# ENIGMA 2000 NEWSLETTER



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## **Entrance to Teufelsberg, Berlin** [American Cold War Listening Station]

## ISSUE 140 January 2024

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## <u>Editorial</u>

2023 has seen a number of changes to the Number scene; a complete set of schedules [E07a] disappearing along wuth most of S06 and variants as well. Then there is the long standing XPA2 m schedule [Sunday/Tuesday], usually of good strength disappearing after many years along with XPA2 Wed/Fri. E07 along with S06 has seen a change to schedules as well,

XPA2 p [Monday/Wednesday] seems to limp along for now but the last interceptions of this station by myself for 18 and 20/12 were null transmissions. I was unable to monitor transmissions for the rest of December due to a Christmas visit to my daughter but suffice it to say the latest intercepts in 2024 are also Null messages.

All the usual number station schedules have been appearing in the last two months of the 2023 and it will be interesting to see if they survive in the new year, especially the first and third Fridays in the month S06 Russian.

One notable absentee has been the Tuesday, Thursday and Saturday HM01 mixed-mode station from Cuba which was heard earlier in the year starting up at around 0557 UTC on 14375 and 0657 on 13435, or at some time after, but nothing has been heard since mid-October, might be because of unfavourable propagation.

Also nothing further heard of the station at 1500 UTC on 6100 kHz in the 49 metre broadcast band with what appeared to be meteorological information alternating in French and English, heard at the end of September and the first couple of days of October with an extremely strong signal, all the more so since this was in broad daylight in the no-man's land between late summer and early autumn. A bit of a mystery, that one

Thanks to E for sending the cover image of the entrance to Teufelsberg Berlin, the US listening station, active during the Cold War. He notes the graffiti which, he likens to Croydon High Street.

Here's another view, with even more grafitti:



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Last time we had mention of Pirate Radio stations which prompted an excellent reply from our Anon NI correspondent who wrote:

I noticed mention of the former commercial broadcast station Atlantic 252 in the most recent issue of the Newsletter.

The 818 ft (249 m) Summerhill Mast near Clarkstown, Co. Meath, Ireland (from which Atlantic 252 was previously transmitted) was dismantled and removed on 27 July 2023.

My understanding is that there is a ongoing withdrawal from LF and MF broadcasting across the UK and Ireland, which will be complete by 2027.

Closer to home, BBC and commercial stations on MF are gradually being removed from the Lisnagarvery Transmitting Station, which is about ten miles south of Belfast and provides MF broadcast coverage to most, if not all of Northern Ireland.

I did notice in letters section of the most recent issue of RadCom that a correspondent was making a case for the retention of BBC Radio 4 on 198 kHz as a method where in an emergency 'the King could address the nation and be well received' which I thought was a bit fanciful.

I doubt that many ordinary people have access to an LF receiver these days and I must say that other than whilst at sea somewhere off Dublin, I've never been able to get satisfactory audio reception of BBC Radio 4 on 198 kHz!

The radioteleswitch (RTS) on my off-peak electricity supply seemed to be the only thing that could receive BBC Radio 4 on 198 kHz, until it decided stop working earlier this year.

NIE Networks replaced it with an electromechanical timeclock, which ticks audibly and the operation of which can be observed.

#### He follows on with:

I see there was another letter in the most recent RadCom again making a case for the retention of BBC Radio 4 on 198 kHz for the purposes of emergency communications!

I've also heard its use as an off-air frequency standard put forward as a reason for its retention, however this is something that can now be achieved much more easily using a GPS Disciplined Oscillator (GPSDO) giving frequency accuracy in the order of parts per billion, even with the most basic of GPSDO.

The fact that BBC Radio 4 carries the Shipping Forecast and 198 kHz allows it to be received well out into the Atlantic isn't really a reason for its retention either, as BBC Radio 4 doesn't form part of the Global Martime Distress & Safety System (GMDSS) and vessels should be receiving their weather information via marine VHF broadcasts, NAVTEX broadcasts on MF and Inmarsat SafetyNET satellite broadcasts, all of which form part of the GMDSS.

The electricity cost alone of running the 198 kHz service must be colossal - as well as Droitwich (500 kW) there are also two synchronised transmitters in Scotland at Westerglen (50 kW) and at Burghead (50 kW).

Ha! in the event of a nuclear exchange and finding out that high levels of fall-out stopped play at Lords; the Ashes remaining in the possession of England! In his book, either Duncan Campbell or John Laurie, a frequency of 13kHz is used to communicate with submarines in the event of nuclear war started. In keeping with the RADCOM mention, the author states the transmission chain is known unofficially as 'the Cemetary Net.'

We are sorry for the delay in the production of this newsletter; we receive a number of items via our postal service – but it takes all too long over the Christmas period. Last year PoSW's offering took 24 days on a first class stamp, this year it has only been 11day, although looking at the muddy envelope one has to ask where it has been?

### **Exhibition**

### **EXHIBITIONS AND INSTALLATIONS**

## Spies, Lies and Deception



### 29 September 2023 to 14 April 2024 IWM London

Discover over 100 years of intrigue, deceit and real-life secret agents. *Spies, Lies and Deception* is a free, must-see exhibition at IWM London about deception and espionage from the First World War to the present day.

As attended by yours truly and another E2k member. Was it any good? It was passable in my view. My view probably a little jaded having officiated at the London Science Museum's GCHQ: Top Secret, Cyber exhibition. There were two suitcase spy radios on view, same model and one in much better condition than the other.

The brilliant historian and author Helen Fry makes her mark there and is worth listening to; the rest of the artifacts on display, apart from the initial boom box display were so so.

Worth a visit? Good for a couple of hours or so but for me the two pints, company and the meal we had in the Three Stags pub opposite was better.

## Hairy doings in Aden.

In 29/11/2023 my copy of 'The Dhow' was posted through my letter box. 'The Dhow' is the quarterly Journal for members of the Aden Veterans Association which exists for service personel, civilians and families who were there.

Aden as many of you know was a British Protectorate in South Yemen and which was troubled by two opposing groups, NLF & FLOSy, when Egyptian military officer and politician Gamal Abdel Nasser was the second president of Egypt from 1954 until his death in 1970. Nasser wanted to form a Pan Arabian state and as such was a thorn in the side of British troops and politicians as he forced us out of Aden [November 1967]. There were some E2k members who were there so I'll not dwell on the nasties here.

Interestingly, on page 8 on the latest issue of 'The Dhow' is an informative piece written by a Mike Cooper RAF 'A Mission in Aden 1966 -1967'

In it Mr Cooper explains that a fluent Arabic speaker, a Mr Dereck Rose, discovered that a local radio broadcast contained coded messages for the NLF & FLOSY.

These were sent in the same way as the BBC addressed Resistance fighters in their broadcasts during WW2 and as immortalised in the film 'The Longest Day;' "Jean has a long moustache" and the other most memorable "The water ine the Seine is dirty."



T1131 Transmitter aka Type 87 in Naval circles

Inside Middle East Command HQ, based at Fort Morbut located near Steamer Point, in a building was a T1131 transmitter. Located in a 19 inch rack 6 feet high with four lifting lugs affixed for crane location the requirement was to move the unit to the upper regions of the building.

The T1131 was a Ground Station unit VHF transmitter covering 100 - 156MHz used for fighter aircraft comms with a tx output of 35W. From that location and using a directional antenna the signals could be beamed in the right direction for maximum jamming to the unwanted transmissions.

To cause maximum interference the HT Decoupling capacitor was disconnected causing a most distorted signal to be transmitted. A Racal RA17 receiver was tuned to the target station [apparently] to cause the distortion as was received. It is thought by the author that maximum disruption to the terrorist organisations messaging was caused and with their operations affected too.

Although this mission was successful Mr Dereck Rose, reported as working for the IRD [anyone know what that is?], was assassinated in May 1967, the operation coming to an end with his untimely death.

As a result Mr Cooper wrote they were ordered to destroy the equipment and due to the risk to their lives they were confined to camp.

An interesting read indeed!

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'The Dhow' November 2023
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## **News Round**

### <u>Australia</u>

### Visiting professor used PhD students to gather intelligence for China, Asio boss alleges Mike Burgess says Beijing is engaged in 'the most sustained, scaled and sophisticated theft of intellectual property and expertise in human history'

Wed 18 Oct 2023 05.39 BST

https://www.theguardian.com/australia-news/2023/oct/18/visiting-professor-used-phd-students-to-gather-intelligence-for-china-asio-boss-alleges

The spy agency Asio says it has disrupted a plot by China's intelligence services to "infiltrate a prestigious Australian research institution" with officials forcing an academic to leave the country before any harm was done.

The Asio chief, Mike Burgess, provided broad details of the alleged plot while also accusing China of engaging in "the most sustained, scaled and sophisticated theft of intellectual property and expertise in human history".

"It is unprecedented and unacceptable," Burgess said during a press conference in California on Wednesday alongside counterparts from the US, the UK, Canada and New Zealand.

The MI5 director general, Ken McCallum, with the FBI's director, Christopher Wray, in July. US and UK spy chiefs warn Middle East crisis could raise domestic terror threat

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Burgess acknowledged that "all nations spy" and "all nations seek strategic advantage" but he said China's behaviour went "well beyond traditional espionage" and became "a ruthless business model aimed at seizing commercial advantage".

He disclosed that in September, Asio detected and disrupted a plot to infiltrate a prestigious Australian research institution - without naming any entities or individuals.

Burgess alleged that the plot involved a visiting professor who had been recruited by Chinese intelligence.

"Their spymaster gave them money and a shopping list of intelligence requirements and sent them to Australia," he said. "The academic even set his Australian PhD students research assignments in line with his intelligence requirements."

Sign up for Guardian Australia's free morning and afternoon email newsletters for your daily news roundup Burgess said Asio had worked with the research institution and "intervened and removed that academic from our country before the harm could be done".

"This sort of thing is happening every day in Australia as it is in the countries here," he said at the Five Eyes gathering.

"We will meet and defeat this threat because we have a weapon that others don't: the power of partnerships."

When asked whether his forthright comments might disrupt the diplomatic thaw between Australia and China, its biggest trading partner, Burgess said he had "some latitude in saying what I need to say as part of my job".

The Asio chief cited the prime minister, Anthony Albanese, who has said Australia would cooperate with China where it could and disagree where it must. "This is one example where we're calling out something where we must disagree," Burgess said. "But it doesn't stop the ongoing engagement. China's success has been of great benefit to Australia."

The comments coincided with fresh efforts by the trade minister, Don Farrell, to end Beijing's tariffs on Australian wine, proposing the same sort of deal that led to the resumption of barley exports.

a trip suggests a smoother relationship rather than a cosy one

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Farrell said the Albanese government was prepared to pause the wine dispute at the World Trade Organization if Beijing agreed to a fast-tracked review of the wine duties.

Speaking at an Australia-China Business Council event in Canberra, Farrell said he would "prefer to resolve all of our trade issues with China through discussion and dialogue".

A ruling in the WTO wine case is believed to be imminent, meaning there is a short window to reach a direct breakthrough.

Farrell also said he was "optimistic that the technical issues affecting live lobster and red meat exports can be resolved soon".

The Australian government played down the potential diplomatic fallout from the Asio chief's comments.

The home affairs minister, Clare O'Neil, said on Wednesday that Burgess was an "independent appointment" and he was allowed to comment on national security issues "factually".

"I support him in doing so," O'Neil told reporters in Canberra.

The Coalition's home affairs spokesperson, James Paterson, said it was "not often that the Asio director general directly calls out by name China as a perpetrator of national security threats to Australia".

Paterson said it was important to call out "malign behaviour". He said if the comments did any damage to the bilateral relationship that would be the Chinese government's responsibility.

Comment has been sought from the Chinese embassy in Canberra but Beijing has previously accused western security agencies of hypocrisy.

A Chinese foreign ministry spokesperson told reporters in May it was "widely known that the Five Eyes is the world's biggest intelligence association".

https://www.theguardian.com/australia-news/2023/oct/18/visiting-professor-used-phd-students-to-gather-intelligence-for-china-asio-boss-alleges

## <u>China</u>

### China says it has uncovered an alleged Chinese spy for the CIA The accused worked for a military industrial group and was recruited by a CIA agent based in Italy, the state security ministry said.

https://www.nbcnews.com/news/world/china-says-uncovered-alleged-chinese-spy-cia-rcna99398

BEIJING — China has uncovered a Chinese national suspected of spying for the Central Intelligence Agency, its state security ministry said on Friday, highlighting what it said were the risks and dangers of Chinese citizens being recruited abroad.

The Chinese national surnamed Zeng, who had worked for a military industrial group, was recruited by a CIA agent based in Italy, the ministry said in a statement posted on its WeChat channel.

Zeng was sent to Italy by the military industrial group for further studies and became acquainted with the CIA agent.

Through dinner parties, outings and trips to the opera, the two developed a "close" relationship, with Zeng gradually becoming "psychologically dependent" on the CIA agent, the ministry said.

After succeeding in "shaking" Zeng's political stance, the CIA agent sought sensitive information about the Chinese military from Zeng, according to the statement. It did not say when the events took place.

Two Navy sailors arrested for selling military secrets to China, DOJ says AUG. 4, 202301:38 The statement did not specify Zeng's gender but said the person was born in 1971 and the alleged CIA agent was named "Seth."

The U.S. Embassy in Beijing did not respond to a Reuters request for comment.

U.S.-China relations have soured in recent years over a range of issues including national security. Washington has accused Beijing of espionage and cyberattacks, a charge that China has rejected. China has also declared it is under threat from spies.

In the name of national security, China earlier this month called on its citizens to participate in counterespionage work, following an expansion of its anti-spying law in July, alarming the United States.

Zeng was found to have signed an espionage agreement with the U.S. and had received training before returning to China, the ministry said.

The alleged agent promised a huge amount of money and immigration to the U.S. for Zeng's family in return for the information, the ministry said.

After returning to China, Zeng had provided on numerous occasions "core" intelligence, and had pocketed funds for the efforts, it said.

Coercive measures, which normally means detention, have been taken against Zeng, according to the statement.

https://www.nbcnews.com/news/world/china-says-uncovered-alleged-chinese-spy-cia-rcna99398

### **Great Britain**

## How a woman-hating loner who worked at GCHQ became obsessed with an American spy and stabbed her at weekly netball match

#### Joshua Bowles, 29, was sentenced to life for the 'politically motivated' attack

By BETH HALE and GEORGE ODLING

PUBLISHED: 23:07, 30 October 2023 | UPDATED: 01:28, 31 October 2023

https://www.dailymail.co.uk/news/article-12690591/woman-hating-loner-worked-GCHQ-obsessed-American-spy-stabbed-netball.html

The Cheltenham leisure centre is an unlikely location for a spy drama, but on a dark evening in March, as a young woman prepared to head home after a netball match, she was subjected to a terrifying knife attack that rocked the intelligence community.

The brutal assault took place in the sports centre's car park, just three miles from GCHQ, the UK spy agency base.

The victim was a young American spy, the perpetrator a disturbed computer programmer who has also worked at the secretive listening post.

Joshua Bowles, who was described by his barrister as an Incel – a member of a woman-hating online community of men who consider themselves 'involuntarily celibate' having had their sexual overtures to women rejected – was sentenced to life yesterday for what the judge described as a 'politically motivated' terrorist attack.

It seems Bowles, 29, did not just have a grudge against women, but against his former employer and the wider intelligence community. Inexplicably, he vented his anger on a woman he didn't even know.

His victim was saved from fatal injuries by the intervention of two passers-by, and because Bowles, armed with two knives, 'fortuitously missed any major organ'. The stabbing was captured, at least in part, in chilling detail on CCTV.

The footage culminates in the victim, accompanied by a friend, running for her life back into the leisure centre's reception area, her attacker in pursuit.

One detail that was not revealed at London's Old Bailey, however, was the victim's identity. For obvious reasons, she remains anonymous, known only by a series of numbers: 99230.

A spy she may have been, but the victim was also a young woman living out her dreams, having landed a placement at GCHQ via the NSA (the US National Security Agency).

She was, as that game of netball suggests, happily throwing herself into life in the UK. Along with weekly matches with a local team, there was a UK-based boyfriend with whom she was planning to learn to windsurf. She had entered a half-marathon and was studying for a master's degree.

After the attack, she spent a week in hospital, with wounds to her lower abdomen, chest and right thigh. Her boyfriend's family supported her while her own relatives made frantic efforts to book flights.

In a victim impact statement, she told the court: 'He [Bowles] has had a profound effect on me and completely changed my life. It is very difficult to explain to people just how awful it has been.

'I went from being in the best shape I have ever been in, to the weakest I have ever been... I was hunted by him and I don't know why.'

CCTV showed Bowles at the venue a month before the attack. Prosecutors said the assault had been 'premeditated, targeted and vicious'

The attack saw Bowles lash out with a pair of knives, punching and stabbing the American several times

She and her companion - blacked out in the image above - then run for the leisure centre's reception in a bid to escape

She did not remember ever encountering or speaking to her attacker before, she said, and she has not been able to return to work, leaving her status as a resident in this country in question.

So how did 99230, a woman described in court as 'high-achieving, strong and capable', find herself the victim of the outwardly innocuous Joshua Bowles? And more pertinently, perhaps, how did a man who must have passed rigorous security clearances at GCHQ set out to kill a US spy?

The bearded, pale man in a grey jumper, standing in the dock of the Old Bailey on Friday and again yesterday, to be sentenced for attempted murder and assault occasioning actual bodily harm, was an unassuming figure.

Outwardly, Bowles's life was equally unremarkable. He has a younger sister and, until the events of March 9, lived with his parents at their modest semi-detached home in a suburb of Cheltenham.

He dropped out of his A-levels after becoming obsessed with online gaming, then took an access course, leading to a degree in computer science from Coventry university.

Bowles worked a few shifts at a record shop but, in the words of his defence counsel, he was socially 'isolated'.

He joined GCHQ in 2019 – his first job and a role that required him to pass GCHQ's Developed Vetting process. He had been given the organisation's highest level of clearance, sources told the Mail. His family are struggling to understand how he could have perpetrated such senseless violence.

'He has never done drugs, he has never smoked and he never drank,' his grandfather, retired toolmaker John Bowles, 77, told the Mail. 'GCHQ was the first job he had ever applied for – at the age of 26 – and two and a half years in, his head has gone.'

Insisting his grandson has never been interested in politics, Mr Bowles said: 'That place, GCHQ, in my opinion, has turned his mind and ruined his life.' The first signs of his coming descent occurred in 2021 when Bowles, who the court was told has a high functioning form of autism, took time off work suffering with depression.

When he returned to GCHQ he applied to be a higher-level programmer, but was offered only a temporary role – a rejection that led to his resignation in November of that year.

That grievance festered and was exacerbated by Bowles's obsession with the woman who had previously been in the job his intended victim was doing now – a woman who had spurned his advances.

In entries found on his computer, Bowles wrote: 'Nothing will impress her intellectually, can't impress her physically, therefore it is over, suicide is the way.' In the buildup to the leisure centre attack, Bowles made various disturbing searches online.

He was not only familiar with 'incel' culture, the court heard, but researched serial killer Theodore Kaczynski – a mathematician known as the Unabomber, who lived as a recluse and ran a mail-bombing campaign in the US from the 1970s to the 1990s – along with attacks on women and white supremacy. On the latter, he had written: 'This is war, they are replacing you, demoralising you, f\*\*\* their system.'

More chilling still was the preparation Bowles put into his attack.

He researched his victim online, looking up her Facebook and Instagram posts, along with two other US nationals who had also worked for the NSA at GCHQ with him. In the month before the attack, he made almost daily visits in his car to GCHQ and visited the leisure centre on a 'dry run' on February 9, a month before the attack, when his victim's netball team was playing a match.

Whether or not he intended to attack that night is unknown; if he did, he was thwarted by the fact his intended victim was absent.

The attack itself unfolded shortly after 9pm when 99230 and her friend, a fellow American woman identified only as 25869, left the leisure centre to walk to their car.

'Excuse me,' Bowles said to them, before he attacked. The victim described how Bowles just kept coming at her with his knife. 'He just wouldn't stop,' she said.

The attack was temporarily halted by the intervention of a man on his way to play football, who was alerted by her screams.

The women took their chance to run back to the centre, but Bowles followed and resumed his attack. A second bystander, Steve Bunn, restrained Bowles, then asked him if he was OK. Bowles said: 'No, I've just tried to kill her.'

Bowles told Mr Bunn that they both worked at GCHQ and if Mr Bunn 'knew what they did there then he would understand'.

In a rambling statement to the police, Bowles said: 'The system is rigged. I believe the intelligence community helps ensure this rigging, this view has been reinforced by my time working at GCHQ.

'The target was selected for her employment at the NSA. Due to the size and resourcing, American intelligence represents the largest contributor within the intelligence community so made sense as the symbolic target.

'I consider GCHQ just as guilty. Any mental health issues I may have, have been induced by the weight of the truth and the bleakness of the situation. Due to fear of retribution from the intelligence community I do not wish to divulge any details of the advanced capabilities I had exposure to whilst working in intelligence.'

Tim Forte, defending, said Bowles's twin motivations were 'rejection by the object of his affections' and a desire to hurt his ex-employer 'for employment reasons'.

Mrs Justice Cheema-Grubb did not agree, sentencing Bowles to a minimum life term of 13 years.

The judge said Bowles's internet history showed he had a 'deep disaffection with society and a desire to challenge authority'.

She told him: 'The court cannot avoid the conclusion that a significant part of your motivation was that your action would have an adverse impact on the intelligence communities of the United Kingdom and the United States. This was a politically motivated attack.'

#### Additional reporting: Duncan Gardham

https://www.dailymail.co.uk/news/article-12690591/woman-hating-loner-worked-GCHQ-obsessed-American-spy-stabbed-netball.html

Not only that; his Morse and understanding of Polytone stations was crap as well.

### Professor unmasks Russian spy who stole the secrets of Concorde Agent Ace leaked engine designs in Cold War battle for technical supremacy

Alex Farber, Media Correspondent Friday November 24 2023, 10.50am, The Times

https://www.thetimes.co.uk/article/9500754a-8aa3-11ee-947e-24524bf233d8?shareToken=19fef44c5ae430d74641820f50f47550

Concorde is famous as being the pinnacle of British-French aviation but the story of how it fell victim to a Russian plot to steal its secrets is less well known.

Twenty years after the supersonic jet that transformed transatlantic flight touched down for the final time, a Channel 4 documentary has unmasked the spy, codenamed Agent Ace, whose efforts meant that it was almost eclipsed by a Soviet rival.

Concorde: The Race for Supersonic, a two-part film released on Saturday, details how Ace handed 90,000 pages of classified records to the Soviet Union in the 1970s. Among the documents were the top-secret designs for the aircraft's Rolls Royce Olympus 593 engines as its Cold War rival sought to win the race to develop its own supersonic jet, dubbed Concordski by western media.

At stake was the opportunity to prove which power was the most technically advanced and land a string of lucrative commercial contracts with airlines.

Ace as been unmasked by Dr Calder Walton, assistant director of the Belfer Centre's intelligence project at Harvard, after studying the tightly-restricted archives of the KGB defector Vasiliy Mitrokhin, held by Churchill College, Cambridge.

In the film, Walton names Ivor James Gregory as the mole.

Gregory, who died in 1982 aged 73, was born in Hong Kong and trained as an engineer before his career progressed within British European Airways. "We don't know Agent Ace's motivations. There's nothing in his background to suggest he was an ideologically committed Communist although he may have been very good at hiding it," said Walton.

"However the KGB were masters of bribery and blackmail, so that could have been a factor. Or maybe he was just looking for money."

Gregory is the second British spy connected to Concorde after the electronic engineer Jimmy Doyle admitted in 1971 that he shared secrets with the Kremlin for cash after being contacted by the Soviet embassy.

The intelligence historian Calder Walton said the spy he unmasked could have been motivated by ideology, money or blackmail The information they shared with the Soviet Union helped it to launch the Tupolev 144. With Concorde still at the prototype stage, it was unveiled at the Paris Air Show in 1973 but crashed, possibly while performing a manouvre beyond its capabilities. The six crew and eight people on the ground died and the Russian jet was never really able to challenge its western twin.

Walton, whose third book Spies, the Epic Intelligence War between East and West will be published next year, added that the extent to which British intelligence were aware of the situation remains unknown.

He suggested the possibility that the documents Gregory was passing to the Soviets may have been sabotaged before being passed on.

"It's not impossible that the British corrupted some of the information. That is definitely something that the US did in other areas," he said.

It finally entered service two years after Concorde but design flaws meant it only operated on limited flights between Moscow and Kazakhstan, with passengers reporting numerous horror stories. It was cancelled after just six months and 55 passenger flights.

The Tupolev 144 under deveolpment near Moscow at the end of the 1960s. It only made 55 passenger flights, mostly between Russia and Kazakhstan

"The Soviets were good at reverse engineering things and had some of the best mathematicians on the planet but they were very bad at transforming things into practical products," Walton said.

"Concorde was a wonderful status symbol for the UK and the western world and being able to create a rival went to the core of the Kremlin's desire to be taken seriously as a world power that is capable of the same things as the western world. That has not gone away, it's still here today."

The beginning of the end for Concorde came on July 25, 2000, when a fire in the undercarriage caused one of the French aircraft to crash over the village of Gonesse, killing all 100 passengers and nine crew members.

A major safety overhaul was completed after just over a year but the very first test flight took place on September 11, 2001 and despite its flawless trip across the Atlantic it landed back into a changed world of aviation in which it no longer fitted.

It made its final flight two years later.

#### [Not John Stonehouse then]?

### Ofcom investigation helps to convict man for amateur radio interference

24 November 2023

https://www.ofcom.org.uk/news-centre/2023/ofcom-investigation-helps-to-convict-man-for-amateur-radio-interference

Investigations carried out by Ofcom's spectrum experts have helped to secure the conviction of a man who was deliberately causing harmful interference to amateur radio users in and around Hull.

In February 2021 we received complaints from radio amateurs in the area, who told us they had been subjected to deliberate interference of their transmissions, as well as receiving abusive messages. The culprit had been using radio bands illegally to do this, as he didn't have a licence to do so.

We were required to intervene in this case because the illegal activity was significant and targeted, and it was suspected that the culprit was somebody who had previously been convicted of similar activity.

The investigation involved using automatic monitoring equipment as well as our engineers working on the ground, monitoring live transmissions. This provided a picture of the of the impact of the illegal transmissions on the local radio community. All of this work took place in close collaboration with local police.

Through this investigation work, we confirmed that the source of the interference was coming from one particular address, which enabled us to execute a search warrant at the address. Radio equipment was seized that had been used to receive and transmit on the frequencies that were targeted with the harmful interference.

The defendant failed to cooperate with our investigation, and didn't offer an account of what had happened in this case, despite being given the opportunity to do so.

The case went to court, where earlier this month the defendant was found guilty of unlicensed use of radio equipment, illegal possession of radio apparatus, and causing deliberate interference to wireless telegraphy – all of which are offences under the Wireless Telegraphy Act.

In a later sentencing hearing, he was sentenced to 26 weeks' imprisonment, suspended for 12 months.

There have been no further instances of interference, jamming or abuse on these amateur radio frequencies since the beginning of September 2021.

Iain O'Brien, head of spectrum compliance at Ofcom's spectrum group, said: "Amateur radio community users in the Hull area faced significant disruption after their transmissions were deliberately targeted. We are pleased with this result, which should provide some welcome relief to the local radio community, as well as send a very strong signal to those that abuse the airwaves."

Why did Ofcom investigate this case?

As the communications regulator, one of Ofcom's functions is the effective management of the radio spectrum, the licensing of which is a key tool to make sure users are correctly authorised and to protect users from harmful interference. This is done primarily by licensing users and allocating frequencies.

Installing and using radio equipment without a licence or which is exempt from requiring one, is a criminal offence under the Wireless Telegraphy Act, which also makes it unlawful to deliberately interfere with other radio equipment.

Amateur radio is used by hobbyists who use equipment on specific, allocated frequencies to communicate with each other - sometimes around the world. Radio amateurs in the UK require a licence, issued by Ofcom, to transmit and receive on their allocated frequencies. On the whole, radio amateurs abide by the terms and conditions of their licences.

Misusing radio equipment and amateur bands is usually done deliberately to disrupt other users. This interference blocks the channel for other users in the area, and in some cases can involve offensive or threatening language to disrupt legal users, force them off air, and stop them enjoying their hobby. Most of the perpetrators are also unlicenced.

This particular case is an example of this deliberate interference, and took place across several amateur radio bands.

While Ofcom assesses all reports of spectrum non-compliance, not all of these result in an investigation. This case was an extreme incident which required our involvement.

https://www.ofcom.org.uk/news-centre/2023/ofcom-investigation-helps-to-convict-man-for-amateur-radio-interference

### Thanks for the free advert, MI6 spy chief tells Russian state TV Appeal by Richard Moore — aka 'C'— for people to work for the UK featured in documentary on most-watched channel

Katie Gibbons Tuesday December 12 2023, 7.10pm GMT, The Times

The head of MI6 has thanked a Russian state television channel for broadcasting a speech he gave calling on unhappy citizens to "join hands" with British foreign intelligence.

Richard Moore, the head of the secret intelligence service, gave a speech in July encouraging Russians faced with "the venality, infighting and sheer callous incompetence of their leaders" to spy for Britain. Russia's second most viewed station, Channel 1, showed an hour-long profile of Moore in September and included a translated clip of his defection plea.

On Monday, Moore tweeted that the British foreign intelligence agency had been "puzzling over how to get my message to our target audience in Russia — we never thought Russian state TV would step in to help." He added: "Thanks folks."

Moore, who is known as "C", made the appeal in Prague during a speech that claimed Russians were turning to MI6 in reaction to the war in Ukraine. He said that Britain's "door is always open".

Richard Moore said that the "door is always open" for Russians to spy for the UK

He added: "We will handle their offers of help with the discretion and professionalism for which my service is famed. Their secrets will always be safe with us, and together we will work to bring the bloodshed to an end."

Since the invasion of Ukraine in February last year more than 900,000 Russians have left the state to live abroad. Experts say that Russians who pass information to the West are increasingly driven by anger at the government.

There was little or no comment on the MI6 chief's comments in Russian media at the time, which experts say could indicate instruction from the Kremlin to ignore it.

The profile was presented by Maria Butina, 35, a former Russian spy who was convicted of being a foreign agent and deported from America in 2019 after offering sex for jobs. She is now an MP for President Putin's United Russia party and a TV presenter.

In the programme she accused Moore of employing "cheap recruiting methods" and questioned whether he was seriously asking Russians "to buy into this shameless provocation?"

Mark Galeotti, an expert in the Russian security services at University College London, told the Associated Press the translation and broadcast of Moore's comments was "a pretty serious gaffe".

Butina's viewers are "likely to be the kind of people that British intelligence would be interested in," Galeotti said, adding that he would not discount the prospect of the message being successful. Intelligence work is about throwing crumbs out onto the water" and hoping someone will nibble, he said.

Maria Butina, an MP and former spy, presented the Channel 1 documentary about Moore

Butina told the AP via Telegram she was "shocked" that the MI6 chief was interested in her programme, calling the spy chief's position "desperate" and "weak". She then questioned whether "MI6 is so incompetent that they are unable to translate their content from English to Russian by themselves and deliver it to whomever they believe is their audience that they need Russian TV to do so!"

When asked whether she had helped the UK's foreign intelligence agency to spread its message to Russians, she said the programme showed MI6 to be "unpleasant and ugly". She added: "After such advertising no one would definitely want to become a British spy."

## Two senior UK intelligence sources said it's findings need to be investigated by the UK's Government and security services

By Richard Holmes Senior Reporter December 19, 2023 5:07 pm(Updated December 20, 2023 9:13 am)

https://inews.co.uk/news/mi6-security-alert-russian-flat-spy-hq-2815447?s=09

UK intelligence officers have raised security concerns about a Moscow-owned flat that overlooks MI6's headquarters, i can reveal.

