

# ENIGMA 2000 NEWSLETTER



<http://www.enigma2000.org>



**GCHQ Bude**

[Origins unknown, tnx anon]

**ISSUE 143**  
**July 2024**

<http://www.enigma2000.org>

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See last page also.

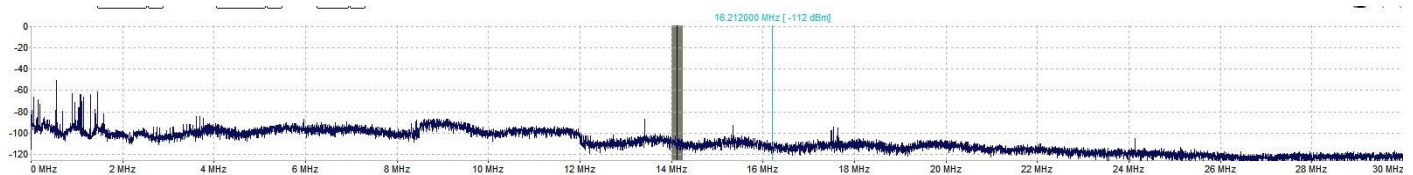
## A REMINDER: ENIGMA2000 WILL NOT DISCUSS THE RUSSIAN/UKRAINE MATTER BEYOND TECHNICAL MATTERS

**WE WILL NOT BE ANSWERING E MAILS SENT FROM THE PARTICIPATING COUNTRIES CONCERNING OUR SUBJECT MATTER OR USING MATERIAL THEREOF.**

# Editorial

May started off with some pretty poor condition that went from bad to worse. In the UK we have been treated to two nights of the Aurora Borealis, such was the magnitude of the Coronal Mass Ejections from our star.

Two radio blackouts so far, the latest as I write this, as the image taken across the HF spectrum [1127z 13052024] shows – not much happening:



The usually reliable XPA2 p signal and that in the early evenings of Radio Thailand being unworkable and difficult respectively. This morning, whilst in the Coffee shop, one Turkish tea and a Rock Cake as per norm, I noted the Solar Flux Index as a whopping 222, the Sunspot Number as 195 and the A and K indices as 54 and 4; almost totally useless. 80 to 20m bands noted as ‘poor’ and 17 to 10m bands as fair. Not much on the chart above. Here’s hoping for and expecting something a little more helpful propagation wise.

Starting back up on 6<sup>th</sup> June; setting up the PC and checking all the working parts [recognise that phrase 499?] I noted the propagation figure were still rather naff for mid-band HF although marginally better than May, that’s for sure.

Yours truly was unable to monitor from 16<sup>th</sup> May as I was undergoing major surgery for total hip replacement. I didn’t like to take my Yaesu VX-5 with me as calling CQ on 2m/70cm probably forbidden in the ward. In any case there was only one other occupant and we hit it off like old mates, same age, same upbringing and so on.

After three days in hospital I was kicked out but with three floors and the shack on the top floor meant no radio [other than the VX-5 and an odd listen on the TRX-1]. First attempt to reach the shack on 3<sup>rd</sup> June was successful but I couldn’t bend to turn the mains on so had to wait for assistance.

However, as at 7<sup>th</sup> June we’re up and running after initial problems on setting shack PC up to make it do what I want it to do.

I do recall my wife phoning me at work to tell me there was a radio amateur on her ward and he’d very much like a QSO at 1300; so for the week or so he was in the care of my wife’s ward I stood outside the Physics Staff Common Room at Imperial College and using just 10mW of RF had interesting QSO’s into his ward. On more than one occasion my counterpart in UCL also joined in and using similar powers. Line of sight over 11 miles, goes to show it can be done.

Although there was no onward cover on the polytones and the one XPB1 I do follow, many thanks to those who continued with logs [Thanks to M8, HJH, HFD, BR and so on]. I never said I was away purposely other than to those involved in the day to day running of the group.

It’s fairly obvious that events surrounding UKR are causing massive changes occurring to the Spy Numbers scene; for me Polytone schedules I’ve followed for years have suddenly gone, E07 schedules and the entire E07a network.

Hans-Friedrich has kindly supplied a list of further stations/scheds he follows that are now no longer there:

Missing skeds

Hans-Friedrich Dumrese kindly posted a list of missing skeds that have been absent for three months [Tnx H-FD]

\* M12 sat 1800/1820/1840z

missing in April 11435/10598/ 9327 938

missing in Mai 11435/10598/ 9327 938

missing in June 11435/10598/ 9327 938

\* XPB1 mon/sat 1200/1210/... 1250z

missing in April 17474/16274/15974/14974/14374/13874

missing in Mai 16329/15929/14829/14429/13929/13529

missing in June 15876/14876/14376/13976/13376/12176

Other missing Skeds:

\* M12 thu 0800/0820/0840z

missing in Mai 9317/10484/11552 135

missing in June 9317/10484/11552 135

The recommended reading this issue is not a reference book [it could well be if read with an open mind] but it’s the BBC’s Security Correspondent Frank Gardners latest thriller. It’s brilliant, read on! As I write this I see Amazon have reduced the cover price to just £10.00.

### Noises? From ‘E’

Whilst at large in the Lake District in May our correspondent noticed a burst noise 4795kHz at 4m and 10s intervals during the day and beyond.

It also manifested itself on 5750kHz [not heard down south, it seems]. Open Carrier also heard often on 27012kHz, so perhaps worth the odd scan or three as time permits. [Thanks corresponding member]. *So folks, Any ideas?*

### A little German/Russo espionage ..... also from 'E'

Two alleged spies suspected of planning to sabotage German military aid for Ukraine have been arrested in the southern German state of Bavaria. The two men, described as dual German-Russian nationals, were detained in Bayreuth on suspicion of spying for Russia, prosecutors say.

Dieter S, 39, is suspected of a string of spying offences. They include plotting an explosion, arson and maintaining contact with Russian intelligence. He is also accused of fighting for a Russian proxy armed force in occupied eastern Ukraine.

The second suspect, identified as Alexander J, is accused of helping him since last month to identify potential targets for attack. He was due to appear in court on Thursday.

Germany is the second largest donor of military aid to Ukraine after the US, earmarking some €28bn (£24bn) since the start of Russia's full-scale invasion in February 2022.

According to prosecutors, the main suspect Dieter S is alleged to have discussed potential sabotage operations in Germany with his Russian contact since October last year, in an attempt to undermine its support for Ukraine.

They cite preparing explosive and arson attacks, especially on military and industrial infrastructure. Dieter S is said to have scouted potential targets including US military facilities, taking photos and videos and handing the information to the Russian contact.

German Justice Minister Marco Buschmann told German news agency DPA that the two arrests were "another significant investigative success" in the fight against Russian President Vladimir Putin's sabotage and spy networks.

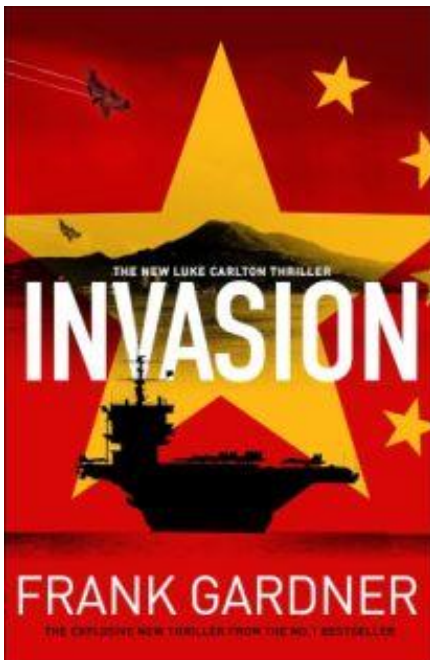
Vice-Chancellor Robert Habeck, currently on an unannounced visit to Kyiv, said on Thursday that he was there "at a time when Ukraine needed all the support it can get in its fight for freedom".

The government in Berlin is spearheading a plan to help bolster Ukraine's air defences.

Thanks 'E'.

## Recommended Reading

### **Not a reference book this time!**



Frank Gardner, BBC Security Correspondent has four books under his belt, that I have read, and this one. Apart from Blood and Sand which tells of events leading up to and beyond his shooting in Saudi Arabia and his fight back to health, this is by far the best. [The others are Crisis, Outbreak and Ultimatum in which we are introduced to the main operator in FG's storyline Luke Carlton and his close desk support Jenny Li]. In this latest volume the action takes off unbounded; I was hoping to read this whilst in hospital but it was saved for later.

It has been difficult to put down, this morning [08/06] the pain from my hip woke me up at 0430 and I was downstairs, coffee at the ready and reading again. It is most believable and written by someone who has been the same places as yours truly and a few of our members [and you 499], these places are well recognizable by their description. I cannot do justice to the genius of Frank Gardner so here's the blurb from the book to do that job. It's well worth the money.... Is there SIGINT and ELINT in it? Oh yes, and the product of 'Converged Analysis of Smartphone Devices;' something a lot of us know a lot about!

*Across the Strait from Taiwan, China's armed forces appear to be readying for war. Could the People's Republic be preparing to invade its island neighbour?*

*Britain's Secret Intelligence Service has a mole deep within the Chinese Communist Party leadership – an individual in possession of intel that could defuse this fast-escalating situation. A 'collector' is sent to meet the spy and, in an anonymous Hong Kong café, the information is handed over. But before the collector can get the data to MI6, she is overpowered, drugged and abducted by persons unknown. Is it the MSS, China's feared state security agency? Or has another, less predictable player entered the game?*

*As geo-political tensions rise, MI6 field operatives Luke Carlton and Jenny Li are dispatched to find the missing agent and the precious intel she carries. With the clock ticking and tip-offs taking them to shady Macau casinos, tawdry night clubs and multiple dead ends, Luke is convinced they are being deliberately strung along.*

*Then they get the vital lead they need. It points to Taiwan – a country frantically preparing for imminent*

## **A short piece to be getting on with!!**

### Covcom Conundrums

As late as 1998 CIA was instructing its agents in foreign lands by short wave radio. The process was called OWVC or One Way Voice Channel.

To shortwave monitors they were, and still are, number stations. The Station used transmitted from a number of sites, from the US, Great Britain, Germany and if rumours are to be believed, Cyprus too.

There were two variations, one Spanish and one in English. On one occasion a variant transmitting numbers in Farsi was intercepted on two occasions. The content was the same; a synthesised female voice repeating numbers along with other encryption administration information to assist him or her to decrypt the message as easily as possible.

The station was called 'The Counting Station,' TCS, or E05 or V05 depending on the language used, English or Spanish.

There were many frequencies used for this worldwide operation, usually sent on the hour or sometimes 45 minutes past the hour for 20 hours a day, 0100 to 2200UTC daily.

Like every other Number Station transmission to agents abroad the TCS was virtually infallible; whilst the transmitting site might be known and the general area of reception guessed at the recipient sat with his commercial Short Wave receiver at home or other secure location and merely received his message knowing he would not be detected merely by listening to the radio; detection of any radiated signal from a radio receiver is extremely difficult.

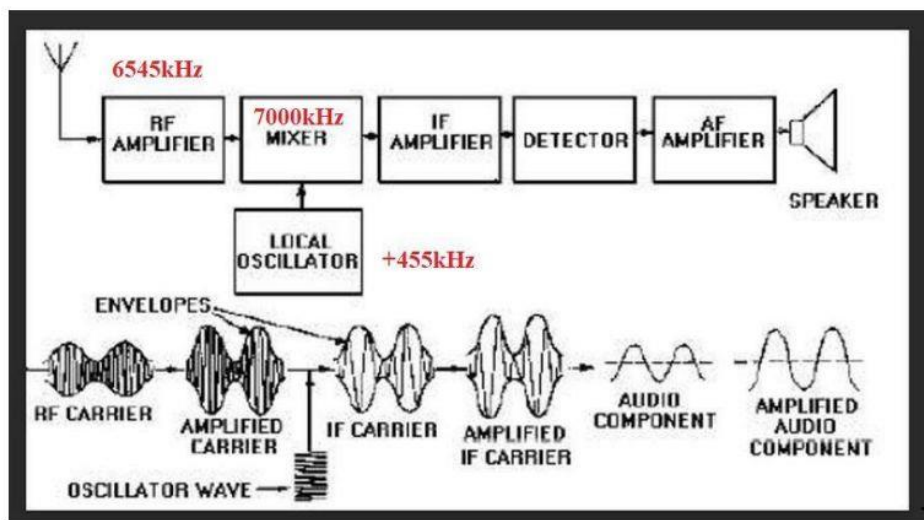
This technique used by MI5 during the Cold War, was known as RAFTER and relied on the reception of the radiated signal of the receiver intermediate frequency plus or minus the received signal. The intercepting and frequency measuring equipment needed to be 'ideally' close coupled. It was used successfully against the Russians as well as Gordon Lonsdale, one of the Portland Spy Ring, in 1959. Such activity is claimed by Peter Wright in his book 'Spycatcher.'

RAFTER was claimed as the idea of Peter Wright but it was just a repurposing of techniques used by radio servicemen to assist with fault location in superhet receivers. ie If there is no sound coming from the AF section and you can couple a receiver and hear the wanted signal you've tested a large proportion of the faulting receiver.

*[Yours truly recalls using this technique to find out what station my noisy next door neighbour was listening to and introducing the sounds of a teleprinter over the top of it – using a cheapo Eagle sig gen, a variable oscillator built around a 12AT7/ECC83 as I remember- I even followed him up and down the band and eventually he gave up. Even better his house was repossessed and he disappeared forever. He lives in a block of flats now and I pity the poor sods who live around him, my gain, their loss*

*It was also used on me one Sunday morning as I listened to the RSGB News on 80m. The amateur involved, who lived in the same block of flats as I mentioned this small fact as we left for duty aboard HMS Belfast in the early days. He was an excellent Morse operator and specialised in Russian Morse – just like DoK – It later transpired he was a radio operator aboard certain trawlers usually operating around the Barents Sea. He even once recounted going ashore to pick up a remote piece of equipment left in a lonely location. Like DoK he is now passed on ]*

RAFTER in an easy to understand picture! [Not nicked by Messer Assange]!



**Intermediate Frequency is known so  $7000 - 455 = 6545\text{kHz}$**

© PBeaumont2021

Recently (November 2, 2018) Yahoo News posted an article on its internet pages entitled 'The CIA's communications suffered a catastrophic compromise. It started in Iran.'

Apparently persons working covertly in Iran used the internet and a particular website and somehow downloaded their message. Whether this was encrypted in some way or what form it took is not stated.

What is stated is that whatever caused this breach the results of the compromising of the sites were deeply felt by the CIA between 2009 and 2013 as those working for the CIA abroad, particularly China and Iran, were rounded up.

It was reported that as many as 24 'sources' died in China between 2011 and 2012.

A subsequent statement outlined that the CIA communications package used to communicate with its agents was first used in 'war zones in the Middle East and not built to withstand the sophisticated counterintelligence efforts of a state actor like China or Iran.'

In May 2011 Iran had announced that it had broken up a 'CIA Spy Network' of some 30 CIA spies, a breach confirmed by US Officials as it was aired on ABC News. Using simple techniques the CIA asset network was analysed using statistics surrounding the site and its visitors.

Once Iran's technicians discovered what the CIA knew about Iranian operations they were able to identify the citizens spying for the CIA; that led to a total understanding of the communications system, allegedly named 'COVCOM.' Whilst it is easy to blame Iran for the penetration and compromising of this CIA COVCOM system the arrests of CIA agents and the reported resultant deaths of some in China suggest that Iran may not have been the original actor involved in this compromising of the COVCOM system and the spy rings that used it *per se*.

Between 2011 and 2012 Chinese authorities arrested 30 agents working for the CIA. Working in Beijing was one CIA case officer Jerry Chun Shing LEE, also known as Zhen Cheng Li.

Lee had 'trained in methods of covert communication, surveillance detection, recruitment of assets, handling of assets, operational security and documenting, handling and securing classified material.

Lee's employment across the globe required Top Secret clearance for which he was cleared.

Sometime around 10th August, 2012 Lee and his family left Hong Kong where they had lived and returned to a hotel Eastern District of Virginia.

During the five days traveling and after at their hotel in Virginia the Lee's baggages were searched and classified documents, some classified Secret, were discovered and photographed.

It was noted that whilst Jerry Lee had liaised with colleagues of similar clearance he made no attempt to either turn over the unwanted documents or hand them to his employers.

This search proved Lee was in unauthorised possession of materials relating to the national defence of the US; such materials were a 'datebook' and an 'address book,' both of which had handwritten notes.

These notes pertained to the classified material also in Lee's possession.

The documents in Lee's possession included classified cables and it soon became obvious that other information was classified to Top Secret and could gravely damage the National Security of the United States.

With the unauthorised possession of Top Secret material it was thought that Lee had spied on behalf of the Chinese government.

Whilst this was not enough to assist the Chinese to gain physical access to the COVCOM communications system used by the CIA it is known that both Iran and China engaged in communications on cyber issues and at a very high level. Had Lee disclosed the identities of the CIA agents then there would be the starting point to trace the internet activity.

The United States was not the only country to stop using Shortwave transmissions of Spy messages. The Counting Station was last heard on October 3, 2003. Also closed is MOSSAD's E10 Station with its NATO style phonetic identifier, 'Victor Lima Bravo Two' as one example, and its five letter groups. The Lincolnshire Poacher and Cherry Ripe with their folk tune intros and plummy voiced female announcer said to be on behalf of MI6 are also long gone now.

It was thought that satellite phones and the BGAN had replaced the transmissions received on shortwave but as one commentator observed, "The CIA is ruining the day it went to the Internet, it should have carried on with 'Cynthia' [CIA pet name for the TCS]."

Whatever, the US certainly transmitted Farsi messages into Iran 1100 and 1200UTC from early 2003 and on a Friday only. [*What about the Congregational prayers?*]

They were destined for their Iranian national asset who was serving in the Revolutionary Guards and who allegedly answered to the codename 'WALLY.' 'WALLY' was not discovered and with his family relocated from Tehran Iran to somewhere in California.

Many Number Stations of course can still be heard today, using a variety of modes, Morse, Voice, Polytones, FSK and RDTF. What is interesting is at the start of the Ukraine/Russia war many schedules either shut of had schedules removed.

This practice continues to this day.

**Thanks to author for presenting this piece and allowing us to use with our Newsletter.**

## Newsround

### Australia

## **India's Modi government operated 'nest of spies' in Australia before being disrupted by ASIO**

By defence correspondent Andrew Greene

Posted Tue 30 Apr 2024 at 7:59am Tuesday 30 Apr 2024 at 7:59am

<https://www.abc.net.au/news/2024-04-30/modi-government-operated-nest-of-spies-in-australia-/103786892>

Indian spies were kicked out of Australia after being caught trying to steal secrets about sensitive defence projects and airport security, as well as classified information on Australia's trade relationships.

The so-called foreign "nest of spies" disrupted by the Australian Security Intelligence Organisation (ASIO) in 2020 was also accused of closely monitoring Indians living here and developing close relationships with current and former politicians.

ASIO Director-General Mike Burgess first alluded to the spy ring in his annual threat assessment delivered in 2021, but, he did not disclose which country was behind the activity, saying to do so would be an "unnecessary distraction".

"The spies developed targeted relationships with current and former politicians, a foreign embassy and a state police service," Mr Burgess said during his March 2021 speech inside ASIO's Canberra headquarters.

"They monitored their country's diaspora community. They tried to obtain classified information about Australia's trade relationships.

"They asked a public servant to provide information on security protocols at a major airport."

Scott Morrison, left, shakes hands with Narendra Modi, right, as they both look into the camera.

The expulsion of spies working for Narendra Modi's government occurred in 2020, during Scott Morrison's prime ministership. (AAP: Mick Tsikas) Mr Burgess also detailed how the "nest of spies" had successfully cultivated and recruited an Australian government security clearance holder who had access to "sensitive details of defence technology".

National security and government figures have now confirmed to the ABC that India's foreign intelligence service was responsible for the "nest of spies", and "a number" of Indian officials were later removed from Australia by the Morrison government.

The Washington Post this week also reported that two members of the Indian intelligence agency known as the "Research and Analysis Wing" (RAW) were expelled from Australia in 2020 following an ASIO counter-intelligence operation.

Details of New Delhi's clandestine operations in Australia have emerged as western allies grow increasingly alarmed over the actions of Prime Minister Narendra Modi's government, which is accused of an assassination in Canada last September.

Do you know more? Four Corners is investigating Indian foreign interference in Australia and would like to hear from you. Contact us here.

In an interview with the ABC while visiting the United States in November, Mr Burgess declined to say whether the Indian government's foreign operations had caused any concern for ASIO back in Australia.

"I don't comment on any actions of any government, and you shouldn't read anything into that, I can assure you though if we saw acts of foreign interference or plotting for that, we will deal with it," Mr Burgess told the ABC.

Further pressed on whether he had ever been involved in the expulsion of Indian personnel from Australia, the ASIO director-general again declined to comment.

"We don't comment on specific operational matters but of course, from time-to-time ASIO will discover undeclared intelligence officers who are operating in our country and through our own actions or asking government to help, people can and do leave this country as a result of being found out."

Indian High Commissioner to Australia, Gopal Baglay.

Indian High Commissioner to Australia Gopal Baglay at an event inside ASIO headquarters in March 2024. (ABC News)

India is a member of the Quadrilateral Security Dialogue alongside the United States, Japan and Australia, and is considered a crucial defence partner in the Indo-Pacific where concerns over China's military build-up are growing.

In 2022, when delivering his next Annual Threat Assessment, Mr Burgess described how nations that were considered friendly were still trying to conduct espionage against Australia.

"Multiple countries are seeking to conduct espionage against us — and not just those countries that might be considered our traditional adversaries," he then said.

"In some instances, espionage is conducted by countries we consider friends — friends with sharp elbows and voracious intelligence requirements."

Podcast: Looking For Modi

In this seven-part series, Avani Dias travels around India in search of answers about who Narendra Modi really is and how he has shaped the world's most populous nation.

An illustration depicting Narendra Modi's face in teal, with white hair and beard, on orange background

Read more

Government sources have told the ABC that friendly nations believed to be particularly active with espionage operations in Australia include Singapore, South Korea, Israel and India.

During the 2024 Annual Threat Assessment, also delivered inside ASIO headquarters, senior diplomats and ambassadors from Singapore, South Korea, Israel and India were all invited guests to hear Mr Burgess speak.

The ABC has approached the Indian High Commission and ASIO for comment, but both declined to respond to specific questions about the "nest of spies" operation.

<https://www.abc.net.au/news/2024-04-30/modi-government-operated-nest-of-spies-in-australia-/103786892>

## **Canada**

### **Canada orders anti-drone firm to shut down over national security risks**

Ishveena Singh

Jun 4 2024 - 9:54 am PT

<https://dronedj.com/2024/06/04/canada-anti-drone-national-security/>

Canada has ordered the dissolution of anti-drone solutions company Bluevec Technologies on national security grounds.

Bluevec has developed a portable solution to detect drones and drone operators in real-time.

A statement from Canada's innovation ministry failed to mention what kind of national security risks the Bluevec posed but suggested that the company had received foreign investment.

According to the ministry, the decision was taken after a multi-step security review process that involved rigorous scrutiny by Canada's national security and intelligence community.

"The government's decisions are based on facts and evidence and on the advice of Canada's security and intelligence community and other government partners," the statement said. "While Canada continues to welcome foreign direct investment, we will act decisively when investments threaten our national security."

Company records dug out by local media show that Bluevec is run by Junfeng (Jack) Jia who arrived in Canada in 2007 from China.

Bluevec was founded in 2018 along with Pegauni Technology, a company that designs detection solutions for wireless devices, such as mobile phones, connected cars, and smart wearables. Pegauni has also been ordered to shut down by the government under the Investment Canada Act.

It's worth mentioning that Bluevec was recently ordered to pay \$800,000 to competitor SkyCope for misusing the company's confidential information and selling it to China-based anti-drone firm Beijing Lizheng Technology.

