/03/2023 1150z [223311] 1150z Strong QRN2 QSB2 FRI Spectre
14/03/2023 1129z [111666] 1129z Strong QRN2 QSB2 TUE Spectre
14/03/2023 1135z [111666] 1135z Strong QRN2 QSB2 TUE Spectre
24/03/2023 1151z [111666] 1151z Fair QRN2 QSB2 FRI Spectre

19572kHz 10/03/2023 1148z [111666] 1148z Strong QRN2 QSB2 FRI Spectre
10/03/2023 1151z [223311] 1151z Strong QRN2 QSB2 FRI Spectre
14/03/2023 1130z [111666] 1130z Strong QRN2 QSB2 TUE Spectre
14/03/2023 1135z [111666] 1135z Strong QRN2 QSB2 TUE Spectre
24/03/2023 1152z [111666] 1152z Fair QRN2 QSB2 FRI Spectre

20072kHz 10/03/2023 1149z [111666] 1049z Strong QRN2 QSB2 FRI Spectre
10/03/2023 1152z [223311] 1152z Strong QRN2 QSB2 FRI Spectre
14/03/2023 1131z [111666] 1131z Strong QRN2 QSB2 TUE Spectre
14/03/2023 1136z [111666] 1136z Strong QRN2 QSB2 TUE Spectre
24/03/2023 1153z [111666] 1153z Fair QRN2 QSB2 FRI Spectre

X06d

11491kHz 02/03/2023 1021z [111111] 1021z Fair QRN2 QSB2 THU Spectre
16/03/2023 1004z [111111] 1005z Strong QRN2 QSB2 THU Spectre
16/03/2023 1009z [111111] 1009z Strong QRN2 QSB2 THU Spectre
23/03/2023 1017z [111111] 1017z Fair QRN2 QSB2 THU Spectre
23/03/2023 1020z [111111] 1020z Fair QRN2 QSB2 THU Spectre

12139kHz 03/03/2023 1006z [111111] 1006z Fair QRN2 QSB2 FRI Spectre

12189kHz 02/03/2023 1021z [111111] 1021z Fair QRN2 QSB2 THU Spectre
16/03/2023 1006z [111111] 1006z Strong QRN2 QSB2 THU Spectre
16/03/2023 1009z [111111] 1009z Strong QRN2 QSB2 THU Spectre
23/03/2023 1018z [111111] 1018z Fair QRN2 QSB2 THU Spectre
23/03/2023 1021z [111111] 1021z Fair QRN2 QSB2 THU Spectre

13386kHz 02/03/2023 1021z [111111] 1021z Fair QRN2 QSB2 THU Spectre
16/03/2023 1007z [111111] 1007z Strong QRN2 QSB2 THU Spectre
16/03/2023 1010z [111111] 1010z Strong QRN2 QSB2 THU Spectre
23/03/2023 1019z [111111] 1019z Fair QRN2 QSB2 THU Spectre
23/03/2023 1022z [111111] 1022z Fair QRN2 QSB2 THU Spectre

18249kHz 02/03/2023 1300z [111111] 1300 Strong QRN2 QSB2 THU Spectre

19449kHz 02/03/2023 1301z [111111] 1301z Strong QRN2 QSB2 THU Spectre

20849kHz 02/03/2023 1302z [111111] 1302z Strong QRN2 QSB2 THU Spectre

Now onto current Logs:

Date	Day	UTC	Freq	Scale	Monitor	Comments
20230502	Tue	0800-0819	13411	165423	Ary, Andrew	TX to Brussels, G12
20230502	Tue	0818-0821	15989	125643	Ary, Andrew	TX to Ulanbatar, G317
20230502	Tue	0827-0833	14358	154263	Ary, Andrew	TX to Rome, G7
20230502	Tue	1156-1157	18523	325614	Andrew	TX to Nairobi, G392
20230502	Tue	1700	17421	246531	Ary	TX to Accra, G16
20230504	Thu	0724	21825	314265	Andrew	TX to Antananarivo, weak, G380
20230504	Thu	0822-0824	17534	351264	Andrew	TX to Abu Dhabi, G440
20230504	Thu	0940-0944	18197	645321	Andrew	TX to Ho Chi Minh City, G410
20230510	Wed	0737-0740	18591	435621	Andrew	TX to Maputo, G98
20230510	Wed	0744-0747	11483	412356	Andrew	TX to Budapest, G97
20230510	Wed	0754-0759	14655	164253	Andrew	TX to Addis Ababa, G395
20230510	Wed	0808-0819	13419	465132	Ary, Andrew	Alert 2 (TX to Sofia, G100) 1
20230510	Wed	0830-0836	11153	465132	Andrew	2.2
20230511	Thu	0809-0819	14812	263145	Ary, Andrew	Alert 7 (TX to Prague, G111) 1
20230511	Thu	0819-0824	16153	153624	Ary, Andrew	TX to Damascus, G249
20230511	Thu	0827	16087	263145	Ary, Andrew	7.2: Not working well
20230511	Thu	0829-0836	16087	263145	Andrew	7.3
20230514	Sun	1035	14414	145632	Dave/AU	TX to Algiers, G135
20230515	Mon	0659-0704	12122	165324	Ary, Andrew	TX to Vienna, G145
20230515	Mon	0911-0927	20675	641523	Andrew	TX to Lusaka, G337
20230516	Tue	0801-0809	15989	125643	Philby/US, Ary	TX to Ulanbatar, G383
20230516	Tue	0830-0838	12149	154263	Ary, Andrew	Alert 2 (TX to Rome, G148) 1
20230516	Tue	0838-0840	15687	154263	Andrew	2.2
20230516	Tue	1143-1147	16188	325614	Andrew	TX to Nairobi, G400
20230517	Wed	1118-1121	13979	215346	Dave	TX to Mumbai, G167
20230518	Thu	0742-0743	19405	352416	Andrew	Alert 2 (Dar es Salaam, G179) 1
20230518	Thu	0743-0746	18575	352416	Andrew	2.2
20230519	Fri	1034	18575	352416	Ary	TX to Dar es Salaam, G441 (new)
20230522	Mon	0819-0827	17475	156234	Dave	Alert 1 (TX to Kampala, G203) 1
20230522	Mon	0846	17475	156234	Dave	1.2: Shortie (15 secs)
20230522	Mon	0935	19235	463125	Dave	Alert 2 (TX to Rabat, G222) 1
20230522	Mon	1003	16117	463125	Andrew	2.2
20230522	Mon	1243-1248	11492	364152	Andrew	Alert 1 (New Delhi, G73) 1: Weak
20230522	Mon	1252-1257	11492	364152	Andrew	1.2
20230523	Tue	1020?	20147	216354	Anon38225	(1)
20230524	Wed	0939-1003	13369	412356	Andrew	Very long TX to Budapest, G243
20230601	Thu	1323	20627	436512	Dave	TX to Harare, G44
20230604	Sun	0654-0657	13481	452163	RX39	TX to Kabul, G66
20230605	Mon	0648-0649	11638	165324	Andrew	TX to Vienna, G1(2)
20230605	Mon	0807-0815	12199	532614	Andrew	TX to Paris, G4
20230605	Mon	0922-0930	20675	641523	Andrew	TX to Lusaka, G5
20230606	Tue	0828-0834	14358	154263	RX39	TX to Rome, G7(3)
20230606	Tue	1142-1147	18523	325614	RX39	TX to Nairobi, G392(4)
20230606	Tue	1712	14812	246531	HFD	TX to Accra, G16
20230607	Wed	0826-0828	14631	362154	RX39	TX to Athens, G32(3)
20230607	Wed	1149-1207	14650	215346	RX39, Dave	Alert 2 (TX to Mumbai, G25) 1(6)
20230607	Wed	1207-1213	13979	215346	RX39, Dave	2.2(5)
20230608	Thu	0813-0819	14550	153624	Andrew	TX to Damascus, faint, G249
20230608	Thu	1018	16115	215346	Anon52484	TX to Mumbai, G108
20230609	Fri	0649-0652	13427	341265	Andrew	Rare scale, G442 (new)
20230613	Tue	0806-0811	13420	534216	Ary, Dave	TX to Bagdad, G87
20230613	Tue	0821-0826	16257	542136	Ary, Dave	TX to Beijing, G88(7)
20230613	Tue	0954-0958	16317	612534	Ary, Dave	TX to Ashgabat, G89
20230613	Tue	1025-1026	20813	216354	RX39	TX to Chennai, G388(8)
20230614	Wed	0725-0735	20950	435621	Ary, Dave	TX to Maputo, G98
20230614	Wed	0741-0807	13369	412356	Ary, Dave	Long TX to Budapest, G97
20230614	Wed	0818	11153	465132	Ary, Dave	TX to Sofia, G100
20230616	Fri	0836-0838	14450	123456	Ary, Andrew	X06c
20230616	Fri	0903-0905	14450	123456	Ary, Andrew	X06c
20230616	Fri	1017-1021	14824	625413	Andrew	TX to Tel Aviv, G193
20230616	Fri	1147	14450	123456	Ary	X06c
20230616	Fri	1203	14450	123456	Ary	X06c
20230619	Mon	0704-0706	11638	165324	Ary, Dave	TX to Vienna, G145
20230619	Mon	0719	12219	123456	Ary	X06c
20230619	Mon	0753	14450	654321	Ary	X06c
20230619	Mon	0756	13530	1--6--	HFD	X06b
20230619	Mon	0810	12219	654321	Ary	X06c
20230619	Mon	0816-0817	12100	654321	Andrew	X06c
20230619	Mon	0817-0824	14450	654321	Ary, Andrew	X06c
20230619	Mon	0820-0824	11438	532614	Ary, Dave	TX to Paris, G147
20230619	Mon	0824-0827	18960	654321	Ary, Andrew	X06c