The luxury £1.2m penthouse on the top floor of the St George Wharf development in Vauxhall, London, has unimpeded views of the Secret Intelligence Service (SIS) headquarters.

i can reveal that security concerns have been raised about the apartment block, as well as Chinese-linked owners purchasing properties there.

The i investigation can now reveal that the Russian owners of the property can be traced back to a Soviet-era £40,000 apartment roughly 300 metres away from the Russian intelligence chemical site that developed Novichok.

There is no evidence that the Russian owners have direct links to the sanctioned Russian facility. But three senior UK intelligence sources told i the proximity between the factory and the company's Moscow address was "not a coincidence".

The Russian-owned penthouse overlooks the SIS building in Vauxhall Cross, London

The sources – a recently retired Foreign Office intelligence analyst focusing on Russia, a former Foreign Office counterintelligence officer, and a serving GCHQ source – said the proximity of the property to the MI6 building would allow anyone to see who was coming and going from the UK intelligence agency office, affording them the opportunity to potentially identify British spies.

The former intelligence officer at the Foreign Office said the Russian owners have been "smart enough" to avoid a direct link to the state institution, called the State Scientific Research Institute for Organic Chemistry and Technology.

Two of the senior UK intelligence sources said i's findings need to be investigated by the UK's Government and security services.

A UK counterintelligence officer who previously oversaw measures to protect MI6's headquarters from espionage said the Russian owner's Moscow address is a "thread that needs to be pulled," and needs to be factored into an investigation into the flat by the UK Government.

"This is a significant finding," they told i. "It needs to be looked into."

A financial investigator at the National Crime Agency (NCA) has also passed on the property's details to colleagues after being contacted by i, urging them to look into the owners of the apartment.

St George Wharf, right, and the MI6 Vauxhall Cross buildings on the Thames' south bank (Photo: Getty Images) The Conservative chair of the Foreign Affairs Committee, Alicia Kearns, said i's findings were "particularly concerning" and called for "additional scrutiny" to be applied to properties surrounding the MI6 building.

"It's no surprise that hostile states are buying up properties for surveillance purposes – but it's the Government's job to stop them by working with neighboring buildings," she told i. "I used to work from a high rise next to SIS – from our windows we were able to identify both individuals and patterns of behavior. What was of passing interest to us, was intelligence for a hostile asset."

i's investigation can reveal that the flat is registered to Poresso Group Ltd, a Russian firm with a registered Moscow address next to the Kremlin's supplier of deadly toxins used in state assassinations.

An analysis of land registry documents by i shows the ownership of flats in the development is obfuscated by offshore corporate structures registered by the "go-to" provider of such services for Russian oligarchs.

Land registry records show that on purchasing the property in 2010 for £735,000, Poresso Group registered its address to a drab Stalin-era apartment block in Moscow.

Apartments at the company's Moscow address are a far cry from Poresso's prime London asset. Built in 1940 on the side of a busy highway in eastern Moscow, flats in the 9-storey block are currently on sale for around £40,000.

Poresso Group is listed on Companies House with two Russian directors. No trace of either could be found by i and neither could be contacted for comment. Additional attempts to reach the residents of the property were unsuccessful.

The discovery of the Russian ownership of a luxury apartment in perfect view of the MI6 headquarters has sparked national security concerns and calls for the Government to investigate.

The NCA refused a request from i for an official comment, neither confirming nor denying that the property is currently being investigated by officers.

The Home Office refused to comment, citing the government's longstanding policy to not comment on security matters.

The Moscow address of the Russian owners is situated in the shadow of the Russian state's Novichok facility The State Scientific Research Institute for Organic Chemistry and Technology was placed under sanctions by the US and EU for its significant role in the development of chemical weapons and the poisoning of politician Alexei Navalny.

The EU has stated that the institute was involved in the development of the toxic nerve agent now known as "Novichok", most recently used in Salisbury in the 2018 assassination attempt of Sergei Skripal and his daughter Yulia.

On UK company registers, Poresso does not list its Moscow address, instead using the details of an offshore agent popular with Russian officials and oligarchs based in the British Virgin Islands (BVI).

Companies House records show that the company is registered with Trident Trust, one of the world's largest offshore service providers, with offices in the BVI, Mauritius, Singapore and other secrecy jurisdictions, including the US state of South Dakota.

How security concerns were previously raised about the St George Wharf development

i can reveal the Thames-side property's 2010 development sparked concern among UK intelligence chiefs, who were worried about the vantage points offered by apartments in the property leading to a counterintelligence operation to protect the secrecy of the SIS building.

The counterintelligence operation saw officers go to every SIS-facing apartment in the block with long lens cameras to understand what could be seen from each one, according to an intelligence officer who oversaw the protection of the SIS building from hostile threats.

Amid interest from several Russian and Chinese buyers, "more than one" apartment in the block was deemed a "threat" and "counter measures" were put in place to protect the secrecy of MI6 offices from espionage, the intelligence official told i.

"There was a particular conversation about the potential threat from the block and the fact that Russian and Chinese nationals were using it," they told i. "There were some long lens tests carried out from the flats to see what could be seen, the result from that helped with counter measures."

One former intelligence officer at the Foreign Office said the property developments surrounding the SIS building have "grown massively" affording the option to hostile actors to "see who is coming and going".

An-ex counter terrorism officer, whose previous responsibilities included providing the Home Office with surveillance counter measures, said that a number of properties in the St George Wharf development were deemed a threat leading to "extensive protection protocols" being put in place to understand who was buying them.

While a former intelligence source, who currently works in a government department, said UK intelligence agencies are "bound to be overlooked from neighboring buildings" by foreign state actors to "mount espionage or disruptive operations" against their headquarters.

A financial investigator at the NCA told i that Trident Trust was the "go-to trust for Russians" and that the offshore agent was often used to add a layer of opaqueness to the ownership of assets.

The investigator had personal experience investigating Trident Trust and referred Poresso's details to colleagues after being informed by i.

Documents released by the International Consortium of Investigative Journalists in 2021 revealed how Trident Trust had been used by Russian oligarchs and Kremlin officials to transfer assets secretly to shell companies across the globe. Trident Trust's BVI office denied a request for comment by i.

The UK intelligence source, who now works for a government department, raised questions over the Moscow-based company, and its ownership of property in such close vicinity of the SIS building.

The Foreign Office said it does not comment on security matters.

i also sent a detailed list of questions to the apartment, but received no response.

MI6 HQ: Fortress in heart of London

The headquarters of the SIS, more commonly known as MI6, has become one of the UK capital's most famous London buildings.

The imposing concrete and green-glass building alongside the Thames a short distance upriver from the Houses of Parliament was commissioned by Margaret Thatcher and completed in 1994. The same year the Intelligence Services Act officially acknowledged MI6 for the first time.

Its notoriety has seen the building has become widely known as the workplace of James Bond, and is shown being attacked by explosives at least twice. But causing such damage to the heavily fortified structure is near impossible.

The building is equipped with state-of-the-art security systems, including walls and windows designed to withstand bullets and bombs, and a "Faraday cage," which prevents electronic eavesdropping from hackers.

The SIS building boasts two moats, and supposedly a tunnel running beneath the Thames to link it with Whitehall. For added security, sensitive equipment in stored in vast subterranean sections.

The building's sturdiness was demonstrated in 2000 when a rocket launched in an IRA attack caused very minimal damage to an external window, proving once again that James Bond is a far cry from reality for the British spy agency.

https://inews.co.uk/news/mi6-security-alert-russian-flat-spy-hq-2815447?s=09

### <u>India</u>

Accused spy leaked Indian naval secrets for crypto 6:43 PM • Nov 07, 2023Crime, Crypto, indiaby Protos Staff

https://protos.com/accused-spy-leaked-indian-naval-secrets-for-crypto/

State secrets revealing the details of Indian Navy submarines and warships have reportedly been leaked to Pakistani intelligence operatives by an Indian spy in exchange for crypto, an offense punishable by death.

As reported by local media, the National Investigation Agency (NIA) accused Manmohan Surendra Panda of spying for Pakistani operatives before selling the confidential naval documents.

The Mumbai resident allegedly exchanged India's classified information with an operative identified as 'Harsh' and received payment through "crypto channels" for his spy work. He supposedly received the crypto payment from various other Pakistani operatives.

Panda is charged with spying under Section 3 of The Official Secrets Act (OSA), conspiracy towards acts of terrorism under Section 18 of the Unlawful Activities (Prevention) Act, and destroying evidence under Section 201 of The Indian Penal Code.

According to The OSA, the penalty for spying "where the offence committed is... in the interest or for the benefit of a foreign power, or is in relation to any work of defence, arsenal, naval, military," can carry the death penalty or 14 years in prison.

Panda also faces life imprisonment under his conspiracy charge. He was reportedly arrested months ago.

https://protos.com/accused-spy-leaked-indian-naval-secrets-for-crypto/

## <u>Iran</u>

### **Double-Agent Reveals IRGC Plot To Kill Iran International TV Anchors**

Thursday, 12/21/2023 Iran International Newsroom

#### https://www.iranintl.com/en/202312219498

The IRGC was plotting to assassinate two Iran International television anchors in London in 2022 amid Iranian anti-government protests, UK's ITV has revealed.

The plan was foiled because the man hired to do the job turned out to be a 'double-agent' working for a western intelligence agency. He would relay all information to his handler and has now shared some details with ITV.

Based on irrefutable evidence -seen and verified by ITV and multiple officials- the plot was commissioned and signed off by Mohammad Reza Ansari, the IRGC commander in charge of assassinations outside Iran.

Ansari is the 'mastermind' behind failed plots to assassinate former US officials Mike Pompeo and John Bolton –for which he's been sanctioned by the US treasury. He is based in Syria and is reported to have links with the family of the Syrian dictator Bashar al-Assad.

According to ITV, Ansari hired and directed the hitman (Ismail) through another Assad associate, Mohammad Abd al-Razek Kanafani, requiring him first to use a car bomb and then a 'quiet' way to kill his targets: "simply stab [them] with a kitchen knife."

The plot was cynically codenamed the "wedding". The targets, Sima Sabet and Fardad Farahzad, were "bride" and "groom". They did not know about the details of the plot until told by ITV during the making of the report.

Ismail, a people-smuggler turned IRGC operative and then double-agent, was promised \$200,000, a new identity and safe passage to Iran via Syria.

This seems to have become the IRGC's preferred method recently, using criminals rather than sympathizers or members of affiliated, non-Iranian militant groups, as was the case years back.

In November 2022, Volant Media, the parent company of Iran International, said that two of its journalists had been notified of direct threats. It said in a statement the Metropolitan Police had formally notified both journalists that these threats represented an imminent, credible and significant risk to their lives and those of their families. Following the significant escalation in Iranian state-backed threats and advice from the London Metropolitan Police, Iran International TV announced in February that it reluctantly and temporarily closed its London studios and moved broadcasting to Washington DC. After months of hiatus in broadcasting from the UK, the network relaunched operations from a new London building in September.

Since its inception, the Islamic Republic of Iran, has been engaged in such plots against Iranian opposition in exile. Some attempts have been more successful than the others, but the regime has never ceased threatening and targeting those who dare speak against it, even those ostensibly safe in western Europe or the United States.

Many Iranian activists believe that the failure of the host states to exact a high price for such atrocities have contributed to its continuation. Those arrested, even found guilty, have often been handed back to Iran in 'exchanges' –that, in turn, have been made possible through hostage-taking.

The most recent example is the release of Asadollah Assadi, a former attaché at the Iranian embassy in Austria, who was convicted in Belgium for plotting to bomb a gathering of Iranian opposition in France in 2018. He went back to Iran triumphantly in a deal to bring back Belgian aid worker Olivier Vandecasteele who was taken hostage in Iran in 2022 and sentenced to 40 years in prison.

According to ITV, the hitman (Ismail) was told the two presenters had to be targeted because they were causing the Iranian regime "a lot of humiliation in the media."

"They accuse Iran of committing any kidnap or assassination [on television] and we must finish them and make an example of them... so anyone who will take their place in the channel will learn a lesson from what happened to them," Iranian spies told Isamil.

The Iranian regime has been attacking Iran International ever since its launch in May 2017. It's been called a "terrorist organization" and is deemed a "public enemy."

In September 2023, Iran's Intelligence Minister appeared on state television to reiterate that the regime would not refrain from "invasive security measures" against Iran International to show that "no terrorist media will be safe."

"We believe that Iran International is a terrorist network, and naturally we deem it our duty and mission to act against them wherever and whenever we deem appropriate," he said.

The ITV report Wednesday was broadcast only a few hours after the jury of a UK court returned a guilty verdict for a suspect gathering information on Iran International's London headquarters for a possible terror attack.

Chechnya-born Magomed-Husejn Dovtaev was detained by officers from London's Metropolitan Police Counter-Terrorism Command in February 2023. He was charged with attempting to collect information "likely to be useful to a person committing or preparing an act of terrorism."

The final verdict will be issued by the court on Friday.

"This trial was a reminder of the threats journalists and news organizations face," Iran International said in a statement after the verdict was announced. "We will not be cowed by threats. Our journalists will continue to provide the independent, uncensored news the people of Iran deserve,"

https://www.iranintl.com/en/202312219498

You might like to watch the series 'Tehran' via AppleTV. Cracking spy story: Iran vs Israel; very topical!

## **Morse - Number Stations**

### **Morse Stations**

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

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

#### UNID CW

#### The French Mystery Morse Station - (Now Classified by Numbers & Oddities as UM05)

#### 5345.8 kHz 06 - 17 Nov

In the last newsletter we featured this station transmitting from Sunday 15 October, sending a single French word, a single figure number or a single letter that repeated every few seconds. After 10 minutes the word or figure changed to a new one that was repeated for the next 10 minutes, and so on 24 hours a day. The station ceased transmissions sometime after 1400z on Friday, 03 November & that was where we left it as the newsletter went to press.

On Monday, 06 November we received another alert from Ary, (AB), that the station had resumed broadcasting in the early afternoon & sure enough monitoring showed the transmissions on 5345.8kHz continuing as before. On the evening of 07 November, the station was heard sending only the letter 'D' every 5 seconds. This started before 1700z & continued until sometime after 0617z on Wednesday, 08 November with the varied words, letters etc. resuming.

Examples of the output from this station logged at random are;

01 Nov Fraises, H, UTU

- 06 Nov Passage pieton, CTE, I, campagne, embouteillage, U, 0, I, K, G, voiture, 0, 6, E
- 08 Nov 0, Le, passage niveau, destination, B, deviation, D, G, A, 1
- 13 Nov Decouverte, port, traffic, 1, 5, 3, D, B, ocean, aeroport, C, 3, 0, passage pieton

Heard on this frequency until morning of Friday 17 November - Almost exactly one month after first appearing on 5345.8kHz.



M23 on 5345kHz sending 'OSS' & UM05 French Morse Stn. Sending 'Cascade' on 5345.8kHz 16 Nov 1740z

#### <u>10300.8 kHz</u> <u>18 – 24 November</u>

Thanks to a report from UDXF the mystery French station was rediscovered on 10300.8kHz on the evening of Fri 17 November. The station was not heard on either frequency when monitored later that night, but had restarted when checked on Sat 18 November. Output of station continues with Morse words, letters & figures but with a new twist a couple of English sentences have also been logged by Ary, that look to have been copy & pasted from computer manuals.

17 Nov Passage, Port, Lac, Detour, Desert, Riviere, Detour, Metro, Jungles, Colline, Velo, Riviere, Plaine, Autoroute, Tunnel, Trains

18 Nov Embouteillage, La gare est ouverte, Destination, Tourisme, Lac, Le, Tramway, Mer, To change the settings copy a file from the system configuration path to the subdirectory, chemin de fer (Note the English phrase – Looks to be from a configuration file)

19 Nov L, Destination, Voyage, Pont, Destination, Jungle, Aeroport, Document is distributed under the terms of the bus, Port, Volage, Passage, Route, Nature, Velo, Grotte, Cascade, Mur

20 Nov To change the settings copy a file from the system configuration path to the subdirectorys, Lac, Voiture, Plage, Exploration

#### <u>3961.8 kHz</u> <u>25 – 27 November</u>

Another frequency change occurred on 25 November when the station moved to 3961.8kHz, with reception in the UK audible from around 1400z onwards.

#### 5345.8 kHz 28 Nov for one day - Then back to 3961.8kHz

The station failed to appear on 28 November, but was found to have moved back to 5345.8kHz – lasting only a day on this frequency – moving back to 3961.8 kHz on the 29 November!

12 Dec 0506z Passage 13 Dec 0503z Riviere

In the second week of December the format progressed to sending loops of non-related words.

08 Dec	Porte fenetre table Couteau verre portefeuille carte de credit	(40 sec silence)
	Chaise lit couverture oreiller	(17 sec silence)
	Couteau verre portefeuille carte de credit	(40 sec silence)
	Chat chien oiseau arbre maison voiture	(10 sec silence)
	Papier rocher	(etc)
16 Dec	Forest Earth Ice Star Riviere River (R)	
	Glace Chair Pomme Pomme Tree Arbre (R)	(43 sec silence)
	Fleur House Montagne Mountain Rain Flower (R)	(46 sec silence)
	Cat Tree Cloud Chat Arbre Nuage (R)	(30 sec silence) etc.

#### 5345.8kHz Another move from 3961.8kHz back to 5345.8kHz occurred on 15 December

19 Dec	Table, Star, Chat, Flower, River, Montagne	(2-second pause before repeating sequence)
28 Dec	Mount, In, Table, Snow, Ciel, Sable, Sea Air, Oiseau, Noile, Car, Book, Voiture	(2-second pause before repeating sequence) (2-second pause before repeating sequence)
	Chaise, Forest, Fish, Flower, Sky, Lune	(2-second pause before repeating sequence)

#### UM05 - Chart Showing Frequency Use / Dates

5345.8	06 – 17 Nov			28 Nov		15 Dec - Ongoing
10300.8		18 – 24 Nov				
3961.8			25 – 27 Nov		29 Nov- 14 Dec	

From reports submitted it appears the frequency changes take place sometime between morning & afternoon.

Peter, (PoSW), was also monitoring this new arrival. Here are his logs & detailed report:

#### French CW on 5345.8 kHz:- By PoSW

First noticed on 15-October sending a word in the French language, and sometimes a single letter or numeral, for around ten minutes or so then changing carried on throughout the month and into November. Went quiet on the third of that month although it was active early on:-

03-Nov-23, Friday:- 0725 UTC:- sending, "CARTE DE CREDIT"; at 0738 UTC, "BRISE".

Returning to this frequency later in the day nothing heard when checked at various intervals between 1600 and 2100 UTC. Nothing heard on the following morning, the assumption being that this exercise had come to an end but it was back at the start of the following week:-

06-Nov-23, Monday:- 1638 UTC:- sending "R"; 1659 UTC, "NATURE"; 2126 UTC, "2", a distinct flutter effect on the keyed carrier perhaps due to aurora, similar noted on the Shannon VOLMET station on 5505 kHz at this time. The local TV news earlier on carried a report that there had been a display of the Aurora Borealis overnight visible in the counties of Norfolk and Suffolk, unusual to see this phenomenon so far south. CW activity on 5345.8 kHz continued daily, an interesting event on the 16th:-

16-Nov-23, Thursday:- 1549 UTC:- Sending "K", weak, but there was a much stronger signal on the LF side:- 5345 kHz:- the original M23 CW, sending "OTE", much stronger than the CW 800Hz higher running at the same time. Stopped around 1624 UTC. Was heard again later on:- 1656 UTC, sending "OSS", strong signal, still on when checked at 1725 and 1740 UTC, stopped at 1754 UTC approx.

17-Nov-23, Friday:- 0739 UTC:- CW on 5345.8 kHz sending "3". Nothing heard later on in the day when monitored between 1850 and 2130 UTC. Nothing heard on the following few days, seemed to have ended. Not much attention paid to this part of the spectrum in the following days but noticed by chance that a different kind of activity had returned in late December:-

19-Dec-23, Tuesday:- 1725 UTC, casually tuning around heard weak, slow CW. Turned out to be a different format, groups of six words, some in French and some in English:- sending "CHAISE FOREST FISH FLOWER SKY LUNE" Stopped at approx.. 1728 UTC, started up again with "FOREST EARTH ICE STAR..." at this point sank into noise and became unreadable. Checked a bit later, had become slightly stronger, sending, "OISEAU POMME EARTH SEA CAT STAR".

Nothing audible when checked on several occasions on Wednesday the 20th, probably there but weak and down in the noise.

21-Dec-23, Thursday:- 1710 UTC, "MOON LIVRE RIVIERE ICE VENT CAT", stopped at 1714 UTC approx.. then started up again, very weak, managed to get "...WIND FORET FLEUR..." before losing the signal to noise.

22-Dec-23, Friday:- 0802 UTC, "GLACE SABLE VOITURE FORET SUN STAR". Stopped before 0805 UTC for about a minute then started up again, "NEIGE BOOK RIVER BOOK FORET SABLE" - "BOOK" sent twice, if I read it correctly.

23-Dec-23, Saturday:- 0742 UTC, "GLACE SABLE VOITURE FORET SUN STAR". Stopped before 0745z then came back with, "CHAISE HOUSE PLUIT CLOUD BIRD AIR".

24-Dec-23, Sunday:- 0823 UTC, "CHAISE HOUSE PLUIE CLOUD BIRD AIR". Weak signal, only just readable.

Was active on Christmas Day, early morning at least:-

25-Dec-23, Monday:- 0711 UTC, sending "CHAISE HOUSE PLUIE CLOUD BIRD AIR" - again; there is a lot of repetition of words and of whole six-word groups. Paused around 0715:45s then started up again with, "GLACE CHAIR POMME POMME TREE ARBRE".

A break from all things radio for a few days, still going upon returning home later in the week:-

28-Dec-23, Thursday:- 0816 UTC, weak signal, difficult copy "TABLE WIND FORET FLEUR SABLE FIRE"

29-Dec-23, Friday:- 0751 UTC, "TABLE WIND FORET FLEUR SABLE FIRE". Stopped after 0753 UTC then came back with, "CHAISE HOUSE PLUIE CLOUD BIRD AIR".

30-Dec-23, Saturday:- 0745 UTC, "TABLE STAR CHAT FLOWER RIVER MONTAGNE", good signal this morning, unusually strong. 0751 UTC, changed to "CHIEN FISH BOOK HOUSE TERRE MOON", signal now becoming weaker.

(Thanks for your excellent account as usual, Peter)

Thanks to all those monitoring this station - AB, BR, chpa, Gary, HFD, PoSW & particularly Ary & UXDF for the reports & logs.

### **Morse - Number Stations**

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

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

#### November 2023:

4490	2000z 2000z 2000z 2000z 2000z 2000z	02 Nov 07 Nov 14 Nov 21 Nov 23 Nov 30 Nov	'197' '197' '197' '197' '197' '197'	$\begin{array}{l} 672 \ 30 = = \ 000 \\ 746 \ 30 = = \ 120 \\ 376 \ 30 = = \ 155 \\ 465 \ 30 = - \ 758 \\ 697 \ 30 = - \ 354 \\ 188 \ 30 = - \ 165 \end{array}$	11 92001 6 90 13090 3 65 12565 3 75 10482 8 65 73524 6 74 98097 2	54570 770 39090 300 39565 305 34756 259 57453 224 25456 878	00 = = 90 = = 65 = = 27 = = 09 = = 79 = =	Fair with QSB, fa Fair, fast. Seque Good. Med-fast. Good, fast. Long Fair, med-fast. U Weak/Fair. No p	ast. Good Mors ntial number gr . Sequential gr ger pauses betw Jsual paired gr pause between g	se. Errors noted ps. 29 grps. sent os. Grp21 sent or een grps. 'Norma os. Hesitant deliv grp & repeat. Poo	nce only al' grps ery or copy	BR/HFD BR BR BR BR BR	THU TUE TUE TUE THU THU
5320	18 <b>04</b> z 1800z 1800z 1800z 1800z	07 Nov 09 Nov 14 Nov 23 Nov 28 Nov	V V '197' '197' '197' '197'	$785 \ 30 = = 1176$ $. \ .4 \ 30 = = 1074$ $654 \ 30 = = 117$ $354 \ 30 = = 847$ $. \ .71 \ 30 = = 453$	55 12765 3 15 89 12789 3 56 35647 ( 75 29510	9765 3076 39789 307 00567 364	65 = = 89 = = 75 = = = =	Weak/Fair. Late s Fair/Good. Med Fair, med-fast. S Weak with QSB.	start no call-up. -fast. Sequentia INGLE grps set Poor copy for	Sequential numb al grps. 40 grps s nt. End DK/GC so much of transmis	er grps. ent ent once ssion	BR HFD BR BR BR	TUE THU TUE THU TUE
5465	0700z	05 Nov	'197'	405 30 = = 345	67							HFD	SUN
5810	1500z 1500z	04 Nov 25 Nov	'197' '197'	$159\ 30 = = 909$ $738\ 30 = = 873$	09 12312 9 66 77187 8	98765 200 38100 773	02 = = 90 = =	Fair with QSB, fa Good, fast. Mos	ast. Grp15 123 t grps used one	45 Grp29 98765 or two paired nur	mbers	BR/HFD BR	SAT SAT
Decembe	<u>r 2023:</u>												
4490	2000z 2000z 2000z 2000z	07 Dec 12 Dec 26 Dec 28 Dec	'197' '197' '197' '197'	$854 \ 30 \ 000 \ 648$ $792 \ 30 = = 756$ $854 \ 30 = = 145$ $927 \ 30 = = 135$	85 67354 ? 65 75867 8 25 14626 4 72 14728 3	78645 779 88374 837 47294 859 31989 311	958 = = 99 = = 11 = = 23 = =	Fair, fast. Many Fair/Good, fast. I Weak/Fair wish ( Weak/Fair with (	paired numbers Hesitant in plac QSB. Poor cop QSB. Poor cop	. Start & end seq. es. Two Corrected y in places with f y in places	errors d errors ade out	BR BR BR BR	THU TUE TUE THU
5320	1800z 1800z	12 Dec 19 Dec	'197' '197'	$297 \ 30 = 758$ $515 \ 30 = 557$	47 65746 7 66 88787 8	74655 098 86958 9	76 = = .6 = =	Fair, fast. Hesita Fair, fast. 515 D	int in places. N K at start 551 a	o noted errors t end. Maybe cop	py error	BR BR	TUE TUE
5810	1500z 1500z 1500z	02 Dec 16 Dec 30 Dec	'197' '197' '197'	$337 \ 30 = = 445$ $755 \ 30 = = 132$ $369 \ 30 = = 598$	86 10987 9 45 23245 9 67 10989 1	91234 012 91234 012 17645 309	34 = = 34 = = 88 = =	Fair, fast. Last 10 Good, fast. Seque Fair, fast. Longe	) grps all ending ential grps. 10 e r pauses betwee	g with 234. Error each ending 245, 3 en grps. No error	rs noted 578, 234 rs noted	BR BR BR	SAT SAT SAT
M01	5320kHz	z 1800z	z 1	14 November 20	)23		M	)1 4490kHz	<b>2000z</b>	4 November 202	23		
197 (R-11789) $21789)$ $21789$ $31789$ $= -652$	4m) 654 ( 12789 137 22789 237 22789 237 32789 337 4 654 30 3	554 30 30 89 14789 89 24789 89 24789 89 34789 0 000	= = 15789 25789 25789 35789	16789 17789 26789 27789 26789 27789 36789 37789	18789 19789 28789 29789 28789 29789 28789 29789 38789 39789	10789 20789 20789 30789	19 11 21 31 ==	7 (R4m) 376 370 565 12565 13565 565 22565 23565 565 32565 33565 376 30 000	$\begin{array}{l} 6 \ 30 \ 30 = = \\ 14565 \ 15565 \\ 24565 \ 25565 \\ 34565 \ 35565 \end{array}$	16565 17565 1 26565 27565 2 36565 37565 3	8565 19 8565 29 8565 39	565 10565 565 20565 565 30565	5
(Errors	omitted)				Courtesy	BR	(E1	rors omitted)			Cour	tesy BR	

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

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

No Reports

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

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

Asiatic MI12 Lugs	Asiatic	M12	Logs
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16184/14784/13484	0300/20/40z	02 Nov	174 1		(Via SDR Japan)	HFD	THU
16275/15975/14675	0010/30/50z 0010/30/50z 0010/30/50z 0010/30/50z	03 Nov 13 Nov 20 Nov 27 Nov	296 1 (8364 189) 296 1 296 1 (507 74) 296 1 (589 59)	94066 65965 25101 49606 17475 59677	(Via SDR Japan) (Via SDR Japan) (Via SDR Japan) (Via SDR Japan)	BR HFD BR BR	FRI MON MON MON
14354/12154/11154	0300/20/40z	05 Dec	311 1		(Via SDR Japan)	HFD	TUE
14947/13447/12147	0010/30/50z 0010/30/50z 0010/30/50z	01 Dec 04 Dec 29 Dec	941 1 941 1 (5889 89) 941 1 (9974 193)	69729 39345 00416 90591	(Via SDR Japan) (Via SDR Japan) (Via SDR Japan)	HFD BR BR	FRI MON FRI

#### European M12 Logs

November 2023:	New scheds in bole	d type						
6859/7459/7959	2200/20/40z	03 Nov	849 1 (7418 85)	87978 73793			BR	FRI
	2200/20/40z	04 Nov	849 1 (7418 85)	87978 73793			BR/HFD	SAT
	2200/20/40z	17 Nov	849 000				BR	FRI
	2200/20/40z	24 Nov	849 1 (405 120)	33406 44645			BR	FRI
	2200/20/40z	25 Nov	849 1 (405 120)	33406 44645			BR	SAT
6874/8074/	0030/0050/0110z	10 Nov	803 000				HFD	FRI
6917/5817/5117	2000/20/40z	01 Nov	981 1 (6342 184)	77836 7653054223 21	700 000 000		BR/Gert/HFD	WED
	2000/20/40z	03 Nov	981 1 (6342 184)	77836 76530			BR	FRI
	2000/20/40z	08 Nov	981 1 (6342 184)	77836 76530			BR	WED
	2000/20/40z	10 Nov	981 1 (6342 184)	77836 76530			BR	FRI
	2000/20/40z	15 Nov	981 000				BR	WED
	2000/20/40z	24 Nov	981 1 (3175 238)	89956 27018			BR	FRI
	2000/20/40z	29 Nov	981 1 (3175 238)	89956 27018			BR	WED
10446/9046/7946	2300/20/40z	02 Nov	392 000				Gert/HFD	THU
	2300/20/40z	06 Nov	392 1 (414 81)	95389 17921			BR	MON
	2300/30/40z	09 Nov	392 1 (414 81)	95389 17921			BR	THU
	2300/20/40z	20 Nov	392 000				BR	MON
	2300/20/40z	23 Nov	392 000				BR	THU
	2300/20/40z	27 Nov	392 1 (1977 79)	38 3	Poor copy		BR	MON
	2300/20/40z	30 Nov	392 1 (1977 79)	23837 13311	FJ		BR	THU
11435/10598/9327	1800/20/40z	04 Nov	938 1 (1931 79)	55810 26444			BR/HFD	SAT
	1800/20/40z	18 Nov	938 1 (6833 72)	26398 07140			BR	SAT
11493/13393/14393	0700/20/40z	01 Nov	433 000				HFD	WED
	0700/20/40z	04 Nov	433 000				Gert	SAT
	0700/20/40z	08 Nov	433 1				HFD	WED
13373/12173/10273	2310/30/50z	08 Nov	312 1 (2043 119)	9342491023			BR/HFD	WED
	2310/30/50z	12 Nov	312 1 (2043 119)	9342491023	V.V	Veak	BR	SUN
	2310/30/50z	15 Nov	312 000				BR	WED
	2310/30/50z	22 Nov	312 1 (686 63)	36628 79129			BR	WED
13386/12189/11491	1110/30/50z	02 Nov	725 1 (4621 92)	75176 89316			BR/HFD	THU
	1110/30/50z	23 Nov	725 1 (7689 91)	43708 05814			BR	THU
	1110/30/50z	30 Nov	724 1 (8563 93)	81708 63690			BR	THU
16292/14892/14392	1400/20/40z	02 Nov	283 1				HFD	THU
	1400/20/40z	06 Nov	283 1 (659 87)	44779 42182			BR	MON
	1400/20/40z	09 Nov	283 1 (659 87)	44779 42182			BR	THU
	1400/20/40z	13 Nov	283 1 (2727 94)	36008 30531			BR	MON
	1400/20/40z	16 Nov	283 1 (2727 94)	36008 30531			BR	THU
	1400/20/40z	20 Nov	283 000	20000 20221			BR	MON
	1400/20/40z	27 Nov	283 1 (9643 93)	81708 63690			BR	MON
	1400/20/40z	30 Nov	283 1 (9643 93)	81708 63690			BR	THU
	1.00/20/102	501101	=00 I (00 10 00)	01,000000000000000000000000000000000000				1110