<https://dronedj.com/2024/06/04/canada-anti-drone-national-security/>

## **China**

### **Beijing takes 'decisive measures' after accusing MI6 of recruiting married couple to spy on China** **Ministry of State Security claims British intelligence service convinced pair who worked for Chinese state agency to defect to MI6**

Our Foreign Staff  
3 June 2024 • 11:05am  
Related Topics  
MI6 (SIS), China, Beijing

<https://www.telegraph.co.uk/world-news/2024/06/03/beijing-claims-mi6-recruited-married-couple-to-spy-on-china/>

China has accused the Secret Intelligence Service of recruiting a couple who worked for the country's central government to spy for the UK.

The Ministry of State Security said in a post on its official WeChat account that MI6 operatives had convinced a man surnamed Wang, who worked in a "core confidential role" in the central state apparatus, to defect, along with his wife, surnamed Zhou.

'Major espionage case'

"Recently, after careful investigation, the national security organs uncovered a major espionage case in which the British Secret Intelligence Service (MI6) instigated a couple, Wang and Zhou, who were staff members of a central state agency of China, to defect," it said.

The accusations came after months of mutual espionage allegations between Beijing and Western countries.

The ministry said British spies began cultivating Wang after he began a course of study in the UK in 2015, arranging dinners and tours for him in order to "understand his character weaknesses, interests and demands".

After learning that Wang "had a strong desire for money", it then approached him to provide well-paid consulting services that came to involve the internal workings of central state agencies, the ministry said.

MI6 personnel later revealed their identities to Wang and directed him to return to China to collect intelligence, convincing him to coerce Zhou into doing the same.

The ministry said it had gathered evidence and taken "decisive measures" against Wang, adding that the case was under further investigation.

The statement gave no details of Wang or Zhou's current occupations in China, the nature of the information they provided, or their whereabouts.

The Foreign, Commonwealth and Development Office was approached for comment.

China and Western powers have long traded accusations of spying but only recently started to disclose details of alleged individual cases.

Last month, British police said Matthew Trickett, who had been charged with helping the semi-autonomous Chinese city of Hong Kong to gather intelligence in the UK, had been found dead in unexplained circumstances.

And in April, German authorities arrested four people on suspicion of spying for China, in the same week that British police charged two men with passing sensitive information to Beijing between 2021 and last year.

<https://www.telegraph.co.uk/world-news/2024/06/03/beijing-claims-mi6-recruited-married-couple-to-spy-on-china/>

## **Great Britain**

### **Ministry of Defence 'targeted by Chinese hack'** **MPs to be told of the breach which targeted service personnel on Tuesday**

Dominic Nicholls,  
ASSOCIATE EDITOR (DEFENCE)  
7 May 2024 • 8:24am

<https://www.telegraph.co.uk/news/2024/05/06/ministry-of-defence-hacked-china/>

China has hacked the Ministry of Defence, The Telegraph understands.

Hackers gained access to payroll information including names, bank details and some addresses of serving personnel, reservists and veterans, in the data breach.

MPs are to be told about the cyber attack on Tuesday and an investigation has been launched into how such sensitive information could have been accessed.

The MoD has not confirmed which country was behind the hack, but The Telegraph understands it was China.

It comes after Chinese-state backed hackers targeted the Electoral Commission and accessed the voting records of 40 million people.

The commission attack was identified in October 2022, but the hackers had been able to access its systems for more than a year, since August 2021.

They also targeted MPs and staff from the White House and US defence agencies.

About 2,000 people are thought to have been affected, although the number of addresses that have been compromised is understood to be far fewer.

Veterans may be affected

The cyber attack is thought to have been on a payroll system operated by a contractor external to the MoD.

The system, which is the main mechanism for administering pay and expenses for service personnel, is separate from the wider MoD infrastructure. It was immediately taken offline.

It is not known if the contractor is responsible for any other part of the MoD infrastructure or whether the company was targeted specifically because of a known vulnerability in its systems.

The attack, which is thought to have taken place in recent days, would not have been able to access any personal details of special forces personnel as they are administered through a separate system. However, some veterans who have left the Armed Forces in recent years may have been affected.

The MoD is expected to contact anyone whose details have been compromised over the next few days.

All salary payments will be made as normal but some expenses payments may be delayed as a result of the attack.

Officials are said to be working to understand the scale of the breach, which could raise questions about whether allies with strained relationships with China wish to share sensitive intelligence with the UK.

In December, a Foreign Office minister told the Commons private conversations of high-profile politicians and civil servants were compromised by Russia's principal security service the FSB during "sustained" attempts to interfere in British politics.

A cyber influence campaign by a group known as Star Blizzard, "almost certainly" a subordinate of an FSB cyber unit, had "selectively leaked and amplified information" since 2015.

Previous attacks against the UK

March 2024: The UK and the United States accused China of a global campaign of "malicious" cyber attacks in an unprecedented joint operation to reveal Beijing's espionage.

Britain publicly blamed China for targeting the Electoral Commission watchdog and for being behind a campaign of online "reconnaissance" aimed at the email accounts of MPs and peers.

December 2023: A Foreign Office minister told the Commons that private conversations of high-profile politicians and civil servants were compromised by Russia's principal security service during "sustained" attempts to interfere in UK politics.

A cyber influence campaign by a group known as Star Blizzard, "almost certainly" a subordinate of an FSB cyber unit, had "selectively leaked and amplified information" since 2015.

July 2022: The British Army confirmed a "breach" of its Twitter and YouTube accounts. The channel featured videos on cryptocurrency and images of billionaire businessman Elon Musk.

The official Twitter account had retweeted a number of posts appearing to relate to NFTs (non-fungible tokens).

April 2021: Britain accused Russia's foreign intelligence service of being behind a major cyber attack on the West.

The Foreign, Commonwealth and Development Office (FCDO) said the National Cyber Security Centre (NCSC) had assessed that it was "highly likely" the SVR was responsible for the so-called SolarWinds hack.

July 2020: Britain, the United States and Canada accused Russian spies of targeting scientists seeking to develop a coronavirus vaccine.

The three allies said hackers linked to Russian intelligence were seeking to steal the secrets of research bodies around the world, including in the UK.

<https://www.telegraph.co.uk/news/2024/05/06/ministry-of-defence-hacked-china/>

But! Better than that above.....

## **Heathrow Border Force official and former Royal Marine accused of spying for Hong Kong**

### **Wai, who has joint British and Chinese nationality, is also a special constable with the City of London Police**

Robert Mendick,  
CHIEF REPORTER and  
Fiona Parker,  
SENIOR NEWS REPORTER  
13 May 2024 • 5:08pm

<https://www.telegraph.co.uk/news/2024/05/13/three-men-charged-spying-hong-kong/>



A Border Force officer has appeared in court along with a former Royal Marine and a Hong Kong trade official, charged with spying on pro-democracy activists living in the UK.

Chi Leung Wai, 38, known also as Peter Wai, from Staines, Surrey, is based with the UK Border Force at Heathrow airport.

Wai, who has joint British and Chinese nationality, is also a special constable with the City of London Police, while also founding a company called D5 security. On D5's website, Wai boasts of "having over 20 years' experience in the British military, police and private security sector".

He was charged alongside two others. Chung Biu Yuen, 63, known also as Billy Yuen, from Dalston, east London, is a retired Hong Kong police officer who works as office manager for the Hong Kong Economic and Trade Office in central London.

Chung Biu Yuen, also known as Billy Yuen, is a retired Hong Kong police officer

The third man charged is Matthew Trickett, 37, from Maidenhead, a former Royal Marine Commando, who served between 2007 and 2013, according to his LinkedIn profile.

Trickett is listed as the sole director of MTR Consultancy, and describes himself as a security consultant. He was also formerly employed by the UK Border Force at Heathrow before joining Home Office Immigration Enforcement in February this year. He is also the director of MTR Consultancy, a security consultancy formed in April 2021.

Chi Leung Wai is also known also as Peter Wai

The charges allege that the three men "assisted a foreign intelligence service" — confirmed to be that of Hong Kong — by agreeing to undertake "information gathering, surveillance and acts of deception, that was likely to materially assist a foreign intelligence service carrying out UK-related activities" between Dec 20 and May 2.

The second charge of foreign interference concerns the trio allegedly forcing entry into a UK residential address on May 1.

The three men all appeared in standard-issued grey jumpers.

District Judge Louisa Cieciora said they must abide by conditions including a 10pm to 5am curfew, reporting weekly to their local police station, not travelling internationally and informing police of devices used to access the internet.

They were charged with the offences under the National Security Act following an investigation by the Metropolitan Police Counter Terrorism Command which saw 11 people arrested.

Eight men and a woman were arrested by officers on May 1 in the Yorkshire area before a man was arrested in London and another man was arrested in the Yorkshire area the following day, the Metropolitan Police said.

The seven men and one woman who were not charged were released from custody on or before May 10.

<https://www.telegraph.co.uk/news/2024/05/13/three-men-charged-spying-hong-kong/>

## **D5 Security**

<https://www.d5security.com/>

*D5 security is an independent private security company based in the UK. We pride ourselves in providing outstanding security and staffing services for high-net-worth individuals, families and businesses based in the UK, China and Hong Kong.*

*We understand that no two clients are the same, which is why we take the time to learn more about you, your team and your business. This allows us to work together to develop a tailor-made security plan for your exact requirements. The majority of our staff have extensive backgrounds in the British Military and Police ensuring that the highest standards are met. Their vast training and experience enable us to offer you unrivalled professionalism and the utmost discretion.*

*D5 Security provides security solutions for Events, Nightlife, Corporate/Retail and Close Protection.*

*Event*  
*The Senior Management Team behind D5 Security have been providing event security management services in the UK, Poland and China for the past 12 years, with over 15 years of combined experience in high end, customer service focused security. Our team are the security people behind events such as London Chinese New Year, McLaren Presentation Evening, Hublot Ferrari Silverstone Racetrack and London Kylin Celebrating Reception. We have purposely aligned our business to reflect our style, influences and passions*

*Nightlife*  
*We have a passion for Nightlife Security, striving to create safe, fun and exciting environments that align with our clients' needs. We provide experienced, SIA accredited Door Supervisors for venues, bars and restaurants. This passion has allowed for us to be the preferred supplier for many of London top venues.*

*Corporate/Retail*  
*D5 Security have been specialist providers of retail guards to many of London's top stores and Pop-ups. We deliver exemplary guarding and service for our luxury retail clients. All of our security guards are highly experienced in dealing with the public, as well as offering a friendly and approachable client experience. This manned service is designed to protect staff and deter crime whilst representing the high standards of the client brand at all times. This allows customers to feel welcomed and protected and allows staff to be able to fulfil their roles to the best of their ability without the additional concern of security.*

*Close Protection*  
*D5 Security brings a unique style of close protection to its customers from their years of real world experience. We pride ourselves on a discrete and unobtrusive method of protection that has attracted an array of clients from diverse industries and requirements.*

*Clients who choose our Close Protection service can feel fully secure in the knowledge that they have such an experienced team supporting them. As with all security delivery, planning is crucial to success. Thorough research is carried out during the consultation process, structuring your requirements to minimise risks and ensure all contingencies are considered for every possible situation*

Peter Wai

Director - Founder

Founder Peter Wai, having over 20 years' experience in the British military, police and private security sector. His vast knowledge, experience and leadership within this sector allows D5 Security to resolve security concerns at all levels and over various roles, as well as using his vast network of professionals in providing exclusive and discreet services to his clients.

No matter what our client requires, D5 Security will provide a discreet service with the upmost professionalism of individuals.

<https://www.d5security.com/>

For MTR Consultancy : [https://www.dnb.com/business-directory/company-profiles/mtr\\_consultancy\\_ltd.4c1c3a6d10440d7d77cde1d07684c4ba.html](https://www.dnb.com/business-directory/company-profiles/mtr_consultancy_ltd.4c1c3a6d10440d7d77cde1d07684c4ba.html)

See also coverage from The South China Morning Post:

<https://www.scmp.com/news/hong-kong/law-and-crime/article/3262550/who-are-3-men-charged-uk-spying-hong-kong>

### **And now a view from inside ENIGMA2000:**

*The story concerning the three arrested 'Chinese Spies' is very interesting. I wondered how those named were involved, but it's plainly obvious.*

*Yuen works for the HK Economic and Trade Office. The London office covers all of Europe and apparently Russia, which also has its own office. I suspect Yuen as the leader, recruiter and head of the ring. His post there means obvious ease of communication with China.*

*Wai owns a security company but is also a Special Constable in City of London Police. That affords access to international and national financial buildings as well as Guild Centres. Very useful, especially with a degree of access to PNC records and Daily Orders as well. Whether or not the security/Border Force interests were disclosed when he signed up as a Special Constable is unknown.*

*Then we have Trickett. An Immigration Enforcement officer with access to Border Force records along with Wai, who is also employed by Border Force. Like Wai, Trickett also has interest in a private security concern registered to him and at his home address.*

*With requested targets made known via Yuen the other two locate them and possibly deal with them too, hence forced entry to one known dissident's property resulting in a charge via the relevant Act.*

*The whole issue will undoubtedly be controlled by China's 1st Bureau which 'looks after' those it deems dissidents.*

*Wai and Trickett are in for long sentences, especially if there's a financial interest, if they have used official records for their own assigned purposes. Wai particularly if he's searched via PNC files. As for Yuen, he'll receive a good sentence and feasibly deportation on end of tariff.*

*The best of all this is the National Security Act is brand spanking new and this, being the first, will be a Test case. First appearance 24th May.*

*NOTE: Matthew Trickett was subsequently found dead in a park near to his home. Police suspect no foul play and have referred themselves to the IOPC [Good Luck with that]. Sort of compounds the guilt of the other two,*

*Then we have this:*

## **Essex man charged with spying for Moscow accused of 'passing on MP's personal details'**

### **Howard Michael Phillips is alleged to have assisted Russia's foreign intelligence service contrary to section 3 of the National Security Act**

Patrick Sawyer,  
SENIOR NEWS REPORTER and  
Martin Evans,

23 May 2024 • 3:15pm

<https://www.telegraph.co.uk/news/2024/05/23/essex-man-charged-spying-russia/>

An Essex man charged with spying for Russia is accused of passing on an MP's personal details to Putin's foreign intelligence service.

Howard Michael Phillips, an unemployed man from Harlow, was charged at Westminster magistrates' court on Thursday with assisting Russia's foreign intelligence service contrary to section 3 of the National Security Act.

The court heard that Phillips, 64, is charged with "acquiring and retaining personal contact details of a Member of Parliament" and "disclosing personal contact details and information relating to a Member of Parliament to a foreign intelligence service".

He is also accused of applying for jobs with the Home Office's Border Force Agency and applying for security clearance.

*\* Phillips allegedly offered to provide logistical support to a foreign intelligence service, including booking a hotel and buying a mobile phone on behalf of a foreign intelligence service, as well as setting up a mobile phone "so that it was available to be used by a foreign intelligence service".*

In court Phillips, wearing a grey tracksuit, spoke only to confirm his address and date of birth.

Judge Daniel Sternberg denied Phillips bail and ordered him to appear at the Old Bailey on June 14.

A Scotland Yard spokesman said: "On May 16, a 64-year-old man was arrested in central London. He was arrested and detained under section 27 of the National Security Act (NSA), 2023.

"A warrant of further detention was obtained at Westminster magistrates' court meaning he could be detained up until May 23 and following consultation with the Crown Prosecution Service (CPS), the CPS authorised the charge as above."

"The arrest is not connected to any other recent charges or investigations linked to NSA offences, and there is not believed to be any threat to the wider public in connection with this matter."

As part of the investigation, which is being led by officers from the Met Police's Counter Terrorism Command, officers also searched an address in the Hertfordshire area and an address in the Essex area.

<https://www.telegraph.co.uk/news/2024/05/23/essex-man-charged-spying-russia/>

*\* Perhaps we can see why some Number Stations are on the decline? Before that's pooh-poohed remember in 2001 Ana Belen Montes made simplistic replies using the US Paging system, whilst Heidrun Anschlag used a Sat Phone for hers. Unbreakable encryption for mobile phones came to light with Enchrochat, successfully used by serious crime groups until eventually breached by DGSE I believe.*

*So, the new National Security Act 2023 seems all powerful. There's certainly a couple of Test cases to go forward with. Anyone wanting to look at the nuts and bolts of the Act can see at:*

<https://www.legislation.gov.uk/ukpga/2023/32/contents/enacted>

## **Keith Mossman, RAF Cold War Warrior whose signal stations helped intercept Soviet bombers – obituary**

On secondment to the Royal Malayan Air Force, he discovered in the jungle a new species of butterfly, which was named in his honour

Telegraph Obituaries  
28 April 2024 • 6:00am

<https://www.telegraph.co.uk/obituaries/2024/04/28/keith-mossman-raf-cold-war-cyprus-soviet-union/>

Group Captain Keith Mossman, who has died aged 96, served in a wide variety of air defence posts as a pilot, controller, and commander at the height of the Cold War.

The son of a First World War veteran, George Keith Mossman was born on October 10 1927 and educated at Bishop Vesey's Grammar School, Sutton Coldfield. He trained as a pilot at the RAF College Cranwell in the first post-war entry in 1947, winning the Groves Memorial Trophy for the best pilot on his course. He also won Victor Ludorum, establishing record times for sprinting and excelling at rugby, which he went on to play for the RAF.

He converted to the Meteor day fighter before joining 63 Squadron at a time when there were 45 fighter squadrons in Fighter Command. On one occasion he ferried a Meteor F8 from Chivenor to Singapore, where it was to enter service with the Royal Australian Air Force, in a 16-leg journey staged across RAF occupied bases in the Mediterranean, Middle East, India and the Far East, over 21 hours.

After training at the Central Flying School (CFS), Mossman returned to Cranwell as a flying instructor on the Harvard. Within 18 months, he was back at CFS to join the staff and train future instructors on the Vampire.

Following a tour at the MoD in London managing the careers and appointments of junior pilots, Mossman returned to the air defence world when he completed the guided weapons course. He served at HQ Fighter Command as the plans officer for the development of the Bloodhound surface-to-air missile to be deployed to protect the V-bomber bases.

In 1959, Mossman returned to flying and, after completing the all-weather conversion course, he joined 25 Squadron at Waterbeach, near Cambridge as a flight commander to fly the Javelin. At the time, deployments to Cyprus were a regular activity for the squadron before it moved to Leuchars where it maintained a quick reaction alert (QRA) capability to scramble in minutes if the Soviets threatened to enter UK airspace, an activity that became very familiar to all fighter aircrew during the Cold War.

He was then posted to the Central Fighter Establishment to command the All-Weather Fighter Combat School at West Raynham, Norfolk.

His career took a very different turn in 1962 when he sailed for Malaya on a three-year secondment to the Royal Malayan Air Force based at Kuala Lumpur. The young air force was equipped with the piston-engine Provost, the Pioneer and the Twin Pioneer; Mossman converted to all three, allowing him to fly into jungle outposts and landing grounds.

With the formation of the Federation of Malaysia in September 1963 tensions with Indonesia increased and there was an uprising in Brunei. Mossman made frequent visits to Borneo flying a newly acquired de Havilland Dove aircraft.

He developed a keen interest in butterflies and, in the jungle, discovered a new species which was named *Ypthima doherthy mossmani* in his honour.

In 1965 he returned to the UK and was posted to the master radar air defence station at Patrington, near Hull. This was followed two years later with promotion to wing commander and a posting to take command of No 260 Signals Unit in Cyprus.

The main control room was based at Cape Gata near Akrotiri with a long-range early warning radar mounted on Troodos mountain at 6,400 feet, which extended the range of the radar considerably. The air defence of Cyprus was provided by a Lightning squadron and a Bloodhound guided missile squadron.

Lightnings were scrambled frequently to intercept both Soviet and Egyptian Air Force Tupolev 104 long-range bombers, which often tried to enter Cypriot air space. At the time, there was considerable air traffic from the Soviet Union to Egypt and 280 SU provided the necessary control for 56 Squadron's Lightnings which were scrambled to intercept.

At the end of his tour, Mossman was appointed OBE.

After attending the Air Warfare Course at Manby, Mossman remained on the staff for 18 months before he took command of RAF Buchan in Aberdeenshire. This large air defence early warning radar station provided the crucial cover for the airspace north of Scotland and into the Norwegian Sea.

Outlying radar stations were based in the Shetlands and the Western Isles. The interception of Soviet bombers of the Northern Fleet by Phantoms and Lightnings was a common occurrence and QRA was kept busy.

Mossman maintained close liaison with adjoining air defence regions and made regular visits to Norway and Denmark to co-ordinate operations. In addition to airborne interceptions, there were numerous large-scale NATO maritime exercises.

On one memorable New Year's Eve party in the officers' mess, he dressed up as an oil-rig worker in a long wig and a clack lace shirt. No-one recognised him and he maintained that he learnt a lot about his station that night. For his services at Buchan, Mossman was advanced to CBE.

Mossman's final appointment in the RAF was in MoD where he was the Deputy Director of Air Defence responsible for the many aspects of air defence of the UK including fighters, missiles, airborne early warning, and the early warning radar units. He was also responsible for the Battle of Britain Memorial Flight. He chaired a NATO tri-service group on air defence, requiring regular visits to Brussels.

After three years, Mossman decided to retire from the RAF and took up an appointment with the Sultan of Oman's Air Force, overseeing the installation and commissioning of an Integrated Air Defence System, which had been purchased from British Aerospace.

On retirement, he became head of the Emergency Planning Office for Cumbria County Council.

He had a wide variety of interests as a fisherman, clock maker and repairer, and beekeeper. He and his wife travelled widely, including a special visit to Hawaii where he attended a family reunion with the Hawaiian descendants of James Mossman, a sea captain who had settled there seven generations before.

Keith Mossman married Vivian Talamo in 1952. She and their four children survive him.

Keith Mossman, born October 10 1927, died February 14 2024

<https://www.telegraph.co.uk/obituaries/2024/04/28/keith-mossman-raf-cold-war-cyprus-soviet-union/>

## **Romania**

### **Romania Detains Man Suspected of Spying for Russia**

By AFP  
May 24, 2024

<https://www.themoscowtimes.com/2024/05/24/romania-detains-man-suspected-of-spying-for-russia-a85217>

Romanian prosecutors announced Friday that they had ordered the arrest of a man suspected of spying for Moscow, while the government declared a Russian diplomat persona non grata.

The arrest of a person suspected of spying marks the first of its kind in Romania since Russia's full-scale invasion of Ukraine more than two years ago.

Prosecutors said the arrested man, a Romanian citizen, had "since 2022, been monitoring Romanian or NATO military objectives located near the municipality of Tulcea," a town near the border with Ukraine.

He is suspected of "collecting military information and taking photographs of military combat equipment and the movement of personnel in the border area with Ukraine, which he transmitted to diplomats from the Russian embassy in Bucharest," prosecutors added.

Authorities did not disclose the man's age or identity.

Romania's Foreign Ministry later said a diplomat from the Russian embassy had been declared "persona non grata on the territory of Romania" for activities in breach of the Vienna Convention on diplomatic relations.

The ministry said it had summoned the Russian charge d'affaires to notify the latter of the decision.

<https://www.themoscowtimes.com/2024/05/24/romania-detains-man-suspected-of-spying-for-russia-a85217>

## **RUSSIA**

**[Of a technical nature only]**

### **US-supplied Himars ‘completely ineffective’ as Russia jams skies with new tech Ukraine forced to stop using many arms supplied by the West because of Putin’s electronic warfare strategy**

Tony Diver,  
US EDITOR  
24 May 2024 • 8:01pm

<https://www.telegraph.co.uk/world-news/2024/05/24/himars-ineffective-as-russia-jams-skies-new-tech-us-weapons/>

Himars rocket launchers supplied to Ukraine by the US have been left “completely ineffective” because of Russian electronic jamming systems.

The launchers, which are capable of firing US-made rockets up to 50 miles at Russian targets, are among the casualties of an electronic warfare strategy used by Vladimir Putin’s forces.

A confidential Ukrainian weapons assessment, obtained by The Washington Post, found that Ukraine has been forced to stop using many of the arms supplied by the West because of problems with targeting.

They includes the Excalibur GPS-guided artillery shells, which are no longer able to fire reliably at targets.

The Russian jamming system operates from the ground, projecting a “cone” of interference into the sky that prevents weapons from communicating with satellites to guide them towards targets.

The assessment said that Ukraine stopped using the Excalibur shells last year after the weapon “lost its potential” and effectiveness fell to just 10 per cent.

The Himars system, hailed early in the war for its ability to destroy targets with a single shot, has now become “completely ineffective,” according to one Ukrainian military source.

