

# ENIGMA 2000 NEWSLETTER



<http://www.enigma2000.org.uk>



*The pilot of a flying boat collects a code message from "Sparks," the wireless operator.*

*[Taken from 'Britain's Wonderful Fighting Forces' Pub Odhams Press Ltd, date unknown]*

**ISSUE 125**  
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<http://www.enigma2000.org.uk>

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See last page also.

# Editorial

Propagation is changing it seems; we have experienced some good lifts, HF and loVHF along with odd lifts VHF and into UHF. Some evidence of DX on 70cm NBFM even. Polytones, especially XPA1 seem a little harder to catch although some very strong sigs on XPA2.

Summer brings lightning and I am utilising my indoor loop. Not as noisy as my vertical and seems as good as anything else I can connect. Also have a 'special' antenna for VHF but that is another story best not told.

Whilst we are on special things we received a request of Cornwall Frequencies; presumably for the G7. Even if we had, and we don't, there is no way we'd disclose them. There must be plenty of other groups who do and it's just a matter of a search.

Thoughts of PoSW:

Short wave propagation remains as variable as ever; however there has been some lively activity at the very top end of the spectrum during May and June with a great deal of activity in the 10 metre amateur band presumably due to seasonal sporadic-E propagation. Very strong signals from most of Europe, especially from the south of the continent, France and Italy in particular, SSB and CW together with digital data signals around 28075 and also FM around 29600. Several strong beacons logged in the lower part of the 10 metre band sending identifying in slow CW, and also a great deal of activity in the 27 MHz CB band. However, none of this has any relevance to the receiving of number stations since there are none operating in this part of the short wave spectrum – unless someone knows otherwise.

Not Number Station but Possibly Interesting:-

Morse station RMP, known to be Russian Navy in Kaliningrad if I recall correctly, has been a strong signal in the evenings after 1800 UTC on 8191 and 5894 kHz - frequencies rounded off to the nearest kHz, pauses frequently then starts up again with a "REO DE RMP QTC...." routine. Appears to be sending the same CW traffic on both but not exactly in parallel; listening on two receivers 8191 seems to be running slightly ahead of 5894. Also 8191 is modulated by a low frequency audio tone which produces a strange effect when received. At first was assumed to be ripple due to a power supply problem, open circuit filter caps or whatever but since it is consistent on a daily basis it must be deliberate although to what purpose is not obvious unless it is for the benefit of radio operators of limited experience to avoid confusion with other signals by giving the signal an unmistakable characteristic which could not be confused with anything else. 5894 kHz, however, is not modulated and is a pure CW note. On several occasions in May RMP had gone from both frequencies when checked at some time after 1900 UTC but was found lower down the band on 8114 and 5179 kHz. Again the higher frequency was modulated by a low frequency tone.

"Slavic Ranters" - as I call them still busy on 7055 kHz:- first noticed a couple of years ago or maybe more on 7055 inside the 40 metre amateur band, strong signal, OM voice in a Slavic language, maybe Ukrainian since a word sounding like Ukraine is heard frequently, some political tirade connected with the ongoing situation between Ukraine and Russia, presumably. Very strong signal on the evening of 18-June, at times with music. This must be going on with the approval of the authorities of whichever country this is coming from; if anyone did something like this in this country it would not be long before there would be a loud knock on the door. Update:- noticed some other Slavic activity on a different 40 metre frequency:- 27-June-21, Sunday:- 1926 UTC, 7100 kHz, very strong LSB signal, OM in whatever language it is, sounding off about who knows what, followed by music, a song, male voice, accompanied by acoustic guitar in the "folk song" style, the word "Rooski" repeated many times during the performance which I guess means "Russian".

Medium wave broadcasting soon to be a thing of the past? The mention of Radio Moscow and Radio Luxembourg in the last newsletter - ah yes, K E Y N S H A M - Horace Bachelor's Infra-Draw method for winning the football pools, remember it well - on medium wave a mode of broadcasting which appears to be on the way out. The BBC operates a large number of local radio stations in the UK, most radiate their programming on medium wave AM, FM and also DAB - as well as on-line. The local BBC station for my area is Radio Cambridgeshire, medium wave frequency 1026 kHz - or was. I noticed in mid-May that there was a continuously running announcement on 1026 that BBC Cambridgeshire was no longer on this frequency and informing listeners of the alternative ways to listen, and I noticed in the third week of June that the station had gone. Several other BBC local radio stations in other parts of the country have also left medium wave and some commercial stations.

Normandy Landings commemorated by amateur radio:- June 6 saw the 77<sup>th</sup> anniversary of Overlord, the Normandy landings in 1944. There is a group of radio amateurs who use old-school amplitude modulation on 3615 kHz in the 80 metre band, they are usually active in the mornings around 7 to 8 am local time and use old military radios together with some amateur equipment from the 1950s, names such as Heathkit and Labgear heard and unusually in this day and age at least one individual uses a home-brew TX on occasion. On the morning of Sunday 6-June some of them were heard engaged in a special net in remembrance of the landings, operators appeared to be using equipment from the era, 19 Sets and so on. Signal strengths surprisingly good considering at this time of year the sun has been up for several hours by 0730 UTC.

Comments on Newsletter 124:-

Interested in the report of a new version of *The Ipccress File* being made by ITV; as it happens a few days before I read this I had a delivery of a batch of DVDs, one of which was of the original 1965 film. For some time I have been building a collection of films which I like on DVD. People keep telling me that the DVD and Blu-Ray are outdated and that the modern way of watching films is over an internet – broadband connection. The problem here, as I see it, that if the internet goes down then you can't watch your film. Also there is the question of censorship; the films I like mostly show white males in a positive role, Michael Caine in *The Ipccress File* and just running my eye over my DVD shelf the likes of John Wayne, Clint Eastwood, Robert Di Nero, Jack Hawkins and many others. The Marxist feminist pressure groups which now have so much influence in Western society may pull out all the stops to get such films banned in the not too distant future so it is a good idea to have copies of films that one likes on DVD and can be viewed independently of any off-air or internet connection. Also, with a DVD there are usually "extras" included on the disc, interviews with the leading members of the cast and individuals connected with the production side, in the case of *The Ipccress File* the blurb on the back says, among other items, "Exclusive new interview with Sir Michael Caine" and "1969 documentary "Candid Caine" featuring Sir Michael Caine talking frankly about his career. As regards censorship of the internet, there is apparently a bill going through Parliament at the moment which if passed will restrict what can and cannot be posted on the internet in this country. Lots of speculation that it will be used to take down anything on the internet which questions the path taken by the Government over the virus crisis, mass immigration and "climate change" but as with other legislation there is likely to be "mission creep" into other areas. I came across an example of internet censorship myself just the other day; feeling rather bored I scrolled through the YouTube history on my laptop when my attention was caught by a film that I had not looked at for a while, with adult themes and apparently recorded off TV because it has the Sony logo in the top right-hand corner and has been dubbed into Spanish despite being an American film and the auto-translation into English is, frankly, rubbish.

When I clicked to play the film something came up on the screen informing me that this film contained age-related content and in order to prove I was over 18 I was to type in the number of my credit card “No payment will be taken”, it said reassuringly. I guard my credit and debit card numbers very jealously and, being ever aware of the possibility of on-line fraud, I certainly wouldn't reveal them just to watch an 18 movie so I had to forgo the pleasure of watching that particular production. [Thanks Peter]

## **HELP! Needed please**

Via two members we have received a request for help. A transmitter has been acquired for which little is known. The capacitors are of 'Hunts' origin and the valves believed to be post war production by Messrs Phillips. The older of you will recognise the polarised 4/5 pin plug used to connect the -LT, +LT and the -HT and +HT [and sometimes Grid Bias also].

The black crackle case seems to have been professionally made and the unit, a three valve [tubes to US readers] device it appears Crystal controlled. We don't have the Valve types sadly and there is not circuit available as yet so we're asking any readers [members or not]who know about this little unit to please contact ENIGMA 2000 with detail.





Quite a nice little unit throughout and easily mistaken for an amateur constructed QRP unit. Unable to see where the Key or keying unit would fit unless the white 'knob' bottom right is an integral key with contacts below such as that in the Paraset or WS46.

So, anyone with some knowledge about this piece please be so kind as to contact ENIGMA2000 via website. Thanks.

## Underwater cables arouse interest of world powers

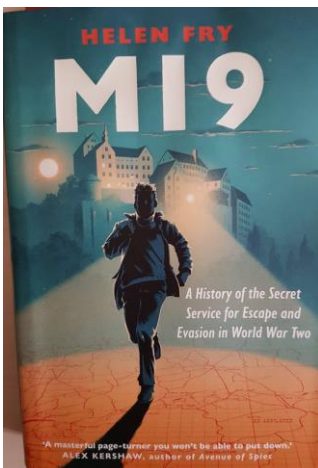
<https://www.msn.com/en-gb/video/watch/underwater-cables-arouse-interest-of-world-powers/vp-AAKUuRB?ocid=msedgntp>

*The accompanying video is well worth watching; we all know about the US 'IVY BELLS' operation [and other 'probes'] so it's obvious what France is up to. Even other well known Signal Organisations are at it; certain online media and an investigative journo have really said more than one should*

Some 99 percent of global telecommunications now transit below our oceans, via thousands of kilometres of underwater cables. Billions of pieces of information are exchanged, some of which are arousing the interest of world powers. Intelligence services around the world are increasingly using these cables to spy on other countries. Our France 2 colleagues report, with FRANCE 24's Emerald Maxwell and Jennie Shin.

<https://www.msn.com/en-gb/video/watch/underwater-cables-arouse-interest-of-world-powers/vp-AAKUuRB?ocid=msedgntp>

## Recommended Reading

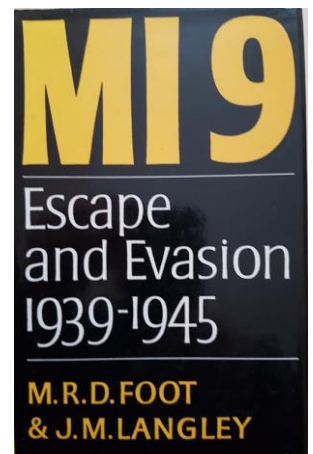


### MI9 Helen Fry

This is the second book I have read by Helen Fry, the other 'M Room' was picked up at a book launch. Excellent, accurate read, signed by the author and the obvious subject of the book. We've all seen 'The Great Escape' a brilliant film about a mass escape from a German PoW camp. The escapes were not as shambolic as they looked. My Uncle Gordon was a PoW, taken on Crete. He described to me condx as he endured. Some camps were run properly others ok. One person he did mention was Douglas Bader.

Every time he escaped the remaining prisoners' rations and Red Cross boxes were stopped for 3 months at a time. Much happiness, he related, when Bader was moved to Colditz. Absolute nuisance thought most of those who had the misfortune to be in the camp with him and he said that Bader was moved not because he was an escaper but because some fellow PoWs hatched a plan to murder him to stop his escaping and punishments.

Well, you won't read that in this book but you read about the way in which escape lines were set up, how they were maintained and the development of 'tools' to assist with prisoners escape.



Not surprisingly prisoners who reached the UK were debriefed and an entire intelligence picture built up about the camps, those who ran them, conditions, morale and of course the ease with which prisoners could leave.

It's all in Dr Fry's book. New records came to light and are well researched along with other papers and records.

You'll see I have put up a book of a similar title; I bought this literally yonks ago. I found it interesting but it was hard going, consisting of personal experience and lots of stuff from other referenced works. Much of Dr Fry's writings, referenced to official documents, covers the subject in a deeper but in an easy read. Messrs Foot and Langley, both PoWs, wrote with memories and what was available at the time. The book is difficult going, toffee like I once described it, and in a sense reads much like a police statement.

I recommend Dr Fry's offering whole heartedly; you will not be disappointed reading this excellent work which also [like the other book] covers events surrounding escape and evasion in the Far East [*HK to be precise – Argyll Road who some might recall certain delights nearby*].

## Manitoba: 'Wake-up call for Canada': Security experts say case of 2 fired scientists could point to espionage

Couple shared information, virus samples from high-security lab with Chinese institute

Karen Pauls · CBC News · Posted: Jun 10, 2021 3:00 AM CT | Last Updated: 11 hours ago

<https://www.cbc.ca/news/canada/manitoba/winnipeg-lab-security-experts-1.6059097>

Dr. Xiangguo Qiu, a prominent virologist at the forefront of an ongoing RCMP investigation, is seen in an undated screengrab at the Winnipeg-based National Microbiology Laboratory. She was fired from her post in January, but officials won't say why. (CBC)

China says its scientific co-operation with Canada should not be politicized, responding to questions about two scientists fired from Canada's only Level 4 lab — a case that has led to an RCMP investigation, demands for details in Parliament and concerns about Chinese espionage.

Very few people know why Dr. Xiangguo Qiu and her biologist husband, Keding Cheng, were marched out of the Winnipeg-based National Microbiology Lab (NML) two years ago and stripped of their security clearance. They were officially fired last January.

However, two national security experts believe the case of the scientists raises the possibility of Chinese espionage.

"It appears that what you might well call Chinese agents infiltrated one of the highest prized national security elements when it comes to biosecurity and biodéfence," said Christian Leuprecht, a security expert and professor at the Royal Military College and Queen's University.

When asked about the case during a daily briefing in Beijing, Wang Wenbin, a spokesperson for China's Ministry of Foreign Affairs, said: 'China and Canada have some scientific co-operation, which is quite normal and should not be politicized.' (Mark Schiefelbein/The Associated Press)

At a news conference in Beijing on Wednesday, the spokesperson for China's Ministry of Foreign Affairs was asked if Qiu and Cheng were involved in espionage on behalf of the Chinese government.

In May 2019, the couple shared information and samples of Ebola and Henipah, two kinds of paramyxovirus, with the Wuhan Institute of Virology after the Winnipeg lab agreed to send the samples to the Chinese lab.

"I'm not aware of what you mentioned. China and Canada have some scientific co-operation which is quite normal and should not be politicized," said Wang Wenbin in response to questions from CBC News.

Qiu and her husband, Keding Cheng, were marched out of the Level 4 lab in July 2019, but only terminated in January. (Governor General's Innovation Awards) A Level 4 virology facility is a lab equipped to work with the most serious and deadly human and animal diseases. That makes the Winnipeg lab one of only a handful in North America capable of handling pathogens requiring the highest level of containment, such as Ebola.

The Public Health Agency of Canada (PHAC) has said in the past that the National Microbiology Lab routinely shares samples with other public health labs and that the transfers follow strict protocols.

"The [National Microbiology Lab] is open to providing materials in a safe, responsible and transparent fashion with other labs in order to foster global collaboration rather than enable research on any given disease to be monopolized by specific teams," PHAC president Iain Stewart told a parliamentary committee in May.

"While this is the only time that we have shared virus samples with this particular lab, collaboration with labs outside of Canada are critical to advance public health research into infectious diseases."

No charges, but RCMP investigation continues

While Leuprecht has no inside information about the couple's case, he said the known facts of the story just don't add up. If the pair had committed a straightforward national security violation, he said, charges would have been laid.

Despite a lack of charges, Qiu and Cheng remain under investigation by RCMP.

RCMP spokesperson Cpl. Julie Courchaine would only say that the Manitoba RCMP's federal serious and organized crime section is taking the lead in the ongoing investigation.

Kiera Lawson, a spokesperson for the Canadian Security Intelligence Service (CSIS), also declined to answer questions, saying: "We do not publicly comment [on], or confirm or deny the specifics of our own investigations."

Qiu, a medical doctor from Tianjin, China, came to Canada in 1996 for graduate studies. (CBC)

Qiu is a medical doctor from Tianjin, China, who came to Canada for graduate studies in 1996. She started at the University of Manitoba, but began working at the national lab as a research scientist in 2006, working her way up to become head of the Vaccine Development and Antiviral Therapies section in NML's special pathogens program.

She was also part of the team that helped develop ZMapp, a treatment for the deadly Ebola virus, which killed more than 11,000 people in West Africa between 2014-2016.

But in July 2019, just months after she sent a shipment of Ebola and Henipah viruses to the Wuhan Institute of Virology in China, Qiu, Cheng and the Chinese students she was working with were asked to leave the lab.

Canadian scientist sent deadly viruses to Wuhan lab months before RCMP asked to investigate

Scientists let go from National Microbiology Laboratory amid RCMP investigation

Ebola is considered a "Category A" bioterrorism agent by the U.S. Centers for Disease Control and Prevention because it can easily spread and results in high death rates. Henipah/Nipah are classified as "Category C" because they can be engineered for mass dissemination.

At the time, sources told CBC News several computers had been seized, a lab log book was missing and Qiu's regular trips to China were suspended.

Demanding answers

For months, the special parliamentary committee on Canada-China Relations has been demanding PHAC provide answers around that shipment of viruses, the reason that the scientists were fired and whether they are Canadian citizens.

PHAC has refused, citing privacy legislation.

PHAC has said the case involved a possible policy breach, an administrative matter and that the public was never at risk. Recently, however, officials have said it's a matter of national security.

O'Toole wants an investigation of Winnipeg virus lab's ties to China

PHAC president given until Friday to explain why two scientists let go

Last week, Parliament passed a Conservative motion demanding PHAC turn over hundreds of pages of uncensored documents.

The documents have now been shared with the National Security and Intelligence Committee of Parliamentarians (NSICOP), which is made up of MPs who are appointed by the prime minister and provided national security clearance.

After two scientists working at the National Microbiology Lab in Winnipeg were stripped of their security clearance, national security experts have raised concerns about the possibility of espionage and, on Wednesday, MPs demanded answers in the House of Commons. 2:03  
Executive director Lisa-Marie Inman declined to answer questions about the group's work, saying the committee speaks only through its reports. Those reports are vetted by the prime minister before they are made public.

Leuprecht believes the documents may reveal larger security issues at the lab — and may expose the role of Canada's allies in the investigation.

"This would also explain why you haven't charged them, because once you charge them, then eventually you have to put people on trial. And when you put people on trial, then you have to disclose the evidence that you have. So the government might quite intentionally be trying to keep this sort of relatively below the radar as much as it can," he said.

"This needs to be a wake-up call for Canada about how aggressive the Chinese have become at infiltrating Western institutions for their political, economic and national security benefits," he said, pointing to concerns about Chinese espionage in recent annual reports by CSIS and NSICOP.

Christian Leuprecht is a security expert and a professor at the Royal Military College of Canada and Queen's University. (CBC)

Collaboration with China

In newly released documents, PHAC outlines a secret level clearance is required to work at the NML and anyone working with human pathogens and toxins must have clearance under the Human Pathogens and Toxins Act (HPTA).

The Winnipeg-based National Microbiology Lab is the only Level 4 lab in Canada, enabling its scientists to work with highly dangerous microbes. (John Woods/The Canadian Press)

Since Qiu had access to the Level 4 lab, it indicates she had both clearances.

In 2017 and 2018, Qiu made at least five trips to China, including one to train scientists and technicians at China's newly certified Level 4 lab in the city of Wuhan.

According to documents obtained by CBC News through access-to-information requests, the trips were funded by a third party, the identity of which was redacted.

An email sent by Qiu on July 4, 2018 is seen redacted documents recently released by the Public Health Agency of Canada. (Public Health Agency of Canada)

In 2017-2018, Qiu authored or co-authored approximately 50 scientific papers. Although she has not been allowed into the NML since mid-2019, she has another 32 publications to her name during that time, including six in 2021. Most involve Ebola or Marburg viruses, as well as Chinese scientists and funding.

Qiu had also brought over Chinese graduate and post-graduate students to work in her lab.

The Globe and Mail recently reported that one of those scientists was Feihu Yan, from the People's Liberation Army's (PLA) Academy of Military Medical Sciences.

Sources inside the lab tell CBC News they saw the Chinese military scientist at the NML. Qiu has co-authored at least eight publications with Yan.

PHAC spokesperson Eric Morrissette declined to answer questions about Yan's work in Winnipeg, saying "the individual was not an employee" of the lab.

CBC News previously received hundreds of pages of documents through an access-to-information request, detailing a shipment of Ebola and Henipah viruses sent from the Winnipeg lab to the Wuhan Institute of Virology in China. (Karen Pauls/CBC News)

Leuprecht and others are critical of the lack of oversight that allowed researchers like Yan to get inside the lab.

"China has a very active, very aggressive and extremely dangerous bioweapons program," said Leuprecht. "So all the research that's being generated here could easily be reappropriated by the Chinese authorities to advance rather nefarious causes."

With China's track record of intellectual property espionage, another expert says it's concerning that Chinese research institutions were helping to fund some of the work done in collaboration with NML scientists.

"Why did our security procedures not identify that this was not a good idea, that these individuals, given their background, should not be given security clearances?" said Scott Newark, a former Alberta crown prosecutor, executive officer of the Canadian Police Association, and policy adviser to the Ontario and federal governments.

Qiu, right, was given a Governor General's award in 2018 for helping to develop ZMapp, a treatment for the deadly Ebola virus. (CBC)

Whereabouts unknown

Qiu and Cheng were last publicly seen at a memorial service for Dr. Frank Plummer, the former head of the national lab who died in February 2020.

They have never been reached for comment, despite visits to their two Winnipeg homes. Neighbours say they haven't seen the couple at their primary residence for months. The second home is a rental property. Former co-workers say Qiu has also bragged about owning a mansion in China.

A recent visit to their property near the beach community of Gimli, Man., found an empty lot with no cottage built on it.

Neighbours say they haven't seen Qiu and Cheng at their primary residence in Winnipeg in recent months. (Karen Pauls/CBC)

Newark said their properties — valued at about \$1.7 million — raise questions about if they had incomes outside of their federal government salaries, a total of about \$250,000 for the two of them.

"That is an absolute profile ... a big red flag," he said.

Newark also said the Trudeau government's attempts to keep the details of this case under wraps have parallels to a joint RCMP-CSIS intelligence report in the late 1990s called Project Sidewinder.

It found the Chinese government and Asian criminal gangs had been working together in drug smuggling, nuclear espionage and other criminal activities that constituted a threat to Canadian security.

Canadian government scientist under investigation trained staff at Level 4 lab in China

Representatives of Chinese dissident groups reject Trudeau's comments on racism

However, the report was shelved amid allegations of political pressure not to antagonize China. The then-Liberal government was trying to encourage more trade between the two countries.

"No news is good news, is how we often refer to it," Newark said.

"It's playing out again in this case example. There are important security issues — and not just for us, but for all the other countries that we partner with as well — because if there's information that's going from us to a hostile foreign state, that is something that has significant ramifications."

<https://www.cbc.ca/news/canada/manitoba/winnipeg-lab-security-experts-1.6059097>

## **Stasi's 'no touch' torture: It was the East German secret police's most terrifying weapon - gaslighting mind games that drove its own citizens mad... and the lessons for today's social media generation couldn't be more stark**

The Stasi routinely beat confessions out of suspects before they went on trial  
Reputation for violence against so-called troublemakers and enemies of state  
Informants were everywhere and people in state lived in fear of being accused  
By TONY RENNELL FOR THE DAILY MAIL  
.PUBLISHED: 22:44, 8 June 2021 | UPDATED: 09:17, 9 June 2021

<https://www.dailymail.co.uk/news/article-9665947/Stasis-despicable-torture.html>

There is an old joke about the Stasi, the brutal secret police who back in the bad old days of the Cold War ran — with a rod of iron — what was then the hardline communist state of East Germany.

It goes like this: ancient human remains are found deep in a cave and archaeologists are having trouble determining their age, so they call in forensics teams from the American CIA, the Russian KGB and the Stasi.

The CIA team go in first with masses of equipment and come out four hours later to pronounce that the remains are about 500,000 years old.

The KGB team are next in and after eight hours announce that their superior technology dates the remains at 515,550 years ago.

Then the Stasi team go in — two men in grey suits with just a duffel bag between them.

Shortly after come sounds of shouting, swearing and banging, which go on for the next two days. When the Stasi team finally emerge, dirty and dishevelled, their clothes ripped, their verdict is that 'the remains are 515,553 years, 7 months, 3 weeks and 5 days old'.

The amazed archaeologists ask how they know such an astonishingly exact date. 'He confessed,' the Stasi agents say.

Behind the tongue-in-cheek humour was a grim reality that was anything but funny. The Stasi routinely beat confessions out of suspects before they went on trial or disappeared.

Their reputation for violence against so-called troublemakers and enemies of the state — anyone in East Germany suspected of being a doubter let alone a full-blown dissident — was on a par with the Gestapo it had replaced when the Nazi regime fell in 1945 and Germany was divided.

Arbitrary arrest, solitary confinement in special prisons that were censored from maps and officially did not exist, systematic brutality, sleep deprivation and torture — these were the everyday weapons of the nearly 100,000 policemen in the Ministry of State Security as they kept their sinister tabs on a third of the entire nation, logging their every move and building up bulging paper files of information on them.

Informants were everywhere. People lived in fear of being accused. Here was the nightmare of George Orwell's Nineteen Eighty-Four in all its grim, dystopian reality.

This was a country where the tap on the shoulder in the street was common, followed by the chilling words: 'State Security. Come with me.'

Where mail was routinely intercepted and 90,000 letters a day steamed open for inspection and wiretaps and hidden microphones were commonplace.

Where people's body scent was collected on pieces of cloth and stored in glass jars, so they could be tracked by dogs if they went missing. Where specialist teams even broke into homes and stole women's underclothes for the same purpose.

The trouble was that all this sinister behaviour was denting East Germany's international credentials. It liked to present itself as the perfect socialist state that put the West to shame but it was coming under fire for its breaches of human rights. It needed a makeover of its image, while still retaining its grip on the people.

So in the 1970s, the masterminds at Stasi School — formally known as the College of Legal Studies — decided on a new, more subtle tactic of repression, a way of stamping out rebellion without the overt use of force.

Instead of pounding their suspects into submission, they would send them mad. And so began the policy of Zersetzung.

The word meant disintegration or corrosion or decomposition. Today we would call it 'gaslighting' — playing with someone's mind and self-worth until any resistance crumbles and he or she becomes either compliant or apathetic.

Another phrase for it was 'no-touch torture'.

It was an aspect of East German history largely buried after the Berlin Wall came down in 1989 and the two German states reunited the following year.

According to a new book, *The Grey Men*, by former FBI agent Ralph Hope, the men and women of the Stasi who had enacted Zersetzung disbanded and disappeared into unified Germany to reinvent themselves and disguise their past.

That was more than three decades ago, so why, you may wonder, should we care about it any more.

Because, as we will see later, what the Stasi did has chilling resonances to life today

There were scores of ways to play mind games with suspects, in a bid to create panic, confusion and fear. Some were obvious. The phone would ring but when it was picked up there was no one there. Then it would ring again, and again.

But Stasi agents were also known to break into suspects' homes when they were out and change the time on the alarm clock in the bedroom so it went off unexpectedly — and frighteningly — in the middle of the night.

Pictures on walls were moved, an electric razor in the bathroom left running, socks moved to a different drawer, furniture shifted to a different position, even the coffee mysteriously disappearing from the kitchen and the variety of tea in a cupboard replaced by a different one.

It was the little things like this that freaked people out, leaving them, in the words of the Stasi handbook, 'paralysed, disorganised and isolated'.

A married target would be sent falsified photographs of himself in a compromising situation or postcards from another woman demanding child support payments; his wife would get a sex toy in the post; a vibrator — which was classified as decadent Western frivolity — would be planted in his home to embarrass and incriminate him.

All these were tactics to undermine family relations and help destroy him.

'Decomposition was designed to unglue a dissident's psyche, to chip away at his sanity,' according to U.S. academic Professor Dominic Tierney of the think-tank the Foreign Policy Research Institute in Philadelphia.

'A regime opponent would find himself trapped in a Kafkaesque nightmare. Everywhere he turned, an evil force seemed to be hounding him, even though he could not prove that he had been singled out.

'Who would believe that the government was secretly stealing his tea towels?'

The effects were powerful. Some victims killed themselves, others suffered insomnia, panic attacks and nervous breakdowns. One target called what happened to him 'an assault on the human soul'.

Insidious step was piled on insidious step to systematically undermine individuals and prevent them from living a normal life. Their homes were bugged, telephones tapped, cars mysteriously sabotaged, bicycle tyres slashed.

A promotion at work would be denied for no good reason. Medical notes were interfered with and they were diagnosed for treatment they did not need.

On whispered Stasi instructions, staff in bars and shops would refuse to serve them, leaving them feeling isolated, unwanted, outsiders.

The continual sense of being followed and checked on, that no one around you could be trusted, was inevitably damaging — as at least one woman would later discover from her Stasi file, the person who had informed on her for years was her own husband, the father of her sons.

The aim, writes Max Hertzberg, veteran investigator in the Stasi archive, was to 'switch off' a person's supposed dissident activities.

The secret policemen didn't care whether this happened through disillusionment, fear, burn-out or mental illness. 'All outcomes were acceptable, and people's mental health and social standing during or after an operation were of no interest to them.'

Sullyng someone's reputation was always an effective tactic, as a 14-year-old girl named Regina found out when she was targeted as a way of getting at her father, who ran his own business as a hairdresser and was therefore 'an enemy of socialism'.



The word was put around that she was a Flittchen — promiscuous — and strangers would stalk her, making lewd remarks and touching her up. She was followed and twice men tried to rape her. In the end she gave up the struggle and became a Stasi informant herself, grassing up her own parents.

As well as against individuals, Zersetzung tactics were also used to undermine organised groups of dissidents, the sort that printed anti-government leaflets or made contact with the West.

Dissent and distrust would be stirred up among members with rumours of collaboration with the authorities, of informants in their midst, until they were so busy suspecting each other that they had no time to be active opponents of the state any more.

An agent would infiltrate a group and then surreptitiously disrupt what they were doing by, for example, agreeing to tasks but not getting round to them, losing equipment and sabotaging the production of dissident material.

All these soul-destroying activities of the Stasi were frankly hideous and there is every indication that they worked. Many opponents of the regime simply caved in and shut down their activities, worn down and worn out by the relentless pressure on them.

'The Stasi didn't try to arrest every dissident,' writes German historian Hubertus Knabe. 'It preferred to paralyse them and it could do so because it had access to so much personal information and to so many institutions.'

Today, more than 30 years on, what deeply concerns him is that the evils of the Stasi are not acknowledged in the reunified Germany but swept under the carpet of history.

'Not until the communist dictatorship is as firmly in mind in Germany as the criminal regime of the Nazis will we really have succeeded in coming to terms with the legacy of the Stasi,' he says.

This is the sentiment echoed in *The Grey Men*. The book, by former FBI agent Ralph Hope, whose beat included Eastern Europe, tries to track the progress of those thousands of Stasi secret policemen who never faced punishment for what they had done but simply disappeared into the reunited Germany, reinventing themselves as businessmen, academics and politicians.

What's more, 21st-century Germany, he says, seems happy to connive in this, with 'apathy and a misplaced nostalgia for a 'quaint and fun' East Germany that never existed' supplanting the historical truth.

So much so that, according to polls, a majority of students in Germany today think there were democratic elections in the old East Germany whereas the truth is that it was a one-party, Left-wing dictatorship whose power was protected by thugs.

'Denying that the Nazi Holocaust happened is ridiculous and widely offensive. In Germany it's also illegal to do so. But not so for those who deny and minimise the trauma of the hundreds of thousands of victims of the 40 years of German communism.'

As for Zersetzung, Hope has a chilling modern take on that.

In the virtual world, information on all of us is stored away by tech giants such as Facebook, LinkedIn, Twitter, Google, Snapchat and Instagram.

Billions of people round the world willingly give away their personal details, and intelligence and police agencies, as well as employers, media and criminals, routinely draw on them.

Where the Stasi had to wheedle out the minutiae of people's lives and then store the information in millions of physical brown files, today it's all there tucked away in unseen digital files.

'There's no need for a late-night knock at the door — Facebook is already inside.'

Such organisations even employ moderators to sift out what the company defines as hate speech.

A laudable thing to do perhaps, 'but having an unaccountable private entity deciding what is acceptable speech is arguably as dangerous as a government dictatorship.'

Today's social media would have been heaven-sent for the Stasi in destroying a person's credibility and self-esteem. 'A present-day Stasi certainly would make use of any and all tools. But today they could let commercial social media do much of the work first.'

Is this far-fetched, he asks. Not when you consider what is already happening in China. There, the WeChat messaging service — used by a billion people across the globe — is routinely scanned.

'Did you say something critical on WeChat, attend church or visit a foreign embassy? Good luck getting a good job, or a visa to travel. Another Stasi dream come true.'

Nor is it just the state we need to worry about.

In this modern world of ours, individuals can easily employ Stasi-like digital tools against anyone.

And now you don't have to break into someone's home and change the alarm clock or send an unwanted sex toy in the post to unravel and unnerve them any more.

Social media makes gaslighting instant, easy and remote. Hope cites the growing frequency of 'doxing', the publishing on the internet of real or false private information about someone, as a way of intimidating, discrediting or silencing them.

It's done by small groups, individuals or foreign government actors pretending to be someone else.

'The goal is to destroy the person, in true Stasi fashion. It's the Zersetzung of today.'

*The Grey Men: Pursuing The Stasi Into The Present* by Ralph Hope is published by Oneworld Publications at £18.99.

<https://www.dailymail.co.uk/news/article-9665947/Stasis-despicable-torture.html>

# Police officer who stole drug dealers' cash jailed

By Tom Symonds

Home Affairs correspondent

13/05/2021

<https://www.bbc.co.uk/news/uk-57100058>

A Metropolitan Police officer who pretended to stop and search drug dealers so he could steal their money has been jailed for eight years.

Kashif Mahmood seized hundreds of thousands of pounds for an organised crime gang controlled from Dubai.

The gang received information about when money was on the move so that Mahmood could intercept it - in uniform - using police cars.

Four other men and a woman received sentences of up to 16 years.

The sentences follow an investigation which benefited from the penetration of the Encrochat mobile phone network in 2020.

Passing sentence, His Honour Judge Tomlinson said Kashif Mahmood had abused his position of "power, trust and responsibility".

'Betrayal'

Metropolitan Police Commissioner Dame Cressida Dick called the case "shocking" but said she was "delighted" the Met's anti corruption officers "were able to mount this operation and to catch those people and to actually have a big impact on an organised criminal network".

Of corrupt officers, Dame Cressida added: "They betray the rest of us and we deplore this form of corruption or any corruption."

The defendants pleaded guilty to offences including acquiring criminal property, money laundering and drug supply.

It was a sophisticated criminal operation based on tip-offs from a shadowy figure in Dubai, named in court as Mutjaba Neazmand.

Using the code name "SSNew" on the Encrochat network, the court heard he was involved in large-scale drug dealing, but also directing gang members to "steal back" the proceeds.

UK 'jobs'

Neazmand would contact the gang's leader in the UK, Mohsin Khan, with information about "jobs" - large amounts of money being carried by drug couriers.

Khan, whose Encrochat nickname was "AcquaPlus" would pass on the details to police officer Kashif Mahmood, who had served in the Met for 10 years.

Mahmood would book out police cars from Stoke Newington Police station, and pick up an accomplice, Ioan Gherghel, to pose as his partner.

Backed up by Khan and his two brothers, they would then try to stop the couriers and "seize" their money.

Often the couriers had been given the cash by the Khan gang as part of a drug deal.

When it was stolen back by the Khans and Mahmood, they were left out of pocket, and at risk of reprisals from their criminal associates.

The scam was so successful the gang seized more than a million pounds, prosecutors believe.

By March 2020 "SSNew" or Neazmand, the mastermind in Dubai, was boasting in Encrochat messages that: "We can do 1500m and I still say to u bro we do more."

"This system is in our hand. We can do it unlimited."

Police say Encrochat was almost exclusively used by criminals who communicated freely, believing their conversations were encrypted.

It was penetrated by French police and intelligence agency cyber security experts in early 2020, and, as a result, more than 1,500 suspects have been arrested so far.

Chingford surveillance

The Khan gang were caught following a number of "jobs", including one where they inadvertently targeted a drug courier, while he was under police surveillance.

Prosecutors believe the gang had handed him half a million pounds, in return for drugs.

Mahmood and Gherghel, also dressed as police officers, then stopped the man's car in Chingford, East London, searched it, and took the money back.

This meant that the gang now had both the cash and the drugs.

But surveillance officers belonging to a police proactive money laundering team were, by chance, watching what happened.

They stopped Mahmood to find out why the search of the target's car had been carried out, and requested he create an intelligence report.

Prosecutors said Mahmood was forced to go to his police station, despite being signed off on sick leave to complete the report.

It was used by police as evidence against him.

They also analysed extensive mobile phone evidence to build up a picture of the gang's communications and movements.

Following arrests, large amounts of cash were found in the conspirators' homes.

Maria Shah, a partner of one of the gang, and also convicted of being involved, is believed to have withdrawn a large amount of cash from a safety deposit box facility in Knightsbridge, central London.

When police searched the boxes they were found to be empty.

<https://www.bbc.co.uk/news/uk-57100058>

## Russian spy unit suspected of directed-energy attacks on U.S. personnel

CIA Director William Burns is now receiving daily briefings on the investigation.

By LARA SELIGMAN and ANDREW DESIDERIO

05/10/2021 04:03 PM EDT

[https://www.politico.com/amp/news/2021/05/10/russia-gru-directed-energy-486640?](https://www.politico.com/amp/news/2021/05/10/russia-gru-directed-energy-486640?hpid=hp_hp-top-table-main-russia-gru-directed-energy-486640)

U.S. officials suspect that a notorious Russian spy agency may be behind alleged attacks that are causing mysterious health issues among U.S. government personnel across the world, according to three current and former officials with direct knowledge of the discussions.

Officials do not have a smoking gun linking Russia's military intelligence unit, the GRU, to the suspected directed-energy incidents, said the people, who were not authorized to speak publicly. The intelligence community has not reached a consensus or made a formal determination. However, officials have told lawmakers that they have intensified their investigation in recent weeks to include all 18 federal intelligence agencies, and that it is focused on the GRU's potential involvement, according to a congressional official briefed on the matter.