17432/18532/19132	0800/20/40z 0800/20/40z	01 Nov 05 Nov	451 1 451 1 (656 171) 8877	9 80483	HFD BR	WED SUN
December 2023:						
5832/6832/7732	2200/20/40z 2200/20/40z 2200/20/40z 2200/20/40z 2200/20/40z 2200/20/40z 2200/20/40z 2200/20/40z	02 Dec 08 Dec 09 Dec 15 Dec 16 Dec 22 Dec 29 Dec 30 Dec	887 1 (405 120)         3340           887 1 (5090 86)         7235           887 1 (5090 86)         7235           887 1 (5090 86)         7235           887 1 (5090 86)         7235           887 1 (5090 86)         7235           887 1 (3090 86)         7235           887 1 (333 95)         6611           887 1 (333 95)         6611	6 44645 4 19281 4 19281 4 19281 4 19281 6 68533 2200z msg stopped after DK & restarted 6 68533	BR BR/HFD BR BR BR BR BR BR	SAT FRI SAT FRI FRI FRI SAT
6792/5892/5092	2000/20/40z 2000/20/40z 2000/20/40z 2000/20/40z 2000/20/40z 2000/20/40z 2000/20/40z	01 Dec 06 Dec 13 Dec 15 Dec 20 Dec 22 Dec 29 Dec	780 1 (3175 238) 8995 780 000 780 1 (717 173) 7297 780 000	66 27018 11 91241 11 91241 11 91241 11 91241	BR HFD BR BR BR BR BR	FRI WED FRI WED FRI FRI FRI
9134/8134/7534	2300/20/40z 2300/20/40z 2300/20/40z 2300/20/40z 2300/20/40z 2300/20/40z	04 Dec 07 Dec 14 Dec 21 Dec 25 Dec 28 Dec	457 1 (5          457 1 (485 93)       .4612         457 000          457 1 (614 85)       2875         457 1 (248 111)       8528         457 1 (248 111)       8528	Poor copy 3 778 9 87605 6 22974 6 22974 93146 78516 000 000	BR/HFD BR/HFD BR Gert BR Gert	MON THU THU THU MON THU
10174/12174	0700/20/40z 0700/20/40z 0700/20/40z	02 Dec 06 Dec 30 Dec	113 000 113 1 113 000		HFD HFD Gert	SAT WED SAT
11129/10329/9329	2310/30/50z 2310/30/50z 2310/30/50z 2310/30/50z 2310/30/50z 2310/30/50z	<b>03 Dec</b> <b>06 Dec</b> 17 Dec 20 Dec 24 Dec 31 Dec	133 1 (6.4 159)          133 1 (7836 73)          133 1 (723 52)       9829         133 1          133 1 (7388 98)       7602         133 1 (243 217)       5934'	V.Weak V.Weak 0 53809 . 555 .4 7 12457	BR/HFD BR BR BR BR BR BR	SUN WED SUN WED SUN SUN
11435/10598/7732	1800/20/40z 1800/20/40z	09 Dec 23 Dec	938 1 938 1 (1194 77) 4689	8 79876	BR BR	SAT SAT
13386/12189/11491	1110/30/50z 1110/30/50z 1110/30/50z	07 Dec 14 Dec 28 Dec	725 1 (6035 92)       9246         725 1 (4094 91)       3642         725 1 (7821 91)       2733	2 17977 9 95209 4 76227	BR BR BR	THU THU THU
15909/14609/13909	1400/20/40z 1400/20/40z 1400/20/40z 1400/20/40z 1400/20/40z 1400/20/40z 1400/20/40z	04 Dec 07 Dec 11 Dec 18 Dec 21 Dec 25 Dec 28 Dec	969 1 (549 76)         1545           969 1 (549 76)         1545           969 000         1545           969 1 (7232 71)         4960           969 1 (7232 71)         4960           969 1 (8066 89)         2538           969 1 (8066 89)         2538	6 65689 Heavy QRM on 14609kHz 6 65689 6 34196 9 67970 9 67970	BR/HFD BR BR BR BR BR BR	MON THU MON MON THU MON THU
16234/17434/	0800/20/40z	03 Dec	242 0		HFD	SUN
M12 6917/5817 981 981 981 1 ( 77836 76530 116 98500 15005 022 36546 85377 76: 89506 26463 54: 95375 95763 477 76376 26789 100 60288 03799 72: 59399 90449 00:	/5117kHz         2000/202           R2m)         6342         184         6           529         29782         33503         22           819         53555         19595         46           521         81728         67140         75           512         31799         76193         01           188         73637         01023         04           577         95511         51966         89           266         89431         86013         48           231         19499         20431         75	20/2040z         0           342         184           311         45768           i306         38344           i851         14577           272         89854           i641         25741           i682         72981           i768         45996           i404         54911	1 Nov 2023 54050 45440 89468 04902 75531 45236 13807 05517 62618 44573 75256 71287 52322 28437 11672 39337 12800 16443 20553 59025 71100 52743 85963 87212	M12         9134/8134/7534kHz         2300/2320/2340z           457         457         457         1         (R2m)         248         111         248         111           85286         22974         13697         06749         46465         95131         04569           53027         37988         81423         53896         32304         38125         95772           35834         77909         12512         91309         76267         10188         25939           49148         01654         98309         26556         62478         29427         83256           68964         24756         74986         72707         28828         69064         12874           89463         72356         51037         66690         15222         26133         94342	28 Dec 2023 9 87533 95719 952 5 52787 96861 933 9 63781 78791 322 5 31514 05850 092 9 8026 31389 042 2 67718 88716 578	271 527 504 222 546 332

981 981 981 1 (R2m) 6342 184 6342 184	
	457 457 457 1 (R2m) 248 111 248 111
77836 76530 11629 29782 33503 22311 45768 54050 45440 89468	
98500 15005 02319 53555 19595 46306 38344 04902 75531 45236	
36546 85377 76521 81728 67140 75851 14577 13807 05517 62618	85286 22974 13697 06749 46465 95131 04569 87533 95719 95271
89506 26463 54512 31799 76193 01272 89854 44573 75256 71287	53027 37988 81423 53896 32304 38125 95772 52787 96861 93627
95375 95763 47438 73637 01023 04641 25741 52322 28437 11672	35834 77909 12512 91309 76267 10188 25939 63781 78791 32504
76376 26789 10677 95511 51966 89682 72981 39337 12800 16443	49148 01654 98309 26556 62478 29427 83256 31514 05850 09222
60288 03799 72266 89431 86013 48768 45996 20553 59025 71100	68964 24756 74986 72707 28828 69064 12874 98026 31389 04546
59399 90449 00231 19499 20431 75404 54911 52743 85963 87212	89463 72356 51037 66690 15222 26133 94342 67718 88716 57832
39180 28878 70412 60756 00145 42566 98892 88987 60983 48664	23444 76489 69692 79489 34890 78737 98658 75052 28784 33894
24169 38454 38377 32809 67208 54293 94481 85196 58628 32665	82263 04512 44123 83572 54443 46478 22854 15748 66198 42669
91025 78372 22790 68531 23803 38182 96890 37697 25124 50569	22804 10515 15656 03523 31548 03283 41197 28720 43805 52699
53402 61004 74779 59910 80829 12637 70817 58232 47387 52775	44718 75551 80551 19059 49306 71762 83989 60771 18322 27945
48987 70803 25095 13905 11146 47734 54982 03656 79585 18833	50619 48838 56971 85486 68569 47078 93299 58516 01875 93146
32713 67144 32622 02117 78326 51154 58182 71183 20799 07522	78516 000 000
09765 71335 13472 88170 48873 24672 69517 62152 33019 11935	
13864 71338 10328 43632 36859 89065 45609 80681 61738 15138	
89628 81915 43122 39814 40225 42985 82004 20715 71743 82301	Courtesy Gert
47618 55544 23849 42574 07568 05434 30973 69135 52286 30821	
93655 32100 54223 21700 000 000	
Courtesy Gert	

#### M14 IA MCW / ICW Short 0

#### November 2023:

12211	0500z	01 Nov	952 (710 66) = 60458	(Via SDR Russia)	HFD	WED
10243	0520z	01 Nov	952 (710 66) = 60458	(Via SDR Russia)	HFD	WED

#### December 2023:

No Reports

#### <u>M23</u> O ICW

Following on from October's reports, the hourly burst consisting of a Morse 'K' or 'Y' with tones was noted daily on 5345kHz. On Thursday, 16 November the station reactivated with some new sequences, with the hourly bursts still continuing between & even over these sequences.

5345	1549 (IP) – 1624z 1654 - 17545z	16 Nov 16 Nov	OTE (R) OSS (R60m)	Heard in pro Marker hear	ogress – Ended approx 1549z d a few seconds after end of sequence	PoSW AB/BR	THU THU
	$\begin{array}{c} 0554 - 0754z \\ 0945 - 1009z \\ 1055 - 1105z \\ 1222 - 1226z \\ 1248 - 1308z \\ 1355 - 1359z \end{array}$	17 Nov 17 Nov 17 Nov 17 Nov 17 Nov 17 Nov	TOE         (R2hrs)           035         (R24m)           111         (R10m)           TUO         (R4m)           TUO         (R20m)           TUO         (R4m)	(T Zero T)	Markers at 0554z & 0754z Markers at 0924, 0926 & 0928z Marker at 1400z	AB AB AB/BR AB/BR AB AB	FRI FRI FRI FRI FRI
	Nothing heard on 18	8 Nov					
14930	1714z (IP)	19 Nov	TUO (R)			Anon	SUN
	1846z (IP)	21 Nov	RTS (R)		(Via French SDR)	HFD	TUE
	1800 – 1900z	22 Nov	RTS (R1hr)			AB	WED
26240	0835z (IP) 1200 – 1230z 1300 – 1330z	21 Nov 21 Nov 21 Nov	RTS (R) XKO (R30m) XKO (R30m)			AB/Anon AB AB	TUE TUE TUE
	0830 - 0930z 1200 - 1230z 1300 - 1330z	22 Nov 22 Nov 22 Nov	RTS (R1hr) XKO (R30m) XKO (R30m)			AB AB AB	WED WED WED

Thanks to AB, BR, HFD, PoSW, Anon & UDXF for reports & Information

### Morse Stations - Not Number Related

#### <u>M51</u> XIX

No reports - M51b format in use

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

2001	110005
3 X X I	//hx / h
	11002.1

1230 - 1308z	20 Dec	Mercredi- Leçon	23-2/1 Codé,	23-2/2 Clair,	23-2/3 Codé,	23-2/4 Clair (720 grps/hr)	BR	WED
1230 - 1258z	28 Dec	Jeudi- Leçon	04-2/1 Codé,	04-2/2 Clair,	04-2/3 Codé,	04-2/4 Clair (840 grps/hr)	BR	THU
1130 - 1206z	29 Dec	Vendredi- Leçon	05-2/1 Codé,	05-2/2 Clair,	05-2/3 Codé,	05-2/4 Clair (960 grps/hr)	BR	FRI

#### <u>M51b</u>

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

#### 3881//6825

Sending almost continuously outside of scheduled lesson slots. Non-stop 5-character groups composed of M51a messages

#### <u>M89</u> O

#### BSA5 DE TP4C

Following a request from Japanese radio amateur & YouTuber, 'Plato 1959', the following video has been produced about the mystery Morse station TP4C regularly heard in the 80m amateur band & producing a good, strong signal in Japan.

We know the station as one of the M89 regulars - one that has retained the same call-sign & frequency since January 2021.



#### https://www.youtube.com/watch?v=Bl-rqWmytWM

Well worth the 10 minutes to view & there are also many other videos on Plato 1959's channel that may be of interest. One of the latest being an analysis & direction finding exercise on a Russian OTH radar signal operating within the 40m amateur band.

M89 Freq & Call sig	gns heard in Nov / Do	ec 2023	New Scheds shown in Bold Type	From logs submitted from JPL		
4720//5150	V WNF(x3) DE FX	M (x2) (R5)	(Hand sent)			
4860// 6840	VVV (x3) Q2M (x3)	) DE NYZ (	x2) (R5) QSA ? K			
<u>M95</u> O XSV, XS	V70, XSV85					
M95 Morse Logs	(Bold type indicates	s new loggi	ng)			
4178//NRH	<b>Call Sign S2DJ</b> 2100z & 2300z	<b>Believe tl</b> 22 Nov	is to be new Round Slip and freq for Y V XP5B (x3) DE S2DJ (x2)	HXD DE SAQC (Remote tuner Netherlands)	BR	WED

Spl Msg: VVV JPL VY Best RGDS DE E2K K

## Marker Beacons (MX MXI)

3593.7	0411z 0443z 0418z 0443z	10 Dec 17 Dec 22 Dec 24 Dec	MXI MXI MXI MXI	CW Beacon CW Beacon CW Beacon CW Beacon	"D" "D" "D" "D"	Sevastopol Sevastopol Sevastopol Sevastopol		Good Moderate Moderate Moderate	chpa chpa chpa chpa	SUN SUN FRI SUN
	0404z	26 Dec	MXI	CW Beacon	"D"	Sevastopol		Good	chpa	TUE
3593.9	0458z	15 Nov	MXI	CW Beacon	"S"	Severomorsk	Transmission stopped 0502z	Moderate	chpa	WED
	0443z	20 Nov	MXI	CW Beacon	"S"	Severomorsk		Moderate	chpa	MON
	0409z	10 Dec	MXI	CW Beacon	"S"	Severomorsk		Excellent	chpa	SUN
	0442z	18 Dec	MXI	CW Beacon	"S"	Severomorsk		Good	chpa	MON
	0444z	24 Dec	MXI	CW Beacon	"S"	Severomorsk		Weak	chpa	SUN
4545	2137z	05 Dec	MXV	CW Beacon	"V"			Strong	BR	TUE
4557.7	2240z	12 Nov	MXI	CW Beacon	"D"	Sevastopol		Weak	BR	SUN
	0422z	22 Dec	MXI	CW Beacon	"D"	Sevastopol		Weak	chpa	FRI
	0439z	24 Dec	MXI	CW Beacon	"D"	Sevastopol		Good	chpa	SUN
4557.9	2239z	12 Nov	MXI	CW Beacon	"S"	Severomorsk			BR	SUN
	0408z	25 Nov	MXI	CW Beacon	"S"	Severomorsk		Good	chpa	SAT
	0432z	30 Nov	MXI	CW Beacon	"S"	Severomorsk		Excellent	chpa	THU
	0458z	09 Dec	MXI	CW Beacon	"S"	Severomorsk		Good	chpa	SAT
	0423z	22 Dec	MXI	CW Beacon	"S"	Severomorsk		Good	chpa	FRI
5153.7	2241z	12 Nov	MXI	CW Beacon	"D"	Sevastopol			BR	SUN
	2010z	19 Nov	MXI	CW Beacon	"D"	Sevastopol			BR	SUN
	0530z	22 Nov	MXI	CW Beacon	"D"	Sevastopol		V.Weak	chpa	WED
	0434z	30 Nov	MXI	CW Beacon	"D"	Sevastopol		Excellent	chpa	THU
	1543z	05 Dec	MXI	CW Beacon	"D"	Sevastopol		Moderate	chpa	TUE
	0535z	12 Dec	MXI	CW Beacon	"D"	Sevastopol		Moderate	chpa	TUE
	0435z	23 Dec	MXI	CW Beacon	"D"	Sevastopol		Moderate	chpa	SAT
5153.9	1638z	12 Nov	MXI	CW Beacon	"S"	Severomorsk			BR	SUN
	0606z	18 Nov	MXI	CW Beacon	"S"	Severomorsk		Weak	chpa	SAT
	1638z	19 Nov	MXI	CW Beacon	"S"	Severomorsk		Weak	BR	SUN
	0529z	22 Nov	MXI	CW Beacon	"S"	Severomorsk		Moderate	chpa	WED
	0435z	30 Nov	MXI	CW Beacon	"S"	Severomorsk		Excellent	chpa	THU
	0436z	23 Dec	MXI	CW Beacon	"S"	Severomorsk		Moderate	chpa	SAT

	0450z	24 Dec	MXI	CW Beaco	on "S"	Severomorsk			Moderate	chpa	SUN
5154.1	2242z	12 Nov	MXI	CW Beaco	n "A"	Astrakhan				BR	SUN
	2011z	19 Nov	MXI	CW Beaco	n "A"	Astrakhan				BR	SUN
5156.7	1505z	06 Nov	MX (	CW Beaco	n "L"	St Petersburg			Excellent	chpa	MON
	0443z	07 Nov	MX (	CW Beaco	n "L"	0			Weak	chpa	TUE
	15147	08 Nov	MX (	W Beaco	n "L"				Good	chna	WED
	1021z	11 Nov	MX (	W Beaco	n "I"				Weak	chpa	SAT
	16367	12 Nov	MY (	TW Beaco	п Г. n "Г."	St Detersburg	(Fast)		weak	BD	SUN
	0452	12 Nov	MX (	TW Deaco	и L " "Т"	Stretersburg	(l'ast)		Variat	ahna	TUE
	0455Z	14 Nov	MAC	W Beaco	n L				v.weak	cnpa	TUE
	1609Z	14 Nov	MAC	JW Beaco	n "L"	G. D			weak	chpa	IUE
	0604z	18 Nov	MX (	CW Beaco	n "L"	St.Petersburg			Moderate	chpa	SAT
	0406z	25 Nov	MX (	CW Beaco	n "L"				Excellent	chpa	SAT
	0544z	01 Dec	MX (	CW Beaco	n "L"				Moderate	chpa	FRI
	0438z	17 Dec	MX (	CW Beaco	n "L"				Moderate	chpa	SUN
	0514z	19 Dec	MX (	CW Beaco	n "L"				Good	chpa	TUE
5345.8	0448z	13 Nov	UN	NID Beaco	n "U"	,			V.weak	chpa	MON
7508.9	1636z	12 Nov	MXI	CW Beaco	on "S"	Severomorsk				BR	SUN
	0509z	15 Nov	MXI	CW Beaco	on "S"	Severomorsk			Weak	chpa	WED
	1409z	15 Nov	MXI	CW Beaco	on "S"	Severomorsk			Good	chpa	WED
	0905z	26 Nov	MXI	CW Beaco	on "S"	Severomorsk			Good	chpa	SUN
	1655z	26 Nov	MXI	CW Beaco	on "S"	Severomorsk			Good	chpa	SUN
	1236z	11 Dec	MXI	CW Beaco	on "S"	Severomorsk			Excellent	chpa	MON
	13247	21 Dec	MXI	CW Beaco	on "S"	Severomorsk			Good	chna	THU
	04547	24 Dec	MXI	CW Beaco	n "S"	Severomorsk			Good	chpa	SUN
	0-13-12	24 DCC	IVIZXI	CW Beact	л <u>э</u>	Severomorsk			0000	enpa	501
7509	0456z	24 Dec	MXI	CW Beaco	on "C"	Moscow			Moderate	chpa	SUN
7509.1	1830z	14 Nov	MXI	CW Beaco	n "A"	Astrakhan			V.weak	chpa	TUE
8494.7	1633z	12 Nov	MXI	CW Beac	on "D	" Sevastopol				BR	SUN
	1602z	14 Nov	MXI	CW Beac	on "D	" Sevastopol			V.weak	chpa	TUE
	0520z	26 Nov	MXI	CW Beac	on "D	" Sevastopol			Good	chpa	SUN
8494.9	1633z	12 Nov	MXI	CW Beac	on "S'	Severomorsk				BR	SUN
	1644z	14 Nov	MXI	CW Beac	on "S'	Severomorsk			Moderate	chna	TUE
	12347	11 Dec	MXI	CW Beac	on "S'	Severomorsk			Excellent	chpa	MON
	13237	21 Dec	MXI	CW Beac	on "S'	Severomorsk			Good	chpa	THU
	04527	21 Dec 24 Dec	MVI	CW Beac	on "S'	Severementsk			Good	chpa	SUN
8495.1	1634z	12 Nov	MXI	CW Beac CW Beac	on "A	" Astrakhan			0000	BR	SUN
0407.0	1(25-	12 No.	MV	CW D		C4 D-4				חח	CUN
8497.8	1035Z	12 Nov	MA	CW Beaco	n L	St Petersburg			C 1	BK	SUN
	1028z	15 Nov	MX	CW Beaco	n "L'	St.Petersburg			Good	chpa	WED
	1226z	11 Dec	MX	CW Beaco	n "L'	St Petersburg			Excellent	chpa	MON
	1238z	21 Dec	MX	CW Beaco	n "L'	St Petersburg			Good	chpa	THU
	0452z	24 Dec	MX	CW Beaco	on "L'	St Petersburg			Good	chpa	SUN
10871.7	1631z	12 Nov	MXI	CW Beaco	on "D"	Sevastopol				BR	SUN
10871.9	1631z	12 Nov	MXI	CW Beaco	on "S"	Severomorsk				BR	SUN
	1406z	15 Nov	MXI	CW Beaco	on "S"	Severomorsk			Moderate	chpa	WED
	0854z	26 Nov	MXI	CW Beaco	on "S"	Severomorsk			Good	chpa	SUN
	1322z	21 Dec	MXI	CW Beaco	on "S"	Severomorsk			Good	chpa	THU
13527.7	1629z	12 Nov	MXI	CW Beaco	on "D"	Sevastopol				BR	SUN
	1553z	14 Nov	MXI	CW Beaco	on "D"	Sevastopol			V.weak	chpa	TUE
	1314z	21 Dec	MXI	CW Beaco	on "D"	Sevastopol			Good	chpa	THU
13527.9	1630z	12 Nov	MXI	CW Beaco	on "S"	Severomorsk				BŔ	SUN
	1408z	15 Nov	MXI	CW Beaco	on "S"	Severomorsk			Weak	chpa	WED
	1320z	21 Dec	MXI	CW Beaco	on "S"	Severomorsk			Good	chpa	THU
16331.7	1626z	12 Nov	MXI	CW Beaco	on "D"	Sevastopol				BR	SUN
10001.1	1316z	21 Dec	MXI	CW Beaco	n "D"	Sevastopol			Good	chna	THU
16331.0	13507	12 Nov	MYI	CW Bana	n "S"	Severomorel		Fair with	OSB3	PI dp	SUM
10331.9	16277	12 INOV	MVI	CW Deace	л З n "6"	Severomanal-		r all with	Cach		SUN
16332.0	1627Z	12 Nov	MXI	CW Beaco	n "C"	Moscow				BR	SUN
200.15 -	00.50	121101		CIU D					<b>a</b> .	1	501
20047.7	0852z 1318z	26 Nov 21 Dec	MXI MXI	CW Beaco CW Beaco	on "D" on "D"	Sevastopol Sevastopol			Good Good	chpa chpa	SUN THU
	1318z	21 Dec	MXI	CW Beaco	on "D"	Sevastopol			Good	chpa	TH
A DEPOSIT OF LAND	Notice Property of the Distance of the State	AND DESCRIPTION OF	South Land Street	Was per suff	STATISTICS.	the first state of the light sector	CONTRACTOR OF AN ADDRESS OF ADDRESS	STATE AVIANT	and the second second	SHOULD BE HERE TO BE AND A STORE OF A	0001-000

16331.9kHz 1350z 12 Nov

Severomorsk 'S' Beacon with Fair Signal into London, UK

Courtesy PLdn

All logs from chpa Monitored from Stockholm. All logs from BR & PLdn monitored from Southeast UK.

## **Oddities**

#### Russian Markers – Ary Reports Changes (AB)

The Russians are still changing their channel markers. A reorganisation perhaps?

The Squeaky Wheel disappeared months ago and is replaced by the Pip. The Pip now also appears on 4525 kHz.

The Goose replaced the Airhorn on 4930 kHz

4525	26-12-2023	0646 S30	Pip
5448	26-12-2023	0646 S30	Pip (normal S30 day freq)
5367	26-12-2023	0646 S30	Pip (5367 is the former S32 freq)
4625	26-12-2023	0610 S28	Buzzer: Russian military channel marker
4182	26-12-2023	0610	Dash
4930	26-12-2023	0610	Goose (instead of Airhorn)
4930	26-12-2023	0610	Goose (instead of Airnorn)
3243	26-12-2023	0610	Goose
4770	26-12-2023	0610	Alarm

#### Thanks for the update, Ary

#### 'The Goose'

3243	1457z 0436z 0511z 1528z 1731z 0550z 0455z 1536z 0623z 0517z 0434z	06 Nov 07 Nov 15 Nov 15 Nov 21 Nov 29 Nov 05 Dec 14 Dec 19 Dec 24 Dec	Voice m	essage sent 1733z		Weak Weak Good Excellent Good Good Moderate Weak Weak	USB USB USB USB USB USB USB USB	chpa chpa chpa chpa chpa chpa chpa chpa	MON TUE WED WED TUE TUE THU TUE SUN
4310	1322z	11 Dec	'Goose' N	Marker – Day freq		Good	USB	chpa	MON
'The Ai	<u>r Horn'</u>								
4930	0424z 0608z 0503z 0619z 0557z 0442z	19 Nov 27 Nov 29 Nov 02 Dec 04 Dec 24 Dec	Marker s Marker s Marker s Marker s Marker s Marker s	ignal (Air Horn) ignal (Air Horn) ignal (Air Horn) ignal (Air Horn) ignal (Air Horn) ignal (Air Horn)		Weak Moderate Excellent Weak Weak Weak	USB USB USB USB USB	chpa chpa chpa chpa chpa chpa	SUN MON WED SAT MON SUN
'The Al	arm'								
4770	1503z 0408z 0506z 1851z 0404z 0542z 0456z 0619z 0627z	06 Nov 11 Nov 16 Nov 25 Nov 01 Dec 09 Dec 12 Dec 14 Dec	Marker S	Signal (The Alarm)		Excellent Good Good Weak Excellent Excellent Moderate Good Moderate	USB USB USB USB USB USB USB	chpa chpa chpa chpa chpa chpa chpa chpa	MON SAT THU SAT SAT FRI SAT TUE THU
<u>S28</u>	'The Buzzer'								
4625	1502z 0440z 0648z 1417z 0519z 0500z 0541z 0700z 0626z 0428z 0441z	06 Nov 07 Nov 12 Nov 22 Nov 28 Nov 01 Dec 06 Dec 14 Dec 22 Dec 24 Dec	S28	"The Buzzer" Marker		Good Moderate Good Excellent Good Excellent V.Weak Good	USB USB USB USB USB USB USB USB USB	chpa chpa chpa chpa chpa chpa chpa chpa	MON TUE SUN SUN WED TUE FRI WED THU FRI SUN
<u>S30</u>	'The Pip'								
3756	1459z 1510z 1845z 0418z 0457z	06 Nov 08 Nov 18 Nov 19 Nov 28 Nov	S30	'Pip' marker (Night freq)	Minor QRM	Weak V.Weak Weak Weak Good	USB USB USB USB	chpa chpa chpa chpa chpa	MON WED SAT SUN TUE

