ENIGMA 2000 NEWSLETTER

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Intelligence Ship Kildin, Black Sea Fleet (photo by Andrey Brichevsky, 12 November 2015) [*Thanks for use of image*]

Intelligence Ship Kildin
Project 861M / Moma Class

The converted Moma (Project 861M) is an Electronic Intelligence gathering ship converted from Moma class survey ship / buoy tenders. Ships in this series were built in Gdansk, Poland. Total for this project during the 1967-73 biennium. 29 vessels have been built, some of them (9 units) has been transformed into an intelligence ship under Project 861M. The ships continue in service with the Russian Navy.

Hydrographic survey vessel Kildin laid down at the Stocznia Polnocna Shipyard, Gdansk, Poland (yard No.861/13), launched 31 December 1969, commissioned 23 May 1970.

In 1970 the ship was converted to the intelligence ship. Now in service.

Bizan ESM radar system, 2 Don navigation radars, sonar MG-329 Sheksna, underwater communication system MG-13, underwater communication system MG-26 Khosta, station MI-110K, special electronics: Vitok-AK, MRR-1-7, Vakhta-M, Vakhta-10, Vakhta-12, Vizit-M, Rotor-N, Uzel, Kayra, Oktava

https://www.kchf.ru/eng/ship/intelligence/kildin.htm

Story inside: followed HMS Queen Elizabeth off Oman [Wonder if Kildin was listened to-ahem]?

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Editorial

A Happy New Year to our readers. Members will doubtless be pleased the subs for this group have been paid so we exist for another year.

We apologise for the late release of this issue; due, in no small part to matters beyond our control viz. Royal Mail

G06 b New Designator:

Ary wrote: G06 faded to nil so I had no idea that there was more to it. There was however a complete message and an extra 5FG in the callup like E06b has.

10755 13-12-2021 1310 G06b

975 45218 125 30
56511 53052 06895 27520 91362 57346 62062 89338 17746 12716
41228 21985 91670 68117 08754 20375 27827 72573 62582 13182
39773 19824 76169 66516 27085 72837 14815 59190 20416 07866
125 30 00000 Courtesy Priyom

[*Thanks to Ary and Priyom colleagues*]

Please note in your Active Stations List and look at previous S906g - Assigned 02 Apr 2014 (Station under investigation)
Temporary holding ID for voice variant of S06.
First heard Sun 02 Mar on 11073kHz.
Format as S06 with additional 5 fig grp in header
e.g. 352 352 352 63524 719 40
Uses S06 voice. A similar situation.

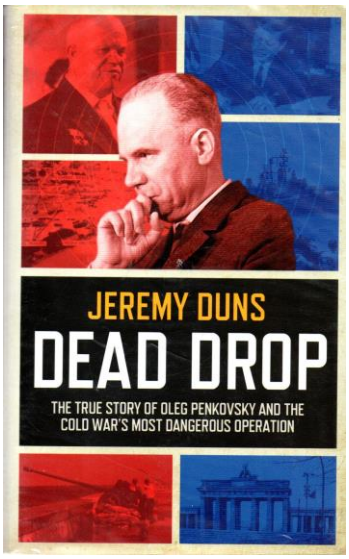
In Mazeilka X06 section offered by Jochen there is mention of the new variant X06d. Thanks to all in that group.

In the last newsletter [En127] we started off with details of stations that were seemingly popping up on several frequencies, some repeated and some already seen from a similar event during the Russian/Crimea spat. This increase of out of schedule transmissions is still ongoing but not with the same verve. Thanks to Ary we are receiving details of some of the stations that are popping up.

For those with an interest in these stations we have added a 'Special Stations' section which can be found after Jochen's 'X06' column. In station/date order there are some surprisingly long polytones; the last time anything like this was registered by yours truly was just prior to and at the arrest of Heidrun A.

Propagation seems to be changing slightly although we have suffered some rather poor conditions as noted by monitors. For the new year we can hope for something better.

Book Review



I found this account an easy read although I suspect some supposition by the author. I suspect those who wrote the screenplay for 'The Courier' had also read this work. Worth a read, one mention of YOYO51 number transmission on behalf of CIA from Frankfurt; also a surveillance image of Penkovsky allegedly receiving his message text.

Amazon's blurb reads:

In August 1960, a Soviet colonel called Oleg Penkovsky tried to make contact with the West. His first attempt was to approach two American students in Moscow. He handed them a bulky envelope and pleaded with them to deliver it to the American embassy. Inside was an offer to work as a 'soldier-warrior' for the free world. MI6 and the CIA ran Penkovsky jointly, in an operation that ran through the showdown over Berlin and the Cuban Missile Crisis. He provided crucial intelligence, including photographs of rocket manuals that helped Kennedy end the Cuba crisis and avert a war. Codenamed HERO, Penkovsky is widely seen as the most important spy of the Cold War, and the CIA-MI6 operation, run as the world stood on the brink of nuclear destruction, has never been bettered. But how exactly did the Russians detect Penkovsky, and why did they let him continue his contact with his handlers for months afterwards? Could it be that the whole Cuban Missile Crisis was part of a Soviet deception operation - and has another betrayal hidden in plain sight all these years? Thrilling, evocative and hugely controversial, Dead Drop blows apart the myths surrounding one of the Cold War's greatest spy operations.

News Round

Soviet Cold War Operations against RFE/RL Ukrainian Service

By Richard H. Cummings. Published Dec. 14. Updated Dec. 14 at 6:36 pm

https://www.kyivpost.com/ukraine-politics/soviet-cold-war-operations-against-rfe-rl-ukrainian-service.html

For over 40 years, Radio Free Europe (RFE) and Radio Liberty (RL) were two American-sponsored radio stations in Munich that broadcast to countries behind the Iron Curtain. They were described in a secret 1969 Central Intelligence Agency report as "the oldest, largest, most costly, and probably most successful covert action projects aimed at the Soviet Union and Eastern Europe."
By the time of the report, thousands of persons worked for these radio stations for almost 20 years at a cost of over $300 ml. Yet, for years much of their existence remained covered in a Cold War shroud of mystery and intrigue. Early records no longer exist, and many persons responsible for the stations' development have died, leaving fragmentary records. The archives of American and Eastern intelligence services remain classified, inaccessible to the public, or destroyed in the immediate post-1989 years.

All of the intelligence services of the Warsaw Pact operated against RFE/RL for over 40 years. Sometimes this was centrally coordinated activity, and sometimes the countries ran their own operations. In this case, hostile actions spoke louder than words in the battle of ideas fought by East and West.

Assymetric responses

"Radio Liberation from Bolshevism" first broadcast on March 1, 1953, from transmitters in Lampertheim, Germany, to the Soviet armed forces in Germany and Austria. Within ten minutes, the Soviet Union started jamming the broadcasts, an activity that would continue for another 35 years. On August 14, 1954, the Ukrainian Service of Radio Liberation (later Radio Liberty) began its first broadcast from Munich to Ukraine with these words: "Brothers and sisters! Ukrainians! We live abroad, but our hearts and minds are always with you. No iron curtain can separate us or stand in our way."

The station's name was changed to "Radio Liberation" in 1956 and then renamed Radio Liberty in 1963.

Émigrés from both RFE and RL faced intimidation, blackmail, murder, threats of murder, and kidnapping. The first and only direct physical attack on RFE/RL headquarters in Munich took place on February 21, 1981. On that date, an international team of terrorists led by the infamous "Carlos the Jackal" exploded a bomb that injured employees and caused over two million dollars in damage.

Numerous propaganda books about both stations were published in East Europe and the former Soviet Union whenever those regimes wanted to counter the radios' effective programming with domestic and international propaganda. The information in these books was mostly fabricated with tendentious information supplied by agents inside the stations.

A review of the history of RFE/RL would not be complete without mentioning some of the intelligence service activities directed against the radios and their personnel.

Case Study

Agents TARAS, NIKOLAJ, CERNY, and others, were active in Soviet KGB and Czechoslovak SNB operations against the Ukrainian Broadcast Service of RFE/RL in 1988-1989.

The Ukrainian minority in Czechoslovakia (mostly in Slovakia) was of concern to both the Czechoslovak intelligence service SNB ((Sbor národní bezpečnosti or National Security Corps) and the Soviet KGB. For example, the 2nd Administration of the SNB's 12th Division sent "secret collaborators" to contact the Ukrainian Service employees of Radio Liberty and other emigres in the West. The 2nd Administration also sent reports to a Soviet KGB officer "P" of the 5th Department, 2nd Division.

The Soviet KGB used the "secret collaborators" from Czechoslovakia, as it was known that Radio Liberty employees would not have trusted visitors directly from Ukraine, whom they would believe were "agent provocateurs." Thus, the idea was developed to use the Ukrainian minority in Czechoslovakia, especially those considered "dissidents," for intelligence operations against Radio Liberty.

The following except is one of many now becoming available showing the extent of the efforts of Warsaw Pact countries' spy agencies to infiltrate these stations.

Operation "NIKOLAJ," October 1989 Report Excerpt:

Subject: Object "NIKOLAJ" – report about Radio Liberty. The Object of the Operation "NIKOLAJ" traveled in July and August 1989 with his wife to capitalist countries. They left Czechoslovakia via Austria in the private car of a Radio Liberty editor, who was returning home to West Germany from a visit to her husband's parents who live in the CSSR.

"NIKOLAJ" spent three days with the Radio Liberty couple in Munich. In several discussions, he learned that the wife is currently following the Soviet press and is preparing a press review for the Ukrainian section of "Radio Liberty." She is in a better position than her husband at RL; she is a producer, has a good relationship with the head of the Ukrainian section, Bohdan Nahajlo, and with the entire management of "Radio Liberty."

An excerpt from a secret report naming members of RL's Ukrainian Service

With the permission of RL's director and after receiving a sticker with the word "VISITOR" printed on it, "NIKOLAJ" was allowed to enter the premises of the Ukrainian section. A security guard at the entrance asked for "NIKOLAJ's" passport and kept it. "Radio Liberty" has about 1,600 employees, of whom 21 work for the Ukrainian section.

One editor conducted an interview with "NIKOLAJ" on the topic "Ukrainian Culture in the CSSR;" he (NIKOLAJ) requested that the interview be broadcast in full and without any changes.

Bohdan Nahajlo, as mentioned above, who is editor-in-chief of the Ukrainian section, is about 35 to 40 years old. His parents are Ukrainians, but he was born in the United Kingdom. "NIKOLAJ" also met with the editor Ivan Kacurovsky, an ethnic Ukrainian who is about 70 years old, a member of the first wave of immigrants, and who holds strongly anti-Soviet views. Furthermore, "NIKOLAJ" personally met with the announcer of the Ukrainian section Olexa Bojarko and with the Ukrainian emigre poet Ema Avdijevska. Both are using pseudonyms.

Among the Ukrainian emigres, there is little information on the lives and activities of Ukrainians living in the CSSR. The employees of the Ukrainian section of "Radio Liberty" are only interested in the situation in Ukraine and have developed no efforts to obtain information from the CSSR. They consider the CSSR to be a

conservative state in which restructuring (perestroika) has not gained ground; they believe that the CSSR does not want to introduce (reforms) similar to those in the other socialist countries.

In general, "NIKOLAJ" learned that RL currently has very reliable and quick channels to Ukraine. They receive information on all the activities of the internal opposition, demonstrations, and the situation in Ukraine and the USSR. The Ukrainian emigres also took advantage of the lack of paper in the USSR. They provided paper for certain publishing houses in the USSR to enable them to publish rehabilitated authors according to the wishes of the Ukrainian emigres and the internal opposition.

"NIKOLAJ" had a stopover in Munich only on his way to KZ (Kapitalisticke Zeme–capitalist countries?) and back to the CSSR. He focused his attention on his stay in the USA and Canada, where he spent most of his time. Information about "NIKOLAJ's" stay in the USA and Canada will be delivered to the Soviet friends in the following report.

The reports ended here as the collapse of Communism in Czechoslovakia took place in November 1989, and with that, the hostile activity against RFE and RL ceased. My book Cold War Radio: The Dangerous History of American Broadcasting in Europe 1950-1989 details the hostile activity.

This is but one example of what went on well into the Gorbachev era despite the declared policy of glasnost and perestroika. And even after the Soviet Union stopped jamming RFE/RL in November 1988.

The Kyiv Post feature "History" takes a look at how places in the city have changed over time.

https://www.kyivpost.com/ukraine-politics/soviet-cold-war-operations-against-rfe-rl-ukrainian-service.html

Worth a look for the initial image of RFE control room

Russia Says Arrests Ukrainian Spy Trio Amid Mounting Tensions

https://www.themoscowtimes.com/2021/12/02/russia-says-arrests-ukrainian-spy-trio-amid-high-tensions-a75717

Russia's Federal Security Service (FSB) said Thursday it has detained three alleged Ukrainian spies gathering secrets and plotting terrorist attacks as tensions between the countries escalate over Kiev's accusations of Russian military buildup and planned invasions.

All three Ukrainian nationals had confessed to being recruited by Ukraine's military and security services, Interfax quoted the FSB as saying.

Ukraine's security service, the SBU, denied the incident, saying the accusation was "fake" and part of a "hybrid war" effort.

The Russian intelligence service said one of those detained had planned to detonate two explosive devices at an undisclosed location. The FSB identified the alleged spy as Oleksandr Tsilyk, who had reportedly confessed to being recruited by the Ukrainian defense ministry's main intelligence directorate.

"I was recruited in May 2021," he was quoted as saying, adding that Ukrainian intelligence had trained him to "work with dead drops and special communications."

A father-and-son pair identified as Zinoviy and Ihor Koval also confessed to being ordered by the Security Service of Ukraine to "photograph road and railway bridges as well as a thermal plant" in exchange for a $10,000 reward, Interfax reported.

The FSB's anti-terrorist unit said it had uncovered "short-barrelled automatic weapons and personal protective equipment" in the pair's vehicle that were sent for forensic review.

The FSB did not disclose where in Russia or when the alleged spies had been detained.

Its announcement of arrests comes amid growing warnings from Ukraine and its Western allies that Russia may be gearing up for an early 2022 invasion of Ukraine with a fresh troop buildup.

Moscow has in return blamed Kiev for massing tens of thousands of troops near pro-Russia separatist-held territory in southeast Ukraine.

Ukrainian President Volodymyr Zelenskiy this week called on Russian President Vladimir Putin to explicitly deny plans to move Russian troops across the Ukrainian border, which Putin declined to do.

Zelenskiy previously disclosed that Ukrainian intelligence services uncovered discussions between Ukrainian and Russian nationals of a Dec. 1-2 coup. The Kremlin denied any involvement.