A White House spokesperson, who requested anonymity to discuss a sensitive issue, emphasized that investigators do not yet know the cause of these incidents or whether they constitute an attack by foreign actors. However, the spokesperson said, these are areas of "active inquiry," and the National Security Council is working with other agencies to address the "unexplained health incidents."

"The health and well-being of American public servants is a paramount priority to the Administration and we take extremely seriously reports by our personnel of anomalous health incidents," the spokesperson said.

Victims of the suspected attacks report symptoms consistent with the "Havana syndrome" incidents of 2016, in which a number of American spies and diplomats experienced residual headaches, loss of balance and hearing, ringing and pressure in the ears, and sometimes long-term brain damage.

The GRU's inclusion as a suspect in the investigation, which has not been previously reported, comes as Biden administration officials are working to reassure outraged lawmakers that they are committed to getting to the bottom of the issue and holding those responsible to account. Officials have already sounded the alarm to members of Congress about what they see as an increasing threat of directed-energy attacks on American personnel, POLITICO first reported.

CIA Director William Burns is deepening his involvement in the effort and is now receiving daily briefings on the status of the investigation, according to two people familiar with the matter. Burns has also appointed a senior officer reporting directly to him about those efforts.

The GRU is well-known for its involvement in Russia's covert operations around the world, including Moscow's annexation of Crimea and numerous cyberattacks across the West. The U.S. has already found the GRU to be responsible for interfering in the 2016 and 2018 elections through the use of cyberattacks and other means.

The group has a known footprint in each of the locations where the suspected incidents occurred, including in the U.S., and is the only agency within the Russian government that has the technology to pull off such attacks, the people said.

"It looks, smells and feels like the GRU," said one former national security official involved in the investigation. "When you are looking at the landscape, there are very few people who are willing, capable and have the technology. It's pretty simple forensics."

A current official briefed on the probe said GRU agents "are the only ones [we] know have the capability to attack our people like that on our soil."

Israel and China may also have the technology, but neither country operates in all of the locations where the incidents were reported, or has shown the desire to attack Americans in this way, another former national security official said.

When reached for comment about Burns' involvement, a CIA spokesperson referred POLITICO to the director's comments before the House Intelligence Committee last month, during which he said it would be a "very high priority to ensure that my colleagues get the care that they deserve and that we get to the bottom of what caused these incidents and who was responsible."

In a statement last month, the bipartisan leaders of the Senate Intelligence Committee credited Burns — who has been on the job only since March — with a "renewed focus" on directed-energy attacks.

After initially declining to comment, a spokesperson for Director of National Intelligence Avril Haines issued a statement to POLITICO noting that the intelligence community (IC) has "no definitive information about the cause of these incidents" and has not concluded whether a foreign actor is responsible.

"Since the beginning of the Biden administration, the IC has intensified efforts to identify the cause of these incidents, determine attribution, increase collection efforts, and prevent additional [anomalous health incidents]," said Amanda Schoch, the assistant director of national intelligence for strategic communications.

The Pentagon launched an investigation into the incidents late last year after then-acting Defense Secretary Chris Miller spoke to a combat veteran who suspected he had been attacked and was seeking medical attention, POLITICO previously reported.

Miller told POLITICO last week that the suspected attacks amount to "an act of war."

The incidents have allegedly occurred all over the world, including in Europe, Miami, northern Virginia and near the White House, POLITICO reported.

Russian study of this type of technology dates back to the latter part of the 20th century, when the former Soviet Union opted to pursue "irregular warfare," where it could counter the United States in "the seams and the gaps," rather than in the conventional space, the first former official said. Microwave pulse weapons, which use a form of electromagnetic radiation to damage targets, are "the perfect gray zone" weapons because attribution is so difficult, the person said.

While investigators have not determined definitively that these incidents are caused by a specific weapon, some believe any such device would be primarily transported by vehicle, according to the former official and a congressional official. Some could be small enough to fit into a large backpack, and an individual can be targeted from 500 to 1,000 yards away.

Betsy Woodruff Swan and Erin Banco contributed to this report.

This article has been updated to include comment from ODNI.

<https://www.politico.com/amp/news/2021/05/10/russia-gru-directed-energy-486640?>

## Check Out This Backpack-Mounted Signals Intelligence System Worn By A Marine Special Operator [*Worth clicking on link*]

"Body-worn" signal snooping gear gives American special operators an additional way to spot and track enemy forces, and monitor their surroundings.

BY JOSEPH TREVITHICK MAY 27, 2021  
THE WAR ZONE

<https://www.thedrive.com/the-war-zone/40826/this-marine-raider-is-wearing-a-backpack-mounted-signals-intelligence-system>

A recently released picture of Marine Raiders conducting realistic urban training shows an operator wearing a backpack with a large tubular antenna sticking out it. While this system, and the entire picture, looks like it could be ripped straight from a blockbuster action movie or modern military first-person shooter video game, it is a very real tool that is able to detect and geolocate enemy signals. This can provide useful real-time intelligence about enemy forces and their movements, as well as improved general situational awareness.

The Raiders in question were training in Nashville, Tennessee, together with regular Marines, earlier this month, as part of what is known as a Raven exercise. Marine Forces Special Operations Command (MARSOC) uses Raven exercises to prepare Raiders for upcoming deployments. In one picture, seen at the top of this story, the Raider carrying the system in question, which is part of a larger family known as the Joint Threat Warning System (JTWS), is crouching in front of a Western Star truck in a warehouse, while another provides immediate security. In another shot, seen below, what may be the same JTWS-equipped Raider is seen together with other Marines outside what could be the same building.

### USMC

Marine Raiders, as well as conventional Marine infantrymen, take part in a Raven exercise in Nashville, Tennessee in May 2021. A Raider on the right is seen carrying a man-portable Joint Threat Warning System (JTWS), as evidenced by the large tubular antenna protruding from his backpack. Integrating the backpack-mounted component of the JTWS family into this exercise would have given the combined force of Raiders and conventional Marines an important additional source of information during the drill, just as it would in real life. The exact capabilities of this particular system, which appears to be the most recent iteration of the "body-worn" segment of the larger JTWS family, are unclear.

Marine Raiders use a Humvee to provide security during the mock night raid conducted as part of the recent Raven exercise in Nashville. What appears to be the antenna associated with a JTWS, possibly just another appearance of the backpack-mounted system, is seen on top of the vehicle.

A 2019 briefing from U.S. Special Operations Command's (SOCOM) JTWS Program Manager said that this system was capable of providing very-high-frequency/ultra-high-frequency (VHF/UHF) direction-finding capability. Other sources make clear that even the backpack elements of the JTWS family have some level of geolocation and communications intercept capabilities. This means that they can both determine the source of a radiofrequency emission and, if it's a certain type of unencrypted radio or other communications chatter, listen in on it.

Available information also indicates that location data can be displayed, even for moving targets, overlaid on digital map on a hand-held tablet-like device, along with other relevant information. In the picture at the top of this story, the Raider carrying the system can be seen looking down at this portable user interface. Operators should be able to push this information to other units or larger command centers, as well.

In the past, SOCOM has described the various versions of these backpack-mounted systems as a "Threat Warning, Force Protection, and Situational Awareness toolbox." In short, they offer even small units a way to spot hostile or potentially hostile forces before they necessarily see them, as well as providing a clearer picture of the immediate battlespace, in general, based on the locations of different kinds of radiofrequency emissions.

In addition, when conducting raids and other direct action missions, as well as long-range "special reconnaissance" operations, it can help pinpoint the positions of targets of interest, as well as collect other potentially actionable signals intelligence (SIGINT) data, in near real-time. It's possible that the system may be able to spot certain kinds of improvised explosive devices that use remote triggers of some kind, such as cell phones, which regularly ping their networks to ensure they remain connected.

It is worth pointing out that man-portable radio direction-finding equipment and even more robust signals intelligence systems are hardly new. Various types have been employed by conventional U.S. forces, as well as special operations units, too. The particular system employed in this recent Raven exercise also has a general outward look that is very similar to various backpack-mounted electronic warfare jammers, primarily intended to disrupt improvised explosive devices, that have been in widespread service for years now.

### US ARMY

A US Army soldier from a conventional unit carrying a Wolfhound system, another type of backpack-mounted signals intelligence suite.

### USMC

A US Marine carries a THOR II backpack-mounted electronic warfare jammer designed to counter improvised explosive devices in Afghanistan in 2012.

Different iterations of the various components of the JTWS, alone, which also includes larger systems designed for installation on various kinds of manned and unmanned aircraft, boats, and ground vehicles, have been in service for decades now. In the early 2000s, there existed at least some legacy signals intelligence systems already available to SOCOM, including man-portable types, were also officially made part of the larger JTWS family.

### SOCOM

Other backpack-mounted systems that have been part of SOCOM's JTWS family over the years.

"The legacy SOF [special operations forces] SIGINT systems have demonstrated the high value of tactical SIGINT during many recent missions involving SOF," then-Brigadier General Donald Wurster, an Air Force officer serving at that time as the director of SOCOM's Center for Intelligence and Information Operations, told members of the Senate Armed Services Committee all the way back in 2004. "The acquisition and fielding of JTWS is key to providing enhanced situational awareness, force protection and time sensitive intelligence for targeting to supported SOF elements."

However, as one writer for Soldier Systems Daily noted while discussing JTWS developments in 2017, "while I used an early version of this system in Haiti over 20 years ago, it has come a long way from the AN/TRQ-30 DF [direction-finding] loops first fielded to 3rd Group [the U.S. Army's 3rd Special Forces Group] in 1990. They were the height of 1950s technology and the receiver used like 30 D cell batteries."

US ARMY

A drawing showing one type of tripod-mounted loop antenna used with AN/TRQ-30 man-portable direction-finding system.

Advances in general computing power and the continued miniaturization of electronics mean that signals intelligence suites, as well as related electronic warfare and electronic support measures systems, have been steadily improving in overall capability, while shrinking in size, over the years. This is not to mention more recent developments in fields such as artificial intelligence and machine learning that look set to revolutionize intelligence gathering and electronic warfare, among other aspects of future conflicts, broadly.

Advanced electronic warfare capabilities, many of which are building off of existing signals intelligence systems, in particular, are of growing interest across all of the branches of the U.S. military, including among conventional and special operations units. This comes as adversaries and potential opponents, especially potential near-peer competitors, such as Russia and China, have been making their own significant strides in these fields, which could have serious ramifications for American forces in future combat operations and non-combat activities. This is something The War Zone has explored in depth in the past.

With all this in mind, it seems more than likely that man-portable signals intelligence systems just like the ones that Marines Raiders brought to this recent Raven exercise, as well as similar electronic warfare suites that can fit inside a backpack, will become an increasingly common feature in future U.S. military operations, whether they involve special forces, conventional units, or both.

<https://www.thedrive.com/the-war-zone/40826/this-marine-raider-is-wearing-a-backpack-mounted-signals-intelligence-system>

*Many thanks to MaleAnon for alerting us to this particular piece*

## Spy chief wants to recruit more women and ethnic minorities and describes plan as 'mission critical' for the secret service

Spy chief Jeremy Fleming has said that inclusion has become 'mission critical'

He said Britain's intelligence agency needs more women and ethnic minorities

Spokesman for GCHQ said it was 'putting serious resource and thinking into what more we can do as an organisation'

By REBECCA CAMBER CRIME AND SECURITY EDITOR FOR THE DAILY MAIL

PUBLISHED: 22:13, 11 May 2021 | UPDATED: 10:35, 12 May 2021

<https://www.dailymail.co.uk/news/article-9568107/Spy-chief-wants-recruit-women-ethnic-minorities.html>

James Bond author Ian Fleming once wrote of 'blithering women who thought they could do a man's work'.

But these days women spies are 'mission critical', the head of GCHQ said yesterday.

Jeremy Fleming – no relation to the late writer – said: 'Inclusion has become mission critical, not a nice-to-have.'

The spy chief told the Cyber UK conference that Britain's intelligence agency needs more women and ethnic minorities.

'The UK will only be able to thrive in the digital era if we are able to draw people from all backgrounds to work together on these problems,' he said.

'It's not just the morally right thing to do, it's smart business.' His comments are a world away from those of Fleming, whose novels inspired movies including Quantum of Solace, starring Daniel Craig as 007 and Gemma Arterton as agent Strawberry Fields.

He wrote in his first novel, Casino Royale: "These blithering women who thought they could do a man's work."

'Why the hell couldn't they stay at home and mind their pots and pans and stick to their frocks and gossip and leave men's work to the men.'

Yesterday a spokesman for GCHQ said it was 'putting serious resource and thinking into what more we can do as an organisation...to better represent the country we serve'.

A spokesman for GCHQ said it was 'putting serious resource and thinking into what more we can do as an organisation...to better represent the country we serve'

Spy chief Jeremy Fleming has said that inclusion has become 'mission critical'

Later at the same conference, Priti Patel announced plans to bolster cybersecurity laws.

The Home Secretary said a government review would look at harsher punishments for hacking, online fraud and crimes against children.

She spoke after a warning from Mr Fleming who said data had 'become the crown jewels that we must protect'.

<https://www.dailymail.co.uk/news/article-9568107/Spy-chief-wants-recruit-women-ethnic-minorities.html>

# Morse Stations

All frequencies listed in kHz. Freqs are generally  $\pm 1$ kHz

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

## Morse - Number Stations

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

Use of the variant formats appears to have ceased – At least for now. Four variant formats have been identified.

Standard Format:	197 (R4m) 117 117 30 30 == 93447 .... 20478 == 117 117 30 30 000	(Still the most commonly used format)
Variant Format 1:	197 (R4m) 147/30 147/30 78902 ... 86083 147/30 000	(Not in use)
Variant Format 2:	197 (R4m) 521=30 == 521=30 == 46547 ... 88305 = 521=30 == 521=30 0=0=0	(Not in use)
Variant Format 3:	463 (R4m) 127 30 == == 84820 ... LG 82607 == == 127 127 30 30 000	(Not used at all in 2020)
Variant Format 4:	197 (R4m) 589 589 = 30 30 == 40728 .... 58918 == 589 589 = 30 30 000	(Logged only once in Jan / Feb)

Times shown are the scheduled start times. Recently, transmissions have been starting approximately one minute earlier than that scheduled – possibly the result of a radio room clock that is not synchronised.

This 'feature' of M01 has been noted before on a number of occasions over the years – occurring once or twice a year. These early starts continue for a while before suddenly returning to a corrected schedule once the offending clock is, (presumably), adjusted.

The time difference never appears to drift more than the one minute mentioned above, (the exception being the occasional single transmission that appears with a late start). The one minute time error, when present, affects all of the weekly schedules equally until such time as it is corrected, whereupon all schedules then fall back to the corrected time.

Logged as back on, (almost), accurate time by Thu 01 July.

### May 2021:

4905	2000z	04 May	'025' 257 30 == 77291 ... 58044 ==	Good/Strong. Excellent Morse. No errors.	BR/HFD/PLdn	TUE
	2000z	06 May	'025' 748 30 == 54507 ... 31257 ==	Fair, fast. Error Grp20 sent as 4994 499 49	BR/PLdn	THU
	2000z	11 May	'025' 423 30 == 78243 ... 39910 ==	Good, fast. Several errors in msg. Only one GC at start	BR	TUE
	2000z	13 May	'025' 745 30 == 34679 ... 82440 ==	Strong, fast. Many errors in call-up. Grp13 9307 93070	BR	THU
	2000z	18 May	'025' 948 30 == 88357 ... 59148 ==	Strong, fast. Two errors noted, grps16 & 21	BR	TUE
	2000z	20 May	'025' 203 30 // 57990 ... 39582 //	Good, fast. Several errors noted inc. incomplete grps.	BR	THU
	2000z	25 May	'025' 479 30 == 40986 ... 49950 ==	Good, V.fast. Several errors noted. Many errors in call-up	BR	TUE
	2000z	27 May	NRH – Checked Twente SDR as well as Home QTH, (S.E. UK)		BR	THU
5280	1800z	04 May	'025' 244 30 == 37888 ... 4.965 ==	Weak/Fair, fast. Poor copy. Long zeros for starting GC	BR/HFD	TUE
	1800z	06 May	'025' 729 30 == .9440 ... 45471 ==	Weak, fast. High noise. Poor copy	BR	THU
	1800z	20 May	NRH		BR	THU
	1800z	27 May	'025' Very weak / weak signal. No useful copy		BR	THU
6435	1500z	01 May	'025' 819 30 == 58116....		HFD	SAT
	1500z	08 May	'025' 543 30 == 15624 ... 18467 ==	Fair, fast. QSB. No errors in msg. DK sent as 545 at start?	BR	SAT
	1500z	15 May	'025' 738 30 == 47092 ... 95578	Fair, fast. Several errors noted. Muddled ending	BR	SAT
	1500z	22 May	'025' 128 30 == 88253 ... 62282 ==	Fair, fast. One error noted, grp02 92690 92990	BR	SAT
	1500z	28 May	'025' 348 30 == 35216 ... 25976 ==	Weak, fast. Several errors noted. Poor copy at times	BR	SAT
6780	0700z	02 May	'025' 855 30 == 67327 ... 41595 == 855 30 0 0 0	Weak UK / Good in Holland	AB/E.SMITH/PLdn	SUN
	0700z	09 May	'025' 594 30 == 30626 ... 55150 == 594 30 0 0 0	Started with good, strong sigs. QRM/QSB	HFD/PLdn	FRI

### June 2021:

4905	2000z	01 Jun	'025' 788 30 // 41842 ... 00769 //	Good/strong, fast. Several errors noted.	BR	TUE
	2000z	08 Jun	'025' 461 30 == 40087 ... 45991 ==	Good fast. Numerous errors. Starting DK sent as 461 641	BR	TUE
	2000z	10 Jun	'025' 749 30 == 44399 ... 37583 ==	Weak/Fair with QSB, med-fast. Difficult copy at times	BR	THU
	2000z	15 Jun	'025' 951 30 == 62970 ... 67933 ==	Strong, fast. Excellent Morse. One error grp29 28444 2844	BR	TUE
	2000z	17 Jun	'025' 409 30 == 36959 ... 87964 ==	Fair, fast. Errors noted. Difficult copy at times	BR	THU
5280	1800z	17 Jun	Weak – No useful copy		BR	THU
	1800z	29 Jun	'025' 119 30 == 56550 ... 69284 ==	Weak, fast. Poor copy due to weak sig & static (Twente)	BR	TUE
6435	1500z	05 Jun	'025' 806 30 == 37490 ... 26824 ==	Fair, fast. Starting DK sent as 806 60. Grp02 7962 79642	BR	SAT
	1500z	12 Jun	'025' 121 30 == 16246 ... 35072 ==	Weak, fast. Several noted errors. Poor sigs	F5JBR/BR	SAT
	1500z	26 Jun	'025' 742 30 == 88578 ... 29312 ==	Fair, fast. Excellent Morse. One error grp18 37037 37030	BR	SAT

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

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

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

4980	0611z	723	10 Jun	723 (x3) 10623 (x2) 723 (x3) 10782 (x2) 333 10767 10767 111 999 272 10 = 12992 48795 55441 28093 18944 98003 41522 61272 67228 27185 = 272 10 000	CW	F5JBR	THU
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4985	0635z	412	10 Jun	412 (x3) 57759 (x2) 333 57603 111 999 273 10 = 59119 99246 94733 98508 72976 62883 74958 66126 33025 26225 = 273 10 000 111 000	CW	F5JBR	THU
4917	0706	783	10 Jun	783 (x3) 40320 (x2) 111 111 999 358 10 = 14230 86102 75423 45957 24851 71248 14230 43385 95148 29351 = 358 10 111 = 358 10 = 14230 86102 75423 45957 24851 71248 14230 43385 95148 29351 = 358 10 111 = 14230 111 = 14230 333 333 111 = 43385 111 000	CW	F5JBR	THU

**M08a** XVIII ICW / CW, some MCW

No reports

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

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

**Asiatic M12 Scheds**

13423/12123/11123	0700/20/40z	04 May	411 1 (5064 86)	16349 30484 ... 24636 98341 000 000	Gert/HFD/RNGB	TUE
	0700/20/40z	06 May	411 1 (5064 86)	16349 30484 ... etc.	(Siberian SDR) RNGB	THU
	0700/20/40z	13 May	411 1 (175 32)	43584 60956 ... 06043 52313 000 000	Gert/RNGB	THU
13426/12126/10226	0210/30/50z	17 May	412 1		(Via Japan SDR) HFD	MON
13481	0720z	17 Jun	541 1 (6906 104)	36909 85948.....etc.	HFD/RNGB	THU
14581/13481/12181	0700/20/40z	24 Jun	541 1 (9058 106)	90005.....etc.	RNGB	THU
15918/14818/13918	0210/30/50z	28 Jun	989 1		(Via China SDR) HFD	MON

**European M12 Logs**

**May 2021:**

**New scheds in bold type**

8161/9161/10561	0030/0050/0110z	04 May	115 000		Gert/HFD	TUE
	0030/0050/0110z	07 May	115 000		Gert	FRI
	0030/0050/0110z	11 May	115 1 (8791 115)	47938 27479 ... 12939 80449 000 000	Gert	TUE
	0030/0050/0110z	14 May	115 1 (8791 115)	47938 27479 ... 12939 80449 000 000	Gert	FRI
9317/10484/11552	0530/0550/0610z	04 May	135 1 (9901 110)	93462 13520 ... 82289 31460 000 000	E.SMITH/Gert/HFD/RNGB	TUE
	0530/0550/0610z	11 May	135 1 (8303 108)	64832 73605 ... 11653 17772 000 000	Gert	TUE
	0530/0550/0610z	18 May	135 1 (7088 110)	56089 21778.....etc.	(Via SDR Siberia) RNGB	TUE
10183/9083/8083	2210/30/50z	01 May	199 1 (493 102)	27072 34715 ... 68421 93218 000 000	Gert/HFD	SAT
	2210/30/50z	05 May	199 1 (520 88)	98102 58107 ... 17690 49609 000 000	Gert	WED
	2210/30/50z	08 May	199 1 (520 88)	98102 58107 ... 17690 49609 000 000	Gert	SAT
	2210/30/50z	12 May	199 1	Too weak to copy	Gert	WED
	2210/30/50z	19 May	199 1 (2288 46)	54828 22995 ... 38866 60039 000 000	Gert	WED
	2210/30/50z	22 May	199 1 (2288 46)	54928 22995 ... 38866 60039 000 000	Gert	SAT
10843/10234/9234	2100/20/40z	01 May	822 1 (2813 120)	36954 18675 ... 71245 19013 000 000	Gert/HFD	SAT
	2100/20/40z	07 May	822 1 (2813 120)	36954 18675 ... 71245 19013 000 000	BR/Gert	FRI
	2100/20/40z	08 May	822 1 (2813 120)	36954 18675 ... 71245 19013 000 000	Gert	SAT
	2100/20/40z	14 May	822 1 (2720 166)	80149 23106 ... 39724 88421 000 000	Gert	FRI
	2100/20/40z	15 May	822 1 (2720 166)	80149 23106 ... 39724 88421 000 000	Gert	SAT
	2100/20/40z	21 May	822 1 (2720 166)	80149 23106....	BR	FRI
	2100/20/40z	22 May	822 1 (2720 166)	80149 23106 ... 39724 88421 000 000	Gert	SAT
12162/11566/10711	1710/30/50z	05 May	546 1 (9783 110)	42062 62406....	BR	WED
	1700/20/40z	06 May	546 1 (6127 111)	54450 64525 ... 62579 51531 000 000	BR/Gert	THU
	1800/20/40z	06 May	546 1 (6278 106)	55213 70064 ... 00056 29504 000 000	BR/Gert	THU
	1710/30/50z	12 May	546 1 (9334 113)	42089 97322 ... 47253 12902 000 000	Gert	WED
	1700/20/40z	13 May	546 1 (7745 111)	17476 94577 ... 20655 02999 000 000	Gert	THU
	1800/20/40z	13 May	546 1 (5563 105)	16154 25112 ... 46142 93030 000 000	Gert	THU
	1710/30/50z	19 May	546 1 (2858 112)	48839 65754....	BR	WED
	1800/20/40z	20 May	546 1 (8740 112)	99549 74383....	BR	THU
	1700/20/40z	27 May	546 1 (6215 108)	31125 45093....	BR	THU
	1800/20/40z	27 May	546 1 (9404 111)	36932 91025....	BR	THU

13381/12181/10781	2110/30/50z	03 May	317 1 (2661 77)	84158 86826 ... 71801 48234 000 000		BR/Gert/HFD	MON
	2110/30/50z	06 May	317 1 (2661 77)	84158 86826 ... 71801 48234 000 000		Gert	THU
	2110/30/50z	10 May	317 000			Gert	MON
	2110/30/50z	13 May	317 000			BR/Gert	THU
	2110/30/50z	17 May	317 1 (4705 50)	44188 16357....		BR	MON
	2110/30/50z	20 May	317 1 (4705 50)	44188 16357....		BR	MON
2110/30/50z	24 May	317 000				BR	MON
	2110/30/50z	27 May	317 000			BR	THU
	2110/30/50z	31 May	317 1 (1065 93)	37703 39968....		BR	MON
<b>13386/12189/11491</b>	<b>1300/20/40z</b>	<b>21 May</b>	<b>725 1 (96 .3 76)</b>	<b>34727 229 ... ..</b>		BR	FRI
13926/13426/11526	2000/20/40z	03 May	573 000			Gert/HFD	MON
	2000/20/40z	06 May	573 000		Good	E.SMITH/Gert	THU
	2000/20/40z	13 May	573 1 (221 33)	23248 00308 ... .. 67063 21821]THU			
	2000/20/40z	31 May	573 000			BR	MON
14377/13461/12114	1300/20/40z	03 May	317 1 (7805 99)	00673 82176 ... 77819 12696 000 000		Gert/HFD	MON
	1200/20/40z	04 May	317 1 (3998 104)	69574 58614 ... 06096 37864 000 000	Strong	E.SMITH/HFD	TUE
	2000/20/40z	06 May	317 1 (1577 108)	69760 09879 ... 75861 72052 000 000	Good	E.SMITH/HFD	THU
	1300/20/40z	10 May	317 1 (4643 95)	71230 33151....		BR	MON
	1200/20/40z	11 May	317 1 (1297 101)	68103 43752....		BR	TUE
	1710/30/50z	19 May	317 1			HFD	WED
	1700/20/40z	27 May	317 1			HFD	THU
	1800/20/40z	27 May	317 1			HFD	THU
16113/15813/14813	1600/20/40z	02 May	188 000			HFD	SUN
	1600/20/40z	05 May	188 1 (9078 95)	32299 00746 ... 27642 98594 000 000	SDR Moscow	Strong	E.SMITH
	1600/20/40z	16 May	188 000			Gert	SUN
16194/14794/---	1950/2010/2030z	05 May	173 000			BR/HFD	WED
	1950/2010/2030z	07 May	173 000			E.SMITH/Gert	FRI
	1950/2010/2030z	12 May	173 000			BR	WED
	1950/2010/2030z	19 May	173 000			Gert	WED
	1950/2010/2030z	21May	173 000			BR	FRI
<b>June 2021:</b>							
7857/9157/10457	0030/0050/0110z	11 Jun	814 000			Gert	FRI
	0030/0050/0110z	15 Jun	814 1 (328 72)	51966 97256 ... 71563 69874 000 000		Gert/HFD	TUE
	0030/0050/0110z	22 Jun	814 000			Gert	TUE
	0030/0050/0110z	25 Jun	814 000			Gert	FRI
	0030/0050/0110z	29 Jun	814 1 (3786 91)	40921 80915 ... 47111 87862 000 000		Gert	TUE
11552	0610z	08 Jun	135 1 (6986 109)	60835 50748.....etc.		RNGB	TUE
9317/10484/11552	0530/0550/0610z	22 Jun	135 1 (1486 112)	38078 50335 ... 66847 41870 000 000		Gert	TUE
	0530/0550/0610z	30 Jun	135 1 (1051 113)	04669 05436....		Gert	WED
10223/9323/8023	2210/30/50z	12 Jun	239 1 (9326 110)	19857 75299 ... 29186 46830 000 000		Gert/HFD	SAT
	2210/30/50z	23 Jun	239 1 (3200 46)	58059 83506 ... 99612 37317 000 000		Gert	WED
	2210/30/50z	26 Jun	239 1 (3200 46)	58059 83506 ... 99612 37317 000 000		Gert	SAT
	2210/30/50z	30 Jun	239 000			Gert	WED
11144/10544/9344	2100/20/40z	04 Jun	153 1 (289 134)	62983 78948 ... 81373 78922 000 000		BR/E.SMITH	FRI
	2100/20/40z	05 Jun	153 1 (289 134)	62983 78948 ... 81373 78922 000 000	Good/Fair/Fair	E.SMITH	SAT
	2100/20/40z	11 Jun	153 1 (7830 152)	37767 81361 ... 13170 19617 000 000		BR/ Gert/HFD	FRI
	2100/20/40z	12 Jun	153 1 (7830 152)	37767 81361....		BR	SAT
	2100/20/40z	18 Jun	153 1 (7830 152)	37767 81361 ... 13170 19617 000 000		Gert	FRI
	2100/20/40z	19 Jun	153 1 (7830 152)	37767 81361 ... 13170 19617 000 000		Gert	SAT
	2100/20/40z	25 Jun	153 1 (366 92)	46481 91068 ... 08536 38547 000 000		BR/Gert	FRI
	2100/20/40z	26 Jun	153 1 (366 92)	46481 91068 ... 08536 38547 000 000		BR/Gert	SAT
12162/11566/10711	1800/20/40z	10 Jun	546 1 (5181 104)	22117 22907....		BR	THU
	1710/30/50z	16 Jun	546 1 (4100 107)	99182 62785....		BR	WED
	1700/20/40z	17 Jun	546 1 (6137 109)	49759 70785 ... 55390 17877 000 000		BR/Gert	THU
	1800/20/40z	17 Jun	546 1 (4990 108)	89523 81226 ... 99254 41144 000 000		BR/Gert	THU
	1710/30/50z	23 Jun	546 1 (9280 104)	98573 32790 ... 72270 81638 000 000		Gert	WED
	1700/20/40z	24 Jun	546 1 (2999 112)	76901 51915....		BR	THU
	1800/20/40z	24 Jun	546 1 (3895 113)	10386 18702....		BR	THU
	1710/30/50z	30 Jun	546 1 (7115 105)	20683 51614.... 79690 86281 000 000		BR/Gert	WED
<b>13386</b>	<b>1100z</b>	<b>03 Jun</b>	<b>725 1</b>			HFD	THU
<b>13386/12189/11491</b>	<b>1110/30/50z</b>	<b>10 Jun</b>	<b>725 1 (6261 99)</b>	<b>62740 78132....</b>		BR	THU
	1110/30/50z	17 Jun	725 1 (8801 90)	96856 02315....		BR	THU
	1110/1130/1150z	24 Jun	725 1 (5488 96)	05290 80322 ... 02681 75963 000 000		AB	THU
13892/13392/11592	2000/20/40z	07 Jun	119 1 (1593 79)	74129 06110....		BR/HFD	MON
	2000/20/40z	10 Jun	119 1 (1593 79)	74129 06110 ... 51912 95079 000 000		Gert	THU
	2000/20/40z	14 Jun	119 000			BR/Gert	MON
	2000/20/40z	17 Jun	119 000			Gert	THU
	2000/20/40z	21 Jun	119 1 (1560 93)	83697 54285....	(Chirp on 13892kHz CW)	BR	MON
	2000/20/40z	24 Jun	119 1 (1560 93)	83697 54285 ... 26345 85934 000 000		Gert	THU
	2000/20/40z	28 Jun	119 000			BR	MON



14377/13461/12114	2000/20/40z 2000/20/40z	10 Jun 24 Jun	317 1 (8107 102) 317 1 (2101 103)	80283 11667.... 28168 04126 ... 44246 00793 000 000		BR Gert	THU THU
14493/13393/12193	2110/30/50z 2110/30/50z 2110/30/50z 2110/30/50z 2110/30/50z 2110/30/50z 2110/30/50z	03 Jun 07 Jun 10 Jun 14 Jun 17 Jun 21 Jun 24 Jun 28 Jun	431 1 (1065 93) 431 000 431 000 431 1 (6908 77) 431 1 (6908 77) 431 000 431 000 431 1 (673 97)	37703 39968 ... 83589 73688 000 000 39733 61093 ... 92194 45927 000 000 39733 61093 ... 92194 45927 000 000 41622 02286 ... 83849 15454 000 000		BR/E.SMITH BR BR/Gert/HFD BR/Gert BR/Gert Gert BR/Gert	THU MON THU MON THU MON THU MON
14926/14426/13426	1600/20/40z 1600/20/40z 1600/20/40z 1600/20/40z	06 Jun 13 Jun 27 Jun 30 Jun	944 000 944 1 (517 51) 944 1 (4400 67) 944 000	95591 59898 ... 67484 17539 000 000 31742 20142 ... 73348 47074 000 000	Good	E.SMITH Gert/HFD Gert Gert	SUN SUN SUN WED

<b>M12 9317/10484/11552kHz 0530/0550/0610z 04 May 2021</b>
135 135 135 1 (R2m) 9901 110 9901 110
93462 13520 98005 87670 92640 79993 84593 16034 10804 99836 71016 77065 24592 53173 27328 83590 81535 64426 35482 64989 57193 08727 31057 09235 19809 63491 44705 00595 76143 25812 72527 69097 74803 83006 03287 57477 14374 18528 19527 37004 84741 49742 94325 21061 98725 08004 76329 67860 21008 66364 17485 97580 58604 31129 53469 78639 44352 01479 82954 45065 54079 82797 01195 14074 16430 33825 28084 94664 73498 70993 95214 80776 53545 20355 68327 71442 23995 75935 96809 38046 77446 01037 66343 14688 61996 99334 91075 59435 55568 23467 81150 57476 07697 55598 19332 15313 65756 70479 74765 89583 67485 88739 04330 40030 40890 72674 19477 80807 82189 31460 000 000
<i>Courtesy E.SMITH</i>

<b>M12 13386/12189/11491kHz 1110/1130/1150z 24 Jun 2021</b>
725 725 725 1 (R2m) 5488 96 5488 96
05290 80322 26904 24985 58221 33252 42550 04276 33553 25770 30790 13077 48898 91304 82111 13689 76448 35548 74502 55573 01731 18588 86179 83314 45817 47195 68948 58136 50659 02703 11329 43567 46532 97784 02059 49226 19164 45753 22552 84339 35863 81835 50396 45987 40141 77430 96823 60425 36308 19697 25455 23445 16525 91159 40634 76160 81557 31370 26074 61048 97092 29117 62737 90951 88447 70998 55670 00635 40194 09794 52530 03625 20121 05927 94696 76407 82952 39360 64473 48983 49415 06563 49656 90608 12320 40862 87562 98701 63636 78914 32902 25110 08934 63926 02681 75963 000 000
<i>Courtesy AB</i>

<b>M12 11144/10544/9344kHz 2100/2120/2140z 04 Jun 2021</b>
153 153 153 1 (R2m) 289 134 289 134
62983 78948 28818 15212 29733 76513 49373 34979 25579 49171 10344 39496 53682 89081 78416 57775 96282 44079 97567 72405 35999 63026 20195 59440 50051 15477 55034 38147 22178 28793 86028 02504 68333 47963 75215 73623 87977 87171 68984 53280 54972 35409 78855 74745 75194 76737 33269 23820 90512 99243 48201 36480 71475 88038 54929 68314 40696 05794 10855 87867 13561 26845 04157 05765 94568 08875 27016 33264 16826 60777 13431 60201 95663 71787 53308 88226 81254 39771 48831 52149 91241 61642 97338 40813 40601 00723 92836 46366 17519 59109 62583 97010 09149 48375 70746 25929 23078 41769 84568 96747 03546 76358 50463 02723 57740 29738 25393 49880 42655 70551 99064 76729 00920 60442 47949 40178 89923 46425 18556 02679 54497 46499 07364 61911 43719 41326 36826 65057 57258 89340 77281 56811 81373 78922 000 000.
<i>Courtesy E.SMITH</i>

<b>M12 11144/10544/9344kHz 2100/2120/2140z 11 Jun 2021</b>
153 153 153 1 (R2m) 7830 152 7830 152
37767 81361 01343 58086 35054 26786 08311 46124 56517 12939 08223 35543 69010 55801 86716 62275 90419 80018 68335 63169 37433 22658 58107 99815 44080 99265 55752 54524 69920 09343 67060 89549 17910 66789 39773 26607 37080 54817 40315 57851 39719 54254 11775 56852 91562 18901 96334 29961 02040 73249 68106 89833 41628 75023 22251 41645 70594 93184 96072 75705 33917 56586 75851 68339 80680 09318 68857 82089 85037 47092 09036 25358 34075 21518 75008 49448 04238 02735 21923 24504 27858 67242 76893 58700 28676 57908 21280 12826 28557 01046 21384 23788 62898 58801 90445 05485 47223 41747 22997 64535 51123 01497 30193 81648 59321 87478 39256 57765 97127 14267 50916 39718 76482 37469 95013 74711 26318 55728 11138 55931 47404 95102 31380 74817 43706 41019 25515 04351 02348 75293 76271 80676 30325 61704 50002 47378 90522 19561 75594 47513 45136 55813 16979 03357 53176 07945 48632 50302 69543 08625 13170 19617 000 000
<i>Courtesy Gert</i>

**M14** IA MCW / ICW Short 0

**May 2021:**

16347	0930z 0930z	10 May 25 May	617 00000 617 00000	(SDR Utwente) (SDR Utwente)	ER ER	MON TUE
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**June 2021:**

10243	0520z <b>0521z</b> 0520z 0520z 0520z	22 Jun 23 Jun 24 Jun 25 Jun 28 Jun 29 Jun	952 (668 468 51 51) == 66574 84494 ..., 93786 51431 == 468 51 00000 952 (707 59) = 86192 90911 ... 32834 96117 = 707 59 00000 952 (163 61) = 85863 22217 ... 25233 12708 = 163 61 00000 952 (708 51) = 76587 93044 ... 57777 24435 = 78 708 51 51 00000 952 (134 65) = 14646 19189 ... 26495 16246 = 134 65 00000 952 (860 61) = 23145 26172 ... 63813 22699 = 860 61 00000	CW Late start CW CW CW CW CW	AB AB AB AB AB AB	TUE WED THU FRI MON TUE
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12211	<b>0502z</b>	23 Jun	952 (707 59) = 86192 90911 ... 32834 96117 = 707 59 00000	Late start	CW	AB	WED
	0500z	24 Jun	952 (163 61) = 85863 22217 ... 25233 12708 = 163 61 00000		CW	AB	THU
	0500z	25 Jun	952 (708 51) = 76587 93044 ... 57777 24435 = 78 708 51 51 00000		CW	AB	FRI
	0500z	28 Jun	952 (134 65) = 14646 19189 ... 26495 16246 = 134 65 00000		CW	AB	MON
	0500z	29 Jun	952 (860 61) = 23145 26172 ... 63813 22699 = 860 61 00000		CW	AB	TUE
	0500z	30 Jun	952 (473 52) = 21325 05644 ... 95930 49109 = 473 52 00000		CW	AB	WED
16347	0930z	10 Jun	617 00000	(SDR Utwente)		ER	THU

<b>M14 10243kHz 0520z 22 Jun 2021</b>
952 (R4m) 668 468 51 51 ==
66574 84494 97140 30898 53788 71226 60582 79344 63842 18709 74578 84860 32299 81288 68542 57971 04043 19692 02634 57060 33960 98168 22192 04309 85367 70393 56021 20867 24640 46335 19464 85955 35457 57260 08190 49582 01125 61079 93651 53549 28395 55200 56131 40464 11231 89100 16332 55413 57947 93786 51431 ==
468 468 51 51 00000
<i>Courtesy AB</i>

<b>M14 12211kHz 0500z 25 Jun 20</b>
952 (R4m) 708 708 51 51 ==
76587 93044 98403 35226 67731 88567 90946 52151 21373 91576 28739 98521 58516 95065 91582 22435 40137 81323 53000 76938 33601 72803 28358 29352 03019 02624 21113 61308 53203 53137 09415 70454 81942 36004 40208 09755 20245 12203 23054 25326 65272 75425 40838 78746 35628 47285 19569 64772 03705 57777 24435 ==
78 708 51 51 00000
<i>Courtesy AB</i>

## M23 O ICW

Peter, (PoSW), managed to catch some M23 activity in the early evenings during June.