	1538Z		05 Dec		Moderate	USD	cnpa	IUE
	0459z		13 Dec		Good	USB	chpa	WED
	0519z		19 Dec		Moderate	USB	chpa	TUE
	0419z		23 Dec		Good	USB	chpa	SAT
5448	1441z		12 Nov S30	'Pip' Marker (Day freq)	Weak	USB	chpa	SUN
	0628z		14 Dec		Moderate	USB	chpa	THU
	0604z		15 Dec		Moderate	USB	chpa	FRI
4182	'T Marl	ker'						
	1501				XX7 1	LICD		MON
	1501z		06 Nov	Normal sound from the 1 Marker	Weak	USB	chpa	MON
	0500z		09 Nov		Good	USB	chpa	THU
	0442z		14 Nov		Moderate	USB	chpa	IUE
	0517z		26 Nov		Excellent	USB	chpa	SUN
	0540z		01 Dec		Excellent	USB	chpa	FRI
	0404z		10 Dec		Excellent	USB	chpa	SUN
	1320z		11 Dec		Moderate	USB	chpa	MON
	0446z		18 Dec		Good	USB	chpa	MON
	0520z		19 Dec		Excellent	USB	chpa	TUE
	0420z		23 Dec		Excellent	USB	chpa	SAT
	0436z		24 Dec		Good	USB	chpa	SUN
4183.1/4	<u>4184.1</u>	<u>'T Mark</u>	<u>er'</u>					
	1958z		19 Nov	T Marker			BR	SUN
<u>4525</u>	<u>Marker</u> 1603z	Beacon (Secondary 26 Nov	<mark>everal changes no</mark> RUS Marker	ted on this marker over December)	Good	USB	chna	SUN
	0458z	28 Nov	S4525 Marker		Good	USB	chpa	TUE
	0427z	30 Nov	S4525 Marker		Moderate	USB	chpa	THU
	0616z	02 Dec	S4525 Marker		Moderate	USB	chpa	SAT
	0541z	04 Dec	\$4525 Marker		Madarata	USB	-1	
			$S_{J_2}$ when $S_{J_2}$		wouchate		cnpa	MON
	2140z	04 Dec 06 Dec	Buzzer – Two T	one Alternating	Wioderate	USB	BR	MON TUE
	2140z 2155z	06 Dec 07 Dec	Buzzer – Two T 'Pip' tone Approx	one Alternating x every 2.5 seconds	Woderate	USB USB	BR BR	MON TUE THU
	2140z 2155z 2217z	06 Dec 07 Dec 08 Dec	Buzzer – Two T 'Pip' tone Appro Back to single 's	one Alternating x every 2.5 seconds tandard' Buzzer tone	Moderate	USB USB USB	BR BR BR	MON TUE THU FRI
	2140z 2155z 2217z 0405z	06 Dec 07 Dec 08 Dec 10 Dec	Buzzer – Two T 'Pip' tone Appro Back to single 's S4525 Marker	one Alternating x every 2.5 seconds tandard' Buzzer tone	Excellent	USB USB USB USB	cnpa BR BR BR chpa	MON TUE THU FRI SUN
	2140z 2155z 2217z 0405z 0422z	06 Dec 07 Dec 08 Dec 10 Dec 23 Dec	Buzzer – Two T 'Pip' tone Appro: Back to single 's S4525 Marker S4525 Marker	one Alternating x every 2.5 seconds tandard' Buzzer tone	Excellent Moderate	USB USB USB USB	cnpa BR BR BR chpa chpa	MON TUE THU FRI SUN SAT
<u>4675</u>	2140z 2155z 2217z 0405z 0422z	06 Dec 06 Dec 07 Dec 08 Dec 10 Dec 23 Dec	Buzzer – Two T 'Pip' tone Appro. Back to single 's S4525 Marker S4525 Marker er - Bodø Radio fi	one Alternating x every 2.5 seconds tandard' Buzzer tone <u>requency</u>	Excellent Moderate	USB USB USB USB	enpa BR BR BR chpa chpa	MON TUE THU FRI SUN SAT
<u>4675</u>	2140z 2155z 2217z 0405z 0422z <u>Unident</u> 0529z	04 Dec 06 Dec 07 Dec 08 Dec 10 Dec 23 Dec	Buzzer – Two T 'Pip' tone Appro: Back to single 's S4525 Marker S4525 Marker er - Bodø Radio fu 15 Nov	one Alternating x every 2.5 seconds tandard' Buzzer tone <u>requency</u> Unidentified Marker on Bodø Radio freq.	Excellent Moderate	USB USB USB USB USB	chpa BR BR chpa chpa chpa	MON TUE THU FRI SUN SAT
<u>4675</u>	2140z 2155z 2217z 0405z 0422z <u>Unident</u> 0529z 1537z	06 Dec 07 Dec 08 Dec 10 Dec 23 Dec	Buzzer – Two T Pip' tone Appro- Back to single 's S4525 Marker S4525 Marker er - Bodø Radio fi 15 Nov 15 Nov	one Alternating x every 2.5 seconds tandard' Buzzer tone <u>requency</u> Unidentified Marker on Bodø Radio freq. Unidentified Marker on Bodø Radio freq.	Moderate Moderate Moderate Moderate	USB USB USB USB USB	chpa chpa chpa chpa	MON TUE THU FRI SUN SAT WED
<u>4675</u> <u>6870</u>	2140z 2155z 2217z 0405z 0422z <u>Unident</u> 0529z 1537z <u>Unident</u>	06 Dec 06 Dec 07 Dec 08 Dec 10 Dec 23 Dec tified Marke	Buzzer – Two T Pip' tone Appro: Back to single 's S4525 Marker S4525 Marker er - Bodø Radio fi 15 Nov 15 Nov	one Alternating x every 2.5 seconds tandard' Buzzer tone <b>requency</b> Unidentified Marker on Bodø Radio freq. Unidentified Marker on Bodø Radio freq.	Moderate Moderate Moderate Moderate	USB USB USB USB USB USB	chpa BR BR chpa chpa chpa chpa	MON TUE THU FRI SUN SAT WED WED
<u>4675</u> <u>6870</u>	2140z 2155z 2217z 0405z 0422z <u>Unident</u> 0529z 1537z <u>Unident</u> 0454z	of Dec 06 Dec 07 Dec 08 Dec 10 Dec 23 Dec tified Marke	Buzzer – Two T Pip' tone Appro- Back to single 's S4525 Marker S4525 Marker er - Bodø Radio fi 15 Nov 15 Nov Signal 13 Nov	one Alternating x every 2.5 seconds tandard' Buzzer tone requency Unidentified Marker on Bodø Radio freq. Unidentified Marker on Bodø Radio freq. Unidentified signal of "time zero beat" type	Moderate Excellent Moderate Moderate Weak	USB USB USB USB USB USB USB	chpa chpa chpa chpa chpa	MON TUE THU FRI SUN SAT WED WED
<u>4675</u> <u>6870</u>	2140z 2155z 2217z 0405z 0422z <u>Unident</u> 0529z 1537z <u>Unident</u> 0454z 0512z	04 Dec 06 Dec 07 Dec 08 Dec 10 Dec 23 Dec tified Marke	Buzzer – Two T 'Pip' tone Approv Back to single 's S4525 Marker S4525 Marker er - Bodø Radio fi 15 Nov 15 Nov 15 Nov Signal 13 Nov 14 Nov	one Alternating x every 2.5 seconds tandard' Buzzer tone <b>requency</b> Unidentified Marker on Bodø Radio freq. Unidentified Marker on Bodø Radio freq. Unidentified signal of "time zero beat" type Unidentified signal of "time zero beat" type	Moderate Moderate Moderate Moderate Weak Weak	USB USB USB USB USB USB USB	chpa chpa chpa chpa chpa chpa	MON TUE THU FRI SUN SAT WED WED MON TUE
<u>4675</u> <u>6870</u>	2140z 2155z 2217z 0405z 0422z <u>Unident</u> 0529z 1537z <u>Unident</u> 0454z 0512z 1820z	04 Dec 06 Dec 07 Dec 08 Dec 10 Dec 23 Dec tified Marke	Buzzer – Two T Buzzer – Two T 'Pip' tone Appro: Back to single's S4525 Marker S4525 Marker er - Bodø Radio fi 15 Nov 15 Nov 15 Nov 15 Nov 13 Nov 14 Nov 14 Nov	one Alternating x every 2.5 seconds tandard' Buzzer tone <b>requency</b> Unidentified Marker on Bodø Radio freq. Unidentified Marker on Bodø Radio freq. Unidentified signal of "time zero beat" type Unidentified signal of "time zero beat" type Unidentified signal of "time zero beat" type	Moderate Moderate Moderate Moderate Weak Weak Weak	USB USB USB USB USB USB USB USB	chpa chpa chpa chpa chpa chpa chpa	MON TUE THU FRI SUN SAT WED WED WED TUE
<u>4675</u> <u>6870</u>	2140z 2155z 2217z 0405z 0422z <u>Unident</u> 0529z 1537z <u>Unident</u> 0454z 0512z 1820z 0528z	06 Dec 07 Dec 08 Dec 10 Dec 23 Dec tified Marke	Buzzer – Two T Buzzer – Two T 'Pip' tone Appro: Back to single's S4525 Marker S4525 Marker <b>er - Bodø Radio fr</b> 15 Nov 15 Nov <b>Signal</b> 13 Nov 14 Nov 14 Nov 15 Nov	one Alternating x every 2.5 seconds tandard' Buzzer tone <b>requency</b> Unidentified Marker on Bodø Radio freq. Unidentified Marker on Bodø Radio freq. Unidentified signal of "time zero beat" type Unidentified signal of "time zero beat" type	Moderate Moderate Moderate Moderate Weak Weak Moderate Moderate	USB USB USB USB USB USB USB USB USB	chpa chpa chpa chpa chpa chpa chpa chpa	MON TUE THU FRI SUN SAT WED WED MON TUE TUE WED
<u>4675</u> <u>6870</u>	2140z 2155z 2217z 0405z 0422z <u>Unident</u> 0529z 1537z <u>Unident</u> 0454z 0512z 1820z 0528z 0513z	06 Dec 07 Dec 08 Dec 10 Dec 23 Dec tified Marks	Buzzer – Two T Buzzer – Two T Pip' tone Appro- Back to single 's S4525 Marker S4525 Marker er - Bodø Radio fi 15 Nov 15 Nov 15 Nov 14 Nov 14 Nov 14 Nov 15 Nov 16 Nov	one Alternating x every 2.5 seconds tandard' Buzzer tone <b>requency</b> Unidentified Marker on Bodø Radio freq. Unidentified Marker on Bodø Radio freq. Unidentified signal of "time zero beat" type Unidentified signal of "time zero beat" type	Moderate Moderate Moderate Weak Weak Moderate Moderate Good	USB USB USB USB USB USB USB USB USB USB	chpa chpa chpa chpa chpa chpa chpa chpa	MON TUE THU FRI SUN SAT WED WED WED TUE WED THU

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

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

## **Voice and other modes:**

## E06 Nov/Dec log 2023

<b>Monday</b> 13/11	(repeats Tuesday) '537' 910 45 89377etc (via B	<b>0210z</b> KiwiSDR J)	<b>10673kHz</b> Thanks HfD	0310z	14398Hz	(frequencies may vary slightly)
05/12	'537' 291 48 59019etc (via K	<b>0210z</b> iwiSDR J) Thanks Hf	<b>9382Hz</b> D	0310z	13426khz	
<b>Thursday</b> 02/11	(repeats Friday) '361' 482 39 110032etc	<b>0300z</b> Thanks HfD	16168kHz	0400z	13863kHz	(frequencies may vary slightly)
01/12	'361' 209 43 04749etc	0300z (via KiwiSDR RUS)	<b>14654kHz</b> Thanks HfD	0400z	12177kHz	

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

 02/11
 '507' 384 61 28753
 34393 94759 08341
 83138 96558 67998 34529 76956 78496
 60986 11183 94851 21482 45312 89072 11995 77609 37672 07810

 82086
 68575 87536 94709 16474 00028 42649
 61020 09078 04916 59542 23260 86796 14292 51256 10581 90092 78980 89464 44109

 13441
 90566 03167 99194 60325 75142 41162 86510 92480 58245 90475 12931 78049 24414 67927 08142 68361 19826 27039 27902

 58011
 384 61 00000

- 16/11 '507' 149 62 60504 08630 53830 37412 41682 12105 21145 33745 72416 62623 15307 99008 04123 13630 60344 12412 03128 23194 53813 72738 93409 36478 22866 97468 45925 01111 44877 44638 81702 51408 12305 55909 80894 22384 46478 44253 14971 79476 89999 74705 44252 74942 32446 11631 47954 66843 49059 30920 78939 61568 57110 20569 60373 65829 19633 18079 66450 59069 51198 58101 54394 22215 149 62 00000
- 0600z
   14575kHz
   0700z
   17420kHz

   07/12
   '923' 641 50 82144 71663 73418 83694 20957 54092 64813 23926 73523 49135 77525 57305 01113 48644 73430 81251 06154 16316 03693 90054 27356 56992 24054 95003 59132 07556 18012 84075 68778 16579 63859 00858 09852 04943 06502 47397 55168 24593 20005 40668 97871 57633 71790 77334 94006 22934 24444 86500 45031 82445 641 50 000000
- 21/12 '923' 876 51 14816 35088 64005 68237 42918 17157 46493 39484 38944 48520 81643 17749 97013 43601 35693 56100 03810 25337 45949 29243 48651 94307 60219 75694 96563 12818 50934 37184 29015 27349 21180 57521 82024 77828 44794 51878 36313 67160 07751 82419 39201 89437 42987 01215 62924 40286 75885 46374 29067 57783 22579 876 51 00000

 Saturday
 1600z
 7377kHz
 1630z
 5410khz

 30/12
 '480' 536 48 35416 32312 89121 46857 71874 43148
 04736 41475 34673 65459
 54934 42971 67472 24930 82528 64826 59749 89450 27975 68565

 25725 79459 97313 50575 13514 19389
 38292 73540 43891 43456 91696 45097 46261 50235 32685 57587 30954 94901 89490 08109

 16526 16585 93275 92702 53826 13191
 19151 17029 536 48 00000

 Sunday
 0730z
 9946kHz
 0800z
 8095khz

 31/12
 '480' 536 48 35416 32312 89121 46857 71874 43148
 04736 41475 34673 65459 54934
 42971 67472 24930 82528 64826 59749 89450 27975 68565

 25725 79459 97313 50575 13514 19389
 38292 73540 43891 43456 91696
 45097 46261 50235 32685 57587 30954 94901 89490 08109

 16526 16585 93275 92702 53826 13191
 19151 17029 536 48 00000
 (With thanks from Ary)

#### And some short analysis from PoSW:

First + Third Thursday in the Month 0600 + 0700 UTC Schedule:-2-Nov-23:- 0600 UTC, 18285 kHz, call "507", DK/GC "384 384 61 61", around S5 to S6. 0700 UTC, 20140 kHz, second sending stronger, S9 with occasional fading, ended after 0714z.

3-Nov-23, Friday, the expected repeats:-0600 UTC, 18285 kHz 0700 UTC, 20140 kHz, similar signal strengths as 24 hours earlier.

16-Nov-23:- 0600 UTC, 18285 kHz, very weak signal of some kind, unreadable, too weak to confirm as E06. 0700 UTC, 20140 kHz, much better, call "507", DK/GC "149 149 62 62", started off around S4 to S5, quickly became stronger, over S9. Ended 0714:40s approx.

17-Nov-23, Friday:- Nothing heard at 0600 UTC on 18285 kHz, very weak signal of some kind on 18295; if that was E06 it was far to weak to confirm.

0700 UTC, 20140 kHz, strong signal.

7-Dec-23:- Nothing readable at 0600 UTC on 14575 kHz, predicted frequency for the first sending in December. 0700 UTC, 17420 kHz, weak signal, could just make out the "923" preamble. Started to become stronger about seven minutes in, ended before 0713 UTC with, "641 641 50 50 00000".

8-Dec-23, Friday:- 0700 UTC, 17420 kHz - again, nothing readable at 0600z - "923" and "641 641 50 50", stronger than yesterday.

21-Dec-23:- A familiar story, nothing readable at 0600 UTC on 14575. 0700 UTC, 17420 kHz, call "923", DK/GC "876 876 51 51", reasonable signal.

22-Dec-23, Friday:- 0700 UTC, 17420 kHz, weaker than yesterday, nothing heard of the first sending.

### <u>E07</u>

#### We start with some excellent analysis from PoSW and then on to others [mainly M8] logs:

#### Saturday Schedule, 1400 UTC Start:-

4-Nov-23:- 1400 UTC, 10323 kHz, "310 310 310 000". 1420 UTC, 9123 kHz, both transmissions strong enough to over-ride the local RF interference which is very strong in this part of the short-wave spectrum.

18-Nov-23:- 1400 UTC, 10323 kHz, very weak, unreadable. 1420 UTC, 9123 kHz, stronger, "310 310 310 000".

25-Nov-23:- 1400 UTC, 10323 kHz and 1420 UTC, 9123 kHz, both strong, "310 310 3000".

2-Dec-23:- 1400 UTC, 9143 kHz, "116 116 116 000", strong enough to be heard over the local noise QRM.

1420 UTC, 8143 kHz, strong.

9-Dec-23:- 1400 UTC, 9143 kHz and 1420 UTC, 8143 kHz, both surprisingly strong, pushing the S-meter well over the "9", "116 116 116 000".

16-Dec-23:- 1400 UTC, 9143 kHz, "116 116 116 000", strong. 1420 UTC, 1420 UTC, 8143 kHz, also strong.

23-Dec-23:- 1400 UTC, 9143 kHz and 1420 UTC, 8143 kHz, both strong enough to be heard above the local interference, "116 116 106 000".

30-Dec-23:- 1400 UTC, 9143 kHz, "116 116 116 000", good signal. 1420 UTC, 8143 kHz, strong. As far as I am aware this schedule has not sent a single message in the whole of 2023 – see also comment below.

Sunday Schedule, 0700 UTC Start:-Always a repeat of whatever has been sent by the previous day's 1400z schedule - which so far this year unless I have missed something has always been a couple of minutes worth of "000 - no message". 5-Nov-23:- 0700 UTC, 10268 kHz, "201 201 201 000", weak. 0720 UTC, 11068 kHz, also weak.

12-Nov-23:- 0700 UTC, 10268 kHz, "201 201 201 000", weak. 0720 UTC, 11068 kHz, very weak.

19-Nov-23:- 0700 UTC, 10268 kHz, nothing heard, probably a very weak signal masked by local RF interference. 0720 UTC, 11068 kHz, "201 201 201 000", just about readable.

26-Nov-23:- 0700 UTC, 10268 kHz, "201 201 201 000", missed second sending.

3-Dec-23:- 0700 UTC, 9326 kHz, "345 345 345 000", strong enough to be heard above the local RF noise interference. 0720 UTC, 10426 kHz, weaker.

10-Dec-23:- 0700 UTC, 9326 kHz strong and 0720 UTC, 10426 kHz, weaker, "345 345 300".

17-Dec-23:- 0700 UTC, 9326 kHz, "345 345 345 000", weak but readable. 10426 kHz, even weaker.

24-Dec-23:- 0700 UTC, 9326 kHz, "345 345 345 000", weak but clear. Nothing readable from the second sending at 0720 UTC.

31-Dec-23:- 0700 UTC, 9326 kHz, "345 345 345 000", strong enough to be heard over the local interference. 0720 UTC, 10426 kHz, weak but readable.

#### Saturday + Thursday Schedule, 1410 UTC Start:-

Signals from this schedule have been very weak in November and December, as was the case in these months last year.

2-Nov-23, Thursday:- 1410 UTC, 11574 kHz, very weak, could just about hear the E07 OM, unreadable.
1430 UTC, 10274 kHz, also unreadable, situation made worse by local RF noise interference.

4-Nov-23, Saturday:- 1410 UTC, 11574 kHz, "327 327 327 000", just readable. 1430 UTC, 10274 kHz, nothing heard.

Nothing readable on any of the other Thursdays or Saturdays when I was near a radio in November.

2-Dec-23, Saturday:- 1410 UTC, 10226 kHz, very weak, local interference, unreadable. 1430 UTC, 9226 kHz, predicted frequency for the second sending, unreadable.

7-Dec-23, Thursday:- Nothing readable at 1410 or 1430 UTC, except that transmission did not end after two-and-a-bit minutes which means a message and therefore a third sending:-1450 UTC, 8126 kHz, "674 674 674 1", DK/GC "6210 73" x 2, reasonable and indeed, readable signal.

9-Dec-23, Saturday:- 1410 UTC, 10226 kHz, very weak, unreadable, became slightly stronger in message-mode around 1414 UTC. 1430 UTC, 9126 kHz, unreadable. 1450 UTC, 8126 kHz, "674" and "6210 73" again,

16-Dec-23, Saturday:- Nothing readable from either the 1410 UTC or 1430 UTC transmissions and no sign of a sending at 1450 UTC which suggests "no message" routine.

23-Dec-23, Saturday:- Nothing heard at 1410 or 1430 UTC, sent a message today which meant there was a third sending which was a reasonable signal:-1450 UTC, 8126 kHz, "674 674 674 1", DK/GC "285 58" x 2, ended at 1457:20s UTC.

30-Dec-23, Saturday:- Nothing readable at 1410 or 1430 UTC and nothing heard at 1450 on 8126 which probably means "no message" format.

#### Tuesday + Friday Schedule, 1500 UTC Start:-

3-Nov-23, Friday:- 1500 UTC, 14737 kHz, "751 751 751 000", strong signal. 1520 UTC, 13537 kHz, interference from a rapidly sweeping carrier on this frequency, always there, CODAR radar? E07 stronger so no problem copying.

7-Nov-23, Tuesday:- 1500 UTC, 14737 kHz, "751 751 751 751 1", DK/GC "7981 95" x 2, strong signal. 1520 UTC, 13537 kHz, also strong. 1540 UTC, 12137 kHz, third sending strong also.

10-Nov-23, Friday:- 1500 UTC, 14737 kHz, "751" and "7981 91" again, strong.

1520 UTC, 13537 kHz, strong.

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

14-Nov-23, Tuesday:- 1500 UTC, 14737 kHz, "751 751 751 000", weaker than usual. 1520 UTC, 13537 kHz, much stronger.

17-Nov-23, Friday:- 1500 UTC, 14737 kHz and 1520 UTC, 13537 kHz, both strong, "751 751 751 000".

21-Nov-23, Tuesday:- 1500 UTC, 14737 kHz, "751 751 751 751 1", message, DK/GC "6643 144", weak signal. 1520 UTC, 13537 kHz, stronger. 1540 UTC, 12137 kHz, wide variations in signal strength.

24-Nov-23, Friday:- 1500 UTC, 14737 kHz, "751" and "6643 144" again, strong signal at first, weaker by the end at 1514:30s UTC. 1520 UTC, 13537 kHz, good signal over-riding the sweeping carrier until approx 1531z when E07 vanished. Came back with the "751..1" routine then back into 5Fs without repeating the DK/GC. Failed transmission has been noted two or three times with this schedule. 1540 UTC, 12137 kHz, signal strength up and down.

28-Nov-23, Tuesday:- 1500 UTC, 14737 kHz, "751 751 751 000", weak. 1520 UTC, 13537 kHz, stronger, with the usual sweeping carrier interference.

1-Dec-23, Friday:- 1500 UTC, 13539 kHz, "512 512 512 000", very strong signal, almost the same frequency as used for the second sending of this schedule in November complete with the sweeping carrier for company, much weaker than E07. 1520 UTC, 12139 kHz, second sending inside 25 metre broadcast band, heterodyne from strong station on 12140.

5-Dec-23, Tuesday:- 1500 UTC, 13539 kHz, "512 512 512 1", message, DK/GC "373 138" x 2, strong signal, swept carrier interference joined by an idling FSK signal on close frequency, both weaker than E07. 1520 UTC, 12139 kHz, good signal, broadcaster on 12140 also strong. 1540 UTC, 10239 kHz, nothing readable on predicted frequency for the third sending, local RF noise interference very strong, E07 underneath, no doubt.

8-Dec-23, Friday:- 1500 UTC, 13539 kHz, "512" and "373 138" again, good signal apart from swept carrier and the idling FSK is still there. 1520 UTC, 12139 kHz, weaker, the broadcast station on 12140 strong. Nothing readable at 1540z on 10239.

12-Dec-23, Tuesday:- 1500 UTC, 13539 kHz, "512 512 512 000", strong, swept carrier as usual and the idling FSK which appears to have taken up permanent residence here.

1520 UTC, 12139 kHz, weaker with the usual interference from the broadcaster on 12140.

15-Dec-23, Friday:- 1500 UTC, 13539 kHz and 1520 UTC, 12139 kHz, both with their forms of interference as above, "512 512 512 000".

19-Dec-23, Tuesday:- 1500 UTC, 13539 kHz, "512 512 512 1", message, DK/GC "204 66" x 2, with the usual two varieties of interference. 1520 UTC, 12139 kHz, with the broadcaster on the HF side for company. Nothing readable from the third sending on 10239.

22-Dec-23, Friday:- 1500 UTC, 13539 kHz, "512" and "204 66" again, with interference as above. 1520 UTC, 12139 kHz, with the broadcast station going strong, heterodyne from the carrier strong, the audio not so much. As usual, nothing readable from the 1540 UTC sending.

#### Others Logs [Usually M8]

Sunday

November 2023

0700z	10268kHz	0720z	11068kHz	0740z	12168kHz
05/11	MISSED				
12/11	201 000				Fair, 0700z QRM2
19/11	201 000				Weak
26/11	201 000				0700z Fair, 0720z Weak

#### December 2023

0700z	9326kHz		0720z	10426kHz	0740z	11526kHz	
03/12		345 000					0700z Weak, 0720z Fair
10/12		345 000					Fair
17/12		345 000					0700z Weak, 0720z Fair
24/12		NOT MON	NITORED				
31/12		345 000					Fair

#### Tuesday/Friday

#### November 2023

1500z	14737kHz	1520z	13537kHz	1540z	12137kHz	1
03/11	751 0	00				1500z Fair, 1520z Weak
07/11	751 1	7981 95 92305	5 04074 000 000			1520z Fair, rest Weak
751 1 7981 9 92305 48839 07960 55776 52677 05782 37124 37239 72737 77776 97837 86773 54674 12880 73171 85363 87965 07217 36247 95513	95 95 36362 62117 69008 455 6 60725 36746 15690 725 6 64697 73745 77774 277 8 6176 85876 75605 347 9 27574 76794 62397 655 9 7764 67155 97478 775 8 85355 24044 45077 867 0 1725 94687 90929 126 4 47257 80333 54768 018 6 66490 29776 04074 000	577 91468 57432 844 577 91468 57432 844 5775 62355 02797 87 700 66702 77558 36 567 42582 65747 47; 884 01875 88834 65 727 04605 77626 67 585 48428 46912 06 70 25084 40134 70: 0 000 Count Courtes	873 57771 470 98480 753 34545 247 24287 5687 5782 687 57844 747 17762 490 63208 534 41010 sy <i>Gary</i>			
10/11	751 1	7981 95 92305	5 04074 000 000			Fair
14/11	751 0	00				Weak
17/11	751 0	00				Weak
21/11	751 1	6643 144 2344	7 78167 000 000			Weak, 1520z QRM

#### December 2023

1500z	13539kHz	1520z	12139kHz	1540z	10239kHz	1	
01/12	512 0	00				Fair, 1520z I	HETQRM2
05/12	512 1	373 138 51302	2 51295 000 000			1540z Fair, 1	rest Weak
08/12	512 1	373 138 51302	2 51295 000 000			1540z Fair, 1	rest Weak
12/12	512 0	00				Weak 1500z	QRM
15/12	512 0	00				Fair. A	tt PLdn, Fair: 1500z TTYQRM2, 1520z HETQRM2 [1062Hz]
19/12	512 1	204 66 22978	82084 000 000			1520z Strong	g, rest Weak
22/12	512 1	204 66 22978	82084 000 000			Fair, 1500z 7	TTYQRM3, 1520z BCQRM3
26/12	512 1	204 66 22978	82084 000 000			Weak, 1500,	, 1520z QRM
29/12	512 0	00				Weak, 1500,	, 1520z QRM

#### Thursday/Saturday

#### November 2023

1410z	11574kHz	1430z	10274kHz	1450z	9274kHz	
09/11	327	7 1 5055 69 79613	30974 000 000			Weak, 1450z Under b/c stn
11/11	327	7 1 5055 69 79613	to 30974 000 000			Weak, 1410z QRM
15/11	327	7 000				Weak
18/11	327	7 000				Weak, 1410z QRM2
23/11	327	7 1 5948 91 55059	20392 000 000			Weak, 1450z S9 QRM
25/11	327	7 1 5948 91 55059	20392 000 000			Weak, 1450z S9 QRM
30/11	327	7 000				1410z Fair, 1430z Weak

#### December 2023

1410z	10226kHz		1430z	9226kHz	1450z	8126kHz	
02/12		674 000					Weak
07/12		674 1 6210	73 51886	10307 000 000			Weak
14/12		674 000					Weak

16/12	674 000	Weak
21/12	674 1 285 58 35181 22135 000 000	Weak
30/12	674 000	Weak

#### Saturday

#### November 2023

1400z	10323kHz	1420z	9123kHz	1440z	8023kHz	
11/11	310 000					1400z Strong, 1420z Weak
18/11	310 000					1400z Fair, 1420z Weak
25/11	310 000					Strong

#### December 2023

1400z	9143kHz	1420z	8143kHz	1440z	7643kHz	
02/12	116 000					1400z Weak, 1420z Fair
16/12	116 000					1400z Weak, 1420z Fair
30/12	116 000					Strong

## E11 & E11a log Nov/Dec 2023

4505kHz       1910z       01/11 [395/00] Out 1913z S5       Malc, HfD         1910z       04/11 [399/00] Out 1913z S9       Malc         1910z       08/11 [395/00] Out 1913z S9       Malc         1910z       11/11 [395/00] Out 1913z S9       Malc         1910z       11/11 [395/00] Out 1913z S9       Malc         1910z       15/11 [392/31 7593890498] Out 1919z S9       Malc         1910z       25/11 [395/00] Out 1913z S9       Malc         1910z       25/11 [395/00] Out 1913z S9       Malc         1910z       29/11 [391/00] Out 1913z S9       Malc	WED SAT WED SAT WED SAT WED SAT WED SAT
1910z       04/11 [399/00] Out 1913z S9       Malc         1910z       08/11 [395/00] Out 1913z S9       Malc         1910z       11/11 [395/00] Out 1913z S9       Malc         1910z       11/11 [392/31 7593890498] Out 1919z S9       Malc         1910z       25/11 [395/00] Out 1913z S9       Malc         1910z       25/11 [395/00] Out 1913z S9       Malc         1910z       25/11 [395/00] Out 1913z S9       Malc         1910z       29/11 [391/00] Out 1913z S9       Malc	SAT WED SAT WED SAT WED SAT WED SAT
1910z       08/11 [395/00] Out 1913z S9       Malc         1910z       11/11 [395/00] Out 1913z S9       Malc         1910z       15/11 [392/31 7593890498] Out 1919z S9       Malc         1910z       25/11 [395/00] Out 1913z S9       Malc         1910z       25/11 [395/00] Out 1913z S9       Malc         1910z       29/11 [391/00] Out 1913z S9       Malc	WED SAT WED SAT WED SAT WED SAT
1910z       11/11 [395/00] Out 1913z S9       Malc         1910z       15/11 [392/31 7593890498] Out 1919z S9       Malc         1910z       25/11 [395/00] Out 1913z S9       Malc         1910z       29/11 [391/00] Out 1913z S9       Malc	SAT WED SAT WED SAT WED SAT
1910z       15/11 [392/31 7593890498] Out 1919z S9       Malc         1910z       25/11 [395/00] Out 1913z S9       Malc         1910z       29/11 [391/00] Out 1913z S9       Malc	WEE SAT WED SAT WED SAT
1910z         25/11 [395/00] Out 1913z S9         Malc           1910z         29/11 [391/00] Out 1913z S9         Malc	SAT WED SAT WED SAT
1910z 29/11 [391/00] Out 1913z S9 Malc	WED SAT WED SAT
17102 2711 [571705] Out 17152 57	SAT WED SAT
1910z 02/12 [396/00] Out 1913z S7 Male	WED
1910z 13/12 [395/00] Out 1913z S9 Male	SAT
1910z 16/12 [302/00] Out 1913z S9 Male	
19102 10112 [304/00] Out 19132 S7 Male	WED
19102 2012 [39700] 30119257 [300] 191257 [300] Mate	WED
1)102 2/112 [570/51/00+05	WED
4909kHz 1300z 02/11 [310/00] Out 1303z S5 (Dutch SDR) Malc, HfD	THU
1530z 04/11 [368/00] Out 1533z S4 Malc, Gary	H, HfD SAT
1300z 06/11 [316/00] Out 1303z S2 (Dutch SDR) Malc	MON
1300z 09/11 [315/00] Out 1303z S2 (Dutch SDR) Malc	THU
1530z 11/11 [360/33 10371 98548 06874 36518 66428 92656 6581934578 49171] Out 1540z S4 Gary H, Ma	le SAT
1300z 13/11 [310/00] Out 1303z S9 (Finnish SDR) Malc	MON
1300z 16/11 [314/00] Out 1303z S2 (Dutch SDR) Malc	THU
1530z 18/11 [368/00] Out 1533z S3 Male, Gary	H SAT
1530z 19/11 [364/00] Out 1533z S3 Male	SUN
1300z 20/11 [316/00] Out 1303z S2 (Dutch SDR) Malc	MON
1530z 25/11 [365/00] Out 1533z S9 Male, Gary	H SAT
1530z 26/11 [363/00] Out 1533z S5 Malc	SUN
1300z 27/11 [311/36 52882 40559] Out 1310z S6 (Finnish SDR) Malc	MON
15302 02/12 [369/00] Out 1533z S3	SAT
13007 07/12 [316/00] Out 1303z S5 (Finnish SDR) Malc	THU
15302 10/12 [563/40 34300 97728] Out 15412 S4 Malc	SUN
15307 16/12 [366/00] Out 15332 S6	SAT
13007 18/12 [319/00] Out 13032 S2 (Dutch SDR) Male	MON
15302 30/12 [350/00] Out 15332 S7 Male	SAT
15302 31/12 [360/00] Out [5332 S5	SUN
15502 51/12 [500/00] Out 15552 55	501
5082kHz         1715z         01/11 [976/00] Out 1718z S2 + QRM         Malc, HfD	WED
2000z 02/11 [528/39 6767620345] Out 2011z S5 Malc, HfD	THU
1715z 08/11 [970/31 14086 39045 01675 66244 94845 69227 5933509960 50603] Out 1724z S7 Malc, dMHz	z WED
2000z 12/11 [521/00] Out 2003z S4 Malc	SUN
1715z 15/11 [970/00] Out 1718z S5 Malc	WED
1715z 17/11 [976/00] Out 1718z S3 Malc	FRI
2000z 19/11 [522/00] Out 2003z S6 Male	SUN
2000z 26/11 [520/00] Out 2003z S3 Malc	SUN
1715z 29/11 [977/00] Out 1718z S7 Malc	WED
2000z 30/11 [525/00] Out 2003z S5 Male	THU
2000z 07/12 [520/00] Out 2003z S9 Male	THU
1715z 08/12 [975/00] Out 1718z S4 Male, dMH:	z FRI
2000z 10/12 [520/00] Out 2003z S3 Male	SUN
1715z 13/12 [975/00] Out 1718z S5 Male	WED
1715z 15/12 [975/00] Out 1718z S5 Male	FRI