AFP contributed reporting.

https://www.themoscowtimes.com/2021/12/02/russia-says-arrests-ukrainian-spy-trio-amid-high-tensions-a75717

We broke Enigma before Alan Turing, says Poland as it opens codebreaker museum

Maria Wilczek, Warsaw
Friday September 24 2021, 3.30pm, The Times

https://www.thetimes.co.uk/article/we-broke-enigma-before-alan-turing-says-poland-as-it-opens-codebreaker-museum-3bmvv8prm

Polish mathematicians Henryk Zygalski, Jerzy Ryzycki and Marian Rejewski first cracked the Germans' Enigma cypher machine in 1932

The Polish military's prewar codebreaker course was so clandestine that it was even concealed from the lead professor's secretary, who had German roots.

A handpicked group of Poland's brightest mathematics students would spend a dozen hours each week unscrambling German ciphers. In 1932 three of them hit the jackpot: they broke the "unbreakable" Enigma code, laying the foundations for similar British feats during the Second World War.

Now the original site of Poland's codebreaking office is opening as a museum, the Enigma Cipher Centre, to tell the story of how the country's cryptologists paved the way for later efforts at Bletchley Park.

The new Polish museum to its codebreakers is at the site of their work in Poznan

From the 1920s Polish intelligence suspected that the Germans had started using typewriter-like machines to code their correspondence. The army founded a cipher bureau in the western city of Poznan, next to the city's university, which had leading faculties of philosophy and mathematics.

There, Professor Zdzislaw Krygowski selected more than 20 of his best mathematicians, all but one of whom were men, for a secret cryptology course launched in January 1929.

According to Piotr Bojarski, the new centre's director, Poland was the first country to deploy mathematics to fight enemy ciphers, breaking with the earlier custom of hiring linguists.

In 1932 the office was moved to Warsaw, where on the last day of the year, three Polish cryptologists — Marian Rejewski, Henryk Zygalski and Jerzy Rozycki — cracked the Enigma cipher machine.

They later developed tools and techniques to parse through the machine's 158 million million million [or nearly 159 quintillion] different settings, which the German senders began to reset daily in 1936. As war became imminent, in July 1939 the Polish army shared its guarded techniques and a mock-up of the Enigma machine to an incredulous group of French and British officers.

Bletchley Park in Buckinghamshire is famous as the site where the Enigma code was broken

"It was a shock to the Allies, with the British slightly offended that Poles had been reading German messages in secret the entire time," Bojarski said.

Poland's radio intelligence office was then evacuated. Months later, Rejewski, Zygalski and Rozycki met Alan Turing in France to divulge their methods, paving the way for his efforts at Bletchley Park.

From 1940 Turing and his team developed the machines to decrypt enemy missives, giving the Allies a strategic edge believed to have shortened the war by as much as two years.

"The centre was founded to share knowledge about how Poles were the first to break the Enigma," Bojarski said. "Pop culture and films have done a lot of harm by showing Bletchley Park as the only site where Enigma codes had been broken."

Much of the evidence for the Polish story had been scattered in military files across Europe, and French records were only declassified in 2016. "The divisions of the Cold War and the secrecy of the project . . . also contributed to the merits of those before Turing going unknown," Bojarski added.

https://www.thetimes.co.uk/article/we-broke-enigma-before-alan-turing-says-poland-as-it-opens-codebreaker-museum-3bmvv8prm

From DGW05 tnx

Spy agencies paying Amazon millions to host secret data

The Times26 Oct 2021Nadeem Badshah
https://www.thetimes.co.uk/article/gchq-mi5-mi6-spy-agencies-amazon-millions-host-secret-data-26lfrqxf8

Amazon Web Services (AWS), the company's cloud computing arm, will be used by GCHQ, MI5 and MI6 in addition to other government departments such as the Ministry of Defence during joint operations.

The deal, estimated to be worth £500 million to £1 billion over the next decade, was signed this year.

Sources told the Financial Times that although AWS was a US company, all the agencies' data would be held in Britain and Amazon would not have access to information on the cloud platform.

Ciaran Martin, who was head of the National Cyber Security Centre, a branch of GCHQ, said that the deal would allow the security services "to get information from huge amounts of data in minutes, rather than in weeks and months".

He added: "This is not about collecting or hoarding more data. The obvious business case is to use existing large amounts of data more effectively."

Gus Hosein, executive director of Privacy International and an expert in technology and human rights, said that there were "many things" that parliament, regulators and the public needed to know about the deal.

He said: "This is yet another worrying public-private partnership, agreed in secret. If this contract goes through, Amazon will be positioned as the go-to cloud provider for the world's intelligence agencies. Amazon has to answer for itself which countries' security services it would be prepared to work for."

The cloud service is designed to host classified and sensitive information securely and enable spies to share data more easily from field locations.

It will also allow GCHQ, MI5 and MI6 to use applications such as speech recognition which can translate particular voices from hours' worth of intercept recordings during espionage operations and undertake faster searches on each other's databases. GCHQ said that it would not discuss its business relationships with technology suppliers.

The CIA signed its first $600 million cloud contract with AWS in 2013 on behalf of all US intelligence agencies. The system was upgraded last year under a new deal with a consortium comprising

AWS, Microsoft, Google, Oracle and IBM. Admiral Mike Rogers, former head of the US National Security Agency, said that cloud storage had helped intelligence officers zero in on potential suspects.

He said: "It gives us speed, it gives us flexibility, and by being able to aggregate more data, it increases the possibility that you're going to identify that needle in the haystack."

This month Sir David Omand, the former head of GCHQ, said that the intelligence services faced problems recruiting specialists because of the money on offer from the private sector.

He added that cyber specialists, mathematicians and information and communication technology experts were a "scarce breed".

“It is a particular problem in the intelligence community,” he told The Times and The Sunday Times Cheltenham Literature Festival. “You can earn more outside.” He acknowledged that it was a problem affecting the whole of Whitehall. Asked if the calibre going into public service was still high, he replied: “There aren’t enough of them, of the very, very best because of the careers offered by merchant banks.”

https://www.thetimes.co.uk/article/gchq-mi5-mi6-spy-agencies-amazon-millions-host-secret-data-26lfrqxf8

China Telecom banned by US

The Times28 Oct 2021David Charter Washington Didi Tang Beiji

https://www.thetimes.co.uk/article/us-bans-chinese-telecoms-giant-spying-fears-tk70n5mh5

The state-owned China Telecom company has been ordered to cease operations in the United States because of “significant national security risks” and fears that it has been used for spying.

A key Chinese telecoms company has been banned in the US because of “significant national security risks” and fears that it has been used to spy on America.

China Telecom, one of the country’s three big state-owned networks, was ordered to cease operations in the US within 60 days by the Federal Communications Commission (FCC).

The ban is the latest in a long list of measures to restrict Chinese technology companies as relations between the superpowers sour in an atmosphere of mutual suspicion.

General Mark Milley, chairman of the joint chiefs of staff, said in an interview with Bloomberg TV yesterday that China’s test in August of a hypersonic missile was “very concerning” and “very close” to the kind of “Sputnik moment” that triggered the space race between America and the Soviet Union during the Cold War.

President Biden had hoped to meet President Xi at the G20 summit in Rome this weekend or at the Cop26 summit in Glasgow after that, but the Chinese leader will not be attending either, leaving US officials to arrange a virtual meeting to ease tensions.

China Telecom was one of three companies delisted from the New York Stock Exchange in January after an executive order signed by President Trump to “address the threat from securities investments that finance communist Chinese military companies”. Biden continued with the policy and has frequently talked of his determination to stop China overtaking the US as the world’s pre-eminent power.

The FCC said in its ruling that China Telecom’s ownership and control by the Chinese government “raise significant national security and law-enforcement risks”, providing opportunities for the Chinese government “to access, store, disrupt, and/or misroute US communications, which in turn allow them to engage in espionage and other harmful activities”.

It said the company was “subject to exploitation, influence and control by the Chinese government and is highly likely to be forced to comply with Chinese government requests”.

Brendan Carr, the FCC commissioner, tweeted: “Another important step towards addressing the threats posed by communist China and those that would do its bidding.”

Ge Yu, a spokesman for China Telecom, said: “The FCC’s decision is disappointing. We plan to pursue all available options while continuing to serve our customers.”

China said it would take steps to protect its companies but did not outline retaliatory measures. Asian stock markets dropped as news of the ban spread, adding to tensions between the superpowers and anxiety about inflation.

The US government said last year that the China Telecom network was used by more than four million Chinese-Americans and two million Chinese visitors to the US. As many as 300,000 Chinese students at US schools use its services, along with 1,500 Chinese businesses in America.

US intelligence services were apparently taken by surprise by the test of the nuclear-capable hypersonic missile, which circled the earth. Milley said: “I don’t know if it’s quite a Sputnik moment, but I think it’s very close to that. It has all of our attention.”

“They’re expanding rapidly, in space, in cyber and then in the traditional domains of land, sea and air. They have gone from a peasant-based infantry army that was very, very large in 1979 to a very capable military that covers all the domains and has global ambitions.”

https://www.thetimes.co.uk/article/us-bans-chinese-telecoms-giant-spying-fears-tk70n5mh5

China builds world’s fastest programmable quantum computers that outperform ‘classical’ computers

Vishwam Sankaran 4 hrs ago

https://www.msn.com/en-gb/news/techandscience/china-builds-world-s-fastest-programmable-quantum-computers-that-outperform-classical-computers/ar-AAPZXn4?ocid=msedgdhp&pc=U531

Chinese scientists claim to have built the world’s fastest programmable quantum computers, which appear to crack problems that are currently not feasible for ”classical” non-quantum computers.

The researchers led by Pan Jianwei from the University of Science and Technology of China (USTC), said one of the quantum computing systems — Zuchongzhi 2.1 — is a million times more powerful than its nearest competitor, Google’s Sycamore.

Their programmable superconducting quantum computer, named after a 5th-century mathematician, is 10 million times faster than the world’s fastest supercomputer, the scientists said.

Besides, their photonic quantum computer based on light — Jiuzhang 2 — can carry out calculations 100 trillion times faster than the world’s fastest existing supercomputer, the physicists noted in another study, published in the journal Physical Review Letters on Monday.

In conventional computers, the most basic unit of information is a bit, and data is fundamentally stored in binary codes of 1s and 0s. On the other hand, quantum computers make use of the special properties of the smallest particles in the universe which can exist in multiple states — as zeros and ones at the same time, or in any position between.

This flexibility of quantum particles allows for quantum bits, or qubits, using which many different calculations can be performed simultaneously, scientists said.

While there are many approaches to achieve quantum computing, the Chinese team has built two different systems — one is the light-based photonic quantum computers, and the other is a superconducting quantum computer that needs to be kept at very low temperatures to work efficiently.

In photonic quantum computers, light's energy units, the photons, are manipulated with mirrors, beam splitters, and phase shifters, while in the latter the state of the qubits is manipulated using an electromagnetic field.

These manipulations execute operations on the photons similar to adding ones and zeroes in classical computers, and single-photon detectors help read what changes the photons have undergone.

The common theme in both these types of quantum computers is that they accept multiple quantum states as inputs, have the states travel through a circuit, and deliver multiple states as output.

For instance, in photonic quantum computers, the scientists said, single photons arrive as input in parallel to an optical circuit in which components like beam splitters cause the photons to interfere, causing their states to change, and they emerge from multiple output ports.

In experiments, the scientists used the two quantum computers to calculate the probability that a certain input configuration may lead to a particular output configuration.

Since these circuits have tens of inputs and outputs, such probability calculations, scientists say, are infeasible for classical computers.

But in both photonic and superconducting quantum computers, they say the quantum nature of these systems helps increase the number of parallel computations that can happen, making such probability calculations feasible.

While these machines are not expected to completely replace classical computers, they can carry out specific complex calculations for short periods of time.

Pan and his team showed that for their system which has 1043 possible outcomes, their photonic quantum computer can sample the output 1024 times faster than a classical supercomputer – an upgrade from the team's December result of 1014 times faster operation.

The scientists also claim that their sampling calculation using their superconducting quantum computer is about 1,000 times more difficult to do on a classical computer.

"We estimate that the sampling task finished by Zuchongzhi in about 1.2 h [hours] will take the most powerful supercomputer at least 8 yr [years]," the scientists wrote in the study.

Barry Sanders, director of the Institute for Quantum Science and Technology at the University of Calgary in Canada, who was unrelated to the study, said in a linked commentary that the two experimental quantum computers "tackle the most complex problems yet".

"This indicates that our research has entered its second stage to start realising fault-tolerating quantum computing and near-term applications such as quantum machine learning and quantum chemistry," the study's co-author Zhu Xiaobo told Chinese state media.

https://www.msn.com/en-gb/news/techandscience/china-builds-world-s-fastest-programmable-quantum-computers-that-outperform-classical-computers/ar-AAPZXn4?ocid=msedgdhp&pc=U531

Chinese spy Xu Yanjun convicted of trying to steal US aviation trade secrets from GE Aviation

Xu Yanjun was found guilty of two counts of conspiring and attempting to commit economic espionage, and three counts related to trade secret theft
Xu was one of 11 Chinese nationals named in October 2018 indictments for involvement in a scheme to steal technology from GE Aviation
Agence France-Presse

https://www.scmp.com/news/world/united-states-canada/article/3155094/chinese-spy-xu-yanjun-convicted-trying-steal-us

A Chinese intelligence officer was on Friday convicted in US federal court of economic espionage in an alleged state-backed effort to steal technology from US and French aerospace firms, the Justice Department said.
Xu Yanjun, an official in the Jiangsu province foreign intelligence office of the Ministry of State Security, was found guilty in the Cincinnati court on two counts of conspiring and attempting to commit economic espionage, and three counts related to trade secret theft.
The economic espionage charges carry a maximum of 15 years in prison each and a fine of up to US$5 million, while the other charges bring up to 10 years in prison each.
Xu was one of 11 Chinese nationals, including two intelligence officers, named in October 2018 indictments for involvement in a five-year scheme to steal technology from Cincinnati-based GE Aviation, one of the world's leading aircraft engine manufacturers, and France's Safran Group, which was working with GE on engine development.

"Xu attempted to steal technology related to GE Aviation's exclusive composite aircraft engine fan, which no other company in the world has been able to duplicate, to benefit the Chinese state," the Justice Department said in a statement.
Xu, using various aliases, "identified experts who worked for the companies and recruited them to travel to China", the statement added.

He was arrested in April 2018 in Belgium, where he had apparently been lured in a counter-intelligence operation – he had planned to secretly meet a GE employee on the trip.

He was extradited to the US in October 2018 to face trial.

The 2018 indictments named 10 other accomplices in the operation, including the two Jiangsu security officials – who appear to have worked under Xu – six hackers, and two employees of the French company.
None of the 10 have been arrested.

The indictments detailed efforts to use malware and phishing techniques to hack into target computers and remove data on the engines and parts.
The Justice Department said at the time that a Chinese state-owned aerospace company had been trying to develop an engine like GE's for use in China-made aircraft.