20230619	Mon	0923-0933	20675	641523	Ary, Dave	TX to Lusaka, G337
20230619	Mon	1035	12219	123456	Ary	X06c
20230619	Mon	1037	12100	123456	Anon07043	X06c
20230620	Tue	0631	12120	123456	Ary	X06c
20230620	Tue	0823-0834	13401	154263	Ary, RX39	TX to Rome, G148 (RX39: (4))
20230621	Wed	0641	15819	256341	Ary, Andrew	TX to Beirut, G169
20230621	Wed	1118-1141	14650	215346	Ary, Andrew, Dave	Very long TX to Mumbai, G167
20230623	Fri	1008-1018	17463	256134	Ary, Andrew	TX to Abidjan, G270(9)
20230625	Sun	1052-1054	15810	145632	RX39	TX to Algiers, G284
20230626	Mon	0814-0818	14871	156234	Andrew	TX to Kampala, G203
20230626	Mon	0940-0942	13517	463125	Andrew	TX to Rabat, G222
20230626	Mon	1236-1239	13467	364152	Ary, Andrew	TX to New Delhi, G73(10)
20230627	Tue	0801-0805	11545	534216	Ary, Andrew	TX to Bagdad, G232
20230627	Tue	0806-0811	16257	542136	Ary, Andrew	TX to Beijing, G88
20230627	Tue	1004	13510	612534	Ary	TX to Ashgabat, G234
20230628	Wed	0618	13448	1--6--	Schorschi	X06b before XPA2p
20230628	Wed	0741	13369	412356	Ary	TX to Budapest, G243
20230628	Wed	0805-0807	11153	465132	Ary, Andrew	TX to Sofia, G246(11)
20230628	Wed	0905-0914	16116	134265	Ary, Andrew	Alert 3 (TX to Tunis, G90) 1
20230628	Wed	0911-0918	18245	134265	Ary, Andrew	3.2
20230628	Wed	0917-0923	13985	134265	Ary, Andrew	3.3
20230628	Wed	1100	14250	1--6--	HFD	X06b
20230628	Wed	1211	11250	1--6--	tiNG	Very long X06b(12)

- 1) 1016 UTC: Serdolik, after it stopped, "216354" 2 times (alert 1)
- 2) Weak start, suddenly got strong
- 3) Fair QRM3 QSB3
- 4) Strong QRM2 QSB2
- 5) Fair QRM2 QSB3
- 6) Very weak QRM3 QSB4
- 7) 0816-0819 UTC: MFSK66
- 8) 1038 UTC: Serdo v2
- 9) Heard by Andrew on WebSDR Greifswald (DL5CG)
- 10) Carrier up until 1254 UTC
- 11) 0752 UTC: serdo v2
- 12) Ending after 1245 UTC

Many thanks as usual to all contributors. Till the next issue I say: Good-bye and stay safe!

Jochen Schäfer, Numbers-, X06 Database and Teamkopf

GIZZA JOB



Wanted spies: No remote work and must leave cell phone at home

May 22, 2023 6:40 PM UTC Updated a day ago

Germany, February 8, 2019. REUTERS/Axel Schmidt

BERLIN, May 22 (Reuters) - Calling wannabe James Bonds.

<https://www.reuters.com/world/europe/wanted-spies-no-remote-work-must-leave-cell-phone-home-2023-05-22/>

Intelligence services are finding it harder to recruit staff since the pandemic as prospects want to work from home and would rather not part with their personal cell phones, the head of Germany's foreign intelligence service BND said on Monday.

"We cannot offer certain conditions that are taken for granted today," said Bruno Kahl, who described finding enough and the right staff as a great challenge as baby boomers are heading into retirement.