	2000z	17/12 [527/00] Out 1003z S3	Malc	SUN
	1715z	20/12 [978/34 5069195308] Out 1725z S8	Malc	WED
	2000z	21/12 [527/00] Out 2003z S3	Malc	THU
	1715z	27/12 [970/00] Out 1718z S5	Malc	WED
	2000z	31/12 [525/33 5230494930] Out 2010z S6	Malc	SUN
5251111	0700	0.4/11 5405/001 0 + 0702 - 02		G 4 T
53/1kHz	0/00z	04/11 [495/00] Out 0/03z 83	Male, HfD	SAI
	0700z	11/11 [490/32 19108	Male	SAI
	0700Z	19/11 [490/00] Out 0/032 S2	Malc	SUN
	0700z	26/11 [490/00] Good 02/12 [400/00] Out 0702 = 84	KNGB Mala	SUN
	0700Z	02/12 [490/00] Out 07052 S4	wate	SAT
5409kHz	1530z	02/11 [264/00] Out 1533z S3	Male, HfD	THU
U TOYILL	1530z	09/11 [264/00] Out 1533z S6	Malc	THU
	1530z	16/11 [261/31 74989	Malc	THU
	1530z	30/11 [266/00] Out 1533z S5	Malc	THU
	1530z	07/12 [264/00] Out 1533z S9	Malc	THU
	1530z	14/12 [260/00]	Gary H	THU
	1530z	21/12 [269/34 9492118661] Out 1540z S7	Malc	THU
5432kHz	1605z	05/11 [233/00]	HfD	SUN
	1605z	07/11 [236/00] Out 1608z S7	Malc	TUE
	1605z	12/11 [237/00] Out 1608z S4	Male, Brixmis	SUN
	1605z	14/11 [232/38 41958 83639 16198 94432 37866 31575 1556264792 51552] Out 1616z S7	Brixmis, Malc	TUE
	1605z	26/11 [232/00] Out 1608z S7	Malc	SUN
	1605z	28/11 [23//00]	Gary H	TUE
	1605z	10/12 [238/00] Out 1608z S4	Malc	SUN
	1605z	12/12 [255/00] Out 1608z S7	Malc	TUE
	1605z	1//12 [252/00] Out 1608z S5	Malc	SUN
	1605z	19/12 [230/35 334261//14] Out 1610z S/	Malc	TUE
	1605z	20/12 [255/00] 21/12 [222/00] Oct 1 (09= 55	Gary H	TUE
	1605z	31/12 [232/00] Out 1608z S5	Maic	SUN
5770kHz	17307	02/11 [418/00] Out 1733z \$3	Male HfD	THU
JIIJKIIZ	1730z	09/11 [415/00] Out 1733z S6	Male	THU
	1730z	30/11 [414/00] Out 1733z S3	Male	THU
	1730z	07/12 [414/00] Out 1733z S3+ORM	Malc	THU
	1730z	21/12 [415/30 59282	Malc	THU
	1730z	28/12 [410/00] Fair	dMHz	THU
6804Hz	0700z	03/11 [573/00] Good	RNGB, Malc, HfD	FRI
	0700z	07/11 [574/35 55609 55675 82124 58915 69518 60385 7662101740 80009] Out 0710 S3	RNGB, Malc	TUE
	0700z	14/11 [574/00] Out 0703z S3	Malc	TUE
	0700z	17/11 [570/00] Out 0703z S6	Malc	FRI
	0700z	28/11 [579/00] Good	RNGB, Malc	TUE
	0700z	08/12 [577/00] Out 0703z S3	Malc	FRI
	0700z	12/12 [571/00] Out 0703z S4	Malc	TUE
	0700z	15/12 [576/00] Out 0703z S3	Malc	FRI
	0700z	19/12 [579/00] Out 0703z S3	Malc	TUE
68401-Uz	1000-7	$02/11$ [646/00] Out 1002 $\times$ 55	Mala HfD	TUII
0049K11Z	19002	02/11 [040/00] Out 19032 35	HfD	FRI
	19007	06/11 [644/00] Out 1903z S2	Male	MON
	1900z	09/11 [644/00] Out 1903z S6	Male	THU
	1815z	10/11 [925/33 27310	Malc	FRI
	1900z	13/11 [649/36 86082	Malc	MON
	1815z	17/11 [927/00] Out 1818z S2	Malc	FRI
	1815z	19/11 [916/00] Out 1818z S5	Malc	SUN
	1900z	20/11 [647/00] Out 1903z S6	Malc	MON
	1815z	26/11 [924/00] Out 1818z S6	Malc	SUN
	1900z	27/11 [640/00] Out 1903z S6	Malc	MON
	1910z	30/11 [640/00] Out 1913z S5	Malc	THU
	1900z	04/12 [641/00] Out 1903z S5	Malc	MON
	1900z	07/12 [649/00] Out 1903z S5	Malc	THU
	1815z	08/12 [927/38 8255571724] Out 1826z S3 (Dutch SDR)	Malc	FRI
	1815z	17/12 [926/00] Out 1818z S3	Malc	SUN
	1815z	15/12 [926/00] Out 1818z S6	Malc	FRI
	1900z	18/12 [643/39 0761119532] Out 1911z S4	Malc	MON
	1815z	31/12 [925/00] Out 1818z S5	Malc	SUN
60061-11-	0820-	02/11 [425/00] Cood	DNCD HED	TILL
0980KHZ	08202	02/11 [455/00] Good 03/11 [436/00] Epir	RNGB, HID	FPI
	08202	10/11 [435/38 32156 = 0.62151  Out 0.8217  S2	Male	L KI EDI
	08202	16/11 [434/00] Fair	RNGR Male	Г.К. ТЦІ Т
	08202	17/11 [432/00] 1 all	Male	FDI
	08202	30/11 [436/00] Good	RNGB Male	THI
	08202	07/12 [438/00] Out 0823z S4	Malc	
	08202	08/12 [439/00] Out 0820z 53	Malc	FRI
	08202	15/12 [430/32 38694	Malc	FRI
	08207	21/12 [435/00] Out 0823z S2	Malc	THI
	0820z	22/12 [436/00] Out 0823z S3	Malc, RNGB	FRI
	0820z	28/12 [434/00] Good	RNGB	THU
	0820z	29/12 [434/00] S4	Brixmis	FRI

7469kHz	0930z	01/11 [278/36 75936 80325 86436 42856 29350 45330 3031912870 99663] Good	RNGB, Malc, HfD	WED
	0930z	08/11 [275/00] Out 0933z S3	Malc	WED
	0930Z	09/11 [272/00] Out 09332 S2 15/11 [272/00] Out 09332 S4	Male	THU
	09302	22/11 [271/00] Good	RNGB	WED
	0930z	29/11 [277/00] Out 0933z S2	Malc	WED
	0930z	30/11 [273/00] Out 0933z S3	Malc	THU
	0930z	07/12 [277/00] Out 0933z S2	Malc	THU
	0930z	13/12 [279/00] Out 0933z S3	Malc	WED
	0930z	21/12 [277/00] Out 0933z S2	Malc	THU
	0930z	27/12 [275/32 59371 80571 25871 46200 71217 27401 8308800546] Out 0940z S2	RNGB, Malc	WED
7840kHz	0645z	02/11 [512/00]	HfD	THU
7850kHz	0600z	03/11 [352/00]	HfD	FRI
9079kHz	1000z	03/11 [305/00] Good	RNGB, Malc, HfD	FRI
	1000z	07/11 [300/30 48681	Malc	TUE
	1000z	14/11 [309/00] Out 1003z S4 17/11 [302/00] Out 1003z S5	Malc Mala	TUE
	1000z	1//11[302/00] Out 10032 85 21/11[302/00] Good	PNGP	
	1000z	28/11 [304/00] Out 1003z S3	Malc	TUE
	1000z	08/12 [305/21 77824	Malc	FRI
	1000z	12/12 [304/00] Out 1003z S3	Malc	TUE
	1000z	15/12 [306/00] Out 1003z S3	Malc	FRI
	000z	19/12 [302/00] Out 1003z S3	Malc	TUE
	1000z	22/12 [306/00] Out 1003z S3	Malc	FRI
9130khz	0715z	03/11 [639/00] Good	RNGB, Malc, HfD	FRI
	0715z	07/11 [636/00] Out 0718z S4	Malc	TUE
	0715z	10/11 [630/00] Good	RNGB	FRI
	0/15z 0715z	1//11 [639/38 32225/8024] Out 0/26z 8/	Malc	
	0715Z	28/11 [631/00] Good	RNGB Male	TUE
	0715z	01/12 [637/00] Good	RNGB	FRI
	0715z	08/12 [634/00] Out 0718z S4	Malc	FRI
	0715z	12/12 [635/00] Out 0718z S3	Malc	TUE
	0715z	15/12 [635/00] Out 0718z S4	Malc	FRI
	0715z	22/12 [630/34 3668960442] Out 0725z S5	Malc	FRI
10213kHz	z 0745z	06/11 [269/00] Out 0748z S7	Malc, HfD	MON
	0745z	13/11 [261/31 74989 87098 22431 29326 14676 66123 92378 2324129726 87530] Good	RNGB	MON
	0745z	20/11 [268/00] Out 0/48z S5 27/11 [266/00] Out 0748z S5	Malc Mala	MON
	0745z	27/11 [200/00] Out 07482 S8 04/12 [269/00] Out 07482 S7	Malc	MON
	0745z	18/12 [269/34 94921	Male	MON
10487kH	z 1910z	03/11 [618/00] Out 1913z S6	Malc	FRI
1010/111	1910z	10/11 [618/00] Out 1913z S4 (Finnish SDR)	Malc	FRI
	1910z	12/11 [617/00] Out 1913z S5	Brixmis, Malc	SUN
	1910z	19/11 [617/31 5312557297] Out 1919z S2 (Finnish SDR)	Malc	SUN
	1910z	26/11 [614/00] Out 1913z S5 (Dutch SDR)	Malc	SUN
	1910z	08/12 [613/00] Out 1913z S3 (Finnish SDR)	Malc	FRI
	1910z	10/12 [611/00] Out 1913z S2 15/12 [(10/00] Out 1012= S2 (Final the SDB)	Malc	SUN
	1910Z	15/12 [010/00] Out 19132 S5 (Finnish SDR) 17/12 [617/00] Out 19132 S2 (Finnish SDR)	Male	FKI
	1910z	31/12 [618/35 54177	Male	SUN
110021-6-	0000-	01/11 [528/00] Out 0002= 55	Mala HfD	WED
11092KNZ	0900Z	06/11 [534/00] Out 09052 55	RNGB. Male	WED MON
	0900z	08/11 [536/00] Out 0903z S6	Malc	WED
	0900z	13/11 [533/32 48789 14320 10124 85539 34260 12734 0887161737 20974]	RNGB, Malc	MON
	0900z	20/11 [535/00] Out 0903z S6	Malc	MON
	0900z	22/11 [536/00] Good	RNGB	WED
	0900z	27/11 [536/00] Out 0903z S5	Malc	MON
	0900z	29/11 [532/00] Good	RNGB M-1-	WED
	0900Z	13/12 [536/00] Out 09032 S5	Malc	WED
	0900z	18/12 [538/37 17325	Malc	MON
	0900z	27/12 [538/00] Out 0903z S3	Malc	WED
11100kHz	z 1045z	01/11 [697/00] Out 1048z S3	Malc	WED
	1045z	06/11 [690/00] Out 1048z S3	Malc, HfD	MON
	1045z	08/11 [694/00] Out 1048z S5	Malc	WED
	1045z	13/11 [697/00] Out 1048z S4	Malc	MON
	1145z	20/11 [696/38 34078 27047 17822 58991 26282 85467 1502076361 92302] Out 1056z S5	RNGB, Malc	MON
	1045z	2//11 [692/00] Out 10482 54 20/11 [692/00] Fair with OPM	Maic	MON
	1045z	04/12 [694/00] Part with QKW	Male	WED MON
	1045z	13/12 [691/00] Out 1048z S5	Malc	WED
	1045z	18/12 [693/00] Out 1048z S4	Malc	MON
	1045z	20/12 [693/00] Out 1048z S4	Malc	WED
	1045z	27/12 [690/33 99121 00493 44490 59263 64333 54063 7665826653 51137] Out 1055z S3	dMHz, Malc	WED

11104kHz 0715z	06/11 [757/00] Out 0718z S6	Malc, HfD	MON
0715z	08/11 [750/00] Good	RNGB, Malc	WED
0715z	13/11 [755/00] Out 0718z S6	Malc	MON
0715z	15/11 [751/00] Good	RNGB, Malc	WED
0715z	20/11 [753/00] Out 0718z S4	Malc	MON
0715z	27/11 [750/36 9574314311] Out 0725z S5+QRM	Malc	MON
0715z	04/12 [750/38 4441486721] Out 0725z S5	Malc	MON
0715z	13/12 [752/00] Out 0718z S5	Malc	WED
0715z	18/12 [750/00] Out 0718z S5	Malc	MON
0715z	20/12 [752/00] Out 0718z S6	Malc	WED
0715z	27/12 [757/00] Out 0718z S4	Malc	WED
11559kHz 1205z	01/11 [465/00]	HfD	WED
1205z	07/11 [462/00] Out 1208z S5	Malc	TUE
1205z	14/11 [469/00] Out 1208z S4	Malc	TUE
1205z	15/11 [465/00] Out 1208z S4	Malc	WED
1205z	29/11 [466/32 6328406414] Out 1215z S3+QRM	Malc	WED
1205z	12/12 [464/00] Out 1208z S4	Malc	TUE
1205z	13/12 [464/00] Out 1208z S5 27/12 [465/00] Out 1208z S6	Malc Malc	WED WED
12032	2/12 [400/00] Out 12002 00	Male	11 ED
12067kHz 0845z	01/11 [714/00] Good	RNGB, Malc, HfD	WED
0845z	06/11 [719/00] Weak	RNGB, Malc	MON
0845z	13/11 [714/00] Strong	RNGB	MON
0845z	20/11 [715/33 68837 82948 22924 01096 03982 35345 6176419353 17132] Out 0854z S4	RNGB, Malc	MON
0845z	27/11 [716/00] Out 0858z S5	Malc	MON
0845z	29/11 [711/00] Out 0848z S4	Malc	WED
0845z	04/12 [719/37 01668 69192 14842 71204 01037 98803 2189062598 03618] Out 0855z	RNGB, Malc	MON
0845z	13/12 [713/00] Out 0848z S5	Malc	WED
0845z	18/12 [718/00] Out 0848z S3	Malc	MON
0845z	20/12 [711/00] Out 0848z S8	Malc	WED
0845z	27/12 [710/00] Good	RNGB, Malc	WED
12153kHz 0505z	02/11 [335/00]	HfD	THU
12924kHz 1745z	05/11 [245/00]	HfD	SUN
1745z	06/11 [245/40 16546 79642] Out 1756z S2 (Dutch SDR)	Malc	MON
1745z	13/11 [245/00] Out 1748z S2	Male Gary H dMHz	MON
17457	19/11 [240/00] Out 1748z S2	Malc	SUN
17452	20/11 [247/00]  Out  1748z  S2 (Dutch SDR)	Male	MON
17457	26/11 [247/00]  Out  17482  S2 (Dutch SDR) 26/11 [247/00]  Out  17482  S3 (Dutch SDR)	Male	SUN
1745z	04/12 [247/00] Out 1748z S2 (Finnish SDR)	Malc	MON
12262111- 1420-	04/11 [019/00] Out 1422- S4	Mala LIFD	SAT
13303KHZ 1430Z	04/11 [918/00] Out 14552 86	Male, HID	SAI
1430Z	0//11 [912/32 05834	Malc	TUE
1430z	14/11 [910/00] Out 14332 84	Male	IUE
1430z	18/11 [915/00] Out 1433z S3	Malc	SAT
1430z	25/11 [914/00] Out 1433z S8	Malc	SAT
1430z	28/11 [918/00] Out 1433z S3	Malc	TUE
1430z	02/12 [910/00] Out 1433z S3	Malc	SAT
1430z	12/12 [918/00] Out 1433z S9	Malc	TUE
1430z	19/12 [911/00] Out 1433z S5	Malc	TUE
1430z	30/12 [918/40 4648952432] Out 1441z S9 QSB5	Malc	SAT
13908kHz 0745z	02/11 [229/00] Good	RNGB, Malc, HfD	THU
0745z	07/11 [221/00] Out 0748z S2	Malc	TUE
0745z	09/11 [225/00] Strong	RNGB, Malc	THU
0745z	14/11 [224/00] Out 0748z S5	Malc	TUE
0745z	16/11 [227/00] Good	RNGB, Malc	THU
0745z	23/11 228/33 27995 26158 84036 26790 08162 47904 03977 93367 71671] Good	RNGB	THU
0745z	28/11 [225/00] Out 0748z S4	Malc	TUE
0745z	30/11 228/001 Out 0748z S4	Malc	THU
07457	07/12 [221/32 85318 24724 52402 62345 26487 79511 6906771460 66242] Fair	RNGB	THU
0745z	12/12 [221/00] Out 0748z S7	Malc	TUE
0745z	19/12 [220/00] Out 0748z S6	Malc	TUE
0745z	21/12 [228/00] Fair	RNGB, Malc	THU
146111247 0020-	01/11 [132/00] Good	DNGB Mala LIAD	WED
14011KHZ U82UZ	01/11 [132/00] COOU 07/11 [126/21 56505 80262 22/64 08664 22170 16782 67887 52624 27084] Coord 8220 66	NINOD, Male, HID	WED
0820Z	0//11 [130/31 30393 89302 22404 08004 221/9 16/82 6/88/33034 2/084] Out 0829Z S6	KNUB, Malc	TUE
0820z	14/11 [135/00] GOOD	KNGB, Malc	TUE
0820z	15/11 [151/00] Good	KNGB, Malc	WED
0820z	28/11 [134/00] Out 08232 85	Maic	TUE
0820z	29/11 [131/00] Out 0823z S4	Malc	WED
0820z	05/12 [134/00] Strong	RNGB	TUE
0820z	12/12 [134/38 9931402649] Out 0831z S9 QSB5	Malc	TUE
0820z	19/12 [133/00] Out 0823z S3	Malc	TUE
0820z	20/12 [135/00] Out 0823z S7	Malc	WED
0820z	27/12 [131/00] Out 0823z S5	Malc	WED

17378kHz 0745z	01/11 [347/00] Fair	RNGB, Male, HfD	WED
0745z	02/11 [151/00]	HfD	THU
0745z	03/11 [349/00] Strong	RNGB, Malc	FRI
0745z	07/11 [155/36 84435 62347 81148 96556 53020 43804 2612639607 80140]	RNGB, Malc	TUE
0745z	10/11 [349/33 1958033553] Out 0755z S3	Malc	FRI
0845z	14/11 [159/00] Out 0848z S6	Malc	TUE
0745z	15/11 [343/00] Fair	RNGB, Malc	WED
0745z	17/11 [344/00] Out 0748z S6	Malc	FRI
0845z	28/11 [156/00] Out 0848z S7	Malc	TUE
0745z	29/11 [347/00] Out 0748z S3	Malc	WED
0845z	30/11 [155/00] Out 0848z S7	Malc	THU
0745z	01/12 [340/00] Weak	RNGB	FRI
0845z	07/12 [155/00] Out 0848z S9	Malc	THU
0745z	08/12 [340/00] Out 0748z S2 (Dutch SDR)	Malc	FRI
0845z	12/12 [157/26 3319792066] Out 0854z S9 QSB5	Malc	TUE
0745z	13/12 [349/36 5231808659] Out 0755z S3 (Dutch SDR)	Malc	WED
0845z	19/12 [150/00] Out 0748z S3	Malc	TUE
0745z	20/12 [347/00] Out 0748z S3 (Dutch SDR)	Malc	WED
0845z	21/12 [159/00] Out 0848z S8	Malc	THU
0745z	22/12 [343/00] Out 0748z S2	Malc	FRI
0745z	27/12 [346/00] Out 0748z S5	Malc	WED
0845z	28/12 [150/00] Strong	RNGB	THU
23004kHz 0600z	13/11 [946/00]	HfD	MON
23353kHz 0830z	01/11 [184/00]	HfD	WED
0830z	06/11 [183/00] Good (Polish SDR)	RNGB	MON
0830z	10/11 [185/00] Out 0833z S2	Malc	FRI
0830z	13/11 [183/36 16945 63975 89471 69883 47816 34965 1898884968 08411] Fair with QRM	RNGB	MON
0830z	20/11 [185/00] Weak	RNGB, Malc	MON
0830z	27/11 [183/00] Out 0833z S2	Malc	MON
0830z	04/12 [185/26 27476 89737 47357 81023 33044 51827 9998860724 94565 90410]	RNGB	MON
0830z	18/12 [188/00] Good	RNGB	MON
0830z	22/12 [185/00] Fair	RNGB, Malc	FRI
0830z	29/12 [189/00] Fair	RNGB	FRI

#### PoSW's logs mirror those above

As always, mostly of the "oblique zero zero"..."no message" format lasting around three minutes and ten seconds. 4505 kHz, 1910 UTC:-

1-Nov-23, Wednesday:- "395/00".

8-Nov-23, Wednesday:- "395/00".

11-Nov-23, Saturday:- "395/00".

15-Nov-23, Wednesday:- "392/31", message, very strong signal, "Out" at 1919:30s UTC.

22-Nov-23, Wednesday:- "393/00".

2-Dec-23, Saturday:- "396/00".

9-Dec-23, Saturday:- "390/00".

4909 kHz, 1530 UTC:-

- 20-Dec-23, Wednesday:- "394/00".
- 30-Dec-23, Saturday:- "390/31", message.

12-Nov-23, Sunday:- "360/33, message, not too strong a signal, "Out" shortly before 1540z. 26-Nov-23, Sunday:- "363/00". 10-Dec-23, Sunday:- "363/00". 16-Dec-23, Saturday:- "366/00". 17-Dec-23, Sunday:- "367/00". 23-Dec-23, Saturday:- "365/00". 30-Dec-23, Saturday:- "360/00". 5409 kHz, 1530 UTC:-9-Nov-23, Thursday:- "264/00". 30-Nov-23, Thursday:- "266/00". 7-Dec-23, Thursday:- "264/00". 14-Dec-23, Thursday:- "260/00". 5432 kHz, 1605 UTC:-12-Nov-23, Sunday:- "237/00". 26-Nov-23, Sunday:- "232/00". 3-Dec-23, Sunday:- "238/00". 5-Dec-23, Tuesday:- "238/00". 10-Dec-23, Sunday:- "238/00". 12-Dec-23, Tuesday:- "235/00". 17-Dec-23, Sunday:- "232/00". 6849 kHz, 1900 UTC:-13-Nov-23, Monday:- "649/36", message. 16-Nov-23, Thursday:- "649/36" again.

30-Nov-23, Thursday:- "640/00". 4-Dec-23. Monday:- "641/00". 18-Dec-23, Monday:- "643/39", message. 12067 kHz, 0845 UTC:-1-Nov-23, Wednesday:- "714/00". 15-Nov-23, Wednesday:- "714/00". 20-Nov-23, Monday:- "715/33", message, started off reasonably strong, became much weaker. 22-Nov-23, Wednesday:- "715/33" again. 27-Nov-23, Monday:- "716/00". 29-Nov-23, Monday:- "711/00". 4-Dec-23, Monday:- "719/37", message. 11-Dec-23, Monday:- "718/00". 13-Dec-23, Wednesday:- "713/00". 20-Dec-23, Wednesday:- "711/00". 13363 kHz, 1430 UTC:-14-Nov-23, Tuesday:- "910/00". 18-Nov-23, Saturday:- "915/00". 25-Nov-23, Saturday:- "914/00". 2-Dec-23, Saturday:- "910/00". 9-Dec-23, Saturday:- "919/00". 16-Dec-23, Saturday:- "917/00". 23-Dec-23, Saturday:- "914/00". 30-Dec-23, Saturday:- "918/40", message. 13908 kHz, 0745 UTC:-9-Nov-23, Thursday:- "225/00". 14-Nov-23, Tuesday:- "224/00" 21-Nov-23, Tuesday:- "228/33", message, "Out" at 0754:55s UTC. 28-Nov-23, Tuesday:- "225/00". 30-Nov-23, Thursday:- "228/00". 5-Dec-23, Tuesday:- "221/32", message, "Out" just before 0754:30s UTC. 7-Dec-23, Thursday:- "221/32" again. 12-Dec-23, Tuesday:- "221/00". 19-Dec-23, Tuesday:- "220/00". 14611 kHz, 0820 UTC:-8-Nov-23, Wednesday:- "136/31", message. 14-Nov-23, Tuesday:- "135/00". 21-Nov-23, Tuesday:- "134/00". 22-Nov-23, Wednesday:- "134/00". 28-Nov-23, Tuesday:- "134/00". 29-Nov-23, Wednesday:- "131/00". 5-Dec-23, Tuesday:- "134/00", very strong signal this morning. 6-Dec-23, Wednesday:- "136/00". 12-Dec-23, Tuesday:- "134/38", message, very strong at first then became weaker. 13-Dec-23, Wednesday:- "134/38" again. 19-Dec-23, Tuesday:- "133/00". 20-Dec-23, Wednesday:- "135/00". 17378 kHz, 0745 UTC:-1-Nov-23, Wednesday:- "347/00". 3-Nov-23, Friday:- "349/00". 8-Nov-23, Wednesday:- "349/33", message, "Out" just after 0755 UTC. 17-Nov-23, Friday:- "344/00". 24-Nov-23, Friday:- "346/00". 29-Nov-23, Wednesday:- "347/00". 1-Dec-23, Friday:- "340/00". 6-Dec-23, Wednesday:- "349/00". Nothing readable from this one on Friday the 8th.

13-Dec-23, Wednesday:- Nothing readable at first, emerged from the noise in 5F groups message mode at around 0750 UTC, must be propagation changing.

### S06 log Nov/Dec 2023

Friday 1st & 3rd							
-		200	00z	7812khz	2100	z 5743kHz	
03/11	<b>'637' 00000</b>						

17/11 '637' 902 54 85661 85346 58277 56378 08830 63982 61805 36332 15712 79171 14294 83147 79162 53980 81994 11793 33205 88716 97026 83240 90425 97509 04239 38944 21567 18600 58566 53769 97953 34071 07428 51954 98170 80770 57349 91934 81841 91777 12685 22589 41972 44316 71707 42833 47495 56790 40417 71636 48083 58507 12328 54537 10312 79360 902 54 00000

		1900z	7812kHz	2000z	5743kHz
01/12	·637 <sup>,</sup> 00000				
15/12	·637 <sup>,</sup> 00000				
		1500-2	12207kbz	1600-	01041-11-2
01/11	·287, 460 2 11111 00061	13002	1339/KIIZ	10002	7174KHZ
01/11	'387' 215 40 92635etc	(Thanks HfD)			
		0400z	11616khz	0420z	9322khz
01/11	'480' 159 62 08083etc	(via KiwiSDR	RUS) Thank	cs HfD	
		0830z	10755khz		
22/12	<sup>975</sup> 123 60 23406 20685	54216 26724 84	341 26940 33137 :	58289 20617 68	835 86505 51142 47653 81452 54653 06529 44609 00215 87804 16170
	48078 73103 2	25950 55385 865	507 76504 96791 6	66570 66272 89	343 05191 00175 45354 05217 12554 05392 55551 87190 29601 87755
	5916 pause 91	62 94970 off, 11	l sec silence		
	'975' (R) 05392 55551 871	90 29601 87755	59162 94970 709	50 75798 51075	5 39118 44954 63995 42218 42009 77230 24158 85275 10211 91318
	02474 28642 47	980 94903 4438	0 123 60 00000	(Thanks to Ary	

S06c

14/12 1021z 16129kHz '11213' continued for 4 minutes

#### More logs from PoSW:

First + Third Fridays in the Month Schedule:-

Following the usual practice was expected to show up in November and December on the same frequencies used in the first two months of this year - which proved to be the case:-

(Thanks to Andrew)

3-Nov-23:- 2000 UTC, 7812 kHz, "637 637 637 00000", weak signal.

2100 UTC, 5743 kHz, much stronger.

17-Nov-23:- Having followed this schedule for some time it has followed a routine of sending a message twice in the course of a year, in May and November. The last such transmission was on 19-May of this year when a message of 60 5F groups was sent and it was thought that another message might be be transmitted this evening - which proved to be the case:-

2000 UTC, 7812 kHz, very weak signal, only just detectable with the receiver in USB mode

and the tuning shifted LF to produce a feeble heterodyne note from the carrier - which did not go off after four minutes which suggested "full message" format, confirmed by the second sending:-

2100 UTC, 5743 kHz, much stronger, call "637", DK/GC "902 902 54 54", ended around 2115:20s UTC.

On the rare occasions this schedule sends a message there is a repeat on the following day:-

18-Nov-23, Saturday:- 2000 UTC, 7812 kHz, very weak signal, unreadable. 2100 UTC, 5743 kHz, as 24 hours earlier much stronger.

#### Moved back by one hour in December:-

1-Dec-23:- 1900 UTC, 7812 kHz, "637 637 637 00000", back in the old routine, weak signal, only just readable. 2000 UTC, 5743 kHz, stronger.

15-Dec-23:- Nothing readable at 1900 UTC on 7812 kHz. 2000 UTC, 5743 kHz, "637 637 637 00000", weak.