After Xu's arrest, China said the United States was "making something out of thin air"

https://www.scmp.com/news/world/united-states-canada/article/3155094/chinese-spy-xu-yanjun-convicted-trying-steal-us

Chinese threat calls for Five Eyes expansion

As Beijing eyes Taiwan and cosies up to Russia, the intelligence alliance needs the help of Japan
The Times17 Nov 2021Roger Boyes @rogerboyes
https://www.thetimes.co.uk/article/chinese-threat-calls-for-five-eyes-expansion-bkkxwh8rv

If new candidates try to join the Five Eyes spy club they should expect to get a poke in the eye and may end up blinded. That was the crude warning from Beijing, which is worried that the West is working on new and more inventive ways of containing China.

Even so, the moment has come to expand urgently the eavesdropping alliance of the US, UK, Canada, Australia and New Zealand. The first new recruit, the Sixth Eye, should be Japan, a country that has for decades studiously avoided military posturing but which now has reason to fear that its neighbourhood is turning ugly.

Japan has long expertise on China and Russia — it shared military signals with the United States during the 1969 Sino-Soviet conflict — and it is emerging as an indispensable ally. American lawmakers are demanding that the director of national intelligence present a report on the pros and cons of Five Eyes enlargement by May next year. That's likely to be a prelude to an invitation to Japan and it will mark the end of an anachronistic set-up that places the Anglosphere as the natural stewards of western security.

It certainly reflects how Japan is becoming a key intelligence player. It has set up a directorate for signals intelligence and opened 11 listening posts that scoop up communications in China, North Korea and the Russian Far East.

The Japanese military is still a "self-defence force" and there are still strong voices arguing that Tokyo has to treat China with caution and respect. But over the past few months the debate has come to resemble more and more the kind of language that's being heard inside the Biden White House: namely that the countries of the Indo-Pacific region have to make a choice between being in a community of shared democratic values or in a cynical and ultimately selfdestructive alignment with the world's autocratic powers. You can trade with China but you can't play both sides.

Two factors have given an edge to the Five Eyes discussion. The first is that the West is all too often baffled by Xi Jinping. The problem with spying on a single-minded autocracy is that there are very few ways that spies can get inside his head or anywhere close to the inner circle.

That lesson was learnt by the CIA in 2017 when news broke of a ring of American agents arrested by the Chinese secret police, interrogated, jailed or executed. Since then Sigint — the interception and analysis of conversations between members of the elite — has been deemed more efficient than Humint (human intelligence). But even the formidable tech of the National Security Agency at Fort Meade and GCHQ at Cheltenham ends up leaving big gaps in our understanding of Xi's intentions.

Hence the naked guesswork that is going into whether, and when, China might make a lunge for Taiwan. Almost all of China's naval and military build-up is being interpreted through the prism of a possible invasion of Taiwan.

So, too, is the sudden surge of testing of a hypersonic glide vehicle, capable of flying at super speeds over the South Pole, dodging US missile defences and hitting American targets. "A Sputnik moment", in the words of the chairman of the US joint chiefs of staff, General Mark Milley. Why should China be initiating a major change in the geostrategic balance of power at this moment? To deter the US from playing the nuclear card if it comes to Taiwan's aid.

Perhaps not everything that is coming out of Beijing at the moment is about an encroaching fight to the death. That is why Japan would be such a valuable intelligence-sharing ally. It's not just a neighbour of Taiwan and home to US bases, it is also within firing range of North Korea's missiles. And it is in dispute with Russia over territory in the Russian Far East. It has, as an East Asian expert put it to me, "a panoramic threat perception" that is missing in the West.

That view of the threat in the East joins up with what could be happening in the West. Russia and China will probably never be friends but they have strong mutual interests.

Russia supplies gas and oil to China, they co-operate on military training and defence technology, they stick together at the UN. If China really does crush Taiwan, Russia will no doubt help it through the inevitable sanctions. What does the Kremlin get out of such a pact? Cover at the UN and Chinese economic support if Vladimir Putin makes a new grab for Ukraine.

What we might now be seeing is another Molotov-Ribbentrop carveup in the making. Ukraine for Russia, Taiwan for China; these are both potent national causes, not mere skirmishes.

The strategic aim of the West — ask Henry Kissinger before it's too late — has to be to keep Russia and China apart. No good can come of their axis, not for the West, nor ultimately for themselves. The chaos, the unravelling of global order that would arise from these two big nuclear powers acting diplomatically together but on two separate military battlefields is the ultimate nightmare. Reason enough for the Anglosphere West to enlarge the latticework of its intelligence sharing in dangerous fast-moving times.

Once Japan is in, India should follow. It will be a step-by-step process — it has, after all, taken the Five Eyes 75 years to develop its institutions and practices. Trust will be important. So will shared values. But the guiding principle has to be: the more eyes the better.

https://www.thetimes.co.uk/article/chinese-threat-calls-for-five-eyes-expansion-bkkxwh8rv

Mystery of spymaster's son found dead outside Russian embassy in Berlin

Tom Parfitt, Moscow | David Crossland, Berlin
Friday November 05 2021, 4.05pm, The Times

https://www.thetimes.co.uk/article/mystery-of-spymasters-son-found-dead-outside-russian-embassy-in-berlin-6s0gxtv79

When the body of Kirill Zhalo was found outside the embassy the Russians refused a post-mortem examination and he was repatriated

A Russian diplomat who was found dead after falling from one of the top floors of Russia's embassy in Berlin was the son of a spymaster accused of hounding dissidents.

It is not clear whether the 35-year-old man died before or after he fell. His body was discovered by police guarding the compound at approximately 7.20am on October 19. The embassy did not agree to a post-mortem examination and his body was repatriated the next day.

The diplomat was a second secretary at the embassy in Berlin's Mitte district. However, German intelligence sources told Der Spiegel that they suspected he was an undercover officer of Russia's Federal Security Service, or FSB, and was related to one of the service's senior generals.

Bellingcat, the investigative website which has exposed assassination attempts by Russian security officers, said that it had used open-source data to identify the diplomat as Kirill Zhalo, son of General Alexey Zhalo, deputy director of the FSB's Second Service. It found that car and address registration data from leaked databases confirmed that the diplomat was registered at the same addresses as the general in Moscow and in Rostov-on-Don, where the family comes from.

The Second Service is allegedly responsible for a series of attacks on Kremlin opponents, including the attempt last year to kill Alexei Navalny, 45, the opposition leader, by smearing his underpants with novichok, a deadly nerve agent.

It has also been linked to the assassination of Zelimkhan Khangoshvili, 40, a former Chechen rebel commander, in Berlin's Kleiner Tiergarten in August 2019. Vadim Krasikov is on trial for murder in the city. A previous investigation by Bellingcat cited mobile telephone data as showing that before the murder Krasikov had visited the premises of the FSB's anti-terrorism centre and spent four days at a special operations training base for advanced shooting techniques near Moscow. Both are under the control of the Second Service.

Krasikov had also made numerous calls to the head of a charitable fund for former FSB special forces officers.

Kirill Zhalo had previously served as third secretary of Russia's permanent representation to the United Nations in Vienna. He moved to Berlin in June 2019, two months before Khangoshvili's murder.

Google documents show that he was removed from the diplomatic list of Germany's foreign ministry at some point this week.

General Zhalo oversees the FSB's Directorate for Protection of Constitutional Order, whose officers were allegedly part of a squad that tracked Navalny prior to the attempt on his life as he visited supporters in Siberia. The directorate is also said to be behind attempts to poison Vladimir Kara-Murza, a Kremlin critic, and Dmitry Bykov, a writer.

The Russian embassy in Berlin confirmed the death of its diplomat, saying it was a tragic accident. It declined to comment yesterday for "ethical reasons", but said in a statement: "We consider that the speculation regarding this tragic incident that is appearing in a series of western media is absolutely inappropriate."

A spokesman for the German foreign ministry said that it was aware of the case but could not give any details for data privacy reasons. Since the dead man had diplomatic status, the Berlin state prosecutor's office was not authorised to conduct an investigation.

The man appeared to have fallen from an upper floor at the back of the embassy complex that runs along Behrenstrasse. The palatial front of the embassy, built in the early 1950s, faces the Unter den Linden boulevard. The Insider, Bellingcat's Russian partner website, said that suicide was unlikely as the embassy building was not particularly tall.

https://www.thetimes.co.uk/article/mystery-of-spymasters-son-found-dead-outside-russian-embassy-in-berlin-6s0gxtv79

Russian spy ship 'tracking navy carrier' [Front cover imagery]

Kieran Gair
Monday November 08 2021, 12.01am, The Times

https://www.thetimes.co.uk/article/russian-spy-ship-tracking-navy-carrier-70zqffjpx

The Carrier Strike Group consists of vessels from several allied navies in support of the carrier

A Russian spy ship has been spotted tracking the Royal Navy's aircraft carrier off Oman.

The vessel, thought to be a Russian moma-class ship, was berthed alongside a Dutch frigate that has accompanied HMS Queen Elizabeth on the inaugural deployment of Britain's carrier strike group.

The vessel is believed to be equipped with listening devices and would be capable of intercepting radio communications from Britain's aircraft carrier.

Thought to be the Kildin, the Russian ship was seen on October 8 transiting the Bosphorus, before entering the Mediterranean en route to the Gulf.

Images of the Dutch frigate's arrival appeared on social media last night. In one of the images posted online, the Russian intelligence vessel can be seen tied up just ahead of the Royal Netherlands navy warship HNLMS Evertsen.

HI Sutton, a naval specialist, said that although the Kildin was 50 years old, "these small ships pack a powerful intelligence-gathering punch".

He said: "Originally built as a survey ship over 50 years ago, Kildin is now used for electronic intelligence. It has a number of aerials."

He said that although it was not surprising that a Russian intelligence vessel was "tagging along" with the carrier strike group, it was unusual that "evidence has surfaced on social media".

Kildin measures just over 70m in length and has a crew of 73. She is lightly armed with only 16 anti-aircraft missiles but carries radars and underwater communications systems to listen in on other ships.
The Dutch warship left Muscat, Oman, on November 6 and satellite images showed the Russian vessel had departed by 10.52 local time the same day.

The Kildin was built at the Stocznia Polnocna shipyard in Gdansk, Poland, and launched on December 31, 1969. She was commissioned in 1970 and converted to an intelligence ship the same year. It is not the first time that the carrier strike group deployment has been the subject of Russian interest. In June Moscow said that a patrol ship had fired warning shots at HMS Defender, a Type-45 destroyer, as it crossed the Black Sea near Crimea — which was annexed by Russia in 2014. The Ministry of Defence insisted that the British ship had been in international waters at the time.

HMS Queen Elizabeth is docked at Duqm, from where she has been supporting land, sea and air exercises with the Omani forces, including missions flown by British and American crews in F-35 stealth fighters.

Speaking on a visit to the region, Ben Wallace, the defence secretary, said: “HMS Queen Elizabeth is here to demonstrate our commitment to the Omanis as invaluable partners and to show our support to the wider Gulf region.”

The carrier strike group is due to return to Britain next month after a seven-month deployment.

https://www.thetimes.co.uk/article/russian-spy-ship-tracking-navy-carrier-70zqffjpx

Cracking the code on Fleming’s cufflinks

The Times19 Nov 2021Peter Chappell

https://epaper.thetimes.co.uk/the-times/20211119

The codes on the cufflinks baffled Fleming’s estate
It’s a cypher fiendish enough for any aspiring spook. A set of cufflinks owned by Ian Fleming that feature a spy-like code have sold at auction for £5,700, but their message remains a mystery.

Fleming, the creator of James Bond, wore the cultured pearl set, inscribed with “WUS”, “SIL”, “UDH” and “NUF” on their backs, to the Dr No screening party in 1962.

They were expected to fetch £800 at Mallams auctioneers in Oxford but exceeded the estimate when they were sold to an unknown British bidder.

Louise Dennis, head of jewellery and watches at Mallams, said: “I contacted the Fleming estate and asked if they knew anything about them or about the coding. They couldn’t elaborate on the meaning inscribed, but it intrigued them.”

Mallams contacted the media in the hope that “someone else out there might be able to crack the code”. Dennis said that Fleming enjoyed designing cyphers throughout his life, having served in the naval intelligence division. He was involved in code-breaking missions during the war.

“It’s possible only Fleming himself knew the significance of the letters,” she added. “If there are any aspiring detectives out there, that would be fabulous.”

The cufflinks’ listing says: “Surely a perfect code-breaking mission for any aspiring spies out there. Ian Fleming’s service in the Naval Intelligence Division during the Second World War, together with his experiences as a journalist, inspired much of his writing for the character of James Bond, an officer in the Secret Intelligence Service.

“Bond was introduced in the 1952 novel Casino Royale and so captured the public’s imagination that Fleming penned 11 further Bond novels, two collections of short stories with subsequent adaptations for film, television and radio. These circular cufflinks, which come to Mallams by family descent, are sure to prove popular with James Bond enthusiasts and carry an estimate of £800-£1,200.”

https://epaper.thetimes.co.uk/the-times/20211119

Russian military roll out spy rocks

Marc Bennetts, Moscow
Monday November 29 2021, 5.00pm, The Times

https://www.thetimes.co.uk/article/russian-military-roll-out-spy-rocks-d6pbp0xs5

Russia’s military is developing “spy rocks”, apparently inspired by an espionage device that Britain once used on the streets of Moscow.

The fake rock runs on caterpillar tracks and is equipped with a periscope-style camera and a microphone, according to a video posted by TV Zvezda, a television channel owned by the Russian defence ministry. It can be controlled remotely by operators more than a mile away. The video showed the spy rock travelling a short distance across a snowy field before its camera emerged.

The surveillance device, which can remain in standby mode for up to 24 hours, was created by researchers at an air force academy in Voronezh, a city about 300 miles south of Moscow. It took three years to develop.

Nikolai Yemets, one of the designers, said it had been a challenge to fit all the espionage equipment into the device. TV Zvezda said it could be used to spy on the Russian army’s enemies on the battlefield without putting soldiers at risk. “It has no parallels in the Russian armed forces,” the channel said. It was unclear why Russia has decided to reveal its existence.

In 2006 Russia alleged that four British diplomats in Moscow had used a fake rock containing electronic equipment to receive and transmit information planted by a Russian citizen. State TV aired footage of a man walking along the street in Moscow before stopping to pick up the rock, which was reported to have stopped working. The FSB, Russia’s state security service, also released a video showing a hollowed-out rock filled with circuitry. The alleged Russian double agent was arrested and admitted spying for Britain.

Britain initially denied the allegations but in 2012, Jonathan Powell, the former chief of staff to Tony Blair when he was prime minister, admitted that the rock was a British espionage tool.

“The spy rock was embarrassing,” he told the BBC. “They had us bang to rights. Clearly they had known about it for some time and had been saving it up for a political purpose.”

https://www.thetimes.co.uk/article/russian-military-roll-out-spy-rocks-d6pbp0xs5

Well worth a look because of video coverage [Worth remembering the Israeli’s have deployed similar in Lebanon]

Morse Stations

All frequencies listed in kHz. Freqs are generally +- 1k
This is a representative sample of the logs received, giving an indication of station behaviour and the range of times/freqs heard. These need to be read in conjunction with any other articles/charts/comments appended to this issue.