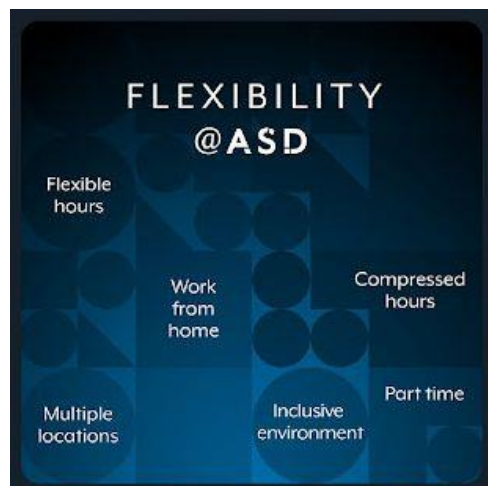
"Remote work is barely possible at the BND for security reasons, and not being able to take your cell phone to work is asking much from young people looking for a job," he added.

Some 6,500 people work for the BND, according to its homepage.

Reporting by Sabine Siebold; Editing by Lisa Shumaker

<https://www.reuters.com/world/europe/wanted-spies-no-remote-work-must-leave-cell-phone-home-2023-05-22/>

Where else could you go to work and leave your mobile phone outside the office, I wonder?



FINALLY!:

BRITAIN SECRETLY TURNED GIBRALTAR INTO MAJOR NATO SPY BASE

A formerly secret UK military report reveals that Gibraltar's "main value" to Britain during the Cold War was its role as a covert NATO military and intelligence outpost – which it kept hidden from Spain.

MATT KENNARD
22 JUNE 2023

<https://declassifieduk.org/britain-secretly-turned-gibraltar-into-major-nato-spy-base/>

NATO paid for secret spy facility to be built inside the Rock of Gibraltar
NATO operated secret underground maritime headquarters at Gibraltar and proposed installation of underwater spy system in the Gibraltar Straits

Gibraltar provided NATO with "ideal position for surveillance" of Soviet naval movements
UK knew Spain believed NATO operations on Gibraltar were "potential threat to Spanish security"

Britain secretly used its overseas territory of Gibraltar as a NATO spying base during the Cold War, it can be revealed.

The revelations come from a secret report drawn up by the Ministry of Defence (MoD) in 1972.

It shows how NATO paid for a spy facility inside the Rock of Gibraltar and operated a secret underwater maritime headquarters in seas around the territory.

The new information could increase tensions with Spain as it is not clear whether these assets still exist. Spain has long claimed Gibraltar and attempts to restrict its use as a military and intelligence base.

The MoD report was titled "The Strategic Importance of Gibraltar to the United Kingdom" and submitted to Peter Carrington, defence secretary in Edward Heath's government.

Carrington would go on to serve as the secretary general of NATO from 1984-88.

Using Gibraltar as a NATO spy base was kept secret from Spain, which had been ruled for decades by the dictator General Franco, because the British knew it would be controversial. The report noted: "Spain objects to Gibraltar's status as a 'foreign base on Spanish territory' and regards its use by NATO as a potential threat to Spanish security."

Spain did not join NATO until 1982, following Franco's death in 1975 and the emergence of democracy. The regime in Madrid had "regularly sought, with some success, to dissuade other NATO nations from making use of Gibraltar", the British report added.

It is likely the Franco regime had no idea of the NATO build-up in the British overseas territory in the period.

NATO surveillance

The report noted that NATO maintained at Gibraltar a secret "underground Maritime Headquarters", which could be "activated, when necessary, for operations and exercises".

It was used to service NATO's naval commander in the region, who was responsible for all maritime operations using Alliance forces.

"His tasks broadly are to carry out surveillance, to conduct an anti-submarine offensive in the Straits of Gibraltar and to control and protect Allied shipping sheltered in ports" in the area, the report noted.

It continued: "He is also charged with a number of tasks common to all NATO naval commanders in the Mediterranean, eg the destruction of enemy shipping."

The report further noted that there are "current NATO proposals for the installation of an underwater surveillance system in the Gibraltar Straits." It is not known if these were followed through.

The report also noted that a Joint Communication Centre manned by Royal Navy personnel was "built within the Rock in 1963 using NATO infrastructure funds".

Communications facilities in Gibraltar for NATO commanders included high frequency radio circuits to the UK, Malta, Rome and Lisbon. Also made available were tactical radio circuits for NATO maritime operations in the eastern Atlantic and the western Mediterranean.

Approval “in principle” had also been given by NATO for the installation of a tropospheric-scatter system – a method of communicating with microwave radio signals over large distances – to provide improved communications between NATO’s Gibraltar and Portuguese command structure.

“In addition, NATO has tentative plans to install a satellite communication station in Gibraltar in 1975/76,” the report noted.