## **S11a log Nov/Dec 2023**

5371kHz	0830z	04/11 [377/00] Konyetz 0833z S5 (Dutch SDR)	Malc, HfD	SAT
	0830z	12/11 [379/00] Konyetz 0833z S3	Malc	SUN
	0830z	18/11 [378/34 27515 62008 34206 07904 64961 01460 1238941709 13529 04714]	RNGB	SAT
	0830z	25/11 [379/00] Konyetz 0833z S2	Malc	SAT
	0830z	02/12 [372/00] Konyetz 0833z S2	Malc	SAT
	0830z	09/12 [371/00] Konyetz 0833z S2	Malc	SAT
	0830z	16/12 [379/00] Konyetz 0833z S4	Malc	SAT
	0830z	17/12 [377/00] Strong	RNGB, Malc	SUN
	0830z	30/12 [379/37 48735 56331 46880 88188 91853 39371 80982 9562411455 06996] Good	RNGB, Malc	SAT
6252kHz	0915z	03/11 [481/00] Strong	RNGB, Malc, HfD	FRI
	0915z	06/11 [482/00] Fair	RNGB, Malc	MON
	0915z	10/11 [480/00] Konyetz 0918z S2	Malc	FRI
	0915z	13/11 [486/35 45043 14934 85526 56056 31676 35856 4311566428 00071] Good	RNGB	MON
	0915z	20/11 [484/00] Konyetz 0918z S2	Malc	MON
	0915z	27/11 [480/00] Good	RNGB, Malc	MON
	0915z	04/12 [486/00] Out 0918z S3	Malc	MON
	0915z	08/12 [484/00] Konyetz 0918z S3	Malc	FRI
	0915z	15/12 [487/37 3522313849] Konyetz 0918z S2	Malc	FRI
	0915z	18/12 [482/00] Konyetz 0918z S2	Malc	MON
	0915z	22/12 [485/00] Konyetz 0918z S3	Malc	FRI

9050kHz 0700z	02/11 [478/00] Konyetz 0703z S3	Male, HfD	THU
0700z	06/11 [478/00] Konvetz 0703z S5	Malc	MON
0700z	09/11 [472/00] Strong	RNGB. Malc	THU
0700z	13/11 [475/33 30251	Malc	MON
0700z	20/11 [472/00] Konvetz 0703z S5	Malc	MON
0700z	27/11 [476/00] Konvetz 0703z S3	Malc	MON
0700z	30/11 [479/00] Konvetz 0703z S4	Malc	THU
0700z	04/12 [470/00] Out 0703z S4	Malc	MON
0700z	07/12 [472/00] Strong	RNGB	THU
0700z	18/12 [476/00] Konvetz 0703z S5	Malc	MON
0700z	21/12 [472/00] Strong	RNGB	THU
0,002	2.1.2 [.1.2.00] Subig	na (ob	
10448kHz 1400z	03/11 [421/00]	HfD	FRI
1400z	07/11 [425/32 97197;44490] Konyetz 1411z S4	Malc	TUE
1400z	04/11 [424/00] Konyetz 1403z S6	Malc	FRI
1400z	08/12 [426/00] Konyetz 1403z S4	Malc	FRI
1400z	12/12 [424/00] Konyetz 1403z S7	Malc	TUE
1400z	15/12 [429/00] Konyetz 1403z S3	Malc	FRI
1400z	19/12 [421/00] Konyetz 1403z S5	Malc	FRI
1140/111 10/0			WED
11486kHz 1850z	01/11 [281/00] Konyetz 1853z S3	Male, HfD	WED
1850z	04/11 [281/00] Konyetz 1853z S2	Malc	SAT
1850z	08/11 [285/34 8017504920] Konyetz 1901z S2	Malc	WED
1850z	15/11 [288/00] Out 1853z S2 (Finnish SDR)	Malc	WED
1850z	25/11 [288/00] Konyetz 1853z S2 (Dutch SDR)	Malc	SAT
1850z	29/11 [391/00] Konyetz 1853z S2	Malc	WED
1850z	02/12 [288/00] Konyetz 1853z S2 (Finnish SDR)	Malc	SAT
1850z	13/12 [288/00]	Ary	WED
1850z	27/12 [282/00] Konyetz 1853z S2	Malc	WED
1850z	30/12 [288/00] Konyetz 1853z S2 (Dutch SDR)	Malc	SAT
11559kHz 0445z	02/11 [794/00]	HfD	THU
21906kHz 0510z	01/11 [656/00]	HfD	WED
23486kHz 0725z	01/11 [389/00]	HfD	WED
0725z	08/11 [384/00] Eair (Polish SDR)	RNGB Male	WED
0725z	10/11 [381/00] Konvetz 0738z S2 (Dutch SDR)	Malc	FRI
07252	15/11 [383/33 32222 77340 88605 53056 04901 99900 63724 98071 52881] Polish SDR	RNGB	WFD
07252	22/11 [389/00] Fair (Polish SDR)	RNGB	WED
07252	29/11 [381/00] Konvetz 0728z S3 (Finnish SDR)	Malc	WED
07252	01/12 [380/00] Weak	RNGB	FRI
07252	06/12 [489/00] Weak	RNGB	WFD
07252	08/12 [109/00] Konvetz 0728z S2 (Finnish SDR)	Male	FRI
07252	13/12 [380/00]	Ary	WED
07252	15/12 [380/00] Konvetz 0728z S2 (Dutch SDR)	Male	FDI
07252	20/12 [389/40 2009] Convetz 07262 52 (Duch SDR)	Male	WED
07252	27/12 [287/00] K onvetz 0728z S2 (Dutch SDR)	Male	WED
07232	2//12 [20//00] Konyetz 0/202 52 (Duten SDK)	iviale	W ED

## <u>V07</u>

#### Sunday

November 2023

0200z 17431kH	z	0220z	16131kHz	0240z	14431kHz		
17431kHz0200z	05/11	414 1 714	8 123 39346 755	649 000 000	Weak	DanAR	SUN
414 414 414 1 7148 123 39346 11010 44191 19887 68317 44603 24643 03384 18642 71494 03198 84030 51760 69140 10558 73372 40447 63168 28022 06345 74611 91178 04050 33091 09915 32032 57738 52427 36301 02748 17552 84957 22283 11751 21970 67939 49015 06471 41548 37438 17453 06321 72105 77839 74274 3739 166803 66151 06952 45819 36231 63914 92571 59112 93713 93488 81200 58041 84638 28966 37466 69620 41437 37890 67889 57056 07657 68977 40256 79031 52025 16343 55694 13057 56533 96253 09676 85261 77768 94384 43892 15023 08985 11062 31958 97104 18920 42646 85426 86835 75549 000 00 <i>Courtesy</i>	01864 66822 06375 51890 85955 78663 81114 01044 71051 70364 29724 20549 50212 48476 04374 51739 54935 59458 93979 52866 14693 08442 68214 14693 08442 68214 28410 00 DanAR						

17431kHz0200z	12/11	414 1 576	5 109 63426	91482 000 000		Weak		DanAR	SUN
411         414         414           576         109           63426         49432         79142         6164           29455         6056         57625         8007           89100         21937         44214         9990           66798         51016         11623         7265           67796         78171         7388         6108           21407         22837         42781         8100           25169         67491         77805         3863           9179         33898         9187         89689         00311           89689         00311         18709         5338         9109         5333           91793         56067         11231         0023         6142         22083         26128         6551           30881         02111         69283         3801         8009         83697         03519         2632           36895         35324         77851         3460         02063         45070         31881         9731           37448         5568         69741         6486         38963         09910         12375         6572           72762         51	3 28756 1 65968 9 83120 4 32787 2 69853 9 79850 8 71675 0 57201 3 75808 4 18513 2 93896 2 18765 1 97922 2 55321 7 32422 9 72934 3 76584 6 21954 9 69247 0 40672 0 72792 2 <i>DanAR</i>								
17431kHz0200z	26/11	414 1 714	8 123 39346	. 75549 000 000	[Rpts 05/11]	Weak	DanAR	SUN	
December 2023	~	0000	1.50.401.11	02.40	1 45 401 11				
0200z 18249ki	Hz	0220z	15949kHz	0240z	14549kHz	Z			
295 295 295 1           675 89           36695 70398 61094 3266           96075 73402 04510 7070           68897 92412 68542 0343           52250 21802 03149 5854           16077 70100 31945 7396           71170 03587 09530 7800           6141 96138 11488 0148           35474 74514 45809 1513           22060 57896 51095 6158           82179 28970 64412 1388           42187 46120 64228 0229           89030 61370 02661 3943           99438 69398 30468 0169           51758 36788 13873 3987           26826 13928 09162 4054           06026 98256 63053 1437           74669 04584 81553 54816           21644 36360 95436 7046           000 000         Courtesy	2 30934 01500 1 91432 4 57827 7 48826 4 83465 0 52723 9 77456 9 70457 8 1000 8 1000 9 10000 9 10000 9 10000 9 10000000000	295101.	, 69 J0093 7			w cak	DallAK	3014	
18249kHz 0200z	10/12	295 1 645	57 116 81863	. 16020 000 000	1	Weak	DanAR	SUN	
295 295 295 295 1 6457 116 81863 58545 18766 0562 27197 00660 59784 7298 99205 83930 26000 2605 49217 54511 49741 3894 81979 93967 92175 7899 03214 29541 49657 0155 70641 14691 11926 1214 85857 41462 56677 6281 46338 00034 81016 3933 05729 00062 35799 1301 85002 04469 21718 9430 51902 03817 39255 9860 512192 48406 55987 2643 74743 70485 12926 8614 85854 91254 61395 1943 74743 70485 12926 8614 85854 91254 61395 1943 25304 10068 89180 2668 97814 85683 88434 7948 38071 74412 80370 3813 6541 35717 90438 5694	0 52016 1 25220 2 68054 9 75907 9 36883 2 09408 7 44535 2 62722 5 71466 2 90029 5 63267 8 87398 3 50839 5 54424 2 02330 0 59519 6 36650 4 88777 7 18282 5 31358 8 61883 9 88449 8 864430 DanAR								
15949kHz 0220z	17/10	295 1 400	) 74 64261 5	2288 000 000		Weak	DanAR	SUN	
295 295 295 1 400 74 64261 37416 11342 2532 02950 64402 73507 8448 32224 59990 75722 9380 63018 71291 93395 5537 38017 77407 88396 3257 80222 70619 17260 7858 82023 15096 88710 6460 92359 77313 5455 16593	8 48083 6 01710 6 21884 3 47389 6 55896 0 30791 7 80335 5391								

03994 84211 72971 22499 8116 49032 46669 84215 31308 1190 82224 17149 34469 07175 0663 82527 65865 32475 25626 8879 80242 73550 67856 55012 4490 44717 23714 24321 07319 5812 58022 65791 24374 52288 000 000 Courtesy DanAR	51 07 31 09 04 27				
18249kHz 0200z 24	4/12	295 1 7854 61 68753 15762 000 000	Weak	DanAR	SUN
295 295 295 1 7854 61 68753 94014 45780 87882 6792 28033 54435 59239 16095 6417 46099 04374 76688 06747 0332 73446 47370 56562 23320 6517 05465 8420 11814 29395 7879 76050 47621 12407 55729 7023 71782 56110 29651 85112 9648 06556 22311 49816 64695 6878 52323 92379 79135 79675 9685 79512 77860 64428 97397 4395 05839 50506 56719 02229 4273 61911 95317 40293 78778 3663 15762 000 000 Courtesy DanAR	28 71 20 72 30 30 32 38 38 58 58 58 58 58 58 58 58 58 58 58 58 58				
18249kHz 02:00z 3	1/12	295 1 633 112 75846 95316 000 000	Weak	DanAR	SUN
295 295 295 1 633 112 75846 68792 30515 13941 0397 50406 36543 67116 13544 0376 54485 53727 26611 66985 2268 75608 76744 78062 11903 1978 10829 59162 66202 71102 3809 23206 64525 06404 01903 3744 4831 63297 91250 20903 9990 14623 61272 86433 54461 5481 69905 32989 91941 74248 9642 68319 02509 11477 88907 7407 95356 63181 58866 13997 8113 95073 85516 03699 37399 2941 64821 06687 60464 93534 4369 32980 06314 48093 44204 7659 59940 12868 32161 07036 2969 25690 5697 391237 7259 3216 03337 86448 58899 45011 7078 88667 25856 26482 54767 9114 95889 86483 71332 80690 4780 25471 16923 74962 28479 7663 01426 47068 62305 63117 1768 80937 95316 000 000 <i>Courtesy DanAl</i>	76 57 58 55 58 78 77 77 77 77 78 76 70 77 77 78 78 76 70 70 70 70 70 70 70 70 70 70 70 70 70				

<u>V13</u>

Nil Reports

## $\underline{V15}$ North Korean Intelligence via Radio Pyongyang

Nil Reports

## **<u>V24</u>** South Korean Intelligence

Nil Reports

## <u>V26</u>

## **Polytones**

## XPA1 Wed/Fri

#### November 2023

Wednesday/Friday

1310z	13875kHz	1330z	13375kHz	1350z	10875kHz	Z
01/11	838 00	00 01033 00001	00000 32654			1310z Fair, 1330z Strong, 1350z Weak
03/11	838 00	00 05922 00001	00000 36657			1350z Weak, rest Fair
08/11	838 1 0	02804 00102 5	1099 15120			1350z Weak, rest Strong
838 838 838	1 838 838 838 1 838 838	838 1				
02804 00102 20358 35584 62583 22565 63903 51912 31467 87148 27648 14739 43447 61875	51099 51115 80178 8760 51061 76790 74184 2746 23503 68306 56926 190 73936 95865 78381 6216 58053 93205 71140 8781 34679 79283 61976 9407 79604 53176	02 99301 63250 011 51 22857 98336 585 90 09411 92990 224 53 76369 73822 606 19 64304 14038 219 77 30067 48834 122	90 76712 50 00174 67 49745 85 23880 63 53158 86 06352			
87043 28464 64821 95495 85973 15266 95866 93409 15120	57401 40445 32633 7431 33151 18480 48124 3015 34165 13057 29696 3687 79252 73574 17092 3314	13 34919 29171 660 57 40973 00482 284 71 81734 67551 548 43 23559 79941 319 <i>Court</i>	69 68074 76 25465 30 37262 23 11718 esy PLdn			
10/11	838 1 (	02804 00102 5	1099 15120			1350z Weak, rest Strong
15/11	838 1 0	02804 00102 5	1099 15120			1350z Weak, rest Fair





17/11	838 1 02804 00102 51099 15120	1350z Weak QRM3, rest Fair
22/11	838 000 01507 00001 00000 37251	1310z Strong, rest Fair
24/11	838 000 06463 00001 00000 34664	1350z Weak, rest Strong
29/11	838 000 09010 00001 00000 31262	1310z Strong, rest Fair

December 2023





10265kHz 1350z 06/12/2023 DIGIQRM5

1350z DIGIQRM5, rest Fair, 1310z PulseQRM2

#### 

00518 00180 99495 50703 95824 92164 63297 81290 01768 80455 40996 74634 22591 85599 06281 01534 20899 00868 69844 00777 70975 23795 58316 33290 90167 28830 48469 22587 89287 41095 50200 08334 15458 89452 91563 49034 30108 73207 55986 34363 80543 13577 78126 58207 83388 02091 66535 08264 32761 28868 85455 87842 80436 98084 56089 77003 02846 94660 98400 08862 91460 37724 29546 38542

98681 14475 28453 00049 18555 98382 02608 55564 55110 86845 43749 69043 40501 21321 66951 75628 94132 61196 66410 18622 9015 85701 92419 70371 56078 40667 38331 63257 92110 67840 93538 38051 13362 72480 68910 50872 90498 34311 47132 65926 07436 19272 60305 54799 32332 75044 11047 04047 59610 38790 03307 00944 00112 04596 02794 86588 45468 42903 81350 34918 71537 20236 82937 19744

56662 35713 76250 11677 59365 65442 53783 26835 64228 13394 09068 31019 86952 64840 89122 94945 11212 24556 54864 07692 31042 29895 21217 92528 27116 61332 07330 50898 84640 63175 10912 40705 50160 72273 48683 72550 53933 80333 58414 03925 14315 16714 09956 40327 92830 91252 03583 64497 88051 26491 99952 37048 33017 14284 14070 Courtesy PLdn

08/12	412 1 00518 00180 99495 14070
13/12	412 1 00518 00180 99495 14070
15/12	412 1 00518 00180 99495 14070
20/12	412 000 05699 00001 00000 40666
22/10	412 000 04990 00001 00000 35665
26/12	NOT MONITORED
29/12	412 1 05329 00110 63538 20352

 $\begin{array}{l} 05329\ 00110\ 63538\ 62934\ 93537\ 13801\ 37240\ 90830\ 15705\ 95352\\ 15788\ 89151\ 24641\ 95346\ 98732\ 28837\ 54770\ 72706\ 01331\ 43884\\ 40378\ 96654\ 79947\ 34942\ 34523\ 74563\ 43677\ 96898\ 07794\ 64771\\ 18872\ 47258\ 0301\ 60416\ 25861\ 87920\ 77559\ 70857\ 34285\ 70571\\ 54238\ 28161\ 57143\ 47675\ 97777\ 78590\ 29052\ 47151\ 12755\ 97676\\ 98948\ 64756\ 68618\ 64099\ 51717\ 0789\ 01125\ 87004\ 47405\ 83754\\ 67098\ 31308\ 07277\ 36406\end{array}$ 

70575 81254 55889 57431 77168 69362 96675 58104 75789 84815 37050 82548 70191 51724 95265 49195 76861 92651 33356 16194 75959 05202 06131 30172 35527 76395 24474 09962 26374 35479 57363 96358 32357 62182 44907 62594 64065 44553 84273 31360 19691 85649 95710 02402 15333 15539 00189 50100 20352 Courtesy PLdn

## <u>XPA2 m</u>

#### Sunday/Tuesday

November 2023

1200z	14783kHz	1220z	13883kHz
05/11	08296	00001 00000	) 35271
07/11	09064	00069 06077	7 00136
09064 00069 19412 51615 26728 76011 85951 65876 21089 41894 39510 44012 26150 70535 67116 00136	0 06077 26806 30153 845 5 50167 97257 23807 624 0 04248 81535 46968 497 0 30102 72980 27325 181 1 25777 74163 87424 262 2 39180 27364 72583 767 5 35101 67400 34243 343 5	33 74640 05106 9 45 74647 67551 5 39 28118 15270 7 77 76115 20131 1 69 81432 74904 7 26 60850 64186 6 83 20306 59507 2 <i>Cot</i>	9729 30155 9656 65372 7191 28499 4285 68933 0797 69456 4668 15451 4496 06879 urtesy PLdn
12/11	09064	00069 06077	7 00136
14/11	04065	00001 00000	) 33662
19/11	06661	00001 00000	) 34664

21/11 00501 00076 05261 ... 26047

00501 00076 05261 25603 15830 78115 73892 72980 93736 21378 15821 91031 05302 60221 15187 69934 05382 28478 13801 26590 85561 92563 84482 39116 23909 03219 32048 25398 52888 00966 82740 94816 02216 36270 54183 11723 47274 09936 83879 47269 18312 03459 76032 27027 76737 10885 78474 51657 61684 59394 44226 46670 28663 91901 40476 74187 22278 17126 86311 44754 92696 19274 72646 88478 04556 72606 64772 84518 02370 09062 18871 29930 85257 87766 68468 68260 32816 23887 26047 *Courtesy PLdn* 

- 1350z DIGIQRM5, rest Fair, 1310z PulseQRM2
- 1350z Unworkable, rest Fair 1310z PulseQRM2
- 1350z NRH, rest Strong 1310z PulseQRM2
- 1350z QRM4, rest Fair
- 1350z Weak, rest Strong

1350z Unworkable, rest Fair, 1500z PULSEQRM3

1240z Fair, rest MISSED
Strong, 1240z MISSED
Strong
1200z Strong, rest Fair
1240z Weak, rest Fair
Strong

12183kHz

1240z

26/11	6/11 00501 00076 05261 26047				Very strong
28/11 06274 00001 00000 34263			34263		1240z Stromg. rest Very strong
December	r 2023				
1200z	10807kHz	1220z	12207kHz	1240z	13507kHz
03/12	NRH				
05/12	NRH				Frequencies searched, no trace

## Nothing heard since.

## <u>XPA2 p</u>

#### Monday/Wednesday

November 2023

0800z	11529kHz	0820z	13429kHz	0840z	13929kHz	Z
01/11	05892 (	0100 06985	. 76172			0800z Weak QRM4, rest Fair
05892 00100 ( 12764 51561 9 46091 68505 1 67057 53967 8 19400 11708 3 73902 57626 6 92411 64157 1 36756 64871 7 66805 27580 7 73264 88976 7 06342 46288 7	06985 71443 12702 99194 94994 08081 62478 8807( 18700 66739 24315 74745 81351 53730 03296 38365 0709 99894 40953 70095 57706 18916 23994 94036 12655 92501 24004 7362 75615 37133 35489 6833 75038 65201 01550 96408 72881 76982 78561 32968 76172 Courtesy PLdn	4 02356 12542 431 47897 94009 790 7 74115 05330 864 8 61004 01223 859 903235 12864 834 5 31107 71513 496 9 00383 15804 669 9 00383 15804 669 5 55645 31172 775 8 76568 63792 274 8 72380 77255 603	06 60500 37 23029 81 21309 75 78982 39 60456 92 72160 15 89790 31 78423 94 27429 59 40425			
06/11	04040 (	00001 00000	. 31260			Fair, 0800z NRH
08/11	09343 (	00001 00000	. 34265			0840z Fair, rest Weak 0800z QRM2
13/11	08505 (	00001 00000	. 36260			0800z Weak, 0820z Very strong, 0840z Fair
15/11	08585 (	00001 00000	. 36270			0800z Unworkable, rest Fair with QRM3
20/11	00637 (	00100 49433	. 70171			0820z Weak, 0840z Fair, 0800z Unworkable
00637 00100 4 87114 80117 5 34844 95004 3 51128 37108 7 90063 58919 2 20325 29418 6 97143 02317 4 62115 20406 8 21290 61359 9 27864 89175 7	49433 73520 72787 7382 50619 43776 97586 89642 50658 83454 79637 2971 78444 60326 84335 8984 42409 12846 98530 6836 57987 83432 45598 30892 55393 53681 52262 02553 46111 71596 71758 86018 45599 16583 14942 1806 92583 94102 77341 84911 70171	4 61379 11635 971 2 79905 72119 812 7 73328 71987 275 4 69054 60583 520 5 1739 33682 959 2 94860 43505 819 3 38392 02017 921 8 13211 90800 076 8 28250 44066 174 2 0687 57182 947 <i>Courte</i>	19 40961 80 88300 28 90548 30 30521 60 78396 37 31354 22 47312 25 35374 85 71233 77 04522 sys PLdn			
22/11	00637 (	00100 49433	. 70171			0820z Strong, 0840z Fair, 0800z Unworkable
27/11	00637 (	00100 49433	. 70171			0800z Weak, rest Fair with QSB2
29/11	00637 (	00100 49433	. 70171			0800z Weak, rest Fair with QSB2

#### December 2023

0800z	11493kHz	0820z	13393kHz
04/12	09899	00125 68728	17414
06/12	09899	00125 68728	17414

09899 00125 68728 46176 24876 96176 85873 00557 63865 39867 93849 58843 31004 96504 81041 8280 63232 02620 11775 56122 98917 90411 22888 47026 50850 58629 75635 80783 34337 50932 81831 10835 89504 40170 43930 59382 59258 33797 43600 06621 59845 28261 78762 92377 45182 41588 09439 65156 67253 17876 06839 07112 37555 08304 52060 11146 38676 26394 52228 49987 19048 93172 87227 98502 29604 67651 43360 59087 23775 08295 72058 67226 14473 72737 60175 94229 84229 46489 98886 48699 88357 24744 02416 41889 27845 63349 79800 26021 05166 31251 36121 76271 10714 14621 10844 32059 78436 39008 40336 40420 95951 05091 46243 52371 67200 40311 86590 38225 28246 19269 47371 96843 53931 03601 60099 21947 84210 40675 97509 26680 05346 58295 64226 99698 27787 74535 98061 17414 *Courtesy PLdn*  0840z 13993kHz

0840z Fair, rest Weak 0840z Strong, rest Weak

11/12	09899 00125 68728 17414
13/12	09899 00125 68728 17414
18/12	01734 00001 00000 36654
20/12	08479 00001 00000 37667

## Other XPA2 scheds

From Ary

9142 kHz 17-11-2023 1025z XPA2 MFSK-16/20Bd 00794 00027 34430 30683 57104 50946 58005 17887 78038 31892 66322 54419 05117 39664 00781 55486 87265 23881 61140 62617 65448 41910 01980 95964 33668 53741 87628 88804 03572 63343

From H-FD

Wed 01.11.2023 0910Z 17413 msg Wed 01.11.2023 0930Z 15852 msg Wed 01.11.2023 0950Z 13363 msg

Wed 01.11.2023 1100Z 13393 msg Wed 01.11.2023 1120Z 12193 msg Wed 01.11.2023 1140Z 11093 msg

Wed 01.11.2023 1200Z 13968 msg Wed 01.11.2023 1220Z 15968 msg Wed 01.11.2023 1240Z 17468 msg

Thu 02.11.2023 0600Z 11162 msg Thu 02.11.2023 0620Z 12162 msg Thu 02.11.2023 0640Z 13962 msg

Thu 02.11.2023 1600Z 10223 msg Thu 02.11.2023 1620Z 9223 msg Thu 02.11.2023 1640Z 8123 msg

Sat 04.11.2023 0910Z 15985 msg Sat 04.11.2023 0930Z 14885 msg Sat 04.11.2023 0950Z 13885 msg

Sat 04.11.2023 1600Z 8126 msg Sat 04.11.2023 1620Z 6826 msg Sat 04.11.2023 1640Z 5326 msg

Tue 07.11.2023 0600Z 11162 msg Tue 07.11.2023 0620Z 12162 msg Tue 07.11.2023 0640Z 13962 msg

Tue 07.11.2023 1100Z 10653 msg Tue 07.11.2023 1120Z 9353 msg Tue 07.11.2023 1140Z 8153 msg

Fri 10.11.2023 0900Z 16225 msg Fri 10.11.2023 0920Z 17425 msg Fri 10.11.2023 0940Z 19125 msg

From Ary December 2023

9265 05-12-2023 1100 XPA2 8165 05-12-2023 1120 XPA2 7665 05-12-2023 1120 XPA2 7665 05-12-2023 1140 XPA2 00682 00090 53172 32707 08257 84893 31706 28840 09104 43716 73658 61870 56837 35298 72738 17321 95566 69868 41724 77010 59788 54146 44957 85221 16089 87716 58418 81229 55572 50706 35124 29894 31833 59758 16924 98862 19895 67890 90979 57921 61325 81940 16639 84151 28327 24068 23267 33987 14926 63065 18098 90239 79002 13248 10262 60268 69075 82032 39060 50301 57073 33362 20191 72615 48884 65706 48211 71762 65690 38246 91507 64763 78235 60115 18918 27312 70048 19769 04762 43505 15657 52925 87831 70814 94962 80026 54531 37922 33535 39127 01089 75986 30212 Courtesy Ary 0800z Weak, 0820z Fair, 0840z Strong

Strong

Weak

0800z Unworkable, rest Very strong

#### 1B XPA2 Fm H-FD

Fri 01.12.2023 0900Z 16347 msg
Fri 01.12.2023 0920Z 18247 msg
Fri 01.12.2023 0940Z 19547 msg
Sat 02.12.2023 0910Z 13919 msg
Sat 02.12.2023 0930Z 11519 msg
Sat 02.12.2023 0950Z 10719 msg
c
Sat 02.12.2023 1600Z 6984 msg
Sat 02.12.2023 1620Z 5884 msg
Sat 02.12.2023 1640Z 4784 msg
5
Tue 05.12.2023 0600Z 9281 msg
Tue 05.12.2023 0620Z 10481 msg
Tue 05.12.2023 0640Z 11481 msg

Tue 05.12.2023 1100Z 9265 msg Tue 05.12.2023 1120Z 8165 msg Tue 05.12.2023 1140Z 7665 msg

Fri 08.12.2023 1200Z 14841 msg Fri 08.12.2023 1220Z 16241 msg Fri 08.12.2023 1240Z 18241 msg

Tue 12.12.2023 1100Z 9265 msg Tue 12.12.2023 1120Z 8165 msg Tue 12.12.2023 1140Z 7665 msg

Tue 12.12.2023 1600Z 8184 msg Tue 12.12.2023 1620Z 7684 msg Tue 12.12.2023 1640Z 6784 msg

Wed 13.12.2023 0910Z 13562 msg Wed 13.12.2023 0930Z 11583 msg Wed 13.12.2023 0950Z 10281 msg

Wed 13.12.2023 1100Z 11579 msg Wed 13.12.2023 1120Z 10979 msg Wed 13.12.2023 1140Z 10279 msg



#### Monday/Saturday

#### November 2023

13894kHz 1100z	04/11	Strong	2m15s	PLdn	SAT
13394kHz 1110z	04/11	Strong	2m15s	PLdn	SAT
12194kHz 1120z	04/11	Fair	2m15s	PLdn	SAT
11494kHz 1130z	04/11	Weak	2m15s	PLdn	SAT
11094kHz 1140z	04/11	Weak	2m15s	PLdn	SAT
10494kHz 1150z	04/11	Weak	2m15s	PLdn	SAT

13894kHz	1100z	06/11	Weak	4m28s	PLdn	MON
13304kHz	11107	06/11	Fair	4m28s	PI dn	MON
121041/Uz	11202	06/11	Fair	4m28s	DI dn	MON
12194КПZ	11202	00/11	rair	4111288	PLan	MON
11494kHz	1130z	06/11	Fair	4m28s	PLdn	MON
11094kHz	1140z	06/11	Fair	4m28s	PLdn	MON
10494kHz	1150z	06/11	Fair	4m28s	PLdn	MON
13894kHz	1100z	11/11	MISSED		PLdn	SAT
13394kHz	1110z	11/11	MISSED		PLdn	SAT
12104kHz	11202	11/11	MISSED		DI dn	SAT
12194KHZ	1120Z	11/11	MISSED	4 20	PLdn DL 1	SAT
11494kHz	1130z	11/11	Fair	4m29s	PLdn	SAT
11094kHz	1140z	11/11	Fair	4m29s	PLdn	SAT
10494kHz	1150z	11/11	Fair	4m29s	PLdn	SAT
13894kHz	1100z	13/11	Fair	1m40s	PLdn	MON
13304kHz	11107	13/11	Fair	1m40s	PI dn	MON
12104LUa	1120-	12/11	Fair	1	DI da	MON
12194KHZ	11202	13/11	rair	1	PLan	MON
11494KHZ	1130z	13/11	Fair	1m40s	PLan	MON
11094kHz	1140z	13/11	Fair	1m40s	PLdn	MON
10494kHz	1150z	13/11	Weak	1m40s	PLdn	MON
13894kHz	1100z	18/11	Strong	1m40s	PLdn	SAT
13394kHz	11107	18/11	Strong	1m40s	PI dn	SAT
121041/Hz	11202	18/11	Strong	1m40s	DI dn	SAT
12194KIIZ	11202	10/11	Suong	1 40	FLuii DL 1	SAI
11494KHZ	1130z	18/11	Strong	1m40s	PLan	SAT
11094kHz	1140z	18/11	Strong	1m40s	PLdn	SAT
10494kHz	1150z	18/11	NRH		PLdn	SAT
13894kHz	1100z	20/11	Fair	1m40s	PLdn	MON
13304kHz	11107	20/11	Fair	1m40s	PI dn	MON
121041/Uz	11202	20/11	Fair	1m40s	DI dn	MON
12194КПZ	11202	20/11	rair	1111408	PLan	MON
11494kHz	1130z	20/11	Weak	1m40s	PLdn	MON
11094kHz	1140z	20/11	Fair	1m40s	PLdn	MON
10494kHz	1150z	20/11	Weak	1m40s	PLdn	MON
13894kHz	1100z	25/11	Fair	1m40s	PI dn	SAT
1330/1/Hz	11102	25/11	Fair	1m40s	DI dn	SAT
10104LU	11102	25/11	Fall	1 40	FLuii DL 1	SAI
12194kHz	1120z	25/11	Fair	1m40s	PLdn	SAT
11494kHz	1130z	25/11	Weak	1m40s	PLdn	SAT
11094kHz	1140z	25/11	Weak	1m40s	PLdn	SAT
10494kHz	1150z	25/11	Weak	1m40s	PLdn	SAT
1380/1/17	11007	27/11	Fair	4m20s	DI dn	MON
13694KHZ	11002	27/11	rair	4111298	PLan	MON
13394kHz	1110z	2//11	Fair	4m29s	PLdn	MON
12194kHz	1120z	27/11	Weak	4m29s	PLdn	MON
11494kHz	1130z	27/11	Weak	4m29s	PLdn	MON
11094kHz	1140z	27/11	Fair	4m29s	PLdn	MON
10494kHz	1150z	27/11	Fair	4m29s	PLdn	MON
December '	2023					
December	2023					
14483kHz	1100z	02/12	Weak	4m29s	PLdn	SAT
13983kHz	1110z	02/12	Weak	4m29s	PLdn	SAT
13483kHz	1120z	02/12	Weak	4m29s ORM2	PLdn	SAT
12183kHz	11307	02/12	Weak	4m29s	PLdn	SAT
115831-11-2	11407	02/12	NRH		PI dn	SAT
10983kHz	11402 1150z	02/12	NRH		PLdn	SAT
14483kHz	1100z	04/12	Weak	1m40s	PLdn	MON
13983kHz	1110z	04/12	Weak	1m40s	PLdn	MON
13483kHz	1120z	04/12	Weak	1m40s	PLdn	MON
12183kHz	1130z	04/12	Weak	1m40s	PLdn	MON
11583kHz	11407	04/12	Weak	1m40s	PI dn	MON
100921-II-	11402	04/12	Weak	1	DI 1.	MON
10983KHZ	1150Z	04/12	v.eak	1m40s	PLan	MON
14483kHz	1100z	09/12	Strong	1m40s	PLdn	SAT
13983kHz	1110z	09/12	Strong	1m40s	PLdn	SAT
13483kHz	11207	09/12	Strong	1m40s ORM2	PLdn	SAT
121921-11-	1130-	00/12	Strong	1m/0c	DIda	SAT
12103KHZ	1130Z	00/12	Studig	1	I LUII DL d	SAI
11583KHz	1140Z	09/12	Strong	1m4Us	rLan	SAL
10983kHz	1150z	09/12	Weak	1m40s	PLdn	SAT
14483kHz	1100z	11/12	Weak	2m15s	PLdn	MON
13983kHz	1110z	11/12	Fair	2m15s	PLdn	MON
134831-11-7	11207	11/12	Fair	2m15s ORM2	PLdn	MON
101001-TL	11202	11/12	r an Eain	2m15a QIXIVI2	n Lull DI da	MON
12165KHZ	1130Z	11/12	ran W-1	21111.38	r Lun	MON
11583KHz	1140Z	11/12	weak	2m15s	rLdn	MON
10983kHz	1150z	11/12	Weak	2m15s	PLdn	MON