“The Russians deployed electronic warfare, disabled satellite signals, and Himars became completely ineffective,” they said.

The Pentagon and weapons manufacturers are now understood to be looking for a fix that would allow the systems to avoid Russian jamming.

A Ukrainian Defence Ministry spokesman told The Washington Post: “We work closely with the Pentagon on such matters. In the event of technical problems, we promptly inform our partners to take the necessary measures to solve them in a timely manner.

“Our partners from the USA and other Western countries provide constant support for our requests. In particular, we regularly receive recommendations to improve the equipment.”

Other systems, including the Storm Shadow missile and Army Tactical Missile System (ATACMS) are less susceptible to jamming.

It comes after Russia successfully disrupted the Starlink satellite network, run by a company owned by Elon Musk, which Ukrainian troops rely on for connection to the internet.

Ukrainian forces have experienced outages on the front line in recent weeks as Moscow has stepped up its electronic warfare operations.

Mykhailo Fedorov, Ukraine’s digital minister, said in an interview this week that Starlink had previously been resistant to Russian jamming, but that its technology appeared to have become more sophisticated.

He said Putin’s forces had been “testing different mechanisms to disrupt the quality of Starlink connections” using “powerful” electronic weapons.

<https://www.telegraph.co.uk/world-news/2024/05/24/himars-ineffective-as-russia-jams-skies-new-tech-us-weapons/>

## **Sweden**

### **Swedish signals intelligence agency to take over national cybersecurity center**

Alexander Martin  
April 23rd, 2024

<https://therecord.media/sweden-ncsc-moving-under-signals-intelligence-agency-fra?s=08>

After failing to achieve “expected results,” Sweden’s National Cyber Security Center (NCSC) is facing a range of reforms, including being brought under the control of the country’s cyber and signals intelligence agency.

The failures were assessed as part of a government review, rather than in response to a single incident, but come amid a changing geopolitical situation for Sweden, which formally joined NATO this March in the wake of the Russian invasion of Ukraine.

The restructuring will see Sweden move toward a model for its cybersecurity center similar to that of the United Kingdom, Norway and Denmark, where those bodies are parts of GCHQ, the Norwegian National Security Authority and the Danish Defence Intelligence Service, respectively.

The reforms have been recommended in an interim report, commissioned by the Swedish government into the cybersecurity center’s shortcomings. The interim report particularly praised the British NCSC for its “outward profile” and its premises at Nova South in London, which had previously been criticized by MPs.

Sweden’s NCSC was established in December 2020, not as an authority in itself but more as a voluntary collaboration center between a handful of authorities, including sigint agency the Defence Radio Establishment (FRA) and the Swedish armed forces.

These authorities were tasked to use the NCSC to “coordinate the work to prevent, detect and deal with antagonistic cyber threats and other IT incidents,” as well as “convey advice and support regarding threats, vulnerabilities and risks” and “constitute a national platform for collaboration and information exchange with private and public actors in the cybersecurity field.”

To some degree, these were activities that were already being carried out by different agencies, but the initial structure meant the Swedish NCSC had no budget of its own, with funds instead coming from the participating authorities.

Alongside the legal challenges that limited the contributions of the participating authorities to their legally prescribed tasks, the funding limitations contributed to the NCSC failing to live up to the government’s expectations.

The government’s inquiry found that the NCSC lacked “clear goals, missions, and division of responsibilities,” and particularly took aim at narrow definitions of the center’s tasks limiting it to addressing “major” instead of “significant” incidents, and “cyberattacks” instead of “cyberthreats.”

Its recommendations, some of which will require legislation to be put into effect, are intended to help the NCSC achieve its overall goal of strengthening “Sweden’s collective ability to prevent, detect and manage cyber threats and significant IT incidents.”

The recommendations focus on the NCSC adopting the responsibilities for different cybersecurity tasks currently spread across several Swedish authorities, and that the NCSC becomes a body wholly owned by the FRA, Sweden’s cyber and signals intelligence agency, although the other six authorities will continue to participate in it.

CERT-SE, Sweden’s national CSIRT (Computer Security Incident Response Team) is currently operated by the country’s civil contingencies agency rather than a cybersecurity authority. The inquiry recommends that these activities “should be transferred to the [FRA] and NCSC as soon as possible.”

Other changes are expected to be recommended in later reports from the inquiry.

The Swedish reforms come as many European countries are attempting to strike a balance within their cybersecurity apparatus between the intelligence services and aspects of government that are more used to engaging with the public and with industry.

While this is expected to be challenging for the FRA, the model in Britain, Norway and Denmark — which the government report praises — suggests it can be done effectively.

<https://therecord.media/sweden-ncsc-moving-under-signals-intelligence-agency-fra?s=08>

## **United States of America**

### **‘Lost’ Air Force satellite orbited Earth undetected for 25 years — until now, scientists say**

By JULIA DAYE THE CHARLOTTE OBSERVER • May 7, 2024

[https://www.stripes.com/branches/space\\_force/2024-05-07/lost-air-force-spy-satellite-13786287.html](https://www.stripes.com/branches/space_force/2024-05-07/lost-air-force-spy-satellite-13786287.html)

A Cold War-era satellite that was deemed “lost” after eluding detection for decades has finally been found. (Allen J. Schaben, Los Angeles Times/TNS) (Tribune News Service) — An experimental spy satellite that was deemed “lost” after eluding detection for decades has finally been found.

“The S73-7 satellite has been rediscovered after being untracked for 25 years,” astrophysicist Jonathan McDowell said in an April 29 post on X, formerly Twitter. He says it reappeared on April 25, citing Space Force data. The Cold War-era satellite, officially called the Infra-Red Calibration Balloon (S73-7), was just over 2 feet in diameter.

The U.S. Air Force’s Space Test program launched it on April 10, 1974, with a much larger spy satellite, Gizmodo reported. According to the outlet, the balloon was supposed to inflate after launch, but something went wrong.

After the failure, teams back home lost track of the balloon twice — once in the 1970s and then again for much longer starting in the 1990s when ground-based sensors could no longer detect it. For a quarter-century, analysts in the 18th Space Defense Squadron, the group responsible for tracking all human-made objects in Earth’s orbit, saw nothing of S73-7, Popular Science reported.

In the minds of experts, the balloon was now lost in the world of “space junk.”

Then, suddenly, in late April, there it was. An analyst saw S73-7 show up on the sensor data, McDowell said. It was floating in Earth’s orbit as expected, but now scientists could track it again.

But how did scientists lose track of it in the first place? S73-7 being small and largely non-metal makes it harder for the radar to detect, McDowell told Gizmodo. In addition, every day, scientists track over 20,000 pieces of equipment that surf Earth’s orbit, which can be a lot to keep up with. A rediscovery like this is a triumph for analysts trying to keep track of the thousands of objects circling our planet. If one thing goes missing, it’s not a disaster. But if too many get lost, the risk of collisions and excess debris increases, according to United Nations University.

With objects in Earth’s orbit moving at 17,500 miles per hour, too much junk and shards of debris could be incredibly hazardous to satellites and anything else that may need to pass through the area in the future, Space.com reported.

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[https://www.stripes.com/branches/space\\_force/2024-05-07/lost-air-force-spy-satellite-13786287.html](https://www.stripes.com/branches/space_force/2024-05-07/lost-air-force-spy-satellite-13786287.html)

Source - Stars and Stripes

# The Russian 'spy', the NSA mole and the FBI sting that got him

Published  
30 April 2024  
By Rachel Looker  
BBC News

<https://www.bbc.co.uk/news/world-us-canada-68930894>

Jareh Sebastian Dalke disabled the location tracking system on his car then drove north from his home in Colorado Springs to Denver's Union Station. He made sure to leave without his phone.

The 31-year-old former US National Security Agency (NSA) employee parked several blocks away, walking to the train station with a laptop, a memory card, a gun and a note with handwritten instructions for his clandestine mission.

Dalke had spent several months communicating via email and transmitting top secret, classified information to someone he believed was a Russian foreign agent.

He was preparing to send more files after receiving instructions on how to access a secure connection at the station.

On the day of his mission, in September 2022, Dalke opened his laptop and emailed five files. One was a letter written in Russian, according to court documents.

"My friends!" it began. "I am very happy to finally provide this information to you... I look forward to our friendship and shared benefit. Please let me know if there are desired documents to find and I will try when I return to my main office."

However, his "Russian" contact was in fact an undercover US Federal Bureau of Investigation (FBI) agent.

FBI agents surrounded him moments after he sent the files.

Dalke on Monday received a nearly 22-year prison sentence for attempted espionage after sharing classified information.

He pleaded guilty last year to six counts of transmitting national defence information to a foreign agent.

"This defendant, who had sworn an oath to defend our country, believed he was selling classified national security information to a Russian agent, when in fact, he was outing himself to the FBI," said Attorney General Merrick Garland in a statement.

Dalke, who worked as an information systems security designer at the NSA, admitted to using an encrypted email account to share excerpts of classified documents. He held a top secret security clearance and signed a lifetime binding non-disclosure agreement as part of his role.

He obtained the documents while working at the agency.

Dalke started working at the NSA in June 2022. He worked for less than a month before requesting a nine-month leave of absence to help a family member with a medical condition, according to court documents. He was denied the leave and later submitted a letter of resignation.

He later re-applied for a position and accepted an offer of re-employment with the agency around the same time as his arrest in Denver.

Dalke asked for \$85,000 (£67,953) through cryptocurrency from the undercover agent in return for the excerpts and promised to share more information in the future, according to court documents.

He admitted to wilfully transmitting the files with the intent that the information could benefit Russia, according to the US Department of Justice. He also admitted to using an encrypted email to demonstrate his "legitimate access and willingness to share" classified information with an individual who he believed was a Russian agent.

The classified documents included details related to foreign targeting of US systems and information on cyber operations, according to court documents.

In one of his emails transmitting files, Dalke wrote the excerpts were a "small sample of what is possible".

<https://www.bbc.co.uk/news/world-us-canada-68930894>

## 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.

### SAQ World Heritage Radio Station

The historic radio station at Grimeton, near Varberg, southern Sweden is preserved & maintained by dedicated volunteers & is the only remaining pre-valve era transmitter that uses a piece of technology called an Alexanderson Alternator. What is remarkable is that the transmitting station will celebrate its centenary on December 01, 2024!

Built as a long-wave transatlantic telegraphy radio station completed in 1924 the station remained commercially in operation until the 1960s, first using Morse, later changing to RadioTeleType for the remainder of its commercial life. The original building & equipment was retained intact on its retirement & is now maintained as a World Heritage site.

The transmitting station is in working order & once a year the system is fired up and a test message is transmitted using the historical allocated call sign SAQ.

Christer, (chpa), monitored this transmission, as he has in previous years, & sends us this log:

Monitored from Stockholm30-Jun-2024 0852z by chpa

SAQ Grimeton 17.2 kHz 0852z 30-Jun-2024 VVV VVV VVV VVV DE SAQ SAQ SAQ ... normal intro. before transmission 0854z CW-U moderate chpa Sun

Sent before transmission on the Alexanderson Day, Sunday, June 30th, 2024, 09:30-16:00. CET a more comprehensive message was sent at 0900 UTC

The website for the station carries a wealth of information about this unique station & is well worth visiting:

<https://alexander.n.se/en/>

Thanks to chpa for the log & for bringing this remarkable station to our notice.

### UNID CW

#### UM05 – The French Mystery Morse Station

The station was silent from the end of April, but reappeared Tue 14 May.

5345.8	1827z (IP)	14 May	Sending Morse 'T' repeated changed to 'oonnerre' at 1833z	BR	TUE
	2049z (IP)	14 May	Sending Morse 'C' repeated	AB	TUE

Only to go silent once again for several days in late May, reappearing briefly on 22 May on a new frequency – just down from the previous frequency on 5344.2kHz as reported by Ary, (AB).

5344.2	1742z	22 May	Sending 'Neige' repeated etc.	AB	WED
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On Wednesday, 23 May the station was once again silent until Friday 14 June:-

5345.8	1945z	14 Jun	Sending 'Kakapo' repeated – Changed to 'Tui' at 1951z (A Kakapo is a bird from New Zealand according to Google!)	BR	FRI
	0034z	17 Jun	'S' repeated - changed to 'Poule' at 0039z	BR	MON

UM05 soon went silent, once again, unheard from 19 June and was next heard on Tuesday, 25 June:-

5345.8	1055z	25 Jun	Sending 'horlogue'. NRH on Twente, but weak, audible on the Baldock, UK SDR	BR	TUE
	1813z	25 Jun	Sending 'evaluation'. Audible in UK and on Twente SDR	BR	TUE

## 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 2024:

4903	2000z	02 May	'025' 849 30 == 85940 75830 ... 44859 76859 ==	Fair/Good, fast. No errors. Grps13 54321, Grp23 56789	BR/HFD	THU
	2000z	07 May	'025' 825 30 == 74513 64518 ... 65734 54627 ==	Good, fast. Several errors noted. 31 grps logged	BR	TUE
	2000z	14 May	'025' 381 30 == 46137 62415 ... 71945 43617 ==	Fair, fast. Excellent Morse. Error Grp04 54327 53427	BR	TUE
	2000z	16 May	'025' 536 30 == 76543 74621 ... 75930 56783 ==	Fair, V.fast. Excellent Morse. Perfect with no errors	BR	THU
	2000z	23 May	'025' 830 30 == 83771 83928 ... 73505 94891 ==	Good, fast. Good Morse. Only 29 groups logged	BR	THU
	2000z	28 May	'025' 465 30 == 48395 84473 ... 85738 93824 ==	Good, fast. Good Morse. No errors. Perfect sending	BR	TUE
	2000z	30 May	'025' 517 30 == 73849 72830 ... 72847 19746 ==	Good, fast. Excellent Morse. Error grp14 51782 5782	BR	THU
<b>(4903)</b>	1800z	02 May	'025' 826 30 84637 86745 ... 64518 97487 ==	Weak, fast. With errors. Only 29 grps. <b>Used 2000z freq.</b>	BR/HFD	THU
5280	1800z	07 May	'025' 675 30 == 75643 86094 ... 56321 96752 ==	Weak, fast. With errors, one corrected	BR	TUE
	1800z	14 May	'025' 371 30 == 91735 73528 ... 44357 64718 ==	NRH UK. Fair via SDR Finland. Errors noted	BR	TUE
	1800z	16 May	'025' 896 30 == 37189 72641 ...	NRH UK. Fair via Finland. Poor copy. Errors noted	BR	THU
	1800z	21 May	'025' 152 30 == 62537 82903 ... 21389 03872 ==	NRH UK. Fair via Finland. Good Morse. 33 grps sent	BR	TUE
	1800z	23 May	'025' 953 30 == 76359 45362 ... 76854 76859 ==	Weak, fast. Good Morse. Only 28 Groups logged	BR	THU
	1800z	28 May	'025' 772 30 == 47383 73838 ... 38321 93.49 ==	Weak, fast. Good Morse. Error grp30 repeat?	BR	TUE
6435	1500z	18 May	NRH		BR	SAT
	1500z	25 May	'025' 30 == .9872 25872.... "025" for 4 minutes, then no id, then "30 30 == " and then the message		HFD	SAT
6780	0700z	05 May	'025' 265 30 == 65739 .3087 ... 6789 .65423 ==	Weak/Fair, fast. Poor copy. Grp09 76543	BR/HFD	SUN
	0700z	12 May	'025' 272 30 == 83990 81930 ... 83904 81994 ==	Ex.Weak, med-fast. Good Morse. Grp18 71550 71500	BR	SUN

### June 2024:

4903	2000z	04 Jun	'025' 258 30 == 82936 61782 ... 65728 15629 ==	Fair, fast. Good Morse. Corrected errors grps08 & 27	BR	TUE
	2000z	06 Jun	'025' 269 30 == 29854 35438 ... 67834 98627 ==	Fair/Good, fast. Good Morse. No errors	BR	THU
	2000z	11 Jun	'025' 925 30 == 96753 96782 ... 65782 56489 ==	Fair, fast. Excellent Morse. Grp24 sent once only	BR	TUE
	2000z	13 Jun	'025' 965 30 == 33546 22980 ... 09077 35421 ==	Fair, fast. Several errors noted inc. two corrected	BR	THU
	2000z	18 Jun	'025' 809 30 == 62.45 52809 ...	Weak, heavy static. Poor copy. Odd characters on ending	BR	TUE
	2000z	20 Jun	'025' 102 30 == 20913 27361 ... 83745 95873 ==	Fair, fast. Good Morse. One error noted. Grp24 12345	BR	THU
	2000z	25 Jun	'025' 595 30 == 75648 12930 ... 75821 76840 ==	Fair/Good, fast. Excellent Morse. Grp16 63212 6312	BR	TUE
	2000z	27 Jun	'025' 475 30 == 06758 94753 ... 56785 86957 ==	Fair, fast. Excellent Morse. Two errors – one corrected	BR	THU
5280	1800z	04 Jun	'025' 361 30 == 71393 .1.86 ... 63784 57.78 ==	Very weak, fast. Poor copy. Corrected error grp25	BR	TUE
	1800z	06 Jun	'025' 372 30 == 95.64 90683 ... 22356 97862 ==	Weak, fast. Good Morse. No errors. Grp17 67890	BR	THU
	1800z	11 Jun	'025' 420 30 == 98064 87650 ... 76853 89670 ==	Weak, fast. Excellent Morse. Poor copy	BR	TUE
	1800z	13 Jun	'025' 797 30 == 08789 59367 ... 24398 40965 ==	Weak, fast. Hesitant delivery with errors. Poor copy	BR	THU
	1800z	18 Jun	'025' 932 30 == 62746 52648 ... 62748 25472 ==	V.weak, med-fast with 29 grps. Odd characters at end	BR	TUE
	1800z	20 Jun	'025' 162 30 == 72836 72651 ... 78321 89231 ==	Extremely weak, fast. Good via Finland. Grp10 12345	BR	THU
	1800z	25 Jun	'025' 567 30 == 65749 78020 ... 67543 23700 ==	Fair, fast. Excellent Morse. Corrected error on grp30	BR	TUE



1800z	27 Jun	'025' 094 30 == 87659 6748 . . . . 46543 33456 ==	Weak, fast. Muddled mix using unfinished grps etc.	BR	THU	
6435	1500z	01 Jun	'025' 418 30 == 16253 85637 ... 02256 32195 ==	Weak, readable, fast. Excellent Morse. No noted errors	BR	SAT
	1500z	08 Jun	'025' 591 30 == 85743 82764 ... 85432 18234 ==	Very Weak, Med-fast. Restarted after 1 <sup>st</sup> two grps error	BR	SAT
9736	0715z	16 Jun	'475' 234 50 == 34701....	Harmonics	HFD	SUN

<b>M01/3</b>	<b>4903kHz</b>	<b>2000z</b>	<b>Thu 09 May 2024</b>
'025' (R4m) 404 404 30 30 ==			
12345 12312 23423 23142 46354 54321 09876 67890 58475 90204			
10405 83947 16324 12356 23467 22743 94039 22657 48548 92049			
18493 52163 53746 18374 23412 56456 78675 89089 10098 75948			
== 404 404 30 30 000			
<i>Courtesy BR</i>			

<b>M01/3</b>	<b>6780kHz</b>	<b>0700z</b>	<b>Sun 12 May 2024</b>
'025' (R4m) 272 272 30 30 000 ==			
83990 81930 85003 71993 71884 11173 81933 71833 81005 81750			
00590 83005 84595 73000 18400 84500 00055 71550 83955 82940			
83748 73918 50993 76400 55509 83054 71005 84910 83904 81994			
== 272 272 30 30 000			
<i>Courtesy BR</i>			

**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	06 May	412 1	(Via SDR Japan)	HFD	MON
16272/14972/13972	0300/20/40z	07 May	299 1	(Via SDR Japan)	HFD	TUE
15918/14818/13918	0210/30/50z	03 Jun	989 1	(Vis SDR Japan)	HFD	MON
14975/13875/13475	0300/20/40z	04 Jun	984 1	(Via SDR Japan)	HFD	TUE

**European M12 Logs**

**May 2024:**

**New scheds in bold type**

10843/10243/9243	2100/20/40z	03 May	822 1 (5355 130)	00504 62753....	BR/HFD	FRI
	2100/20/40z	04 May	822 1 (5355 130)	00504 62753....	BR	SAT
	2100/20/40z	10 May	822 1 (8629 99)	78523 34816....	BR	FRI
	2100/20/40z	11 May	822 1 (8629 99)	78523 34816....	BR	SAT
	2100/20/40z	17 May	822 1 (8629 99)	78523 34816....	BR	FRI
	2100/20/40z	18 May	822 1 (8629 99)	78523 34816....	BR	SAT
	2100/20/40z	24 May	822 1 (115 179)	97152 43827....	BR	FRI
	2100/20/40z	25 May	822 1 (115 179)	97152 43827....	BR	SAT
11519/12194/13407	1100/20/40z	07 May	289 1 (8649 59)	61616 19660....	BR/HFD	TUE
	1100/20/40z	14 May	289 1 (7293 58)	75616 28218....	BR	TUE
	1100/20/40z	21 May	289 1 (6830 60)	81701 90905....	BR	TUE
	1100/20/40z	28 May	289 1 (1157 55)	56837 29904....	BR	TUE
12162/11566/10711	1800/20/40z	07 May	546 1 (3166 52)	37524 74531....	BR/HFD	TUE
	1800/20/40z	14 May	546 1 (2279 55)	58197 57201....	BR	TUE
	1800/20/40z	21 May	546 1 (6390 58)	82299 34037....	BR	TUE
13926/13426/ 11526	2000/20/40z	02 May	573 000		HFD	THU
	2000/20/40z	06 May	573 1 (418 141)	07819 83660....	BR	MON
	2000/20/40z	09 May	573 1 (418 141)	07819 83660....	BR	THU
	2000/20/40z	13 May	573 000		BR	MON
	2000/20/40z	16 May	573 000		BR	THU
	2000/20/40z	20 May	573 1 (9253 33)	06365 13791....	BR	MON
	2000/20/40z	23 May	573 1 (9253 33)	06365 13791....	BR	THU
	2000/20/40z	27 May	573 000		BR	MON
	2000/20/40z	30 May	573 000		BR	THU
<b>15892/14892/13992</b>	<b>2310/30/50z</b>	<b>01 May</b>	<b>889 1</b>		HFD	WED
	2310/30/50z	08 May	889 1 (122 131)	25418 45044....	BR	WED
	2310/30/50z	22 May	889 1 (1926 74)	65079 48518....	BR	WED
15936/14736/13536	1900/20/40z	01 May	975 1 (5069 94)	95209 36790....	BR/HFD	WED
	1900/20/40z	03 May	975 1 (5069 94)	95209 36790....	BR	FRI
	1900/20/40z	08 May	975 000		BR	WED
	1900/20/40z	10 May	975 000		BR	FRI
	1900/20/40z	15 May	975 1 (279 171)	59543 98397....	BR	WED
	1900/20/40z	17 May	975 1 (279 171)	59543 98397....	BR	FRI
	1900/20/40z	22 May	975 1 (279 171)	59543 98397....	BR	WED
	1900/20/40z	24 May	975 1 (279 171)	59543 98397....	BR	FRI
	1900/20/40z	29 May	975 000		BR	WED
	1900/20/40z	30 May	975 000		BR	FRI

20282/19482/18382	1400/20/40z	02 May	243 000			HFD	THU
	1400/20/40z	06 May	243 1 (8120 97)	24211 58808....		BR	MON
	1400/20/40z	13 May	243 000			BR	MON
	1400/20/40z	20 May	243 1 (6598 89)	37432 13786....		BR	MON
	1400/20/40z	30 May	243 000			BR	THU