An excerpt from the 1972 UK military report. (UK National Archives)

Importance to UK

The report concluded: “The main value of Gibraltar to the UK is in the context of Britain’s support for NATO.”

It continued: “Without the facilities of Gibraltar...NATO would lose an ability to control the Straits, certain Naval Base facilities, an underground maritime headquarters and a base for Long Range Maritime Patrol and other air operations.”

The report noted that Gibraltar provides NATO with “an ideal position for surveillance and enables regular reports to be made on Soviet naval movements”.

Written at a time of Cold War tensions with the Soviet Union, the strategic importance of Gibraltar to NATO “was likely to increase rather than decrease in the foreseeable future,” it added.

NATO objectives in the Straits of Gibraltar, the report noted, “are to keep the Straits open for the free and uninterrupted passage of Alliance naval forces and merchant shipping, to maintain close surveillance of Soviet Bloc ships using the Straits and to have the ability to deny the Straits to the enemy once hostilities commence.”

It concluded: “Gibraltar provides an excellent location from which to carry out operations in the pursuance of these aims.”

The nearest other NATO air bases at the time were Montijo in Portugal on the Atlantic Coast, 300 miles to the north west, and Decimomannu in Sardinia in the Mediterranean, 700 miles to the east.

There were other US air bases in southern Spain “from which NATO operations would no doubt be mounted in war, but,” it added, “there could be political constraints on their use in peace or during a period of tension.”

<https://declassifieduk.org/britain-secretly-turned-gibraltar-into-major-nato-spy-base/>

Chart Section Index

1. Prediction Chart
2. M01 Schedule
3. Family III
4. XPA1 Wednesday/Friday schedule
XPA2 schedules m and p

July 2023

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Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jul kHz, ID, ...	Aug kHz, ID, ...
x	x	x	x	x			0000		F01	01A	17471	17471
x	x	x	x	x	x	x	0000		V13	0		18040
x				x			0025/0035		F01	01A	14878/12185	16023/14373
	x			x			0030/0050/0110		M12	01B	7475/ 8075/ 9275 402	6784/ 8184/ 9384 713
x	x	x	x	x	x	x	0100		V13	0		18040
x				x			0125/0135		F01	01A	14878/12185	16023/14373
x	x	x	x	x	x	x	0200		V13	0	8169	9276
						x	0200/0220/0240		V07	01B	search	search
x	x						0210/0310 tue, when msg		E06	01A	11632/13827 537	11472/13570 537
x				x			0210/0230/0250		M12	01B	15881/14781/13481 874	12163/11163/19463 114
			x	x			0300/0400		E06	01A	14845/12189 361	14648 /12084 361
x	x	x	x	x	x	x	0300		V13	0	7502	search (15388?)
x		x					0315		E11	03	14575 25#	14575 25#
x	x	x	x	x	x	x	0400		V13	0		search (15388?)
x	x	x	x	x			0400/0420		S06	01A	11616/ 9322 480	11616/ 9322 480
	x		x				0445		S11A	03	9968 79#	9968 79#
x							0450		E11	03	7469 41#	7469 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
x	x						0500/0510/0520 0530/0540/0550		XPB1	01B	11169/11469/12169 13369/13969/14569	11559/12159/13459 13959/14459/14959
x	x	x	x	x			0500/0520		M14	01A	12211/10243 952	12211/10243 952
	x		x				0500/0520/0540		XPA2	01B	10243/11143/12143	10252/11152/12152
			x	x			0500/0600	1/3	E06	01A	13825/15615 679	13540/16115 210
x		x					0510		S11A	03	13537 65#	13537 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	9150 35#	9150 35#
x	x	x	x	x	x	x	0600		V13	0		11430
						x	0600/0620/0640		E07	01B	10317/11117/12217 312	9261/10261/11461 224
		x			x		0600/0620/0640		M12	01B	search	search

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jul kHz, ID, ...	Aug 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			x			0645		E11	03	8091 51#	8091 51#
x		x		x		x	0655		HM01	18	9330	9330
	x		x		x		0655		HM01	18	13435	13435
x			x				0700		S11A	03	9339 47#	9339 47#
	x			x			0700		E11	03	8680 57#	8680 57#
					x	x	0700		E11	03	7377 49#	7377 49#
x	x	x	x	x	x	x	0700		V13	0		18040
						x	0700		M01	01B	6780 025	6780 025
	x		x				0700/0720/0740		M12	01B	10807/10207/ 9207 822, check	11148/10648/ 9148 161, check
x		x					0700/0720/0740		XPA2	01B	12148/13448/13948	12152/13552/13952
	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	18030 75#	18030 75#
	x			x			0715		E11	03	10429 63#	10429 63#
	x			x			0720		M01A	14	9151 728	9151 728
x							0745		E11	03	9610 26#	9610 26#
	x		x				0745		E11	03	14940 22#	14940 22#
		x		x			0745		E11	03	15720 34#	15720 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		18040
	x			x			0800/0820/0840		M12	01B	12218/13518/ 254 search cancelled?	13391/13891/14791 387 cancelled?
		x					0800/0820/0840		XPA2	01B		
				x		x	0800/0820/0840		XPA2	01B	13391/13891/14891	13962/14862/15962
	x	x					0820		E11	03	17378 13#	17378 13#
			x	x			0820		E11	03	4909 43#	4909 43#
x				x			0830		E11	03	16335 18#	16335 18#