Morse - Number Stations

UNID CW

Details of an unidentified network logged by Andre, F5JBR. Possibly North Korean or Chinese;

0542	P5GO	0934z	05 Dec	Possibly North Korean	P5GO Working P5A2 (Only Calling)	Via SDR Japan	F5JBR	SUN
3397	P5GO	0947z	05 Dec	Possibly North Korean	P5GO Working P5A2 (QSO : exchange QRK and QST) in simplex	Via SDR Japan	F5JBR	SUN
3397	P5A3	1013z	05 Dec	Possibly North Korean	P5A3 Working P5D4 (QSO : exchange QRK) in Simplex	Via SDR Japan	F5JBR	SUN
3397	P5GO	1018z	05 Dec	Possibly North Korean	P5GO Working P5A2 (QSO : exchange QRK and QST)	Via SDR Japan	F5JBR	SUN
5420	P5GO	0851z	16 Dec	Possibly North Korean	P5GO Working P5A2 (QSO) in Simplex	Via SDR Japan	F5JBR	THU

NOTE : P5A3 and P5GO same Station

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

Five 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 ... 82607 = = = = 127 127 30 30 000	(Last used 2019)
Variant Format 4:	197 (R4m) 589 589 = 30 30 = = 40728 .... 58918 = = 589 589 = 30 30 000	(Last used Jan/Feb & Sep/Oct 2021)
Variant Format 5:	197 (R4m) 452 452 30 30 = = 18721 … 20918 452 452 30 30 = = 000	(Appeared Nov 2021 – Used 3 times)

Variant 5 is added from November 2021. The use of these variants is probably just to introduce additional errors to the transmissions. These variants seem to be used randomly after their initial introduction, then appearing rarely before finally ceasing completely.

A new development first noted in July 2021 is the occasional change to the ending where 0.0.0. is sent using periods in place of the usual 000

Reception of the 1800z transmissions has become more difficult of late & during December it has become almost impossible for any viable reception of this schedule. Just prior to the cessation of M01b, there was some sort of reorganisation leaving the M01 transmissions weaker, while the M01b transmissions became stronger – at least for the very short time before they ceased completely.

November 2021:

4430	2000z	02 Nov	'197' 021 = 30 = = 35018 … 17483 = =	Deep QSB. V. poor Morse. Format 4	AB	TUE
4490	2000z	18 Nov	'197' 110 30 = = 21323 … 65556 = =	Fair via Twente SDR. Numerous errors. Ended 0.0.0.	BR	THU
4490	2000z	23 Nov	'197' 303 30 = = 73290 … 10110 = =	Fair via Twente SDR, fast. Grp04 77881 7881	BR	TUE
4490	2000z	25 Nov	'197' 436 30 = = 44354 … 22009 = =	Fair via Twente SDR, med-fast. Numerous errors noted	BR/HFD	THU
4490	2000z	30 Nov	'197' 701 30 = = 78933 … 00010 = =	Fair via Twente. Excellent Morse	BR	TUE
5320	1800z	02 Nov	'197' 310 30 = = 45678 … 95831 = =	310 310 30 30 000	AB	TUE
5320	1800z	25 Nov	'197' 321 = = 0 45345 … 34311 = =	NRH UK. Fair via SDR Ukraine. Error in start sequence	BR	THU
5320	1800z	30 Nov	NRH – Also tried Russian & Ukraine SDRs		BR	TUE
5465	0700z	21 Nov	'197' . . .6 30 = 54 . 65…	Too fast for me	HFD	SUN
5465	0700z	28 Nov	'197' 892 30 = 46376….		HFD	SUN
5910	1500z	06 Nov	'197' 124 30 = = ... … 65678 = =	Fair, fast. Missed start of transmission	BR	SAT
5810	1500z	13 Nov	'197' 823 30 = = 58294 … 68391 = =	Weak/Fair, V.fast. Error grp23. Ended 0.0.0.	BR/HFD	SAT
5810	1500z	20 Nov	'197' 365 30 = = 22110 … 521 .8 = =	Fair, fast. Intermittent QRM from data bursts	BR	SAT
5810	1500z	27 Nov	'197' 876 30 = = 77654 … 72747 = =	Fair/Good via Twente. Fast delivery. No errors	BR	SAT

December 2021:

4490	2000z	02 Dec	'197' 399 30 = = ... … 76587 = =	Weak via Twente. Fair via SDR Norway	BR	THU
	2000z	07 Dec	'197' 728 30 = = 88341 … 92319 = =	Weak/Fair via Twente. One error. Grp23 82285 82258	BR	TUE
	2000z	09 Dec	'197' 451 30 = = 54182 … 09123 = =	Fair/Good via Twente. Fast delivery. No errors	BR	THU
	2000z	14 Dec	'197' 706 30 = = 45365 … 58790 = =	Weak/Fair via Twente. Fast delivery. Errors on start DK	BR	TUE
	2000z	21 Dec	'197' 302 30 = = 71234 …	Fair via Twente to grp16 then faded with unusable sigs	BR	TUE
	2000z	28 Dec	'197' 452 30 = = 18721 … 20918 452 452 30 30 = = 000	Good via Twente. [Note 1]	BR	TUE
	2000z	30 Dec	'197' 365 30 = = 46537 … 90899 = =	Good via Twente. Grp24 35342 35432. Grp30 sent once	BR	THU
5320	1800z	07 Dec	NRH (Norway – Ukraine SDRs)		BR	TUE
	1800z	09 Dec	'197' 372 30 = = 53527 … 52982 = =	Groups 3, 12, 13 were not repeated	AB	THU

	1800z	14 Dec	NRH	(Norway – Russia SDRs)	BR	TUE
	1800z	16 Dec	'197'	Very weak via SDR Finland	HFD	THU
	1800z	21 Dec	'197'	753 30 = = 62192 … 01532 753 753 30 30 = = 000 Fair via Twente. Errors noted [Note 1]	BR	TUE
	1800z	30 Dec	NRH	(Twente & SDR Norway)	BR	THU
5465	0700z	26 Dec	'197'	753 30 = = 62192 … 01532 = = 753 753 30 30 000 (Same Msg as 21 Dec, 1800z)	AB	SUN
5810	1500z	04 Dec	'197'	461 30 = = 36148 … 53197 = = Fair/Good via Twente. Good Morse, occasional hesitation	BR	SAT
	1500z	11 Dec	'197'	835 30 = = 73529 … 70371 = = Good via Twente. Med-fast delivery. Only 29 groups sent	BR	SAT
	1500z	25 Dec	'197'	302 30 = = 71234 … 10982 302 302 30 30 = = 000 Good Via Twente. [Note 1]	BR	SAT

[Note 1] Ending sequence sent in incorrect order with = = sent AFTER DK & GC (e.g. 20918 452 452 30 30 = = 00

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.

6792	1238z (IP)	06 Dec	729 729 729 28844 28844 (R) 111 111 000	AB	MON
3510	1755z	16 Dec	246 246 246 95456 95456 (R) 246 246 246 96166 96166 (R) 111 96166 96166 (R) 246 246 246 333 95379 95379 (R) 111 999 864 30 = 28406 75975 40753 71242 12891 30586 31680 58260 84243 16190 63586 53950 84367 85972 76037 81636 99338 19680 66201 71300 09630 98086 50015 23707 69117 71755 58973 78192 63253 09321 = 864 30 111 000		

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

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

Asiatic M12 Logs

16275/15975/14675	0010/30/50z	26 Nov	296 1	(Via Japan SDR)	HFD	FRI
14947/13447/ - - -	0010/30/50z	30 Dec	941 000	(Via Japan SDR)	HFD	FRI

European M12 Logs

November 2021: **New scheds in bold type**

6859/7459/7959	2200/20/40z	05 Nov	849 1 (254 32)	23965 32322….	BR/HFD	FRI
	2200/20/40z	06 Nov	849 1 (254 32)	23965 32322….	BR	SAT
	2200/20/40z	12 Nov	849 1 (254 32)	23965 32322….	BR	FRI
	2200/20/40z	26 Nov	849 1 (585 120)	94520 43168 … 30247 11626 000 000	BR/Gert	FRI
	2200/20/40z	27 Nov	849 1 (585 120)	94520 43168 … 30247 11626 000 000	BR/Gert	SAT
6874/80749374	0030/0050/0110z	02 Nov	803 000		Gert/HFD	TUE
	0030/0050/0110z	09 Nov	803 1 (7374 135)	84333 34607 … 97730 15689 000 000	Gert	TUE
	0030/0050/0110z	11 Nov	803 1 (7374 135)	84333 34607 … 97730 15689 000 000	Gert	FRI
	0030/0050/0110z	19 Nov	803 000		Gert	FRI
	0030/0050/0110z	23 Nov	803 1 (9591 77)	18102 96022 … 98388 46232 000 000	Gert	TUE
	0030/0050/0110z	26 Nov	803 1 (9591 77)	18102 96022 … 98388 46232 000 000	Gert	FRI
	0030/0050/0110z	30 Nov	803 000		Gert	TUE
6917/5817/5117	2000/20/40z	05 Nov	981 000		Gert	FRI
	2000/20/40z	10 Nov	981 1 (2065 93)	92281 37457 … 14513 12808 000 000	AB/BR/HFD	WED
	2000/20/40z	17 Nov	981 1 (2065 93)	92281 37457 … 14513 12808 000 000	BR/Gert	WED
	2000/20/40z	24 Nov	981 000		BR/Gert	WED
	2000/20/40z	26 Nov	981 000		Gert	FRI
6937/5737/4537	2210/30/50z	01 Nov	975 1 (6130 78)	25343 78959….	BR/HFD	MON
	2210/30/50z	04 Nov	975 1 (6130 78)	25343 78959 … 10695 72520 000 000	Gert	THU
	2210/30/50z	08 Nov	975 000		BR/Gert	MON
	2210/30/50z	11 Nov	975 000		Gert	THU
	2210/30/50z	15 Nov	975 1 (9528 49)	50274 76173….	BR	MON
	2210/30/50z	18 Nov	975 1 (9528 49)	50274 76173 … 54640 98632 000 000	Gert	THU
	2210/30/50z	22 Nov	975 000		BR/Gert	MON
	2210/30/50z	25 Nov	975 000		Gert	THU
	2210/30/50z	29 Nov	975 000		Gert	MON

9317/10484/11552	0530/0550/0610z	02 Nov	135 1 (8340 113)	83464 28265 … 73061 06219 000 000		Gert/HFD	TUE
	0530/0550/0610z	09 Nov	135 1 (5482 105)	86215 67333 … 52227 70159 000 000		Gert	TUE
	0530/0550/0610z	23 Nov	135 1 (9549 109)	31586 72558 … 60623 51389 000 000		Gert	TUE
	0530/0550/0610z	30 Nov	135 1 (5032 106)	32228 76431 … 89622 34352 000 000		Gert	TUE
10446/9046/ 7946	2300/20/40z	01 Nov	392 000			BR/HFD	MON
	2300/20/40z	04 Nov	392 000			Gert	THU
	2300/20/40z	08 Nov	392 1 (114 49)	89828 11281 … 78498 77238 000 000		BR/Gert	MON
	2300/20/40z	11 Nov	392 1 (114 49)	89828 11381 … 77498 77238 000 000		Gert	THU
	2300/20/40z	15 Nov	392 1 (114 49)	89828 11381….		BR	MON
	2300/20/40z	18 Nov	392 1 (114 49)	89828 11381 … 77498 77238 000 000		Gert	THU
	2300/20/40z	22 Nov	392 000			BR/Gert	MON
	2300/20/40z	25 Nov	392 000			Gert	THU
	2300/20/40z	29 Nov	392 1 (739 96)	07751 72736 … 45547 45824 000 000		Gert	MON
11054/10754/9254	0110/30/50z	04 Nov	972 1 (6581 78)	42204 90789 … 19231 92708 000 000		Gert/HFD	THU
	0110/30/50z	18 Nov	972 1 (311 36)	95325 17537 … 35685 88597 000 000		AB/Gert	THU
	0110/30/50z	28 Nov	972 1 (311 36)	95325 17537 … 35685 88597 000 000		Gert	SUN
11435/10598/9327	1800/20/40z	20 Nov	938 1			HFD	SAT
12162/11566/10711	1710/30/50z	03 Nov	546 1 (5432 110)	57699 06185….		BR/HFD	WED
	1700/20/40z	04 Nov	546 1 (3858 107)	59953 39527 … 29809 63448 000 000	Very weak	Gert/HFD	THU
	1700/20/40z	11 Nov	546 1 (1569 111)	09528 94659 … 20296 58590 000 000	[Note 1]	AB	THU
	1800/20/40z	11 Nov	546 1 (6041 109)	79480 46460 … 28122 28093 000 000	[Note1]	AB	THU
	1710/30/50z	17 Nov	546 1 (. . . . .)	58011 18760…. (Late – missed DK GC)		BR	WED
	1700/20/40z	18 Nov	546 1 (9191 111)	81456 05963 … 06266 42294 000 000		AB	THU
	1800/20/40z	18 Nov	546 1 (3103 112)	65561 90885 … 63937 60802 000 000		AB/HFD	THU
	1700/20/40z	25 Nov	546 1 (5262 105)	36006 31497 … 18323 22323 000 000	(Via SDR Kuwait)	AB	THU
	1800/20/40z	25 Nov	546 1 (1131 105)	62672 65371 … 39735 05486 000 000	(Via SDR Russia)	AB	THU
13386/12189/11491	1110/30/50z	04 Nov	725 1			HFD	THU
	1110/30/50z	11 Nov	725 1 (2117 97)	83000 11011 … 75986 65132 000 000		Gert	THU
	1110/30/50z	25 Nov	725 1 (2627 98)	21467 08614 … 80105 83573 000 000		BR/Gert	THU
14377/13461/12114	1130/1150/1210z	04 Nov	317 1		[Note 2]	HFD	THU
	1130/1150/1210z	08 Nov	317 1 (2052 97)	91964 51556 … 47292 76542 000 000		Gert	MON
	1130/1150/1210z	15 Nov	317 1			HFD	MON
	1130/1150/1210z	29 Nov	317 1 (8130 91)	03730 13679 … 46344 79874 000 000		Gert	MON
16292/14892/14392	1400/20/40z	01 Nov	283 1 (8266 51)	60142 41487 … 99954 81527 000 000		Gert	MON
	1400/20/40z	08 Nov	283 000			Gert	MON
	1400/20/40z	11 Nov	283 000			Gert/HFD	THU
	1400/20/40z	25 Nov	283 000			Gert	THU
	1400/20/40z	29 Nov	283 1 (1121 93)	63017 95467 … 32899 53549 000 000		Gert	MON
17432/18532/- - -	0800/20/40z	03 Nov	451 000			HFD	WED

[Note 1] Both the 1700z & 1800z scheds are very poorly received in Europe, usually only audible on 10711kHz. Whereas in the UK neither of these two scheds are currently audible.