Return of M23 CW on 5345:-

The M23 Morse station sending a 3-figure group nice and slow had been logged on 5340 kHz for a few days in the third week of March. Appeared to go quiet for a time but was found on the more usual frequency of 5345 in June:-

17-June-21, Thursday: 1709 UTC, 5345 kHz, strong slow CW in progress sending, "888". Stopped in full flow after 1711 UTC.  
1728 UTC, "888" again, stopped after 1741 UTC. Chance discovery while casually tuning around, perhaps it has been on for some time.  
Nothing further heard for the remainder of the evening.

18-June-21, Friday: 1656:20s UTC (approx.) starting up with "888". Strong, stopped 1711:16s UTC.  
1726 UTC:15s UTC, starting up with "888", stopped at 1741:14s UTC in full flow.

Looks like two 15 minute sessions in the early evening, UK time. Checked 5345 several times in the morning and afternoon but nothing heard.

19-June-21, Saturday: 1701 UTC, strong "888" in progress, stopped 1711:15s (approx.).  
1726:15s UTC, starting up with "888", stopped 1741:14s UTC.

Correction to earlier statement, there are three airings of "888", or at least there were today:-

20-June-21, Sunday: 1632 UTC, found in progress, stopped after 1641 UTC, 5.41 pm in these parts.  
1656 :14s UTC, started, 1711:13s stopped.  
1726:14s UTC, "888" until 1741:12s.

21-June-21, Monday: 1626:11s UTC, "888", stopped after 1641.  
1656:10s UTC started, 1711:10s stopped.  
1726:10s UTC started, 1741:10s stopped.

Continued throughout the remaining days of June, always a good signal, beginning a little bit earlier with each passing day and in the final days of the month was starting three or four seconds before 1626, 1656 & 1726 UTC.

*As usual, a good detailed report – Thanks Peter!*

## Morse Stations - Not Number Related

### M51 XIX

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

No reports – M51b format in use

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

3881//6825									
1130 - 1214z	07 Jun	Lundi-Leçon	11-2/1 Codé	11-2/2 Clair,	11-2/3 Codé,	11 -2/4 Clair (420 grps/hr)	BR	MON	
1130 - 1201z	08 Jun	Mardi-Leçon	12-2/1 Codé	12-2/2 Clair,	12-2/3 Codé,	12-2/4 Clair (600 grps/hr)	BR	TUE	
1130 - 1206z	09 Jun	Mercredi- Leçon	13-2/1 Codé,	13-2/2 Clair,	13-2/3 Codé,	13-2/4 Clair (720 grps/hr)	BR	WED	
1130 - 1156z	10 Jun	Jeudi- Leçon	14-2/1 Codé,	14-2/2 Clair,	14-2/3 Codé,	14-2/4 Clair (840 grps/hr)	BR	THU	
1130 - 1204z	11 Jun	Vendredi- Leçon	15-2/1 Codé,	15-2/2 Clair,	15-2/3 Codé,	15-2/4 Clair (960 grps/hr)	BR	FRI	

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

3881//6825  
 1514 (IP) - 1647z+ 08 Jun Non-stop 5-character groups composed of M51a messages BR TUE  
 2334 (IP) - 0020z+ 11 Jun Non-stop 5-character groups composed of M51a messages BR FRI

**M89 O**

This is a summary of activity from the M89 stations.

**Traffic & Operator Chat from M89**

Traffic & Op. chat reported on the following freqs. (All in kHz).

3740	4040	5012	5435	6139	7368	8113	10403	11222
	4128	5044	5457	6141	7425	8238		
	4166	5068	5485	6478	7459	8621		
	4200	5075	5506	6566	7674	8800		
	4220	5094	5517	6666	7684	8989		
	4242	5105	5531					
	4252	5107	5538					
	4298	5109	5550					
	4320	5116	5555					
	4346	5117	5561					
	4372	5123	5601					
	4386	5198	5621					
	4419	5200	5627					
	4435	5202	5656					
	4519	5213	5716					
	4531	5222	5738					
	4566	5223	5766					
	4617	5231	5768					
	4654	5277	5810					
	4679	5285						
	4680	5330						
	4721	5378						
	4765	5405						
	4952	5410						
	4956	5419						
	4958	5432						
	4961							
	4965							
	4967							
	4976							

**New Scheds for May / Jun 2021:**

**From logs submitted from JPL & F5JBR**

4658//NRH New Round Slip for this frequency First heard 18 June V KP8W (x3) DE AMG7 (x2)

**Chart of M89 Freq & Call signs heard in May / Jun 2021**

**New Scheds shown in Bold Type**

**From logs submitted from JPL & F5JBR**

<u>Freq in KHz</u>	<u>Call Slip</u>
3565//4718	V BSA5 (x3) DE TP4C (x2)
3565//4718//6378/7045	V BSA5 (x3) DE TP4C (x2)
3823//NRH	V 8RVF (x3) DE CV4K (x2)
4658//NRH	V N72H (x3) DE 8HM4(x2)
4658//NRH	V KP8W (x3) DE AMG7 (x2)
4718//6378//7045	V BSA5 (x3) DE TP4C (x2)
4860//5640//6320//6840//8290	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA
4860//5640//6840//8290//8360	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA
4860//5640//6320//6840//8290//8360	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA
4860//5640//6320//6840//8290//8360//10640	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA

<u>Freq in kHz</u>	<u>Call Slip</u>
5640//6320//6840//8360//10640	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ?
6378//NRH	V BSA5 (x3) DE TP4C (x2)
6378//7045	V BSA5 (x3) DE TP4C (x2)
6840//8290//8360//10640	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ?
K	
7620//NRH	V WNF(x3) DE FXM (x2) (R5) (Hand Sent)
7620//8350	V WNF(x3) DE FXM (x2) (R5) (Hand Sent)
7676//NRH	V 8RVF (x3) DE CV4K (x2)

*Courtesy JPL*

4200 1229z (IP) 26 Jun NR 1695 CK 51 56 0626 2030 RMKS BT 0608 TO 6952 AR (Remote tuner Taiwan) JPL SAT

4252 1429z (IP) 04 June NR 266 1 CK 61 20 0604 2150 RMKS 5472435 TO 547243. K (Remote tuner Novosibirsk) JPL FRI



5716	1609z (IP) 26 Jun	NR 3114/EX 0009 BT	VR8Q/E7P AR	(Remote tuner Chungking)	JPL	SAT
5768	1443z (IP) 04 Jun	NR 148AY K7977..4 2240 RMKS 521.262 TO 5215267 K		(Remote tuner Novosibirsk)	JPL	FRI
5810	1433z (IP) 04 Jun	NR 0174/EX CK 61 23 0604 2303 K NR K127/EX CK 61 23 0605 2310 K NR K128/EX CK 61 23 23 17 NR K128/EX 61 23 0604 2317 K NR K129/EX CK 61 23 0604 2323 K		(Remote tuner Novosibirsk)	JPL	FRI
6139	1209z (IP) 26 Jun	NR 1707/EX 2009 BT	A2D3/H2YH III	(Remote tuner Taiwan)	JPL	SAT
6141	1210z (IP) 26 Jun	NR 391/EX 2009 BT	Y3AQ/L8C AR	(Remote tuner Taiwan)	JPL	SAT
6478	1218z (IP) 26 Jun	NR 1432/EX 2015 BT	BJ2/J0 AR	(Remote tuner Taiwan)	JPL	SAT
6566	1603z (IP) 26 Jun	NR 350./EX 0000 BT	7P3/X3S8 AR	(Remote tuner Chungking)	JPL	SAT
7425	1043z (IP) 29 Jun	NR 1141/EX 1844 RMKS 7836069 TO 7836060 K A3C5/F7D4 AR NR .... CK 91 21 0620 1840 RMKS 7836069 TO 7836060 K		(Remote tuner Hong Kong)	JPL	TUE
7459	1047z (IP) 18 May	0518 1810 RMKS 7881 TO 7315 K		(Remote tuner Khabarovsk)	JPL	TUE
8800	1033z (IP) 29 Jun	NR 3368/EX 0009 BT	Y3J6/K5LV AR	(Remote tuner Hong Kong)	JPL	TUE
10403	1107z (IP) 11 May	RMKS 2791 TO 2795 K		(Remote tuner Novosibirsk)	JPL	TUE

**M89 5419kHz 0935 (IP) - 0938z 14 May 2021**

1P 34W K (0935z)  
NPR 1P 34W BT U745 U745 AR K (0936z)  
RPT 1P 62W TO 64W K (Both stations on this frequency)  
NRPt 1P 62W TO 64W BT 6U5N T437 33AU AR (0936z)  
RPT 2P 27W K  
RPT 2P 27W BT 37T4 37T4 AR  
OK QSL 1736 K  
OK HR WK NR 10 UWK/? K  
NR 1.. K  
NR SK SK SK (0938z)

**M89 5561kHz 1624 (IP) - 1626z 18 May 2021**

DIEN DIEN DIEN DIEN DIEN DIEN (1624z)  
FFF NR 1225/EX 0024 BT  
**T5C8/H2Y1 AR**  
**NR 1225/EX 0024 BT**  
**T5C8/H2Y1 AR**  
**NR 1225/EX 0024 BT**  
**T5C8/H2Y1 AR** QSY 06 QSY 06 QSY 06 VVV (1626z)

**M89 5621kHz 1615 (IP) - 1617z 18 May 2021**

YK4U YK4U YK4U (1615z)  
FFF NR 1208/EX 0015 BT  
**F2Y0/W5D5 AR**  
**NR 1208/EX 0015 BT**  
**F2Y0/W5D5 AR**  
**NR 1208/EX 0015 BT**  
**F2Y0/W5D5 AR** QSY 06 QSY 06 VVV (1617z)

Courtesy JPL

**M89 5810kHz 1433 (IP) - 1442z 04 June 2021**

AR K (IP – Sending msg) (1433z)  
R OK QSL 22EEEEEE R OK QSL 2302 K (1433z)  
(Both stations on this frequency)  
NOK  
R OK QSL 2302 AGN  
**MSG NR 0174/EX CK 61 23 0604 2303 K** (1434z)  
R GA  
R OK BT BT BT BT BT BT AUND 3D4A A3TU 367D 3DU4 UT56  
AD73 3UTA NU5D 6DN7 AR K (1435z)  
R OK QSL 2308 K  
64  
R OK QSL 2308 K  
OK  
R HR MSG GA  
HR 7G GA  
OK GA  
MSG MSG MSG NR C127/CC. 1236 EEE  
NR K127/EX CK 61 23 0605 231 III  
**NR K127/EX CK 61 23 0605 2310 K** (1438z)  
R GA  
OK BT BT BT BT BT B T A37U DU5T 6DAN D6A3 T4U3 DA7T  
6T5U T637 T3AU 7DN4 AR K  
R OK QSL 2316 K (1439z)  
R OK MSG MSG MSG  
NR K128/EX CK 61 23 23 17  
**NR K128/EX 61 23 0604 2317 K**  
R OK GA  
64 R BT BT BT A47D D7TU 43DA D6AU U 4A5 4DTN 357U  
46DT 3U56 3TUN AR K  
R QSA2 EEEE R QSL 2322 K (1441z)  
R OK  
**MSG MSG MSG NR K129/EX CK 61 23 0604 2323 K** (1442z)

Courtesy JPL

**M95** O XSV, XSV70, XSV85

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

3968//6936	Call Sign SAQC (Previously 3A7D) 1856z	(Previously 3A7D) 13 May	Suspect change in frequency and Round Slip for DKG6 DE 3A7D V YHxD (x3) DE SAQC (x2)	(Remote tuner Novokuzneck)	JPL	THU
	1553z	26 Jun	V YHxD (x3) DE SAQC (x2)	(Remote tuner Novosibirsk)	JPL	SAT
4243//NRH	Message number differs from current XSV70 and XSV85 message numbers.					
4243//9054	Message number differs from current XSV70 and XSV85 message numbers.					
	1143 (IP) - 1153z	11 May	NR . 7 CK 23 35 0511 1550 BT	(Remote tuner Japan)	JPL	TUE
	1145 (IP) - 1204z	25 May	NR 041 CK 65 35 0525 1542 BT NR 020 CK 26 35 0525 1625 BT NR 50 CK 241 35 0525 1650 BT NR 22 CK 159 35 0511 1600 BT	(Remote tuner Japan)	JPL	TUE
	1140 - 1150z	05 Jun	NR 064 CK 08 35 0605 1554 BT	(Remote tuner Taiwan)	JPL	SAT
	1139 - 1155z	06 Jun	NR 066 CK 37 35 0606 1528 BT NR 12 CK 169 35 0606 1602 BT	(Remote tuner Taiwan)	JPL	SUN
	1140 (IP) - 1157z	10 Jun	NR 074 CK 49 35 1533 BT NR 068 CK 29 35 0610 1555 BT NR 20 CK 140 35 0610 1609 BT	(Remote tuner Taiwan)	JPL	THU
	1139 (IP) - 1149z	18 Jun	NR 090 CK 29 35 0618 1523 BT NR 3. CK 109 35 018 1534 BT	(Remote tuner Taiwan)	JPL	FRI
	1142 (IP) - 1151z	26 Jun	NR 007 CK 41 35 0626 1550 BT NR 52 CK 131 35 0626 1600 BT	(Remote tuner Taiwan)	JPL	SAT
	1142 (IP) - 1153z	29 Jun	NR 013 CK 50 35 0629 1507 BT NR 58 CK 129 35 0629 1537 BT	(Remote tuner Hong Kong)	JPL	TUE
4364//8073	Call Sign XSV85					
	1130 - 1136z	11 May	NR 0344 CK 115 35 0511 1534 BT	(Remote tuner Taiwan)	JPL	TUE
	1130 - 1140z	13 May	NR 0348 CK 186 35 0513 1630 BT	(Remote tuner Taiwan)	JPL	THU
	1134 - 1139z	25 May	NR 0372 CK 167 35 0525 1620 BT	(Remote tuner Philippines)	JPL	TUE
	1130 - 1144z	03 Jun	NR 0398 CK 320 35 0603 1617 BT NR 060 CK 62 35 0603 1542 BT NR 047 CK 16 35 0603 1550 BT NR 06 CK 159 35 0603 1612 BT	(Remote tuner Taiwan) (Remote tuner Japan)	JPL JPL	THU THU
	1131 - 1139z	05 Jun	NR 040. CK 168 35 0605 1608 BT	(Remote tuner Taiwan)	JPL	SAT
	1135 - 1138z	06 Jun	NR 0411 CK 222 35 0606 A558 BT	(Remote tuner Taiwan)	JPL	SUN
	1130 - 1150z	10 Jun	NR 0421 CK .6 35 0610 1658 BT	(Remote tuner Taiwan)	JPL	THU
	1130 - 1138z	18 Jun	(Defective keying - missed msg nr)	(Remote tuner Hong Kong)	JPL	FRI
	1136 (IP) - 1142z	26 Jun	NR 0464 CK 238 35 0626 1632 BT	(Remote tuner Hong Kong)	JPL	SAT
	1130 - 1141z	29 Jun	NR 0470 CK 240 35 0629 1637 BT	(Remote tuner Hong Kong)	JPL	TUE
5479//6936	Call Sign SAQC 1101z	(Active daily - only first marker log has been included) 29 Jun	V YHxD (x3) DE SAQC (x2)	(Remote tuner Novosibirsk)	JPL	TUE
5479//10722	Call Sign SAQC 1104z	(Active daily - only first marker log has been included) 11 May	V YHxD (x3) DE SAQC (x2) (IP - Cont'd)	(Remote tuner Novosibirsk)	JPL	TUE
	1059z	03 Jun	V YHxD (x3) DE SAQC (x2) (IP - Cont'd) VVV HR SVC GA NR 014 1900 RMKS 9123 TO 9270 BT CL/1930/ZBT/9123/9270 AR A AGN NR 014 1900 RMKS 9123 TO 9270 BT CL/1930/ZBT/9123/9270 AR QSL ? HR WK NR 240 (Return to Round Slip - 1101z)	(Remote tuner Novosibirsk)	JPL	THU
	1101z	29 Jun	V YHxD (x3) DE SAQC (x2) (IP - Cont'd) 144 1900 RMKS 9123 TO 9912 BT CL/1930/ZBT/9123/9912 AR QS.. (Horrible CW Opr...) 2404 1NR 240 SK SK (Return to R/S - 1102z)	(Remote tuner Novosibirsk)	JPL	TUE
7345	0905 (IP) - 0906z	16 May	4AA 445 354 U4T 353 4TN 445 AR	(Remote tuner Khabavrosk)	JPL	SUN
7553//9153	0936 (IP) - 0936z	16 May	445 4D6 33D 75D 4DU TT6 773 3AD 353 4A5 N3D	(Remote tuner Taiwan)	JPL	SUN
8567	0959 (IP) - 1006z	14 May	VVV OWBR DE ZDUB MSG 7G NR 43/CCK CK 31 32 0514 1800 RMKS 7734 TO 12078 1.4 1435 788780233..24 BT 43/CCK CK 20 7G/33/CCK CK 31 .. 0414 1800 RMKS ..524 TO 120. 8064 1435 .. RMKS 76.4 O 1207 0964 3535 7887 .023 2003 B T	(Remote tuner Japan)	JPL	FRI

10722//NRH	Call Sign 3A7D							
	1048z	01 May	YHXD (x3) DE SAQC (x2)		(Remote tuner Khabarovsk)	JPL	FRI	
	1000z	12 Jun	YHXD (x3) DE SAQC (x2)		(Remote tuner Novosibirsk)	JPL	SAT	
10473	1104z (IP)	13 May	05 05 (IP – Long zero)		(Remote tuner Novosibirsk)	JPL	THU	

**M95 8567kHz 0959z (IP) 14 May 2021**

**VVV OWBR DE ZDUB** (IP – 0959z)

HR 7G GA  
**MSG 44 K EEE /MSG CCK/ CK 213**  
**MSG 7G NR 43/CCK CK 31 32 0514 1800 RMKS 7734 TO 12078 1.4**  
**1435 788780233..24 BT**  
 4..U NT3 6T7D. (Cont'd – weak /fadng) (1002z)  
 AR R HR 7G GA (1004z)  
**43/CCK CK 20**  
**7G/33/CCK CK 31 .. 0414 1800 RMKS ..524 TO 120. 8064 1435 ..**  
**RMKS 76.4 O 1207 0964 3535 7887 .023 2003 B T**  
 4T. 84D3 U NT53 (Cont'd – 1006z)

**M95 4364/8073kHz 1130z 13 May 2021**

**BNGC DE XSV85**

Into voice - USB - Chinese - Male (1130z)  
 Switched to Chinese digital 4+4 QPSK 75/3000 – LSB (1131z)  
 Switched to CW – Handsent (1138z)

**V BNGC (x3) DE XSV85 (x2)** (IP - 1138z)  
 HR MSG GA PSE CY (1139z)  
**NR 0348 CK 186 35 0513 1630 BT**

*Courtesy JPL*

**M95 4243/9054kHz 1140z 10 June 2021**

VV HR 7G TO YR PSE CY (1151z)  
**NR 074 CK 49 35 1533 BT**  
 5AA UTT TAT 3U6 3A4 5T7 5TD 75U 353 U4T  
 355 37U DN7 36T 4T7 344 N3D 4A5 445 3DA  
 4DD 5TN 75U 353 U4T 354 37U DN7 36T 4A7  
 344 N3D 4A5 445 3DA 4DD 5AA 75U 353 U4T  
 354 DN7 36T 4TN NAT 4TA 445 3DA 4DD AR A HR 7G GA  
 (1155z)  
**NR 068 CK 29 35 0610 1555 BT**  
 UT5 TAT 3U6 3A4 TTA TTU TT3 773 354 37U  
 N45 374 33U 33N N3D 353 36U 4T7 446 474  
 437 346 N3D 4UT 445 4D4 3DU N3D 3DA AR A HR 7G GA  
 (1156z)  
**NR 20 CK 140 35 0610 1609 BT**  
 UTU TAT 3U6 3A4 TTU 773 354 373 N3D 353 (Cont'd – 1157z)

**M95 5479/10722kHz 1059z 03 June 2021**

V YHXD (x3) DE SAQC (x2) (IP - Cont'd)

VVV HR SVC GA **NR 014 1900 RMKS 9123 TO 9270 BT**  
**CL/1930/ZBT/9123/9270 AR A AGN** (From R/S - 1100z)  
**NR 014 1900 RMKS 9123 TO 9270 BT**  
**CL/1930/ZBT/9123/9270 AR QSL ? HR WK NR 240**  
 (Return to R/S - 1101z)

*Courtesy JPL*

## Marker Beacons (MX MXI)

5153.7	2028z	31 May	MXI	CW	Beacon "D"	Sevastopol	BR	MON
5153.8	2026z	31 May	MXI	CW	Beacon "P"	Kaliningrad	BR	MON
5153.9	0057z	02 Jun	MXI	CW	Beacon "S"	Severomorsk	BR	WED
5154.1	2027z	31 May	MXI	CW	Beacon "A"	Astrakhan	BR	MON
5156.8	0059z	02 Jun	MX	CW	Beacon "L"	St Petersburg (Fast)	(Clear under digital signal)	BR WED
7508.7	2030z	31 May	MXI	CW	Beacon "D"	Sevastopol	BR	MON
7508.8	0102z	02 Jun	MXI	CW	Beacon "P"	Kaliningrad	BR	WED
7509.1	2031z	31 May	MXI	CW	Beacon "A"	Astrakhan	BR	THU
8494.8	2032z	31 May	MXI	CW	Beacon "P"	Kaliningrad	BR	MON
8495	2034z	31 May	MXI	CW	Beacon "C"	Moscow	BR	MON
8497.8	2035z	31 May	MX	CW	Beacon "L"	St Petersburg	BR	MON
10871.8	0105z	02 Jun	MXI	CW	Beacon "P"	Kaliningrad	BR	WED
10871.9	2036z	31 May	MXI	CW	Beacon "S"	Severomorsk	BR	MON
10872.1	2035z	31 May	MXI	CW	Beacon "A"	Astrakhan	BR	MON
13527.7	2037z	31 May	MXI	CW	Beacon "D"	Sevastopol	BR	MON
13527.9	2040z	31 May	MXI	CW	Beacon "S"	Severomorsk	BR	MON
13528	2041z	31 May	MXI	CW	Beacon "C"	Moscow	BR	MON
13528.1	2038z	31 May	MXI	CW	Beacon "A"	Astrakhan	BR	MON
16331.7	2041z	31 May	MXI	CW	Beacon "D"	Sevastopol	BR	MON
16331.8	1952z	04 Jun	MXI	CW	Beacon "P"	Kaliningrad	BR	FRI

**Contributors:** AB, BR, ER, E.SMITH, F5JBR, Gert, HFD, PLdn, PoSW, RRGB *Thank you all for your logs.*

# Voice, Polytone, Tones, Hybrids and FSK

Voice stations, Polytones and Hybrids continuing normally with remote copy much better using remote SDR rather than those of us who use home receivers.

## E06

Reports on this station a little sparse this time [!]

From RNGB:

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

<b>Monday</b>		<b>0210z</b>	<b>11404kHz</b>	<b>0310z</b>	<b>13562kHz</b>
17/05	'537' 680 45 65656.....etc	(thanks HfD)			
		<b>0210z</b>	<b>11557kHz</b>	<b>0310z</b>	<b>13803kHz</b>
28/06	'537' 808 31 97607.....etc	(thanks HfD)			
<b>Thursday (repeats Friday)</b>		<b>0300z</b>	<b>14767kHz</b>	<b>0400z</b>	<b>12157kHz</b>
13/05	'361' 278 36 50437.....etc	(thanks HfD)			
<b>First /Third Thursday (repeats Friday)</b>		<b>0500z</b>	<b>14565kHz</b>	<b>0600z</b>	<b>16125kHz</b>
06/05	'460' 128 53 10666 83240 40656 39152 07191 42588 07633 58329 90079 19695 44660 91862 54317 96684 73375 77988 16354 57157 93482 98797 79482 56805 54621 33324 68059 38284 49428 16604 91510 94992 51227 21867 24065 13478 44782 08065 11143 49138 23557 99919 38344 14910 51920 92679 23972 87634 15719 98766 21029 61791 09680 78507 39620 128 53 00000				
20/05	'460' 389 51 22360 28379 32013 85173 98602 29204 91143 41222 97157 47722 95950 43814 90291 51295 88391 04189 09499 66319 20051 53299 49649 42696 93250 41791 34162 23483 28034 68685 27164 49400 03470 81642 03548 52895 46707 15990 12882 21439 68221 64715 98108 34753 66697 96600 54958 05649 51966 64681 43030 79165 59453 389 51 00000				
		<b>0500z</b>	<b>13985kHz</b>	<b>0600z</b>	<b>15830kHz</b>
03/06	'328' 670 51 22551 08340 71135 49305 64041 78675 29332 33535 51672 65472 62680 77847 64894 08924 61859 59447 81773 39575 55654 77504 49401 24099 08555 85106 61419 46708 96579 12135 91128 68402 72263 33927 53584 31237 54736 65446 95144 99789 05840 85605 33895 57037 78219 21473 99384 96799 46322 47016 45123 79960 56244 670 51 00000				
17/06	'328' 914 50 59219 91543 88236 74319 79502 09971 69632 48611 92194 05254 29691 89679 14205 62607 72784 85893 94622 39458 20980 97274 56966 45465 57907 93606 83335 32021 19987 29332 82641 02151 89711 28705 10108 76771 70662 79627 30227 78228 48955 59626 40365 17057 70796 42382 97194 92903 90841 58280 13150 45547 914 50 00000				

From H-FD

Fri 21.05.2021 0500Z 14565 460-389/51=22360  
Fri 21.05.2021 0600Z 16125 460

June 2021

Fri 18.06.2021 0500Z 13985 328-914/50=59219  
Fri 18.06.2021 0600Z 15830 328

## E07

From PoSW:

### Sunday + Wednesday Schedule, 1700 UTC Start:-

2-May-21, Sunday:- 1700 UTC, 13934 kHz, "919 919 919 000", S7.  
1720 UTC, 12134 kHz, second sending, S9.

5-May-21, Wednesday:- 1700 UTC, 13934 kHz, full message this evening, "919 919 919 1",  
DK/GC "6623 131" x 2, S7 to S8.  
1720 UTC, 12134 kHz, peaking over S9.  
1740 UTC, 10934 kHz, back down to S7.

9-May-21, Sunday:- 1700 UTC, 13934 kHz, "919" and "6623 131" again, S5 to S7.  
1720 UTC, 12134 kHz, over S9.  
1740 UTC, 10934 kHz, S6 to S7.

12-May-21, Wednesday:- 1700 UTC, 13934 kHz and 1720 UTC, 12134 kHz, both strong, "919 919 919 000".

16-May-21, Sunday:- 1700 UTC, 13934 kHz, "919 919 919 000", S6 to S7.  
1720 UTC, 12134 kHz, stronger.



23-May-21, Sunday:- 1700 UTC, 13934 kHz, full message, “919 919 919 1”, DK/GC “300 71” x 2, peaking S7 with QSB.  
1720 UTC, 12134 kHz, S8 to S9.  
1740 UTC, 10934 kHz, weaker, S5 to S6.

2-June-21, Wednesday:- Missed first sending on predicted frequency 13368 kHz.  
1720 UTC, 11568 kHz, second sending very weak, unable to read other than it was another full message.  
1740 UTC, 10468 kHz, no problem here, peaking S9, “354 354 354 1”, DK/GC “3496 74” x 2.

6-June-21, Sunday:- 1700 UTC, 13368 kHz, “354” and “3496 74” again, S7.  
1720 UTC, 11568 kHz, much stronger than on the 2<sup>nd</sup>, peaking S9.  
1740 UTC, 10468 kHz, S7 to S8.

9-June-21, Wednesday:- 1700 UTC, 13368 kHz, “354 354 354 000”, peaking around S7.  
1720 UTC, 11568 kHz, weaker.

13-June-21, Sunday:- 1700 UTC, 13368 kHz, strong signal and 1720 UTC, weaker, “354 354 354 000”.

16-June-21, Wednesday:- 1712 UTC, 13368 kHz, missed the start having lost track of the time – as you do, checking the frequency of the first sending in case it was in “full message” mode – and it was. Not too strong, 4 or 5 on the S-meter, ended around 1718 UTC so quite a long message.  
1720 UTC, 11568 kHz, “354 354 354 1”, DK/GC “207 155” x 2, strong.  
1740 UTC, 10468 kHz, also strong.

20-June-21, Sunday:- 1700 UTC, 13368 kHz, “207 155” again, strong signal.  
1720 UTC, 11568 kHz, slightly weaker.  
1740 UTC, 10468 kHz, S6, weakest.

23-June-21, Wednesday:- 1700 UTC, 13368 kHz, “354 354 354 000”, strong signal.  
1720 UTC, 11568 kHz, weaker.

27-June-21, Sunday:- 1700 UTC, 13368 kHz and 1720 UTC, 11568 kHz, weaker, “354 354 354 000”

**Saturday Schedule, 1300 UTC Start:-**

1-May-21:- 1300 UTC, 12176 kHz, “152 152 152 000”, strong, S-meter well over the 9.  
1320 UTC, 11576 kHz, weaker.

8-May-21:- 1300 UTC, 12176 kHz, strong signal and 1320 UTC, 11576 kHz, weaker, “152 152 152 000”.

15-May-21:- 1300 UTC, 12176 kHz, “152 152 152 000”, S6 to S7.  
1320 UTC, 11576 kHz, slightly stronger.

29-May-21:- 1300 UTC, 12176 kHz, strong and 1320 UTC, 11576 kHz, much weaker, “152 152 152 000”.

5-June-21:- 1300 UTC, 12176 kHz, S7, “152 152 152 000”.  
1320 UTC, 11576 kHz, a couple of S-points weaker.

12-June-21:- 1300 UTC, 12176 kHz and 1320 UTC, 11576 kHz, both strong, “152 152 152 000”.

19-June-21:- 1300 UTC, 12176 kHz, “152 152 152 000”, strong signal.  
1320 UTC, 11576 kHz, also strong.

26-June-21:- 1300 UTC, 12176 kHz and 1320 UTC, 11576 kHz, both around S7, “152 152 152 000”.

**Sunday Schedule, 0600 UTC Start:-**

2-May-21:- 0600 UTC, 10317 kHz, “312 312 312 000”, S7.  
0620 UTC, 11117 kHz, slightly weaker.

9-May-21:- 0600 UTC, 10317 kHz, strong, well over S9 and 0620 UTC, 11117 kHz, slightly weaker, “312 312 312 000”.

16-May-21:- 0600 UTC, 10317 kHz and 0620 UTC, 11117 kHz, both strong, “312 312 312 000”.

23-May-21:- 0600 UTC, 10317 kHz, weak at first, came up to S6, “312 312 312 000”.  
0620 UTC, 11117 kHz, S6.

6-June-21:- 0600 UTC, 10317 kHz and 0620 UTC, 11117 kHz, both around S7, “312 312 312 000”.

13-June-21:- 0600 UTC, 10317 kHz, S7 to S8 and 0620 UTC, 11117 kHz, over S9, “312 312 312 000”.

20-June-21:- 0600 UTC, 10317 kHz, weak signal and 0620 UTC, 11117 kHz, stronger, “312 312 312 000”.

**Others' Logs:**

**Sunday**

**May 2021**

<b>0600z</b>	<b>10317kHz</b>	<b>0620z</b>	<b>11117kHz</b>	<b>0640z</b>	<b>12217kHz</b>
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16/05	312 000				
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0600z Weak, 0620z Fair

30/05	312 000				
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Strong

**Sunday/Wednesday**

**May 2021**

1700z	13394kHz	1720z	12134kHz	1740z	10934kHz	
02/05		919 000				1700z Fair, 1720z Very strong
05/05		919 1 6623 131 82656 ... 94907 000 000				[1720z Very strong] Strong
09/05		919 1 6623 131 82656 ... 94907 000 000				[1720z Very strong] Strong
12/05		919 000				1700z Strong, 1720z Weak
16/05		919 000				Strong
19/05		919 1 300 71 15695 ... 06093 000 000				Weak
23/05		919 1 300 71 15695 ... 06093 000 000				Weak
26/05		919 000				Weak
30/05		919 000				1700zFair, 1720z Strong

**June 2021**

1700z	13368kHz	1720z	11568kHz	1740z	10468kHz	
02/06		354 1 3496 74 89895 ... 04564 000 000				[1700z Fair] Weak

Note freqs and msg structure 06/06

13363kHz1700z 06/06 [354 x 3 1 3496 74 89895 to 04564 ATTENTION single repeat]OUT 1710z S9 M8 SUN  
 11568kHz1720z 06/06 [354 x 3 1 3496 74 89895 to 04564 ATTENTION single repeat]OUT 1730z S9 M8 SUN  
 10468kHz1740z 06/06 [354 x 3 1 3496 74 89895 to 04564 ATTENTION single repeat]OUT 1740z S9 M8 SUN

06/06		354 1 3496 74 89895 ... 04564 ATTENTION single repeat			OUT	Strong
09/06		354/00OUT				1700zStrong 1720z Weak
13/06		354 000				Weak
16/06		354 1 207 155 02220 ... 78462 000 000				Fair
20/06		354 1 207 155 02220 ... 78462 000 000				[1700z Very strong] Fair
23/06		354 000				Strong
27/06		354 000				Strong
30/06		354 1 595 87 38875 ... 98638 000 000				[1700z Fair] Weak

**Tuesday/Friday**

**May 2021**

0700z	16246kHz	0720z	18446kHz	0740z	19246kHz	
04/05		242 1 4050 74 06511 ... 70292 000 000				[0740z RussianSDR] 0700z Fair, rest weak
07/05		242 1 4050 74 06511 ... 70292				[0700z QTH Rx] Weak, DutchSDR
11/05		242 000				Weak DutchSDR
14/05		242 000				Weak
18/05		242 1 461 65 76667 ... 96988 000 000				[0700z QTH Rx] Weak, Dutch SDR
25/05		242 000				Weak
28/05		242 000				[0720z Dutch SDR] Weak

**June 2021**

0700z	16331kHz	0720z	18731kHz	0740z	19331kHz	
01/06		373 1 449 98 98592 ... 40632 000 000				[0700z QTH Radio] Weak DutchSDR
04/06		373 1 449 98 98592 ... 40632 000 000				Weak
08/06		373 000				[0720z Dutch SDR] Weak

11/06	373 000				Weak
15/06	373 1 457 132 74885 ... 31864 000 000				Weak Dutch SDR
18/06	373 1 457 132 74885 ... 31864 000 000			[0740z Dutch SDR]	Weak
22/06	373 000			[0720z NRH]	Weak
25/06	373 000			[0720z Dutch SDR]	Weak
29/06	373 000			[0720z Dutch SDR]	Weak

**Thursday/Saturday**

**May 2021**

1410z	15836kHz	1430z	14636kHz	1450z	13536kHz	
01/05	157 1 8629 117 80108 ... 21207 000 000					Weak
08/05	157 000					Weak
13/05	157 1 499 188 30179 ... 08025 000 000					Weak
15/05	157 1 499 188 30172 ... 08025 000 000				[1450z QRM]	Weak
20/05	157 000					Strong [dMHz]
27/05	157 1 7437 107 26526 ... 38187 000 000					Weak
29/05	157 1 7437 107 26526 ... 38187 000 000				[1410z Dutch SDR]	Weak

**June 2021**

1410z	13417kHz	1430z	14717kHz	1450z	15817kHz	
03/06	603 000					Weak
05/06	603 000					1410z Fair 1430z Weak
10/06	603 1 1362 81 46936 ... 75892 000 000					Weak
12/06	603 1 1362 81 46936 ... 75892 000 000					Weak
17/06	603 000					Weak
19/06	603 000					Weak
26/06	603 1 1997 65 98092 ... 63583 000 000					Weak

603 1  
1997 65  
98092 96996 94903 10424 05484 26897 57843 59618 24869 54329  
14037 14033 40378 69642 84006 84276 63686 39376 71926 07898  
28992 03276 93591 75690 03588 98416 95287 38221 75812 25876  
41014 21923 59755 93370 97126 49528 91883 66899 08910 66738  
44154 40981 49035 56572 89727 19435 73215 98833 98314 43622  
15429 12818 89424 65942 15981 58555 86146 02117 71947 51099  
62788 99018 15154 36701 63583  
000 000 *Courtesy dMHz [Strong, via Twente]*

**Saturday**

**May 2021**

1300z	12176kHz	1320z	11576kHz	1340z	10276kHz	
01/05	152 000					Weak
08/05	152 000					Weak
15/05	152 000					Weak
29/05	152 000					1300z Fair, 1320z Weak

**June 2021**

05/06	152 000					Weak
12/06	152 000					Fair
19/06	152 000					Strong
26/06	152 000					Weak

# E07a

Not much to rave about from the three best received E07a schedules, two minutes of “no message” throughout May and June.