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jul kHz, ID, ...	Aug kHz, ID, ...
					x	x	0830		S11A	03	5149 37#	5149 37#
x		x					0845		E11	03	12815 71#	12815 71#
	x		x				0845		E11	03	19184 15#	19184 15#
		x		x		x	0855		HM01	18	9240	9240
	x		x		x		0855		HM01	18	11462	11462
x		x					0900		E11	03	9052 53#	9052 53#
		x					0900/1000		S06	01A	search	search
x		x					0910/0930/0950		XPA2	01B	16296/14981/13953	18059/16093/14874
			x		x		0910/0930/0950		XPA2	01B	13445/12145/11545	14372/13372/12172
x				x			0915		S11A	03	6814 48#	6814 48#
		x	x				0930		E11	03	6923 27#	6923 27#
x	x	x	x	x	x	x	0930		M14	01A	16347 10.&25. 14878 11.&26. when msg	16347 10.&25. 14878 11.&26. when msg
x		x		x		x	0955		HM01	18	9155	9155
	x		x		x		0955		HM01	18	12180	12180
	x			x			1000		E11	03	12153 30#	12153 30#
	x	x	x	x			1015/1025/1035		F01	01A	11141/ 9192/ 7363	11076/ 9164/ 7316
x		x					1045		E11	03	12089 69#	12089 69#
		x			x		1100/1110/1110 1130/1140/1150		XPB1	01B	13884/13384/12384 11584/11084/10584	13567/13367/12367 11567/11067/10567
	x			x			1100/1120/1140		XPA2	01B	14958/13958/12158	13887/12187/10387
		x	x				1100/1120/1140		XPA2	01B	17435/16235/14935	16264/15864/14864
			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, 13974	9276, 13974
x					x		1200/1210/1210 1230/1240/1250		XPB1	01B	15876/14876/14376 13976/13376/12176	15876/14876/14376 13976/13376/12176
	x	x					1205		E11	03	6304 46#	6304 46#
		x		x			1210/1230/1250		XPA1	01B	13368/12168/11168	13491/12191/10691
x			x				1300		E11	03	5737 31#	5737 31#
x	x	x	x	x	x	x	1300		V13	0	7688, 11430	7688, 11430
	x			x			1300/1310/1310 1330/1340/1350		XPB1	01B	search	search
					x		1300/1320/1340		E07	01B	12176/11576/10276 512	12176/11576/10276 512
	x			x			1400		S11A	03	9448 42#	9448 42#
			x		x		1410/1430/1450		E07	01B	13562/14862/16162 441	13519/14819/15919 288
	x				x		1430		E11	03	12984 91#	12984 91#

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jul kHz, ID, ...	Aug kHz, ID, ...
					x		1500		M01	14	6435 025	6435 025
	x			x			1500/1520/1540		E07	01B	search	search
					x		1500/1520/1540		XPA2	01B	13954/12154/11454	13825/12125/11025
			x				1530		E11	03	10356 26#	10356 26#
					x	x	1530		E11	03	5082 36#	5082 36#
x	x	x	x	x	x	x	1555		HM01	18	11435	11435
x			x				1600/1620/1640		M12	01B	16284/14984/14384 293	16251/14951/14451 294
		x				x	1600/1620/1640		M12	01B	13979/13379/12179 931	14681/13881/13381 683
	x		x				1600/1620/1640		XPA2	01B	13538/14438/14938	14864/14364/13464
	x					x	1605		E11	03	5231 23#	5231 23#
	x		x				1645		E11	03	14575 33#	14575 33#
x	x	x	x	x	x	x	1655		HM01	18	11530	11530
		x		x			1715		E11	03	7863 97#	7863 97#
			x				1730		E11	03	8088 41#	8088 41#
x						x	1745		E11	03	14410 24#	14410 24#
x	x	x	x	x	x	x	1755		HM01	18	11635	11635
	x		x				1800		M01	14	5280 025	5280 025
		x		x			1800/1820/1840		XPA2	01B	search	search
					x		1800/1820/1840		M12	01B	11435/10598/ 9227 938	11435/10598/ 9227 938
				x		x	1815		E11	03	12229 92#	12229 92#
x			x				1840/1850/1900	1	F01	01A	14829/12214/10932	15854/13543/11126
		x			x		1850		S11A	03	12457 28#	12457 28#
x			x				1900		E11	03	7600 64#	7600 64#
		x					1900/1920/1940		M12	01B	8047/ 6802/ 5788 463	8047/ 6802/ 5788 463
		x		x			1900/1920/1940		M12	01B	14968/14468/13368 943	15931/14831/13531 985
			x				1900/1920/1940		M12	01B	11435/10598/ 9227 938	11435/10598/ 9227 938
				x			1900/2000	1/3	S06	01A		10286/ 8037 637
		x			x		1910		E11	03	4783 39#	4783 39#
				x		x	1910		E11	03	9610 61#	9610 61#
x			x				1940/1950/2000	1	F01	01A		
			x			x	2000		E11	03	5409 52#	5409 52#