[Note 2] No signal until 2008z on 14377kHz, then 317 1 call-up

December 2021:

5832/6832/7732	2200/20/40z	03 Dec	887 1 (6107 86)	87707 48757 … 91442 15434 000 000		BR/Gert	FRI
	2200/20/40z	04 Dec	887 1 (6107 86)	87707 48757 … 91442 15434 000 000		Gert/HFD	SAT
	2200/20/40z	11 Dec	887 1 (6107 86)	87707 48757 … 91442 15434 000 000		BR/Gert	SAT
	2200/20/40z	17 Dec	887 000			Gert	FRI
	2200/20/40z	18 Dec	887 000			BR/Gert	SAT
	2200/20/40z	24 Dec	887 000			BR/Gert	FRI
	2200/20/40z	25 Dec	887 000			BR/Gert	SAT
	2200/20/40z	31 Dec	887 000			BR	FRI
6792/5892/5092	**2000/20/40z**	**01 Dec**	**780 1 (2882 69)**	**22577 52272 … 94987 28560 000 000**		Gert/HFD	WED
	2000/20/40z	**03 Dec**	**780 1 (2882 69)**	**22577 52272 … 94987 28560 000 000**		Gert	FRI
	2000/20/40z	08 Dec	780 000			BR	WED
	2000/20/40z	10 Dec	780 000			BR/Gert	FRI
	2000/20/40z	15 Dec	780 1 (660 81)	06492 17636 … 06018 15447 000 000		Gert	WED
	2000/20/40z	17 Dec	780 1 (660 81)	06492 17636 … 06018 15447 000 000		BR/Gert	FRI
	2000/20/40z	22 Dec	780 000			BR/Gert	WED
	2000/20/40z	24 Dec	780 000			Gert	FRI
	2000/20/40z	31 Dec	780 000			BR	FRI
6832/7532/- - -	0030/0050/0110z	03 Dec	851 000			AB	FRI
	0030/0050/0110z	07 Dec	851 1 (9146 125)	40177 77699 … 87041 22546 000 000		Gert	TUE
	0030/0050/0110z	10 Dec	851 1 (9146 125)	40177 77699 … 87041 22546 000 000		Gert/HFD	FRI
	0030/0050/0110z	17 Dec	851 000			Gert	FRI
	0030/0050/0110z	21 Dec	851 1 (8407 91)	75188 09345 … 98508 09931 000 000		AB	TUE
	0030/0050/0110z	24 Dec	851 1 (8407 91)	75188 09345 … 98508 09931 000 000		Gert	FRI
	0030/0050/0110z	28 Dec	851 000			Gert	TUE
	0030/0050/0110z	30 Dec	851 000			Gert	FRI

6937/5737/4537	2210/30/50z	02 Dec	975 000			AB/BR	THU
	2210/30/50z	06 Dec	975 1 (5227 56)	56252 94793 … 77699 28415 000 000		BR/Gert	MON
	2210/30/50z	09 Dec	975 1 (5227 56)	56252 94793 … 77699 28415 000 000		Gert	THU
	2210/30/50z	13 Dec	975 000			BR	MON
	2210/30/50z	16 Dec	975 000			BR/Gert	THU
	2210/30/50z	20 Dec	975 1 (148 67)	02098 50761 … 09983 18161 000 000		AB	MON
	2210/30/50z	23 Dec	975 1 (148 67)	02098 50761 … 09983 18161 000 000		BR/Gert	THU
	2210/30/50z	27 Dec	975 000			BR/Gert	MON
	2210/30/50z	30 Dec	975 000			BR/Gert	THU
9134/8134/7534	2300/20/40z	02 Dec	457 1 (739 96)	07751 72736 … 45547 45824 000 000		AB/BR/HFD	THU
	2300/20/40z	06 Dec	457 1 (8943 83)	37959 54299 … 24532 27046 000 000		BR/Gert	MON
	2300/20/40z	09 Dec	457 1 (8943 83)	37959 54289 … 24532 27046 000 000		Gert	THU
	2300/20/40z	13 Dec	457 000			BR	MON
	2300/20/40z	16 Dec	457 000			BR/Gert	THU
	2300/20/40z	20 Dec	457 1 (6860 97)	29113 64690 … 98628 03256 000 000		AB	MON
	2300/20/40z	23 Dec	457 1 (6860 97)	29113 64690 … 98628 03256 000 000		BR/Gert	THU
	2300/20/40z	27 Dec	457 000			BR/Gert	MON
	2300/20/40z	30 Dec	457 000			BR/Gert	THU
9379/8179/7479	0110/30/50z	12 Dec	314 1 (4066 48)	65184 96216 … 14584 55920 000 000		Gert/HFD	SUN
	0110/30/50z	16 Dec	314 1 (4066 48)	65184 96216 … 14584 55920 000 000		Gert	THU
	0110/30/50z	19 Dec	314 1 (4066 48)	65184 96216 … 14584 55920 000 000		Gert	SUN
	0110/30/50z	23 Dec	314 000			Gert	THU
	0110/30/50z	26 Dec	314 000			Gert	SUN
12162/11566/10711	1710/30/50z	01 Dec	546 1 (4956 112)	82853 56603 … 91330 58130 000 000		AB	WED
	1700/20/40z	02 Dec	546 1 (8617 110)	69413 36901 … 00970 24763 000 000	[Note1]	AB	THU
	1710/30/50z	08 Dec	546 1 (6961 104)	86321 29468 … 86397 16306 000 000		AB	WED
	1800/20/40z	02 Dec	546 1 (6512 113)	59702 10482 … 40805 67639 000 000	[Note1]	AB	THU
	1700/20/40z	09 Dec	546 1 (3497 108)	44096 91580 … 99234 11741 000 000		AB/BR	THU
	1800/20/40z	09 Dec	546 1 (2174 107)	48583 04444 … 53375 43936 000 000		AB	THU
13386/12189/11491	1110/30/50z	09 Dec	725 1 (4136 91)	79454 92273 … 63621 75805 000 000		BR/Gert	THU
	1110/30/50z	23 Dec	725 1 (7900 99)	10098 18392 … 81968 79509 000 000	Strong	E.SMITH	THU
	1110/30/50z	30 Dec	725 1 (3396 99)	48380 69866 … 86787 56418 000 000		BR/Gert	THU
14377/13461/12114	1130/1150/1210z	06 Dec	317 1 (2664 93)	43983 19209 … 14587 93070 000 000		BR/Gert	MON
	1130/1150/1210z	13 Dec	317 1 (9073 96)	27649 65235….		BR	MON
	1130/1150/1210z	20 Dec	317 1 (4875 92)	70435 29778 … 21059 88898 000 000		BR/Gert	MON
	1130/1150/1210z	27 Dec	317 1 (8155 96)	42670 16792 … 25230 99283 000 000		Gert	MON
15909/14609/13909	1400/20/40z	02 Dec	969 1 (1121 93)	63017 95467 … 32899 53549 000 000		AB	THU
	1400/20/40z	06 Dec	969 000			Gert/HFD	MON
	1400/20/40z	09 Dec	969 000			Gert	THU
	1400/20/40z	13 Dec	969 1 (509 83)	63616 42247….		BR	MON
	1400/20/40z	16 Dec	969 1 (509 83)	63616 42247….		BR	THU
	1400/20/40z	20 Dec	969 000			Gert	MON
	1400/20/40z	27 Dec	969 000			BR/Gert	MON
	1400/20/40z	30 Dec	969 000			Gert	THU
16234/17434/- - -	0800/20/40z	05 Dec	242 000			Gert/HFD	SUN
	0800/20/40z	12 Dec	242 1 (2822 84)	61051 59101 … 53109 37961 000 000		Gert	SUN
	0800/20/40z	19 Dec	242 000			Gert	SUN
	0800/20/40z	26 Dec	242 1 (5661 77)	00614 20437 … 99978 59633 000 000		Gert	SUN

[Note 1] Both the 1700z & 1800z scheds are very poorly received in Europe, usually only audible on 10711kHz.
Whereas in the UK neither of these two scheds are currently audible.

M12 6917/5817/5117kHz 2000/2020/2040z 10 Nov 2021

981 981 981 1 (R2m) 2065 93 2065 93

92281 37457 83485 82853 60539 28594 91541 34871 41111 85272
39516 40756 01521 28259 15534 54822 55138 21604 64033 54466
84779 46112 00421 07154 01241 93495 61098 18104 18300 18157
31321 73346 83469 15076 97041 49154 15141 43287 64123 17615
66905 17146 53958 73831 33163 36315 61673 02253 06972 15157
92400 72796 57994 65159 03760 71616 21787 56876 61169 53242
72017 30902 55605 69969 12376 12054 54698 60377 90310 10393
14355 61705 29320 11774 72497 34867 62098 79177 88099 23828
46608 51456 46446 19872 61870 82658 18075 06122 66955 16247
91553 14513 12808 000 000

Courtesy AB

M12 5832/6832/7732kHz 2200/2220/2240z 11 Dec 2021

887 887 887 1 (R2m) 6107 86 6107 86

87707 48757 66736 92611 83752 77587 82844 62354 63534 94586
73476 65132 31322 05543 02282 66166 61241 16087 83086 62933
76627 13830 04954 53573 15493 23312 86063 63876 89425 82544
62207 97513 96149 16876 45639 48286 69793 97709 62024 23064
94177 09299 37961 12382 11349 86286 77162 39394 56041 47556
79171 40751 26264 51506 74054 65607 00322 68247 56255 98832
67824 85314 72982 69761 35206 31115 80495 20817 92733 20441
30652 12733 80976 34164 43237 51561 82648 29412 32858 47280
07767 99150 10353 53546 91442 15434 000 000

Courtesy Gert

M14 IA MCW / ICW Short 0

November 2021:

10243	0520z	05 Nov	No transmissions due to a Russian public holiday			AB	FRI
	0520z	10 Nov	No transmission			AB	WED
	0520z	15 Nov	952 (717 53) = 35195…	(Via Russia SDR)		HFD	MON
12211	0500z	05 Nov	No transmissions due to a Russian public holiday			AB	FRI
	0500z	10 Nov	952 *(Incomplete preamble)* 16012 … 55743 = = 616 616 51 51 *(no nulls)*		[Note 1]	AB	WED
	0500z	15 Nov	952 (717 53) = 35195…	(Via Russia SDR)		HFD	MON
17458	0930z	10 Nov	617 00000			ER/HFD	WED
	0930z	25 Nov	617 00000	(SDR Utwente)		ER	THU

[Note 1] Transmitter problems. Off at 0509z & back at 0510z. Strong QRM from a BC station

December 2021:

10243	0520z	01 Dec	952 (487 50) = 14853 38084 … 75759 65730 = 487 50 00000		CW	AB	WED
	0520z	10 Dec	952 (873 51) = 77007 67506 … 96392 57254 = 873 51 00000		CW	AB	FRI
12211	0500z	01 Dec	952 (487 50) = 14853 38084 … 75759 65730 = 487 50 00000		CW	AB	WED
	0500z	10 Dec	952 (873 51) = 77007 67506 … 96392 57254 = 873 51 00000		CW	AB	FRI
17458	0930z	10 Dec	617 (823 164) = 93749 10094 … 89720 30796 = 823 164 00000		CW	AB	FRI
	0930z	25 Dec	617 (823 164) = 93749 10094 …	(SDR Utwente)	CW	ER	SAT

Unscheduled M14

6792	1400z	08 Dec	910 (635 41) = 23396 69325 … 02568 98446 = 635 41 00000		CW	AB	WED
6792	0622z	16 Dec	910 (823 60) = 56742 37925 … 57025 23434 = 823 60 00000	[Note 2]	CW	AB	THU
10755	0830z	14 Dec	975 (123 60) = 59006 35382 … 45903 14650 = 123 60 00000	[Note 2]	CW	AB	TUE

[Note 2] Restarts during the message

M14 12211kHz 0500z 01 December 2021

952 (R4m) 487 487 50 50 = =

14853 38084 53480 66635 38113 73158 07393 52244 63092 66224
31061 49691 82858 12778 27728 78971 91314 26931 65967 48066
28914 88763 10218 74363 33562 17561 80718 53068 26376 19370
85014 83513 86993 82301 88244 89314 98125 18029 14379 93320
64030 72915 95600 33280 32602 57206 12022 29167 75759 65730
= =

487 487 50 50 00000

Courtesy AB

M14 6792kHz 1400z 08 December 2021

910 (R4m) 635 635 41 41 = =

23396 69325 12316 98873 39241 51648 54927 44564 19040 48305
31120 13022 13542 55602 10190 64567 68557 98656 73078 55640
99948 00123 24719 44285 39820 04861 86172 94570 77324 77763
52480 09607 42552 16906 27181 47882 06909 49219 69421 02568
98446
= =

635 635 41 41 00000

Courtesy AB

M23 O ICW

Once again, we are indebted to Ary, (AB), for finding another outbreak of M23. Unfortunately a short-lived series of transmissions, but nevertheless a welcome appearance from this intriguing station.

5345	1600 – 1610z	27 Nov	050 (R10m)	Long zero	AB	SAT
	1800 – 1812z	27 Nov	943 (R12m)		AB	SAT
5345	1200 – 1210z	28 Nov	050 (R10m)		AB	SUN
	1400 – 1412z	28 Nov	943 (R12m)		AB	SUN
	1607 – 1617z	28 Nov	050 (R10m)	Strong Long Zero	AB/BR	SUN
	1800 – 1812z	28 Nov	943 (R12m)	Strong	AB/BR	SUN

These scheds failed to appear on Monday, 29 November & no further reports were received.

Morse Stations - Not Number Related

M51 XlX

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

1230 - 1313z	22 Nov	Lundi-Leçon	11-2/1 Codé	11-2/2 Clair,	11-2/3 Codé,	11-2/4 Clair (420 grps/hr)	BR	MON
1230 - 1301z	23 Nov	Mardi-Leçon	12-2/1 Codé	12-2/2 Clair,	12-2/3 Codé,	12-2/4 Clair (600 grps/hr)	BR	TUE
1230 - 1306z	24 Nov	Mercredi- Leçon	13-2/1 Codé,	13-2/2 Clair,	13-2/3 Codé,	13-2/4 Clair (720 grps/hr)	BR	WED
1230 - 1256z	25 Nov	Jeudi- Leçon	14-2/1 Codé,	14-2/2 Clair,	14-2/3 Codé,	14-2/4 Clair (840 grps/hr)	BR	THU
1230 - 1304z	26 Nov	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

0201z	13 Dec	Non-stop 5-character groups composed of M51a messages	BR	MON
0129z	21 Dec	Non-stop 5-character groups composed of M51a messages	BR	TUE
0225z	25 Dec	Non-stop 5-character groups composed of M51a messages	BR	SAT

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).