## Wednesday Schedule, 2000 UTC Start:-

5-May-21:- 2000 UTC, 12166 kHz, “172 172 172 000”, S9+, very strong signal.  
2020 UTC, 10766 kHz, also very strong.

12-May-21:- 2000 UTC, 12166 kHz, 172 172 172 000”, signal weaker than expected, just about making a “7” on the S-meter.  
2020 UTC, 10766 kHz, much stronger, S9+.

19-May-21:- 2000 UTC, 12166 kHz and 2020 UTC, 10766 kHz, both very strong, “172 172 172 000”.

26-May-21:- 2000 UTC, 12166 kHz, “172 172 172 000”, S9+.  
2020 UTC, 10766 kHz, S9+.

2-June-21:- 2000 UTC, 12166 kHz, S9+ and 2020 UTC, 10766 kHz, slightly weaker, “172 172 172 000”.

9-June-21:- 2000 UTC, 12166 kHz and 2020 UTC, 10766 kHz, both S8 to S9, not the usual S9+ but strong enough, “172 172 172 000”.

16-June-21:- 2000 UTC, 12166kHz and 2020 UTC, 10766 kHz, again both strong but not S9+, “172 172 172 000”.

23-June-21:- 2000 UTC, 12166 kHz, very strong, “172 172 172 000”.  
2020 UTC, 10766 kHz, also very strong.

## Friday Schedule, 1510 UTC Start:-

7-May-21:- 1510 UTC, 12182 kHz, “101 101 101 000”, strong.  
1530 UTC, 11082 kHz, also a strong signal.

14-May-21:- 1510 UTC, 12182 kHz, “101 101 101 000”, S9.  
1530 UTC, 11082 kHz, slightly weaker.

21-May-21:- 1510 UTC, 12182 kHz, “101 101 101 000” S7.  
1530 UTC 11082 kHz, S4 at best, both weaker than usual.

28-May-21:- 1510 UTC, 12182 kHz, “101 101 101 000”, S7 to S8.  
1530 UTC, 11082 kHz, weak.

11-June-21:- 1510 UTC, 12182 kHz, “101 101 101 000”, S6-7 with QSB.  
1530 UTC, 11082 kHz, stronger.

18-June-21:- 1510 UTC, 12182 kHz, S6 and 1530 UTC, 11082 kHz, weaker, “101 101 101 000”.

25-June-21:- 1510 UTC, 12182 kHz, “101 101 101 000”, good signal.  
1530 UTC, 11082 kHz, slightly weaker.

## Saturday Schedule, 0800 UTC Start:-

1-May-21:- 0800 UTC, 12177 kHz, “148 148 148 000”, peaking around S8.  
0820 UTC, 13477 kHz, weaker.

8-May-21:- 0800 UTC, 12177 kHz, S7 to S8 and 0820 UTC, 13477 kHz, weaker, “148 148 148 000”.

15-May-21:- 0800 UTC, 12177 kHz, “148 148 148 000”, peaking S9.  
0820 UTC, 13477 kHz, weaker.

29-May-21:- 0800 UTC, 12177 kHz, “148 148 148 000”, S7.  
0820 UTC, 13477 kHz, second sending stronger, unusually.

5-June-21:- 0800 UTC, 13373 kHz, “338 338 338 000”, peaking S8.  
0820 UTC, 14373 kHz, weaker.

12-June-21:- 0800 UTC, 13373 kHz, S5 and 0820 UTC, 14373 kHz, weak, “338 338 338 000”.

19-June-21:- 0800 UTC, 13373 kHz and 0820 UTC, 14373 kHz, both S5 to S6, “338 338 338 000”.

26-June-21:- 0800 UTC, 13373 kHz, “338 338 338 000”, S6.  
0820 UTC, 14373 kHz, weaker.

## **From PoSW’s quick analysis onto others’ logs**

### **Wednesday**

#### **May 2021**

<b>2000z</b>	<b>12166kHz</b>	<b>2020z</b>	<b>10766kHz</b>	<b>2040z</b>	<b>9266kHz</b>
05/05	172 000				Very strong
12/05	172 000				2000z Weak QRM4, 2020z Very strong

**Wednesday May 2021 continued:**

19/05	172 000					Very strong
26/05	172 000					Very strong

**June 2021**

02/06	172 000					Very strong
09/06	172 000					2000z Very strong 2020z Strong QRM2
16/06	172 000			[2000z Strong, Repeating tones heard]		Very strong
23/06	172 000					Very strong
30/06	172 1 60704 653 38 81496 ... 55549 000 000					Very strong

172 1 60704  
 653 38  
 81496 22749 31802 48953 37376  
 65929 28084 13794 59019 79903  
 11885 98705 66320 90427 65676  
 42767 52974 08569 24225 49188  
 54342 71834 36680 52192 32119  
 19869 55508 74086 61058 90912  
 96840 55733 49539 39471 46490  
 30625 07618 55549  
 000 000      *Courtesy PLdn*

**Thursday**

**May 2021**

0430z	7933kHz	0450z	9133kHz	0510z	10233kHz	
06/05	912 000					Very strong
13/05	912 000					Very strong
20/05	912 000				[0430z MISSED]	Weak
27/05	912 000					Weak

**June 2020**

03/06	912 000					Very strong
10/06	912 000				[0450z QRM2]	Very strong
17/06	912 000				[0450z NRH]	Very strong
24/06	912 000					Strong QRM2

**Friday**

**May 2021**

1510z	12182kHz	1530z	11082kHz	1550z	10182kHz	
07/05	101 000					Fair
14/05	101 000					Very strong
21/05	101 000					Weak
29/05	101 000					Weak

**June 2021**

04/06	101 000					Weak
11/06	101 000					Weak
18/06	101 000					Weak
25/06	101 000					Weak

**Saturday**

**May 2021**

0800z	12177kHz	0820z	13477kHz	0840z	14877kHz	
01/05	148 000					0800z Weak, 0820z Strong
08/05	148 000				[0800z QRM2]	Weak
15/05	148 000					Fair
22/05	148 000				[0820z Unworkable]	Weak
29/05	148 000					0800z Weak, 0820z Strong

**June 2021**

0800z	13373kHz	0820z	14373kHz	0840z	14873kHz	
05/06	338 000					Strong
12/06	338 000					0800z Weak, 0820z Fair
19/06	338 000					Weak
26/06	338 000					Weak

## E11&E11a log May/June

4638kHz	0500z	11/05 [121/26 54624 56542 12841 20626 04026 46426 42465 42520 84054 60426 54024 68445 42605 84468 65424 56608 46245 04650 64084 02654 20652 64262 06468 02468 56422 26064]	(The crazy world of 121)	Ary	TUE
4783kHz	1910z	01/05 [395/00] Out 1913z S9		Malc, HfD	SAT
	1910z	05/05 [393/00] Out 1913z S9		Malc	WED
	1910z	12/05 [396/00] Out 1913z S9		Malc	WED
	1910z	15/05 [393/00] Out 1913z S7		Malc	SAT
	1910z	19/05 [394/00] Out 1913z S8		Malc	WED
	1910z	26/05 [395/33 65917.....72209] Out 1910z S9		Malc	WED
	1910z	29/05 [395/33 65917.....etc] Repeat of Wednesday		Malc	SAT
	1910z	02/06 [390/00] Out 1913z S9		Malc	WED
	1910z	05/06 [399/00] Out 1913z S9		Malc, Gary H	SAT
	1910z	09/06 [392/35 78818.....75599] Out 1920z S9+QRM		Malc	WED
	1910z	12/06 [392/35 78818.....etc] Repeat of Wednesday		Malc	SAT
	1910z	16/06 [391/00] Out 1913z S9		Malc	WED
	1910z	19/06 [392/00] Out 1913z S5		Malc	SAT
	1910z	23/06 [399/00] Out 1913z S9		Malc	WED
	1910z	26/06 [399/00] Out 1913z S9		Malc	SAT
	1910z	30/06 [395/00] Out 1913z S9		Malc	WED
4909kHz	0820z	06/05 [435/00] Out 0823z S2		Malc, HfD	THU
	0820z	07/05 [436/00] Out 0823z S3 (Dutch SDR)		Malc	FRI
	0820z	13/05 [430/00] Out 0823z S3 (Dutch SDR)		Malc	THU
	0820z	14/05 [432/00] Out 0823z S2 (Dutch SDR)		Malc	FRI
	0820z	20/05 [434/31 71031 40658 00386 68932 01464 13136 90105 29252.....32946 71603] S2		RNGB	THU
	0820z	21/05 [434/31 71031.....etc] Repeat of Thursday		RNGB	FRI
	0820z	27/05 [439/00] Out 0823z S2 (Dutch SDR)		Malc	THU
	0820z	28/05 [434/00] Out 0823z S2 (Dutch SDR)		Malc	FRI
	0820z	03/06 [438/00] Out 0823z S2		Malc, RNGB	THU
	0820z	04/06 [434/00] Out 0823z S2		Malc, RNGB	FRI
	0820z	10/06 [430/00] Out 0823z S3 (Dutch SDR)		Malc	THU
	0820z	11/06 [438/00] Out 0823z S2 (Dutch SDR)		Malc	FRI
	0820z	18/06 [430/00] Out 0823z S2 (Dutch SDR)		Malc	FRI
	0820z	25/06 [432/33 54227 43703 43015 02113 10459 55590 34172 03845.....82687 37277]		RNGB	FRI
5082kHz	1530z	01/05 [368/00] Out 1533z S3 (Dutch SDR)		Malc, HfD	SAT
	1530z	02/05 [366/00] Out 1533z S2		Malc	SUN
	1530z	08/05 [366/00] Out 1533z S3 (Dutch SDR)		Malc	SAT
	1530z	09/05 [360/00] Out 1533z S2		Malc	SUN
	1530z	15/05 [365/00] Out 1533z S2 (Dutch SDR)		Malc, RNGB	SAT
	1530z	16/05 [363/00] Out 1533z S2		Malc	SUN
	1530z	23/05 [367/00] Out 1533z S2		Malc	SUN
	1530z	29/05 [363/40 64834.....72397] Out 1541z S3		Malc	SAT
	1530z	30/05 [363/40 64843? To		Malc	SUN
	1530z	05/06 [365/40 01259.....80597] Out 1541z S2		Malc	SAT
	1530z	12/06 [363/00] Out 1533z S2		Malc	SAT
	1530z	13/06 [365/00] Out 1533z S3		Malc	SUN
	1530z	19/06 [369/00] Out 1533z S2 (Dutch SDR)		Malc	SAT
	1530z	26/06 [367/00] Out 1533z S3		Malc	SAT
	1530z	27/06 [360/00] Out 1533z S3		Malc	SUN

5371kHz	1605z	02/05 [233/00] Out 1608z S2		Malc, HfD	SUN
	1605z	04/05 [235/00] Out 1608z S2		Malc, RNGB	TUE
	1605z	09/05 [231/00] Out 1608z S2		Malc	SUN
	1605z	11/05 [235/31 72257.....30278] Out 1614z S5		Malc	TUE
	1605z	16/05 [235/31 72257.....etc] Repeat of Tuesday		Malc	SUN
	1605z	18/05 [232/00] Out 1608z S3		Malc	TUE
	1605z	25/05 [231/00] Out 1608z S2		Malc	TUE
	1605z	30/05 [235/00] Out 1608z S4		Malc	SUN
	1605z	01/06 [232/00] Out 1608z S3		Malc	TUE
	1605z	08/06 [237/00] Out 1608z S2		Malc	TUE
	1605z	13/06 [233/00] Out 1608z S3		Malc	SUN
	1605z	15/06 [236/39 15164.....14199] Out 1616z S3		Malc	TUE
	1605z	20/06 [236/39 15164.....etc] Repeat of Tuesday		Malc	SUN
	1605z	27/06 [233/00] Out 1608z S2		Malc	SUN
	1605z	29/06 [236/00] Out 1608z S2		Malc	TUE
5409kHz	1530z	03/05 [520/00] Out 1533z S3		Malc, HfD	MON
	1530z	07/05 [520/00] Out 1533z S2		Malc	FRI
	1530z	10/05 [520/00] Out 1533z S2		Malc	MON
	1530z	14/05 [524/00] Out 1533z S2		Malc	FRI
	1530z	17/05 [521/35 86955.....46080] Out 1540z S3 (Dutch SDR)		Malc	MON
	1530z	24/05 [522/00] Out 1533z S2		Malc, dMHz	MON
	1530z	28/05 [527/00] Out 1533z S2		Malc	FRI
	1530z	31/05 [528/00] Out 1533z S2		Malc	MON
5737kHz	1300z	06/05 [312/00] Out 1303z S3 (Dutch SDR)		Malc, HfD	THU
	1300z	10/05 [315/00] Out 1303z S2		Malc	MON
	1300z	17/05 [312/31 90933.....83911] Out 1310z S1/S2		Malc	MON
	1300z	24/05 [319/00] Out 1303z S2		Malc, dMHz	MON
	1300z	27/05 [311/00] Out 1303z S2		Malc	THU
	1300z	31/05 [313/00] Out 1303z S2 (Dutch SDR)		Malc	MON
	1300z	03/06 [315/00] Out 1303z S2		Malc, RNGB	THU
	1300z	07/06 [310/35 06382.....88431] Out 1310z S3 (Dutch SDR)		Malc	MON
	1300z	10/06 [310/35 06382.....etc] Repeat of Monday		Malc	THU
	1300z	14/06 [316/00] Out 1303z S2		Malc	MON
	1300z	17/06 [313/00] Out 1303z S2		Malc	THU
	1300z	21/06 [311/00] Out 1303z S3 (Dutch SDR)		Malc	MON
	1300z	24/06 [316/00] Out 1303z S2		Malc	THU
1300z	28/06 [316/00] Out 1303z S2		Malc	MON	
6304kHz	1205z	04/05 [466/00] Out 1208z S2 (Dutch SDR)		Malc, HfD	TUE
	1205z	05/05 [463/00] Out 1208z S2		Malc	WED
	1205z	12/05 [460/32 48620.....51041] Out 1215z S2 +QRM		Malc	WED
	1205z	18/05 [463/00] Out 1208z S2		Malc	TUE
	1205z	19/05 [461/00] Out 1208z S2		Malc	WED
	1205z	25/05 [460/00] Out 1208z S2		Malc	TUE
	1205z	26/05 [464/00] Out 1208z S2+QRM (Dutch SDR)		Malc	WED
	1205z	01/06 [465/00] Out 1208z S2 (Dutch SDR)		Malc, RNGB	TUE
	1205z	02/06 [460/00] Out 1208z S3		Malc	WED
	1205z	08/06 [463/34 57501.....57481] Out 1216z S2 (Dutch SDR)		Malc	TUE
	1205z	09/06 [463/34 57501.....etc] Repeat of Tuesday		Malc	WED
	1205z	15/06 [463/00] Out 1208z S2		Malc	TUE
	1205z	16/06 [469/00] Out 1208z S2		Malc	WED
	1205z	22/06 [466/00] Out 1208z S3 (Dutch SDR)		Malc	TUE
	1205z	29/06 [466/00] Out 1208z S2 (Dutch SDR)		Malc	TUE
1205z	30/06 [465/00] Out 1208z S2 (Dutch SDR)		Malc	WED	
6480kHz	0710z	01/05 [490/00] Out 0713z S2		Malc, HfD	SAT
	0710z	02/05 [495/00]		RNGB	SUN
6923kHz	0930z	05/05 [273/00] Out 0933z S2		Malc, dMHz, HfD	WED
	0930z	06/05 [278/00] Out 0933z S2		Malc	THU
	0930z	12/05 [277/00] Out 0933z S2		Malc	WED
	0930z	13/05 [271/00] Out 0933z S2		Malc, RNGB	THU
	0930z	19/05 [277/00] Out 0933z S2		Malc	WED
	0930z	20/05 [275/00]		RNGB	THU
	0930z	26/05 [275/37 44738.....18780] Out 0941z S3		Malc	WED
	0930z	27/05 [275/37 44738.....etc] Repeat of Wednesday		Malc	THU
	0930z	02/06 [270/00] Out 0933z S2		Malc, RNGB	WED
	0930z	03/06 [276/00] Out 0933z S3		Malc	THU
	0930z	09/06 [275/00] Out 0933z S2		Malc	WED
	0930z	10/06 [275/00] Out 0933z S2		Malc	THU
	0930z	16/06 [270/31 98617 66385 28609 82747 63520 83198 99975.....72924 47907] Out 0940z		RNGB, Malc	WED
	0930z	17/06 [270/31 98617.....etc] Repeat of Wednesday		Malc	THU
	0930z	23/06 [276/00] Out 0933z S5 (Dutch SDR)		Malc	WED
	0930z	24/06 [270/00] Out 0933z S2		Malc	THU
	0930z	30/06 [275/00] Out 0933z S2		Malc	WED
7449kHz	0900z	03/05 [533/00] Out 0903z S2		Malc, RNGB, HfD	MON
	0900z	05/05 [535/00] Out 0903z S2		Malc, dMHz	WED
	0900z	10/05 [532/39 23441 40754 95847 96024 81930 38974 08364 05981.....21263] Out 0911z S2		RNGB, Malc	MON
	0900z	12/05 [532/39 23441.....etc] Repeat of Monday		Malc	WED
	0900z	17/05 [533/00] Out 0903z S3		Malc, RNGB	MON

	0900z	19/05 [536/00] Out 0903z S2		Malc	WED
	0900z	24/05 [538/00] Out 0903z S4 (Dutch SDR)		Malc, RNGB	MON
	0900z	26/05 [536/00] Out 0903z S2		Malc	WED
	0900z	31/05 [533/00] Out 0903z S2		Malc	MON
	0900z	02/06 [532/00] Out 0903z S3		Malc	WED
	0900z	07/06 [538/36 24602.....72684] Out 0911z S4 (Dutch SDR)		Malc	MON
	0900z	09/06 [538/36 24602.....etc] Repeat of Monday		Malc	WED
	0900z	14/06 [538/00] Out 0903z S2		Malc	MON
	0900z	16/06 [538/00] Out 0903z S2		Malc	WED
	0900z	21/06 [536/00] Out 0903z S2		Malc, RNGB	MON
	0900z	23/06 [538/00] Out 0903z S2		Malc, RNGB	WED
	0900z	28/06 [538/00] Out 0903z S3		Malc	MON
	0900z	30/06 [530/00] Out 0903z S2		Malc, RNGB	WED
7469khz	0450z	03/05 [418/00] Out 0453z Fair		Ed Smith	MON
	0450z	10/05 [412/00]		HfD	MON
	0450z	07/06 [418/00]		Ed Smith	MON
7600kHz	1900z	03/05 [644/00] Out 1903z S7		Malc, HfD	MON
	1900z	06/05 [641/00] Out 1903z S6		Malc, Gary H	THU
	1900z	10/05 [646/00] Out 1903z S7		Malc	MON
	1900z	13/05 [644/00] Out 1903z S4		Malc	THU
	1900z	17/05 [644/00]		Gary H, Malc	MON
	1900z	24/05 [640/37 11855 54940 96860 38424 02048 94451 93955.....78212 29305] Out 1911z S5		RNGB, Malc	MON
	1900z	27/05 [640/37 11855.....etc] Repeat of Monday		Malc, Kopf	THU
	1900z	31/05 [644/00] Out 1903z S4		Malc	MON
	1900z	03/06 [646/00] Out 1903z S6		Malc, RNGB	THU
	1900z	07/06 [643/37 61514.....56852] Out 1911z S4		Malc	MON
	1900z	10/06 [643/37 61514.....etc] Repeat of Monday		Malc	THU
	1900z	14/06 [646/00] Out 1903z S4		Malc	MON
	1900z	17/06 [641/00] Out 1903z S7		Malc	THU
	1900z	21/06 [641/00] Out 1903z S7		Malc	MON
	1900z	24/06 [646/00] Out 1903z S9		Malc	THU
	1900z	28/06 [646/00] Out 1903z S5		Malc	MON
7863kHz	1625z	02/05 [975/00] Out 1628z S5		Malc, HfD	SUN
	1625z	05/05 [974/00] Out 1628z S7		Malc, dMHz	WED
	1625z	09/05 [976/00] Out 1628z S5		Malc	SUN
	1625z	12/05 [974/38 84779.....94051] Out 1636z S3		Malc	WED
	1625z	16/05 [974/38 84779.....etc]		Malc	SUN
	1625z	19/05 [978/00] Out 1628z S4		Malc	WED
	1625z	23/05 [976/00] Out 1628z S3		Malc	SUN
	1625z	26/05 [970/00] Out 1628z S3		Malc	WED
	1625z	30/05 [972/00] Out 1628z S4		Malc	SUN
	1625z	02/06 [975/00] Out 1628z S4		Malc	WED
	1625z	06/06 [972/00] Out 1608z S3		Malc	SUN
	1625z	09/06 [972/00] Out 1628z S5		Malc	WED
	1625z	13/06 [972/00] Out 1628z S3		Malc	SUN
	1625z	16/06 [976/38 95862.....50512] Out 1631z S2		Malc	WED
	1625z	20/06 [976/38 95862.....etc] Repeat of Wednesday		Malc	SUN
	1625z	23/06 [978/00] Out 1628z S7		Malc	WED
	1625z	27/06 [976/00] Out 1628z S3		Malc	SUN
	1625z	30/06 [972/00] Out 1628z S5		Malc	WED
8088kHz	1730z	06/05 [415/00] Out 1733z S4		Malc	THU
	1730z	13/05 [413/00] Out 1733z S2		Malc	THU
	1730z	27/05 [412/31 23871.....16384] Out 1740z S3		Malc	THU
	1730z	03/06 [415/00] Out 1733z S4		Malc	THU
	1730z	10/06 [416/00] Out 1733z S3		Malc	THU
	1730z	17/06 [413/37 67030.....84369] Out 1741z		Malc	THU
8091kHz	0645z	04/05 [514/38 80667 14602 93772 31377 42470 31962 45048 00377.....75458 01464] Out 0656z		RNGB, Malc, HfD	TUE
	0645z	06/05 [514/38 80667.....etc] Repeat of Tuesday		Malc	THU
	0645z	11/05 [518/00] Out 0648z S3		Malc	TUE
	0645z	13/05 [514/00] Out 0648z S2		Malc, RNGB	THU
	0645z	18/05 [518/00] Out 0648z S4		Malc, RNGB	TUE
	0645z	20/05 [510/00]		RNGB	THU
	0645z	25/05 [512/00] Out 0648z S2		Malc, RNGB	TUE
	0645z	27/05 [512/00] Out 0648z S2		Malc	THU
	0645z	01/06 [514/00] Out 0648z S2		Malc, RNGB	TUE
	0645z	03/06 [514/00] Out 0648z S3		Malc	THU
	0645z	08/06 [514/00] Out 0648z S7		Malc	TUE
	0645z	10/06 [515/00] Out 0648z S5		Malc	THU
	0645z	15/06 [510/00] Out 0648z S5		Malc, RNGB	TUE
	0645z	17/06 [515/00] Out 0648z S3		Malc	THU
	0645z	22/06 [511/40 87790 26696 42043 33414 14082 70199 13704 45253.....29769 97557] Out 0656z		RNGB, Malc	TUE
	0645z	24/06 [511/40 87790.....etc] Repeat of Tuesday		Malc	THU
	0645z	29/06 [510/00]		RNGB	TUE
8545kHz	1045z	03/05 [690/00] Out 1048z S5		Malc, HfD	MON
	1045z	05/05 [697/00] Out 1048z S2		Malc, dMHz	WED
	1045z	10/05 [693/23 21083.....89112] Out 1053z S3		Malc	MON



	1045z	12/05 [693/23 21083.....etc] Repeat of Monday	Malc	WED
	1045z	17/05 [698/00] Out 1048z S3	Malc	MON
	1045z	24/05 [693/00] Out 1048z S2	Malc, dMHz	MON
	1045z	26/05 [691/00] Out 1048z S3	Malc	WED
	1045z	31/05 [698/00] Out 1048z S3	Malc	MON
	1045z	07/06 [694/00] Out 1048z S4	Malc	MON
	1045z	09/06 [691/00] Out 1048z S3	Malc	WED
	1045z	14/06 [692/00] Out 1048z S4	Malc	MON
	1045z	16/06 [696/00] Out 1048z S2	Malc	WED
	1045z	21/06 [693/00] Out 1048z S3	Malc	MON
8565kHz	0315z	12/05 [258/00]	HfD	WED
8680kHz	0700z	04/05 [573/00] Out 0703z S3	Malc, RNGB, HfD	TUE
	0700z	07/05 [574/00] Out 0703z S5	Malc	FRI
	0700z	11/05 [571/00] Out 0703z S4	Malc	TUE
	0700z	14/05 [570/00] Out 0703z S2	Malc	FRI
	0700z	18/05 [571/00] Out 0703z S3	Malc, RNGB	TUE
	0700z	25/05 [577/31 45405 24337 17297 78226 67309 73482 91680 01322.....79850 77310] Out 0709z	RNGB, Malc	TUE
	0700z	28/05 [577/31 45405.....etc] Repeat of Tuesday	Malc	FRI
	0700z	01/06 [576/00] Out 0703z S2	Malc, RNGB	TUE
	0700z	04/06 [571/00] Out 0703z S3	Malc, RNGB	FRI
	0700z	08/06 [571/00] Out 0703z S3	Malc	TUE
	0700z	11/06 [570/00] Out 0703z S2	Malc	FRI
	0700z	15/06 [575/31 05472 02654 38380 64770 84384 36614 92702 24277.....04816] Out 0710z S3	RNGB, Malc	TUE
	0700z	18/06 [575/31 05472.....etc] Repeat of Tuesday	Malc	FRI
	0700z	22/06 [574/00] Out 0703z S3	Malc	TUE
	0700z	25/06 [574/00] Out 0703z S6	Malc, RNGB	FRI
	0700z	29/06 [570/00] Out 0703z S3	Malc, RNGB	TUE
9060kHz	0300z	28/06 [183/00]	HfD	MON
9150kHz	0600z	14/05 [353/00]	Ary	FRI
	0600z	16/05 [355/00]	Ed Smith	SUN
	0600z	21/05 [351/00]	HfD	FRI
	0600z	25/06 [351/33 11448 63917 52417 85873 84578 13476 11668 24168.....49220 13887] Out 0610z	RNGB, Malc	FRI
9610kHz	1910z	02/05 [618/00] Out 1913z S9	Malc, HfD	SUN
	0745z	03/05 [268/31 32487 47483 84440 30058 33965 22149 98802.....32801 76364] Out 0755z S4	RNGB, Malc	MON
	1910z	07/05 [616/00] Out 1913z S4	Malc	FRI
	1910z	09/05 [618/00] Out 1913z S9	Malc	SUN
	0745z	10/05 [269/00] Out 0748z S5	Malc	MON
	1910z	14/05 [612/00] Out 1913z S5	Malc	FRI
	1910z	16/05 [618/00] Out 1913z S9 QSB4	Malc, Gary H	SUN
	0745z	17/05 [264/00] Out 0748z S4	Malc, RNGB	MON
	1910z	21/05 [617/37 27467 66156 83613 47053 20902 01805 78534 71103.....36631 20676]	RNGB	FRI
	1910z	23/05 [617/37 27467.....etc] repeat of Friday	Malc	SUN
	0745z	24/05 [266/00] Out 0748z S3	Malc, RNGB	MON
	1910z	28/05 [616/00] Out 1913z S9	Malc	FRI
	1910z	30/05 [618/00] Out 1913z S9	Malc	SUN
	0745z	31/05 [269/00] Out 0748z S5	Malc	MON
	1910z	04/06 [611/34 57745.....59841] Out 1920z S7 QSB3	Malc, Kopf	FRI
	1910z	06/06 [611/34 57745.....etc] Repeat of Friday	Malc	SUN
	0745z	07/06 [262/37 44992 52800 89684 38081 67875 29108 68444 36428.....81562] Out 0756z S3	RNGB, Malc	MON
	1910z	11/06 [617/00] Out 1913z S5	Malc	FRI
	1910z	13/06 [618/00] Out 1913z S9	Malc	SUN
	0745z	14/06 [264/00] Out 0748z S6	Malc	MON
	1910z	18/06 [613/00] Out 1913z S4	Malc, Gary H	FRI
	1910z	20/06 [618/00] Out 1913z S4	Malc	SUN
	0745z	21/06 [267/00] Out 0748z S3	Malc, RNGB	MON
	1910z	25/06 [614/00] Out 1913z S4	Malc	FRI
	1910z	27/06 [614/00] Out 1913z S9	Malc	SUN
	0745z	28/06 [268/00] Out 0748z S7	Malc	MON
10356kHz	1530z	06/05 [268/31 32487 to 76364] Out 1539z S9	Malc, HfD	THU
	1530z	27/05 [266/00]	Gary H, Malc	THU
	1530z	03/06 [267/00] Out 1533z S7	Malc	THU
	1530z	10/06 [262/37 44992.....81562] Out 1540z S4 QSB2	Malc, HfD	THU
	1530z	17/06 [266/00] Out 1533z S4	Malc, Gary H	THU
	1530z	24/06 [268/00]	Gary H	THU
10429kHz	0715z	04/05 [631/00] Out 0718z S5	Malc, RNGB, HfD	TUE
	0715z	07/05 [634/00] Out 0718z S5	Malc	FRI
	0715z	11/05 [636/39 91675.....57102] Out 0726z S4	Malc	TUE
	0715z	18/05 [637/00] Out 0718z S3	Malc, RNGB	TUE
	0715z	21/05 [631/00]	RNGB	THU
	0715z	25/05 [637/00] Out 0718z S6	Malc, RNGB	TUE
	0715z	28/05 [633/00] Out 0718z S2	Malc	FRI
	0715z	01/06 [633/00] Out 0718z S4	Malc	TUE
	0715z	04/06 [631/00] Out 0718z S3	Malc, RNGB	FRI
	0715z	08/06 [635/00] Out 0718z S3	Malc, RNGB	TUE
	0715z	11/06 [639/00] Out 0718z S3	Malc	FRI
	0715z	15/06 [635/00] Out 0718z S3	Malc, RNGB	TUE

	0715z	18/06 [630/00] Out 0718z S3	Malc	FRI
	0715z	22/06 [631/34 14442 12084 25647 78286 18515 06730 35866 93195.....30599 74758] Out 0725z	RNGB, Malc	TUE
	0715z	25/06 [631/34 14442.....etc] Repeat of Tuesday	RNGB	FRI
	0715z	29/06 [636/00] Out 0718z S4	Malc, RNGB	TUE
12153kHz	0845z	04/05 [159/00] Out 0848z S6	Malc, RNGB, HfD	TUE
	1000z	04/05 [306/00]	RNGB, Malc	TUE
	0845z	06/05 [157/00] Out 0848z S4	Malc	THU
	1000z	07/05 [309/00] Out 1003z S3	Malc, HfD	FRI
	0845z	13/05 [152/00] Out 0848z S3	Malc, RNGB	THU
	1000z	14/05 [309/00] Out 1003z S3	Malc	FRI
	0845z	18/05 [156/26 15956 37335 49544 07146 46264 04735 68680 3489485825 61128] Out 0853z S3	RNGB, Malc	TUE
	1000z	18/05 [305/22 21234.....44999] Out 1008z S3	Malc	TUE
	0845z	20/05 [156/26 15956.....etc] repeat of Tuesday	RNGB	THU
	0845z	25/05 [157/00] Out 0848z S3	Malc	TUE
	0845z	27/05 [152/00]	dMHz	THU
	0845z	27/05 [152/00] Out 0848z S2	Malc	THU
	1000z	28/05 [308/00]	dMHz, Malc	FRI
	0845z	01/06 [156/00] Out 0848z	dMHz, Malc	TUE
	1000z	04/06 [305/00] Out 1003z S3	Malc	FRI
	0845z	08/06 [156/36 67333.....56359] Out 0855z S4	Malc	TUE
	1000z	08/06 [305/38 32434.....31251] Out 1011z S4	Malc	TUE
	0845z	10/06 [156/36 67333.....56359] Out 0848z S3	Malc	THU
	1000z	11/06 [305/38 32434.....31251] Out 1011z S4	Malc	FRI
	0845z	15/06 [151/00] Out 0848z S3	Malc	TUE
	0845z	17/06 [157/00] Out 0848z S3	Malc, RNGB	THU
	1000z	18/06 [307/00] Out 1003z S4	Malc	FRI
	0845z	22/06 [157/00] Out 0848z S4	Malc	TUE
	0845z	24/06 [159/00] Out 0848z S4+QRM	Malc	THU
	1000z	25/06 [309/00] Out 1003z S3	Malc	FRI
	0845z	29/06 [151/00] Out 0848z S3	Malc	TUE
12229kHz	1650z	02/05 [929/00] Out 1653z S2	Malc, HfD	SUN
	1650z	07/05 [925/00] Out 1653z S7	Malc	FRI
	1650z	09/05 [926/00] Out 1653z S7	Malc	SUN
	1650z	14/05 [924/00] Out 1653z S3	Malc	FRI
	1650z	16/05 [915/00] Out 1653z S3	Malc	SUN
	1650z	21/05 [925/00]	RNGB	FRI
	1650z	23/05 [920/00] Out 1653z S3	Malc	SUN
	1650z	28/05 [921/39 63414.....12982] Out 1701z S3	Malc	FRI
	1650z	30/05 [921/39 63414.....etc]	Malc	SUN
	1650z	04/06 [920/00] Out 1653z S4	Malc	FRI
	1650z	06/06 [929/00] Out 1653z S4	Malc, Ed Smith	SUN
	1650z	11/06 [920/00] Out 1653z S6	Malc	FRI
	1650z	13/06 [922/00] Out 1653z S4	Malc	SUN
	1650z	18/06 [924/00] Out 1653z S3	Malc	FRI
	1650z	20/06 [926/00] Out 1653z S5	Malc	SUN
	1650z	25/06 [920/33 54481.....10310] Out 1700z S3	Malc	FRI
	1650z	27/06 [920/33 54481.....etc] Repeat of Friday	Malc	SUN
12815kHz	0845z	03/05 [713/00]	HfD	MON
	0845z	05/05 [715/00]	Ary	WED
	0845z	10/05 [715/00] Out 0848z S5	Malc	MON
	0845z	12/05 [716/00] Out 0848z S3	Malc, RNGB	WED
	0845z	17/05 [718/00] Out 0748z S5	Malc	MON
	0845z	19/05 [718/00] Out 0848z S3	Malc	WED
	0845z	24/05 [719/36 59650 78987 36264 43758 08085 87242 43302 71770.....55992 04771]	RNGB, HfD	MON
	0845z	26/05 [719/36 59650.....04771] Out 0848z S3	Malc	WED
	0845z	31/05 [715/00] Out 0848z S5	Malc	MON
	0845z	02/06 [716/00] Out 0848z S9	Malc, RNGB	WED
	0845z	07/06 [713/00] Out 0748z S2	Malc	MON
	0845z	09/06 [715/00] Out 0848z S5	Malc	WED
	0845z	14/06 [710/39 18483.....93284] Out 0856z S4	Malc	MON
	0845z	16/06 [710/39 18483.....etc] Repeat of Monday	Malc	WED
	0845z	21/06 [718/00] Out 0848z S3	Malc, RNGB	MON
	0845z	23/06 [713/00] Out 0848z S3	Malc	WED
	0845z	28/06 [718/00] Out 1848z S3	Malc	MON
	0845z	30/06 [715/00] Out 0848z S3	Malc	WED
12984kHz	1345z	01/05 [917/00] Out 1348z S4	Malc, HfD	SAT
	1345z	04/05 [912/39 56227.....77400] Out 1356z S3+QRM	Malc	TUE
	1345z	08/05 [912/39 56227.....etc] Repeat of Tuesday	Malc	SAT
	1345z	11/05 [918/00] Out 1348z S2	Malc	TUE
	1345z	15/05 [919/00] Out 1348z S3	Malc	SAT
	1345z	18/05 [911/00] Out 1348z S5	Malc	TUE
	1345z	25/05 [912/00] Out 1348z S3	Malc	TUE
	1345z	29/05 [918/00] Out 1348z S3	Malc	SAT
	1345z	01/06 [910/00] Out 1348z S2	Malc	TUE
	1345z	05/06 [914/00] Out 1348z S3	Malc	SAT
	1345z	08/06 [919/00] Out 1348z S4	Malc	TUE
	1345z	12/06 [911/00] Out 1348z S3	Malc	SAT
	1345z	15/06 [914/00] Out 1348z S4	Malc	TUE
	1345z	19/06 [919/00] Out 1348z S4	Malc	SAT