**June 2024:**

11144/10544/9344	2100/20/40z	01 Jun	153 1 (115 179)	97152 43827....		BR/HFD	SAT
	2100/20/40z	07 Jun	153 1 (6403 187)	56139 00362....		BR	FRI
	2100/20/40z	08 Jun	153 1 (6403 187)	56139 00362 ...	93544 28044 000 000	Gert	SAT
	2100/20/40z	15 Jun	153 1 (6403 187)	56139 00362 ...		BR	SAT
	2100/20/40z	21 Jun	153 1 (482 231)	20530 08962 ....		BR	FRI
	2100/20/40z	28 Jun	153 1 (482 231)	20530 08962 ...	58145 59601	Gert	FRI
11519/12194/13407	1100/20/40z	04 Jun	289 1 (6303 60)	82712 48950....		BR	TUE
	1100/20/40z	18 Jun	289 1 (9991 59)	45813 46592....		BR	TUE
	1100/20/40z	25 Jun	289 1 (4132 62)	35423 92901....		BR	TUE
12162/11566/10711	1800/20/40z	04 Jun	546 1 (4072 53)	95653 83761....		BR	TUE
	1800/20/40z	11 Jun	546 1 (7672 51)	22151 15756....		BR	TUE
	1800/20/40z	18 Jun	546 1 (4367 56)	19916 49219....		BR	TUE
	1800/20/40z	25 Jun	546 1 (6001 55)	7085313398....		BR	TUE
13892/13392/11592	2000/20/40z	03 Jun	119 1 (8595 146)	01761 28373....		BR/HFD	MON
	2000/20/40z	06 Jun	119 1 (8595 146)	01761 28373....		BR	THU
	2000/20/40z	13 Jun	119 000			BR	THU
	2000/20/40z	17 Jun	119 1 (9338 178)	04013 97110....		BR	MON
	2000/20/40z	20 Jun	119 1 (9338 178)	04013 97110....		BR	THU
	2000/20/40z	24 Jun	119 000			BR	MON
	2000/20/40z	27 Jun	119 000			BR	THU
15823/14823/13923	1900/20/40z	05 Jun	889 000			BR	WED
	1900/20/40z	07 Jun	889 000			HFD	FRI
	1900/20/40z	12 Jun	889 1 (9559 165)	93905 66642....		BR	WED
	1900/20/40z	14 Jun	889 1 (9559 165)	93905 66642....		BR	FRI
	1900/20/40z	19 Jun	889 1 (9559 165)	93905 66642....		BR	WED
	1900/20/40z	21 Jun	889 1 (9559 165)	93905 66642....		BR	FRI
	1900/20/40z	26 Jun	889 000			BR	WED
16342/15842/14942	2310/30/50z	02 Jun	389 1 (7642 59)	09830 69346....		BR/HFD	SUN
	2310/30/50z	05 Jun	389 1 (6995 89)	54354 51560....		BR	WED
	2310/30/50z	09 Jun	389 1 (6995 89)	54354 51560....		BR	SUN
17427/16327/14627	1600/20/40z	03 Jun	436 1 (7925 107)	90214 94880....		BR	MON
	1600/20/40z	06 Jun	436 1 (7925 107)	90214 94880....		BR	THU
	1600/20/40z	17 Jun	436 1 (335 91)	81707 00937....		BR	MON
	1600/20/40z	20 Jun	436 1 (335 91)	81707 00937....		BR	THU
	1600/20/40z	24 Jun	436 000			BR	MON
	1600/20/40z	27 Jun	436 000			BR	THU

M12	11144/10544/9344kHz	2100/2120/2140z	08 June 2024
153 153 153 1	(R2m)	6403 187	6403 187
56139 00362 06561 69895 39935 53039 65123 66909 70479 36323			
19094 24131 88781 70916 06769 72431 99393 42031 08760 24790			
31172 90911 00174 92033 66701 62885 24984 34051 12869 80230			
63287 70302 44407 86429 74630 99064 47133 14393 32432 43397			
70424 70139 61621 55790 36270 92946 18673 59342 54237 19982			
52649 52848 39004 29918 00033 36764 93167 23889 96886 33914			
92941 36947 71631 24752 92894 68083 61823 09675 83395 51867			
50204 76710 83280 16914 32030 93252 88129 93188 25681 42256			
70771 95907 16086 26697 35673 93130 56493 89242 41849 52890			
87070 65734 48273 83855 22320 23473 08117 50962 83150 67930			
93887 65976 91780 86947 16021 78679 89019 50341 82529 11364			
05781 05872 83478 48615 15929 18050 22669 42753 46983 03508			
51724 69077 79842 94445 55546 95402 16867 17369 33317 17136			
59545 30561 85497 85014 45167 19481 17069 21563 55926 32383			
19563 99251 51224 25318 26116 58579 14536 46805 15994 87581			
95903 30221 85879 71341 22578 59038 83102 14827 26896 04763			
70301 70899 70895 84399 21196 82688 11763 14235 67060 72076			
32755 83226 03579 34352 69895 99619 71887 16218 75105 66944			
08440 21604 09075 80971 16524 93544 28044 000 000			
<i>Courtesy Gert</i>			

M12	11144/10544/9344kHz	2100/2120/2140z	28 June 2024
153 153 153 1	(R2m)	482 231	482 231
20530 08962 06867 30937 45516 60007 48582 10108 38106 74278			
63662 51922 22349 38914 03957 09961 16428 31187 10725 30935			
23882 82268 77728 21195 49607 87089 04615 24642 78949 99107			
29822 75518 55827 01740 30682 75856 52015 94119 29899 84531			
95251 86861 79511 52116 01633 81695 51523 06383 08293 18686			
30127 90121 68761 86915 49202 23045 02750 10418 84178 11830			
73019 82206 04545 22769 98756 84978 94164 32532 44445 39206			
96333 99669 79466 88493 14606 47358 13039 23066 04920 37590			
59749 68966 85010 01301 71399 83562 31719 84399 08950 76203			
86863 86991 18799 32796 75313 21873 02374 49222 62270 01762			
71908 10333 68882 70758 07650 84074 84214 71721 43538 67946			
28788 82076 76523 52792 21660 43143 98701 15140 32047 02566			
50301 91116 36796 75581 39474 52758 42486 18171 66548 38114			
53821 67064 80217 63453 89430 48277 82737 58788 35156 29794			
51328 73730 97023 18679 59797 05371 47089 14309 16769 03959			
03091 86780 94733 75755 88760 38062 88260 09802 21437 07145			
55456 69203 49121 40960 70200 20127 37133 76942 07746 96024			
05370 26203 45117 30148 34385 66118 06061 24688 57267 38592			
80967 44895 58085 47882 76647 58477 54210 37000 81328 65762			
77376 00722 94449 54199 69130 03721 31700 80331 54643 35945			
48377 56431 08626 95984 95179 06100 49824 11228 89691 28604			
78339 20918 62531 95339 44895 79252 35775 82687 10018 25947			
03125 57097 56965 29934 53840 97397 15278 15521 42412 58145			
59601 000 000			
<i>Courtesy Gert</i>			

**M14** IA MCW / ICW Short 0

**May 2024:**

12211	0500z	02 May	952 (173 56) = 26244....	(Via SDR Japan)	HFD	THU
10243	0520z	02 May	952 (173 56) = 26244....	(Via SDR Japan)	HFD	THU

**June 2024:**

No Reports

**M23** O ICW

No Reports

**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 - 1217z	17 Jun	Lundi-Leçon	01-2/1 Codé	01-2/2 Clair,	01-2/3 Codé,	01-2/4 Clair (420 grps/hr)	BR	MON
	1130 - 1203z	18 Jun	Mardi-Leçon	02-2/1 Codé	02-2/2 Clair,	02-2/3 Codé,	02-2/4 Clair (600 grps/hr)	BR	TUE
	1130 - 1209z	26 Jun	Mercredi- Leçon	13-2/1 Codé,	13-2/2 Clair,	13-2/3 Codé,	13-2/4 Clair (720 grps/hr)	BR	WED
	1130 - 1159z	27 Jun	Jeudi- Leçon	14-2/1 Codé,	14-2/2 Clair,	14-2/3 Codé,	14-2/4 Clair (840 grps/hr)	BR	THU

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

3881//6825	0041z	17 Jun	Non-stop 5-character groups composed of M51a messages				BR	MON
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**M89** O

**M89 Freq & Call signs heard in May / Jun 2024**

6840//NRH VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K

**M95** O XSV, XSV70, XSV85

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

3968//6936	Call Sign SAQC (Previously 3A7D)	Suspect change in frequency and Round Slip for DKG6 DE 3A7D				
	2043z	30 May	V YHXD (x3) DE SAQC (x2)	(Remote tuner Netherlands)	BR	THU
4364//8073	Call Sign XSV85					
	1143 (IP) - 1146z	17 Jun	Msg in progress using AU34567DNT cut numbers	(Remote tuner New Zealand)	BR	MON

**Spl Msg:** VVV JPL VY Best RGDS DE E2K K  
4620

**Marker Beacons (MX MXI)**

5153.7	1952z	17 May	MXI CW Beacon "D"	Sevastopol	BR	FRI
	0045z	17 Jun	MXI CW Beacon "D"	Sevastopol	BR	MON
5153.9	0045z	17 Jun	MXI CW Beacon "S"	Severomorsk	BR	MON
5156.7	1951z	17 May	MX CW Beacon "L"	St Petersburg	BR	FRI
	0046z	17 Jun	MX CW Beacon "L"	St Petersburg	BR	MON
7508.7	1949z	17 May	MXI CW Beacon "D"	Sevastopol	BR	FRI
	0048z	17 Jun	MXI CW Beacon "D"	Sevastopol	BR	MON
7508.9	1950z	17 May	MXI CW Beacon "S"	Severomorsk	BR	FRI
	0049z	17 Jun	MXI CW Beacon "S"	Severomorsk	BR	MON
7509	1950z	17 May	MXI CW Beacon "C"	Moscow	BR	FRI
	0049z	17 Jun	MXI CW Beacon "C"	Moscow	BR	MON

8494.7	2035z	20 Jun	MXI	CW	Beacon	"D"	Sevastopol		BR	FRI
8495	1948z	17 May	MXI	CW	Beacon	"C"	Moscow	Under Digital sig	BR	FRI
8497.8	1948z	17 May	MX	CW	Beacon	"L"	St Petersburg		BR	FRI
	2036z	20 Jun	MX	CW	Beacon	"L"	St Petersburg		BR	FRI
	0401z	24 Jun	MX	CW	Beacon	"L"	St Petersburg	Good	chpa	MON
10871.7	1946z	17 May	MXI	CW	Beacon	"D"	Sevastopol		BR	FRI
	0052z	17 Jun	MXI	CW	Beacon	"D"	Sevastopol		BR	MON
10871.8	0802z	25 May	MXI	CW	Beacon	"P"	Kaliningrad		BR	SAT
	2026z	20 Jun	MXI	CW	Beacon	"P"	Kaliningrad		BR	FRI
10871.9	1946z	17 May	MXI	CW	Beacon	"S"	Severomorsk		BR	FRI
	0052z	17 Jun	MXI	CW	Beacon	"S"	Severomorsk		BR	MON
	0402z	24 Jun	MXI	CW	Beacon	"S"	Severomorsk	Good	chpa	MON
10872.1	1947z	17 May	MXI	CW	Beacon	"A"	Astrakhan		BR	FRI
	0053z	17 Jun	MXI	CW	Beacon	"A"	Astrakhan		BR	MON
13527.7	1943z	17 May	MXI	CW	Beacon	"D"	Sevastopol		BR	FRI
	0054z	17 Jun	MXI	CW	Beacon	"D"	Sevastopol		BR	MON
13527.9	0801z	25 May	MXI	CW	Beacon	"S"	Severomorsk		BR	SAT
	0055z	17 Jun	MXI	CW	Beacon	"S"	Severomorsk		BR	MON
	0407z	24 Jun	MXI	CW	Beacon	"S"	Severomorsk	Weak	chpa	MON
13528.1	0055z	17 Jun	MXI	CW	Beacon	"A"	Astrakhan		BR	MON
	2038z	20 Jun	MXI	CW	Beacon	"A"	Astrakhan		BR	FRI
16331.7	1944z	17 May	MXI	CW	Beacon	"D"	Sevastopol	Strong	BR	FRI
	2039z	20 Jun	MXI	CW	Beacon	"D"	Sevastopol		BR	FRI
16331.9	2035z	30 May	MXI	CW	Beacon	"S"	Severomorsk		BR	THU
	2039z	20 May	MXI	CW	Beacon	"S"	Severomorsk		BR	FRI
	0414z	24 Jun	MXI	CW	Beacon	"S"	Severomorsk	Weak	chpa	MON
16332.0	1944z	17 May	MXI	CW	Beacon	"C"	Moscow	Weak	BR	FRI
	2038z	20 Jun	MXI	CW	Beacon	"C"	Moscow	Strong	BR	FRI
16332.1	2314z	02 Jun	MXI	CW	Beacon	"A"	Astrakhan		BR	SUN

All logs from chpa Monitored from Stockholm. All logs from BR monitored from UK.

## Oddities

### S28      'The Buzzer'

4625	2105z	25 May	S28	<b>Continuous wide-band (3.5kHz) signal present</b>			USB	BR	SAT
	1849z	26 May	S28	'The Buzzer marker' – Normal buzzer tones			USB	BR	SUN
	0057z	17 Jun	S28	'The Buzzer marker' – Normal buzzer tones			USB	BR	MON

### S30      'The Pip'

3756	2108z	25 May	S30	'Pip' marker (Night freq)			USB	BR	SAT
	0058z	17 Jun	S30	'Pip' marker (Night freq)			USB	BR	MON

### New Additional 'Pip' Markers (Origins unknown – May be connected to Russian / Ukraine 'Radio Wars' activity)

6218	2109z	25 Mar		Sending alternate 'pip' & 'Buzz' tones			USB	BR	SAT
	0100z	17 Jun		'Pip' marker			USB	BR	MON
	2043z	20 Jun		Song being played repeatedly (Russian?) + STANAG			USB	BR	FRI
6230	2110z	25 Mar		'Pip' marker			USB	BR	SAT
5780	2112z	25 May		'Pip' marker			USB	BR	SAT

### 4326//4326.8/4327.8      'T' Marker (New Frequencies – previously on 4326.1//4327.1)

	2055z	20 Jun		'T' Marker (or Long dash?)				BR	FRI
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Contributors:      AB, BR, chpa, Gert, HFD      *Thank you all for your logs.*

# Voice, Polytone, Tones, Hybrids and FSK

## E06

From PoSW, analysis and observations:

First + Third Thursdays in the Month 0500 + 0600 UTC Schedule - repeated on the following day:-

2-May-24:- 0500 UTC, 14565 kHz, call "460", DK/GC "219 219 57 57", strong signal, ended just before 0514 UTC.  
0600 UTC, 16125 kHz. Weaker signal.

3-May-24, Friday:- 0500 UTC, nothing readable of the first sending on 14565, propagation must have changed over the past 24 hours.  
0600 UTC, 16125 kHz, very weak signal down in the noise, became stronger around 0610.

17-May-24, Friday - missed the previous day's transmissions:-  
0500 UTC, 14565 kHz, call "460", DK/GC "873 873 51 51", good signal.  
0600 UTC, 16125 kHz, also a good signal, ended before 0613 UTC.

6-June-24:- 0500 UTC, 13985 kHz, call "328", DK/GC "146 146 50 50", weak signal.  
0600 UTC, 15820 kHz, stronger.

7-June-24, Friday:- 0500 UTC, 13985 kHz, weak signal.  
0600 UTC, 15830 kHz, stronger.

20-June-24:- 0500 UTC, 13895 kHz, "328", DK/GC "741 741 50 50".  
0600 UTC, 15830 kHz, strong signal with occasional fading.

21-June-24, Friday:- 0500 UTC, 13985 kHz, weak signal, difficult copy.  
0600 UTC, 15830 kHz, also weak.

And RNGB's input:

### **E06 May/June log:**

<b>First/Third Thursday (repeats Friday)</b>	<b>0500z</b>	<b>14565kHz</b>	<b>0600z</b>	<b>16125kHz</b>
02/05 '460' 219 57	05686 62086 63272 17384 15189 97219 81222 39549 93084 46941 55564 62483 76668 73395 50314 47743 56119 14453 64761 16456 35497 57484 46085 31157 35646 22606 49334 14428 81175 66334 99456 77802 38711 41595 35069 59355 98598 75003 38648 93422 17264 47384 82841 60889 62389 88438 47573 93479 28122 21512 10964 72664 57888 03086 26847 71367 31720 219 57 00000			
06/06 '328' 146 50	47562 19712 14018 16247 20460 29749 56695 15834 68062 09359 29034 80518 64146 41654 92760 24762 85191 04908 93612 24102 18139 55093 92777 66098 83872 87034 91402 66612 87358 28858 21600 18605 30384 49432 02399 65638 47829 83487 84077 17279 53412 04090 29307 48573 05851 97171 04551 50806 31358 17806 146 50 00000			
20/06 '328' 741 50	10016 87215 18895 08371 49452 39854 24918 77325 16827 31874 70786 88747 45578 39980 63836 70414 05034 38031 84528 55166 87106 99286 41150 73185 61434 40416 35948 01406 16174 94705 72372 18484 26619 23661 58127 38781 18843 04015 83694 23775 20551 50724 81054 94382 16316 61930 92252 92532 49408 96831 741 50 00000			

## E07

### **E07 from PoSW, with mention of ongoing poor condx.**

Saturday + Thursday Schedule, 1410 UTC Start:-

2-May-24, Thursday:- 1410 UTC, 15836 kHz, "157 157 157 000".  
1430 UTC, 14536 kHz, very weak signal, unreadable.

4-May-24, Saturday:- 1410 UTC, 15836 kHz, "157 157 157 000", S5.  
1430 UTC, 14536 kHz, very weak.

11-May-24, Saturday:- Nothing readable on any of the predicted frequencies, probably connected with the ongoing story in the media concerning solar activity and its likely effects on the ionosphere and the displays of the Aurora Borealis.

16-May-24, Thursday:- 1410 UTC, 15836 kHz, "157 157 157 000", S4 to S5.  
1430 UTC, 14536 kHz, weak, clear signal.

23-May-24, Thursday:- 1410 UTC, 15836 kHz, "157 157 157 1", message, DK/GC "513 117" x 2, weak signal.  
1430 UTC, 14536 kHz, stronger, ended after 1542 UTC.  
1450 UTC, 13536 kHz, weak, interference from rapidly sweeping carrier, CODAR wave measuring radar?

25-May-24, Saturday:- 1410 UTC, 15836 kHz, "157" and "513 117" again, weak signal.  
1430 UTC, 14536 kHz, stronger.  
1450 UTC, 13536 kHz, weak with interference as on the 23<sup>rd</sup>.

30-May-24, Thursday:- 1410 UTC, 15636 kHz, “157 157 157 000”, S7.  
 1430 UTC, 14536 kHz, also an indicated S7, stronger than usual for the second sending.

1-June-24, Saturday:- Nothing readable on 13417 kHz, predicted frequency for the first sending in June.  
 1430 UTC, 14717 kHz, “603 603 603 000”, weak, clear signal.

8-June-24, Saturday:- 1410 UTC, 13417 kHz, “603 603 603 1”, message, DK/GC “6395 88” x 2, difficult copy due to very strong FSK/RTTY signal on the HF side.  
 1430 UTC, 14717 kHz, good signal.  
 1450 UTC, 15817 kHz, good signal, peaking over S9.

13-June-24, Thursday:- 1410 UTC, 13417 kHz, “603 603 603 000”, just about readable due to the FSK signal on close frequency.  
 1430 UTC, 14717 kHz, weak, clear signal.

15-June-24, Saturday:- 1410 UTC, 13417 kHz, weak signal + FSK making for difficult copy, could just hear the “000” of “no message”.  
 1430 UTC, 14717 kHz, “603 603 603 000”, good signal.

20-June-24, Thursday:- 1410 UTC, 13417 kHz, “603 603 603 1”, as always FSK on HF side making copy difficult.  
 1430 UTC, 14717 kHz, very weak, unreadable.  
 1450 UTC, 15817 kHz, weak at first, became stronger, DK/GC “6971 132” x 2, ended around 1503:25s UTC.

**Tuesday/Friday**

**May 2024**

1500z	16132kHz	1520z	18232kHz	1540z	18432kHz
03/05		124 1 6776 150 11335 ... 40174 000 000			1520z Weak, rest Fair
07/05		124 000			1500z Fair, 1520z Weak
14/05		124 1 5782 121 85911 ... 49410 000 000			Weak
17/05		124 1 5782 121 85911 ... 49410 000 000			1520z Fair, rest weak
28/05		124 1 7713 76 38169 ... 48526 000 000			Weak
31/05		124 1 7713 76 38169 ... 48526 000 000			Weak 1540z via Dutch SDR

**June 2024**

1500z	14945kHz	1520z	16145kHz	1540z	18245kHz
01/06		912 000			Weak 1500z QRM
07/06		912 000			Weak, 1520z NRH
14/06		912 1 msg txt inaudible, poor condx			1540z Very weak, noisy, rest NRH
18/06		NRH across schedule			
21/06		NOT MONITORED			
25/06		912 1 8786 93 81471 rest weak and noisy across schedule			1540z Weak QRM3/4, rest Unworkable.
29/06		NRH			Poor condx prevail

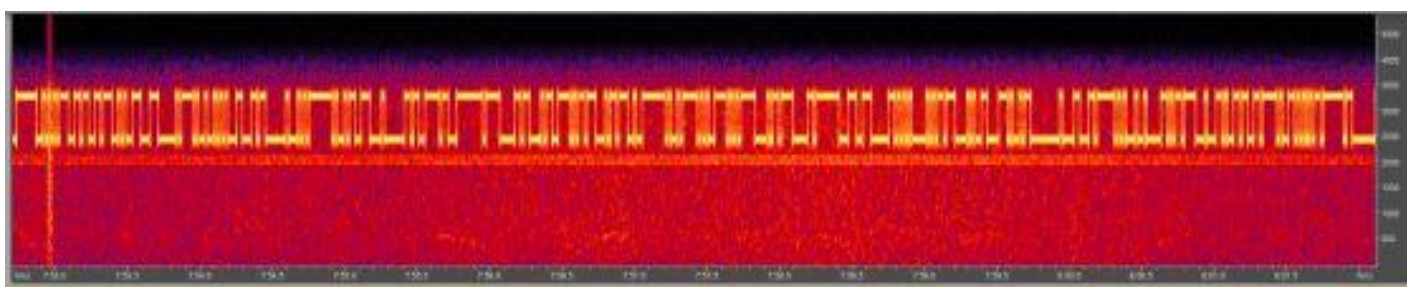
**Thursday/Saturday**

**May 2024**

1410z	15836kHz	1430z	14636kHz	1450z	13536kHz
02/05		157 000			1400z Fair, 1420z Weak
04/05		157 000			Weak
09/05		157 1 7900 83 17881 ... 14307 000 000			Weak
16/05		157 000			Weak
18/05		157 000			Weak

June 2024

1410z 13417kHz 1430z 14717kHz 1450z 15817kHz  
 01/06 603 000 Weak 1410z QRM



TTY as seen on 13417kHz 1410z

06/06	603 1 6395 88 78271 ... 04569 000 000	<i>See above</i>	1410z NRH TTY only, rest Weak, 1430z QRM3
08/06	603 1 6395 88 78271 ... 04569 000 000		1410z NRH TTY only, rest Weak
13/06	603 000		Weak, 1410z TTY QRM NRH
15/06	NOT MONITORED, LIGHTNING		
20/06	603 1 6971 132 08496 ... 69207 000 000		1450z Fair, 1410z TTY only, 1430z NRH [Fm M8 in Canada via DutchSDR: Weak 1410z QRM]
22/06	NOT MIONITORED		
27/06	603 000		1410z TTYQRM5, 1430z Weak
29/06	603 000		Weak