16/12	Fair	2m15s	PLdn	SAT
16/12	Fair	2m15s	PLdn	SAT
16/12	Strong	2m15s	PLdn	SAT
16/12	Strong	2m15s	PLdn	SAT
16/12	Fair	2m15s	PLdn	SAT
16/12	Weak	2m15s	PLdn	SAT
18/12	Fair	4m28s	PI dn	MON
18/12	Fair	4m28s	PI dn	MON
18/12	Fair	4m28s	PL dn	MON
18/12	Weak	4m28s	PLdn	MON
18/12	Weak	4m28s	PLdn	MON
18/12	Weak	4m28s	PLdn	MON
22 to 28 I	Dec 2023			
30/12	Fair	1m40s	PLdn	SAT
30/12	Strong	1m40s	PLdn	SAT
30/12	Strong	1m40s QRM2	PLdn	SAT
30/12	Weak	1m40s	PLdn	SAT
30/12	Weak	1m40s	PLdn	SAT
	16/12 16/12 16/12 16/12 16/12 16/12 18/12 18/12 18/12 18/12 18/12 18/12 18/12 22 to 28 I 30/12 30/12 30/12 30/12	16/12       Fair         16/12       Fair         16/12       Strong         16/12       Strong         16/12       Fair         16/12       Fair         16/12       Fair         16/12       Fair         16/12       Fair         16/12       Fair         18/12       Fair         18/12       Fair         18/12       Fair         18/12       Weak         30/12       Fair         30/12       Strong         30/12       Weak         30/12       Weak         30/12       Weak	16/12       Fair       2m15s         16/12       Fair       2m15s         16/12       Strong       2m15s         16/12       Strong       2m15s         16/12       Strong       2m15s         16/12       Fair       2m15s         16/12       Fair       2m15s         16/12       Fair       2m15s         16/12       Fair       2m15s         16/12       Weak       2m15s         18/12       Fair       4m28s         18/12       Fair       4m28s         18/12       Fair       4m28s         18/12       Weak       4m28s         22 to 28 Dec 2023       30/12       Strong       1m40s         30/12       Weak	16/12       Fair       2m15s       PLdn         16/12       Fair       2m15s       PLdn         16/12       Strong       2m15s       PLdn         16/12       Strong       2m15s       PLdn         16/12       Strong       2m15s       PLdn         16/12       Fair       2m15s       PLdn         16/12       Fair       2m15s       PLdn         16/12       Fair       2m15s       PLdn         16/12       Weak       2m15s       PLdn         18/12       Fair       4m28s       PLdn         18/12       Fair       4m28s       PLdn         18/12       Fair       4m28s       PLdn         18/12       Weak       4m28s       PLdn         22 to 28 Dec 2023       2012       Strong       1m40s       PLdn         30/12       Strong       1m40s       PLdn       30/12       Weak       1m40s

Weak

1m40s

#### Wednesday/Saturday

30/12

#### November 2023

10983kHz 1150z

16353kHz 1200z	01/11	Fair	4m29s	PLdn	WED
15953kHz 1210z	01/11	Fair	4m29s	PLdn	WED
14953kHz 1220z	01/11	Fair	4m29s	PLdn	WED
13453kHz 1230z	01/11	Fair	4m29s	PLdn	WED
12153kHz 1240z	01/11	Fair	4m29s	PLdn	WED
11453kHz 1250z	01/11	Weak	4m29s	PLdn	WED
16353kHz 1200z	04/11	Strong	4m29s	PLdn	SAT
15953kHz 1210z	04/11	Strong	4m29s QRM3/4	PLdn	SAT
14953kHz 1220z	04/11	Strong	4m29s	PLdn	SAT
13453kHz 1230z	04/11	Strong	4m29s QRM2	PLdn	SAT
12153kHz 1240z	04/11	Fair	4m29s	PLdn	SAT
11453kHz 1250z	04/11	Fair	4m29s	PLdn	SAT
16353kHz 1200z	08/11	Fair	4m29s	PLdn	WED
15953kHz 1210z	08/11	Fair	4m29s QRM3	PLdn	WED
14953kHz 1220z	08/11	Fair	4m29s	PLdn	WED
13453kHz 1230z	08/11	Fair	4m29s	PLdn	WED
12153kHz 1240z	08/11	Fair	4m29s	PLdn	WED
11453kHz 1250z	08/11	Fair	4m29s	PLdn	WED



PLdn PLdn

SAT SAT

QRM on signal; 15953kHz 1210z 11/11/2023

16353kHz 1	1200z	11/11	Fair	4m29s		PLdn	SAT	
15953kHz 1	1210z	11/11	Fair	4m29s	QRM3	PLdn	SAT	[See pic above]
14953kHz 1	1220z	11/11	Fair	4m29s		PLdn	SAT	
13453kHz 1	1230z	11/11	Fair	4m29s		PLdn	SAT	
12153kHz 1	1240z	11/11	Fair	4m29s		PLdn	SAT	
11453kHz 1	1250z	11/11	Fair	4m29s		PLdn	SAT	
16353kHz 1	1200z	15/11	Fair	4m29s		PLdn	WED	
15953kHz 1	1210z	15/11	Fair	4m29s		PLdn	WED	
14953kHz 1	1220z	15/11	Fair	4m29s		PLdn	WED	
13453kHz 1	1230z	15/11	Fair	4m29s	QRM3	PLdn	WED	
12153kHz 1	1240z	15/11	Fair	4m29s		PLdn	WED	
11453kHz 1	1250z	15/11	Weak	4m29s		PLdn	WED	
16353kHz 1	1200z	18/11	Fair	4m29s		PLdn	SAT	
15953kHz 1	1210z	18/11	Fair	4m29s		PLdn	SAT	
14953kHz 1	1220z	18/11	Fair	4m29s		PLdn	SAT	
13453kHz 1	1230z	18/11	Fair	4m29s (	QRM2	PLdn	SAT	
12153kHz 1	1240z	18/11	Fair	4m29s		PLdn	SAT	
11453kHz 1	1250z	18/11	Weak	4m29s		PLdn	SAT	

	1200z	22/11	Fair	4m29s	PLdn	WED
15953kHz	1210z	22/11	Fair	4m29s	PLdn	WED
14953kHz	1220z	22/11	Fair	4m29s	PLdn	WED
13453kHz	1230z	22/11	Fair	4m29s	PLdn	WED
12153kHz	1240z	22/11	Fair	4m29s	PLdn	WED
11453kHz	12507	22/11	Fair	4m29s	PLdn	WED
11455KHZ	12502	22/11	1 411	411275	1 Lun	LD
16353kHz	1200z	25/11	Weak	4m29s	PL dn	SAT
15953kHz	1210z	25/11	Weak	4m29s	PLdn	SAT
14953kHz	12202	25/11	Fair	4m29s	PI dn	SAT
13453kHz	12202	25/11	Fair	4m29s	PI dn	SAT
12152kHz	12402	25/11	Fair	4m20s	DI dn	SAT
12133KHZ	12402	25/11	Wash	41112.95 4m 20a	F Luii DI da	SAT
11433KHZ	12302	23/11	weak	4111298	PLan	SAT
16353kHz	1200z	29/11	Strong	4m29s	PL dn	WED
15953kHz	12107	29/11	Strong	4m29s	PI dn	WFD
140521/Hz	12202	20/11	Eair	4m20s	DI dn	WED
124521/LIZ	12202	29/11	Fair	4m20s	DI dn	WED
13433KHZ	12302	29/11	Fall	41112.95	FLuii DL 1	WED
12155KHZ	1240Z	29/11	Fair	4m29s	PLan	WED
11453KHZ	1250z	29/11	Fair	4m29s	PLan	WED
December	2023					
140791-11-	12007	02/12	MISSED		DI de	SAT
120781/L	12102	02/12	Wook	4m20c	DI dn	SAT
12270LU	1210Z	02/12	Weak	4111298	PLun DL 1.	SAI
133/8KHZ	12202	02/12	weak	4111295	PLan	SAT
121/8KHZ	1230z	02/12	weak	4m29s	PLdn	SAI
11078kHz	1240z	02/12	Weak	4m29s	PLdn	SAT
10278kHz	1250z	02/12	V.weak	4m29s	PLdn	SAT
14978kHz	1200z	06/12	Strong	4m29s	PLdn	WED
13978kHz	12107	06/12	Strong	4m29s	PI dn	WFD
13378kHz	12202	06/12	Strong	4m29s	PI dn	WED
12179LUZ	12202	06/12	Subig	41112.95	DL de	WED
121/0KHZ	1230Z	06/12	Fair Fair	4111298	PLun DL 1.	WED
110/8KHZ	1240Z	06/12	Fair	4m29s	PLan	WED
102/8KHZ	1250z	06/12	weak	4m29s	PLan	WED
14978kHz	1200z	09/12	Strong	4m29s	PL dn	SAT
13978kHz	1210z	09/12	Strong	4m29s	PLdn	SAT
133781/Hz	12202	09/12	Strong	4m29s	PI dn	SAT
12179LUZ	12202	09/12	Strong	41112.95	DL de	SAT
121/0KHZ	12302	09/12	Strong	41112.95 4m 20a	F Luii DI da	SAT
10070LU	1240Z	09/12	Strong	4111295	PLan	SAT
102/8kHz	1250z	09/12	Fair	4m29s QRM2	PLdn	SAI
1/0701-11-						
149/86/17	1200z	13/12	Fair	4m29s ORM2	PLdn	WED
149/8KHZ	1200z 1210z	13/12	Fair Fair	4m29s QRM2 4m29s	PLdn PLdn	WED WED
14978kHZ 13978kHz	1200z 1210z 1220z	13/12 13/12 13/12	Fair Fair Strong	4m29s QRM2 4m29s 4m29s	PLdn PLdn PL dn	WED WED
14978kHz 13978kHz 13378kHz 12178kHz	1200z 1210z 1220z 1230z	13/12 13/12 13/12 13/12	Fair Fair Strong	4m29s QRM2 4m29s 4m29s 4m29s	PLdn PLdn PLdn PLdn	WED WED WED
14978kHz 13978kHz 13378kHz 12178kHz	1200z 1210z 1220z 1230z 1240z	13/12 13/12 13/12 13/12 13/12	Fair Fair Strong Strong	4m29s QRM2 4m29s 4m29s 4m29s 4m29s	PLdn PLdn PLdn PLdn PLdn	WED WED WED WED
14978KHZ 13978kHz 13378kHz 12178kHz 11078kHz 10278kHz	1200z 1210z 1220z 1230z 1240z 1250z	13/12 13/12 13/12 13/12 13/12 13/12	Fair Fair Strong Strong Fair Fair	4m29s QRM2 4m29s 4m29s 4m29s 4m29s QRM2 4m29s QRM2	PLdn PLdn PLdn PLdn PLdn PLdn PLdn	WED WED WED WED WED
14978kHz 13978kHz 13378kHz 12178kHz 11078kHz 10278kHz	1200z 1210z 1220z 1230z 1240z 1250z	13/12 13/12 13/12 13/12 13/12 13/12	Fair Fair Strong Strong Fair Fair	4m29s QRM2 4m29s 4m29s 4m29s 4m29s QRM2 4m29s QRM2	PLdn PLdn PLdn PLdn PLdn PLdn	WED WED WED WED WED WED
14978kHz 13978kHz 13378kHz 12178kHz 1078kHz 10278kHz 14978kHz	1200z 1210z 1220z 1230z 1240z 1250z 1200z	13/12 13/12 13/12 13/12 13/12 13/12 13/12	Fair Fair Strong Strong Fair Fair Strong	4m29s QRM2 4m29s 4m29s 4m29s 4m29s QRM2 4m29s QRM2 4m29s	PLdn PLdn PLdn PLdn PLdn PLdn PLdn	WED WED WED WED WED SAT
14978kHz 13978kHz 13378kHz 12178kHz 10278kHz 14978kHz 13978kHz	1200z 1210z 1220z 1230z 1240z 1250z 1200z 1210z	13/12 13/12 13/12 13/12 13/12 13/12 13/12 16/12	Fair Fair Strong Fair Fair Strong Strong	4m29s QRM2 4m29s 4m29s 4m29s 4m29s QRM2 4m29s QRM2 4m29s 4m29s 4m29s	PLdn PLdn PLdn PLdn PLdn PLdn PLdn PLdn	WED WED WED WED WED SAT SAT
14978kHz 13978kHz 13378kHz 12178kHz 1078kHz 10278kHz 14978kHz 13978kHz 13378kHz	1200z 1210z 1220z 1230z 1240z 1250z 1200z 1210z 1220z	13/12 13/12 13/12 13/12 13/12 13/12 13/12 16/12 16/12 16/12	Fair Fair Strong Strong Fair Fair Strong Strong Strong	4m29s QRM2 4m29s 4m29s 4m29s 4m29s QRM2 4m29s QRM2 4m29s 4m29s 4m29s 4m29s 4m29s	PLdn PLdn PLdn PLdn PLdn PLdn PLdn PLdn	WED WED WED WED WED SAT SAT SAT
14978kHz 13978kHz 13378kHz 12178kHz 10278kHz 10278kHz 13978kHz 13978kHz 13378kHz 12178kHz	1200z 1210z 1220z 1230z 1240z 1250z 1200z 1210z 1220z 1220z 1230z	13/12 13/12 13/12 13/12 13/12 13/12 13/12 16/12 16/12 16/12	Fair Fair Strong Strong Fair Fair Strong Strong Strong Fair	4m29s QRM2 4m29s 4m29s 4m29s 4m29s QRM2 4m29s QRM2 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s	PLdn PLdn PLdn PLdn PLdn PLdn PLdn PLdn	WED WED WED WED WED SAT SAT SAT SAT
14978kHz 13978kHz 13378kHz 12178kHz 10278kHz 10278kHz 13978kHz 13978kHz 13378kHz 12178kHz 11078kHz	1200z 1210z 1220z 1230z 1240z 1250z 1200z 1210z 1220z 1220z 1230z 1240z	13/12 13/12 13/12 13/12 13/12 13/12 13/12 16/12 16/12 16/12 16/12	Fair Fair Strong Strong Fair Strong Strong Strong Fair Strong Strong	4m29s QRM2 4m29s 4m29s 4m29s 4m29s QRM2 4m29s QRM2 4m29s QRM2 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s QRM2 4m29s	PLdn PLdn PLdn PLdn PLdn PLdn PLdn PLdn	WED WED WED WED WED SAT SAT SAT SAT SAT
14978kHz 13978kHz 13378kHz 12178kHz 10278kHz 10278kHz 13978kHz 13978kHz 13378kHz 12178kHz 1078kHz 1078kHz	1200z 1210z 1220z 1230z 1240z 1250z 1200z 1210z 1220z 1220z 1230z 1240z 1250z	13/12 13/12 13/12 13/12 13/12 13/12 13/12 16/12 16/12 16/12 16/12 16/12	Fair Fair Strong Fair Fair Strong Strong Strong Fair Strong Weak	4m29s QRM2 4m29s 4m29s 4m29s 4m29s QRM2 4m29s QRM2 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s	PLdn PLdn PLdn PLdn PLdn PLdn PLdn PLdn	WED WED WED WED WED SAT SAT SAT SAT SAT SAT
14978kHz 13978kHz 13378kHz 12178kHz 10278kHz 14978kHz 13978kHz 13978kHz 13978kHz 12178kHz 1078kHz 10278kHz 10278kHz	1200z 1210z 1220z 1230z 1240z 1250z 1200z 1210z 1220z 1220z 1230z 1240z 1250z 1240z 1250z	13/12         13/12         13/12         13/12         13/12         13/12         13/12         13/12         16/12         16/12         16/12         16/12         16/12         16/12         16/12         16/12         16/12         16/12         16/12         16/12         16/12         16/12         16/12         16/12	Fair Fair Strong Fair Fair Strong Strong Strong Fair Strong Weak	4m29s QRM2 4m29s 4m29s 4m29s 4m29s QRM2 4m29s QRM2 4m29s QRM2 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s	PLdn PLdn PLdn PLdn PLdn PLdn PLdn PLdn	WED WED WED WED WED SAT SAT SAT SAT SAT SAT
14978kHz 13978kHz 13378kHz 12178kHz 10278kHz 10278kHz 13978kHz 13978kHz 1378kHz 12178kHz 1078kHz 10278kHz 10278kHz	1200z 1210z 1220z 1230z 1240z 1250z 1200z 1210z 1220z 1230z 1240z 1220z 1230z 1240z 1250z 1240z 1250z	13/12 13/12 13/12 13/12 13/12 13/12 13/12 16/12 16/12 16/12 16/12 16/12 16/12 20/12	Fair Fair Strong Strong Fair Strong Strong Strong Strong Fair Strong Weak Weak	4m29s QRM2 4m29s 4m29s 4m29s 4m29s QRM2 4m29s QRM2 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s	PLdn PLdn PLdn PLdn PLdn PLdn PLdn PLdn	WED WED WED WED WED WED SAT SAT SAT SAT SAT SAT SAT
14978kHz 13978kHz 13378kHz 12178kHz 10278kHz 10278kHz 13978kHz 13978kHz 1078kHz 1078kHz 10278kHz 14978kHz 13978kHz	1200z 1210z 1220z 1230z 1240z 1250z 1200z 1210z 1220z 1230z 1240z 1220z 1230z 1240z 1250z 1200z 1210z 1250z	13/12 13/12 13/12 13/12 13/12 13/12 13/12 16/12 16/12 16/12 16/12 16/12 16/12 20/12 20/12	Fair Fair Strong Strong Fair Strong Strong Strong Fair Strong Weak Weak NRH Eair	4m29s QRM2 4m29s 4m29s 4m29s 4m29s QRM2 4m29s QRM2 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s	PLdn PLdn PLdn PLdn PLdn PLdn PLdn PLdn	WED WED WED WED WED SAT SAT SAT SAT SAT SAT SAT WED WED
14978kHz 13978kHz 13378kHz 12178kHz 10278kHz 10278kHz 13978kHz 13978kHz 10278kHz 10278kHz 10278kHz 14978kHz 13978kHz 13978kHz 13978kHz	1200z 1210z 1220z 1230z 1240z 1250z 1200z 1210z 1220z 1230z 1240z 1250z 1200z 1210z 1200z 1210z 1210z 1220z 1210z 1220z 1220z	13/12 13/12 13/12 13/12 13/12 13/12 13/12 16/12 16/12 16/12 16/12 16/12 16/12 20/12 20/12 20/12	Fair Fair Strong Fair Strong Strong Strong Strong Fair Strong Weak Weak NRH Fair	4m29s QRM2 4m29s 4m29s 4m29s 4m29s QRM2 4m29s QRM2 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s 4m29s	PLdn PLdn PLdn PLdn PLdn PLdn PLdn PLdn	WED WED WED WED SAT SAT SAT SAT SAT SAT SAT SAT SAT SAT
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NO MONITORING 22 to 30 Dec 2023

#### Additional XPB1 schedules not copied by E2k [From H-FD]:

Fri 03.11.2023 1300Z 20021 MFSK-16 4:30 Fri 03.11.2023 1310Z 19521 MFSK-16 Fri 03.11.2023 1320Z 18421 MFSK-16 Fri 03.11.2023 1330Z 17421 MFSK-16 Fri 03.11.2023 1340Z 16321 MFSK-16 Fri 03.11.2023 1350Z 15921 MFSK-16

Mon 06.11.2023 0600Z 13446 MFSK-16 4:30 Mon 06.11.2023 0610Z 14446 MFSK-16 Mon 06.11.2023 0620Z 14946 MFSK-16 Mon 06.11.2023 0630Z 15846 MFSK-16 Mon 06.11.2023 0640Z 16146 MFSK-16 Mon 06.11.2023 0650Z 17446 MFSK-16 Tue 05.12.2023 0600Z 12119 MFSK-16 4:30 Tue 05.12.2023 0620Z 13419 MFSK-16 Tue 05.12.2023 0630Z 14419 MFSK-16 Tue 05.12.2023 0640Z 13919 MFSK-16 Tue 05.12.2023 0640Z 14919 MFSK-16 Tue 05.12.2023 0650Z 15919 MFSK-16

Fri 08.12.2023 1300Z 20044 MFSK-16 2:18 Fri 08.12.2023 1310Z 19344 MFSK-16 Fri 08.12.2023 1320Z 18544 MFSK-16 Fri 08.12.2023 1330Z 17444 MFSK-16 Fri 08.12.2023 1340Z 16244 MFSK-16 Fri 08.12.2023 1350Z 14944 MFSK-16

## **Hybrids and Tones**

## <u>HM01</u>

No Files submitted, read Editorial

## X06 Mazielka

Date	Day	UTC	Freq	Scale	Monitor	Comments
20231102	Thu	0827-0834	19511	314265	Andrew/SE	TX to Antananarivo, G380
20231102	Thu	0953	18197		Andrew	Broken X06, brief
20231102	Thu	0954-0956	18197	645321	Andrew	TX to Ho Chi Minh City, G410(1)
20231102	Thu	1330	20627	436512	Ary/NL	TX to Harare, G44
20231103	Fri	0910	16218	324615	Ary	TX to Madrid, G52
20231107	Tue	0812-0836	15989	125643	Arv, Dave/AU,	·
					Cargomether	TX to Ulanbatar, G317
20231107	Tue	0920-0935	13401	154263	Arv, Andrew	TX to Rome, G7
20231108	Wed	0820-0830	18591	435621	Arv, Andrew	Alert2 (TX to Maputo, G98) 1
20231108	Wed	0829-0835	13369	412356	Arv. Andrew	TX to Budapest, G97
20231108	Wed	0830-0841	20950	435621	Andrew	2.2
20231108	Wed	0905-0907	13419	465132	Dave	TX to Sofia, G100
20231108	Wed	0912-0915	14812	263145	Dave	TX to Prague G428
20231100	Wed	1351-1357	17///	135621	Ary Anon55956	TX = to Maputo 698
20231100	Thu	0000-0016	130/3	153624	Davo	TX to Damageura C210
20231109	Mon	0010 0015	10040	156024	Dave	TX to Damascus, G249
20231113	Mon	0010-0013	10005	10234	Dave Dave Juduar	IA LO RAMPAIA, GOO
20231113	Mon	0928-0936	19233	403123	Dave, Andrew	Aleris (TX to Rabat, G//) I
20231113	MON	0938-0951	13317	403123	Dave	3.2
20231113	Mon	0952-0957	1011/	463125	Dave	3.3
20231114	Tue	0810	1/523	542136	Andrew	TX to Beijing, G88
20231114	Tue	1015-1018	14675	612534	Dave	TX to Ashgabat, G89
20231114	Tue	1037-1040	11125	216354	Anon21767, Dave	Alert2 (Chennai, G388, LSB) 1
20231114	Tue	1044	20813	216354	Dave	2.2
20231114	Tue	1047-1057	9060	412356	Anon36989	TX to Budapest, R (unconfirmed)
20231115	Wed	1114-1126	16115	215346	Ary, Dave	TX to Mumbai, G167
20231115	Wed	1231-1233	19878	231654	Ary, Dave	Alerrt1 (TX to Abuja, G423) 1
20231115	Wed	1245-1257	19878	231654	Ary, Anon22894	1.2: Brief X06b "16" at end
20231115	Wed	1550	13548	214356	Ary	TX to Amman, G394
20231117	Fri	1024-1034	13547	625413	Dave	TX to Tel Aviv, G193
20231120	Mon	0807-0809	13450	165324	Dave	TX to Vienna, G145
20231120	Mon	0944-0953	20675	641523	Dave	TX to Lusaka, G337
20231122	Wed	0758-0806	18177	164253	Ary, Dave	TX to Addis Ababa, G402
20231122	Wed	0838-0843	13369	412356	Ary, Andrew	Alert2 (TX to Budapest, G243) 1
20231122	Wed	0842-0845	11483	412356	Ary, Andrew	2.2
20231122	Wed	0857-0902	13419	465132	Ary, Andrew	TX to Sofia, G246
20231122	Wed	0859-0902	16116	134265	Ary, Dave	TX to Tunis, G90
20231122	Wed	0920	14812	263145	Andrew	Alert2 (Prague, G435) 1 Shortiel
20231122	Wed	0922-0930	11561	263145	Arv, Andrew	2.2(2)
20231123	Thu	0717	14425	213546	Arv	TX to Islamabad, R
20231123	Thu	0805-0816	14419	521634	Anon53820	TX to Bucharest, G261
20231124	Fri	1015-1053	20605	256134	Arv, Andrew,	····, ···,
					Dave	TX to Abidian, very long, G270
20231125	Sat	1027-1028	11494	61-616	Schorschi	X06b before XPB1
20231201	Fri	1021-1027	14824	625413	Arv. Andrew	TX to Tel Aviv. G56
20231201	Sat	1034	12178	16	Schorschi	X06b before XPB1
20231202	Mon	0904-0908	13395	532614	Andrew	TX to Paris. 64
20231204	Mon	0929-0933	14825	641522	Andrew	Alert? (TX to Lucaba $C5$ ) 1
20231204	Mor	0933-0936	18750	6/1523	Andrew	2 2
20231204	TUOII	0011-0010	13/01	151262	Androw	$\mathbb{Z}_{+2}$
20231203	тие	0944-0948	10401	1J4203	Anarew	IA LU RUINE, G/

```
20231206 Wed 1128-1138 16115 215346 RX39
                                                   Alert2 (TX to Mumbai, G25) 1
20231206 Wed 1139-1153 14650 215346 Anon50820,RX39 2.2
20231207 Thu 0820-0831 14447 162543 Dave
                                                   TX to Nicosia, G39
20231207 Thu 0931
                       16103 645321 Andrew
                                                   TX to Ho Chi Minh City, G410
20231208 Fri 0813-0818 13405 352416 Andrew
                                                   TX to Dar es Salaam, R
20231208 Fri 0840-0842 13377 615243 Andrew
                                                   TX to Geneva, G127
20231210 Sun 1047-1049 15810 145632 Andrew
                                                   Alert2 (TX to Algiers, G135) 1
20231210 Sun 1050
                      15918 145632 Andrew
                                                   2.2: Shortie
20231211 Mon 0816-0828 20690 156234 Dave
                                                   Alert2 (TX to Kampala, 68) 1(3)
20231211 Mon 0828-0841 17475 156234 Dave
                                                   2.2
20231211 Mon 0931-0937 16117 463125 Andrew
                                                   Alert2 (TX to Rabat, G77) 1
20231211 Mon 0931-0937 11617 463125 RX39
                                                   2.2(4)
20231212 Tue 0840-0843 14861 542136 Dave
                                                   Alert2 (TX to Beijing, G88) 1
20231212 Tue 0844-0849 17523 542136 Dave
                                                   2.2
20231212 Tue 1034-1038 17470 216354 Dave
                                                   TX to Chennai, G388
20231213 Wed 0753-0755 18177 164253 Dave
                                                   TX to Addis ababa, G395
20231215 Fri 0832-0841 13954 213546 Ary, Andrew
                                                   TX to Islamabad, G390
20231218 Mon 0830-0832 14377 432516 Dave
                                                   TX to Bern, G341
20231218 Mon 0901-0906 14392 532614 Andrew
                                                   TX to Paris, G147
20231218 Mon 0918-0932 20675 641523 Andrew, Dave
                                                   TX to Lusaka, G337
20231219 Tue 0927-0937 13401 154263 Andrew, RX39
                                                   TX to Rome, G148
20231219 Tue 0945-1014 12100 123456 Andrew, RX39
                                                   X06c
20231220 Wed 1117-1118 16115 215346 RX39
                                                   TX to Mumbai, G167
20231221 Thu 0800-0806 14947 351264 Ary, Andrew
                                                   Alert2 (TX to Abu Dhabi, G434) 1
20231221 Thu 0805-0812 17534 351264 Ary, Andrew
                                                   2.2
20231221 Thu 0921-0922 18197 645321 Ary, Andrew
                                                   TX to Ho Chi Minh City, G417
20231221 Thu 0923-0939 14947 351264 Ary, Andrew
                                                   Next TX to Abu Dhabi, G434(5)
20231221 Thu 1331-1341 20627 436512 Andrew, Ary
                                                   TX to Harare, G180
20231221 Thu 1432-1453 10255 351264 Ary, ssemkaz,
                                    Anon07661
                                                   Next TX to Abu Dhabi, G434(6)
20231226 Tue 0802-0809 13420 534216 Andrew
                                                   TX to Bagdad, G232
20231226 Tue 0812-0815 14861 542136 Andrew
                                                   TX to Beijing, G88
20231226 Tue 1006-1007 17520 612534 Andrew
                                                   TX to Ashgabat, G234(7)
20231226 Tue 1108-1111 17470 216354 Dave
                                                   TX to Chennai, G228
   1) 1001-1017 UTC on 18196 kHz and 1034 UTC on 18197 kHz: MFSK-66
       Several times before: Serdo v2 on 11562 kHz
   2)
      Brief false start
   3)
```

- 4) Simultaneous TX, times not exact
- 5) Carrier up until 0940
- 6) From 1433-1435 together with serdo v2
- 7) Carrier up until 1009

Many thanks to all contributors as usual. I wish you all the best for 2024, and please stay healthy.

Till the next issue I say good-bye

Jochen Schäfer, Numbers-, X06 Database and Teamkopf

### A special from our very own HJH:

## Gibt's was gut auf'm Kasten heute Abend Klaus? (Anything good on the box tonight Klaus?)

Well, okay, so maybe not what Fritz and Klaus would be saying during the war years (1939 to 1945 world tour, in case you missed it!) but close to! I knew that Germany, during the war years, had maintained a domestic TV network, having spoken to some residents who had lived through the war years in Germany. Here in Britain, we had our own domestic TV network, started and run by the BBC 2nd November 1932, transmitting from Alexandra Palace, London. It was shut down September 1st 1939, for fear that the signals would be a navigation aid to raiding enemy aircraft. Given that the location of such stations was known, and could be received quite well from aircraft at altitude in flight, with suitable receivers, and DFd for bearings. Not an unreasonable fear. Given that the Germans are themselves no amateurs when it comes to electronics, and all things radio, one is surprised that they continued broadcasting TV signals throughout the war, certainly in occupied France, of all places. The domestic service was, apparently, closed down for similar reasons, albeit later in the war than was the BBC. A well placed stick of bombs, courtesy of the RAF, later in the war, made the closure more permanent. During my army service in Germany, I found some information from Germans who lived through the war, and much more from a fascinating article which I recently read in the "Airwaves" magazine, published by "On the Air, "a vintage technology company based in Hawarden, Deeside, England. Here, I must express my thanks to the author for permission to use the information in that article, and stress that copyright for that article remains with him. So, let us see what Klaus and Fritz could have watched on the German TV, broadcast in glorious Adolfvision! (Authors sad attempt at humour!)

#### German TV, the start:

The first German electronic TV service started on 22nd March, 1935. The transmitter was located in Berlin at the Fernsehsender Paul Nipkow. The system used was a 180 line system, and viewers could watch programs for 90 minutes three times a week. Given that not many TV sets were privately purchased, the current government of the day were not slow to promote Fernsehstüben, which translates as TV parlours. These were a kind of poor mans cinema, and I am reminded of myself as a young boy, and other scruffy little urchins like myself. (None quite as scruffy as your author!) crowed around the front window of a local TV and radio shop, staring at the display TV set which was left on after the store had closed. (Programmes were not much, but it did wonders for our lip reading!)