	1345z	22/06 [918/32 28692 53304 12473 13726 69489 16177 98410 46286.....63285] Out 1355z	RNGB, Malc	TUE
	1345z	26/06 [918/32 28692.....etc] Repeat of Tuesday	Malc	SAT
	1345z	29/06 [919/00] Out 1348z S3	Malc	TUE
14410kHz	1745z	02/05 [242/00] Out 1748z S4 (Dutch SDR)	Malc, HfD	SUN
	1745z	03/05 [246/37 40254.....18717] Out 1756z S4 QSB2 QRM3	Malc, HfD	MON
	1745z	10/05 [244/00] Out 1748z S6	Malc	MON
	1745z	16/05 [247/00] Out 1748z S5	Malc, Gary H	SUN
	1745z	17/05 [245/00] Out 1748z S2	Malc	MON
	1745z	23/05 [249/00] Out 1748z S3	Malc, dMHz	SUN
	1745z	30/05 [249/00] Out 1748z S2 (Dutch SDR)	Malc	SUN
	1745z	31/05 [248/00] Out 1748z S3	Malc	MON
	1745z	06/06 [240/00] Out 1748z S4	Malc, Ed Smith, Kopf	SUN
	1745z	07/06 [248/00] Out 1748z S7	Malc	MON
	1745z	13/06 [246/00]	Kopf, Malc	SUN
	1745z	20/06 [246/33 03095.....26940] Out 1755z S4	Malc	SUN
	1745z	21/06 [240/00] Out 1748z S7	Malc	MON
	1745z	27/06 [249/00] Out 1748z S3	Malc	SUN
	1745z	28/06 [245/00] Out 1748z S5	Malc	MON
14575kHz	1645z	08/06 [338/00]	HfD	TUE
	1645z	24/06 [335/00] Out 1648z S4	Malc	THU
	1645z	29/06 [335/00] Out 1648z S4	Malc	TUE
14940kHz	0745z	04/05 [220/31 21118 50598 69086 42856 46759 73032 53923.....96314 72592] Out 0755z S4	RNGB, Malc, HfD	TUE
	0745z	06/05 [220/31 21118.....etc] Repeat of Tuesday	Malc	THU
	0745z	11/05 [224/00] Out 0748z S4	Malc	TUE
	0745z	13/05 [220/00] Out 0748z S3	Malc, RNGB	THU
	0745z	18/05 [225/00] Out 0748z S6	Malc	TUE
	0745z	20/05 [229/00]	RNGB	THU
	0745z	25/05 [225/00] Out 0748z S4	Malc	TUE
	0745z	27/05 [229/00] Out 0748z S5	Malc	THU
	0745z	01/06 [221/00] Out 0748z S2	Malc	TUE
	0745z	03/06 [225/00] Out 0748z S9	Malc	THU
	0745z	08/06 [229/00] Out 0748z S5	Malc	TUE
	0745z	10/06 [225/00] Out 0748z S9	Malc	THU
	0745z	15/06 [228/00] Out 0748z S6	Malc, RNGB	TUE
	0745z	17/06 [228/00] Out 0748z S9	Malc, RNGB	THU
	0745z	22/06 [227/39 40178 00200 58345 64490 98549 74681 11976 33349.....67231 48637] Out 0756z	RNGB, Malc	TUE
	0745z	29/06 [224/00] Out 0748z S9	Malc	TUE
15720kHz	0745z	05/05 [346/37 89233 46878 44965 65140 22762 62584 20572 59920.....00559 02094] Out 0756z	Ed Smith, Malc, RNGB, HfD	MON
	0745z	07/05 [346/37 89233.....etc] Repeat of Monday	Malc, Ed Smith	FRI
	0745z	12/05 [340/00] Out 0748z S2	Malc	WED
	0745z	14/05 [342/00] Out 0748z S2	Malc	FRI
	0745z	19/05 [348/00] Out 0748z S2	Malc	WED
	0745z	21/05 [349/00]	RNGB	FRI
	0745z	26/05 [344/00] Out 0748z S3	Malc	WED
	0745z	28/05 [342/00] Out 0748z S2	Malc	FRI
	0745z	02/06 [349/00] Out 0748z S5	Malc, RNGB	WED
	0745z	04/06 [347/00] Out 0748z S5	Malc	FRI
	0745z	09/06 [348/37 34010.....42040] Out 0756z	Malc	WED
	0745z	11/06 [348/37 34010.....etc] Repeat of Wednesday	Malc	FRI
	0745z	16/06 [349/00] Out 0748z S2	Malc	WED
	0745z	18/06 [340/00] Out 0748z S4	Malc, RNGB	FRI
	0745z	23/06 [343/00] Out 0748z S5	Malc, RNGB	WED
	0745z	25/06 [343/00] Out 0748z S3	Malc	FRI
	0745z	30/06 [342/00] Out 0748z S3	Malc	WED
15800kHz	0640z	03/05 [946/00] Out 0643z S2 (Dutch SDR)	Malc, HfD	MON
	0640z	05/05 [940/00]	Ed Smith	WED
	0640z	10/05 [944/33 73408 22150 90760 07627 11139 47956 89100.....39282 51180] Out 0650z	RNGB, Malc	MON
	0640z	12/05 [944/33 73408.....etc] Repeat of Monday	Malc	WED
	0640z	17/05 [945/00] Out 0643z S2+QRM (Dutch SDR)	Malc, RNGB	MON
	0640z	19/05 [945/00] Out 0643z S3	Malc	WED
	0640z	24/05 [948/00]	RNGB	MON
	0640z	26/05 [949/00] Out 0643z S3	Malc	WED
	0640z	31/05 [942/00] Out 0643z S4	Malc	MON
	0640z	07/06 [946/25 75670.....16259] Out 0648z S2	Malc	MON
	0640z	09/06 [946/25 75670.....etc] Repeat of Monday	Malc	WED
	0640z	16/06 [945/00] Out 0643z S3	Malc	WED
	0640z	21/06 [949/00] Out 0643z S3	Malc, RNGB	MON
	0640z	23/06 [945/00] Out 0643z S5	Malc	WED
	0640z	28/06 [942/00] Out 0643z S2 (Dutch SDR)	Malc	MON
	0640z	30/06 [949/00] Out 0643z S2	Malc	WED
17378kHz	0820z	04/05 [132/00] Out 0823z S3 (Russian SDR)	Malc, RNGB, HfD	TUE
	0820z	05/05 [133/00] Out 0823z S3	Malc, HfD	WED
	0820z	12/05 [131/35 15122 82533 96332 05770 13531 83344 16691.....75026 80131] Out 0830z S2	RNGB, Malc	WED
	0820z	18/05 [138/00] Out 0823z S3	Malc, RNGB	TUE
	0820z	19/05 [135/00] Out 0823z S2	Malc, RNGB	WED
	0820z	25/05 [132/00] Out 0823z S5	Malc	TUE
	0820z	26/05 [132/00] Out 0823z S3	Malc	WED

0820z	01/06 [133/00] Out 0823z S3	Malc, RNGB	TUE
0820z	02/06 [130/00] Out 0823z S2	Malc	WED
0820z	08/06 [131/00] Out 0823z S4	Malc	TUE
0820z	09/06 [136/00] Out 0823z S3	Malc	WED
0820z	15/06 [130/35 85130 69197 83798 37053 18791 99098 32463 28833.....00947 57387] Out 0830z	RNGB, Malc	TUE
0820z	16/06 [130/35 85130.....etc] Repeat of Tuesday	Malc	WED
0820z	22/06 [138/00] Out 0823z S5	Malc	TUE
0820z	23/06 [133/00] Out 0823z S2	Malc	WED
0820z	29/06 [133/00] Out 0823z S3	Malc	TUE
0820z	30/06 [135/00] Out 0823z S2	Malc, RNGB	WED
18030kHz	0715z 21/06 [759/00]	RNGB	MON
	0715z 23/06 [752/00] Out 0718z S4	Malc	WED
	0715z 28/06 [759/00] Out 0718z S2	Malc	MON
	0715z 30/06 [759/00] Out 0718z S3	Malc	WED

## E17z

May 2021

Thursday

0800z	16780kHz	0810z	12850kHz		
13/05	217 863 5 67542 87623 12654 67531 67452 863 5 00000			[0810z Dutch SDR]	Weak
27/05	217 480 5 53516 25616 56069 96813 14199 480 5 00000			[0800z QSB1, 0810z Dutch SDR]	Weak

June 2021

17/06	217 403 5 88620 58069 61732 74537 57440 403 5 00000			[0810z Dutch SDR]	Weak
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## E25

No Reports

## G06

Nil Reports

## S06

S06 log May 2021

Thursdays (Repeats Friday)	0830z	17475kHz	0930z	14736kHz						
13/05	'842'	916 35 98579 80803 40248 29997 20891 08700 52342 08131 72834 39526 85742 90131 51095 38416 49686 15034 90076 48565 90984 46059 26770 34290 03070 84627 14535 68717 58194 00086 15506 14542 04960 86094 26291 71282 98360 916 35 00000								
20/05	'842'	507 36 48500 76627 39332 44443 59329 62276 53887 92831 99530 55648 87951 26032 14202 43736 58981 18804 89518 94307 65265 34834 80120 36590 08088 31295 00658 62749 17890 83425 17433 29868 82883 21317 01084 67085 03531 96084 507 36 00000								
27/05	'842'	619 37 94986 05014 52817 28626 58945 28457 68341 48101 67033 79798 96188 76118 66590 02553 72975 66067 00991 70786 60056 54767 29604 32698 30134 39297 80675 18738 56628 67589 73041 93971 94234 34983 67644 59367 04119 03915 34757 619 37 00000								
Fridays (1st & 3rd)	1900z	9475khz	2000z	7561kHz						
07/05	'768'	00000								
21/05	'768'	00000	(used 9465kHz)							
Saturday	1300z	13547kHz	1330z	11128kHz	repeats Sunday	0930z	14735kHz	1000z	12207kHz	
01/05	'480'	275 41 77479 03752 62892 95901 70394 16432 54239 60685 45440 93446 16377 82115 50637 57420 10276 03243 48730 41612 13948 73415 55663 25581 77890 31175 47907 42842 41314 59321 99407 13073 89496 01428 13748 38932 10878 44775 21692 07355 01994 73310 61447 275 41 00000								
15/05	'480'	639 44 52066 01630 66200 47401 84853 00773 88198 03406 11905 45671 09335 66502 84676 22763 63948 35769 95824 79412 98651 94441 68080 27822 77305 23843 95883 08867 73626 67677 92924 75241 15470 32175 64478 75710 14096 73995 85328 87650 23576 55716 55206 60429 13963 73321 639 44 00000								

22/05 '480' 751 43 57923 15689 38290 64137 99288 71561 84703 48826 40681 18838 46338 63102 37871 29829 19860 90023 39302 58963 10418 27984  
 19101 18485 00621 22894 94543 02359 17202 33903 47724 14863 37428 93523 64082 66656 82322 41345 47287 45244 79990 55125  
 70335 30175 82115 751 43 00000 (Thanks Ary)

**S06s May log:**

**Monday**

3rd/10th	0630/0640z	16320/14875	'462' 851 7 46062 68672 97478 39658 30485 96632 52537
17th/24th			'462' 508 7 46062 68672 97478 39685 30485 96632 52537
3rd/10th	0830/0840z	8221/9353	'764' 910 5 21767 53627 11834 81022 36903
17th/24th			'764' 918 5 21767 53672 11834 81022 36903
3rd/10th	0900/0910z	16380/14835	'232' 915 6 05899 50387 45847 23013 89758 52343
17th/24th			'232' 489 5 52401 63919 92699 14600 74248
3rd/10th	1200/1210z	10230/12165	'149' 527 6 26634 14690 95590 60386 03009 81413
17th/24th			'149' 906 5 88620 58069 61732 74537 57440

**Tuesday**

4th/11th	0600/0610z	15945/16945	'438' 901 5 47665 94092 48521 63888 92060
18th/25th			'438' 920 5 39534 17228 15636 47891 23247
4th/11th	0700/0710z	5430/6780	'452' 810 6 79302 53516 25616 56069 96813 14199
18th/25th			'452' 918 6 11171 64385 82707 06123 85642 14376
4th/11th	0730/0740z	7365/11655	'427' 890 5 53516 25616 56069 96813 14199
18th/25th			'427' 908 5 49614 66248 49678 16865 21715
4th/11th	0800/0810z	14373/12935	'127' 809 5 42997 94184 47347 74154 08531
18th/25th			'127' 834 5 56748 89645 34216 67453 67662
4th/11th	1000/1010z	4820/5660	'427' 903 5 84090 09531 88430 33240 61135
18th/25th			'427' too weak to copy
4th/11th	1100/1110z	6810/7560	'265' 480 7 76342 15009 34140 78386 91494 82963 24162
18th/25th			'265' 847 7 56431 34276 89756 45363 23117 88531 88312

**Wednesday**

5th/12th	0830/0840z	11565/12560	'464' 231 5 17099 94961 35826 65906 77233
19th/26th			'464' 290 5 33796 13577 74526 46647 79302
5th/12th	1000/1010z	14580/16020	'276' 418 5 88280 84116 53718 78927 34694
19th/26th			'276' 890 5 88670 58069 61722 64537 57330

**Thursday**

6th/13th	0730/0740	11530/14977	'172' 840 5 76453 23165 78634 97853 24311
20th/27th			'172' 496 5 17099 94961 35826 65906 77233
6th/13th (E17z)	0800/0810z	16780/12850	'217' 863 5 67542 87623 12654 67531 67452
20th/27th			'217' 480 5 53516 25616 56069 96813 14199
6th/13th	0930/0940z	9255/10325	'698' 237 5 46062 68672 97478 39685 30485
20th/27th			'698' 473 5 88280 84116 53718 78927 34694
6th/13th	1200/1210z	13145/14535	'175' 289 6 88620 58069 61732 74537 57440 10597
20th/27th			'175' 402 6 88620 58069 98875 38761 10059 12814

**Friday**

7th/14th	0830/0840z	10290/9655	'156' 920 7 88620 58069 61742 74537 57440 10597 23521
21st/28th			'156' 983 7 46062 68672 97478 39685 30495 96632 52537
7th/14th	0900/0910z	6844/7161	'239' 410 5 22769 13577 74526 46647 79202
21st/28th			'239' 416 5 88620 58069 61732 74537 57440

**Saturday**

1st	0800/0810z	12460/10250	'132' 497 5 83630 93731 58291 64212 67195
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**S06 log June 2021**

**Thursdays (Repeats Friday)**

		0830z	16022kHz	0930z	13925kHz	
03/06	'842' 570 39	91315 37058 97055 30068 68184 88712 89438 50324 00138 96671 44332 70893 86513 11317 57080 60652 07499 87659 48118 23714 68310 50003 05063 03603 88791 83667 60047 63690 74349 33438 00748 36091 29183 13453 38546 56202 97732 58191 82251 570 39 00000				
10/06	'842' 936 40	85668 84648 66638 48582 26014 15435 17319 43062 90426 30678 24976 66177 68342 22853 53417 19172 51979 58101 33622 33274 54201 59307 47860 34076 49134 02945 82671 50145 33982 21875 11618 70558 35460 31294 93766 81059 09305 20015 98829 33504 936 40 00000] 0841z (used 13934kz)				
17/06	'842' 537 41	10249 89256 27461 37860 29424 23590 93663 52768 79596 33372 40973 00348 67877 02762 08223 39979 92214 01751 21629 58962 45247 49178 28570 35190 96379 66840 86940 77633 63013 79418 83500 11867 06881 39887 79672 02789 16412 85094 08212 31739 61073 537 41 00000				
24/06	'842' 691 42	65045 26697 98661 47335 11653 46405 53112 11943 60407 38596 55264 24296 08165 97480 00857 61502 07531 96411 83280 98704 50103 47859 12229 96057 70137 65442 42594 36983 04539 07700 12060 09877 70160 08281 10823 50458 44310 22254 31877 86957 59422 43215 691 42 00000				

**Fridays (1st & 3rd)**

		2000z	9475khz	2100z	7561kHz
04/06	'768' 00000				
18/06	'768' 492 56	45670 43473 46847 74873 96757 98348 67381 46891 82323 20752 36489 10391 58784 01964 25191 72630 06158 40778 16855 12070 57791 51616 11067 68257 88697 52807 75396 36895 59425 81432 93177 63173 75740 63163 28413 82557 68892 57190 79105 79588 47321 83840 79607 66709 12567 03180 17576 28639 12721 44790 94068 03125 68397 29527 62095 74800 492 56 00000] 2015z			

**Other transmissions:**

	<b>0400z</b>	<b>11616kHz</b>	<b>0420z</b>	<b>9322kHz</b>
28/06	'480' 195 55 68471 38185 27284 43431 42395 78198 36263 17552 82467 42583 61804 80846 64273 15300 28874 58895 94505 98723 68938 82063 65100 28107 11078 34786 68425 91234 98968 34249 59426 82927 82187 80650 75690 49109 55265 46234 51359 00103 42937 95274 85817 97856 55018 52218 53117 46784 59348 60141 63052 42700 46237 96737 09836 60951 82852 195 55 00000 - Thanks Ary			
30/06	'480' 197 53 58213 22427 67300 68249 68615 37151 81341 74822 54688 90486 47554 26913 36981 94636 49205 27062 34224 48395 81014 27663 77304 25809 86240 85106 23743 67284 05957 74962 77338 96577 57741 54130 42678 12092 85931 80900 69200 25936 50661 28866 64495 49174 47848 55617 81525 46700 77327 12158 09470 10182 01316 03816 22860 197 53 00000 (Thanks Ary)			

**S06s June log:**

**Monday**

7th/14th	0630/0640z	16320/14875	'462' 509 7 52401 63919 92699 14600 74248 48754 65125
21st/28th			'462' 831 5 46062 68672 97478 39685 30495
7th/14th	0830/0840z	8221/9353	'764' 903 5 39534 17228 15636 47891 23247
21st/28th			'764' 912 5 52401 63819 92699 14600 74248
7th/14th	0900/0910z	16380/14835	'232' 967 5 88145 57856 98835 46186 16945
21st/28th			'232' 970 5 88620 58069 61732 74537 57440
7th/14th	1200/1210z	10230/12165	'149' 832 5 11171 64385 82707 06123 22536
21st/28th			'149' 872 5 22234 22521 21587 27149 87375

**Tuesday**

1st/8th	0600/0610z	15945/16945	'438' 261 5 52401 63919 92699 14600 74248
22nd/29th			'438' 916 5 33796 13577 74526 46637 79202
1st/8th	0700/0710z	5430/6780	'452' 901 6 89758 52343 79628 42432 56075 56281
15th/22nd			'452' 813 6 60196 68094 59162 07574 05647 46214
1st/8th	0730/0740z	7365/11655	'427' 850 6 36903 14112 55678 09775 86415 25910
15th/22nd			'427' 839 5 35673 81934 68010 61121 02105
1st/8th	0800/0810z	14373/12935	'127' 839 5 17099 94961 35826 65906 77233
15th/22nd			'127' 489 5 37528 47373 40174 92159 01727
1st/8th	1000/1010z	4820/5660	'427' 809 5 11171 64385 82707 21816 42997
15th/22nd			'427' 901 5 31960 56970 32452 43712 46084
1st/8th	1100/1110z	6810/7560	'265' 481 7 52401 63919 92699 14600 74248
15th/22nd			'265' 483 7 07574 95647 46214 76897 22282 18313 09213

**Wednesday**

2nd/9th	0830/0840z	11565/12560	'464' 291 5 46062 68672 97478 39685 30495
16th/23rd			'464' 871 5 22192 27868 19761 57217 91858
2nd/9th	1000/1010z	14580/16020	'276' 931 5 88620 58069 61732 74537 57440
16th/23rd			'276' 908 5 35673 48057 13361 19474 34978

**Thursday**

3rd/10th	0730/0740	11530/14977	'172' 936 5 56069 96813 14199 59354 24042
17th/24th			'172' 843 5 46062 68672 97478 39685 30485
3rd/10th (E17z)	0800/0810z	16780/12850	'217' 493 5 88620 39534 14778 88146 11178
17th/24th			'217' 403 5 88620 58069 61732 74537 57440
3rd/10th	0930/0940z	9255/10325	'698' 251 7 41736 25910 56281 63156 05371 42036 01563
17th/24th			'698' 427 5 33796 13577 74526 46647 79302
3rd/10th	1200/1210z	13145/14535	'175' 290 6 67440 23247 16946 80744 21816 60612
17th/24th			'175' 409 6 52401 63919 92699 14600 74248 48754

**Friday**

4th/11th	0830/0840z	10290/9655	'156' 942 7 21767 53672 11834 81022 36903 41412 55678
18th/25th			'156' 938 7 13621 26252 92098 44817 89106 16393 56723
4th/11th	0900/0910z	6844/7161	'239' 418 5 88620 56069 61732 47537 57440
18th/25th			'239' 407 5 17613 74220 56381 16458 39354

**Saturday**

5th	0800/0810z	12460/10250	'132' 804 5 68734 24316 57684 79734 23412
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**PoSW writes:**

**S06. O.M. Voice:-**

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

21-May-21:- 1901 UTC, 9465 kHz, found in progress with, "768 768 768 00000", weak signal on a quiet spot inside the 31 metre broadcast band.  
2001 UTC, 7561 kHz, second sending also found about one minute in, strong signal.

4-June-21:- Nothing found at 1900z, moved up by one hour:-

2003 UTC, 9475 kHz, almost missed it, 10kHz up on last time, "768 768 768 00000".

2100 UTC, 7561 kHz, strong, well over a "9" on the S-meter.

18-June-21:- 2000 UTC, 9485 kHz, calling "768" for a full message transmission, rare enough to be worthy of comment. DK/GC "492 492 56 56", signal up and down peaking around S7. Ended just before 2016 UTC.

2100 UTC, 7561 kHz, peaking S9 with QSB, static crashes, thunderstorms over mainland Europe, I think.

Full message means a "next day repeat":-

19-June-21, Saturday:- 2000 UTC, 9475 kHz, good signal.

2100 UTC, 7561 kHz, peaking S9, still with evidence of far-off thunderstorms.

**Saturday + Sunday Schedules With Call "480":-**

A Saturday S06 at 1300 + 1330 UTC repeated on the following day at 0930 + 1000 had been heard in the first months of this year, found in part early in May but appeared to cease later in the month:-

2-May-21, Sunday:- 1007 UTC, 12207 kHz, S06 in progress, peaking around S7, ended before 1012 UTC with, "275 275 41 41 00000". No sign of this one on Sunday 9-May.

15-May-21, Saturday:- 1306 UTC, 13547 kHz, transmission in progress, weak, ended after 1312z with, "639 639 44 44 00000". No sign of a second sending at 1330z.

16-May-21, Sunday:- 1000 UTC, 12207 kHz, calling "480", DK/GC "639 639 44 44", as per yesterday's transmission, S6 to S7. Searched for a possible sending at 0930z but nothing found.

No sign on either Saturday the 29<sup>th</sup> or Sunday the 30<sup>th</sup>.

No sign of these schedules in June.

**S06s, Y.L. Voice:-**

A selection of the stronger S06s transmissions heard in May and June. As for the weaker ones, many of those would probably have been readable if the local RF noise interference was not so fierce.

**Monday 0830 + 0840 UTC Schedule, Call "764":-**

17-May-21:- 0830 UTC, 8221 kHz, DK/GC "918 918 5 5", "21767 53672 11834 81022 36903", first Monday this month a readable signal heard for this schedule.

0840 UTC, 9353 kHz, weak.

7-June-21:- 0830 UTC, 8221 kHz, DK/GC "903 903 5 5", S6 to S7, "39534 17228 15636 47891 23247". 0840 UTC, 9353 kHz, weak, difficult copy.

14-June-21:- 0830 UTC, 8221 kHz, "903 903 5 5" and 5Fs as on the 7<sup>th</sup>, weak at first but became stronger by 0833z. 0840 UTC, 9353 kHz, very weak, unreadable.

**Tuesday 0730 + 0740 UTC Schedule, Call "427":-**

4-May-21:- 0730 UTC, 7365 kHz, DK/GC "890 890 5 5", good signal, S8, "53516 25616 56069 96813 14199". 0740 UTC, 11655 kHz, S9+, very strong.

11-May-21:- 0730 UTC, 7365 kHz, very weak, unreadable. 0740 UTC, 11655 kHz, "890 890 5 5" and 5Fs as on 4-May but nowhere near as strong, S5 to S6.

18-May-21:- 0730 UTC, 7365 kHz, DK/GC "908 908 5 5", "49614 66248 49678 16865 21715", S5 to S6. 0740 UTC, 11655 kHz, S8 with QSB.

1-June-21:- 0730 UTC, 7365 kHz, DK/GC "850 850 6 6", S4 to S5, "36903 14112 55678 09775 86415 25910". 0740 UTC, 11655 kHz, strong, over S9 with QSB.

**Friday 0830 + 0840 UTC Schedule, Call "156":-**

14-May-21:- 0830 UTC, 10290 kHz, DK/GC "920 920 7 7", "88620 58069 61742 74537 57440 10597 23521". Appeared to be transmitted in USB carrier suppressed mode instead of the more usual USB + carrier; with the receiver in USB there was no heterodyne increasing in frequency when the tuning was moved LF.

0840 UTC, 9655 kHz, transmitted with carrier here.

11-June-21:- 0830 UTC, 10290 kHz, DK/GC "942 942 7 7", S7, "21767 53672 11834 81022 36903 41412 55678". 0840 UTC, 9655 kHz, strong signal.

18-June-21:- 0840 UTC, 9655 kHz, missed 0830z sending, DK/GC "938 938 7 7", "13621 26252 92098 44817 89106 16393 56723", peaking around S7 with QSB.

**First + Third Saturdays in the Month 0800 + 0810 UTC Schedule, Call "132":-**

1-May-21:- 0800 UTC, 12460 kHz, DK/GC "497 497 5 5", reasonable signal, peaking around S7 with QSB, "83630 93731 58291 64212 67195". 0810 UTC, 10250 kHz, weak at first then became stronger.

5-June-21:- 0800 UTC, 12460 kHz, DK/GC "804 804 5 5", strong signal, "68734 24316 57684 79734 23412". 0810 UTC, 10250 kHz, much weaker, difficult copy.

# **S11a log May/June**

5149kHz	0830z	01/05 [372/36 33920.....64279] Konyetz 0842z S3	Malc , Ed Smith, HfD	SAT
	0830z	02/05 [372/36 33920 .....etc] Repeat of Saturday	Malc	SUN
	0830z	08/05 [370/00]	Ed Smith	SAT
	0830z	15/05 [378/00] Konyetz 0833z S2	Malc, RNGB	SAT
	0830z	16/05 [372/00] Konyetz 0833z S2	Malc	SUN
	0830z	23/05 [379/00] Konyetz 0833z S2	Malc	SUN
	0830z	29/05 [377/00] Konyetz 0833z S3	Malc, RNGB	SAT
	0830z	30/05 [373/00] Konyetz 0833z S2	Malc	SUN
	0830z	05/06 [376/33 46740.....01113] Konyetz 0840z S2	Malc	SAT

	0830z	12/06 [372/00] Konyetz 0833z S3		Malc	SAT
	0830z	13/06 [372/00] Out 0833z S3		Malc	SUN
	0830z	19/05 [371/00] Konyetz 0833z S2		Malc	SAT
	0830z	20/06 [373/00] Konyetz 0833z S3	(Dutch SDR)	Malc	SUN
	0830z	26/06 [372/00] Konyetz 0833z S2		Malc	SAT
	0830z	27/06 [376/00] Konyetz 0833z S3	(Dutch SDR)	Malc	SUN
6814kHz	0915z	03/05 [481/00]		RNGB	MON
	0915z	07/05 [484/00] Konyetz 0918z S3		Malc, HfD	FRI
	0915z	10/05 [484/00] Konyetz 0918z S4		Malc	MON
	0915z	14/05 [485/00] Konyetz 0918z S2		Malc	FRI
	0915z	17/05 [485/35 90057 68566 60134 68769 86241 72891 46020 46925.....25337] Konyetz 0918z		RNGB, Malc	MON
	0915z	21/05 [485/35 90057.....etc] Repeat of Monday		RNGB	FRI
	0915z	24/05 [484/00] Konyetz 0918z S2		Malc, RNGB	MON
	0915z	28/05 [482/00] Konyetz 0918z S2		Malc, dMHz, RNGB	FRI
	0915z	31/05 [487/00] Konyetz 0918z S3		Malc	MON
	0915z	04/06 [482/00] Konyetz 0918z S3		Malc	FRI
	0915z	07/06 [486/00] Konyetz 0918z S3		Malc, RNGB	MON
	0915z	11/06 [480/00] Konyetz 0918z S2		Malc	FRI
	0915z	14/06 [481/00] Konyetz 0918z S2		Malc	MON
	0915z	18/06 [480/00] Konyetz 0918z S2		Malc, RNGB	FRI
	0915z	21/06 [481/38 35352 24359 42324 10825 10841 61227 40075.....92438 60455] Konyetz 0926z		RNGB, Malc	MON
	0915z	28/06 [482/00] Konyetz 0918z S2		Malc	MON
9339kHz	0700z	03/05 [479/39 37498 28433 45153 62813 88593 41651 51964 9356013853 01768] Konyetz 0711z		RNGB, Malc, HfD	MON
	0700z	06/05 [479/39 37498.....etc] Repeat of Monday		Malc	THU
	0700z	10/05 [478/00] Konyetz 0703z S4		Malc	MON
	0700z	13/05 [475/00] Konyetz 0703z S2		Malc, RNGB	THU
	0700z	17/05 [479/00] Konyetz 0703z S3		Malc, RNGB	MON
	0700z	20/05 [479/00]		RNGB	THU
	0700z	24/05 [472/00] Konyetz 0703z S3		Malc, RNGB	MON
	0700z	27/05 [470/00] Konyetz 0703z S2		Malc	THU
	0700z	31/05 [472/00] Konyetz 0703z S3		Malc	MON
	0700z	03/06 [475/00] Konyetz 0703z S5		Malc	THU
	0700z	07/06 [476/00] Konyetz 0703z S3		Malc, RNGB	MON
	0700z	10/06 [476/00] Konyetz 0703z S4		Malc	THU
	0700z	14/06 [479/00] Konyetz 0703z S4		Malc	MON
	0700z	17/06 [471/00] Konyetz 0703z S2		Malc, RNGB	THU
	0700z	21/06 [470/39 68221 80862 04000 65823 02852 24175 43373.....07150 43973] Konyetz 0711z		RNGB, Malc	MON
	0700z	24/06 [470/39 68221.....etc] Repeat of Monday		Malc	THU
	0700z	28/06 [475/00] Konyetz 0703z S3		Malc	MON
10125kHz	1020z	18/05 [422/00] Konyetz 1023z S2		Malc, HfD	TUE
	1020z	25/05 [427/00] Konyetz 1023z S2		Malc	TUE
	1020z	28/05 [421/00] Konyetz 1023z S2		Malc	FRI
	1020z	01/06 [427/37 92963.....49250] Konyetz 1031z		Malc, RNGB	TUE
	1020z	04/06 [427/37 92963.....etc] Repeat of Tuesday		Malc	FRI
	1020z	08/06 [427/00] Konyetz 1023z S2		Malc	TUE
	1020z	11/06 [424/00] Konyetz 1023z S2		Malc	FRI
	1020z	15/06 [429/00]		RNGB	TUE
	1020z	18/06 [429/00] Konyetz 1023z S2		Malc	FRI
	1020z	22/06 [426/00] Konyetz 1023z S2		Malc	TUE
	1020z	25/06 [420/00] Konyetz 1023z S3		Malc	FRI
	1020z	29/06 [426/00] Konyetz 1023z S2		Malc	TUE
12457kHz	1850z	01/05 [288/00] Konyetz 1853z S2		Malc, HfD	SAT
	1850z	05/05 [281/38 94917.....53633] Konyetz 1901z S9+10		Malc	WED
	1850z	08/05 [281/39 94917.....etc] Repeat of Wednesday		Malc	SAT
	1850z	12/05 [286/00] Konyetz 1853z S4		Malc	WED
	1850z	15/05 [280/00] Konyetz 1853z S2		Malc	SAT
	1850z	19/05 [282/00] Konyetz 1853z S4		Malc	WED
	1850z	26/05 [282/00] Konyetz 1853z S2		Malc	WED
	1850z	29/05 [284/00] Konyetz 1853z S2		Malc	SAT
	1850z	02/06 [288/00] Konyetz 1853z S9		Malc	WED
	1850z	05/06 [281/00] Konyetz 1853z S6		Malc	SAT
	1850z	09/06 [286/00] Konyetz 1853z S4		Malc	WED
	1850z	12/06 [284/00] Konyetz 1853z S7		Malc	SAT
	1850z	16/06 [285/34 75222.....93180] Konyetz 1901z S9		Malc	WED
	1850z	19/06 [285/34 75222.....etc] Repeat of Wednesday		Malc	SAT
	1850z	23/06 [286/00] Konyetz 1853z S5		Malc	WED
	1850z	26/06 [280/00] Konyetz 1853z S9		Malc	SAT
	1850z	30/06 [285/00] Konyetz 1853z S4		Malc	WED



13537kHz	0510z	10/05 [655/35 95533.....etc]	HfD	MON
	0510z	07/06 [659/00]	Ed Smith	MON
	0510z	14/06 [656/40 22522 47495 46296 35543 21512 45919 19738.....07928 52203] Konyetz 0523z	RNGB	MON
	0510z	22/06 [654/00]	HfD	TUE
18168kHz	1045z	13/05 [380/00] Konyetz 1048z S4	Malc	THU
	1045z	18/05 [381/00] Konyetz 1048z S3	Malc	TUE
	1045z	20/05 [385/00]	RNGB	THU
	1045z	25/05 [381/34 95938.....95880] Konyetz 1056z S6	Malc	TUE
	1045z	27/05 [381/34 95938.....etc] Repeat of Tuesday	Malc	THU
	1045z	01/06 [384/00] Konyetz 1048z S6	Malc	TUE
	1045z	03/06 [381/00] Out 1048z S5	Malc	THU
	1045z	08/06 [384/00] Konyetz 1048z S4 QSB2	Malc	TUE
	1045z	10/06 [381/00] Konyetz 1048z S4	Malc, HfD	THU
	1045z	15/06 [389/37 46207.....80874] Konyetz 1056z S5	Malc	TUE
	1045z	17/06 [389/37 46207.....etc] Repeat of Tuesday S7	Malc	THU
	1045z	22/06 [387/00] Konyetz 1048z S6	Malc, RNGB	TUE
	1045z	29/06 [387/00] Konyetz 1048z S5	Malc	TUE

## V07

### May 2021

0300z	13521kHz	0320z	12121kHz	0340z	11421kHz		
02/05	514 1 7931 90 97337 ... 25490 000 000					[0300z QSB1]	Weak QRN1
514 514 514 1	7931 90 97337 59244 20542 53102 78822 98904 52319 23357 33090 47957 57661 61380 78767 69786 85949 92439 75590 38911 68890 00742 32173 31340 56234 79150 12614 30385 12278 87903 33708 00610 27377 57398 02480 18391 40634 04745 52395 49131 81983 30913 48778 69889 81756 62943 34989 53306 37123 27831 21302 28769 75179 06684 68870 77345 26242 82601 07539 72582 84153 91181 28280 44603 70611 14264 03741 33298 09095 14937 92797 36219 04654 78818 91390 77388 81603 26575 28379 40752 94242 01411 37918 22746 26607 49853 12459 10887 02697 64907 39963 25490 000 000 <i>Courtesy DanAR</i>						
09/05	514 1 468 24 28274 ... 86261 000 000					[0300z via SDR Japan]	Weak, QSB1
514 514 514 1	468 24 28274 80801 16408 95830 87967 01520 15173 98219 82516 91725 12658 75395 56826 65357 80908 05592 88098 19568 03741 37399 60867 42580 61542 86261 000 000 <i>Courtesy DanAR</i>						
16/05	514 1 100 26 56745 ... 79118 000 000						Weak
514 514 514 1	100 26 56745 01644 01337 18367 48614 55188 29161 46003 04361 19771 67860 12341 18803 62894 01136 85662 39877 22832 15222 68785 88353 60332 12019 24558 50570 79118 000 000 <i>Courtesy DanAR</i>						
23/05	514 1 9637 68 98473 ... 60448 000 000					[0340z only]	Weak, via SDR Japan Also H-FD via KiwiSDR J
514 514 514 1	9637 68 98743 64629 00896 60367 75865 24488 64712 99254 14241 82956 24823 02359 30471 43971 85256 60614 78791 80578 31080 49666 97598 92093 77334 88467 10784 64438 43474 36198 50444 01263 16583 18098 68521 28314 04259 66007 86388 24692 82754 49656 38427 89358 94899 30128 24274 07410 15013 25192 21049 70823 95640 96441 85878 57062 23516 44118 80000 95729 57606 32889 43962 52964 21831 02316 80768 57223 83262 60448 000 000 <i>Courtesy DanAR</i>						

June 2021

0300z	13479kHz	0320z	12179kHz	0340z	11479kHz	
01/06	514 1 531 54 41427 ... 65856				SDR Japan [0300z]	Weak, QSB1 AR
	514 514 514 1 531 54 41427 88684 21532 23816 44965 27754 80261 59463 84901 61007 20654 34900 04519 63479 02140 37188 55441 39962 28870 65445 91214 96157 68825 29169 37186 86846 26845 12402 41864 45600 83192 60586 78668 62850 21108 96342 42676 63835 32885 27535 06887 04538 14606 86882 61339 95987 16106 33804 54261 90626 51498 69223 97178 65856 000 000 <i>Courtesy DanAR</i>					
06/06	414 1 211 102 27020 ... 44217 000 000				SDR Japan [0340z]	Weak, QSB1
	414 414 414 1 211 102 27020 82751 97219 22029 64524 25580 54245 67794 73158 57873 81941 17461 77797 30482 59538 98400 35480 77907 61519 33215 76079 69059 51967 60752 41913 86232 66346 44213 87747 54177 93036 26150 33488 32118 48334 06334 57702 34809 66947 46024 79516 83647 63305 32126 03317 13706 76163 29746 19894 77182 58755 49542 80141 85663 24600 64866 69622 83695 43663 27364 85534 24144 41219 16090 96693 38292 64923 57722 91738 28412 29938 81790 21141 62154 42916 20259 98710 33029 03360 61906 30106 66578 80509 52784 58856 44143 99722 43810 20572 33896 83827 50650 58996 71427 42354 57793 35887 96773 74559 90998 18072 44217 000 000 <i>Courtesy DanAR</i>					
13/06	414 1 8583 104 12972 ... 18146 000 000				SDR Japan [0320z]	Weak
	414 414 414 1 8583 104 12972 02400 46061 83879 58415 38496 52090 93682 73486 87130 73477 23978 99097 08326 43029 04670 57658 04075 23427 72948 12098 10455 87088 44414 29931 56070 79228 11316 76653 90364 32752 48775 95319 27873 07416 30551 46872 44183 90227 15926 50205 73484 24072 22160 39044 46699 94826 28499 81091 73120 46152 09593 30562 83908 65962 84472 11660 42056 74690 30642 87814 57096 78108 50069 22466 87001 32213 84787 01026 87735 61503 61426 66092 19370 25898 14768 66540 59889 33553 61552 19777 76923 33313 39458 58128 49761 38977 35019 90216 41473 48009 49814 85648 39250 83033 91989 43711 54212 25402 67489 39697 01911 88080 18146 000 000 <i>Courtesy DanAR</i>					
20/06	414 000				SDR Japan [0300z]	Weak
27/06	414 1 4876 60 79083 ... 00550 000 000				SDR Japan [0300z]	Weak
	414 414 414 1 4876 60 79083 14770 39737 61215 09461 72061 75679 69633 16239 70741 23031 56620 79508 82049 31467 86341 94132 50045 34512 93314 68034 16195 98746 77700 43934 21797 39560 52187 37523 35515 70065 37973 87882 24600 52441 94370 55389 82285 35075 69432 81974 90349 32251 54670 76470 00097 79302 62165 55002 63894 47720 54034 17456 29473 76413 70602 07197 43627 92644 00550 000 000 <i>Courtesy DanAr</i>					

# V13

7502kHz1330z	07/05	USB	New Star Broadcasting	Ary	FRI
7502kHz1300z	09/05	USB	New Star Broadcasting	Ary	SUN
7502kHz1330z	09/05	USB	New Star Broadcasting	Ary	SUN
9276kHz1200z	01/05	USB	New Star Broadcasting	Ary	SAT
9276kHz1200z	07/05	USB	New Star Broadcasting not // with 15890 kHz	Ary	FRI
9276kHz1200z	09/05	USB	New Star Broadcasting not // with 15890 kHz	Ary	SUN
9276kHz1230z	09/05	USB	New Star Broadcasting not // with 15890 kHz	Ary	SUN
15890kHz1200z	01/05	USB	New Star Broadcasting	Ary	SAT
15890kHz1200z	01/05	USB	New Star Broadcasting not // with 9276 kHz	Ary	FRI
15890kHz1200z	09/05	USB	New Star Broadcasting not // with 9276 kHz	Ary	SUN
15890kHz1230z	09/05	USB	New Star Broadcasting not // with 9276 kHz	Ary	SUN

Edd writes:

These are the V13 transmissions from the [priyom.org](http://priyom.org) schedule I've monitored this morning.