## E11&E11a log May/June

4783kHz	1610z	01/05 [390/00] Out 1613z S3		Malc, HfD	WED
	1610z	04/05 [396/00] Out 1613z S5	(Finnish SDR)	Malc	SAT
	1610z	08/05 [395/00] Out 1713z S3	(Dutch SDR)	Malc	WED
	1610z	15/05 [394/34 50488.....40851] Out 1620z S5	(Finnish SDR)	Malc	WED
	1610z	29/05 [392/00] Out 1613z S2	(Dutch SDR)	Malc	WED
	1610z	01/06 [399/00] Out 1613z S2		Malc	SAT
5082kHz	1645z	04/05 [360/00] Out 1648z S2		Malc	SAT
	1645z	05/05 [366/00] Out 1648z S2		Malc	SUN
	1645z	18/05 [363/00] Out 1648z S5	(Finnish SDR)	Malc	SAT
	1645z	19/05 [369/00] Out 1648z S5	(Finnish SDR)	Malc	SUN
	1645z	26/05 [368/00] Out 1648z S4	(Dutch SDR)	Malc	SUN
	1645z	01/06 [364/00] Out 1648z S3	(Dutch SDR)	Malc	SAT
	1645z	02/06 [363/00] Out 1648z S3	(Dutch SDR)	Malc	SUN
5231kHz	1605z	05/05 [236/00] Out 1608z S3	(Dutch SDR)	Malc, HfD	SUN
	1605z	07/05 [238/00] Out 1608z S3	(Dutch SDR)	Malc	TUE
	1605z	19/05 [232/00] Out 1608z S5	(Finnish SDR)	Malc	SUN
	1605z	26/05 [230/32 62818.....85854] Out 1615z S3	(Dutch SDR)	Malc	SUN
	1605z	28/05 [232/00] Out 1608z S3	(Dutch SDR)	Malc	TUE
	1605z	04/06 [238/37 74890.....06143] Out 1616z S4	(Dutch SDR)	Malc	TUE
5409kHz	2000z	02/05 [528/00] Out 2003z S4		Malc, HfD	THU
	2000z	05/05 [522/00] Out 2003z S4		Malc	SUN
	2000z	16/05 [524/00] Out 2003z S3		Malc	THU
	2000z	19/05 [527/00] Out 2003z S2		Malc	SUN
	2000z	26/05 [525/32 98003.....66165] Out 2010z S5		Malc	SUN
	2000z	30/05 [525/00] Out 2003z S5		Malc	THU
	2000z	20/06 [520/35 52114.....73184] Out 2010z S3	(Dutch SDR)	Malc	THU
5737kHz	1300z	02/05 [315/00] Out 1303z S5	(Finnish SDR)	Malc, HfD	THU
	1300z	06/05 [313/40 44726.....00380] Out 1311z S4	(Finnish SDR)	Malc	MON
	1300z	16/05 [313/00] Out 1303z S3	(Finnish SDR)	Malc	THU
	1300z	27/05 [319/00] Out 1303z S2	(Polish SDR)	Malc	MON
	1300z	30/05 [315/00] Out 1303z S3	(Polish SDR)	Malc	THU
	1300z	03/06 [312/00] Out 1303z S2	(Dutch SDR)	Malc	MON
	1300z	20/06 [311/00]		Malc	THU

6252kHz	0820z	03/05 [434/00] Weak (Polish SDR)		RNGB	FRI	
	0820z	09/05 [435/00] Out 0823z S2 (Dutch SDR)		Malc	THU	
	0820z	16/05 [431/00] Out 0823z S4 (Finnish SDR)		Malc	THU	
	0820z	17/05 [434/00] Out 0823z S5 (Finnish SDR)		Malc	FRI	
	0820z	30/05 [435/00] Out 0823z S2		Malc	THU	
	0820z	31/05 [439/00] Out 0823z S2		Malc	FRI	
	0820z	06/06 [431/00] Fair		RNGB	THU	
	0820z	13/06 [432/00] Weak		RNGB	THU	
	0820z	14/06 [438/00] Weak		RNGB	FRI	
	0820z	21/06 [432/00] Fair		RNGB	FRI	
	0820z	28/06 [437/39 92451 90859 95128 10517 54579 17591 11481.....86870 23020 99906] Fair		RNGB	FRI	
	6923kHz	0930z	01/05 [279/00] Out 0933z S3 (Finnish SDR)		Malc, HfD	WED
		0930z	02/05 [279/00] Weak		RNGB	THU
0930z		08/05 [279/00] Out 0933z S2		Malc	WED	
0930z		16/05 [278/35 12746.....81749] Out 0940z S3 (Finnish SDR)		Malc	THU	
0930z		23/05 [278/00] Weak		RNGB	THU	
0930z		29/05 [277/00] Out 0933z S2 (Dutch SDR)		Malc	WED	
0930z		30/05 [271/00] Out 0933z S4 (Dutch SDR)		Malc	THU	
0930z		20/06 [273/00] Good		RNGB	THU	
7377kHz	0700z	04/05 [495/00] Out 0703z S2		Malc	SAT	
	0700z	05/05 [491/00] Out 0703z S5 (Dutch SDR)		Malc	SUN	
	0700z	11/05 [497/00] Good		RNGB	SAT	
	0700z	18/05 [492/00] Out 0703z S2		Malc	SAT	
	0700z	26/05 [496/33 63339.....25705] Out 0710z S2		Malc	SUN	
	0700z	01/06 [492/00] Out 0703z S2		Malc	SAT	
	0700z	02/06 [490/00] Out 0703z S3		Malc	SUN	
	0700z	23/06 [491/00] Fair		RNGB	SUN	
7469kHz	0449z	06/05 [415/37 91895.....etc]		HfD	MON	
7600kHz	1900z	02/05 [649/00] Out 1903z S5		Malc, HfD	THU	
	1900z	06/05 [643/00] Out 1903z S3		Malc	MON	
	1900z	13/05 [646/00] Out 1903z S3		Malc	MON	
	1900z	16/05 [640/00] Out 1903z S2		Malc	THU	
	1900z	27/05 [644/00] Out 1903z S4		Malc	MON	
	1900z	30/05 [649/00] Out 1903z S7		Malc	THU	
	1900z	03/06 [646/00] Out 1903z S3		Malc	MON	
	1900z	06/06 [643/00]		Gary H	THU	
1900z	20/06 [647/37 00893.....85080] Outv1910z S9 (Dutch SDR)		Malc	THU		
7863kHz	1715z	01/05 [974/00] Out 1718z S3		Malc, HfD	WED	
	1715z	03/05 [970/00] Out 1718z S4		Malc	FRI	
	1715z	08/05 [974/31 16176.....71529] Out 1725z S3		Malc	WED	
	1715z	17/05 [970/00] Out 1718z S3		Malc	FRI	
	1715z	29/05 [972/00] Out 1718z S2		Malc	WED	
	1715z	31/05 [970/00] Out 1718z S2		Malc	FRI	
8088kHz	1730z	02/05 [413/00] Out 1733z S4		Malc, HfD	THU	
	1730z	09/05 [415/37 91895.....35570] Out 1741z S3		Malc	THU	
	1730z	16/05 [413/00] Out 1733z S2		Malc	THU	
	1730z	30/05 [411/00] Out 1733z S3		Malc	THU	
8091kHz	0645z	02/05 [512/00] Out 0648z S5		Malc, HfD	THU	
	0645z	07/05 [511/00] Out 0648z S7 (Dutch SDR)		Malc	TUE	
	0645z	09/05 [511/00] Good		RNGB, Malc	THU	
	0645z	14/05 [518/36 67381.....88811] Out 0656z S2		Malc	TUE	
	0645z	21/05 [519/00] Strong		RNGB	TUE	
	0645z	04/06 [515/00] Good		RNGB	TUE	
0645z	20/06 [517/00] Good		RNGB	THU		
8274kHz	1205z	14/05 [461/00]		HfD	TUE	
	1205z	15/05 [469/00] Out 1208z S7 (Finnish SDR)		Malc	WED	
	1205z	21/05 [460/00] Good		RNGB	TUE	
	1205z	29/05 [465/00] Out 1208z S3		Malc	WED	
	1205z	04/06 [464/00] Out 1208z S3 (Dutch SDR)		Malc	TUE	
8680kHz	0700z	03/05 [576/00] Strong		RNGB, Malc, HfD	FRI	
	0700z	07/05 [570/00] Good		RNGB, Malc	TUE	
	0700z	14/05 [574/00] Out 0703z S3		Malc	TUE	
	0700z	17/05 [573/00] Out 0703z S3		Malc	FRI	
	0700z	21/05 [576/00] Good		RNGB	TUE	
	0700z	24/05 [573/00] Good		RNGB	FRI	
	0700z	28/05 [571/38 43798 34572 07308 17493 43024 16225 66795.....35527 71752] Out 0711z S4		RNGB, Malc	TUE	
	0700z	04/06 [571/00] Out 0703z S3		Malc	TUE	
	0700z	07/06 [571/00] Good		RNGB	FRI	
	0700z	14/06 [573/00] Good		RNGB	FRI	
	0700z	21/06 [576/00] Strong		RNGB	FRI	
	0700z	25/06 [575/39 11645 46009 59773 05424 58444 79109 18530 46738.....96027 92208] Good		RNGB	FRI	
	9150kHz	0600z	03/05 [351/00] Good		RNGB, Malc, HfD	FRI
0600z		10/05 [353/00] Good		RNGB	FRI	



	0600z	19/05 [354/00] Out 0603z S4		Malc	SUN
	0600z	24/05 [351/33 00053 74452 13417 87128 63660 73664 79352 90514.....04439 21977 94665]		RNGB	FRI
	0600z	14/06 [359/00] Good		RNGB	FRI
9610kHz	1910z	03/05 [617/00] Out 1913z S6		Malc, HfD	FRI
	1910z	05/05 [610/00] Out 1913z S6		Malc	SUN
	1745z	06/05 [260/33 05989.....45154] Out 0755z S4	(Dutch SDR)	Malc	MON
	0745z	13/05 [261/00] Out 0748z S32		Malc	MON
	1910z	17/05 [610/39 28217.....87774] Out 1921z S7		Malc	FRI
	0745z	20/05 [261/00] Strong		RNGB	MON
	1910z	26/05 [611/00] Out 1913z S7		Malc	SUN
	0745z	27/05 [261/00] Out 0748z S3		Malc	MON
	1910z	31/05 [617/00] Out 1913z S3		Malc	FRI
	1910z	02/06 [613/00] Out 1913z S4		Malc	SUN
	0745z	03/06 [261/38 49402 39057 48041 98427 04704 96945 43742.....89191 34830] Out 0756z S4		dMHz, Malc	MON
	0745z	17/06 [268/00] Good		RNGB	MON
10210kHz	1045z	01/05 [699/00]		HfD	WED
	1045z	06/05 [693/00] Out 1048z S3		Malc	MON
	1045z	08/05 [694/00] Out 1048z S2		Malc	WED
	1045z	13/05 [693/35 10682.....79842] Out 1056z S5	(Finnish SDR)	Malc	MON
	1045z	27/05 [691/00] Out 1048z S3		Malc	MON
	1045z	29/05 [690/00] Out 1048z S4		Malc	WED
	1045z	03/06 [693/00] Out 1048z S3		Malc	MON
10356kHz	1530z	02/05 [269/00] Out 1533z S6		Malc, HfD	THU
	1530z	09/05 [260/33 05989.....45154] Out 1540z S8		Malc	THU
	1530z	16/05 [261/00] Out 1533z S4		Malc	THU
	1530z	30/05 [261/00] Out 1533z S3		Malc	THU
	1530z	20/06 [264/00] Out 1533z S9	(Dutch SDR)	Malc	THU
11116kHz	0900z	01/05 [533/00] Good		RNGB, Malc, HfD	WED
	0900z	06/05 [533/00] Out 0903z S3		Malc	MON
	0900z	08/05 [536/00] Out 0903z S3		Malc	WED
	0900z	13/05 [538/32 38882.....37536]		Malc	MON
	0900z	27/05 [532/00] Out 0903z S3		Malc	MON
	0900z	29/05 [537/00] Out 0903z S3		Malc	MON
12153kHz	1000z	03/05 [308/00] Out 1003z S4		Malc, HfD	FRI
	1000z	07/05 [300/00] Out 1003z S3		Malc	TUE
	1000z	14/05 [309/00] Out 1003z S4		Malc	TUE
	1000z	17/05 [307/00] Out 1003z S3		Malc	FRI
	1000z	31/05 [309/00] Good		RNGB	FRI
	1000z	04/06 [304/00] Out 1003z S3		Malc	TUE
12229kHz	1815z	03/05 [926/31 87414.....78046] Out 1824z		Malc, HfD	FRI
	1815z	17/05 [921/00] Out 1818z S6		Malc	FRI
	1815z	19/05 [924/00] Out 1818z S4		Malc	SUN
	1815z	26/05 [920/00] Out 1818z S7		Malc	SUN
	1815z	31/05 [924/00] Fair		RNGB	FRI
	1815z	02/06 [922/00] Out 1818z S5		Malc	SUN
12530kHz	0715z	03/05 [630/00] Good		RNGB, Malc, HfD	FRI
	0715z	07/05 [637/00] Good		RNGB, Malc	TUE
	0715z	14/05 [634/32 34517.....55150] Out 0725 S7		Malc	TUE
	0715z	21/05 [630/00] Good		RNGB	TUE
	0715z	28/05 [633/00] Out 0718z S9		Malc	TUE
	0715z	31/05 [630/00] Good		RNGB	FRI
	0715z	04/06 [635/00] Good		RNGB	TUE
	0715z	07/06 [636/00] Strong		RNGB	FRI
	0715z	14/06 [631/00] Good		RNGB	FRI
	0715z	25/06 [633/00] Strong		RNGB	TUE
12815kHz	0845z	01/05 [714/00] Out 0848z S4		Malc, RNGB, HfD	WED
	0845z	06/05 [716/39 91048.....46974] Out 0856z S8	(Dutch SDR)	Malc	MON
	0845z	13/05 [713/00] Out 0848z S2		Malc	MON
	0845z	27/05 [711/00] Out 0848z S4	(Finnish SDR)	Malc	MON
	0845z	29/05 [713/00] Out 0848z S3		Malc	WED
	0845z	03/06 [716/34 34251.....53808] Out 0855z S2		Malc	MON
	0845z	10/06 [714/00] Good		RNGB	MON
12984kHz	1430z	04/05 [912/00] Out 1433z S3		Malc, HfD	SAT
	1430z	07/05 [912/32 35029.....33267] Out 1440z S4		Malc	TUE
	1430z	18/05 [912/00] Out 1433z S4		Malc	SAT
	1430z	04/06 [912/00] Out 1433z S4		Malc, Gary H	TUE
14410kHz	1745z	05/05 [248/00]		HfD	SUN
	1745z	06/05 [249/00] Out 1748z S5		Malc	MON
	1745z	13/05 [240/00] Out 1748z S4		Malc	MON
	1745z	19/05 [244/00] Out 1748z S4		Malc	SUN
	1745z	26/05 [240/40 30419.....26910] Out 1757z S9		Malc	SUN
	1745z	27/05 [240/00] Out 1748z S7		Malc	MON
	1745z	02/06 [245/00] Out 1748z S6		Malc	SUN

	1745z	03/06 [242/00] Out 1748z S6		Malc	MON
	1745z	16/06 [242/00]		Gary H	SUN
14575kHz	1645z	02/05 [335/00] Out 1648z S2		Malc, HfD	THU
	1645z	07/05 [333/00] Out 1648z S3		Malc	TUE
	1645z	09/05 [337/00] Out 1648z S5		Malc	THU
	1645z	16/05 [338/33 57132.....00445] Out 1655z S3	(Finnish SDR)	Malc	THU
	1645z	28/05 [332/00] Out 1648z S4		Malc	TUE
	1645z	30/05 [331/00] Out 1648z S3		Malc	THU
	1645z	04/06 [334/00] Out 1648z S3		Malc	TUE
	1645z	20/06 [337/00] Out 1648z S3	(Dutch SDR}	Malc	THU
14940khz	0745z	02/05 [227/00] Weak with QRM		RNGB, Malc, HfD	THU
	0745z	07/05 [223/00] Out 0748z S4+QRM		Malc	TUE
	0745z	09/05 [223/00] Good		RNGB, Malc	THU
	0745z	14/05 [225/00] Out 0748z S3		Malc	TUE
	0745z	16/05 [224/00] Out 0748z S5		Malc	THU
	0745z	28/05 [220/34 19481.....53799] Out 0755z S4		Malc	TUE
	0745z	04/06 [223/00] Out 0748z S4		Malc	TUE
	0745z	06/06 [229/00] Weak		RNGB	THU
	0745z	11/06 [227/00] Fair		RNGB	TUE
	0745z	20/06 [228/38 45797 07935 05077 89241 45618 19367 54459.....05111 02287] Good		RNGB	THU
	0745z	25/06 [227/00] Good		RNGB	TUE
15720kHz	0745z	01/05 [342/00]		HfD	WED
	0745z	03/05 [343/00] Extremely weak		RNGB	FRI
	0745z	08/05 [347/00] Good		RNGB, Malc	WED
	0745z	15/05 [346/00] Out 0748z S3		Malc	WED
	0745z	17/05 [344/00] Out 0748z S3	(Finnish SDR)	Malc	FRI
	0745z	22/05 [344/00] Weak Heavy QRM		RNGB	WED
	0745z	24/05 [349/00] Weak Heavy QRM		RNGB	FRI
	0745z	29/05 [342/40 92965 35504 85353 00180 22965 42652 42839 56902.....92866 25082] Good		RNGB, Malc	WED
	0745z	07/06 [340/00] Good with some QRM		RNGB	FRI
	0745z	28/06 [340/00] Good		RNGB	FRI
15915kHz	0715z	01/05 [755/00]		HfD	WED
	0715z	06/05 [755/00] Out 0718z S2		Malc	MON
	0715z	08/05 [759/00] Good		RNGB, Malc	WED
	0715z	13/05 [755/00] Out 0718z S2		Malc	MON
	0715z	15/05 [754/00] Out 0718z S4		Malc	WED
	0715z	20/05 [754/34 36582 18570 22327 84456 39901 44355 04885 10473.....90420 25925] Good		RNGB	MON
	0715z	27/05 [754/00] Out 0718z S3	(Polish SDR)	Malc	MON
	0715z	29/05 [759/00] Out 0703z S3		Malc	WED
	0715z	05/06 [759/00] Good		RNGB	WED
	0715z	12/06 [759/32 18395 32721 50560 20352 06467 38226 46638 85115.....00349 97076] Faie		RNGB	WED
	0715z	17/06 [753/00] Weak		RNGB	MON
	0715z	24/06 [751/00] Good		RNGB	MON
16125khz	0315z	08/05 [255/00]		HfD	WED
16335kHz	0830z	03/05 [183/00] Out 0833z S4		Malc, HfD	FRI
	0830z	06/05 [185/00] Weak		RNGB, Malc	MON
	0830z	13/05 [188/00] Out 0833z S3		Malc	MON
	0830z	17/05 [184/00] Out 0833z S3		Malc	FRI
	0830z	27/05 [184/00] Out 0833z S2		Malc	MON
	0830z	31/05 [189/00] Out 0833z S3		Malc	FRI
	0830z	03/06 [181/00] Out 0833z S3		Malc	MON
	0830z	10/06 [184/00] Weak		RNGB	MON
	0830z	17/06 [181/26 71740 77642 61395 33339 97424 53307 37576.....87768 76494 18749] Good		RNGB	MON
17378kHz	0820z	01/05 [132/00] Out 0823z S3	(Polish SDR)	Malc, HfD	WED
	0820z	14/05 [134/00] Out 0823z S3		Malc	TUE
	0820z	15/05 [133/00] Out 0823z S4		Malc	WED
	0820z	21/05 [130/37 64762 32879 27778 72015 32395 78276 33474 17407.....97650 53042] Weak		RNGB	TUE
	0820z	28/05 [133/00] Out 0823z S4		Malc	TUE
	0820z	29/05 [130/00] Weak		RNGB, Malc	WED
	0820z	04/06 [134/00] Out 0823z S2		Malc	TUE
	0820z	11/06 [132/00] Good	(Polish SDR)	RNGB	TUE
	0820z	25/06 [130/39 67644 92476 50535 48783 68640 96745 30771 42943.....95471 01407] Good		RNGB	FRI
19184khz	0845z	02/05 [159/00] Weak		RNGB, Malc, HfD	THU
	0845z	07/05 [156/00] Out 0848z S2		Malc	TUE
	0845z	09/05 [152/00] Out 0848z S2		Malc	THU
	0845z	14/05 [152/00] Out 0848z S4	(Finnish SDR)	Malc	TUE
	0845z	16/05 [157/00] Out 0848z S5	(Polish SDR)	Malc	THU
	0845z	28/05 [154/00] Out 0848z S2		Malc	TUE
	0845z	30/05 [152/00] Fair		RNGB	THU
	0845z	04/06 [157/00] Out 0848z S5		Malc	TUE
20170khz	0600z	01/05 [946/00]		HfD	WED
	0600z	06/05 [948/24 50753.....36442] Out 0608z S6	(Finnish SDR)	Malc	MON
	0600z	05/06 [949/00] Weak		RNGB	WED

From PoSW:

A small selection of transmissions from this most active of number stations although, as always, the vast majority are of the “oblique zero zero” - no message, lasting just over three minutes. [Some duplication with above].

5409 kHz, 2000 UTC

2-May-24, Thu:- “528/00”  
9-May-24, Thu:- “524/00”  
16-May-24, Thu:- “524/00”  
19-May-24, Sun:- “527/00”  
23-May-24, Thu:- “525/32”, message, “Out” at 2009:37s UTC.  
30-May-24, Thu:- “525/00”  
6-June-24, Thu:- “524/00”  
13-June-24, Thu:- “528/00”  
16-June-24, Sun:- “521/00”  
20-June-24, Thu:- “520/35”, message, “Out” at 2010:25s UTC.  
23-June-24, Sun:- “520/35” again.

7600 kHz, 1900 UTC

2-May-24, Thu:- “649/00”  
6-May-24, Mon:- “643/00”  
9-May-24, Thu:- “641/00”  
13-May-24, Mon:- “646/00”  
20-May-24, Mon:- “643/39”, message.  
23-May-24, Thu:- “643/39” again.  
30-May-24, Thu:- “649/00”  
6-June-24, Thu:- “643/00”  
10-June-24, Mon:- “648/00”  
13-June-24, Thu:- “646/00”  
20-June-24, Thu:- “640/37”, message.

7863 kHz, 1715 UTC

1-May-24, Wed:- “974/00”  
8-May-24, Wed:- “974/31”, message, “Out” at 1724:18s UTC.  
17-May-24, Fri:- “970/00”  
24-May-24, Fri:- “974/00”  
5-June-24, Wed:- “976/00”  
12-June-24, Wed:- “976/00”  
28-June-24, Fri:- “975/32”, message.

12229 kHz, 1815 UTC

3-May-24, Fri:- “926/31”, message, interference from strong OTHR extending from approx 12217 to 12241 kHz  
24-May-24, Fri:- “925/00”

12984 kHz, 1430 UTC

4-May-24, Sat:- “912/00”  
11-May-24, Sat:- “912/32”, message, “Out” at 1439:36s UTC.  
14-May-24, Tue:- “919/00”  
25-May-24, Sat:- “914/00”  
28-May-24, Tue:- “910/00”  
1-June-24, Sat:- “915/00”  
4-June-24, Tue:- “912/00”  
8-June-24, Sat:- “918/00”  
11-June-24, Tue:- “919/00”  
15-June-24, Sat:- “918/00”

15720 kHz, 0745 UTC

This is a noisy frequency, sounds like some kind of digital data signal, has always been there throughout May and June but E11 managing to be heard over it.

1-May-24, Wed:- “342/00”  
3-May-24, Fri:- “343/00”  
8-May-24, Wed:- “347/00”  
15-May-24, Wed:- “346/00”  
24-May-24, Fri:- “349/00”  
29-May-24, Wed:- “342/40”, message.  
31-May-24, Fri:- “342/40” again.  
5-June-24, Wed:- “346/00”  
7-June-24, Fri:- “340/00”  
12-June-24, Wed:- “343/00”  
14-June-24, Fri:- “346/00”  
21-June-24, Fri:- “349/37”, message.  
26-June-24, Wed:- “348/00”  
28-June-24, Fri:- “340/00”

15915 kHz, 0715 UTC

20-May-24, Mon:- “754/34”, message, “Out” at 0724:55s UTC.  
5-June-24, Wed:- “759/00”  
10-June-24, Mon:- “759/32”, message, “Out” at 0724:40s UTC.  
12-June-24, Wed:- “750/32” again.  
24-June-24, Mon:- “751/00”

17378 kHz, 0820 UTC  
 28-May-24, Tue:- "133/00"  
 4-June-24, Tue:- "134/00"  
 5-June-24, Wed:- "134/00"  
 11-June-24, Tue:- "132/00"  
 12-June-24, Wed:- "130/00"  
 18-June-24, Tue:- "133/00"  
 25-June-24, Tue:- "130/39", message, "Out" at 0831 UTC.