Obviously, the government had an eye on the great propaganda value of this new broadcast medium. They had already instituted a cheap radio for the population, known as the "Volksempfänger" or "Peoples Receiver." This would allow most families to own a set, and hear the latest version of world events, as the current regime wished it to be known. As one can imagine, the chances of long distance DX on such a rig were as good as ones chance of clearing Beechams Brook on a pogo stick!



Test card from Paul Nipkow TV station, Berlin

Short as the viewing time seemed, come the Summer of 1936, and the Berlin Olympics, the viewing time increased to 9 hours daily, but only, it seems, for viewers in Berlin and Hamburg. Despite improvements in TV technology, any increase of service for TV gave way to vastly more use of radio, due no doubt to the huge numbers of listeners that radio provided. A new TV station was built at Witzleben, Berlin, and was named after Paul Nipkow. This was the man who invented the disc which, in mechanical TV systems, was used to scan the subject to be televised. It is the same as that which John Logie Baird used in his early systems. The German Post Office ran the TV sytem, which was called Deutscher Fernsch Rundfunk. (German Television Broadcasting.) Starting in 1935, it was the first TV transmitting station in the world. Having tried various systems, the one found to be best at this time was the 180 line, 25Hz frame signals. The system could use either an electronic system which used a Iconoscope or a Farnsworth type tube, or the mechanical system. Always trying for improvements, the makers were working on development of a 375 line interlaced system.

Another development made at this time was known as the Intermediate Film Transmitter. This device used a loop of 35mm cine film, specially treated with emulsion, then exposed in the normal way for photographic film. Beneath the camera was a light proof tank, in which the film was developed and scanned. The initial coat of emulsion was stripped off, then re-coated prior to being returned to the camera.

This process, despite being novel, and a definite "first", was also made mobile, being fitted in a motor vehicle. This made possible live televising of outside events, such as sports and games. Such a system was possible only in daylight, and there was a slight delay in transmission time. Fernseh AG went live with this system in 1935, thus, despite Baird using a similar sytem later, the German system was operational in 1935, giving them a probable first in TV outside broadcasting. The obvious problem of soundtrack synchronisation, was solved by recording the associated sound on a optical film track, giving a similar delay to that which was on the photographic film, thus both were in synch.

Despite the availability of TV receivers capable of receiving such outside broadcasts, the number of Germans able to afford such a set was relatively small. Thus, the previously mentioned Fernsehstüben, or even cinemas, were used for mass viewing. To facilitate this, a system was devised capable of showing large scale pictures on the screen. Berlin is known to have had 23 installations capable of such mass viewing.

At the Berlin Radio Exhibition of November1936, shortly after the Berlin Olympics, several manufacturers had new TV receivers on show. Some famous names were there, including Telefunken, FernsehAG, Loewe, Phillips and Te-Ka-De. There is no doubt that the recently televised Olympics had boosted public interest in Television, and the German manufacturers were keen to exploit this.

Despite the recent improvement in German living standards, given the current regimes steering the manufacturers in a direction which saw increased production of military related articles, there was not the surge in private TV receiver ownership anticipated by the manufacturers. According to an article by Michael Ockenden (Benelux DX Club,Holland) the German occupying forces in France began in 1941, TV transmissions from Paris. The department responsible was the Military Propaganda department, and the target audience was, initially, hospitals containing German Soldiers. The intention was, presumably, to boost morale and to counter the propaganda transmissions of we dastardly allied forces or the French Resistance. Quite how poor old Fritzi Schmidt or Klaus Grüber ('Allo 'Allo) would be able to tune into Allied transmissions in a ward full of other German troops, is not clear. And this WAS before BFBS was on air. (British Forces Broadcasting Service) Authors Note: On those long exercises, we got it by detuning a R222 receiver, (Freq range 50 to 100 Mhz) taking out the crystal, and sticking a fork into the aerial socket, and got BFBS no problem.



Figure 2: Test Card from Fernsehsender Paris

The transmissions were for 4 hours daily. Maintenance staff were taken from French POWs. with suitable knowledge of the equipment used. The German Air Force were suitably supportive, in the hope that the signals would interfere with the GEE system then in use for British bomber navigation. Seems only fair, given that we DID screw up their Knickbein (Crooked Leg) system circa 1940, a system used for similar reasons, only to guide German Bombers. The system must have been good, for the signals were intercepted at Beachy Head in UK. The WRNS operators who initially intercepted the signals, passed them on, to be recognised by 2 officers with pre war TV knowledge, as TV signals. With this knowledge, some 405 line receivers of pre war vintage were converted to receive 441 line transmissions. However, the transmissions of local UK transmitters were so strong, as to require the aerials of the 441 receivers to have to be relocated The German station sending out these

programs was known as Fernseh Sender Paris. (TV Transmitter Paris) Program content was newsreels and films, and were dubbed in German and French. The number of TV receivers in use is quoted as being approximately 1400, although why the programs would be dubbed in French as well, is not clear.

HJH December 2023. [With thanks to publisher of Airwaves Magazine for the inclusion of Technical Info as required]



Secret Intelligence Service [MI6] building taken from Starbucks coffee shop No Russian Barristas to be seen behind the counter

# **Chart Section Index**

- 1. Prediction Chart
- 2. M01 Schedule
- 3. Family III
- 4. XPA1 Wed/Fri XPA2 schedule p
- 5. M12 Yearly Repeats 2022 to 2023

## January 2024

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ц	ē	g	n	-1	t	u	UEQ.	1-	0.5 m	Tam	Jan	Feb
MO	ΤC	M€	E	되	S 0	SC	UTC	WK	Sth	Fam	kHz, ID,	kHz, ID,
.,							0215		<b>E</b> 11	0.2	8456	8456
X		х					0315		타니니	03	25#	25#
х	х	Х	Х	Х	х	Х	0400		V13	0	18040	9725 <b>,</b> 15388
							0400/0420		006	017	11616/ 9322	11616/ 9322
X	X	х	х	X			040070420		500	UIA	480	480
							0445		0117	0.2	11559	11559
	х		х				0445		SIIA	03	79#	79#
							0450		<b>D</b> 11	0.2	4909	4909
X							0450		타니니	03	41#	41#
х		Х		Х		Х	0455		HM01	18	10860	10860
	х		х		х		0455		HM01	18	11462	11462
х	х	х	х	х	х	х	0500		V13	0	11430	11430
									201.4	0.1.7	12211/10243	12211/10243
Х	Х	Х	Х	Х			0500/0520		MI4	AIO	952	952
											12153	12153
	Х		Х				0505		E11	03	33#	33#
											21906	21906
Х		Х					0510		S11A	03	65#	65#
											9441	9441
	х			х			0530		M01A	14	751	751
											9129 or 9192	9129 or 9192
		Х	Х				0530		M01A	14	498	498
											7692	7692
		Х	Х				0540		M01A	14	536	536
v		v		v		v	0555		нм01	1.8	10345	10345
21	x	23	v	21	v	25	0555		HM01	18	14375	14375
	25		21		25		0000		11110 1	10	23004	23004
x		х					0600		E11	03	94#	94#
			-								7850	7850
				х		х	0600		E11	03	25#	7050
							0.000		171 0	0	11420	10500 11400
X	Х	Х	Х	X	X	X	0600		VI3	0	10107/10007/10007	10522,11430
х	х						0600/0610/0620		XPB1	01B	1218//1338//1388/	13443/13943/14443
							0630/0640/0650			015	1448//1498//1588/	14943/15843/16343
	Х		Х				0600/0620/0640		XPA2	OIB	9382/105/2/11582	11126/12226/13926
			х	х			0600/0700	1/3	E06	01B	13960/16350	1/4/0/20085
											139	702
	х			х			0620		M01A	14	10233 or 10235	10233 or 10235
											354/458	354/458
		х	х				0620		M01A	14	9421	9421
											135	135
	x			x			0630		M01A	14	9447	9447
<u> </u>											143/796	143/796
		х	х				0630		M01A	14	8111	8111
											902/536	902/536
	x		x				0645		E11	03	7840	7840
											51#	51#
Х		Х		х		Х	0655		HM01	18	9330	9330
	х		Х		х		0655		HM01	18	13435	13435
v			v				0700		S112	03	9050	9050
			Δ						STIN		47#	47#
	v			v			0700		E11	03	6804	6804
	Δ			~			0,00				57#	57#
					v	v	0700		E11	03	5371	5371
					^				± ± ±	0.5	49#	49#
х	х	х	Х	Х	Х	х	0700		V13	0	7502, 8169	7502, 8169

n	Ъ	ed	nt	-H	۳ ل	ur	IITC	<b>1.</b> 7]2	S+n	Fom	Jan	Feb
MO	μ	We	ΤŢ	ц	S 0	SL	010	W K.	SUI	raili	kHz, ID,	kHz, ID,
						v	0700		M01	01B	5465	5465
						23	0,00		1101	01D	197	197
						х	0700/0720/0740		E07	01B	9326/10426/11526	9326/10426/11526
											345	345
		х			x		0700/0720/0740		M12	01B	search	11437/13437/14637
											10651	Check
	х			х			0710		M01A	14	297/358	297/358
											9175	9175
		х	Х				0710		M01A	14	146/208	146/208
											11104	11104
х		х					0715		E11	03	75#	75#
							0716		<b>D</b> 11	0.2	9130	9130
	х			х			0/15		ETT	03	63#	63#
	v			v			0720		MO1A	1.4	9151	9151
	~			^			0720		MOIA	1.1	728	728
		x		x			0725		S11A	03	23486	23486
							0,20		0		38#	38#
x							0745		E11	03	10213	10213
											26#	26#
	х		Х				0745		E11	03	13908	13908
	-										22#	22#
		х		х			0745		E11	03	1/3/8	1/3/8 3/#
v		v		v		v	0755		нм∩1	1.8	9065	9065
^	v	~	v	^	v	Δ	0755		HM01	18	11365	11365
x	x	x	x	x	x	x	0800		V1.3	0	7502. 8169	7502. 8169
										-	16357/17457/18357	17415/18215/18715
		х				Х	0800/0820/0840		M12	01B	343	427
		х					0800/0820/0840		XPA2	01B	11493/13393/13993	13387/13887/14787
							0000		<b>D</b> 11	0.2	14611	14611
	х	х					0820		타니니	03	13#	13#
			v	37			0820		<b>c</b> 11	03	6986	6986
			Λ	^			0020		<u>ртт</u>	05	43#	43#
x				x			0830		E11	0.3	23353	23353
											18#	18#
					x	х	0830		S11A	03	5371	5371
											37#	37#
х		х					0845		E11	03	12067	12067
											/⊥# 17270	/ L # 1 7 2 7 0
	х		Х				0845		E11	03	15#	15#
		v		v		v	0855		нм∩1	1.8	9240	9240
	x	Δ	x	~	x	Λ	0855		HM01	18	11462	11462
									11110 1	10	11092	11092
х		х					0900		E11	03	53#	53#
				х		х	0900/0920/0940		XPA2	01B	16327/18227/19627	15835/17435/19535
							0000/1000		000	017		10755/
		Х					0900/1000		300	UIA	searcn	480 search
х		Х					0910/0930/0950		XPA2	01B	14977/13971/13371	16102/14951/13991
			Х		х		0910/0930/0950		XPA2	01B	14794/13994/12194	16146/15846/14446
x				x			0915		S11A	03	6252	6252
									~		48#	48#
		x	х				0930		E11	03	7469	7469
											27#	27#

u	e	ba	າຕ	-1	۳ ۲	un	IITC		C+n	Fom	Jan	Feb
M	Ē	M€	Ę	되	ŝ	SL	UIC	W K.	SUN	raili	kHz, ID,	kHz, ID,
											17458 10.&25.	17458 10.&25.
х	х	х	х	х	х	х	0930		M14	01A	15994 11.&26.	15994 11.&26.
											when msg	when msg
						37	0930/1000		<b>F</b> 06	017	9946/8095	10423/ 8167
						X	093071000		FOO	UIA	480	480
Х		Х		Х		х	0955		HM01	18	9155	9155
	х		х		х		0955		HM01	18	12180	12180
	v			v			1000		F11	03	9079	9079
	Δ			л			1000			05	30#	30#
	Х	Х	Х	Х			1015/1025/1035		F01	01A	11079/ 9162/ 7509	12184/10169/ 8079
v		v					1045		E11	03	11100	11100
Λ		Λ					1013			05	69#	69#
v					v		1100/1110/1110		XPB1	01B	14769/14369/13969	15814/14814/14414
21					21		1130/1140/1150		MI DI	01D	13369/12169/11169	13914/13414/12214
	х			х			1100/1120/1140		XPA2	01B	10231/ 9331/ 8131	12147/10347/ 9247
		х	х				1100/1120/1140		XPA2	01B	13384/12184/10984	13967/13367/11567
			x				1110/1130/1150		м12	01B	13386/12189/11491	13386/12189/11491
			21				1110/1100/1100		1112	UID	725	725
Х	х	Х	Х	Х	х	х	1200		V13	0	7688	8300, 9276,13974
		x			x		1200/1210/1210		XPB1	01B	15425/14825/13425	14873/14373/13873
							1230/1240/1250			012	12125/10425/ 9325	13373/12173/11173
	Х					х	1200/1220/1240		XPA2	01B	10921/12221/13521	11163/13363/14563
		Х		Х			1200/1220/1240		XPA2	01B	13878/14978/16278	14956/16356/17456
	x	x					1205		E11	03	11559	11559
											46#	46#
x			x				1300		E11	03	4909	4909
											31#	31#
x	x	x	x	x	x	x	1300		V13	0	7688,11430	7502, 7688, 9276
							1.0.0.0 /1.0.1.0 /1.0.1.0					10522,11430,13974
	x			x			1300/1310/1310		XPB1	01B	20069/19369/18269	20035/19235/18335
							1330/1340/1350				17469/16269/15969	17435/16235/15835
					х		1300/1330		E06	01A	/3/// 5410	8116/ 5410
											480	480
		х		х			1310/1330/1350		XPA1	01B	14852/13952/11552	143/4/133/4/114/4
							1005 (1405				895	334
	х	х	х				1325/1425		S06	01A	search	search
							sporadic				10440	10440
	х			х			1400		S11A	03	10448	10448
											42#	42#
х			х				1400/1420/1440		M12	01B	1/418/10318/15918	193/3/1/4/3/101/3
											439	341
					х		1400/1420/1440		E07	01B	10323/ 9123/ 8023	11464/10/64/ 9264
											31U 11502/10202/ 0202	4/2
			х		х		1410/1430/1450		E07	01B	11595/10295/ 9295	7/5
											12262	12262
	х				х		1430		E11	03	1 1 H	41 #
											514	514
					х		1500		M01	14	5810	5810
							1 5 0 0 (1 6 0 0					19/
	x	х	х						S06	01A	search	search
<u> </u>							sporadic				10075 /10175 /10075	1 5 0 5 0 / 1 4 4 5 0 / 1 0 1 5 0
	х			х			1500/1520/1540		E07	01B	123/3/121/3/103/5	10000/14400/12158
┣──											5100	5400
			х				1530		E11	03	5409	5409
										1	2 6 #	∠ ७ #

u	це	g	nı	.н Ч	a t	ur	UTC	T.T.Iz	S+n	Fom	Jan	Feb
M	Ъ	M€	T	н	S 0	S	010	wк	SCII	ram	kHz, ID,	kHz, ID,
					v	v	1530		E11	03	4909	4909
					Δ	Δ	1000			05	36#	36#
Х	х	Х	Х	Х	Х	х	1555		HM01	18	11435	11435
					х		1600/1620/1640		XPA2	01B	9317/ 8117/ 7517	11461/10261/ 9161
	Х		Х				1600/1620/1640		XPA2	01B	10465/ 9165/ 8065	12173/1ß373/ 9373
	v					v	1605		E11	03	5432	5432
							1000			00	23#	23#
Х	х	Х	Х	Х	Х	х	1655		HM01	18	11530	11530
		x		x			1715		E11	0.3	5082	5082
							1,10				97#	97#
			x				1730		E11	0.3	5779	5779
							1,00				41#	41#
x						x	1745		E11	03	12924	12924
							1,10				24#	24#
Х	Х	Х	Х	Х	Х	Х	1755		HM01	18	11635	11635
	x		x				1800		M01	14	5320	5320
											197	197
					х		1800/1820/1840		M12	01B	11435/10598/ 9227	11435/10598/ 9227
											938	938
				х		x	1815		E11	03	6849	6849
											92#	92#
		х			х		1850		S11A	03	11486	11486
											28#	28#
х			х				1900		E11	03	6849	6849
											64#	64#
		х					1900/1920/1940		M12	01B	804// 6802/ 5/88	804// 6802/ 5/88
											463	463
				х			1900/2000	1/3	S06	01A		/812/ 5/43
											4505	637
		х			х		1910		E11	03	4505	4505
											39冊 10407	39# 10407
				х		х	1910		E11	03	LU48/	LU48/
<u> </u>							1040/1050/2000	1	E01	017	DL# 7620/ 6702/ 4024	0156/ 6044/ 4507
	X			Х			1940/1930/2000	1	LOT	UIA	1029/ 0/03/ 4034 5000	5092 5092
			х			х	2000		E11	03	508Z	900Z
											5Z#	5∠#

## M01 FREQUENCY LIST

## Frequencies may vary by a few kHz

JAN FEB NOV DEC	<b>M01/1</b>	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	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jan kHz, ID,	Feb kHz, ID,	Nov kHz, ID,	Dec kHz, ID,	Remarks
x		x				0315		E11	03	8456 25#	8456 25#	<b>8456</b> 25#	8456 25#	since 01/14, last log 11/23
	x	x	:			0445		S11A	03	11559 79#	11559 79#	<b>11559</b> 79#	11559 79#	since 05/22, last log 11/23
x						0450		E11	03	4909	4909 41#	4909 41#	4909	since 02/10, last log 10/23
	x	x	:			0505		E11	03	12153	12153	12153	12153	since 10/11, last log 11/23
x		x				0510		S11A	03	21906	21906	21906	21906	<pre>mar/Apr/sep/Oct at 12302, Mai-Aug at 16452 since 08/19, last log 11/23</pre>
						0600		E11	0.3	65# 23004	65# 23004	65# 23004	65# 23004	since 07/17, last log 11/23
_		^								94# 7850	94# 7850	94# 7850	94# 7850	until 03/23 at 0640z
			x		x	0600		EII	03	35# 7840	35#	35#	35# 7840	since 04/15, last log 11/23
	x	x	:			0645		E11	03	51#	51#	51#	51#	since 07/09, last log 11/23
х		×				0700		S11A	03	47#	47#	47#	47#	since 04/10, last log 11/23
	x		x			0700		E11	03	6804 57#	6804 57#	6804 57#	6804 57#	since 01/12, last log 11/23
				x	x	0700		E11	03	5371 49#	5371 49#	5371 49#	5371 49#	since 07/15, last log 11/23
x		x				0715		E11	03	11104 75#	11104 75#	11104 75#	11104 75#	since 06/21, last log 11/23
	x		x			0715		E11	03	9130 63#	9130 63#	9130 63#	9130 63#	since 02/11, last log 11/23
		x	x			0725		S11A	03	23486	23486	23486	23486	since 05/14, last log 11/23
x						0745		E11	03	10213	10213	10213	10213	since 03/14, last log 11/23
_	x					0745		E11	03	26# 13908	26# 13908	26# 13908	26# 13908	2nd transmission Thu 1530z since 01/20, last log 11/23
	~					0745		E11	0.2	22# 17378	22# 17378	22# 17378	22# 17378	aires 06/17, last log 11/22
		×	x			0745		EII	03	34# 14611	34# 14611	34# 14611	34# 14611	since 06/17, last log 11/23
	x	x				0820		E11	03	13#	13#	13#	13#	since 12/18, last log 11/23
		x	x			0820		E11	03	43#	43#	43#	43#	since 10/09, last log 11/23
x			х			0830		E11	03	18#	18#	18#	18#	since 07/15, last log 11/23
				x	x	0830		S11A	03	5371 37#	5371 37#	5371 37#	5371 37#	since 02/14, last log 11/23
x		x				0845		E11	03	12067 71#	12067 71#	12067 71#	12067 71#	since 09/10, last log 11/23
	x	х				0845		E11	03	17378 15#	17378 15#	13046 15#	17378 15#	since 07/17, last log 11/23
x		x				0900		E11	03	11092 53#	11092 53#	11092 53#	11092 53#	since 10/05, last log 11/23
x			x			0915		S11A	03	6252	6252	6252	6252	since 04/19, last log 11/23
		x x	:			0930		E11	03	7469	7469	7469	7469	since 02/14, last log 11/23
	×		×			1000		E11	0.3	9079	9079	9079	9079	since 11/16. last log 11/23
						1045		E11	0.2	30# 11100	30# 11100	30# 11100	30# 11100	aires 03/18 last las 11/22
^		^				1045		511	05	69# 11559	69# 11559	69# 11559	69# 11559	
_	x	x				1205		EII	03	46#	46#	46#	46#	since 03/10, last log 11/23 since 10/11, last log 10/23
	x	x	:			1230		E11	03	4909	4909	4909	4909	May-Aug at 1645z, Nov-Feb at 0505z
х		×				1300		E11	03	31#	31#	31#	31#	since 07/14, last log 11/23
	x		x			1400		S11A	03	42#	42#	42#	42#	since 02/10, last log 11/23
	x			x		1430		E11	03	13363 91#	13363 91#	13363 91#	13363 91#	since 10/15, last log 11/23
		×		I		1530		E11	03	5409 26#	5409 26#	5409 26#	5409 26#	since 06/14, last log 11/23 2nd transmission Mon 0745z
				x	x	1530		E11	03	4909 36#	4909 36#	4909 36#	4909 36#	since 03/14, last log 11/23 2nd transmission Thu 1530z
	x				x	1605		E11	03	5432 23#	5432 23#	5432 23#	5432 23#	since 11/15, last log 11/23
╞	x	x				1645		E11	03	- ~ #	- ~ "	- ~ "		since 10/11, last log 08/22
F		x	x			1715		E11	03	5082	5082	5082	5082	since 02/15, last log 11/23
╞		x				1730		E11	03	5779	5779	9/# 5779	9/# 5779	since 03/10, last log 11/23
x	$\vdash$	+	+		x	1745		E11	03	41# 12924	41# 12924	41# 12924	41# 12924	zna transmission Mon 0450z since 04/18, last log 11/23
F	$\vdash$		~		y	1815		- E11	03	24# 6849	24# 6849	24# 6849	24# 6849	since 05/16. last log 11/23
-	$\vdash$		^		^	1950		0113	0.3	92# 11486	92# 11486	92# 11486	92# 11486	einee 06/17, last log 11/22
-		^	+	x		1030		SIIA	0.5	28# 6849	28# 6849	28# 6849	28# 6849	
x		×				1900		E11	03	64# 4505	64# 4505	64# 4505	64# 4505	since U5/16, last log 11/23
		×		x		1910		E11	03	39#	39#	39#	39#	since 02/14, last log 11/23
			x		x	1910		E11	03	61#	61#	61#	61#	since 04/17, last log 11/23
		х	:		x	2000		E11	03	5082 52#	5082 52#	5082 52#	5082 52#	since 05/15, last log 11/23

## XPA1 Wednesday/Friday schedule

Zulu > Month v	<b>XPA1</b> H+10 H+ 1210 / 1310z	Wed/Fri S 30 H+50	chedule
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 > Month v	<b>XPA2</b> Sched p 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						

Ti	ime UTC			Freq kHz	ID	Μ	Т	W	Т	F	S	S	
				•									
Jan													
00 <b>30</b>	0050	0110	5886	6786	7486	874		Х			Х		
0800	0820	0840	16357	17457	18357	343			Х				Х
1110	1130	1150	13386	12189	11491	725				Х			
1400	1420	1440	17418	16318	14918	439	Х			Х			
1800	1820	1840	11435	10598	9327	938						Х	
2000	2020	2040	6782	5882	5182	781			Х		Х		
2200	2220	2240	5778	6778	8178	771					Х	Х	
2300	2320	2340	11079	10279	9179	136	Х			Х			
Feb	0050	0110	5724	(024	0100	706		v					
0030	0050	0110	5/34	18215	0100	/86		Х	v				v
1110	1120	1150	1/415	12180	18/15	427			Λ	v			Λ
1400	1420	1440	10272	12109	16172	241	v			Λ V			
1400	1420	1840	11/135	1/4/5	9327	038	Λ			Λ		y	
2000	2020	2040	7674	687/	5774	687			x		x	Λ	
2200	2020	2040	5832	6832	7732	887			Λ		X	x	
2300	2320	2340	9362	8062	7462	451	x			X	Δ	-11	
2300	2320	2340	7502	0002	/ 102	1.51	1			1			
Mar													
0010	0030	0050	16284	15984	14784	297*	Х						
00 <b>30</b>	0050	0110	5863	7463	8163	841		Х					
0800	0820	0840	15848	17448	19148	841			Х				Х
0900	0920	0940	14427	14927	16327	493		Х		Х			
1110	1130	1150	13386	12189	11491	725				Х			
1400	1420	1440	20849	19449	18249	842	Х			Х			
1800	1820	1840	11435	10598	9327	938						Х	
2000	2020	2040	10238	9138	7838	218			Х		Х		
2200	2220	2240	8126	7526	6826	178					Х	Х	
2300	2320	2340	9157	7957	6857	917	Х			Х			
Apr	0030	0050	14007	12027	10107	001*	37				37		
0010	0030	0050	14837	13937	12137	891*	Х	17			X		
0030	0050	0110	6854	8154	9354	813		X			X		
1110	1120	1150	12296	13891	14/91	387		Λ		v	Λ		
1400	1420	1440	20071	20371	10271	022	v			A V			
1400	1620	1640	16321	15821	1/721	332	Λ		v	Λ			v
1800	1820	1840	11/135	10598	9327	938			Λ			y	Λ
1900	1920	1940	13564	12164	11164	511			X		X	-11	
2000	2020	2040	12139	11139	10239	234	Х			Х			
2100	2120	2140	7575	8175	9175	511					Х	Х	
											_	-	
May													
00 <b>30</b>	0050	0110	8161	9161	10561	115		Х			Х		
0210	02 <b>30</b>	0250	13426	12126	10226	412*	Х				Х		
0800	0820	0840	13459	13959		446		Х			Х		
1110	1130	1150	13386	12189	11491	725				Х			
1230	1250	1310	12205	13559	14728	973	Х						
1400	1420	1440	20282	19482	18382	243	Х			Х			
1600	1620	1640	16113	15813	14813	188			Х				Х
1800	1820	1840	11435	10598	9327	938						Х	
1900	1920	1940	15936	14736	13536	975	37		X	17	X		
2000	2020	2040	13926	13426	11526	573	Х			X	v	v	L
2100	2120	2140	10843	10243	9243	822					X	Х	

\*Asiatic schedules No reception in the UK – Poor in Western Europe

]	Гime UT(			Freq kHz	ID	Μ	Т	W	Т	F	S	S	
Jun													
00 <b>30</b>	0050	0110	7857	9157		814		Х			Х		
0210	02 <b>30</b>	02 <b>50</b>	15918	14818	13918	989*	Х				Х		
0800	0820	0840	13531	13931		595		Х			Х		
1110	1130	1150	13386	12189	11491	725				Х			
1600	1620	1640	14926	14426	13426	944			X				X
1600	1620	1640	17427	16327	14627	436	X			X		37	
1800	1820	1840	11435	10598	9327	938			v		v	Х	
1900	1920	1940	15823	14823	13923	889	v		X	v	Х		
2000	2020	2040	13892	10544	0244	119	Λ			Λ	v	v	
2100	2120	2140	11144	10344	9344	155					Λ	Λ	
Inly													
0030	0050	01 <b>10</b>	7475	8075	9275	401		х			Х		
0210	0230	0250	15881	14781	13481	874*	х				X		
1110	1130	1150	13386	12189	11491	725				Х			
1600	1620	1640	13979	13379	12179	931			Х				Х
1600	1620	1640	16284	14984	14384	293	Х		-	Х			-
1800	1820	1840	11435	10598	9327	938				İ		Х	
1900	1920	1940	14968	14468	13368	943			Х		Х		
2000	2020	2040	12217	10817	9317	617	Х			Х			
2100	2120	2140	10767	10167	9267	712					Х	Х	
Aug													
00 <b>30</b>	0050	0110	6784	8184		713		Х			Х		
0210	02 <b>30</b>	02 <b>50</b>	12163	11163		114*	Х				Х		
1110	1130	1150	13386	12189	11491	725				Х			
1600	1620	1640	14681	13381	13381	683			Х				Х
1600	1620	1640	16251	14951	14451	294	X			Х			
1800	1820	1840	11435	10598	9327	938					••	Х	
1900	1920	1940	15931	14831	13531	985	37		Х	37	Х		
2000	2020	2040	12148	10648	9148	374	Х			X	v	v	
2100	2120	2140	10314	9114	8014	310					Х	Х	
Son													
0010	0030	0050	14942	13942	12142	991*					x		
0030	0050	0110	6942	8142	9284	912		x			X		
1110	1130	1150	13386	12189	11491	725				x	21		
1600	1620	1640	14927	13927	12227	992			X				x
1600	1620	1640	19546	18446	16346	543	x			x			
1800	1820	1840	11435	10598	9327	938						Х	
1900	1920	1940	13367	12167	10567	315			Х	İ	Х		
2000	2020	2040	11109	10309	9209	385	Х			Х			
2100	2120	2140	7961	6861	5861	988					Х	Х	
Oct										L			
0010	00 <b>30</b>	0050	17429	16229	15929	429*	Х				Х		
0030	0050	0110	6837	8037	9237	802		Х			Х		
0800	0820	0840	17441	18641	19241	462			Х				Х
1110	1130	1150	13386	12189	11491	725				Х			
1400	1420	1440	20168	19468	16268	142	Х			Х			
1800	1820	1840	11435	10598	9327	938			••		••	X	
1900	1920	1940	11135	10235	9235	122			X		X		
2000	2020	2040	10318	9218	8118	178	X			X	17		
2100	2120	2140	5794	6794	8094	770					Х	X	
										1		1	

\*Asiatic schedules No reception in the UK - Poor in Western Europe

]	Гime UT(	C		ID	Μ	Т	W	Т	F	S	S		
Nov													
0010	00 <b>30</b>	0050	16275	15975	14675	296*	Х				Х		
00 <b>30</b>	0050	0110	6874	8074		803		Х			Х		
0300	0320	0340	16184	14784	13484	174*		Х		Х			
0800	0820	0840	17432	18532	19132	451			Х				Х
1110	1130	1150	13386	12189	11491	725				Х			
1400	1420	1440	16292	14892	13392	283	Х			Х			
1800	1820	1840	11435	10598	9327	938						Х	
2000	2020	2040	6917	5817	5117	981			Х		Х		
2200	2220	2240	6859	7459	7959	849					Х	Х	
2300	2320	2340	10446	9046	7946	392	Х			Х			
Dec													
0010	00 <b>30</b>	0050	14947				Х				Х		
00 <b>30</b>	0050	0110	6832	7532	8132	851		Х			Х		
0300	0320	0340	14354	12154	11154	311*		Х		Х			
0800	0820	0840	16234	17434	18234	242			Х				Х
1110	1130	1150	13386	12189	11491	725				Х			
1400	1420	1440	15909	14609	13909	509	Х			Х			
1800	1820	1840	11435	10598	9327	938						Х	
2000	2020	2040	6792	5892	5092	546			Х		Х		
2200	2220	2240	5832	6832	7732	887					Х	Х	
2300	2320	2340	9134	8134	7534	457				Х			
										1			
								<u> </u>			<u> </u>		
								<u> </u>			<u> </u>		
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### Apologies to all readers for delay, caused in part by Royal Mail deliveries

#### **MESSAGES:**

E: A very prosperous and HNY to you and yours.

#### RELEVANT WEBSITES

ENIGMA 2000 Website:

Frequency Details can be downloaded from:

Time zone information:

Encyclopedia of Espionage, Intelligence, and Security

www.enigma2000.org

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

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

http://www.espionageinfo.com/



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