The half-hourly transmissions aren't included in their schedule. I don't know the Chinese language number system so I've just listened and logged, the half-hourlies are repeats of the previous hourly transmission on each respective frequency. Where there were parallel frequencies I checked both were transmitting but only monitored one frequency for each TX and highlighted them in bold. Transmissions typically started one to two minutes before the scheduled start times typed. I have made recordings, if you would like them please just ask.

All transmissions start with Traditional Chinese music followed by the number message.

V13. 11430//13975kHz 0000z 12/06 - 0020z Fair. USB E.SMITH SAT. SDR Hong Kong.

Carrier continues to message repeat.

V13. 11430//13975kHz 0030z 12/06 - 0050z. Fair. USB E.SMITH SAT. SDR Hong Kong.

V13. 9276//11430kHz 0100z 12/06 - 0119z. Fair, QRM3 B/C. USB E.SMITH SAT. SDR Taiwan.

Carrier continues to message repeat.

V13. 9276//11430kHz 0130z 12/06 - 0149z. Fair, QRM3 B/C. USB E.SMITH SAT. SDR Taiwan.

V13. 7502kHz 0200z 12/06 - 0219z. Good. USB E.SMITH SAT. SDR Taiwan.

Carrier continues to message repeat.

V13. 7502kHz 0230z 12/06 - 0249z. Good. USB E.SMITH SAT. SDR Taiwan.

V13. 9276kHz 0300z 12/06 - 0320z. Good, QRM2 B/C. USB E.SMITH SAT. SDR Taiwan.

Carrier continues to message repeat.

V13. 9276kHz 0330z 12/06 - 0350z. Good, QRM2 B/C. USB E.SMITH SAT. SDR Taiwan.

Thanks Edd

7502kHz1259z 24/06 (not //8300 kHz)  
7502kHz1328z 24/06 (not //8300 kHz)

8300kHz1258z 24/06 (not //7502 kHz)  
8300kHz1359z 24/06 (not //7502 kHz)

9276kHz1158z 24/06 (not //15890 kHz)

15890kHz1159z 24/06 (not //9276 kHz)

7502kHz1258z 25/06 V13 New Star Broadcasting (not //8300 kHz)  
7502kHz1328z 25/06 V13 New Star Broadcasting (not //8300 kHz)

8300kHz1259z 25/06 V13 New Star Broadcasting (not //7502 kHz)  
8300kHz1329z 25/06 V13 New Star Broadcasting (not //7502 kHz)

9276kHz1158z 25/06 V13 New Star Broadcasting (not //15890 kHz)

15890kHz1159z 25/06 V13 New Star Broadcasting (not //9276 kHz)

Thanks Ary

# V15 North Korean Intelligence via Radio Pyongyang

Nil Reports

## V24

Nil Reports

## V26

Nil Reports

# Polytones

## XPA1 c

Tuesday/Thursday

May 2021

**0710z**    **11169kHz**                      **0730z**    **12179kHz**                      **0750z**    **13431kHz**

04/05                      214 1 09732 00172 82496 ... 01732

[0720z QRM3]

Fair

214 214 214 1 214 214 214 1 214 214 214 1

09732 00172 82496 94460 67494 58110 17285 30143 54715 47348  
27924 23309 66969 49357 97258 03334 41486 55552 65244 70000  
69460 53827 69059 94831 18372 60348 98277 16894 95558 29828  
54042 17897 77570 04427 46848 57654 69282 86595 68259 27612  
46815 43556 24450 75240 21198 15139 65525 68238 71684 05422  
96900 44759 46836 90902 20778 11736 65872 79110 64548 17414  
45344 27047 03242 38593

49642 63886 63653 04543 36725 61429 99607 95751 89626 41918  
42778 93485 06757 69183 45976 11005 22933 03723 79564 65733  
48800 68455 20704 63821 88990 87532 73991 12047 39683 52983  
59090 86332 44589 13878 09304 18824 33989 09503 67324 96519  
13411 61641 81530 16208 75280 07422 29457 64008 23349 42863  
55422 73279 34249 18011 87620 53805 25898 91196 95567 58320  
14147 24637 97841 68537

03546 13405 23393 79946 13635 59324 20930 73808 78904 83422  
69283 76509 42820 30865 74776 68546 15277 50151 92064 44131  
31803 14957 78034 03764 36606 44419 88727 00937 00153 67601  
98442 33885 82466 39893 72246 53435 65744 81103 01317 90489  
41063 17570 89547 96956 26959 04043 01731    *Courtesy PLdn*

04/05                      214 1 09732 00172 82496 ... 01732

[0720z QRM4]

Fair

11/05                      214 1 00337 00134 44666 ... 43444

[0750z Fair, QSB3]

Strong QRM3

214 214 214 1 214 214 214 1 214 214 214 1

00337 00134 44666 89898 36275 96647 86586 46565 12612 92591  
93551 39760 32701 58716 92801 16025 20407 63353 57248 03189  
02190 01149 55800 72384 54583 74888 23694 28973 94604 89040  
60345 91756 58477 05238 81600 40877 76781 88840 87167 68287  
55553 51999 72697 82345 25282 08716 60712 87733 55099 96479  
92498 05128 95903 38053 49238 09680 57875 92224 67393 49705  
48714 90362 77058 57240

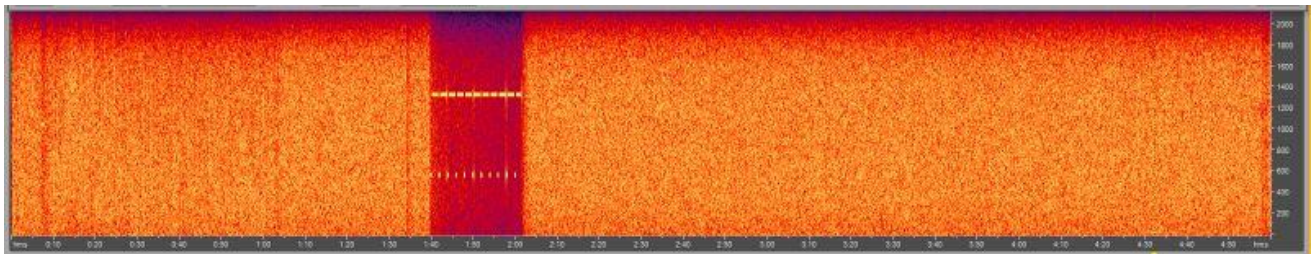
76032 50583 80760 34968 58985 93978 82532 63665 99699 77313  
34379 14077 99829 54678 08478 02606 14906 63828 46255 43240  
03789 62015 86688 90730 72090 27850 53307 31229 29717 75427  
22435 82767 56183 53359 39164 37213 65415 38270 68239 57887  
91272 77300 76390 79140 91626 85000 34733 70814 43351 04661  
40991 31541 92781 12445 29275 35121 59429 08405 58323 49360  
60763 24582 76373 81087

87775 38883 44486 20587 39607 85601 00238 44171 43444  
*Courtesy PLdn*

13/05                      214 1 00337 00134 44666 ... 43444

[0730z QRM5]

Weak



11169kHz 0710z 18/05 1m40s intro only

18/05	214 1 00337 00134 44666 ... 43444		[0710z 1m40s intro only]	Very strong
20/05	214 1 00337 00134 44666 ... 43444		[0730z QRM5]	Weak
25/05	214 1 00466 00106 59905 ... 61272	[3m30s]	[0750z Very strong]	Fair, QRM3

214 214 214 1 214 214 214 1 214 214 214 1

00466 00106 59905 64393 53672 82831 13077 45256 79296 28908  
 50249 27694 69744 11616 48721 19484 79802 59517 60383 84987  
 72035 33410 37906 22591 95187 06433 36357 08167 89057 82917  
 85784 99428 99136 50282 78622 95401 59733 69041 50138 67807  
 90250 06089 30382 80499 04986 34372 42945 59666 46844 75285  
 05791 18069 08652 72310 17231 28545 67352 35081 30773 80572  
 19899 85697 04479 68344

79383 35766 16691 46401 73038 32935 93627 19724 74994 17784  
 59854 08432 43902 76742 04468 33120 77923 04040 45392 31724  
 52528 33665 57422 87402 39999 14228 16861 81559 75146 40379  
 46365 20288 89473 29421 40920 08775 40410 69799 96197 86453  
 55965 99975 18358 07290 61272 *Courtesy PLdn*

27/05	QRM and QSB across schedule; unworkable	[3m30s]		
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**June 2021**

**0710z 11421kHz 0730z 12151kHz 0750z 13972kHz**

01/06	976 1 00466 00106 59905 ... 61272		[0750z Strong]	Fair
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976 976 976 1 976 976 976 1 976 976 976 1

00466 00106 59905 64393 53672 82831 13077 45256 79296 28908  
 50249 27694 69744 11616 48721 19484 79802 59517 60383 84987  
 72035 33410 37906 22591 95187 06433 36357 08167 89057 82917  
 85784 99428 99136 50282 78622 95401 59733 69041 50138 67807  
 90250 06089 30382 80499 04986 34372 42945 59666 46844 75285  
 05791 18069 08652 72310 17231 28545 67352 35081 30773 80572  
 19899 85697 04479 68344

79383 35766 16691 46401 73038 32935 93627 19724 74994 17784  
 59854 08432 43902 76742 04468 33120 77923 04040 45392 31724  
 52528 33665 57422 87402 39999 14228 16861 81559 75146 40379  
 46365 20288 89473 29421 40920 08775 40410 69799 96197 86453  
 55965 99975 18358 07290 61272 *Courtesy PLdn*

03/06	976 1 00466 00106 59905 ... 61272		[0710z Unworkable]	Weak
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08/06	976 1 00193 00128 90889 ... 04702		[0710z Unworkable QSB4/5]	Weak
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10/06	976 1 00193 00128 90889 ... 04702			Fair
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976 976 976 1 976 976 976 1 976 976 976 1

00193 00128 90889 45430 17904 87240 84429 94976 37752 79810  
 26804 28678 77334 76571 95413 16920 17519 07054 98050 00890  
 55510 64448 58198 82605 42343 72323 13562 92700 94423 36522  
 45417 61669 77846 62164 23217 65585 69517 45051 25607 10791  
 85464 50616 29492 46567 96226 43353 78189 54445 59395 19232  
 20165 22267 66312 10537 45925 90985 40356 59690 25517 23180  
 53409 65277 21438 79032

52793 51544 94045 13437 80364 07262 79576 23220 18920 34849  
 95875 48382 86983 28253 12154 07133 15418 28271 02570 47855  
 23686 81841 29534 43042 56302 82667 85274 99653 56669 02009  
 25130 54448 55887 60981 43893 99976 27147 86597 36818 40407  
 41196 41916 37241 68574 32900 54765 40341 49778 60932 27948  
 16183 31472 93114 12041 93576 81248 51858 79901 20351 45763  
 18821 34623 95206 39964

77987 60492 04702 *Courtesy PLdn*

15/06	976 1 00193 00128 90889 ... 04702			Fair QSB4
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17/06	976 1 00193 00128 90889 ... 04702	[0710z Unworkable, 0730z Weak]		Strong
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21/06 976 1 02892 00138 86621 ... 26724 [0750z Weak, QRM3] Strong

976 976 976 1 976 976 976 1 976 976 976 1

02892 00138 86621 36861 13909 33099 24733 66404 14070 69621  
 82049 96065 24725 83726 91982 17178 97821 14647 87675 21247  
 25592 58698 52207 89362 86154 72781 93878 20393 75074 89590  
 03883 12095 63453 36428 66369 64152 15843 99236 19379 99982  
 73866 73028 92994 75379 41703 97953 66269 34264 70030 84592  
 04665 71515 35851 12337 98229 54835 37806 65306 92884 12286  
 59373 67791 19734 86143

80291 01436 12904 02899 70150 23837 15559 64409 04701 87561  
 67817 03354 26525 39910 71553 54366 42210 66334 23049 47382  
 16526 52856 77410 51482 57959 75512 45015 21527 11188 28191  
 17741 63133 28999 34044 72342 92374 29810 00463 06656 23257  
 34355 11777 15171 08338 90119 70535 18875 62206 48399 58089  
 28172 44349 02924 70580 73858 27025 02824 05077 41166 90594  
 89240 14296 39978 74124

01264 73288 32124 03580 02661 78353 20887 66213 40578 07061  
 27319 58029 26724 *Courtesy PLdn*

24/06 976 1 02892 00138 86621 ... 26724 0710z WeakQSB3, 0730z Strong, 0750z Very strong

29/06 976 1 02892 00138 86621 ... 26724 [0710z QSB2] Fair

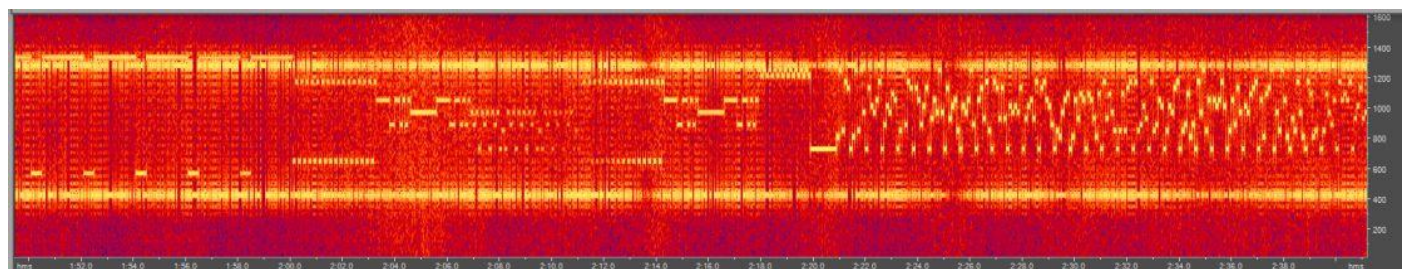
# XPA1 Wed/Fri

May 2021

1210z 13419kHz 1230z 12219kHz 1250z 11419kHz

05/05 424 1 00198 00114 85469 ... 46722 Ary WED

424 424 424 1 424 424 424 1 424 424 424 1  
 00198 00114 85469 25476 11298 86258 36444 83561 54662 68391  
 98383 54548 35639 89652 10467 06376 76307 93741 17189 91253  
 91265 15489 12702 94416 65695 16284 54789 60788 41160 31940  
 97011 17426 96769 35834 92099 96497 56761 88468 59395 23039  
 83473 07892 37936 75484 43959 70886 30703 60237 41055 52647  
 25605 03719 81579 94183 90034 14484 33821 39411 74577 25629  
 14789 05584 71056 71255 10634 56585 81985 86883 12126 61238  
 71353 71708 18774 24374 35003 12580 04112 13815 07012 52857  
 01590 57035 19438 02481 17890 24972 67555 07542 09323 33700  
 59938 66613 57527 00939 24792 29119 39357 23311 84574 99039  
 65223 77102 97953 43785 29159 59511 50524 84669 64451 91996  
 09439 74372 15988 36921 82701 58251 46722 *Courtesy Ary*

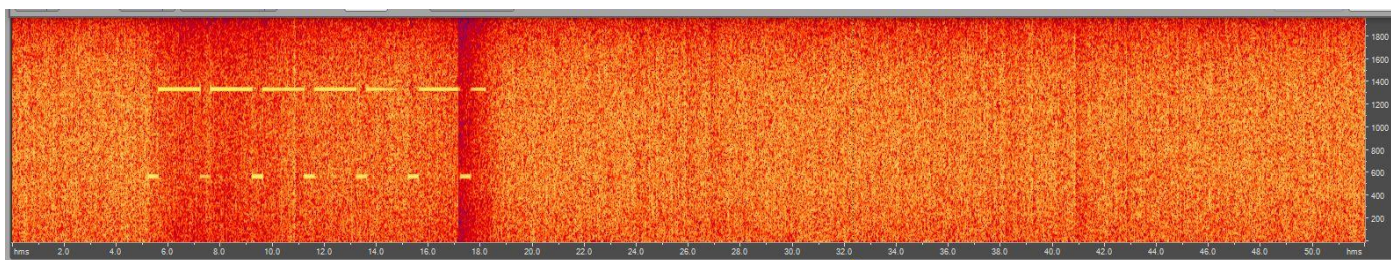


1210z 13419kHz transmission inside TTY transmission 07/05/2021

07/05	424 1 00198 00114 85469 ... 46722	[1210z Strong, TTYQRM5]	Unworkable
12/05	MISSED ..... Cut out changed state due to crappy kettle!		
14/05	424 1 00199 nnnnn nnnnn ... 50322		Unworkable QSB4/5
19/05	424 1 00199 00146 25088 ... 50322	[1210z Strong TTYQRM3]	Unworkable QSB4/5
21/05	424 1 00199 00146 25088 ... 50322	[1250z Unworkable]	Weak
26/05	424 1 00383 00182 38657 ... 07257	[1210z TTYQRM3, 1230z QSB3/4, 1250z Unworkable]	Weak
28/05	424 1 00383 00182 38567 ... 07257	[1210z TTYQRM4, 1230z QSB3, 1250z Unworkable]	Weak 4m16s lg

**June 2021**

1210z	13545kHz	1230z	12145kHz	1250z	11145kHz	
02/06	511 1 00383 00182 38567 ... 07257					via twenteSDR QTH: 1210z Fair 1230z Fair/strong 1250z Strong 1210z Weak, 1230z QRM5, 1250z Weak
511 511 511 1 511 511 511 1 511 511 511 1						
00383 00182 38567 47947 86281 95168 77066 72977 36156 38320 33164 58117 85590 09020 45829 82443 81893 88843 81371 14574 04035 39619 74936 05771 83512 62606 33624 82120 83211 29653 67388 13793 61529 80448 54820 32953 10317 08891 12755 72970 74876 41361 46031 29514 44875 86089 40107 31946 45623 14016 13623 74494 85058 97935 31085 93923 40784 47361 50824 53286 17537 30985 83684 77974						
34020 04540 21226 97959 86090 04916 05196 00279 72003 76214 07438 46277 28181 56606 16343 56151 77483 00280 81205 91248 45331 55083 29853 94674 57455 85949 92672 04915 79010 39200 30185 22435 68945 86534 41865 91426 36967 92057 28281 18731 12600 91156 10306 47779 36047 75609 43180 09371 89183 41444 21187 21036 09999 03250 45489 31063 28824 68908 88090 46797 85834 68389 33422 52953						
65052 50054 52720 99489 85999 37980 67751 09070 54334 03226 94670 54711 86172 10586 07309 84510 62057 89391 66616 93537 99943 41191 73811 49114 59265 25988 11877 37193 27556 47835 28538 32396 32922 71625 87692 69370 34900 10595 50324 43885 48496 45524 51454 71971 86142 03309 13802 82526 80643 32671 50250 20257 22867 34105 31978 64898 07257 <i>Courtesy PLdn</i>						
04/06	511 1 00383 00182 38567 ... 07257					[1250z Unworkable] Weak QSB2/3
09/06	Unworkable; Msg3m32s lg, very weak with QSB4					
11/06	511 1 00538 00110 43339 ... 61564			3m32s lg		[1230/1250z Unworkable] Weak QRM3
16/06	511 1 00538 00110 43339 ... 61564			3m32s lg		[1230zQRM4, 1250z Unworkable] Weak QSB3
18/06	511 1 00538 00110 43339 ... 61564			3m32s lg		[1230/1250z Unworkable] Weak QSB3
23/06	511 1 02790 00124 09536 ... 31737					[1250z Unworkable] Fair, QSB3
25/06	511 1 02790 00124 09536 ... 31737					[1230z QRM5, 1250z NRH] Weak QSB3
30/06	511 1 02790 00124 09536 ... 31737					[1210z 13s Intro only, see below] Weak



XPA1 Wed/Fri schedule: 13545kHz 1210z 30/06 Transmission stopped after 13s, not restarted/

# XPA2 m

Sunday/Tuesday

**May 2021**

2100z	13376kHz	2120z	11576kHz	2140z	10776kHz	
02/05	00203 00222 03585 ... 26312					Very strong
04/05	07454 00166 20517 ... 40553					Very strong
09/05	07454 00166 20517 ... 40553					Strong
07454 00166 20517 20633 71006 32658 46501 42407 80728 08808 54345 48247 04305 33495 77045 55413 95622 27185 07348 22159 44928 33894 23382 39954 92527 89375 34988 47226 84356 87609 57626 45768 39452 14220 19860 39256 04536 03426 10593 45120 22238 18878 93991 77705 28618 14080 84806 56422 63404 50806 67632 55767 37909 50370 12537 88309 57544 01469 91083 93440 53124 01780 58032 75353 12595 73057 42355 78634 83973 73934 47962 64379 27868 97486 05570 72710 37142 28043 41646 94495 91862 16028 02096 70723 17705 42899 95052 74338 39396 22608 27997 14622 12438 86106 80538 25185 01142 54188 88748 47485 72017 61269 28204 47923 99228 88512 32271 36761 95577 31000 69218 65823 34445 88849 28068 83794 88526 80077 23532 34096 69588 95428 46972 24081 73917 98896 12900 11745 66731 86103 80902 34250 96208 82808 01673 66085 65774 58972 94414 51517 81901 33264 21058 01016 87675 25750 84890 96443 17776 03496 12580 59953 75669 92169 93141 06590 23698 21290 25690 18899 53974 76199 19534 31424 78798 07869 23807 36454 40553 <i>Courtesy PLdn</i>						





15/06 07852 00206 89956 ... 25001 [2100z Strong, weak Ar] Very strong

07852 00206 89956 18602 86117 14829 08632 05666 83679 15912 69970 43013 24730 71247 55344 61099 55444 06671 92844 03754 10873 03266 55176 03942 03661 33646 40131 10063 23348 68781 87775 06920 87821 00178 58206 68610 69081 25441 26710 18013 82367 20512 32773 54133 32373 52673 25938 36319 10709 23674 95801 76774 92909 34001 04549 76745 87186 54544 77761 48500 85935 54922 35125 88664 61576 68786 50525 57316 99920 41235 88483 50680 10960 85515 74413 27951 97396 26334 16104 22597 59433 13124 90326 70711 62879 33435 91280 00181 85090 04927 34212 58425 79081 32992 65818 59859 07797 08154 88701 29457 26329 67650 68031 32818 43626 49815 26335 94926 59120 23816 37506 19621 48687 03760 18987 28362 49511 25560 16475 97988 79552 96801 58739 60912 95681 41383 70878 46246 75249 92009 37498 95614 87545 28439 54882 94574 63291 17416 36107 80867 60485 18617 56595 02200 68282 60406 31987 42421 41229 61263 75554 13519 53868 58692 07661 25535 80497 45293 98227 44014 87913 76680 66085 26458 85024 44830 74761 74638 11601 08337 11505 43649 32516 25729 12909 98926 10893 02594 85065 49679 40539 26941 83061 84915 72587 96268 28257 77878 59584 62444 35220 96490 41159 46200 83725 76859 53426 96213 33284 10352 90046 06824 82893 72305 84796 38871 51551 56328 25001

Courtesy PLdn

20/06 07852 00206 89956 ... 25001 [Weak Ar] Very strong

22/06 07233 00104 84167 ... 56100 [WeakAr] [2140z Strong] Fair

07233 00104 84167 03479 05934 88703 80023 92344 96313 04423 97836 34934 39043 15653 81132 21896 15561 76642 75836 78225 10661 73435 90269 85302 72439 14532 70400 07124 62249 94152 06752 47057 83028 04151 32035 33227 55754 08538 36130 17671 03306 37325 74116 64644 38984 72384 49385 02280 84274 60051 76841 83407 93228 45008 43090 57836 00980 22621 37568 93093 98334 61162 59287 71632 36335 75297 25834 03735 74064 99781 59313 74791 19494 51116 00738 55954 81251 47292 75442 70144 02013 26055 29263 60213 68523 94048 52021 07166 89533 86740 76881 54717 29161 57533 40264 29167 12934 22851 24535 18362 63606 33789 47391 99196 54647 98370 56100

Courtesy PLdn

27/06 07233 00104 84167 ... 56100 [2100z Fair] Strong, Weak Ar

29/06 07680 00060 31637 ... 23754 [2100z Fair] Strong

07680 00060 31637 01748 08221 84890 74478 02957 34734 40441 87650 01912 64975 54229 75819 71946 90420 45060 97461 92213 08826 96087 97873 54257 12118 12773 33346 60599 36826 12201 65386 78562 61333 79213 52328 81119 17110 46750 38637 40097 08695 62169 35098 02466 43261 65317 16751 04956 08793 47044 88022 70749 08716 84543 41852 34039 55049 26225 66111 92903 81466 24911 23754

Courtesy PLdn

# XPA2 p

Monday/Wednesday

May 2021

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

03/05 08220 00184 53007 ... 07550 [0740z Missed] Fair, QRM3/4

05/05 08220 00184 53007 ... 07550 [0740z Fair, QSB2/3] Weak, QSB3

10/05 00539 00204 82025 ... 20353 [0700z QRM5] Fair

00539 00204 82025 81123 59780 85899 11723 79092 24463 52486 68335 01172 34975 25934 14371 09518 64234 44782 94078 31692 38590 57596 05180 30694 93392 81271 15981 64431 07909 49281 58024 60285 87024 68079 02145 19989 08954 64725 58426 52469 16170 95033 77387 87479 95091 82187 37259 38417 66200 37680 32211 66472 82231 54536 60974 14746 53232 67920 56552 95465 20122 26706 90174 32381 27938 83875 01638 33791 17880 11883 66869 11979 99124 69484 73980 43315 46447 02995 33373 50700 39124 82941 46981 16380 23898 33128 39713 50987 41422 16955 71827 73339 36946 48492 46065 14181 87113 76203 52936 15025 59541 50235 07632 89229 53527 78077 25724 00434 16148 32340 90710 30802 27191 30026 17347 05179 15446 32535 73969 18263 70724 47282 56818 28953 66918 89054 95260 22922 15383 70248 20562 69183 91051 58954 03298 34234 43239 88182 62167 63049 27974 10284 93974 68673 96421 65158 90830 21634 51538 84268 92279 92446 94580 28309 75634 39431 90926 03970 46295 95372 31747 48471 59366 10582 98873 32147 57553 24067 27084 04389 14086 55558 07500 75619 90630 33877 01634 07923 92975 12256 52922 63287 74816 47889 65954 15111 20371 62334 55644 16080 80760 42788 87892 88343 05871 90323 87547 68338 46630 11914 03472 40348 52994 54018 19578 09865 20353

Courtesy PLdn

12/05 00539 00204 82025 ... 20353 [0720z QRM5, 0740z MISSED] Weak

17/05 00539 00204 82025 ... 20353 [0700z NRH] Fair, QRM3, QSB

19/05 00539 00204 82025 ... 20353

Very strong QRM3

00539 00204 82025 81123 59780 85899 11723 79092 24463 52486  
68335 01172 34975 25934 14371 09518 64234 44782 94078 31692  
38590 57596 05180 30694 93392 81271 15981 64431 07909 49281  
58024 60285 87024 68079 02145 19989 08954 64725 58426 52469  
16170 95033 77387 87479 95091 82187 37259 38417 66200 37680  
32211 66472 82231 54536 60974 14746 53232 67920 56552 95465  
20122 26706 90174 32381 27938 83875 01638 33791 17880 11883  
66869 11979 99124 69484 73980 43315 46447 02995 33373 50700  
39124 82941 46981 16380 23898 33128 39713 50987 41422 16955  
71827 73339 36946 48492 46065 14181 87113 76203 52936 15025  
59541 50235 07632 89229 53527 78077 25724 00434 16148 32340  
90710 30802 27191 30026 17347 05179 15446 32535 73969 18263  
70724 47282 56818 28953 66918 89054 95260 22922 15383 70248  
20562 69183 91051 58954 03298 34234 43239 88182 62167 63049  
27974 10284 93974 68673 96421 65158 90830 21634 51538 84268  
92279 92446 94580 28309 75634 39431 90926 03970 46295 95372  
31747 48471 59366 10582 98873 32147 57553 24067 27084 04389  
14086 55558 07500 75619 90630 33877 01634 07923 92975 12256  
52922 63287 74816 47889 65954 15111 20371 62334 55644 16080  
80760 42788 87892 88343 05871 90323 87547 68338 46630 11914  
03472 40348 52994 54018 19578 09865 20353 *Courtesy PLdn*

24/05 08302 00158 79469 ... 76644

[0740z 26s intro only]

Weak, QRM3

26/05 08302 00158 79469 ... 76644

Strong QRM3

31/05 08302 00158 79469 ... 76644

*1st grp correction?*

[0700z Weak]

Fair

June 2021

0700z 12148kHz 0720z 13348kHz 0740z 13948kHz

02/06 MISSED

07/06 09087 00106 80027 ... 60600

[0700z Fair]

Strong

09087 00106 80027 97310 30947 30095 31197 95761 84872 39460  
63689 55054 14222 39580 87841 96331 37163 21507 34361 72440  
19946 68112 77970 44018 55846 60908 08163 61176 49427 49064  
13949 99087 80947 24447 80331 31237 65066 99501 73931 22261  
34192 54902 10345 70751 38607 67378 71557 67054 97429 19745  
76221 19941 29079 44360 53934 64689 41736 69073 42534 40520  
72372 40048 77504 58645 46595 65727 66398 51919 03556 79252  
55949 32037 61796 76277 45257 73376 97212 41667 33369 65312  
58349 44753 66182 28123 51467 28505 49178 24238 04926 39584  
12036 55687 26739 49924 10029 99693 84728 92304 23149 80790  
35737 68798 70487 87006 99486 74341 65366 09821 60600  
*Courtesy PLdn*

09/06 09087 00106 80027 ... 60600

Strong

14/06 09087 00106 80027 ... 60600

[0700z Fair]

Strong

16/06 09087 00106 80027 ... 60600

Strong QRM3

21/06 01069 00122 75883 ... 73273

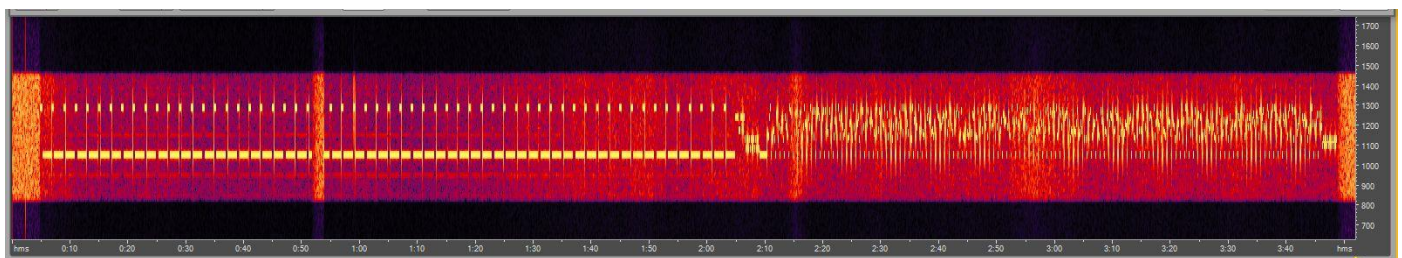
[0740z Strong]

Fair

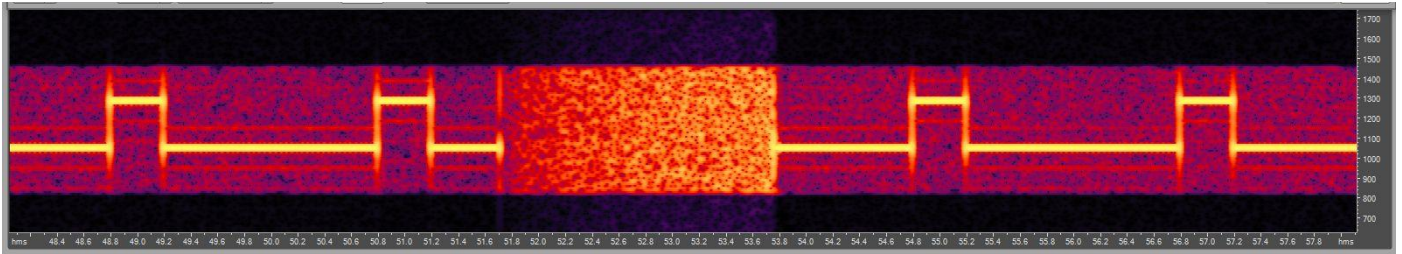
01069 00122 75883 25366 63410 98877 51738 14788 03943 44639  
26808 59786 30868 81381 83359 05930 96056 30183 88045 22930  
38466 89283 30948 53754 11819 28618 43911 70491 44389 35037  
43919 82741 99999 57053 92062 10933 68547 12042 09764 43576  
28714 95831 73479 77018 00113 10621 17680 00841 48298 43609  
84934 76093 60025 76545 37310 95134 59443 76835 48388 09112  
96621 43274 44028 96328 73907 90148 73885 67855 44217 12148  
10142 79988 04468 01434 66210 85830 21677 47684 12867 55513  
11143 46256 34800 71792 29086 39171 67511 90457 43776 92108  
48541 86433 02540 49445 99975 51971 48406 77650 09114 64237  
27300 69228 40715 41455 66214 34817 64729 69042 63636 05741  
67508 93683 23097 30679 93806 54771 64864 07910 98887 41358  
00646 45442 29394 32047 73273 *Courtesy PLdn*

23/06 01069 00122 75883 ... 73273

Strong



Break in intro 13948kHz0740z 28/06



Break in intro 13948kHz0740z 28/06 in detail

28/06	01069 00122 75883 ... 73273 0740z: At 47s into transmission 2s break in transmission, restart at 49s, see above	Strong
30/06	01069 00122 75883 ... 73273 [0700z QSB3]	Strong