3566	4000	4386	5027	6613	7176	8073	9131	11553
3570	4050	4442	5123	6805	7513	8164	9208	
3658	4119	4485	5145	6988	7575	8309		
3726	4123	4510	5199		7686			
3864	4134	4539	5208					
3884	4197	4544	5222					
3879	4199	4560	5437					
	4235	4585	5555					
	4236	4662	5566					
	4241	4717	5612					
	4243	4737	5884					
	4256	4847						
	4257	4861						
	4339	4913						

New Scheds for Nov / Dec 2021: **From logs submitted from JPL & F5JBR**

4726	New Round Slip & frequency	First heard 10 November	V QPL(x3) DE 4WQ (x2) (R5) QSA ? K
5139	New frequency for this Round Slip	First heard 16 December	V 8RVF (x3) DE CV4K (x2)
6140	New Round Slip for this Frequency	First heard 15 November	V L5S3 (x3) DE Z4Y6 (x2)

Chart of M89 Freq & Call signs heard in Nov/ Dec 2021 **New Scheds shown in Bold Type** **From logs submitted from JPL & F5JBR**

Freq in KHz	Call Slip
3565//NRH	V BSA5 (x3) DE TP4C (x2)
3565//4718	V BSA5 (x3) DE TP4C (x2)
3565//4718//6378//7045	V BSA5 (x3) DE TP4C (x2)
4043	V L5S3 (x3) DE Z4Y6 (x2) V IW6S (x3) DE 5D6T(x2)
4718	V BSA5 (x3) DE TP4C (x2)
4720//5150	V WNF(x3) DE FXM (x2) (R5) (Hand sent)
4726	**V QPL(x3) DE 4WQ (x2) (R5) QSA ? K**
4860// 6840	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K

Freq in kHz	Call Slip
5139	**V 8RVF (x3) DE CV4K (x2)**
6140	V IW6S (x3) DE 5D6T(x2) **V L5S3 (x3) DE Z4Y6 (x2)** **V L5S3 (x3) DE Z4Q6 (x2)**
6378//7NRH	V BSA5 (x3) DE TP4C (x2)
6378//7045	V BSA5 (x3) DE TP4C (x2)
6840//NRH	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K
6840//8290	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K
7045//NRH	V BSA5 (x3) DE TP4C (x2)
7620//8350	V WNF(x3) DE FXM (x2) (R5) QSA ? (Hand Sent)

3566		1306z (IP) 16 Nov	CK 61 65 1116 2100 RMKS 4130612 TO 4130610 K	(Remote tuner Japan)	JPL	TUE
3726		1231z (IP) 23 Dec	IEC BT 4554 AR K (Exercise related) NR 2814 CK 65 98 1223 2030 RMKS S BT 8385 TO 8386 AR K	(Remote tuner Taiwan)	JPL	THU
3864	HPP1	1101z (IP) 19 Dec	1 MSG and Send SK – End Traffic at 1130z in Duplex – 4199kHz	(Remote tuner Japan)	F5JBR	SUN
4123		1856z (IP) 10 Dec	NR 20.CK 139 1.2211 0254 RMKS 5372 TO 3379 K	(Remote tuner Novosibirsk)	JPL	FRI
		1906z (IP) 22 Dec	NR 445 CK 139 55 1223 0305 BT RMKS 0073 TO 0078 K	(Remote tuner Novosibirsk)	JPL	WED
4197		1213z (IP) 20 Dec	NR 3180 CK 91 47 1220 2000 RMKS BT 3134 TO 2523 AR K	(Remote tuner Taiwan)	JPL	MON
4199	M1PZ	1101z (IP) 19 Dec	M1PZ Working HPP1 (QSO and MSG) Duplex – 3864kHz HR MSG NR 0061 CK 121 56 1219 1820 RMKS 9070 TO 261	(Remote tuner Japan)	F5JBR	SUN
4235	WGRL	1050z (IP) 16 Dec	WGRL Working BZJ1 (QSO and MSG) in simplex NR 061 CK91 17 1230 RKMS ….	(Remote tuner Japan)	F5JBR	THU
4241		1149z (IP) 24 Nov	NR 6925 CK 101 86 1124 1920 RMKS 4314 TO 1613 K	(Remote tuner Japan)	JPL	WED
4243		1117z (IP) 23 Dec	NR 1511/EX 1942 RMKS 1678 TO 1671 BT FH8/B AR (Not part of M95 sked on same frequency which is currently in Chinese digital 4+4 QPSK 75/3000 - LSB)	(Remote tuner Taiwan)	JPL	THU
4256		1223z (IP) 01 Dec	NR 1243/EX 2027 BT A7WB/Q27 AR	(Remote tuner Japan)	JPL	WED
4257		1214z (IP) 01 Dec	NR 2314 CK 91 53 1201 2010 RMKS BT	(Remote tuner Japan)	JPL	WED
4386	8ZSI	1217z (IP) 23 Dec	VVV WUOZ DE 8ZSI K K QSA1 QSY 02 K K	(Remote tuner Taiwan)	JPL	THU
4397		1235z (IP) 01 Dec	VVV 22AE VVV P83D K	(Remote tuner Japan)	JPL	WED
4442		1116z (IP) 01 Dec	NR .../EX 1915 RMKS 8319 TO 8314 K A0/B2 AR K	(Remote tuner Taiwan)	JPL	WED
4510		1422z (IP) 01 Dec	IEC BT 0..8 AR K (Exercise related)	(Remote tuner Novosibirsk)	JPL	WED
4585		1213z (IP) 23 Dec	TV1M/CD4I AR K (Other station N/H on this frequency)	(Remote tuner Taiwan)	JPL	THU
4737		0954z (IP) 25 Nov	VVV 7I8 DE 5WZ QSA ?	(Remote tuner Japan)	JPL	THU
4847		1117z (IP) 23 Dec	R DE SDU7 QSL TIME 1918 HR WK NR 522 AR DE Z45G QSL TIME 1918 HR WK NR 205 AR DE APD7 QSL TIME 1918 HR WK NR 115 AR R DE ETE2 QSL TIME 1920 HR WK NR 119 AR R DE KY23 QSL TIME 1919 HR WK NR .09 AR R DE 2F8D QSL TIME 1919 HR WK NR 6028 AR R DE HNG7 QSL TIME 1918 HR WK NR 558 AR VVV Y23A Y23A R PT WK NR K NR OK R NRPT WK NR 6028 K	(Remote tuner Taiwan)	JPL	THU
4861		1124z (IP) 23 Dec	NR 50/EX 1922 RMKS CQ BT QY1/AG9 AR R DE R5FB QSL TIME 1923 HR WK NR 169 K R DE 2RGG QSL TIME 1923 HR WK NR 32 AR R DE XGT5 QSL TIME 1923 HR WK NR 223 AR R DE ML3T QSL TIME 1923 HR WK NR 523 AR R DE KLG9 QSL TIME 1924 HR WK NR 53 K R DE APRS QSL TIME 1924 HR WK NR 499 AR K R DE 3RY. QSL TIME 1924 HR WK NR 153 AR K	(Remote tuner Taiwan)	JPL	THU
5027		0112z (IP) 25 Nov	NR 189/EX 0909 RMKS 3942 TO 2239 BT W.4/XDT6 AR K (Other station found on 5145kHz)	(Remote tuner Novosibirsk)	JPL	THU
5145		0116z (IP) 25 Nov	1126 0910 RMKS 3349 TO 3942 K	(Remote tuner Novosibirsk)	JPL	THU
5222		0919z (IP) 25 Nov	NR 230 8W BT BT	(Remote tuner Japan)	JPL	THU
		1000z (IP) 25 Nov	OBSTOU K	(Remote tuner Japan)	JPL	THU
5437		1856z (IP) 10 Nov	HR WK NR 22160 K R NIL SK GB GB	(Remote tuner Novosibirsk)	JPL	WED
5884	CHJ	1130z (IP) 04 Nov	VVV OT9 DE CHJ	(Remote tuner Japan)	JPL	THU
6613	N5U4	1013z (IP) 25 Nov	VV G8P. DE N5U4 K NR 172/EX 1815 RMKS CQ BT N6H3/..SU. 3/K4XB AR	(Remote tuner Japan)	JPL	THU
6805		0136z (IP) 05 Dec	RMKS 2721414 TO 2721410 BT K2T5/Q3W7 AR 45567 NR 2456/EX 34567D M6K3/JJ00 AR BT M4K5/J0T3 AR	(Remote tuner Hong Kong)	JPL	SUN
7176	UJLI	1023z (IP) 25 Nov	VVV UJLI (x3) BT YR NR 26914 7G QSL TIME 1810 K	(Remote tuner Japan)	JPL	THU
7513		0201z (IP) 25 Nov	ICE BT 7896 CK R HR 7G GA K NR 0012 CK 0.12 .. 1125 000 RMKS 8993 TO 8997 BT	(Remote tuner Japan)	JPL	THU
7686		1945z (IP) 10 Nov	R HR WK NR 12. K	(Remote tuner Taiwan)	JPL	WED

			R HR WK NR 520 K R NIL SK GB K				
9208	1VCM	0436z (IP) 19 Dec	Possible CW VVV 1VCM = NR 8622 MSG QSL 1555 = AR		(Remote tuner Japan)	F5JBR	SUN
11553		0112z (IP) 05 Dec	NR 8045/EX 0913 RMKS 9687 TO 9018 BT	Q2C/D4Z AR	(Remote tuner Hong Kong)	JPL	SUN

M89 7686kHz 1945 (IP) - 1949z 10 November 2021

AS R (Other station also on this frequency – 1945z)
7NT5 374D N7T3 (Cont'd – 1947z)
AR QSL ? K (1948z)
R QSL 0350 K
R HR WK NR 12. K
R HR WK NR 520 K
R NIL SK GB K
R SK (1949z)

M89 7513kHz 0201 (IP) - 0205z 25 November 2021

R QSA 3 K (IP – 0201z)
R 7G GA K
R HR 7G GA K (0202z)
OK (Other station N/H on this frequency)
R HR 7G K (0202z)
R ICE BT 7896 CK R HR 7G GA K (0204z)
NR 0012 CK 0.12 .. 1125 000 RMKS 8993 TO 8997 BT
6AND .. A A.47 74N7 (Cont'd – fading – 0205z)

M89 4256kHz 1223 (IP) - 1224z 01 December 2021

7ZGH (Cont'd – 1223z)
FFF NR 1243/EX 2027 BT
A7WB/Q27 AR
NR 1243/EX 2027 BT
A7WB/Q27 AR
NR 1243/EX 20027 BT
A7WB/Q27 AR K SK (1224z)

M89 6805kHz 0136 (IP) - 0145z 05 December 2021

RMKS 2721414 TO 2721410 BT (IP – 0136z)
K2T5/Q3W7 AR (0137z)
BT K2T5/Q3W7 AR
BT K2T5/Q3W7 AR (0138z)
45567 NR 2456/EX 34567D (0139z)
BT BT .K3/100 AR
BT BT M6K3/J100 K (Horrible morse operator!!!)
BT M.K3 K BT M6K3/J100 AR BT
M6K3/JJ00 AR BT M6K3/JJT0 AR (0141z)
BT MBK3/JJT0 AR (0142z)
BT M4K5/J0T3 AR
BT M4KS/J0T3 AR (0143z)
BT M4K5/A BT M4K5/J0T3 AR
BT M4K5/J0T3 AR (0144z)
BT M4K5/J0T3 AR
BT M4K5/J0T3 AR (0145z)

M89 11553kHz 0112 (IP) - 0145z 05 December 2021

R F NR 8045/EX 0913 RMKS 9687 TO 9018 BT (IP – 0112z)
Q2C/D4Z AR
F **NR 8045/EX 0913 RMKS 9687 TO 9018 BT**
Q2C/D4Z AR K
R OK K (Other station N/H on this frequency)
R GA K (0115z)
R QSL 0917 K (0117z)
R OK K (Switched to voice – USB – Male – Chinese - 0117z)

Courtesy JPL

M95 O XSV, XSV70, XSV85

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

3642//NRH	Call Sign 3A7D	(Active daily - only first marker log has been included)					
3642//7602	Call Sign 3A7D	(Active daily - only first marker log has been included)					
3968//NRH	Call Sign SAQC (Previously3A7D) Suspect change in frequency and Round Slip for DKG6 DE 3A7D						
	2212z	08 Nov	SAQC with Round Slip. Fair signal into S.E. England			BR	MON
	2312z	05 Dec	V YHXD (x3) DE SAQC (x2) (IP - Cont'd)		(Remote tuner Novosibirsk)	JPL	SUN
3968//6936	Call Sign SAQC (Previously3A7D) Suspect change in frequency and Round Slip for DKG6 DE 3A7D						
	1846z	10 Nov	V YHXD (x3) DE SAQC (x2)		(Remote tuner Novosibirsk)	JPL	WED
	1400z	01 Dec	V YHXD (x3) DE SAQC (x2)		(Remote tuner Novosibirsk)	JPL	WED
	2230z	15 Dec	V YHXD (x3) DE SAQC (x2)		(Remote tuner Novosibirsk)	JPL	WED
			VVV HR SVC GA NR 0760630 RMKS 1950 TO 7849 BT CL/0700/ZBT/1950/7849 AR				
			AGN NR 076 0630 RMKS 1950 TO 7849 BT CL/0700/ZBT/1950/7849 AR QSL ? HR WK NR 07				
			(From Round Slip - 2030z. Return to Round Slip - 2032z)				
4050	05 05 05						
	1210 (IP) - 1214z	24 Nov	4754 44474 655	CQ CQ C Q STOUK	(Remote tuner Japan)	JPL	WED
4243//NRH	Message number differs from current XSV70 and XSV85 message numbers.						
	1144 (IP) - 1202z	17 Nov	NR 024 CK 20 35 1117 1516 BT		(Remote tuner Japan)	JPL	WED
			NR 098 CK 38 35 1117 1544 BT				
			NR 34 CK 149 35 1117 1550 BT				
	1148 (IP) - 1201z	24 Nov	NR 013 CK 57 35 1124 1553 BT		(Remote tuner Taiwan)	JPL	WED
			NR 052 CK 34 35 1124 1626 BT				
			NR 48 CK 142 35 1124 1642 BT				
	1148 (IP) - 1212z	01 Dec	NR 027 CK 40 35 1201 1545 BT		(Remote tuner Japan)	JPL	WED
			NR 02 CK 194 35 1201 1553 BT				
	1155 (IP) - 1207z	12 Dec	NR 049 CK 52 35 1212 1544 BT		(Remote tuner Japan)	JPL	SUN
			NR 24 CK 194 35 1212 1558 BT				