## S06

### S06 log May/June

<b>Friday 1st &amp; 3rd</b>		<b>1900z</b>	<b>11149khz</b>	<b>2000z</b>	<b>9205kHz</b>
03/05	'842' 00000				
17/05	'842' 316 52	78697 15720 77215 31835 71592 07613 47880 88346 93212 52409 10758 75017 88555 02962 24655 53410 86460 99365 30945 15824 81515 16409 07727 42688 09571 81156 99236 45006 00594 39186 13020 22706 04974 96623 75968 16050 92898 48395 19742 89857 42718 19141 49658 88638 45354 58656 41971 64554 63138 93661 01181 98457 316 52 00000			
07/06	'842' 00000				
<b>Wednesday</b>		<b>0930z</b>	<b>14975kHz</b>	<b>1030z</b>	<b>12093kHz</b>
01/05	'480' 276 50	53840 70287 67625 75393 45163 05192 41341 10142 64154 54121 63874 23218 98185 29843 24952 73424 49376 85843 93754 20725 80139 60289 98636 14313 17196 03178 67672 89097 23594 34212 13243 80780 38308 60521 83591 26873 70619 24967 62972 40347 24363 69560 31435 14849 49464 92802 10481 65859 24835 58606 276 50 00000			
08/05	'480' 372 46	62146 04956 28141 75071 49051 62091 71891 71956 89465 83963 53045 41328 17179 32457 94386 75974 17807 57897 41326 25193 39560 59262 50874 02614 95437 83931 56425 91073 30685 83693 86473 13801 46043 01671 60983 94284 34572 19642 51351 89840 14602 46524 96827 28760 08263 49214 371 46 00000			
15/05	'480' 273 44	95729 98476 10865 48172 34735 53572 17082 14890 23434 47020 01958 96165 80871 46532 12902 12470 18794 24843 71589 24751 24638 42687 85361 71412 84657 37674 31467 42747 29498 28170 83716 41547 01754 82854 45294 78287 65791 40614 01475 93640 45240 90958 15632 31616 273 44 00000			
<b>Saturday</b>		<b>1600z</b>	<b>13547khz</b>	<b>1630z</b>	<b>11128kHz</b>
04/05	'480' 951 43	57175 28634 65168 39409 81304 94936 16412 78076 21437 56426 70848 59541 02831 97061 75312 27830 58528 62190 29848 87196 37476 13184 75174 13172 46514 70767 08472 47868 67593 46850 05875 37694 20140 92085 04283 16480 19584 71202 25193 85054 25726 91512 02358 951 43 00000			
<b>Sunday</b>		<b>0730z</b>	<b>14735kHz</b>	<b>0800z</b>	<b>12217kHz</b>
05/05	'480' 951 43 57175.....etx	(Repeat of Saturday)			

PoSW's take on Russian Man:

#### First + Third Fridays in the Month Schedule, 1900 + 2000 UTC in May, 2000 + 2100 UTC in June:-

3-May-24:- Nothing found on the first Friday of this month; frequencies in May of last year were 10286 and 8037 kHz, expected similar parts of the short-wave spectrum to be used this evening. As it turned out, both were somewhat higher.

17-May-24:- 1903 UTC, 11149 kHz, found in progress calling "842" for a message, severe local interference between about 8600 to 11800 kHz or so making for difficult copy. DK/GC "316 316 52 52". Unable to find a transmission at 2000 UTC. As expected there was a repeat on the following day:-

18-May-24, Saturday:- 1900 UTC, 11149 kHz, difficult copy.  
 2003 UTC, 9205 kHz second sending in progress, also suffering from local interference.

7-June-24:- 2000 UTC, 11149 kHz, "842 842 842 00000", heard surprisingly well over the local interference.  
 2100 UTC, 9205 kHz, weak, difficult copy.

21-June-24:- 2000 UTC, 11149 kHz, "842 842 842 00000"  
 2100 UTC, 9205 kHz, weak signal, only just readable.

#### Saturday Schedule, 1600 + 1630 UTC:-

A schedule at these times had been logged in the first months of the year moving higher in frequency with each month, always with call "480", sometimes with the S06 Russian

OM voice and others with the E06 English – perhaps alternating on a weekly basis; in April appeared on 11487 and 9412 kHz and was never very strong. Showed up in May but only once:-

4-May-24:- 1602 UTC, 13547 kHz:- found in progress with "480", strong signal, by far the best reception of this Saturday schedule, clear of local RF interference. DK/GC "951 951 43 43". Unable to find a second sending at 1630 UTC, which was presumably a couple of MHz or so lower. Nothing heard on the following Saturday, 11-May, thought that this might be due to propagation issues associated with the solar geomagnetic disturbances being reported in the media at this time but nothing was heard on the following Saturdays and nothing found in June.

# S11a log May/June

5149kHz	0830z	04/05 [370/37 11198.....31627] Konyetz 0841z S2 (Polish SDR)	Malc	SAT
	0830z	18/05 [379/00] Konyetz 0833z S3 (Finnish SDR)	Malc	SAT
	0830z	19/05 [376/00] Out 0833z S2	Malc	SUN
	0830z	25/05 [378/00] Fair	RNGB	SAT
	0830z	26/05 [376/00] Konyetz 0833z S3 (Dutch SDR)	Malc	SUN
	0830z	01/06 [378/40 31065..... ?????] 0842z S3 QSB3	Malc	SAT
	0830z	16/06 [377/00] Fair	RNGB	SUN
	0830z	29/06 [378/00] Fair	RNGB	SAT
6814kHz	0915z	03/05 [483/00] Konyetz 0918z S7 (Finnish SDR)	Malc	FRI
	0915z	06/05 [486/00] Weak	RNGB, Malc	MON
	0915z	13/05 [483/00] Konyetz 0918z S5 (Finnish SDR)	Malc	MON
	0915z	17/05 [481/00] Konyetz 0918z S2	Malc	FRI
	0915z	31/05 [480/00] Konyetz 0918z S3 (Dutch SDR)	Malc	FRI
	0915z	14/06 [487/31 87617 13477 63025 41433 05323 72963 84194 75677.....20697 68449] Good	RNGB	FRI
	0915z	28/06 [483/00] Fair	RNGB	FRI
9339kHz	0700z	02/05 [472/00] Strong	RNGB, Malc	THU
	0700z	09/05 [476/39 85676 72220 39709 42805 00975 19226 61621 14998.....15308 65609] Good	RNGB	THU
	0700z	13/05 [476/00] Konyetz 0703z S2	Malc	MON
	0700z	20/05 [475/00] Good	RNGB	MON
	0700z	16/05 [470/00] Konyetz 0703z S3	Malc	THU
	0700z	27/05 [479/00] Konyetz 0703z S2 (Polish SDR)	Malc	MON
	0700z	30/05 [471/00] Fair	RNGB	THU
	0700z	03/06 [471/00] Konyetz 0703z S3	Malc	MON
	0700z	06/06 [475/00] Strong	RNGB	THU
	0700z	10/06 [477/00] Strong	RNGB	MON
	0700z	17/06 [475/00] Good	RNGB	MON
	0700z	20/06 [472/00] Good	RNGB	THU
	0700z	24/06 [479/34 97782 77744 84758 23976 79687 49943 16413 90512.....02450 19782] Good	RNGB	MON
9448kHz	1400z	03/05 [427/00] Konyetz 1403z S3	Malc, HfD	FRI
	1400z	07/05 [426/00] Konyetz 1403z S2	Malc	TUE
	1400z	14/05 [420/35 09587.....37160] Konyetz 1412z S5 (Finnish SDR)	Malc	TUE
	1400z	28/05 [420/00] Konyetz 1403z S5 (Dutch SDR)	Malc	TUE
	1400z	04/06 [421/00] Konyetz 1403z S4 (Dutch SDR)	Malc	TUE
9968kHz	0445z	02/05 [793/00]	HfD	THU
12457kHz	1850z	01/05 [280/34 54629 06201 38039 17783 24865 03865 89447.....74064] Konyetz 1901z S8	Malc, HfD	WED
	1850z	08/05 [284/00] Konyetz 1853z S9	Malc	WED
	1850z	15/05 [280/00] Konyetz 1853z S9	Malc	WED
	1850z	18/05 [285/00] Konyetz 1853z S2	Malc	SAT
	1850z	29/05 [281/00] Konyetz 1853z S6	Malc	WED
	1850z	01/06 [288/00] Konyetz 1853z S9	Malc	SAT
16357kHz	0510z	06/05 [654/00]	HfD	MON
20905kHz	0725z	01/05 [381/00] Konyetz 0728z S2 (Polish SDR)	Malc, HfD	WED
	0725z	03/05 [384/00] Konyetz 0728z S3 (Finnish SDR)	Malc	FRI
	0725z	08/05 [389/00] Konyetz 0728z S2	Malc	WED
	0725z	10/05 [383/00] Good	RNGB	FRI
	0725z	17/05 [380/39 83079.....10749]	Malc	FRI
	0725z	22/05 [384/00] Good (Polish SDR)	RNGB	WED
	0725z	29/05 [384/00] Fair with QRM (Polish SDR)	RNGB	WED
	0725z	31/05 [389/00] Konyetz 0728z S3 (Finnish SDR)	Malc	FRI
	0725z	05/06 [383/00] Good	RNGB	WED
	0725z	07/06 [385/00] Strong	RNGB	FRI
	0725z	12/06 [387/38 29877 44444 67944 67125 87745 65639 75936 95334.....74439 78686] Good	RNGB	WED
	0725z	21/06 [382/00] Fair	RNGB	FRI
	0725z	28/06 [389/00] Fair	RNGB	FRI

**V06**

# V07

With thanks from Daniel, DanAR

## May 2024

**0700z 14469kHz 0700z 13369kHz 0700z 12169kHz**

14469kHz0700z 05/05 431 1 6881 79 87780 ... 05749 000 000 QSA2 DanAR SUN

431 431 431 1  
6881 79  
87780 61060 58853 33787 13446  
11488 20021 40946 89591 58963  
59985 13083 66977 80559 63303  
41624 71620 29228 61089 90974  
66471 39955 07953 91077 89040  
49536 21430 00041 71815 48181  
46529 72612 91120 23421 99299  
22885 60417 36303 37633 05505  
82799 55155 57859 73080 42546  
47398 55054 03810 98332 32258  
76782 07214 14505 33417 73808  
67407 35237 57263 69627 19944  
98055 64436 33535 14052 60276  
60597 40419 51025 66065 35838  
00775 25098 49179 19899 23950  
88362 94283 17567 05749  
000 000 *Courtesy DanAR*

14469kHz0700z 12/05 431 1 9316 112 95904 ... 90332 000 000 QSA2 DanAR SUN

431 431 431 1  
9316 112  
95904 12269 37424 23334 40812  
56232 93167 67898 18561 88329  
41828 97525 38523 19366 73528  
75309 99687 87224 54009 57726  
04714 98517 06107 73248 58954  
08198 64485 12097 24928 14359  
91628 75681 62039 77391 34869  
86553 78474 66023 03465 36567  
75121 10445 93783 33321 67217  
12612 45265 45636 79836 42926  
55041 88468 59255 20384 60893  
59970 43178 38595 65458 01642  
36757 80712 34814 98988 78027  
96520 34829 33760 96962 15696  
81108 94727 97125 20426 00004  
49839 58391 73718 77927 28247  
11772 43258 32810 48520 96982  
11650 15113 39974 88336 86004  
93515 57180 05784 37691 91659  
45378 49724 26411 48957 33910  
78484 75216 69270 72558 19039  
87314 88770 00151 06780 96250  
34544 90322 000 000  
*Courtesy DanAR*

14469kHz0700z 19/05 431 000 QSA3 DanAR SUN

14469kHz0700z 26/05 431 1 6687 103 01339 ... 67710 000 000 QSA3 DanAR SUN

431 431 431 1  
6687 103  
01339 13728 93352 05651 10993  
55072 90321 21764 52026 60387  
39608 30663 17258 38832 88323  
50919 12658 80301 24391 84432  
01304 68416 01515 95113 27026  
99414 75715 97324 98495 27790  
77188 30504 89594 76245 12193  
44602 57508 69100 63034 08816  
12435 15968 11585 23863 08320  
66394 22093 43880 68599 95322  
40337 33045 75684 34323 61131  
27702 46265 64101 33861 64906  
48351 30921 03841 06953 80469  
52420 57759 21566 77596 04169  
01440 08010 27950 27684 68157  
95092 61393 60419 68497 55584  
86507 84151 41496 09401 46776  
76899 67997 79816 10126 20926  
49901 90853 66419 80749 90813  
83472 87465 61279 69791 57478  
21171 05376 67710 000 000  
*Courtesy Dan*

## June 2024

**0700z 13927kHz 0720z 13427kHz 0740z 12127kHz**

13927kHz0700z 02/06 942 1 7631 63 30115 ... 99503 000 000 QSA3 DanAR SUN

942 942 942 1  
7631 63  
30115 77246 39008 15104 22582  
34544 80900 30648 66934 29231  
08373 59147 10415 81058 77296

46297 95047 38566 09709 63120  
50212 38619 00994 61879 43962  
77311 25484 77199 50936 08031  
79503 00149 72990 96755 75209  
17255 03961 57708 79105 51105  
61777 33140 61877 52176 77432  
21123 93835 15974 37634 27896  
99345 97616 16516 74998 92582  
32750 73982 34788 83910 19971  
05446 30421 99503 000 000

Courtesy DanAR

13927kHz0700z 09/06 942 1 6151 96 92459 ... 55171 000 000 QSA3 DanAR SUN

942 942 942 1  
6151 96  
92459 26115 59862 43935 08470  
66712 50837 42551 44046 36393  
83534 80517 75639 92744 32977  
90551 79784 69955 17418 48085  
33632 36959 65968 10917 70217  
21070 17073 35083 90339 18446  
57470 24146 31099 22402 30559  
46198 17613 29208 22324 75940  
30801 66173 01868 64616 20695  
18227 45005 81677 62655 19479  
75392 68848 09786 65907 51913  
86040 58529 74161 88531 76240  
72411 15322 36091 24460 04968  
39756 27103 35049 27913 74808  
37811 00846 15648 98008 54714  
55125 17497 76401 33013 68285  
38575 30361 55974 96135 79716  
11043 00518 19378 28727 69661  
94613 66243 60376 63122 57763  
55171 000 000 Courtesy DanAR

13927kHz0700z 02/06 NRH

13927kHz0700z 23/06 942 1 5706 112 47381... ????? 000 000 QSA2 QSB 2 weak conditions DanAR SUN

942 942 942 1  
5706 112  
47381 19459 34681 57899 17769  
71993 63994 88405 11319 82715  
50723 15189 28681 12737 92619  
34639 08816 59136 01648 03932  
66840 97131 60514 91201 86977  
39824 84811 16060 52534 93225  
21653 11498 91986 18223 41356  
85325 05339 14898 90805 13746  
41324 25217 52399 98311 57449  
41694 14243 64794 89452 45684  
93280 17049 74854 73893 51357  
59312 76550 48249 16897 29083  
72552 72674 50120 70898 47721  
79594 29696 27422 50312 94244  
02601 00201 48309 49681 25107  
20357 51185 92036 1 985 17272  
72398 ..... 27943 29950 96249  
21 82 32358 40909 12702 011 9  
84883 5 956 04166 40105  
14469 08504 66399  
65966 7 54371 72792 04885  
82297 65108 83327 64888 324  
????? ????? ?????  
000 000 Courtesy DanAR

13927kHz0700z 30/06 942 1 1683 93 85318 5... 90867 000 000 QSA3 DanAR SUN

942 942 942 1  
1683 93  
85318 55820 29793 67860 23230  
78318 93531 72758 95844 81747  
76588 33698 83692 38876 21939  
38626 10102 62758 61646 08878  
28946 45416 37520 34845 37148  
28177 97803 69673 32355 44991  
20747 52862 66295 95826 10838  
39474 95892 50617 10383 90521  
02289 25883 10294 61180 68703  
53763 06401 87134 35967 64676  
52777 01528 21244 25402 36603  
90890 86668 33477 19878 49423  
81190 80311 71502 69064 96694  
69933 62699 25471 86927 11024  
78405 59942 16833 73693 40132  
92483 81934 49934 45923 40719  
47340 27320 76306 37751 10222  
56394 51634 18739 14967 72008  
43917 76437 90867 000 000  
Courtesy DanAR

# V13

## V15 North Korean Intelligence via Radio Pyongyang

Nil Reports

# V24

Nil Reports

# V26

Nil Reports

# Polytones

## XPA1 Wed/Fri

May 2024

1210z	13419kHz	1230z	12219kHz	1250z	11419kHz
01/05	Unworkable across schedule, 1210z TTYQRM4				
03/05	LIGHTNING NOT MONITORED				
08/05	Unworkable across schedule, 1210z TTYQRM4				
From H-FD:	Wed 08.05.2024 1210Z 13419 424, RTTY QRM Wed 08.05.2024 1231Z 12219 424 Wed 08.05.2024 1250Z 11419 424:1				
10/05	424 1 00598 00269 62612 ... 72625		1210z NRH, 1230z Weak, 1250z Very weak		

**NOT MONITORED FROM 13<sup>TH</sup> TO 31<sup>ST</sup> MAY**

June 2024

1210z	13545kHz	1230z	12145kHz	1250z	11145kHz
05/06	NOT MONITORED				
07/06	511 1 03431 00183 69678 ... 44035		1210z Fair, rest Very weak		
12/06	511 1 03431 00183 69678 ... 44035		1210z Unworkable, rest Weak		
14/06	511 1 03431 00183 69678 ... 44035		1210z Very weak, rest unworkable		
19/06	00189 00177 73889 ... 45046		1230z Weak, rest Unworkable		
21/06	00189 00177 73889 ... 45046		1250z Unworkable, rest Weak		
26/06	00189 00177 73889 ... 45046		1250z NRH, rest Weak		
28/06	Unworkable		GROUPS from Ary, Rx'd with thanks:		

XPA1, 13545/12145/11145 kHz, 28-06, 1210/1230/1250 UTC  
 511 511 511 1 511 511 511 1 511 511 511 1  
 00189 00177 73889 44602 03695 59135 51102 83857 09275 50573  
 62259 92650 23944 75194 55373 39992 62901 07025 97492 97039  
 88234 24881 35876 54831 07639 82003 49160 92611 02800 28196  
 63337 33655 77179 08091 01462 15479 85002 64241 28640 49631  
 94412 81421 93844 87160 61184 46836 30150 36919 75360 58121  
 06804 46891 95573 06346 04709 63310 28483 96612 56672 01618  
 87902 31219 63784 62725 64259 91517 31096 54867 50111 08915  
 02185 54920 56179 11011 56583 14755 43658 39428 37577 76790  
 73870 41750 47968 25358 36372 97713 66288 99837 63211 88532  
 89790 92813 85540 73318 49887 27629 00974 02689 76003 12964



45347 65735 89067 78283 72546 85813 06791 70648 28365 41064  
 25886 67912 92378 76908 56141 28822 74606 48604 24405 08702  
 76084 59778 05541 29344 23716 48543 06735 16084 85333 08923  
 53526 40778 13688 29039 57667 74949 05005 21979 47253 79325  
 69788 60776 61246 98034 11231 33618 08136 36045 11823 06422  
 52483 59647 96111 38286 91778 85127 25794 65351 24406 27807  
 22024 08078 06591 86415 91530 62141 32204 96621 01670 59110  
 01201 44543 15312 26741 14286 42443 04371 73532 51751 45046  
 Courtesy Ary

# XPA2 p

Monday/Wednesday

May 2024

0700z 12148kHz 0720z 13448kHz 0740z 13948 kHz  
 01/05 06362 00301 04387 ... 27775 Weak [6m01s]

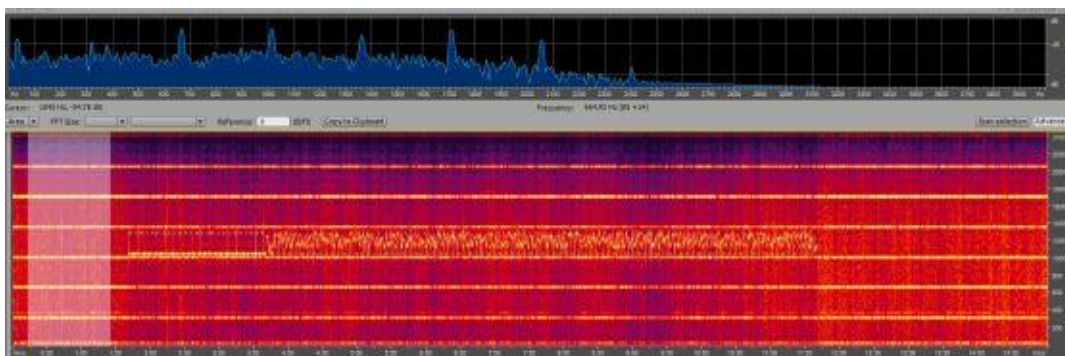
06362 00301 04387 43702 49036 32700 59517 75102 00978 75164  
 30030 44482 47944 25269 73203 56025 04438 13867 10295 28738  
 02679 69369 72913 63468 20837 70142 52024 75557 41724 11091  
 53064 24501 26997 97459 41810 04188 62972 37048 86139 61506  
 44197 50342 79976 20988 78951 73349 77071 17916 04999 12220  
 46347 16821 63676 69413 69230 18333 31542 61559 58126 17415  
 39666 04909 89851 62600 31314 74560 60533 23722 73973 50653  
 64916 95463 83341 13395 03892 35868 10293 36382 65099 01612  
 50753 37997 14849 76104 72464 95218 87153 70144 21947 16115  
 90286 58945 78221 83401 15507 33426 33305 30075 99409 78661  
 66425 52487 65405 21049 36554 55254 73896 20417 46919 59546  
 28932 55009 07036 93050 96727 18968 13520 45622 86017 91829  
 54234 12251 23871 58756 68011 73935 94624 77469 83823 98702  
 32138 03831 31840 80918 78474 90218 61537 01479 26855 48116  
 42192 11863 88573 80491 64430 19801 32374 01067 45116 17192  
 80767 71399 66534 75801 64518 89400 92875 25675 59455 99746  
 25276 94409 65170 46211 43590 39280 04725 17996 65681 92727  
 91516 29865 74291 95481 42733 15462 37276 61488 38274 67781  
 47365 69815 16187 15766 97440 83978 04528 05975 47687 52555  
 04827 26929 15330 66774 39616 90657 23957 13814 78920 83668  
 43647 40083 20003 81931 96249 81475 36944 61994 56781 29905  
 35710 45057 48300 29508 69906 29389 64185 07707 55305 77731  
 55724 60791 32275 41067 03460 08605 96238 06927 53915 71720  
 86270 66561 93693 69703 75653 73560 60813 56188 64012 86290  
 32329 08599 89518 14728 90146 81941 62988 48585 28341 77299  
 33763 01916 53424 63204 70849 44778 27911 35582 75806 55702  
 56336 39985 72907 26306 09753 25645 47096 24307 96837 44686  
 07283 32280 47435 95656 16998 05781 10923 03339 03626 49263  
 87672 68643 46563 78019 83294 32977 64576 14905 04761 18593  
 32399 86153 92263 52340 83356 11615 11659 88594 23062 75694  
 57088 57741 95481 27775  
 Courtesy PLdn

06/05 LIGHTNING NOT MONITORED  
 08/05 Msg 5m54s lg Unworkable, poor condx

NOT MONITORED FROM 13<sup>TH</sup> TO 31<sup>ST</sup> MAY

June 2024

0700z 12148kHz 0720z 13448kHz 0740z 13948 kHz  
 03/06 NOT MONITORED  
 05/06 NOT MONITORED Message heard via H-FD



12148kHz 0700z 10/06/2024 Strange sig, not seen before

10/06 07376 00611 52745 ... 53542 0740z Fair, rest Weak 0700z QRM3/4 See above. 9m59s lg  
 Last time sigs this length were seen was with XPA1 for Anshlags after they were obviously compromised.