## XPA2 Wednesday/Friday

### May 2021

2100z	12124kHz	2120z	11124kHz	2140z	10624kHz	
05/05	09297 00168 97739 ... 26622					Very strong
	09297 00168 97739 63303 64177 56305 63675 83420 46502 92104 40481 84503 63689 90457 78253 54872 34904 81338 40303 79146 37530 58960 27093 73504 62630 04673 92106 71463 86721 92890 32284 44643 53157 47855 66081 76144 43321 55335 30775 06970 48274 44829 00376 47955 06341 36924 56834 12534 34723 95791 77793 42693 39855 27808 04579 95681 20189 92184 93807 38228 45509 41004 44209 87392 37057 11811 37092 27649 56762 41050 55237 01012 88056 89108 75277 82997 07521 11955 36832 68973 33550 55332 25691 01903 09807 95927 76873 60982 78290 52115 07038 39804 40802 78204 09587 51790 49029 97368 04209 69976 50610 66104 82747 59657 44225 79428 91825 20577 84604 59024 32059 19738 73482 61216 22925 07246 48147 40094 75166 60395 21289 71226 65713 32643 87282 50008 87164 66279 30376 01841 99026 49709 02446 79802 70638 12145 36593 39116 35218 97085 37122 75263 26473 08386 77752 78043 27002 19252 43530 14972 83816 10219 77468 60414 51288 59850 56978 74224 75326 38417 06655 41433 62270 09414 34682 35971 06328 87587 29270 08536 26622 <span style="float: right;"><i>Courtesy PLdn</i></span>					
07/05	09297 00168 97739 ... 26622					Very strong
12/05	2100z QRM5, rest unworkable					
14/05	00408 00038 31415 ... 41626					Very strong [WeakAr]
	00408 00038 31415 51366 92044 27104 66325 72088 94362 79159 50912 42900 54211 25841 19761 82347 95907 88648 10407 87886 85929 47952 88739 91048 96572 56984 40801 91278 66606 57171 78481 04822 37645 48477 62927 63955 99225 53638 73618 83429 41626 <span style="float: right;"><i>Courtesy PLdn</i></span>					
19/05	00408 00038 31415 ... 41626					Very strong.
21/05	00408 00038 31415 ... 41626			[2140z QRM2]		Very strong
26/05	04493 00001 00000 ... 34665					Very strong
28/05	09045 00001 00000 ... 33665					Very strong [Weak in Ar]

### June 2021

2100z	13462kHz	2120z	12162kHz	2140z	11562kHz	
02/06	09950 00068 88172 ... 24314					Very strong
	09950 00068 88172 07531 92403 95254 62224 01655 56856 33280 69869 16773 63992 29106 00557 47711 99198 49146 79112 79581 93441 51016 35688 10643 72415 24209 49027 61472 43804 47386 56508 51044 37285 71878 91890 46180 33652 57740 87972 39019 97329 66663 80093 02136 19175 26721 82258 64188 47128 83641 52816 72410 95622 21633 71738 03678 11629 01033 03531 85870 26941 79403 66498 91434 30596 69933 87296 01671 60147 84139 24314 <span style="float: right;"><i>Courtesy PLdn</i></span>					
04/06	09950 00068 88172 ... 24314					Very strong

09/06	04257 00054 69604 ... 30304		Very strong
	04257 00054 69604 44504 62989 56571 64074 37393 16341 97139 08951 15407 23035 65791 95690 88280 72338 33667 09050 07231 65717 16716 59251 39776 10912 41969 11868 61782 01702 52472 46290 92856 00629 40219 49447 32407 38154 45212 04693 75541 05847 83097 15618 17054 53029 46007 59746 63898 08417 35223 38148 76651 61240 13761 62386 81392 30304 <i>Courtesy PLdn</i>		
11/06	04257 00054 69604 ... 30304	[2140z Strong]	Very strong
16/06	06457 00144 25290 ... 71744	[2140z Strong]	Very strong
	06457 00144 25290 77370 66407 14099 12785 66383 63801 92607 47611 75353 86956 35333 50246 07077 98439 01160 71628 12539 14766 66802 12030 68160 47922 51710 76843 37013 13502 84119 24513 49408 02536 44709 12788 50154 51730 91720 50710 49798 77180 50685 31900 26616 04701 71925 63672 51549 03042 86117 75590 01600 59391 01688 41874 11369 79543 52174 72471 43358 15614 01116 14980 83804 52690 45300 72792 58564 84534 28082 58177 15179 03117 16925 52487 04997 19858 80937 72150 12137 70929 57514 96758 65492 09485 39177 14969 22699 75846 15140 46143 08148 01729 55717 79514 46244 69377 17386 92431 14216 78814 45923 73951 71283 27869 68968 61633 03980 36462 31335 07710 71502 27229 67876 14483 32117 21871 27322 10491 98585 00798 47274 03790 35722 68717 92041 37173 64527 05805 50445 82964 01940 29094 87211 39648 06165 62173 35721 95321 98174 81995 22330 82089 03289 90084 73589 71744 <i>Courtesy PLdn</i>		
18/06	06457 00144 25290 ... 71744		Very strong [Weak in Ar]
23/06	00635 00122 65347 ... 27321		Very strong [WeakQSB Ar]
	00635 00122 65347 50582 64683 76532 99777 18006 21407 02109 18738 59743 03374 72855 20037 51747 66120 33393 32009 19333 90213 82073 09589 92821 41023 07816 62929 60250 29229 05443 61932 41586 10479 76789 38322 26295 49451 80543 99331 01140 25753 88364 77780 54623 64987 55030 04199 14984 06970 34743 96638 43832 40854 66385 37972 86276 04675 27078 04268 60634 53372 93058 00943 75781 83602 97060 37365 99607 50153 91692 20470 14130 89199 49178 93153 82118 50665 89870 20284 01028 85362 52499 41806 71463 68467 91090 89030 92310 84357 46979 03624 25761 19394 52396 44169 54878 34603 81502 90954 59306 61391 72386 95264 02626 68714 75510 80595 19338 15033 85283 04946 99722 37589 67133 18309 45938 68690 26368 04262 97218 64007 50188 05390 08611 27321 <i>Courtesy PLdn</i>		
30/06	00580 00120 39775 ... 63362		Very strong
	00580 00120 39775 62524 78947 03921 57856 51864 16888 55007 02639 54910 09613 42370 58616 97763 59603 60039 30130 09499 04074 42597 67831 75204 92988 88407 30818 94715 34202 03071 06381 71450 58144 20252 13984 43095 05346 32067 35282 16327 13151 41107 12028 60729 70011 49456 50077 71260 24470 63741 38150 93095 40871 84952 80072 75641 68368 63655 90335 54576 09424 98899 03220 48329 53889 43985 37846 59975 66500 83306 82424 44112 72953 62753 02114 85182 54787 64057 15201 00094 98286 11722 20792 72206 37380 58116 49472 70600 36191 67602 07963 75843 84084 49997 00524 15888 68709 73924 08147 76018 26883 54368 53394 41786 65871 25382 12888 20450 70936 86708 30338 49379 19652 24949 58964 10317 36538 36510 23929 57270 60893 31158 63362 <i>Courtesy PLdn</i>		

## Other XPA2

[Tuesday]

1100z	16159kHz	1120z	14359kHz	1140z	13459kHz		
04/05		02975 00001 00000 40261				Ary	TUE

### From H-FD

Sat 01.05.2021 0910Z 14794 msg  
Sat 01.05.2021 0930Z 13994 msg  
Sat 01.05.2021 0950Z 12194 msg

Sat 01.05.2021 1500Z 15938 msg  
Sat 01.05.2021 1520Z 14538 msg  
Sat 01.05.2021 1540Z 13438 msg  
Fri 07.05.2021 2100Z 12124 msg  
Fri 07.05.2021 2120Z 11124 msg  
Fri 07.05.2021 2140Z 10624 msg

Mon 10.05.2021 0910Z 17431 msg via KiwiSDR RUS  
Mon 10.05.2021 0930Z 15841 msg via KiwiSDR RUS  
Mon 10.05.2021 0950Z 13934 msg via KiwiSDR RUS

Tue 11.05.2021 1100Z 16159 msg via KiwiSDR RUS  
Tue 11.05.2021 1120Z 14539 msg via KiwiSDR RUS  
Tue 11.05.2021 1140Z 13459 msg via KiwiSDR RUS

Tue 18.05.2021 1600Z 13538 msg  
 Tue 18.05.2021 1620Z 14438 msg  
 Tue 18.05.2021 1640Z 14938 msg

Thu 20.05.2021 1100Z 16147 msg via KiwiSDR RUS  
 Thu 20.05.2021 1120Z 15847 msg via KiwiSDR RUS  
 Thu 20.05.2021 1140Z 14747 msg via KiwiSDR RUS

Wed 02.06.2021 1100Z 15982 msg  
 Wed 02.06.2021 1120Z 14982 msg  
 Wed 02.06.2021 1140Z 13882 msg

Sat 05.06.2021 0910Z 13527 msg  
 Sat 05.06.2021 0930Z 12227 msg  
 Sat 05.06.2021 0950Z 11427 msg

Sat 05.06.2021 1500Z 14892 msg  
 Sat 05.06.2021 1520Z 13492 msg  
 Sat 05.06.2021 1540Z 12192 msg

Tue 08.06.2021 1100Z 15874 msg  
 Tue 08.06.2021 1120Z 14474 msg  
 Tue 08.06.2021 1140Z 13374 msg

Tue 08.06.2021 1600Z 13417 msg  
 Tue 08.06.2021 1620Z 14817 msg  
 Tue 08.06.2021 1640Z 15917 msg

Mon 21.06.2021 0910Z 17417 msg  
 Mon 21.06.2021 0930Z 15812 msg  
 Mon 21.06.2021 0950Z 14504 msg

# XPB1

## SUN/TUE

### May 2021

14852kHz 1900z	02/05	Strong	2m15s		PLdn	SUN
13952kHz 1910z	02/05	Strong	2m15s		PLdn	SUN
12152kHz 1920z	02/05	Strong	2m15s		PLdn	SUN
11152kHz 1930z	02/05	Strong	2m15s		PLdn	SUN
10352kHz 1940z	02/05	Strong	2m15s		PLdn	SUN
9252kHz 1950z	02/05	Strong	2m15s		PLdn	SUN
14852kHz 1900z	04/05	Weak	2m15s		PLdn	TUE
13952kHz 1910z	04/05	Strong	2m15s	QRM2	PLdn	TUE
12152kHz 1920z	04/05	Strong	2m15s		PLdn	TUE
11152kHz 1930z	04/05	Strong	2m15s		PLdn	TUE
10352kHz 1940z	04/05	Strong	2m15s		PLdn	TUE
9252kHz 1950z	04/05	Strong	2m15s		PLdn	TUE
14852kHz 1900z	09/05	Fair	2m15s		PLdn	SUN
13952kHz 1910z	09/05	Strong	2m15s		PLdn	SUN
12152kHz 1920z	09/05	Strong	2m15s		PLdn	SUN
11152kHz 1930z	09/05	Strong	2m15s		PLdn	SUN
10352kHz 1940z	09/05	V.strong	2m15s		PLdn	SUN
9252kHz 1950z	09/05	V.strong	2m15s		PLdn	SUN
14852kHz 1900z	11/05	Strong	4m28s		PLdn	TUE
13952kHz 1910z	11/05	Strong	4m28s		PLdn	TUE
12152kHz 1920z	11/05	Fair	4m28s	QRM3	PLdn	TUE
11152kHz 1930z	11/05	Fair	4m28s	QRM3	PLdn	TUE
10352kHz 1940z	11/05	Fair	4m28s	QRM3	PLdn	TUE
9252kHz 1950z	11/05	Strong	4m28s		PLdn	TUE
14852kHz 1900z	16/05	Fair	4m28s		PLdn	SUN
13952kHz 1910z	16/05	Strong	4m28s		PLdn	SUN
12152kHz 1920z	16/05	Strong	4m28s		PLdn	SUN
11152kHz 1930z	16/05	V.strong	4m28s		PLdn	SUN
10352kHz 1940z	16/05	V.strong	4m28s		PLdn	SUN
9252kHz 1950z	16/05	Strong	4m28s		PLdn	SUN
14852kHz 1900z	18/05	Weak	4m28s		PLdn	TUE
13952kHz 1910z	18/05	Strong	4m28s		PLdn	TUE
12152kHz 1920z	18/05	Strong	4m28s		PLdn	TUE
11152kHz 1930z	18/05	Strong	4m28s	QRM2	PLdn	TUE
10352kHz 1940z	18/05	Strong	4m28s		PLdn	TUE
9252kHz 1950z	18/05	V.Strong	4m28s		PLdn	TUE

14852kHz	1900z	23/05	Fair	4m28s		PLdn	SUN
13952kHz	1910z	23/05	V.strong	4m28s		PLdn	SUN
12152kHz	1920z	23/05	V.strong	4m28s		PLdn	SUN
11152kHz	1930z	23/05	V.strong	4m28s		PLdn	SUN
10352kHz	1940z	23/05	V.strong	4m28s		PLdn	SUN
9252kHz	1950z	23/05	V.strong	4m28s		PLdn	SUN
14852kHz	1900z	25/05	Fair	4m28s		PLdn	TUE
13952kHz	1910z	25/05	Fair	4m28s	QRM2	PLdn	TUE
12152kHz	1920z	25/05	Strong	4m28s		PLdn	TUE
11152kHz	1930z	25/05	Strong	4m28s		PLdn	TUE
10352kHz	1940z	25/05	Strong	4m28s		PLdn	TUE
9252kHz	1950z	25/05	Strong	4m28s		PLdn	TUE
14852kHz	1900z	30/05	Strong	4m28s		PLdn	SUN
13952kHz	1910z	30/05	V.Strong	4m28s		PLdn	SUN
12152kHz	1920z	30/05	V.Strong	4m28s		PLdn	SUN
11152kHz	1930z	30/05	V.Strong	4m28s		PLdn	SUN
10352kHz	1940z	30/05	V.Strong	4m28s		PLdn	SUN
9252kHz	1950z	30/05	V.Strong	4m28s		PLdn	SUN
<b>June 2021</b>							
15863kHz	1900z	01/06	Weak	2m15s		PLdn	TUE
14963kHz	1910z	01/06	V.Strong	2m15s		PLdn	TUE
13963kHz	1920z	01/06	V.Strong	2m15s		PLdn	TUE
12163kHz	1930z	01/06	V.Strong	2m15s		PLdn	TUE
11163kHz	1940z	01/06	V.Strong	2m15s		PLdn	TUE
10463kHz	1950z	01/06	V.Strong	2m15s		PLdn	TUE
15863kHz	1900z	06/06	V.Strong	2m15s		PLdn	SUN
14963kHz	1910z	06/06	V.Strong	2m15s		PLdn	SUN
13963kHz	1920z	06/06	V.Strong	2m15s		PLdn	SUN
12163kHz	1930z	06/06	V.Strong	2m15s		PLdn	SUN
11163kHz	1940z	06/06	Strong	2m15s		PLdn	SUN
10463kHz	1950z	06/06	Strong	2m15s		PLdn	SUN
15863kHz	1900z	08/06	V.Strong	4m28s		PLdn	TUE
14963kHz	1910z	08/06	V.Strong	4m28s		PLdn	TUE
13963kHz	1920z	08/06	V.Strong	4m28s		PLdn	TUE
12163kHz	1930z	08/06	V.Strong	4m28s		PLdn	TUE
11163kHz	1940z	08/06	V.Strong	4m28s		PLdn	TUE
10463kHz	1950z	08/06	V.Strong	4m28s		PLdn	TUE
15863kHz	1900z	13/06	Unworkable			PLdn	SUN
14963kHz	1910z	13/06	Weak	4m28s		PLdn	SUN
13963kHz	1920z	13/06	V.strong	4m28s		PLdn	SUN
12163kHz	1930z	13/06	Strong	4m28s	QRM2	PLdn	SUN
11163kHz	1940z	13/06	Strong	4m28s	QRM2	PLdn	SUN
10463kHz	1950z	13/06	Strong	4m28s	QRM2	PLdn	SUN
15863kHz	1900z	15/06	Weak	2m15s		PLdn	TUE
14963kHz	1910z	15/06	Fair	2m15s		PLdn	TUE
13963kHz	1920z	15/06	Weak	2m15s		PLdn	TUE
12163kHz	1930z	15/06	Fair	2m15s		PLdn	TUE
11163kHz	1940z	15/06	Weak	2m15s		PLdn	TUE
10463kHz	1950z	15/06	NRH			PLdn	TUE
15863kHz	1900z	20/06	Weak	2m15s		PLdn	SUN
14963kHz	1910z	20/06	Weak	2m15s		PLdn	SUN
13963kHz	1920z	20/06	Weak	2m15s		PLdn	SUN
12163kHz	1930z	20/06	Fair	2m15s		PLdn	SUN
11163kHz	1940z	20/06	Weak	2m15s		PLdn	SUN
10463kHz	1950z	20/06	Weak	2m15s		PLdn	SUN
15863kHz	1900z	22/06	Fair	2m15s	QRM2	PLdn	TUE
14963kHz	1910z	22/06	Weak	2m15s	QRM3	PLdn	TUE
13963kHz	1920z	22/06	Weak	2m15s	QRM3	PLdn	TUE
12163kHz	1930z	22/06	Weak	2m15s		PLdn	TUE
11163kHz	1940z	22/06	Fair	2m15s		PLdn	TUE
10463kHz	1950z	22/06	Weak	2m15s		PLdn	TUE
15863kHz	1900z	27/06	Strong	2m15s		PLdn	SUN
14963kHz	1910z	27/06	Fair	2m15s		PLdn	SUN
13963kHz	1920z	27/06	Strong	2m15s		PLdn	SUN
12163kHz	1930z	27/06	Fair	2m15s		PLdn	SUN
11163kHz	1940z	27/06	Strong	2m15s		PLdn	SUN
10463kHz	1950z	27/06	Strong	2m15s		PLdn	SUN

15863kHz 1900z	29/06	NRH				PLdn	TUE
14963kHz 1910z	29/06	Fair	2m15s	QRM3		PLdn	TUE
13963kHz 1920z	29/06	Weak	2m15s	QRM3		PLdn	TUE
12163kHz 1930z	29/06	Weak	2m15s	QRM3		PLdn	TUE
11163kHz 1940z	29/06	Fair	2m15s			PLdn	TUE
10463kHz 1950z	29/06	Weak	2m15s			PLdn	TUE

**MON/SAT**

**May 2021**

16329kHz 1200z	01/05	NRH				PLdn	SAT
15929kHz 1210z	01/05	Weak	4m28s	QRM3		PLdn	SAT
14829kHz 1220z	01/05	Weak	4m28s	QRM3		PLdn	SAT
14429kHz 1230z	01/05	Weak	4m28s			PLdn	SAT
13929kHz 1240z	01/05	Weak	4m28s			PLdn	SAT
13529kHz 1250z	01/05	Weak	4m28s			PLdn	SAT
16329kHz 1200z	03/05	Unworkable				PLdn	MON
15929kHz 1210z	03/05	Weak	1m45s?			PLdn	MON
14829kHz 1220z	03/05	Weak	1m45s?		<i>Difficult to discern ending, sigs poor</i>	PLdn	MON
14429kHz 1230z	03/05	Weak	1m45s?			PLdn	MON
13929kHz 1240z	03/05	Weak	1m45s?			PLdn	MON
13529kHz 1250z	03/05	MISSED				PLdn	MON
16329kHz 1200z	08/05	V.weak	1m40s			PLdn	SAT
15929kHz 1210z	08/05	V.weak	1m40s			PLdn	SAT
14829kHz 1220z	08/05	V.weak	1m40s			PLdn	SAT
14429kHz 1230z	08/05	Weak	1m40s			PLdn	SAT
13929kHz 1240z	08/05	Fair	1m40s			PLdn	SAT
13529kHz 1250z	08/05	Fair	1m40s			PLdn	SAT
16329kHz 1200z	10/05	Weak	4m28s			PLdn	MON
15929kHz 1210z	10/05	Weak	4m28s			PLdn	MON
14829kHz 1220z	10/05	Weak	4m28s			PLdn	MON
14429kHz 1230z	10/05	Weak	4m28s	QRM3		PLdn	MON
13929kHz 1240z	10/05	Weak	4m28s	QRM3		PLdn	MON
13529kHz 1250z	10/05	Fair	4m28s	QRM3		PLdn	MON
16329kHz 1200z	15/05	Fair	4m28s			PLdn	SAT
15929kHz 1210z	15/05	Fair	4m28s			PLdn	SAT
14829kHz 1220z	15/05	Fair	4m28s	QRM3		PLdn	SAT
14429kHz 1230z	15/05	Fair	4m28s	QRM3		PLdn	SAT
13929kHz 1240z	15/05	Fair	4m28s	QRM3		PLdn	SAT
13529kHz 1250z	15/05	Fair	4m28s	QRM3		PLdn	SAT
16329kHz 1200z	17/05	NRH	D Beacon on freq			PLdn	MON
15929kHz 1210z	17/05	Weak	1m40s	QRM3		PLdn	MON
14829kHz 1220z	17/05	Weak	1m40s	QRM3		PLdn	MON
14429kHz 1230z	17/05	Weak	1m40s	QRM3		PLdn	MON
13929kHz 1240z	17/05	Weak	1m40s	QRM3		PLdn	MON
13529kHz 1250z	17/05	Weak	1m40s	QRM3		PLdn	MON
16329kHz 1200z	22/05	Unworkable				PLdn	SAT
15929kHz 1210z	22/05	Unworkable				PLdn	SAT
14829kHz 1220z	22/05	Weak	1m40s			PLdn	SAT
14429kHz 1230z	22/05	Weak	1m40s			PLdn	SAT
13929kHz 1240z	22/05	Fair	1m40s			PLdn	SAT
13529kHz 1250z	22/05	MISSED				PLdn	SAT
16329kHz 1200z	24/05	Weak	1m40s	QRM3		PLdn	MON
15929kHz 1210z	24/05	Weak	1m40s			PLdn	MON
14829kHz 1220z	24/05	Weak	1m40s			PLdn	MON
14429kHz 1230z	24/05	Weak	1m40s			PLdn	MON
13929kHz 1240z	24/05	Fair	1m40s			PLdn	MON
13529kHz 1250z	24/05	Fair	1m40s			PLdn	MON
16329kHz 1200z	29/05	NRH		QRM5		PLdn	SAT
15929kHz 1210z	29/05	Weak	1m30s			PLdn	SAT
14829kHz 1220z	29/05	Weak	1m30s			PLdn	SAT
14429kHz 1230z	29/05	Fair	1m30s			PLdn	SAT
13929kHz 1240z	29/05	Fair	1m30s	QSB3		PLdn	SAT
13529kHz 1250z	29/05	Fair	1m30s	QSB3		PLdn	SAT
16329kHz 1200z	31/05	NRH		QRM5		PLdn	MON
15929kHz 1210z	31/05	NRH				PLdn	MON
14829kHz 1220z	31/05	NRH				PLdn	MON
14429kHz 1230z	31/05	Unworkable				PLdn	MON
13929kHz 1240z	31/05	Unworkable				PLdn	MON
13529kHz 1250z	31/05	Unworkable				PLdn	MON

**June 2021**

15876kHz	1200z	05/06	Strong	4m28s		PLdn	SAT
14876kHz	1210z	05/06	Strong	4m28s		PLdn	SAT
14376kHz	1220z	05/06	Strong	4m28s		PLdn	SAT
13976kHz	1230z	05/06	Weak	4m28s		PLdn	SAT
13376kHz	1240z	05/06	Weak	4m28s	QRM3	PLdn	SAT
12176kHz	1250z	05/06	Strong	4m28s	QRM3	PLdn	SAT
15876kHz	1200z	07/06	Weak	1m40s		PLdn	MON
14876kHz	1210z	07/06	Fair	1m40s		PLdn	MON
14376kHz	1220z	07/06	Weak	1m40s		PLdn	MON
13976kHz	1230z	07/06	Weak	1m40s		PLdn	MON
13376kHz	1240z	07/06	Weak	1m40s	QRM4	PLdn	MON
12176kHz	1250z	07/06			QRM5	PLdn	MON
15876kHz	1200z	12/06	NRH			PLdn	SAT
14876kHz	1210z	12/06	NRH			PLdn	SAT
14376kHz	1220z	12/06	NRH			PLdn	SAT
13976kHz	1230z	12/06	NRH			PLdn	SAT
13376kHz	1240z	12/06	Fair	1m38s		PLdn	SAT
12176kHz	1250z	12/06	Fair	1m38s	QRM3	PLdn	SAT
15876kHz	1200z	14/06	Weak	4m28s		PLdn	MON
14876kHz	1210z	14/06	Fair	4m28s	QRM3	PLdn	MON
14376kHz	1220z	14/06	Fair	4m28s	QRM2	PLdn	MON
13976kHz	1230z	14/06	Fair	4m28s	QRM3	PLdn	MON
13376kHz	1240z	14/06	Weak	4m28s	QRM3	PLdn	MON
12176kHz	1250z	14/06			QRM5	PLdn	MON
15876kHz	1200z	19/06	Weak	4m28s		PLdn	SAT
14876kHz	1210z	19/06	Weak	4m28s		PLdn	SAT
14376kHz	1220z	19/06	Weak	4m28s		PLdn	SAT
13976kHz	1230z	19/06	Weak	4m28s		PLdn	SAT
13376kHz	1240z	19/06	Weak	4m28s		PLdn	SAT
12176kHz	1250z	19/06			QRM5	PLdn	SAT
15876kHz	1200z	21/06	V.weak		QRM3	PLdn	MON
14876kHz	1210z	21/06	V.weak		QRM3	PLdn	MON
14376kHz	1220z	21/06	V.weak		QRM3	PLdn	MON
13976kHz	1230z	21/06	V.weak		QRM3	PLdn	MON
13376kHz	1240z	21/06	V.weak		QRM3	PLdn	MON
12176kHz	1250z	21/06	V.weak		QRM3	PLdn	MON
15876kHz	1200z	26/06	Fair	1m40s		PLdn	SAT
14876kHz	1210z	26/06	Fair	1m40s		PLdn	SAT
14376kHz	1220z	26/06	Weak	1m40s		PLdn	SAT
13976kHz	1230z	26/06	Weak	1m40s		PLdn	SAT
13376kHz	1240z	26/06	Weak	1m40s		PLdn	SAT
12176kHz	1250z	26/06	Weak	1m40s		PLdn	SAT
15876kHz	1200z	28/06	Weak	4m28s	QRM3	PLdn	MON
14876kHz	1210z	28/06	Weak	4m28s	QRM3	PLdn	MON
14376kHz	1220z	28/06	Weak	4m28s	QRM3	PLdn	MON
13976kHz	1230z	28/06	Weak	4m28s	QRM3	PLdn	MON
13376kHz	1240z	28/06	Weak	4m28s	QRM3	PLdn	MON
12176kHz	1250z	28/06	Weak	4m28s	QRM3	PLdn	MON

**From H-FD**

0500z

Mon 03.05.2021 0500Z 13435 msg 4:30  
 Mon 03.05.2021 0510Z 13935 msg  
 Mon 03.05.2021 0520Z 14435 msg  
 Mon 03.05.2021 0530Z 14835 msg  
 Mon 03.05.2021 0540Z 15935 msg  
 Mon 03.05.2021 0550Z 16235 msg

Tue 08.06.2021 0500Z 11559 msg  
 Tue 08.06.2021 0510Z 12159 msg  
 Tue 08.06.2021 0520Z 13459 msg  
 Tue 08.06.2021 0530Z 13959 msg  
 Tue 08.06.2021 0540Z 14459 msg  
 Tue 08.06.2021 0550Z 14959 msg



# Tones, Hybrids and FSK

## X06 Mazielka (1c) logs section

Date	Day	UTC	Freq	Scale	Monitor	Comments
20210511	Tue	0819-0822	14861	542136	Schorschi	TX to Beijing, S9, G88
20210517	Mon	0725-0729	13415	263514	Ary/NL	G425
20210518	Tue	1026-1108	16450	111333	Schorschi	X06b with S9
20210521	Fri	1040-1045	13547	625413	Schorschi	TX to Tel Aviv, S9, G193
20210522	Sat	1431-1432	15938	1--6--	Schorschi	X06b with S9 before XPA2
20210523	Sun	2006/2011	13376	1--6--	LU5EMM	Fair X06b before XPA2
20210528	Fri	1959/2005	12124	1--6--	LU5EMM	Fair X06b before XPA2
20210604	Fri	2000/2004	13462	1--6--	LU5EMM	Fair X06b before XPA2
20210608	Tue	2002/2003	13427	1--6--	LU5EMM	Fair X06b before XPA2
20210611	Fri	2004	13462	1--6--	LU5EMM	Fair X06b before XPA2
20210616	Wed	0709	12150	256341	Ary	TX to Beirut, G169 (no end time)
20210618	Fri	2128/2132	13462	1--6--	LU5EMM	Fair X06b before XPA2
20210618	Fri	2143	12162	1--6--	LU5EMM	Fair X06b before XPA2
20210620	Sun	1941/1945	13427	1--6--	LU5EMM	Fair X06b before XPA2
20210621	Mon	0736-0741	12133	263514	Ary	G425
20210622	Tue	0831-0857	11649	6-----	Schorschi	X06b single tone i. p. with S9
20210623	Wed	1909/1944	13462	1--6--	LU5EMM	Fair X06b before XPA2
20210625	Fri	0830-0837	12177	356412	Schorschi	TX to Berlin, S9, G271
20210628	Mon	1255-1307	12177	364152	Ary	TX to New Delhi, G73

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

Jochen Numbers-, X06 Database and Teamkopf

## HM01/SK01

11435kHz1628z	01/05	47732 88341 44163 71863 33616 20801		Ary	SAT
Files					
13114773.TXT					
24608834.TXT					
54414416.TXT					
61107186.TXT					
36443361.FIG					
62062080.TXT					
11435kHz1558z	02/05	47733 88342 44164 71864 33617 20801		Ary	SUN
Files					
13114773.TXT					
24608834.TXT					
54414416.TXT					
61107186.TXT					
36443361.FIG					
62062080.TXT					
11435kHz1558z	05/05	47731 40017 44161 71861 33614 77458	Restart at 1603 UTC. Repeat of 29 April.	Ary	WED
Files					
13114773.TXT					
20884001.TXT					
54414416.TXT					
61107186.TXT					
36443361.FIG					
68547745.TXT					
11435kHz1558z	10/05	23253 65481 74303 26874 30056 44161		Ary	MON
Files					
21082325.TXT					
04806548.TXT					
77787430.TXT					
04806548.TXT					
23252687.TXT					
84023005.TXT					

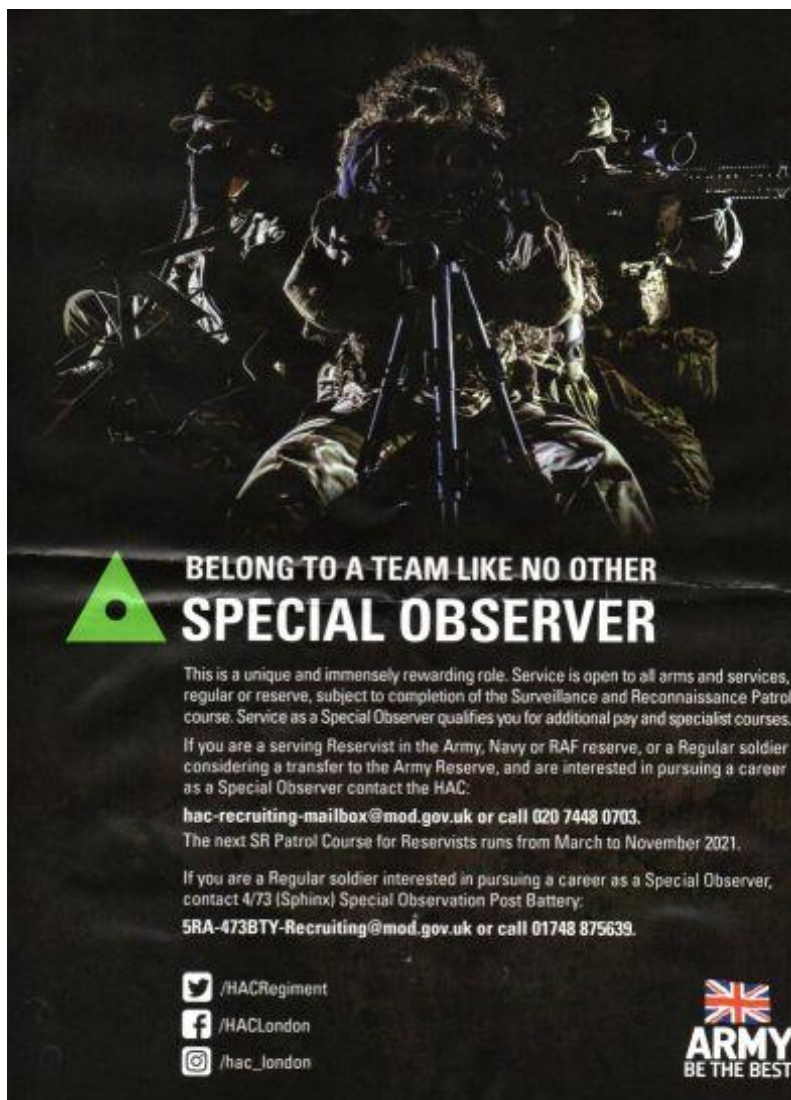
11435kHz1558z	12/05 23253 65481 74303 26874 30056 44161 (repeat of 10 May)		Ary	WED
Files				
21082325.TXT				
04806548.TXT				
77787430.TXT				
04806548.TXT				
23252687.TXT				
84023005.TXT				
11435kHz1558z	19/05 80463 57733 43634 15045 83406 40721	[First new msg since 14/05]	Ary	WED
Files				
72068046.TXT				
81215773.TXT				
66344363.TXT				
08541504.TXT				
85188340.TXT				
87144072.TXT				
11435kHz1558z	25/05 66012 17241 10803 16171 10125 67090	SK01 AM/Easypal	Ary	TUE
Files				
210512095557-23252687.TXT				
210512100240-36514416.F1G				
11435kHz1604z	26/05 81835 83434 60287 07167 32801 22783	HM01 AM/RDFT Late start	Ary	WED
Files				
22133280.TXT				
88010716.TXT				
70486028.TXT				
24362278.TXT				
77728183.TXT				
11378343.TXT				
11435kHz1628z	26/05 81835 83434 60287 07167 32801 22783	AM	Ary	WED
11435kHz1629z	26/05 47733 88342 44164 71864 33617 20801 (Repeat of 2 May)	SK01 AM/Easypal	Ary	WED
Files				
210512095217-04806548.TXT				
210512095359-21082325.TXT				
210512095557-23252687.TXT				
210512100240-36514416.F1G				
210512100355-77787430.TXT				
210512100516-84023005.TXT				
11435kHz1600z	30/05 81837 83436 05301 88031 32802 22785	AM/RDFT	Ary	SUN
Files				
77728183.TXT				
11378343.TXT				
38610530.TXT				
50128803.F1C				
22133280.TXT				
24362278.TXT				
11435kHz1603z	17/06 74112 11741 68846 52106 65386 87741	HM01 AM/RDFT Late start	Ary	THU
Files				
42187411.TXT				
50721174.F1C				
34776884.TXT				
50325210.F1C				
36136538.F1G				
36858774.F1G				
11435kHz1638z	18/06 47733 88342 44164 71864 33617 20801	SK01 AM/WinDRM	Ary	FRI
Callsign 2A1B3D				
Files				
210512100240-36514416.F1G				
210512100355-77787430.TXT				
210512100516-84023005.TXT				
11435kHz1602z	23/06 74117 11745 11181 82283 71262 87745	HM01 AM/RDFT Late start	Ary	WED

11435kHz1646z	23/06	74117 11745 11181 82283 71262 87745	HM01	AM/RDFT	Late start		Ary	WED
Files								
42187411.TXT								
50721174.FIC								
30161118.TXT								
36048228.FIG								
01667126.TXT								
36858774.FIG								
11435kHz1638z	24/06	33181 11747 11183 82285 71264 87747	HM01	AM/RDFT			Ary	THU
Late start. Started in mid message.								
Files								
10323318.TXT								
50721174.FIC								
30161118.TXT								
36048228.FIG								
01667126.TXT								
36858774.FIG								
11435kHz1612z	25/06	33181 87541 11184 82286 71265 28001	HM01	AM/RDFT	Late start		Ary	FRI
Files								
10323318.TXT								
77258754.TXT								
30161118.TXT								
36048228.FIG								
01667126.TXT								
58082800.TXT								
1143kHz1600z	26/06	33182 87541 11185 82287 71266 28001	HM01	AM/RDFT			Ary	SAT
Files								
10323318.TXT								
77258754.TXT								
30161118.TXT								
36048228.FIG								
01667126.TXT								
58082800.TXT								
11435kHz1603z	28/06	33184 87543 11187 35221 56141 28003	HM01	AM/RDFT	Late start		Ary	MON
Files								
10323318.TXT								
77258754.TXT								
30161118.TXT								
47133522.TXT								
45535614.TXT								
58082800.TXT								
11435kHz1604z	30/06	33185 87544 11188 35221 56141 28004	HM01	AM/RDFT	i.p.		Ary	WED
Files								
10323318.TXT								
77258754.TXT								
30161118.TXT								
47133522.TXT								
45535614.TXT								
58082800.TXT								
11530kHz1658z	05/05	47733 88342 44164 71864 33617 20801					Ary	WED
started with a repeat of May 2: 42 44164 71864 33617 2080 pause 416 pause								
Files are being sent in Easypal mode and back to RDFT at 1758 UTC								
Ary notes the 1758z and later transmissions on 5,6,7th May repeated groups sent on 29/04 whilst those sent on 8th and 9th May were a repeat of groups sent on 2nd May. New groups on 10 <sup>th</sup> May.								
11530kHz1658z	11/05	23254 65482 74304 26875 30057 44162					Ary	TUE
Files								
21082325.TXT								
04806548.TXT								
77787430.TXT								
23252687.TXT								
84023005.TXT								
36514416.FIG								

11530kHz1728z	12/05 47733 88342 44164 71864 33617 20801 (repeat of 2 May)/Easypal				Ary	WED	
Files							
	210512100240-36514416.F1G						
	210512100516-84023005.TXT						
	210512095217-04806548.TXT						
	210512095359-21082325.TXT						
	210512095557-23252687.TXT						
11530kHz1655z	25/05 88342 44164 71864 33617 20801 47733 silence 81831 57739 60282 07162 15243 40727	SK01 AM/RDFT	[Easypal and wrong groups]		Ary	TUE	
Files							
	77728183.TXT						
	81215773.TXT						
	70486028.TXT						
	88010716.TXT						
	38841524.TXT						
	87144072.TXT						
11530kHz1728z	25/05 47733 88342 44164 71864 33617 20801	AM/Easypal	Signal off at 1737 UTC		Ary	TUE	
Files							
	210512095217-04806548.TXT						
	210512095359-21082325.TXT						
	210512095557-23252687.TXT						
	210512100240-36514416.F1G						
	210512100355-77787430.TXT						
	210512100516-84023005.TXT						
11530kHz1658z	26/05 81835 83434 60287 07167 32801 22783	HM01	AM/RDFT		Ary	WED	
Files							
	22133280.TXT						
	88010716.TXT						
	70486028.TXT						
	24362278.TXT						
	77728183.TXT						
	11378343.TXT						
11530kHz1735z	26/05 81835 83434 60287 07167 32801 22783	HM01	AM	Late start	Ary	WED	
11530kHz1739z	26/05 47733 88342 44164 71864 33617 20801 (Repeat of 2 May)	SK01	AM/Easypal		Ary	WED	
Files							
	210512095217-04806548.TXT						
	210512095359-21082325.TXT						
	210512095557-23252687.TXT						
	210512100240-36514416.F1G						
	210512100355-77787430.TXT						
	210512100516-84023005.TXT						
11530kHz1729z	17/06 47733 88342 44164 71864 33617 20801	SK01	AM/Easypal		Ary	THU	
Files							
	210512100240-36514416.F1G						
	210512100355-77787430.TXT						
	210512100516-84023005.TXT						
11530kHz1658z	18/06 74114 11742 68848 82281 65388 87742	HM01	AM/RDFT		Ary	FRI	
Files							
	42187411.TXT						
	50721174.F1C						
	34776884.TXT						
	36048228.F1G						
	36136538.F1G						
	36858774.F1G						
115301731z	18/06 47733 88342 44164 71864 33617 20801	SK01	AM/WinDRM		Ary	FRI	
11530kHz1728z	27/06 33183 87542 11186 82288 71267 28002	HM01	AM/RDFT		Ary	SUN	
Files							
	10323318.TXT						
	77258754.TXT						
	30161118.TXT						
	36048228.F1G						
	01667126.TXT						
	58082800.TXT						

11635kHz1800z	12/05 47733 88342 44164 71864 33617 20801 (repeat of 2 May) + Easypal files after 2 minutes 23253 65481 74303 26874 30056 44161 (repeat of 10 May) + RDFT files	Ary	WED
11635kHz1807z	25/05 81831 57739 60282 07162 15243 40727 AM/RDFT Late start	Ary	TUE
Files			
77728183.TXT			
81215773.TXT			
70486028.TXT			
88010716.TXT			
38841524.TXT			
87144072.TXT			
11635kHz1827z	25/05 47733 88342 44164 71864 33617 20801 SK01 AM/Easypal	Ary	TUE
Files			
210512095217-04806548.TXT			
210512095359-21082325.TXT			
210512095557-23252687.TXT			
210512100240-36514416.F1G			
210512100355-77787430.TXT			
210512100516-84023005.TXT			

## Gizza Job .....



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This is a unique and immensely rewarding role. Service is open to all arms and services, regular or reserve, subject to completion of the Surveillance and Reconnaissance Patrol course. Service as a Special Observer qualifies you for additional pay and specialist courses.