	1145 (IP) – 1208z	20 Dec	NR 065 CK 57 35 1220 1545 BT NR 40 CK 163 35 1220 1602 BT	(Remote tuner Taiwan)	JPL	MON
	1143z (IP) – 1211z	23 Dec	NR 06 CK 25 49 1221 2130 BT NR 057 CK 19 35 1223 1549 BT NR 058 CK 14 35 1223 1551 BT NR 071 CK 52 35 1223 1552 BT NR 46 CK 212 35 1223 1600 BT	(Remote tuner Taiwan)	JPL	THU
4243//9054	Message number differs from current XSV70 and XSV85 message numbers.					
	1141 (IP) - 1156z	01 Nov	NR 066 CK 33 35 1101 1518 BT NR 02 CK 133 35 1101 1545 BT	(Remote tuner Taiwan)	JPL	MON
	1142 (IP) – 1202z	04 Nov	NR 07U CK 46 35 1104 1510 BT NR 08 CK 144 35 1104 1601 BT	(Remote tuner Japan)	JPL	THU
	1140 (IP) - 2359z	10 Nov	NR 004 CK 19 35 1111 0614 BT NR 085 CK 42 35 1111 0701 BT NR 21 CK 069 35 1111 0707 BT	(Remote tuner Taiwan)	JPL	WED
	2340 (IP) - 2352z	15 Nov	NR 019 CK 19 35 1116 0600 BT NR 095 CK 29 35 1116 0614 BT NR 31 CK 062 35 1116 0654 BT	(Remote tuner Japan)	JPL	MON
4283//7553	Call sign XSV70					
	0937 (IP) - 0946z	25 Nov	NR 1047 CK 101 35 1125 0714	(Remote tuner Japan)	JPL	THU
4431	**HR SVC HR SVC = 654/XZ928/4706/13/13/99/X628A/COMM/5561 AR HR WK NR 460 HR WK NR 460 SK SK**					
				(Remote tuner Japan)	F5JBR	SUN
4364//NRH	Call Sign XSV85					
4364//8073	Call Sign XSV85					
	1131 - 1140z	01 Nov	NR 0954 CK 159 35 1101 1528 BT	(Remote tuner Taiwan)	JPL	MON
	1132 - 1138z	04 Nov	NR 0960 CK 151 35 1104 1610 BT	(Remote tuner Taiwan)	JPL	THU
	0002 - 0009z	11 Nov	NR 0986 CK 149 35 1111 0700 BT	(Remote tuner Taiwan)	JPL	THU
	0006 -1142z	17 Nov	NR 1010 CK 97 35 1117 0555 BT	(Remote tuner Taiwan)	JPL	WED
	1136 - 1142z	17 Nov	NR 1012 CK 250 35 1117 1606 BT	(Remote tuner Taiwan)	JPL	WED
	1130 - 1143z	01 Dec	NR 1066 CK 386 35 1201 1654 BT	(Remote tuner Taiwan)	JPL	WED
	1130 - 1152z	12 Dec	NR 1110 CK 044 35 1212 1700 BT NR 1111 CK 5U6 35 1212 1701 BT	(Remote tuner Taiwan)	JPL	SUN
	1130 - 1144z	20 Dec	NR 1150 CK 360 35 1220 1656 BT	(Remote tuner Taiwan)	JPL	MON
4431	**1410 (IP) - 1419z**	**01 Dec**	NR 03/CCK CK 21 41 1201 2200 RMKS 5561 TO 3975 4721 3160 5445 4796 6735 BT			
				(Remote tuner Novosibirsk)	JPL	WED
5479//NRH	Call Sign SAQC		(Active daily - only first marker log has been included)			
	1214z	12 Dec	V YHXD (x3) DE SAQC (x2) (IP - Cont'd)	(Remote tuner Japan)	JPL	SUN
5479//10722	Call Sign SAQC		(Active daily - only first marker log has been included)			
	0939z	01 Nov	V YHXD (x3) DE SAQC (x2) (IP - Cont'd)	(Remote tuner Novosibirsk)	JPL	MON
	1055z	08 Dec	V YHXD (x3) DE SAQC (x2) (IP - Cont'd)	(Remote tuner Novosibirsk)	JPL	WED
7553//9153	Call sign XSV70					
	1325 (IP) - 1333z	16 Nov	NR 1022 CK 170 35 1116 1500	(Remote tuner Japan)	JPL	TUE
8073	Call sign XSV85					
	Usual format is Initial call-up in voice USB, then to digital 4+4 mode LSB, finally, switching to CW					
	1144z	24 Nov	CK 426 35 1124 1607 BT	(Remote tuner Taiwan)	JPL	WED
8550	**0940z**	**16 Dec**	**Messages in progress**	(Remote tuner Japan)	F5JBR	THU
	NNR32 NNR32 CCK50 CCK50 TIKZC LACRT CSGVX GVYNP NQFTI KZRIL JLADS GVXME FHZOI JAUMK AFUID JYBQS KUDME YEWQH WLACR UJSBD YNPEQ FHOXG PSJYB NCETW LFUOD XARGH BQHKZ KMEZO XZACR UJLDS MBVKN PEWYQ FHOIB ZBQSK CFUWL ODXMG JYHTI OMVET CETWL ZOQFI XRGIA JYABT VKNUR APEGV WYNBQ TIKZC JLODG VXMPN PHRIU DETVK NCWLF RGIXA JTESB QVFUO (NOTE : Repeat the message several times, then go to the next message)			
8801	**Message format indicates M95 family**			(Remote tuner Japan)	JPL	THU
	0151 (IP) - 0154z	25 Nov	NR 001/CCK CK 49 18 1125 0935 RMKS 9KQ94 VAOA CY?			
9054	Call sign XSV85		All logged via Remote tuner Hong Kong unless stated			
	(See also 4243//9054kHz listing)					
	2347 – 2350z	05 Dec	NR 0.4 CK 33 35 1206 0621 BT	(Remote tuner Khabarovsk)	JPL	WED
10180	Call Sign 3A7D		(Active daily - only first marker log has been included)			

10722//NRH Call Sign 3A7D
1048z 01 May YHXD (x3) DE SAQC (x2) (Remote tuner Khabarovsk) JPL FRI

M95 4243//9054kHz 1140z 10 November 2021

Into Voice 1140z Female operator
Switched to Chinese digital 4+4 QPSK 75/3000 LSB 1142z
Switched to CW Hand sent 1146z

V HR 7G TO YR PSE CY
(1146z)
NR 004 CK 19 35 1111 0614 BT
UT5 TAA 3U4 3A4 TTA TTU TT3 773 35U U4T
353 4A5 447 46D 4D6 3D4 AR 7G AGN (2348z)
NR 004 CK 19 35 1111 0614 BT (Repeats message – 2348z)
AR A HR MSG GA
NR 085 CK 42 35 1111 0701 BT
5AA UTT TAA 3U4 3A4 5T7 75U 357 37U 4A5 (Cont'd – 2353z)
AR MSG AGN
NR 085 CK 42 35 1111 0701 BT (Repeats message – 2355z)
AR A HR 7G GA
NR 21 CK 069 35 1111 0707 BT
UTU TAU 3U4 3A4 TTU 773 35A U4T 353 4A5 (Cont'd – 2359z)

M95 4364//8073kHz 0002z (IP) 11 November 2021

BNGC DE XSV85

IP - In Chinese digital 4+4 QPSK 75/3000 LSB 0002z
Switched to CW Hand sent 0007z

V BNGC (x3) DE XSV85 (x2) (0007z)
HR MSGS GA PSE CY (0008z)
NR 0986 CK 149 35 1111 0700 BT
TAA 3U4 3A4 TAU 773 TA7 773 TAD 773 (Cont'd – 0009z)

Courtesy JPL

M95 4050kHz 1210z (IP) 24 November 2021

05 05 (IP – Long zero -1210z)

4754 44474 655 (1211z)
SOSOSOSOSOSOSOSO
CQ CQ OBSTOUK (1212z)
CQ CQ C Q STOUK
BT BT 4T7T4 TUATU.6OAT3 AATTU AN6..2W TU ATUK R
(Both stations on this frequency)
BT BT 4T7U7 TU4T3 7.AAD TA7UT4..
BT BT 4TDA5 TUDTA 6DOTN7 T3UUA6 II
BT BT 4T6N5 TA6TA5DT5TTN5AATAT ADDN3U63II
5W
5W2
AA TATK
R
BT BT 4TT3 UTUA TU6U OAT4 AATT AANT II (Cont'd – 1214z)

M95 4431kHz 1410z (IP) 01 December 2021

TTTT TTTT DATN A57D A75U 4NUN 4N53 N476 (Cont'd – 1410z)
AR (1412z)
HR 7G GA HR 7G GA
NR 03/CCK CK 21 41 1201 2200 RMKS 5561 TO 3975 4721 3160 5445 4796 6735 BT
4T.. U5AT N763 5NAT AD4A UN6T TN43 3DAU
TTTT TTTT DATN A57D A75U 4NUD 4N53 N476
(Repeat of above message - 1417z)
AR HR WK NR 460 HR WK NR 460 SK SK (1419z)

Courtesy JPL

Marker Beacons (MX MXI)

3657	1715z	23 Dec	MXI CW Beacon "V"	Khiva	Normal sound with lots of QRM Good	chpa	THU
4557.7	0135z	13 Dec	MXI CW Beacon "D"	Sevastopol	Weak	BR	MON
4557.9	0134z	13 Dec	MXI CW Beacon "S"	Severomorsk		BR	MON
5153.7	2046z	12 Dec	MXI CW Beacon "D"	Sevastopol		BR	SUN
5153.9	2048z	12 Dec	MXI CW Beacon "S"	Severomorsk	Weak	BR	FRI
5154	2047z	12 Dec	MXI CW Beacon "C"	Moscow		BR	SUN
5156.8	1526z	17 Dec	MX CW Beacon " L"	St Petersburg	Operating at an extremely fast rate!	BR	FRI
	0134z	21 Dec	MX CW Beacon " L"	St Petersburg	Back to normal speed!	BR	TUE
5342.1	0814z	09 Dec	MXV CW Beacon "V"		Weak Via SDR Novosibirsk	E.SMITH	THU
	0543z	30 Dec	MXV CW Beacon "V"		Weak Via SDR Novosibirsk	E.SMITH	THU
7508.7	2053z	12 Dec	MXI CW Beacon "D"	Sevastopol		BR	SUN
7508.9	0142z	13 Dec	MXI CW Beacon "S"	Severomorsk	Via SDR Norway	BR	MON
7509.1	2053z	02 Mar	MXI CW Beacon "A"	Astrakhan		BR	SUN
7611	0550z	29 Dec	MXV CW Beacon "V"		Strong Via SDR Novosibirsk	E.SMITH	WED
	0542z	30 Dec	MXV CW Beacon "V"		Strong Via SDR Novosibirsk	E.SMITH	THU
8494.8	1521z	17 Dec	MXI CW Beacon "P"	Kaliningrad		BR	FRI
8494.9	1522z	17 Dec	MXI CW Beacon "S"	Severomorsk		BR	FRI
8495	2055z	12 Dec	MXI CW Beacon "C"	Moscow		BR	SUN
8495.1	2054	12 Dec	MXI CW Beacon "A"	Astrakhan		BR	SUN
8497.8	2057z	12 Dec	MX CW Beacon "L"	St Petersburg		BR	SUN
	1520z	17 Dec	MX CW Beacon "L"	St Petersburg	Operating at an extremely fast rate!	BR	FRI
10871.7	1513z	17 Dec	MXI CW Beacon "D"	Sevastopol		BR	FRI
10871.9	1124z	13 Dec	MXI CW Beacon "S"	Severomorsk		BR	MON
10872.1	2059z	12 Dec	MXI CW Beacon "A"	Astrakhan	Weak	BR	SUN
13527.7	1223z	13 Dec	MXI CW Beacon "D"	Sevastopol		BR	MON

13528	1222z	13 Dec	MXI	CW Beacon "C"	Moscow		Weak, QSB	BR	MON
13528.1	1223z	13 Dec	MXI	CW Beacon "A"	Astrakhan		Weak, QSB	BR	MON
16331.7	1221z	13 Dec	MXI	CW Beacon "D"	Sevastopol			BR	MON
16331.9	1220z	10 Jan	MXI	CW Beacon "S"	Severomorsk			BR	MON
20047.9	1212z	13 Dec	MXI	CW Beacon "S"	Severomorsk			BR	MON

Oddities

'The Goose'

3243	1431z	05 Nov	'Goose' Marker – Night Freq		Good	USB	chpa	FRI
	1710z	08 Nov			Excellent	USB	chpa	MON
	1857z	17 Nov			Excellent	USB	chpa	WED
	1722z	24 Nov	Multiple or repeated message sent 1724z		Excellent	USB	chpa	WED
	1650z	09 Dec	Normal sound from the Goose, minor QSB		Moderate	USB	chpa	THU
	0353z	15 Dec	Normal sound from the Goose		Excellent	USB	chpa	WED
	1717z	23 Dec	Normal sound from the Goose		Excellent	USB	chpa	THU
	0613z	24 Dec	Normal sound from the Goose		Excellent	USB	chpa	FRI
4310	1205z	17 Nov	'Goose' Marker – Day freq		(Via SDR Khimki, Russia)		HFD	WED

'The Air Horn'

3510	1433z	05 Nov	Marker signal (Air Horn)		Good	USB	chpa	FRI
	1711z	08 Nov			Good	USB	chpa	MON
	0645z	17 Nov			(Via SDR Khimki, Russia)		HFD	WED
	1204z	17 Nov			(Via SDR Khimki, Russia)		HFD	WED
	1503z	17 Nov			(Via SDR Khimki, Russia)		HFD	WED
	1858z	17 Nov			Excellent	USB	chpa	WED
	1954z	17 Nov			(Via SDR Khimki, Russia)		HFD	WED
	1733z	24 Nov			Excellent	USB	chpa	WED
	1651z	09 Dec	Normal sound from the Air Horn		Good	USB	chpa	THU

'The Alarm'

4770	1439z	05 Nov	Marker Signal (The Alarm)		Good	USB	chpa	FRI
	1717z	08 Nov			Good	USB	chpa	MON
	0647z	17 Nov			(Via SDR Khimki, Russia)		HFD	WED
	1207z	17 Nov			(Via SDR Khimki, Russia)		HFD	WED
	1507z	17 Nov			(Via SDR Khimki, Russia)		HFD	WED
	1903z	17 Nov		Minor QSB	Good	USB	chpa	WED
	1958z	17 Nov			(Via SDR Khimki, Russia)		HFD	WED
	1738z	24 Nov			Very weak	USB	chpa	WED
	1656z	09 Dec	Normal sound from the Alarm		Very weak	USB	chpa	THU
	0358z	15 Dec	Normal sound from the Alarm		Good	USB	chpa	WED
	1722z	23 Dec	Normal sound from the Alarm with QSB		Moderate	USB	chpa	THU
	0615z	24 Dec	Normal sound from the Alarm		Excellent	USB	chpa	FRI