12/06 07376 00611 52745 ... 53542

Fair

07376 00611 52745 73364 17522 60879 67629 75442 22360 29709  
61262 06841 24729 56228 30532 44933 08378 29525 34592 77175  
63350 95014 43425 78737 91450 29734 86301 07204 63609 14160  
77106 52711 27657 88302 10188 30139 85956 50145 00141 32678  
58332 86212 52010 42074 33128 52397 35800 07906 94389 94981  
38499 10832 98717 95559 68116 99604 67766 35003 85904 30042  
34266 46662 35782 65284 42940 97026 15817 07634 74774 65563  
60510 74807 24695 07438 75902 51601 10376 38393 55551 55606  
13534 12343 78329 04291 42123 26426 03778 33238 82660 39598  
28409 30451 14546 40327 68936 85463 96077 97586 30139 15904  
01196 85408 37599 73212 84333 25379 37559 40675 55528 71988  
56215 09537 85056 38954 90715 21060 01333 27006 15253 54149  
85203 01917 37664 43755 42010 57644 72448 09100 58140 40970  
59158 01062 11341 20901 06076 84112 56288 97975 77500 32773  
15717 85778 51123 37504 88187 07366 72227 14111 38354 66326  
39132 05030 52306 30248 60695 61434 29955 55214 29921 12008  
65130 86190 42195 76571 05010 01409 08568 09185 69328 62155  
30121 73735 41130 97756 15991 26239 32887 15273 44634 22445  
47265 17266 60893 43932 27446 44203 11009 17639 87856 78049  
97469 04185 14005 29290 71860 74843 80675 73509 98902 31263  
24137 86210 25669 86768 17326 67459 23456 84394 30529 07882  
85745 75322 29271 23649 18290 98522 04495 26335 41797 37302  
92978 83992 11700 85967 13643 73126 74071 32622 99765 43672  
02288 56601 45726 56488 72613 46571 44500 32523 15958 81432  
65524 25272 67068 30342 18578 71463 77247 87558 24710 98096  
16322 57222 21479 69589 66036 24440 93250 22877 25207 11468  
37480 47940 20899 14692 52160 22176 21207 40216 38994 94836  
74762 29750 52918 48005 54882 58941 00720 45917 80405 97353  
59772 01521 10631 77665 69290 93006 19424 73694 31850 28222  
92216 79589 83506 13626 84889 21140 12697 99345 48901 88494  
24806 48166 50836 14289 88603 50764 78659 59725 85417 72047  
76689 04710 57061 34241 78816 56670 92671 56663 07839 04038  
36024 34940 67002 07626 60406 70394 99229 33371 81902 95629  
61210 92096 00145 06991 38585 26739 81212 08029 04840 78442  
27046 31861 23477 01108 40593 19832 96097 32138 61383 74464  
43663 82300 56918 92252 85038 80761 34486 59505 63732 66472  
98028 88707 59127 11152 98517 23713 39951 31329 62706 49291  
08161 89728 30185 44329 94439 74605 40628 03226 96154 54250  
30297 60593 64970 37113 25182 99682 53380 22207 06644 03336  
08587 64488 49080 57408 97683 99330 07057 31463 37557 86117  
97133 04136 31507 33517 41102 29125 99934 26494 62599 20590  
03248 73738 21205 63236 53389 22998 17758 86401 21945 10752  
26925 20623 97823 28925 58351 28286 37408 63330 66918 05117  
81608 40143 11696 62841 43492 15705 65068 08770 77395 93237  
75920 68012 42705 15637 02301 56502 79762 57679 07951 79794  
65016 31988 48318 40643 68608 03067 65901 78519 16188 79202  
06213 09787 98094 93376 27285 91475 06133 03342 86025 89384  
91493 63012 92277 73320 42464 15996 16764 18557 28281 20234  
42928 03425 63997 92247 18410 40635 54699 52455 53866 40135  
74728 51718 54127 70500 71057 23702 86945 96320 18155 75581  
54146 40138 01374 65000 53932 11065 95111 38720 44118 34123  
40546 51070 64402 80572 56088 86402 55156 44464 37416 05554  
91398 20324 85056 58048 51125 25460 07279 93193 34087 49544  
77134 32409 30659 67686 50074 36710 16386 47907 50040 80361  
35952 72639 27574 75842 66477 30711 55257 02261 21429 76040  
08069 21365 23122 59032 99917 66420 96338 80246 33543 53087  
64020 03368 10465 04709 65670 76129 00977 28903 96588 53427  
67054 52092 84294 55872 65817 58541 60523 88340 89513 18739  
33456 75474 79613 40247 19826 90306 76188 70372 95356 61018  
22699 74401 57046 77596 48790 42536 96044 32761 65942 81347  
85502 89136 02317 41467 59914 84756 37014 54437 70180 10447  
00475 22068 46894 53542

Courtesy PLdn

17/06 00594 00122 35725 ... 51230

0700z Unworkable, rest Weak. Poor condx prevail

19/06 00594 00122 35725 ... 51230

0720z Weak, rest Fair

00594 00122 35725 03115 46519 38250 05168 34477 02230 92862  
87396 06492 94138 00114 73112 88922 61773 69780 88048 68166  
89403 06312 31337 30503 15031 82726 54930 15773 86472 57558  
49508 00783 89933 65550 81666 30609 55572 66833 02413 96083  
39506 67711 39139 45828 49245 59642 50723 55566 64464 50472  
96938 93272 94269 53904 90818 65002 72522 28755 40004 44681  
08467 44477 75162 04869 94208 77523 83150 29590 90975 08199  
05156 90170 18235 74891 48204 40878 16353 88488 37066 11171  
47703 26840 93220 79245 07095 04270 60840 86412 43378 23775  
22419 62326 33728 88383 38026 11244 19639 11966 66114 42714  
00332 14022 71688 29447 68330 03044 41160 33662 34852 69086  
83963 41566 16642 83648 45883 93704 69369 61819 26128 06002  
28179 74716 51935 54469 51230

Courtesy PLdn

24/06 00594 00122 35725 ... 51230

0720z Weak, rest Fair

26/06 00594 00122 35725 ... 51230

Fair

# XPA2 Tues/Friday Trial

Tuesday/Friday

May 2024

1100z	16159kHz	1120z	14359kHz	1140z	13459kHz
03/05	LIGHTNING NOT MONITORED				
07/05	00283 00046 35458 ... 21264				1140z Unworkable, rest Weak
	00283 00046 35458 94946 39892 86146 45252 17236 23218 25418 14666 97445 73911 47454 63393 28172 14713 32212 69187 54394 12176 48589 31447 95407 08943 68287 64746 13228 99847 00238 73774 64779 31327 26610 15760 93253 61163 46412 73902 51480 03525 72639 21374 72056 59304 13959 68261 47661 21264 <i>Courtesy PLdn</i>				
10/05	00283 00046 35458 ... 21264				1140z Very weak, rest Weak

NOT MONITORED FROM 13<sup>TH</sup> TO 31<sup>ST</sup> MAY

June 2024

1100z	15874kHz	1120z	14474kHz	1140z	13374kHz
04/06	NOT MONITORED				
07/06	00256 00144 95236 ... 20442				1140z Unworkable, rest Weak
11/06	Unworkable, Poor Condx				
					3m12s Ig
14/06	00315 00081 47800 ... 57660				1140z Unworkable, rest Weak [3m12s]
18/06	03637 00001 00000 ... 37656				1140z Weak, rest NRH
21/06	04525 00001 00000 ... 36256				1450z Fair, 1410z TTY only, 1430z NRH
25/06	09629 00078 35185 ... 31035				1100z Fair, rest Weak [3m10s Ig]
28/06	Unworkable				
					[Full msg 3m10s Ig] GROUPS from Ary, Rx'd with thanks:

XPA2, 15874/14474/13374 kHz, 28-06, 1100/1120/1140 UTC  
09629 00078 35185 12946 93612 06372 90430 45795 90654 87282  
16117 16337 78376 32233 15877 66138 05942 10499 84402 08018  
73687 80400 28242 10560 83754 39327 46017 94886 72200 46659  
58790 08293 54646 99088 24191 20156 44214 57584 70329 07735  
08256 20394 31174 65007 80348 95067 29719 42954 11503 30193  
75951 79008 17132 45506 30308 91499 86922 93116 80941 81697  
31031 98182 07782 24036 71249 69866 53673 87936 25953 45109  
29787 24987 67372 46456 75358 19029 19923 43940 36767 64319  
31035  
*Courtesy Ary*

## Other XPA2

Other XPA frm H-FD:

Wed 01.05.2024 0910Z 17431 msg, msg stops  
Wed 01.05.2024 0930Z 15841 msg, msg stops  
Wed 01.05.2024 0950Z 13934 msg

Wed 01.05.2024 1100Z 16147 msg  
Wed 01.05.2024 1120Z 15847 msg  
Wed 01.05.2024 1140Z 14747 msg

Thu 02.05.2024 0500Z 11168 msg  
Thu 02.05.2024 0520Z 12168 msg  
Thu 02.05.2024 0540Z 13368 msg

Fri 03.05.2024 0800Z 13942 msg  
Fri 03.05.2024 0820Z 14942 msg  
Fri 03.05.2024 0840Z 15942 msg

Sat 04.05.2024 1500Z 15938 msg  
Sat 04.05.2024 1520Z 14538 msg  
Sat 04.05.2024 1540Z 13438 msg

Tue 07.05.2024 1600Z 13538 msg

Tue 07.05.2024 1620Z 14438 msg  
Tue 07.05.2024 1640Z 14938 msg

Fri 10.05.2024 1100Z 16159 msg  
Fri 10.05.2024 1120Z 14359 msg  
Fri 10.05.2024 1140Z 13459 msg

Fri 10.05.2024 1800Z 15872 msg  
Fri 10.05.2024 1820Z 14972 msg  
Fri 10.05.2024 1840Z 13872 msg

Sat 18.05.2024 0910Z 14794 msg  
Sat 18.05.2024 0930Z 13994 msg  
Sat 18.05.2024 0950Z 12194 msg

Sat 01.06.2024 0910Z 13527 msg  
Sat 01.06.2024 0930Z 12227 msg  
Sat 01.06.2024 0950Z 11427 msg

Sat 01.06.2024 1500Z 14892 msg  
Sat 01.06.2024 1520Z 13492 msg  
Sat 01.06.2024 1540Z 12192 msg

Sun 02.06.2024 0800Z 13373 msg  
Sun 02.06.2024 0820Z 13973 msg  
Sun 02.06.2024 0840Z 14973 msg

Tue 04.06.2024 0500Z 10315 msg  
Tue 04.06.2024 0520Z 11115 msg  
Tue 04.06.2024 0540Z 12215 msg

Tue 04.06.2024 1100Z 15874 msg  
Tue 04.06.2024 1140Z 13374 msg

Tue 04.06.2024 1600Z 13417 msg  
Tue 04.06.2024 1620Z 14817 msg  
Tue 04.06.2024 1640Z 15917 msg

Wed 05.06.2024 0910Z 17417 msg  
Wed 05.06.2024 0930Z 15812 msg  
Wed 05.06.2024 0950Z 14504 msg

Wed 05.06.2024 1800Z 17474 msg  
Wed 05.06.2024 1820Z 16274 msg  
Wed 05.06.2024 1840Z 14574 msg

Thu 13.06.2024 1100Z 15982 msg  
Thu 13.06.2024 1120Z 14982 msg  
Thu 13.06.2024 1140Z 13882 msg

Sun 04.08.2024 1120Z 14474 msg

# XPB1

## WED/SAT

### May 2024

13961kHz 1100z	01/05	Weak	4m30s	PLdn	WED
13361kHz 1110z	01/05	Weak	4m30s	PLdn	WED
12161kHz 1120z	01/05	Weak	4m30s	PLdn	WED
11461kHz 1130z	01/05	Weak	4m30s	PLdn	WED
10761kHz 1140z	01/05	Weak	4m30s	PLdn	WED
10161kHz 1150z	01/05	Weak	4m30s	PLdn	WED
13961kHz 1100z	04/05	LIGHTNING	NOT MONITORED	PLdn	SAT
13361kHz 1110z	04/05	LIGHTNING	NOT MONITORED	PLdn	SAT
12161kHz 1120z	04/05	LIGHTNING	NOT MONITORED	PLdn	SAT
11461kHz 1130z	04/05	LIGHTNING	NOT MONITORED	PLdn	SAT
10761kHz 1140z	04/05	LIGHTNING	NOT MONITORED	PLdn	SAT
10161kHz 1150z	04/05	LIGHTNING	NOT MONITORED	PLdn	SAT
13961kHz 1100z	08/05	Weak	4m28s	PLdn	WED
13361kHz 1110z	08/05	Weak	4m28s	PLdn	WED
12161kHz 1120z	08/05	Weak	4m28s	PLdn	WED
11461kHz 1130z	08/05	Weak	4m28s	PLdn	WED
10761kHz 1140z	08/05	NRH		PLdn	WED
10161kHz 1150z	08/05	NRH		PLdn	WED

13961kHz 1100z	11/05	NRH	Poor Condx	PLdn	SAT
13361kHz 1110z	11/05	NRH	Poor Condx	PLdn	SAT
12161kHz 1120z	11/05	NRH	Poor Condx	PLdn	SAT
11461kHz 1130z	11/05	NRH	Poor Condx	PLdn	SAT
10761kHz 1140z	11/05	NRH	Poor Condx	PLdn	SAT
10161kHz 1150z	11/05	NRH	Poor Condx	PLdn	SAT

NOT MONITORED FROM 13<sup>TH</sup> TO 31<sup>ST</sup> MAY

OTHERS FROM H-FD

Mon 06.05.2024 0500Z 13435 MFSK-16 2:11  
 Mon 06.05.2024 0510Z 13935 MFSK-16  
 Mon 06.05.2024 0520Z 14435 MFSK-16  
 Mon 06.05.2024 0530Z 14835 MFSK-16  
 Mon 06.05.2024 0540Z 15935 MFSK-16  
 Mon 06.05.2024 0550Z 16225 MFSK-16

Tue 07.05.2024 1300Z 20061 MFSK-16 1:42  
 Tue 07.05.2024 1310Z 19361 MFSK-16  
 Tue 07.05.2024 1320Z 18261 MFSK-16  
 Tue 07.05.2024 1330Z 17461 MFSK-16  
 Tue 07.05.2024 1340Z 16261 MFSK-16  
 Tue 07.05.2024 1350Z 14961 MFSK-16

June 2024

5<sup>TH</sup> JUNE NOT MONITORED

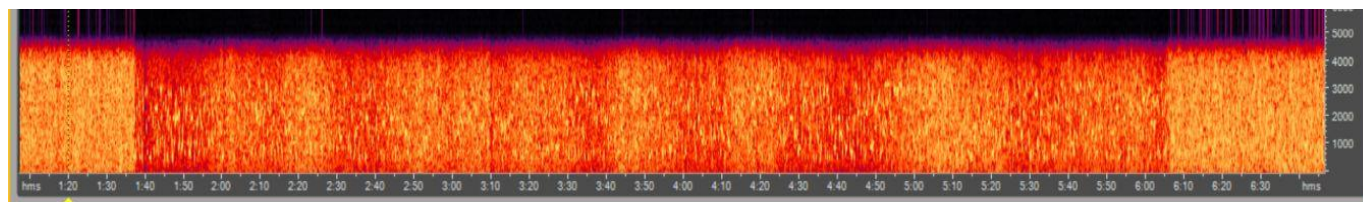
13876kHz 1100z	08/06	Weak	4m28s	PLdn	SAT
13376kHz 1110z	08/06	Weak	4m28s	PLdn	SAT
12176kHz 1120z	08/06	Weak	4m28s	PLdn	SAT
11576kHz 1130z	08/06	NRH		PLdn	SAT
10676kHz 1140z	08/06	NRH		PLdn	SAT
10276kHz 1150z	08/06	NRH		PLdn	SAT

13876kHz 1100z	12/06	Weak	4m28s	PLdn	WED
13376kHz 1110z	12/06	Weak	4m28s	PLdn	WED
12176kHz 1120z	12/06	Weak	4m28s	PLdn	WED
11576kHz 1130z	12/06	Weak	4m28s	PLdn	WED
10676kHz 1140z	12/06	NRH		PLdn	WED
10276kHz 1150z	12/06	NRH		PLdn	WED

15<sup>th</sup> June NOT MONITORED, LIGHTNING [and Trooping of the Colour]

13876kHz 1100z	19/06	Weak	4m28s	PLdn	WED
13376kHz 1110z	19/06	Weak	4m28s	PLdn	WED
12176kHz 1120z	19/06	Weak	4m28s	PLdn	WED
11576kHz 1130z	19/06	Weak	4m28s	PLdn	WED
10676kHz 1140z	19/06	Weak	4m28s	PLdn	WED
10276kHz 1150z	19/06	NRH		PLdn	WED

22<sup>nd</sup> June NOT MONITORED. A&E trip ☹️



13876kHz 1100z 26/06 Pulse QRM2 on signal

13876kHz 1100z	26/06	Weak	1m37s	PLdn	WED	Pulse QRM2 on signal [See above]
13376kHz 1110z	26/06	Weak	1m37s	PLdn	WED	
12176kHz 1120z	26/06	Weak	1m37s	PLdn	WED	QRM3
11576kHz 1130z	26/06	Weak	1m37s	PLdn	WED	
10676kHz 1140z	26/06	NRH		PLdn	WED	
10276kHz 1150z	26/06	NRH		PLdn	WED	
13876kHz 1100z	29/06	Weak	4m28s	PLdn	SAT	
13376kHz 1110z	29/06	Weak	4m28s	PLdn	SAT	
12176kHz 1120z	29/06	Weak	4m28s	PLdn	SAT	
11576kHz 1130z	29/06	Weak	4m28s	PLdn	SAT	QRM2
10676kHz 1140z	29/06	NRH		PLdn	SAT	
10276kHz 1150z	29/06	NRH		PLdn	SAT	QRM3

## Other XPB1 fm H-FD:

1B XPB1

Tue 04.06.2024 0500Z 11559 MFSK-16 4:29  
Tue 04.06.2024 0510Z 12159 MFSK-16  
Tue 04.06.2024 0520Z 13459 MFSK-16  
Tue 04.06.2024 0530Z 13959 MFSK-16  
Tue 04.06.2024 0540Z 14459 MFSK-16  
Tue 04.06.2024 0550Z 14959 MFSK-16  
Tue 04.06.2024 1120Z 12176 MFSK-16  
Tue 04.06.2024 1300Z 20047 MFSK-16 2:17  
Tue 04.06.2024 1310Z 19247 MFSK-16  
Tue 04.06.2024 1320Z 18247 MFSK-16  
Tue 04.06.2024 1330Z 17447 MFSK-16  
Tue 04.06.2024 1340Z 16247 MFSK-16  
Tue 04.06.2024 1350Z 14947 MFSK-16

Fri 28.06.2024 1100Z 13876 MFSK-16 4:30  
Fri 28.06.2024 1110Z 13376 MFSK-16  
Fri 28.06.2024 1130Z 11576 MFSK-16  
Fri 28.06.2024 1140Z 10676 MFSK-16  
Fri 28.06.2024 1150Z 10276 MFSK-16

# Tones, Hybrids and FSK

## HM01

Remembering: Propagation the lower and mid band HF has been very poor lately. There's been very high Solar Flux Index and Flare numbers along with very high A and/or K indices.

From MaleAnon:

HM01 11635kHz 28/5 2130z 15414 08506 06045 20141 53062 02732 TUE Carrier up at 2130z  
HM01 10715kHz 28/5 2200z 15414 08506 06045 20141 53062 02732 TUE Gone by 2230z.  
HM01 10715kHz 29/5 2200z 15415 08507 06046 20142 53063 02733 WED  
HM01 11635kHz 31/5 2100z 21431 20822 21741 20144 34711 02736 FRI

From PoSW good analysis and comment on this somewhat [for me] elusive station:

The HM01 transmission on 13435 kHz on Tuesdays, Thursdays and Saturdays with a nominal - but seldom kept to - start time of 0655 UTC, although it often fails to appear, and this seems to be the station taking a day off rather than anything to do with propagation issues. On the other hand it has also shown up on the other four days of the week.

4-May-24, Saturday:- Transmission under way when tuned in at 0655 UTC, then went into preamble/call routine, 5Fs "10326 00451 44625 26869 20267 78615". Data sounds at 0659, signal strength up and down.

9-May-24, Thursday:- Tuned in at 0709 UTC, weak, went into call routine at 0718, weak signal, "76462 81344 31522 72054 56715 45062". Became stronger, call routine again at 0745 UTC approx.

11-May-24, Saturday:- Nothing heard on 13435 when checked several times between 0655 and 0730.

14-May-24, Tuesday:- In progress with data sounds when tuned in at 0656 UTC, went into call routine around 0712, "76467 81349 31527 28081 42801 45067", wide variations in signal strength, went into call again at 0740 UTC, data sounds at 0743:45s.

16-May-24, Thursday:- Very weak signal on 13435, monitored from 0657 UTC, too weak even to confirm as HM01, did not get any stronger.

18-May-24, Saturday:- Again a very weak signal heard at 0712 UTC, unreadable.

21-May-24, Tuesday:- Came on air at 0659 UTC, straight into data mode. Went into preamble after 0704:- "47225 87545 36075 28087 42807 03553", data sounds at 0707:40s UTC. Went into 5F preamble again before 0732.

23-May-24, Thursday:- Nothing heard at 0657 UTC, came on air at 0706 approx in data mode, 5Fs heard "47228 08501 36078 ...." - didn't pay too much attention at this stage because I expected it to go into preamble within a few minutes but it went off air at 0714 UTC. Monitored 13435 for about ten minutes but nothing further heard.

25-May-24, Saturday:- In progress when tuned in at 0656 UTC, strong signal with the rapid up and down which is a feature of this one, went into preamble/call at 0709, "15411 08502 06041 86164 53062 03558", data sounds at 0712:10s.

28-May-24, Tuesday:- No sign of HM01 on 13435 when monitored from 0655 to 0715, but was on later:- 0806 UTC, transmission in progress, went into preamble around 0808, "15414 08506 06045 20141 53066 02732", data at 0811:10s.

29-May-24, Wednesday:- Not one of the usual days for HM01 on 13435, strong signal noted by chance while tuning around just after 0700 UTC, went into call at 0718, "15415 08507 06046 20141 53067 02733", back into data sounds at 0721:27s. Was in call mode again when checked just after 0747 UTC.

30-May-24, Thursday:- Nothing heard when monitored either side of 0700 UTC but was on when checked around 0730. Went into call at approx 0745:- "15417 70821 06048 20143 53069 02735".

1-June-24, Saturday:- 0700 UTC, transmission in progress when tuned in on the hour, strong signal, went into call routine after 0713, "21432 70824 21742 20146 34712 02738".

2-June-24, Sunday:- 0706 approx, first time heard on 13435 on a Sunday, in progress, strong signal with occasional dips in strength, went into call at 0733z, "21433 70825 21743 20147 34713 02581".

3-June-24, Monday:- 0708 UTC, another unexpected appearance, went in to call at 0721 UTC, "21434 70826 21744 20148 34714 02581" - all "one up" on yesterday's except for the last one, perhaps I heard it incorrectly.

Nothing heard on 4-June, Tuesday.

5-June-24, Wednesday:- came on air at 0652 UTC, went into call routine after 0656, "21434 70826 21744 20148 34714 02581" - same as on Monday.

6-June-24, Thursday:- nothing heard, didn't have time to monitor beyond about 0710z this morning.

7-June-24, Friday:- 0654 UTC, carrier came up, went into call but only for about a minute before going into data sounds, into call routine at approx 0722z, "21434 70826 21744 20148 34714 02581" - again.

Nothing heard on Saturday the 8<sup>th</sup> or Sunday the 9<sup>th</sup> monitoring from about 0655 to 0720 UTC.

10-June-24, Monday:- 0639 UTC, was on earlier than usual, 5Fs heard "21434 70826 21744 20148 34714 02581" yet again. Vanished off air at 0652 UTC approx, monitored until 0715, nothing further heard.

Nothing heard on Tuesday the 11<sup>th</sup> or Wednesday the 12<sup>th</sup>.

13-June-24, Thursday:- 0657 UTC, in progress when tuned in, went into call routine after 0701, "21434 70826 21744 20148 34714 02581". A familiar collection of 5F groups.

15-June-24, Saturday:- came up on air after 0652 UTC, went into preamble/call after 0656, "21434 70826 21744 20148 34714 02581", so no change there. Data sounds at 0659:45s UTC. Signal weaker than of late.