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**[hac-recruiting-mailbox@mod.gov.uk](mailto:hac-recruiting-mailbox@mod.gov.uk) or call 020 7448 0703.**

The next SR Patrol Course for Reservists runs from March to November 2021.

If you are a Regular soldier interested in pursuing a career as a Special Observer, contact 4/73 (Sphinx) Special Observation Post Battery:

**[5RA-473BTY-Recruiting@mod.gov.uk](mailto:5RA-473BTY-Recruiting@mod.gov.uk) or call 01748 875639.**

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From E





## PoSW's Items of Interest in the Media:-

Not been paying too much attention to the mainstream media, a state of mind which has been with me since Covid 19 became "a thing". There is one incident which will remain with me for the rest of my days which I witnessed early on in this ongoing performance.

I had arrived at the local supermarket to do a bit of shopping; there were two uniformed security guard types strutting up and down and shouting at the would be customers, we were to observe the two-metre social distancing as indicated by the lines marked out on the pavement, we were to do our shopping as quickly as possible, "A five-minute shopper is a good shopper", one of them kept repeating like some holy mantra, they were obviously enjoying every bit of their new-found authority and they just needed the jackboots, the armbands and the holster with the Luger '08, and spare magazine to complete the effect.

One of these bastards homed in on an elderly couple standing in the queue just ahead of me and enquired of them if they were from the same household. On receiving a reply in the affirmative he informed them that this being the case, only one of them was allowed inside the store.

There followed a somewhat tearful conversation between the old couple and eventually they decided that the lady would go into the store to do the shopping. The only concession the security guards made was that one of them went and fetched a chair for the old geezer to sit down on while he waited for his missus to return. Luckily it was a pleasant, mild spring day. When it was my turn to be permitted to enter the store I gave a "Vielen dank, Herr Sturmbannfuhrer" as I went in but I think it was wasted on him.

There was a time when I would never have believed that I could witness a scene like this in my country. So I was interested to see this story from Belgium reported in the *I* newspaper of 20-May with the headline, "Manhunt for ex-soldier after Covid threats", written by Leo Cendrowicz which says, "Belgian authorities last night sealed off a nature reserve as they hunted a heavily armed former soldier who is on the run after violently threatening a leading virologist and vowing to fight to the death against coronavirus lockdowns.

As their manhunt entered its third day, Belgian police revealed that Jurgen Conings, 46, had stolen four rocket launchers, a handgun and a semi-automatic sub-machine gun that can pierce bulletproof vests. The rocket launchers were later found in his abandoned car in the Dilserbos forest, near the Dutch border. Special forces initially searched the forest, assisted by Dutch police, but their attention has now turned to the High Fens nature reserve in Belgium's north-east. Mr Conings left suicide notes for his girlfriend at their home in Lanklaar on Monday, saying that he would "join the resistance and would not surrender without a fight". A convert to coronavirus conspiracy theories, he has threatened several people in recent weeks, including the virologist Marc Van Ranst, who has now been moved to a safe house with his family. The weapons specialist and Afghanistan veteran was already on the country's terror list for sympathising with violent, extreme-right groups."

Point to ponder:- "The great nations have always acted like gangsters and the small nations like prostitutes", Stanley Kubrick, 1928-99, American film director.

*Excellent Peter, thanks very much.*

*We experienced much the same as PoSW's two elderly folk – mind you, retired and well over 65 I suppose my missus and I fit that bill. Walking into Sainsbury after a long queue to experience Soviet era shelving and one torn toilet roll on show [what was that about?] we were challenged, 'If you don't mind mate, one only.' We just carried on walking when this singular brain cell on legs confronted us. 'I was talking to you mate – one person only.' My reply was 'I'm not your mate and I have to be with my wife for health reasons I will not discuss with you; and by the way, She has the shopping list and I'm the one with the bank card.'*  
*[My only real health reason was that I wasn't going to be bullied by this idiot and I took great pleasure in using the triple B function : Bullsh\*t Baffles Brains to counter his bluster].*

*With that we walked past the obviously genetically damaged brain cell whilst it was fighting to change between motor functions and reasoning to try to understand what was said to him.' Obersturmbahnfuhrer indeed.*

*Would look better employed as an extra in one of the cheapo 'B' WW2 movies and TV progs we had thrust upon us as we grew up. Like PoSW's example he was dressed in 'sinistré' black accessorised with a utility belt with more pouches than an obese kangaroo. No doubt for his pratarang, pratphone, pratrope prat sanitiser, pratwipes, pratpen and notebook what ever, assuming some form of literacy the prat actually possessed.*

## Russian Navy Surveillance Ship Quietly Operating Off Hawaii

By: Sam LaGrone

May 26, 2021 9:38 AM • Updated: May 26, 2021 1:50 PM

<https://news.usni.org/2021/05/26/russian-navy-surveillance-ship-quietly-operating-off-hawaii>

A Russian Navy surveillance ship has spent the last several days lingering off the coast of the western coast of Hawaii, USNI News has learned.

The Russian ship has operated just outside U.S. territorial waters, Navy officials confirmed to USNI News on Tuesday.

“U.S. Pacific Fleet is aware of the Russian vessel operating in international waters in the vicinity of Hawaii and will continue to track it through the duration of its time here,” U.S. Pacific Fleet spokesman Capt. John Gay said in a statement to USNI News.

“Through maritime patrol aircraft, surface ships and joint capabilities, we can closely monitor all vessels in the Indo-Pacific area of operations.”

A defense official told USNI News that the ship had been operating within the bounds of international law and was not a hazard to navigation. The ship has not been broadcasting an automatic identification system (AIS) signal, officials confirmed to USNI News.

U.S. Pacific Fleet did not provide additional details about the Russian ship, but USNI News understands the vessel is the Russian Navy Vishnya-class auxiliary general intelligence (AGI) ship Kareliya (SSV-535).

The Vladivostok-based ship is one of seven Russian Navy AGIs specializing in signals intelligence – intercepting and deciphering an adversary's transmissions.

On Friday, open-source intelligence analysts tracked Kareliya operating 13 nautical miles to the west of the island of Kauai – just outside U.S. territorial waters.

Kauai is home to the Pacific Missile Range Facility Barking Sands where the Navy and Missile Defense Agency test-fire a variety of missiles.

Kareliya was originally commissioned in 1986 but was placed in a preservation status in the early 2000s. In 2014, the Russian Navy took the ship out of mothballs for a three-year repair and upgrade period, returning it to the fleet in 2017, according to local television station Vestiprim.

Signals intelligence operations are common practice among rival and allied navies. Chinese and Russian ships routinely monitor U.S. exercises. Likewise, U.S. signals intelligence aircraft and ships routinely operate off the coasts of China and Russia conducting similar operations.

During the Cold War, Russian surveillance ships commonly operated off the East Coast near the Naval Station Norfolk, Va., Naval Station Mayport, Fla. and the nuclear submarine base at Naval Submarine Base Kings Bay, Ga.

In late 2019, the Coast Guard warned that Russian Navy surveillance ship Viktor Leonov was operating unsafely off the coasts of South Carolina and Georgia.

“This unsafe operation includes not energizing running lights while in reduced visibility conditions, not responding to hails by commercial vessels attempting to coordinate safe passage and other erratic movements,” read the notice from Coast Guard in Charleston, S.C., at the time.

<https://news.usni.org/2021/05/26/russian-navy-surveillance-ship-quietly-operating-off-hawaii>

## Argentine ELINT ship, ARA Narwal active in 1982



Very interesting to learn Argentine Forces carried out the same sort of things we did.



# Net closes in on Chinese 'spies' in UK universities where academics are suspected of passing pioneering British technology to Beijing

## Specialists have drawn up list of academics suspected of passing on technology

Universities under scrutiny include Manchester, Liverpool and Imperial College

No suggestion any of the institutions are aware of, or complicit in, wrongdoing

By GLEN OWEN and JAKE RYAN FOR THE MAIL ON SUNDAY

PUBLISHED: 00:24, 23 May 2021 | UPDATED: 00:24, 23 May 2021

<https://www.dailymail.co.uk/news/article-9608707/Chinese-spies-UK-universities-academics-suspected-passing-technology-face-arrests.html>

A high-level probe into Chinese 'spies' working in British universities could lead to arrests within weeks, The Mail on Sunday has been told.

Specialists at the Foreign Office, Special Branch and HMRC have drawn up a list of academics suspected of passing sensitive information to Beijing, including pioneering British technology that could be used to aid the repression of minorities and dissidents.

Investigators are understood to have 'established a correlation' between universities which earn significant income from students from China and the activities of staff which have prompted suspicion.

Universities under scrutiny include Manchester and Imperial College, which earn 26 per cent of their income from students from China; Liverpool and Sheffield (28 per cent); and Oxford and Cambridge (10 per cent).

Government specialists have drawn up a list of academics suspected of passing sensitive information to Beijing, including pioneering British technology that could be used to aid the repression of minorities and dissidents

There is no suggestion any of the institutions are aware of, or complicit in, any wrongdoing.

Last year it was revealed that a third of non-EU university students in the UK come from China, with 120,000 paying a total of £2.1 billion in fees.

The investigation was launched amid fears academics were engaged in a 'gold rush' to strike deals with the Communist state over scientific breakthroughs.

In February, The Mail on Sunday revealed MI6 officers, seconded to the Foreign Office, were leading an investigation into more than a dozen universities for potential breach of export controls.

It also emerged that almost 200 British academics were being investigated on suspicion of unwittingly helping the Chinese government build weapons of mass destruction.

Anyone found in breach of the 2008 Export Control Order faces a maximum of ten years in prison.

Earlier this year, Manchester University cancelled an agreement with a Chinese military technology company after it was warned it had supplied apps used by Beijing's security forces in the mass surveillance of Uighurs.

The university said it was unaware of China Electronics Technology Corporation's alleged role in the persecution of Muslims until it received a letter highlighting the links from the Commons Foreign Affairs Committee.

Manchester co-operates with Chinese funders to exploit graphene, a revolutionary material that is seen as having huge military potential because of its immense strength and flexibility.

Meanwhile, Queen Mary University of London has established a 'collaborative partnership' with China's Northwestern Polytechnical University, which specialises in military technology.

In February, a report by the think-tank Civitas accused 14 of the UK's top 24 universities of having ties with Chinese weapons conglomerates and military-linked research centres.

It claimed breakthroughs by British universities risked boosting China's drive for military supremacy through the development of hypersonic missiles, radar jamming systems, robotics, spacecraft and stealth vehicles.

Earlier this year, a survey of students by the Henry Jackson Society think-tank discovered that 899 Chinese nationals were studying militarily sensitive subjects in the UK, including nuclear physics, aerospace engineering and high-tech material science.

The Foreign Office has previously said it would be tightening vetting rules for advanced overseas students of technology.

<https://www.dailymail.co.uk/news/article-9608707/Chinese-spies-UK-universities-academics-suspected-passing-technology-face-arrests.html>

Something I have harped on about some years prior to this. Dyson saw one of his newly designed motors appear in another vacuum cleaner and accused China of industrial espionage. I believe he also sacked a Chinese Development Engineer he employed as well. Read on....

## ***British Vacuum Cleaner Manufacturer Accuses Chinese Spy Of Stealing Secrets For German Rival***

*James Hall, Louise Armitstead, The Daily Telegraph Oct 24, 2012, 10:39 PM*

<https://www.businessinsider.com/dyson-accuses-chinese-spy-of-stealing-secrets-for-german-rival-2012-10?r=US&IR=T>

It is a case of espionage involving top secret blueprints for the latest technology and an international trail that leads from a world-leading British company's HQ to China, via Germany.

The alleged theft of the £100 million technology by an industrial "spy" did not involve laser-guided weapons or the latest tablet technology, but something much more prosaic — vacuum cleaners.

Dyson has filed papers at the High Court alleging that a worker at its Wiltshire base stole the blueprints and passed them to its rival, Bosch. It demands that the German manufacturer returns the details of the technology.

Dyson alleges that the unnamed employee was paid £11,650 by Bosch for passing on details of its “secret motor technology” over a two-year period.

The employee in question, who is thought to be Chinese and had a pre-existing relationship with Bosch, worked at Dyson’s head office in Malmesbury, Wilts, until earlier this year, when the alleged espionage was uncovered. The individual was one of a team of 100 engineers who developed high-speed brushless motors used to power Dyson’s vacuum cleaners and Airblade hand dryers.

According to a Dyson spokesman, the motors, which incorporate microchip technology, drive high volumes of air through the appliance and are not licensed to any other companies.

As well as passing on the information to Bosch, the mole is alleged to have passed on the information to Bosch’s Chinese motor manufacturer. Dyson claimed that the spy was paid the money via a “business” created for the purpose.

Mark Taylor, research and development director at Dyson, said: “Bosch’s vice-president for engineering employed a Dyson engineer and benefited from our confidential know-how and expertise. We have spent over 15 years and £100 million developing high-speed brushless motors. We are demanding the immediate return of our intellectual property.”

Dyson says its motors are key to its success. Using “digital impulse technology” pioneered by the company founder, Sir James Dyson, they spin at 104,000rpm. The company has fought hard against attempts to copy its products, with its Air Multiplier fan the subject of about 500 infringements in more than 30 countries over the past two years.

Dyson said that it has confronted Bosch with evidence of wrongdoing but said that the German company has “refused to return” the technology.

In a statement, Bosch said: “Dyson employed an individual with a pre-existing consultancy agreement with Bosch Lawn and Garden Limited in relation to garden products, and not vacuum cleaners or hand dryers as Dyson implies. Bosch has sought to establish the full details of what occurred, including attempting to establish from Dyson what, if any, confidential information supposedly passed between Bosch and Dyson.”

“Bosch regrets that Dyson has chosen to issue legal proceedings and a press statement at this stage, but will continue to act in the appropriate way.”

<https://www.businessinsider.com/dyson-accuses-chinese-spy-of-stealing-secrets-for-german-rival-2012-10?r=US&IR=T>

# Chart Section Index

1. Prediction Chart
2. M01 Schedule
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July 2021

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Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jul kHz, ID, ...	Aug kHz, ID, ...
x	x	x	x	x			0000		F01	01A	17471	17471
x				x			0025/0035		F01	01A	14878/12185	16023/14373
	x			x			0030/0050/0110		M12	01B	7475/ 8075/ 9275 402	6784/ 8184/ 9134 713
x				x			0125/0135		F01	01A	14878/12185	16023/14373
x	x	x	x	x	x	x	0200		V13	0	9276	9276
x							0210/0310		E06	01A	11632/13827 537	11472/13570 537
x				x			0210/0230/0250		M12	01B	15881/14781/13481 874	12163/11163/19463 114
x				x			0300		E11	03	9060 18#	9060 18#
			x	x			0300/0400		E06	01A	14845/12189 361	14648 /12084 361
x	x	x	x	x	x	x	0300		V13	0	7502	search (15388?)
						x	0300/0320/0340		V07	01B	13521/12121/11421 514	
		x	x				0315		E11	03	14575 25#	14575 25#
x	x	x	x	x	x	x	0400		V13	0		search (15388?)
x	x	x	x	x			0400/0420		S06	01A	11616/ 9322 480	11616/ 9322 480
			x				0430/0450/0510		E07A	01B	7933/ 9133/10233 741	7933/ 9133/10233 741
x							0450		E11	03	7469 41#	7469 41#
x	x	x	x	x	x	x	0500		V13	0		11430
x		x					0510		S11A	03	13537 65#	13537 65#
x		x		x		x	0455		HM01	18	10860	10860
	x		x		x		0455		HM01	18	11462	11462
x	x						0500/0510/0520 0530/0540/0550		XPB1	01B	11168/11468/12168 13368/13968/14568 <b>check</b>	11559/12159/13459 13959/14459/14959 <b>check</b>
			x	x			0500/0600	1/3	E06	01A	13825/15615 679	13540/16115 210
	x			x			0530		M01A	14	9441 751	9441 751
		x	x				0530		M01A	14	9129 or 9192 498	9129 or 9192 498
	x						0530/0550/0610		M12	01B	9317/10484/11552 135	9317/10484/11552 135
		x	x				0540		M01A	14	7692 536	7692 536
x		x		x		x	0555		HM01	18	10345	10345
	x		x		x		0555		HM01	18	14375	14375
				x		x	<b>0600</b>		E11	03	9150 35#	9150 35#
x	x	x	x	x	x	x	0600		V13	0		11430
	x						0600/0610		S06S	01A	15945/16945 438	15945/16945 438
						x	0600/0620/0640		E07	01B	10317/11117/12217 312	9261/10261/11461 224
	x			x			0620		M01A	14	10233 or 10235 354/458	10233 or 10235 354/458

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jul kHz, ID, ...	Aug kHz, ID, ...
		x	x				0620		M01A	14	9421 135	9421 135
	x			x			0630		M01A	14	9447 143/796	9447 143/796
		x	x				0630		M01A	14	8111 902/536	8111 902/536
x							0630/0640		S06S	01A	16320/14875 462	16320/14875 462
x		x					0640		E11	03	15800 94#	15800 94#
	x		x				0645		E11	03	8091 51#	8091 51#
x		x		x		x	0655		HM01	18	9330	9330
	x		x		x		0655		HM01	18	13435	13435
x			x				0700		S11A	03	9339 47#	9339 47#
	x			x			0700		E11	03	8680 57#	8680 57#
x	x	x	x	x	x	x	0700		V13	0		18040
						x	0700		M01	01B	6780 025	6780 025
	x						0700/0710		S06S	01A	5430/ 6780 452	5430/ 6780 452
	x			x			0700/0720/0740		E07	01B	15962/17462/18562 945	16246/18446/19246 242
	x		x				0700/0720/0740		M12	01B	10807/10207/ 9207 822	11148/10648/ 9148 161
						x	0700/0720/0740		V07	01B		<b>search</b>
x		x					0700/0720/0740		XPA2	01B	12148/13448/13948	12152/13552/13952
					x	x	0710		E11	03	6480 49#	6480 49#
	x			x			0710		M01A	14	10651 297/358	10651 297/358
		x	x				0710		M01A	14	9175 146/208	9175 146/208
	x		x				0710/0730/0750		XPA1	01B	10446/11474/12175	10234/11511/12117
<b>x</b>		<b>x</b>					<b>0715</b>		<b>E11</b>	<b>03</b>	<b>18030 75#</b>	<b>18030 75#</b>
	x			x			0715		E11	03	10429 63#	10429 63#
	x			x			0720		M01A	14	9151 728	9151 728
x	x						0730/0740		S06S	01A	7365/11655 427	7365/11655 427
x		x					0730/0740		S06S	01A	11530/14977 172	11530/14977 172
x			x				0745		E11	03	9610 26#	9610 26#
	x		x				0745		E11	03	14940 22#	14940 22#
		x		x			0745		E11	03	15720 34#	15720 34#
x		x		x		x	0755		HM01	18	9065	9065
	x		x		x		0755		HM01	18	11365	11365
x	x	x	x	x	x	x	0800		V13	0		18040

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jul kHz, ID, ...	Aug kHz, ID, ...
			x				0800/0810		E17Z	01A	16780/12850/ 217	16780/12850/ 217
	x						0800/0810		S06S	01A	14373/12935 127	14373/12935 127
					x		0800/0810	1	S06S	01A	12460/10250 132	12460/10250 132
					x		0800/0820/0840		E07A	01B	12173/13973/14873 198	12177/13477/14877 148
			x	x			0820		E11	03	4909 43#	4909 43#
	x	x					0820		E11	03	17378 13#	17378 13#
					x	x	0830		S11A	03	5149 37#	5149 37#
							0830/0840		S06S	01A	8221/ 9353 764	8221/ 9353 764
x		x					0830/0840		S06S	01A	11565/12560 464	11565/12560 464
				x			0830/0840		S06S	01A	10290/ 9655 156	10290/ 9655 156
x			x	x			0830/0930		S06	01A	15875/13469 842	16327/13875 842
x		x					0845		E11	03	12815 71#	12815 71#
	x		x				0845		E11	03	12153 15#	12153 15#
		x		x		x	0855		HM01	18	9240	9240
	x		x		x		0855		HM01	18	11462	11462
x		x					0900		E11	03	7449 53#	7449 53#
							0900/0910		S06S	01A	16380/14835 232	16380/14835 232
				x			0900/0910		S06S	01A	6844/ 7161 239	6844/ 7161 239
x		x					0910/0930/0950		XPA2	01B	16296/14981/13953	18059/16093/14874
			x		x		0910/0930/0950		XPA2	01B	13445/12145/11545	14372/13372/12172
x				x			0915		S11A	03	6814 48#	6814 48#
x	x	x	x	x	x	x	0930		M14	01A	16347 617, only 10.+25. when msg repeat 14878 on 11.+26.	16347 617, only 10.+25. when msg repeat 14878 on 11.+26.
		x	x				0930		E11	03	6923 27#	6923 27#
x			x				0930/0940		S06S	01A	9255/10325 698	9255/10325 698
x		x		x		x	0955		HM01	18	9155	9155
	x		x		x		0955		HM01	18	12180	12180
		x		x			1000		E11	03	12153 30#	12153 30#
	x						1000/1010		S06S	01A	4820/ 5660 427	4820/ 5660 427
		x					1000/1010		S06S	01A	14580/16020 276	14580/16020 276

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jul kHz, ID, ...	Aug kHz, ID, ...
	x	x	x	x			1015/1025/1035		F01	01A	11141/ 9192/ 7363	11076/ 9164/ 7316
	x			x			1020		S11A	03	10125 42#	10125 42#
x		x					1045		E11	03	8545 69#	8545 69#
	x		x				<b>1045</b>		S11A	03	18168 38#	18168 38#
	x						1100/1110		S06S	01A	6810/ 7560 265	6810/ 7560 265
	x			x			1100/1120/1140		XPA2	01B	<b>search</b>	<b>search</b>
		x	x				1100/1120/1140		XPA2	01B	17435/16235/14935	16264/15864/14864
x	x	x	x	x	x	x	1200		V13	0	9276,15890	15890
x							1200/1210		S06S	01A	10230/12165 149	10230/12165 149
x			x				1200/1210		S06S	01A	13145/14535 175	13145/14535 175
					x		1200/1210/1210 1230/1240/1250		XPB1	01B	15876/14876/14376 13976/13376/12176 <b>check</b>	15876/14876/14376 13976/13376/12176 <b>check</b>
	x						1200/1220/1240		M12	01B	14377/13461/12114 317	14377/13461/12114 317
		x	x				1200/1220/1240		XPA2	01B		13919/14719/16219
	x	x					1205		E11	03	6304 46#	6304 46#
		x	x				1210/1230/1250		XPA1	01B	<b>search</b>	<b>search</b>
x			x				1300		E11	03	5737 31#	5737 31#
x	x	x	x	x	x	x	1300		V13	0	7502,13974	9725
x					x		1300/1320/1340		E07	01B	12176/11576/10276 512	12176/11576/10276 512
x							1300/1320/1340		M12	01B	14377/13461/12114 317	14377/13461/12114 317
	x				x		1345		E11	03	12984 91#	12984 91#
			x		x		1410/1430/1450		E07	01B	13562/14862/16162 441	13519/14819/15919 288
					x		1500		M01	14	6435 025	6435 025
x	x						1500/1510		S06S	01A	6766/ 7744 914	6766/ 7744 914
					x		1500/1520/1540		XPA2	01B	13954/12154/11454	13825/12125/11025
x				x			1510/1530/1550		E07A	01B	12213/11413/10113 241	12213/11413/10113 241
x				x			1530		E11	03	5409 52#	5409 52#
			x				1530		E11	03	10356 26#	10356 26#
					x	x	1530		E11	03	5082 36#	5082 36#
	x	x	x	x	x	<b>x</b>	1555		HM01	18	11435	11435
x		x				<b>x</b>	1600/1620/1640		M12	01B	13979/13379/12179 931	14681/13881/13381 683
	x		x				1600/1620/1640		XPA2	01B	13538/14438/14938	14864/14364/13464
	x					x	1605		E11	03	5371 23#	5371 23#

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jul kHz, ID, ...	Aug kHz, ID, ...
		x				x	1625		E11	03	7863 97#	7863 97#
	x		x				<b>1645</b>		E11	03	14575 33#	14575 33#
				x		x	1650		E11	03	12229 92#	12229 92#
x	x	x	x	x	x	<b>x</b>	1655		HM01	18	11530	11530
		x				x	1700/1720/1740		E07	01B	12223/11023/10123 201	13397/12197/10697 316
			x				1700/1720/1740		M12	01B	12162/11566/18711 546	12162/11566/18711 546
		x					1710/1730/1750		M12	01B	12162/11566/10711 546	12162/11566/10711 546
x			x				1730		E11	03	8088 41#	8088 41#
x						x	1745		E11	03	14410 24#	14410 24#
x	x	x	x	x	x	<b>x</b>	1755		HM01	18	11635	11635
	x		x				1800		M01	14	5280 025	5280 025
			x				1800/1820/1840		M12	01B	12162/11566/10711 546	12162/11566/10711 546
	x			x			1840/1850/1900	1	F01	01A	14829/12214/10932	15854/13543/11126
		x			x		1850		S11A	03	12457 28#	12457 28#
x			x				1900		E11	03	7600 64#	7600 64#
	x					x	1900/1910/1910 1930/1940/1950		XPB1	01B	14644/13444/12144 11044/10344/ 9244 <b>check</b>	14918/13918/12218 11118/10218/ 9118 <b>check</b>
		x					1900/1920/1940		M12	01B	8047/ 6802/ 5788 463	8047/ 6802/ 5788 463
				x			1900/2000	1/3	S06	01A		9475/ 7561 768
		x			x		1910		E11	03	4783 39#	4783 39#
				x		x	1910		E11	03	9610 61#	9610 61#
		x		x			1950/2010/2030		M12	01B	16323/14923/13523 395	16148/14748/13448 174
	x		x				2000		M01	14	4905 025	4905 025
x			x				2000/2020/2040		M12	01B	12217/10817/ 9317 617	12148/10648/ 9148 374
			x				2000/2020/2040		M12	01B	14377/13461/12112 317	14377/13461/12112 317
		x					2000/2020/2040		E07A	01A	12166/10766/ 9266 172	12166/10766/ 9266 172
				x			2000/2100	1/3	S06	01A	9475/ 7561 768	
x		x		x		x	2055		HM01	18	11635	11635
	x		x		x		2055		HM01	18	16180	16180
				x	x		2100/2120/2140		M12	01B	10767/10167/ 9267 712	10314/ 9114/ 8014 310
	x					x	2100/2120/2140		XPA2	01B	13394/12194/10794	12159/11559/10559



Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jul kHz, ID, ...	Aug kHz, ID, ...
		x		x			2100/2120/2140		XPA2	01B	12124/11124/10624	
x			x				2110/2130/2150		M12	01B	13381/12181/10781 317	12214/11014/ 9914 209
x		x		x		x	2155		HM01	18	10715	10715
	x		x		x		2155		HM01	18	17480	17480
		x			x		2210/2230/2250		M12	01B	9284/ 8084/ 7584 295	9052/ 8052/ 6952 992
					x		2230/2240		F01	01A	18562/16218	20283/18397
					x		2330/2340		F01	01A	18562/16218	20283/18397

## M01 FREQUENCY LIST

Frequencies may vary by a few kHz

**JAN FEB NOV DEC**

**M01/1**

**197**

DAY	TIME UTC	FREQ kHz
TUE / THU	1800	5320
TUE / THU	2000	4490
SAT	1500	5810
SUN	0700	5465

**MAR APRIL SEPT OCT**

**M01/2**

**463**

DAY	TIME UTC	FREQ kHz
TUE / THU	1800	5475
TUE / THU	2000	5020
SAT	1500	6260
SUN	0700	6510

**MAY JUNE JULY AUG**

**M01/3**

**025**

DAY	TIME UTC	FREQ kHz
TUE / THU	1800	5280
TUE / THU	2000	4905
SAT	1500	6435
SUN	0700	6780

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	May kHz, ID, ...	Jun kHz, ID, ...	Jul kHz, ID, ...	Aug kHz, ID, ...	Remarks
x				x			0300		E11	03	9060 18#	9060 18#	9060 18#	9060 18#	since 07/15, last log 05/21 <b>until 05/21 Fri/Sun at 0830z</b>
		x	x				0315		E11	03	8565 25#	14575 25#	14575 25#	14575 25#	since 01/14, last log 06/21
x							0450		E11	03	7469 41#	7469 41#	7469 41#	7469 41#	since 02/10, last log 05/21 2nd transmission Thu 1730z
x		x					0510		S11A	03	13537 65#	13537 65#	13537 65#	13537 65#	since 08/19, last log 06/21
				x	x		0600		E11	03	9150 35#	9150 35#	9150 35#	9150 35#	since 04/15, last log 05/21 <b>until 04/21 Fri/Sun at 0435z</b>
x		x					0640		E11	03	15800 94#	15800 94#	15800 94#	15800 94#	since 07/17, last log 06/21
	x		x				0645		E11	03	8091 51#	8091 51#	8091 51#	8091 51#	since 07/09, last log 06/21
x			x				0700		S11A	03	9339 47#	9339 47#	9339 47#	9339 47#	since 04/10, last log 06/21
	x			x			0700		E11	03	8680 57#	8680 57#	8680 57#	8680 57#	since 01/12, last log 06/21
					x	x	0710		E11	03	6480 49#	6480 49#	6480 49#	6480 49#	since 07/15, last log 05/21
<b>x</b>	<b>x</b>						0715		<b>E11</b>	<b>03</b>	<b>18030 75#</b>	<b>18030 75#</b>	<b>18030 75#</b>	<b>18030 75#</b>	<b>since 06/21, last log 06/21 t e m p o r a r y ?</b>
	x			x			0715		E11	03	10429 63#	10429 63#	10429 63#	10429 63#	since 02/11, last log 06/21
x			x				0745		E11	03	9610 26#	9610 26#	9610 26#	9610 26#	since 03/14, last log 06/21 2nd transmission Thu 1530z
	x		x				0745		E11	03	14940 22#	14940 22#	14940 22#	14940 22#	since 01/20, last log 06/21
		x	x				0745		E11	03	15720 34#	15720 34#	15720 34#	15720 34#	since 06/17, last log 06/21
				x	x		0820		E11	03	4909 43#	4909 43#	4909 43#	4909 43#	since 10/09, last log 06/21
	x	x					0820		E11	03	17378 13#	17378 13#	17378 13#	17378 13#	since 12/18, last log 06/21
					x	x	0830		S11A	03	5149 37#	5149 37#	5149 37#	5149 37#	since 02/14, last log 06/21
x		x					0845		E11	03	12815 71#	12815 71#	12815 71#	12815 71#	since 09/10, last log 06/21
	x		x				0845		E11	03	12153 15#	12153 15#	12153 15#	12153 15#	since 07/17, last log 06/21
x		x					0900		E11	03	7449 53#	7449 53#	7449 53#	7449 53#	since 10/05, last log 06/21
x				x			0915		S11A	03	6814 48#	6814 48#	6814 48#	6814 48#	since 04/19, last log 06/21
		x	x				0930		E11	03	6923 27#	6923 27#	6923 27#	6923 27#	since 02/14, last log 06/21
x			x				1000		E11	03	12153 30#	12153 30#	12153 30#	12153 30#	since 11/16, last log 06/21
	x			x			1020		S11A	03	10125 42#	10125 42#	10125 42#	10125 42#	since 02/10, last log 06/21 2nd transmission Thu 1730z
x		x					1045		E11	03	8545 69#	8545 69#	8545 69#	8545 69#	since 03/18, last log 06/21
	x		x				1045		S11A	03	18168 38#	18168 38#	18168 38#	18168 38#	since 05/14, last log 06/21 <b>in 02/21 at 0920z</b>
	x	x					1205		E11	03	6304 46#	6304 46#	6304 46#	6304 46#	since 03/10, last log 06/21 2nd transmission Mon 0450z
x			x				1300		E11	03	5737 31#	5737 31#	5737 31#	5737 31#	since 07/14, last log 06/21
	x				x		1345		E11	03	12984 91#	12984 91#	12984 91#	12984 91#	since 10/15, last log 06/21
x				x			1530		E11	03	5409 52#	5409 52#	5409 52#	5409 52#	since 05/15, last log 06/21
					x		1530		E11	03	10356 26#	10356 26#	10356 26#	10356 26#	since 06/14, last log 06/21 2nd transmission Mon 0745z
					x	x	1530		E11	03	5082 36#	5082 36#	5082 36#	5082 36#	since 03/14, last log 06/21
	x					x	1605		E11	03	5371 23#	5371 23#	5371 23#	5371 23#	since 11/15, last log 06/21
		x				x	1625		E11	03	7863 97#	7863 97#	7863 97#	7863 97#	since 02/15, last log 06/21
	x		x				1645		E11	03	14575 33#	14575 33#	14575 33#	14575 33#	since 10/11, last log 06/21 <b>until 04/21 at 1230z</b>
				x	x		1650		E11	03	12229 92#	12229 92#	12229 92#	12229 92#	since 05/16, last log 06/21
x			x				1730		E11	03	8088 41#	8088 41#	8088 41#	8088 41#	since 03/10, last log 06/21 2nd transmission Mon 0450z
x						x	1745		E11	03	14410 24#	14410 24#	14410 24#	14410 24#	since 04/18, last log 06/21
		x			x		1850		S11A	03	12457 28#	12457 28#	12457 28#	12457 28#	since 06/17, last log 06/21
x			x				1900		E11	03	7600 64#	7600 64#	7600 64#	7600 64#	since 05/16, last log 06/21
		x			x		1910		E11	03	4783 39#	4783 39#	4783 39#	4783 39#	since 02/14, last log 06/21
				x	x		1910		E11	03	9610 61#	9610 61#	9610 61#	9610 61#	since 04/17, last log 06/21

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

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

**SPECIAL MATTERS**

**Thanks to all our contributors:**

Ary, Edd, BR, CC, Danix, DanAr, E, HH, HJH, JkC, Jochen, KW, Malc, MaleAnon, PoSW, PLdn, RC, RS, RNOB



Apologies to anyone missed.

**MESSAGES:**

**E:** Thanks your input. Hope all remains well with you.

**RELEVANT WEBSITES**

ENIGMA 2000 Website:

<http://www.enigma2000.org.uk>

Frequency Details can be downloaded from:

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

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

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

Time zone information:

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

Encyclopedia of Espionage, Intelligence, and Security

<http://www.espionageinfo.com/>

**EyeSpyMag!**

<http://www.eyespy.com>

# 2021

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