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jul kHz, ID, ...	Aug kHz, ID, ...
	x		x				2000		M01	14	4903 025	4903 025
x			x				2000/2020/2040		M12	01B	12217/10817/ 9317 617	12148/10648/ 9148 374
				x			2000/2100	1/3	S06	01A	10286/ 8037 637	
x		x	x	x		x	2055		HM01	18	11635	11635
	x		x		x		2055		HM01	18	16180	16180
				x	x		2100/2120/2140		M12	01B	10767/10167/ 9267 712	10314/ 9114/ 8014 310
	x					x	2100/2120/2140		XPA2	01B	13394/12194/10794	12159/11559/10559
x		x		x		x	2155		HM01	18	10715	10715
	x		x		x		2155		HM01	18	17480	17480
					x		2230/2240		F01	01A	18562/16218	20283/18397
					x		2330/2340		F01	01A	18562/16218	20283/18397

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	May kHz, ID, ...	Jun kHz, ID, ...	Jul kHz, ID, ...	Aug kHz, ID, ...	Remarks
x							0315		E11	03	14575 25#	14575 25#	14575 25#	14575 25#	since 01/14, last log 06/23 change from Wed/Thu 11092 kHz to Mon/Wed 11581 kHz during March
x		x					0445		S11A	03	9968 79#	9968 79#	9968 79#	9968 79#	since 05/22, last log 06/23
x							0450		E11	03	7469 41#	7469 41#	7469 41#	7469 41#	since 02/10, last log 06/23 2nd transmission Thu 1730z
x		x					0505		E11	03					since 10/11, last log 02/23 Mar/Apr/Sep/Oct at 1230z, Mai-Aug at 1645z
x		x					0510		S11A	03	13537 65#	13537 65#	13537 65#	13537 65#	since 08/19, last log 06/23
				x		x	0600		E11	03	9150 35#	9150 35#	9150 35#	9150 35#	since 04/15, last log 06/23
x		x					0645		E11	03	8091 51#	8091 51#	8091 51#	8091 51#	since 07/09, last log 06/23
x			x				0700		S11A	03	9339 47#	9339 47#	9339 47#	9339 47#	since 04/10, last log 06/23
x				x			0700		E11	03	8680 57#	8680 57#	8680 57#	8680 57#	since 01/12, last log 06/23
					x	x	0700		E11	03	7377 49#	7377 49#	7377 49#	7377 49#	since 07/15, last log 06/23
x		x					0715		E11	03	18030 75#	18030 75#	18030 75#	18030 75#	since 06/21, last log 06/23
x				x			0715		E11	03	10429 63#	10429 63#	10429 63#	10429 63#	since 02/11, last log 06/23
x							0745		E11	03	9610 26#	9610 26#	9610 26#	9610 26#	since 03/14, last log 06/23 2nd transmission Thu 1530z
x		x					0745		E11	03	14940 22#	14940 22#	14940 22#	14940 22#	since 01/20, last log 06/23
		x		x			0745		E11	03	15720 34#	15720 34#	15720 34#	15720 34#	since 06/17, last log 06/23
x	x						0820		E11	03	17378 13#	17378 13#	17378 13#	17378 13#	since 12/18, last log 06/23
			x	x			0820		E11	03	4909 43#	4909 43#	4909 43#	4909 43#	since 10/09, last log 06/23
x				x			0830		E11	03	16335 18#	16335 18#	16335 18#	16335 18#	since 07/15, last log 06/23
					x	x	0830		S11A	03	5149 37#	5149 37#	5149 37#	5149 37#	since 02/14, last log 06/23
x		x					0845		E11	03	12815 71#	12815 71#	12815 71#	12815 71#	since 09/10, last log 06/23
x		x					0845		E11	03	19184 15#	19184 15#	19184 15#	19184 15#	since 07/17, last log 06/23
x		x					0900		E11	03	9052 53#	9052 53#	9052 53#	9052 53#	since 10/05, last log 06/23
x				x			0915		S11A	03	6814 48#	6814 48#	6814 48#	6814 48#	since 04/19, last log 06/23
		x	x				0930		E11	03	6923 27#	6923 27#	6923 27#	6923 27#	since 02/14, last log 06/23