17-June-24, Monday:- in progress with when tuned in at 0657 UTC. Went into call routine about a minute later, "21435 70827 21745 20149 34715 02582", data sounds at 0701:25s UTC.

Nothing heard on Tuesday 18-June.

19-June-24, Wednesday:- 0704 UTC, in progress when tuned in, must have just missed the first preamble/call routine which was heard again at 0728 UTC approx, "64401 36222 56161 73132 34718 02585", into data sounds at 0731:30s.

20-June-24, Thursday:- 0658 UTC, transmission in progress, weaker than usual with some kind of interference, strong buzzing sound best describes it, 5Fs appeared to be the same as on the previous day.

21-June-24, Friday:- tuned in just after 0700 UTC, call routine in progress, "64402 36224 56162 73134 70101 02587". Strong signal with the usual rapid fading up and down, went into call again after 0728z, data sounds just after 0731.

22-June-24, Saturday:- came on air at 0658 UTC, went into call routine around 0712:- "64403 36225 56163 73135 70101 86781", data sounds at 0715:10s.

23-June-24, Sunday:- 0657 UTC, must have just come on air, was not there a couple of minutes earlier, went into call after 0708 UTC, "64404 36226 56164 73136 70102 86781", data sounds at 0811:40s approx.

24-June-24, Monday:- nothing on 13435 when monitored from around 0655 to 0720 UTC but was going strong about an hour later:- 0808 UTC, HM01 in progress, went into call routine after 0822 UTC, "64407 03581 56167 73139 70105 86784", becoming a weaker signal by this time.

25-June-24, Tuesday:- nothing heard either side of 0700 UTC, noted the S-meter on the receiver tuned to 13435 was at about half scale at 0710, transmission in progress, call routine after 0714, "81131 03581 56168 76511 70106 86785".

26-June-24, Wednesday:- came on air around 0653 UTC, not too strong this morning, went into call at 0715z, slightly stronger by then, "81131 03582 56169 76511 70107 86786".

27-June-24, Thursday:- 0704 UTC, in progress when tuned in, weak signal, call at 0723 approx, "81132 03583 31571 76512 70108 86787", became stronger around 0730z.

28-June-24, Friday:- Nothing heard, monitored 13435 kHz from about 0655 to 0725 UTC.

29-June-24, Saturday:- 0658 UTC, back in business, came on air a couple of minutes before the hour. Call routine around 0724, "81134 03585 31572 76514 73751 86789".

# X06 Mazielka (1c) logs section

Hello all interested in X06 and German media events,

The NumbersKopf is active again. As I introduced in EN 138 and 139, a podcast about « The Anschlags » was produced in West and North German Radio (WDR and NDR) and is now available. But to make it more amazing, I'll first bring the usual X06 report, then you'll find more, OK? So let's go :

## X06 Mazielka (1c) logs section

Date	Day	UTC	Freq	Scale	Monitor	Comments
20240502	Thu	0732-0747	19511	314265	Andrew/SE	Alert3 (Antananarivo, G380) 1(1)
20240502	Thu	0747-0751	17517	314265	Andrew	3.2
20240502	Thu	0751-0752	21825	314265	Andrew	3.3
20240502	Thu	0757-0805	17534	351264	Andrew	TX to Abu Dhabi, G440
20240502	Thu	0805	18575	352416	Andrew	TX to Dar es Salaam, G43
20240502	Thu	0931-0934	20837	645321	Andrew	TX to Ho Chi Minh City, G410
20240502	Thu	1207-1208	16132	352416	Andrew	TX to Dar es Salaam, G43
20240506	Mon	0757-0800	14392	532614	Andrew	TX to Paris, G4
20240508	Wed	0751-0809	20950	435621	Dave/AU	TX to Maputo, G98
20240508	Wed	0819-0824	10814	412356	Dave	Alert2 (TX to Budapest, G97) 1
20240508	Wed	0849-0855	18177	164253	Andrew	TX to Addis Ababa, G395
20240508	Wed	0852-0855	11483	412356	Andrew	2.2
20240513	Mon	0822-0823	17475	156234	Andrew	Alert2 (TX to Kampala, G68) 1
20240513	Mon	0823-0828	20690	156234	Andrew	2.2
20240514	Tue	0818-0824	16257	542136	Andrew	TX to Beijing, G88
20240514	Tue	1139-1142	17470	216354	Dave	TX to Chennai, G388
20240515	Wed	0637-0640	15819	256341	Andrew	TX to Beirut, G169
20240515	Wed	1108-1115	14650	215346	Andrew	Alert2 (TX to Mumbai, G167) 1
20240515	Wed	1115-1123	16115	215346	Andrew	2.2
20240516	Thu	0846	18575	352416	Andrew	TX to Dar es Salaam, G179
20240516	Thu	0921-0923	18197	645321	Dave	TX to Ho Chi Minh City, G417
20240516	Thu	1341-1347	17468	436512	Dave	Alert2 (TX to Harare, G180) 1
20240516	Thu	1347-1357	16277	436512	Dave	2.2
20240517	Fri	1020-1023	12194	625413	Andrew	Alert2 (TX to Tel Aviv, G193) 1
20240517	Fri	1023-1025	11545	625413	Andrew	2.2
20240520	Mon	0656	10250	1-----	Andrew	X06d
20240520	Mon	0659-0723	10249	1-----	RadioteknikaT	F1B-200: X06d in FSK
20240520	Mon	0700-0703	13452	165324	Andrew	TX to Vienna, G145
20240520	Mon	0708	11550	1--6--	Andrew	X06b
20240520	Mon	0712	10950	1--6--	RadioteknikaT	X06b
20240520	Mon	0721-0724	14377	432516	Andrew	TX to Bern, G341
20240520	Mon	0817-0824	11438	532614	Andrew	TX to Paris, G147
20240521	Tue	0819	17454	325614	Andrew	TX to Nairobi, G400
20240521	Tue	0900-0903	14358	154263	Andrew	TX to Rome, G148
20240522	Wed	0919-0924	13985	134265	Andrew	TX to Tunis, G90
20240523	Thu	0653-0654	11515	521634	Andrew	TX to Bucharest, G261
20240523	Thu	0822-0824	16153	153624	Dave	TX to Damascus, G249
20240524	Fri	0655	13427	341265	Andrew	G444 (new)
20240524	Fri	0849-0852	12177	356412	Andrew	TX to Berlin, G271(2)
20240526	Sun	1038-1040	15810	145632	Dave	TX to Algiers, G284
20240526	Sun	1110-1117	15710	261453	Dave	TX to Cairo, G285
20240527	Mon	0831-0832	20690	156234	Andrew	Alert1 (TX to Kampala, G203) 1
20240527	Mon	0915	20690	156234	Andrew	1.2
20240527	Mon	0933-0941	16117	463125	Dave	TX to Rabat, G222
20240528	Tue	0803-0807	13420	534216	Andrew	TX to Bagdad, G232
20240528	Tue	1036-1050	17520	612534	Andrew	TX to Ashgabat, G234
20240603	Mon	0801-0803	13395	532614	Andrew	TX to Paris, G4
20240603	Mon	0934-0939	20675	641523	Andrew	Alert2 (TX to Lusaka, G5) 1
20240603	Mon	0939-0941	23355	641523	Dave	2.2
20240604	Mon	0827-0834	15687	154263	Andrew	TX to Rome, G7
20240605	Wed	1105-1106	9320	1-6-1-	Anon36989	X06b
20240605	Wed	1106-1111	16115	215346	Dave	TX to Mumbai, G25
20240606	Thu	0917-0924	16103	645321	Dave	TX to Ho Chi Minh City, G410
20240606	Thu	1337-1343	17468	436512	Dave	TX to Harare, G44
20240609	Sun	1121-1129	15710	261453	Andrew	TX to Cairo, G138
20240610	Mon	0815-0824	20690	156234	Andrew	TX to Kampala, G68
20240611	Tue	0759-0802	13420	534216	Andrew	TX to Bagdad, G87
20240611	Tue	0801-0805	16257	542136	Andrew	Alert3 (TX to Beijing, G88) 1
20240611	Tue	0805-0807	14861	542136	Andrew	3.2
20240611	Tue	0810-0812	17523	542136	Andrew	3.3
20240611	Tue	0959	12193	1-----	Schorschi	X06d
20240611	Tue	1015	12193	1-----	Schorschi	X06d
20240611	Tue	1036-1039	20807	216354	Dave	Alert3 (TX to Chennai, G388) 1
20240611	Tue	1041-1044	16317	612534	Andrew	TX to Ashgabat, G89



20240611	Tue	1044-1048	27470	216354	Andrew	3.2
20240611	Tue	1045-1046	20813	216354	Dave	3.3(3)
20240614	Fri	0648	13427	341265	Anon701	G442
20240614	Fri	0910-0917	12177	356412	Andrew	TX to Berlin, G126(4)
20240614	Fri	0947-0948	14750	616143	Andrew	X06b test
20240617	Mon	0919-0932	23355	641523	Andrew	Alert2 (TX to Lusaka, G337) 1
20240617	Mon	0937-0942	18750	641523	Andrew	2.2
20240619	Wed	1112-1122	16115	215346	Dave	Alert2 (TX to Mumbai, G167) 1
20240619	Wed	1122-1130	14650	215346	Dave	2.2
20240619	Wed	1245-1249	18245	231654	Dave	TX to Abuja, G423(5)
20240620	Thu	0652-0701	19511	314265	Andrew	TX to Antananarivo, G178
20240620	Thu	0925-0929	18197	645321	Dave	TX to Ho Chi Minh City, G417
20240620	Thu	1333-1341	17468	436512	Dave	TX to Harare, G180
20240621	Fri	0829	14425	213546	Andrew	TX to Islamabad, G390
20240621	Fri	1015-1028	14824	625413	Andrew	Alert2 (TX to Tel Aviv, G193) 1
20240621	Fri	1028-1032	12194	625413	Andrew	2.2
20240623	Sun	1032	15810	145632	Andrew	TX to Algiers, G284
20240624	Mon	0933-0940	13517	463125	Dave	TX to Rabat, G222
20240625	Tue	1015-1017	20813	216354	Anon18785	TX to Chennai, G228
20240625	Tue	1028-1033	11025	612534	Andrew	TX to Ashgabat, G234
20240628	Fri	0828-0832	10653	356412	Andrew	TX to Berlin, G271

- 1) 0718-0732 UTC: MFSK-66
- 2) 0832 and 0845 UTC: MFSK-66
- 3) Simultaneous, on and off a couple of times
- 4) 0917-0919 UTC: MFSK-66
- 5) Initially it sounded like they had two out of synch transmissions happening at once, after a while one stopped and it became clearer

Many thanks to all contributors again from the Numbers-, X06 Database and Teamkopf.

German podcast series "The Anschlags - Russias spies under us"

In June this year, the podcast was produced. It was introduced in the "Mittagsmagazin" (Magazine of the afternoon) in Germany's 1<sup>st</sup> public TV programme, the ARD. There you could hear something about the podcast and me with the shortwave radio (in minute 59).

The podcast series, consisting in 6 parts, reports about "the anschlags" (the couple of Russian origin, arrested in Marburg in October 2011, while Heidrun Anschlag was listening to XPA1), their "double-life" as neighbours and spies, the neighbours themselves, and the stations of their lives.

But not only that: You can also hear shortwave, presented by the NumbersKopf, listening and demonstrating XPA1, how it still sounds today. In part 3: "Sleepers never sleep" (first sent on June 29 - my birthday, by the way) and part 6: "The comeback of the illegals" (first sent on July 20) you will hear not only me, but also something about ENIGMA2000, especially in part 3. The podcast was/is transmitted in the 5<sup>th</sup> audio programme of the West German Radio (WDR) in the German series "Tiefenblick" (Look into the deep).

You can hear all 6 episodes of the podcast here:

<https://www.ardaudiothek.de/sendung/die-anschlags-russlands-spione-unter-uns/13420611/>

This EN issue will come out BEFORE July 20, when part 6 will be transmitted in WDR5 (1130 UTC, repeat one day later, 1630 UTC), so if you also want to be amazed, what they will bring, you can listen live (as I will do that). So I wish much fun and happy listening.

Vy 73&55 as usual from Jochen - this time in my mission as "Shortwave Kopf" of the new podcast series

## **F01**

**From H-FD:**

1A F01 Thu 13.06.2024 1015Z 11487 FSK 200/500 7:04 via KiwiSDR RUS  
 Thu 13.06.2024 1025Z 9376 FSK 200/500 via KiwiSDR POL  
 Thu 13.06.2024 1035Z 7591 NRH

# GIZZA JOB

A screenshot of a tweet from GCHQ (@GCHQ). The tweet text reads: "Despite what you might think you don't need a degree to work with us. In some cases just two GCSEs is all you need to begin your #JourneyToGCHQ, and contribute to our mission to help keep the country safe. Explore more [down arrow icon] gchq-careers.co.uk". Below the text is a photograph of a modern building with a curved glass facade and a brick base, set against a clear blue sky.

 **GCHQ**   
@GCHQ

Despite what you might think you don't need a degree to work with us.

In some cases just two GCSEs is all you need to begin your [#JourneyToGCHQ](#), and contribute to our mission to help keep the country safe.

Explore more   
[gchq-careers.co.uk](https://gchq-careers.co.uk)



499 to note: German not wanted here.  
613 to note: Arabic and Morse not wanted  
'Sevens' Your 25wpm Chinese Morse also obsolete.  
751 keeni meeni 'OWL' skills not needed

"I left the coach at Cardiff Bus Station to be met by 499.  
"Kief Halak" says he'  
"Taiyib, Inshallah" says I.  
The bloke standing next to us suddenly gets stroppy! "  
Taking the piss out of the Welsh Language are you, Matey?"  
"No mate, speaking Yemeni Arabic. Don't you?"  
Mutters under his breath and buggers off!  
*Taken from Memorable moments in Cardiff*

# Chart Section Index

**Predictions**

**M01 Schedule**

**Family III**

**Polytones, XPA1, XPA2**

**En143**  
**July 2024**

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jul kHz, ID, ...	Aug kHz, ID, ...
x		x					0315		E11	03	16125 25#	16125 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				0505		E11	03		
x		x					0510		S11A	03	16357 65#	16357 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	20170 94#	20170 94#
				x		x	0600		E11	03	9150 35#	9150 35#
x	x	x	x	x	x	x	0600		V13	0		11430
x	x						0600/0610/0620 0630/0640/0650		XPB1	01B		
	x		x				0600/0620/0640		XPA2	01B		
		x			x		0600/0620/0640		M12	01B	10371/11471/12171 341	10429/11429/12129 441
			x	x			0600/0700	1/3	E06	01B		
	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

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jul kHz, ID, ...	Aug kHz, ID, ...
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		XPA2	01B	12148/13448/13948	12152/13552/13952
						x	0700/0720/0740		V07	01B	13978/13378/12178 931	13408/12208/11508 425
	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	15915 75#	15915 75#
	x			x			0715		E11	03	12530 63#	12530 63#
					x	x	0715		M01	14	9736 475	9736 475
	x			x			0720		M01A	14	9151 728	9151 728
		x		x			0725		S11A	03	20905 38#	20905 38#
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			0755		HM01	18	11365	11365
x	x	x	x	x	x	x	0800		V13	0		18040
				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	6252 43#	6252 43#
x				x			0830		E11	03	16335 18#	16335 18#
					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			0855		HM01	18	11462	11462
x		x					0900		E11	03	11116 53#	11116 53#
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

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jul kHz, ID, ...	Aug kHz, ID, ...
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					0930/1030		S06	01A	<b>search</b>	<b>search</b>
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	x	x	x	1000		V13	0		
	x	x	x	x			1015/1025/1035		F01	01A	11141/ 9192/ 7363	11076/ 9164/ 7316
x		x					1045		E11	03	10210 69#	10210 69#
x	x	x	x	x	x	x	1100		V13	0		
		x			x		1100/1110/1110 1130/1140/1150		XPB1	01B	13884/13384/12384 11584/11084/10584	13567/13367/12367 11567/11067/10567
	x						1100/1120/1140		M12	01B	11519/12194/13407 289	11519/12194/13407 289
	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	x	x	x	x	x	x	1200		V13	0	9276,13974	9276,13974
	x	x					1205		E11	03	8274 46#	8274 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	20024/19224/18324 17424/16324/15824	20064/19364/18464 17464/16264/15864
	x	x	x				1325/1425 sporadic		S06	01A	<b>search</b>	<b>search</b>
	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#
					x		1500		M01	14	6435 025	6435 025
	x	x	x				1500/1600 sporadic		S06	01A	<b>search</b>	<b>search</b>
	x			x			1500/1520/1540		E07	01B	16232/18332/19132 231	17453/18353/19253 432
					x		1500/1520/1540		XPA2	01B	13954/12154/11454	13825/12125/11025
			x				1530		E11	03	10356 26#	10356 26#
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

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jul kHz, ID, ...	Aug kHz, ID, ...
	x		x				1600/1620/1640		XPA2	01B	13538/14438/14938	14864/14364/13464
	x					x	1605		E11	03	5231 23#	5231 23#
		x			x		1610		E11	03	4783 39#	4783 39#
	x		x				1645		E11	03	14575 33#	14575 33#
					x	x	1645		E11	03	5082 36#	5082 36#
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	17474/16274/14574	15884/14684/13484
	x						1800/1820/1840		M12	01B	12162/11566/10711 546	12162/11566/10711 546
				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			1900/2000	1/3	S06	01A		11149/ 9205 842
				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#

## 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	16125 25#	16125 25#	16125 25#	16125 25#	since 01/14, last log 06/24
	x						0445		S11A	03	9968 79#	9968 79#	9968 79#	9968 79#	since 05/22, last log 06/24
x							0450		E11	03	7469 41#	7469 41#	7469 41#	7469 41#	since 02/10, last log 06/24 2nd transmission Thu 1730z
	x						0505		E11	03					since 10/11, last log 02/24 Mar/Apr/Sep/Oct at 1230z, Mai-Aug at 1645z
x		x					0510		S11A	03	16357 65#	16357 65#	16357 65#	16357 65#	since 08/19, last log 06/24
x		x					0600		E11	03	20170 94#	20170 94#	20170 94#	20170 94#	since 07/17, last log 06/24
				x		x	0600		E11	03	9150 35#	9150 35#	9150 35#	9150 35#	since 04/15, last log 06/24
x		x					0645		E11	03	8091 51#	8091 51#	8091 51#	8091 51#	since 07/09, last log 06/24
x			x				0700		S11A	03	9339 47#	9339 47#	9339 47#	9339 47#	since 04/10, last log 06/24
				x			0700		E11	03	8680 57#	8680 57#	8680 57#	8680 57#	since 01/12, last log 06/24
					x	x	0700		E11	03	7377 49#	7377 49#	7377 49#	7377 49#	since 07/15, last log 06/24
x		x					0715		E11	03	15915 75#	15915 75#	15915 75#	15915 75#	since 06/21, last log 06/24
	x			x			0715		E11	03	12530 63#	12530 63#	12530 63#	12530 63#	since 02/11, last log 06/24
		x		x			0725		S11A	03	20905 38#	20905 38#	20905 38#	20905 38#	since 05/14, last log 06/24
x							0745		E11	03	9610 26#	9610 26#	9610 26#	9610 26#	since 03/14, last log 06/24 2nd transmission Thu 1530z
	x		x				0745		E11	03	14940 22#	14940 22#	14940 22#	14940 22#	since 01/20, last log 06/24
		x		x			0745		E11	03	15720 34#	15720 34#	15720 34#	15720 34#	since 06/17, last log 06/24
	x	x					0820		E11	03	17378 13#	17378 13#	17378 13#	17378 13#	since 12/18, last log 06/24
			x	x			0820		E11	03	6252 43#	6252 43#	6252 43#	6252 43#	since 10/09, last log 06/24
x				x			0830		E11	03	16335 18#	16335 18#	16335 18#	16335 18#	since 07/15, last log 06/24
					x	x	0830		S11A	03	5149 37#	5149 37#	5149 37#	5149 37#	since 02/14, last log 06/24
x		x					0845		E11	03	12815 71#	12815 71#	12815 71#	12815 71#	since 09/10, last log 06/24
	x		x				0845		E11	03	19184 15#	19184 15#	19184 15#	19184 15#	since 07/17, last log 06/24
x		x					0900		E11	03	11116 53#	11116 53#	11116 53#	11116 53#	since 10/05, last log 06/24
x				x			0915		S11A	03	6814 48#	6814 48#	6814 48#	6814 48#	since 04/19, last log 06/24
		x	x				0930		E11	03	6923 27#	6923 27#	6923 27#	6923 27#	since 02/14, last log 06/24
	x			x			1000		E11	03	12153 30#	12153 30#	12153 30#	12153 30#	since 11/16, last log 06/24
x		x					1045		E11	03	10210 69#	10210 69#	10210 69#	10210 69#	since 03/18, last log 06/24
	x	x					1205		E11	03	8274 46#	8274 46#	8274 46#	8274 46#	since 03/10, last log 06/24 2nd transmission Mon 0450z
x		x					1230		E11	03					since 10/11, last log 04/24 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 06/24
	x			x			1400		S11A	03	9448 42#	9448 42#	9448 42#	9448 42#	since 02/10, last log 06/24
x					x		1430		E11	03	12984 91#	12984 91#	12984 91#	12984 91#	since 10/15, last log 06/24
			x				1530		E11	03	10356 26#	10356 26#	10356 26#	10356 26#	since 06/14, last log 06/24 2nd transmission Mon 0745z
x						x	1605		E11	03	5231 23#	5231 23#	5231 23#	5231 23#	since 11/15, last log 06/24
		x			x		1610		E11	03	4783 39#	4783 39#	4783 39#	4783 39#	since 02/14, last log 06/24
	x		x				1645		E11	03	14575 33#	14575 33#	14575 33#	14575 33#	since 10/11, last log 06/24 Mar/Apr/Sep/Oct at 1230z, Nov-Feb at 0505z
					x	x	1645		E11	03	5082 36#	5082 36#	5082 36#	5082 36#	since 03/14, last log 06/24 2nd transmission Thu 1530z
		x		x			1715		E11	03	7863 97#	7863 97#	7863 97#	7863 97#	since 02/15, last log 06/24
			x				1730		E11	03	8088 41#	8088 41#	8088 41#	8088 41#	since 03/10, last log 06/24 2nd transmission Mon 0450z
x						x	1745		E11	03	14410 24#	14410 24#	14410 24#	14410 24#	since 04/18, last log 06/24
				x		x	1815		E11	03	12229 92#	12229 92#	12229 92#	12229 92#	since 05/16, last log 06/24
		x			x		1850		S11A	03	12457 28#	12457 28#	12457 28#	12457 28#	since 06/17, last log 06/24
x			x				1900		E11	03	7600 64#	7600 64#	7600 64#	7600 64#	since 05/16, last log 06/24
				x		x	1910		E11	03	9610 61#	9610 61#	9610 61#	9610 61#	since 04/17, last log 06/24
			x			x	2000		E11	03	5409 52#	5409 52#	5409 52#	5409 52#	since 05/15, last log 06/24

**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 p Schedule**

Zulu >	XPA2 Sched p		
Month v	Monday/Wednesday H 00 H+20 H+40 0700 / 0800z		
Jan	11493	13393	13993
Feb	13387	13887	14787
Mar	13931	14831	16131
Apr	11409	12209	13409
May	12148	13448	13948
June	12148	13448	13948
July	12148	13448	13948
Aug	12152	13552	13952
Sept	12152	13552	13952
Oct	13372	14672	15872
Nov	11529	13429	13929
Dec	11493	13393	13993

**SPECIAL MATTERS**

**Thanks to all our contributors:**

Ary, BR, chpa, DanAR, dMHz, 'E,' Gert, H-FD, HJH, Malc, PLdn, PoSW, RRGB      Apologies to any missed



**MESSAGES:**

**E:            Thanks for all your stuff. Image used on En144. Unable to OCR re Bavarian activity but good work around used!.**

**“The UK is about to enter a nightmare much darker than anyone yet realizes.”  
[Allister Heath, Daily Telegraph 04/07/2024]**

**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/>

**2024**

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

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

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

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

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

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

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

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

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

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

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

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

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