x				x			1000		E11	03	12153 30#	12153 30#	12153 30#	12153 30#	since 11/16, last log 06/23
x		x					1045		E11	03	12089 69#	12089 69#	12089 69#	12089 69#	since 03/18, last log 06/23
x	x						1205		E11	03	6304 46#	6304 46#	6304 46#	6304 46#	since 03/10, last log 06/23
x		x					1230		E11	03					since 10/11, last log 10/22 May-Aug at 1645z, Nov-Feb at 0505z
x			x				1300		E11	03	5737 31#	5737 31#	5737 31#	5737 31#	since 07/14, last log 06/23
x			x				1400		S11A	03	9448 42#	9448 42#	9448 42#	9448 42#	since 02/10, last log 06/23
x				x			1430		E11	03	12984 91#	12984 91#	12984 91#	12984 91#	since 10/15, last log 06/23
			x				1530		E11	03	10356 26#	10356 26#	10356 26#	10356 26#	since 06/14, last log 06/23 2nd transmission Mon 0745z
					x	x	1530		E11	03	5082 36#	5082 36#	5082 36#	5082 36#	since 03/14, last log 06/23
x					x		1605		E11	03	5231 23#	5231 23#	5231 23#	5231 23#	since 11/15, last log 06/23
x		x					1645		E11	03	14575 33#	14575 33#	14575 33#	14575 33#	since 10/11, last log 08/22 Mar/Apr/Sep/Oct at 1230z, Nov-Feb at 0505z
		x		x			1715		E11	03	7863 97#	7863 97#	7863 97#	7863 97#	since 02/15, last log 06/23
			x				1730		E11	03	8088 41#	8088 41#	8088 41#	8088 41#	since 03/10, last log 06/23 2nd transmission Mon 0450z
x					x		1745		E11	03	14410 24#	14410 24#	14410 24#	14410 24#	since 04/18, last log 06/23
				x	x		1815		E11	03	12229 92#	12229 92#	12229 92#	12229 92#	since 05/16, last log 06/23
		x			x		1850		S11A	03	12457 28#	12457 28#	12457 28#	12457 28#	since 06/17, last log 06/23
x			x				1900		E11	03	7600 64#	7600 64#	7600 64#	7600 64#	since 05/16, last log 06/23
		x			x		1910		E11	03	4783 39#	4783 39#	4783 39#	4783 39#	since 02/14, last log 06/23
				x	x		1910		E11	03	9610 61#	9610 61#	9610 61#	9610 61#	since 04/17, last log 06/23
			x		x		2000		E11	03	5409 52#	5409 52#	5409 52#	5409 52#	since 05/15, last log 06/23

XPA1 Wednesday/Friday schedule

Zulu >	XPA1 Wed/Fri Schedule		
Month v	H+10 1210 / 1310z	H+30	H+50
Jan	14852	13952	11552
Feb	14374	13374	11474
Mar	14451	13451	12151
Apr	13368	12168	11168
May	13419	12219	11419
June	13545	12145	11145
July	13368	12168	11168
Aug	13491	12191	10691
Sept	12137	11137	10237
Oct	14564	13564	11464
Nov	13875	13375	10875
Dec	13465	12165	10265

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			Monday/Wednesday		
	H 00	H+20	H+40	H 00	H+20	H+40
	1200 / 2100			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

SPECIAL MATTERS

Thanks to all our contributors:



MESSAGES:

E: Thanks 'E', Badge update good – never considered shape as reason to spend mega money! Enjoy the summer.

RELEVANT WEBSITES

ENIGMA 2000 Website:

<http://www.enigma2000.org>

Frequency Details can be downloaded from:

<http://www.cvni.net/radio/>

More Info on 'oddities' can be found on Brian of Sussex' excellent web pages:

<http://www.brogers.dsl.pipex.com/page2.html>

Time zone information:

<http://www.timeanddate.com/library/abbreviations/timezones/>



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