S28 'The Buzzer'

4625	1437z	05 Nov		Minor QRM, Moderate		USB	chpa	FRI
	1715z	08 Nov			Weak	USB	chpa	MON
	0646z	17 Nov	USB	(Via SDR Khimki, Russia)			HFD	WED
	1206z	17 Nov		(Via SDR Khimki, Russia)			HFD	WED
	1506z	17 Nov		(Via SDR Khimki, Russia)			HFD	WED
	1902z	17 Nov		Minor QSB	Moderate	USB	chpa	WED
	1957z	17 Nov		(Via SDR Khimki, Russia)			HFD	WED
	1737z	24 Nov			Very weak	USB	chpa	WED
	1550z	26 Nov	Weak but clear	QTH South.Wales		USB	Gary	FRI
	1655z	09 Dec	Normal sound from the Buzzer		Very weak	USB	chpa	THU
	0159z	13 Dec	Sounding poorly – More like bursts of white noise			USB	BR	MON
	0357z	15 Dec	Normal sound from the Buzzer		Moderate	USB	chpa	WED
	1721z	23 Dec	Normal but moderate sound from the Buzzer with QSB		Moderate	USB	chpa	THU
	0614z	24 Dec	Normal sound from the Buzzer		Excellent	USB	chpa	FRI

S30 'The Pip'

3756	1435z	05 Nov	S30	'Pip' marker (Night freq)		Weak, Minor QRM	USB	chpa	FRI
	1712z	08 Nov				Weak, Minor QRM	USB	chpa	MON
	1900z	17 Nov				Excellent	USB	chpa	WED
	1504z	17 Nov			USB	(Via SDR Khimki, Russia)		HFD	WED
	1953z	17 Nov				(Via SDR Khimki, Russia)		HFD	WED
	1734z	24 Nov				Good, minor QRM	USB	chpa	WED
	0355z	15 Dec	Normal sound from the Pip			Excellent	USB	chpa	WED
	1719z	23 Dec	Normal sound from the Pip, minor QRM			Good	USB	chpa	THU
5448	0648z	17 Nov	S30	'Pip' Marker (Day freq)	USB	(Via SDR Khimki, Russia)		HFD	WED

S32 **'Squeaky Wheel'**

3828	1436z	05 Nov	S32	'Squeaky Wheel' marker (Night freq)	Weak	USB	chpa	FRI
	1713z	08 Nov			Very weak	USB	chpa	MON
	1901z	17 Nov			Moderate	USB	chpa	WED
	1505z	17 Nov			(Via SDR Khimki, Russia)		HFD	WED
	1956z	17 Nov			(Via SDR Khimki, Russia)		HFD	WED
	1735z	24 Nov			Weak	USB	chpa	WED
	1653z	09 Dec	Normal sound from the Squeaky Wheel		Very weak	USB	chpa	THU
	0356z	15 Dec	Normal sound from the Squeaky Wheel		Weak	USB	chpa	WED
	1720z	23 Dec	Normal but moderate sound. Minor QRM and QSB		Moderate	USB	chpa	THU
3756	1652z	09 Dec	S32	'Squeaky Wheel' marker (Day freq)	Moderate	USB	chpa	THU

4182 **'T Marker'**

	1658z	09 Dec	Normal sound from the T Marker		Moderate	USB	chpa	THU

All logs from chpa Monitored from Stockholm

Contributors: AB, BR, chpa, E.SMITH, ER, F5JBR, Gary, Gert, HFD, JPL *Thank you all for your logs.*

Voice and other modes:

E06 Nov/Dec log

Monday **0210z** **9382kHz** **0310z** **13426kHz**
20/12 '537' 148 36 81058……etc (via KiwiSDR RUS) (Thanks hfd)

Thursday (repeats Friday) **0300z** **kHz** **0400z** **13878khz**
18/11 '361' 597 44 43105……etc via KiwiSDR
0300z **14654kHz** **0400z** **12177khz**
16/12 '361' 975 48 19102…….etc] via KiwiSDR RUS (Thanks hfd)

First /Third Thursday (repeats Friday) **0600z** **18285kHz** **0700z** **20140kHz**
04/11 '507' 829 61 77345 00368 41275 35891 97140 91923 63432 88849 79834 01945 11826 99874 68441 53289 14679 67749 90592 51661 13286 37777 42023 96813 86754 82242 42820 57515 95611 62145 64858 02482 05180 87866 53857 04442 74685 08440 94522 59541 23022 84134 92171 89269 07116 22015 69312 17083 73822 79185 00600 36935 71296 63392 34607 15879 30777 85679 75846 97943 54710 44783 25491 829 61 00000

18/11 '507' 294 61 67849 28320 17328 56210 47712 54954 86225 74948 90676 06278 76040 43430 97198 94900 76455 18243 66106 69425 77826 62862 48253 26481 50083 35905 56523 04488 30326 22838 93120 63852 42539 28325 80079 83276 97879 71416 03936 26865 48973 50753 10498 61718 96638 71972 10651 30712 72503 54518 83130 10125 45932 60027 85216 06830 28705 09485 07262 74716 75890 81340 32013 294 61 00000

0600z **14575kHz** **0700z** **17420kHz**
02/12 '923' 164 50 18560 97835 28211 78965 45435 08583 49233 88319 44191 57117 71456 25984 09297 86763 41351 89145 20402 53068 98154 56489 58419 72970 63444 95349 32249 27181 96817 58863 58342 26738 72376 87141 60277 79644 55696 10877 80545 18549 85976 80823 21733 75398 93050 71608 59282 14004 03943 33278 93024 56443 164 50 00000

16/12 '923' 641 50 67791 85078 79330 26135 81090 61718 24881 19753 09043 53423 06312 57357 28914 09976 64796 77121 08090 25893 35885 46613 08511 06364 97935 94705 34959 52420 16734 28437 88127 70043 09752 48018 08413 32871 78456 02179 21367 53214 82140 51025 20753 41064 51680 28603 50122 55763 66681 22365 68880 80051 641 50 00000

Other: **0720z** **10755kHz**
10/11 USB test transmission
'975' was transmitted from 0720 to 0856z
'975' (R1h 36m) 362 54 59041 13065 04683 84654 90831 62794 00491 65818 38797 71086 72829 24781 34320 24015 72945 97148 27277 05227 65331 11714 68242 75668 70130 21208 56012 79979 38832 99564 17652 15479 42967 04121 13253 24688 80471 26192 82581 97327 29417 78475 75807 92722 03791 92693 35508 18558 91011 25939 22125 26916 75875 99145 00064
(tx break) '975' (R1m) 22125 26916 75875 99145 00064 13535 362 54 00000 (Thanks Ary)

1201z **10755khz**

17/12 ‘975’ (R) 038 26 49576 63374 79720 03804 88947 28065 64514 46319 38467 56373 64577 13154 89749 45892 40509 48467 14389 58581 97002 24201 99530 17340 59467 96975 51106 40963 038 26 (several restarts during 1st message)
‘975’ (R) 824 30 33668 74822 95181 38570 31870 47063 26106 59676 59176 39258 99286 56037 40435 78651 40955 83881 57145 49573 31915 18004 12175 85766 12933 97469 51993 50316 28117 61250 38613 64107 825 30 00000 (Thanks Ary)

16/11 **0830z 13396kHz 0900z 11123kHz**
‘980’ 457 28 71227 14122 05935 77072 46862 51240 47599 46148 34396 66149 64045 18071 87713 05605 52577 21502 00984 73165 09459 86390 34436 37199 89772 44735 09044 88651 31842 00678 457 28 0000 (Thanks Ary)

E06b 1520z 11073kHz
13/12 ‘352’ 46897 (R5) ‘867’ 40 99164 21567 02776 83860 34612 90714 86499 84488 08238 13534 85274 57898 53735 37077 02304 34833 73427 90997 51069 83749 89846 64206 32349 64670 58743 88653 46886 61256 73205 78677 85878 02043 13577 99359 66502 06769 22871 62316 04634 18749 867 40 00000 (Thanks Ary)

E07

Sunday

November 2021

0700z	**10268kHz**	**0720z**	**11068kHz**	**0740z**	**12168kHz**		
07/11	201 1 895 178 89071 ... 88843 000 000					0720z Weak, 0750z Fair	
21/11	201 000						Weak

December 2021

0700z	**9326kHz**	**0720z**	**10426kHz**	**0740z**	**11526kHz**		
05/12	345 1 968 277 87530 ... 82547 000 000						Strong
19/12	345 000					[0720z monitored only]	Fair
26/12	345 000					[0720z monitored only]	Weak

Sunday/Wednesday

November 2021

1800z	**7582kHz**	**1820z**	**6782kHz**	**1840z**	**5182kHz**		
03/11	571 1 685 93 08206 ... 20915 000 000					[1800z QRM]	Weak
07/11	571 1 685 93 08206 ... 20915 000 000					[1800z QRM]	Weak

571 1
685 93
08206 63144 49035 28721 97713 95832 31186 02523 87137 16973
71998 15680 55671 98437 77876 13769 69153 23037 72448 88025
18223 90483 73093 79806 73775 19026 02224 03978 23385 69310
86379 75449 70869 40919 75032 93706 58219 41171 94477 43937
52713 29195 49892 27719 30924 78291 5?891 04614 54244 64781
03728 72936 16039 55173 59618 81158 08947 71210 94605 10522
53464 11023 81028 18380 61050 15562 93077 11560 02981 49467
01859 55213 88010 97289 70298 44808 22695 05816 49635 67537
35299 27851 15622 78083 99829 76788 22417 23521 44710 17098
83309 54638 20915
000 000 *Coutesy dMHz*

10/11	571 000					1800z Fair, 1820z Weak	
14/11	571 000						Fair
17/11	571 1 8148 97 07826 ... 83903 000 000					[1800z BCQRM]	Weak
21/11	571 1 8148 97 07826 ... 83903 000 000						Weak
24/11	571 000					1800z Unworkable 1820z Weak, QRM [Finish SDR]	
28/11	571 000						Weak

December 2021

1800z	**6771kHz**	**1820z**	**5871kHz**	**1840z**	**4571kHz**		
01/12	785 1 6485 137 80634 ... 74770 000 000						Weak
05/12	785 1 6485 137 80634 ... 74770 000 000					[1800z Dutch SDR]	Weak

08/12	785 000	[1800z Dutch SDR]	Weak
12/12	785 000	[1820z DigiQRM4]	Weak
15/12	785 1 711 88 89737 ... 95260 000 000	[1840z strong]	Fair
19/12	785 1 711 88 89737 ... 95260 000 000 [M8: 1800/1820z via Dutch SDR , all weak. PLdn: 1800z NRH, rest fair. Illustrates propagational effects]		See below
22/12	785 000		Weak
26/12	785 000	[1800z Unworkable]	Weak
29/12	785 000	[1800z QRM3]	Weak

Monday/Wednesday

November 2021

2000z 7616kHz 2020z 6816kHz 2040z 5216kHz

NRH

December 2021

2000z 6823kHz 2020z 5823kHz 2040z 5123kHz

NRH

Tuesday/Friday

November 2021

0700z 15823kHz 0720z 16323kHz 0740z 18623kHz

02/11	836 1 6216 87 48780 ... 86114 000 000		Weak
05/11	836 1 6216 87 48780 ... 86114 000 000	[0740z DutchSDR]	Weak

836 836 836 1
6216 87 6216 87
48780 38874 60282 48624 70871 24669 99451 10717 59898 34803
34421 11714 05545 60882 25528 26114 20149 84755 56698 66472
42335 66818 68063 79544 48578 58053 30659 36104 08907 48841
84460 22198 26349 02853 82169 38725 13080 40897 24622 86288
66858 52647 16465 23442 50000 48338 16899 87985 30399 36132
77009 04318 99476 92017 58885 48882 03760 68432 61049 23605
64543 06538 30264 44091 59822 60326 80707 11685 36603 57344
51057 96879 23237 36894 54592 88101 53755 18639 95614 51015
23508 56905 93650 75023 57608 98393 86114 000 000

Courtesy Ary

09/11	836 000		Weak
16/11	836 1 3388 87 66151 ... 91816 000 000	[SDR: 0720z Dutch 0740z Finnish]	Weak
19/11	836 1 3388 87 66151 ... 91816 000 000		Weak
30/11	836 1 4351 175 77426 ... nnnnn 000 000	[0700z QSB1]	Weak

Tuesday/Friday

December 2021

0700z 14364kHz 0720z 14964kHz 0740z 15964kHz

03/12	399:1-4351/175= 77426		H-FD
07/12	399 000		Weak
10/12	399 000	[0720z monitored]	Fair
14/12	399 1 675 39 03202 ... 86609 000 000	[0700z not monitored]	Weak
17/12	399 1 675 39 03202 ... 86609 000 000		Weak
28/12	399 000	[0720z monitored]	Weak

Thursday/Saturday

November 2021

1410z	**11574kHz**	**1430z**	**10274kHz**	**1450z**	**9274kHz**		
04/11	327 000						Weak, [1410z Best]
06/11	327 000						Weak
11/11	327 000						1410z Fair, 1430z Weak
18/11	327 1 7753 77 43346 ... 59891 000 000					[1410z Fair. 1450z QRM]	Weak
20/11	327 1 7753 77 43356 ... 59891 000 000					[1450z QRM]	Weak
25/11	327 000						Weak

December 2021

1410z	**10226kHz**	**1430z**	**9226kHz**	**1450z**	**8126kHz**		
02/12	674 1 6039 75 21580 ... 24556 000 000						Weak
04/12	674 1 6039 75 21580 ... 24556 000 000						Weak
09/12	674 1 6039 75 21580 ... 24556 000 000						Weak
16/12	674 000						Weak
25/12	674 000					[1430z NRH]	Weak
30/12	674 000						Weak

Saturday

November 2021

1400z	**10323kHz**	**1420z**	**9123kHz**	**1440z**	**8023kHz**		
06/11	310 1 895 178 89071 ... 88843 000 000 [Multipath propagation]?					[1400z,1448z Echo]	1410z Weak, 1428z Fair, 1448z Strong
20/11	310 000						1400z Weak, 1420z Strong

December 2021

1400z	**9143kHz**	**1420z**	**8143kHz**	**1440z**	**7643kHz**		
04/12	116 1 968 277 87530 ... 82547 000 000						Strong

Note revised times due to msg txt length [30m sending time]
9143kHz1400z 04/12 [116 x 3 1 968 277 87530 to 82547 000 000]1430z S9 M8 SAT
8143kHz1435z 04/12 [116 x 3 1 968 277 87530 to 82547 000 000]1505z S9 M8 SAT
7643kHz1510z 04/12 [116 x 3 1 968 277 87530 to 82547 000 000]1540z S9 M8 SAT

18/12	116 000						Weak
25/12	116 000						Strong

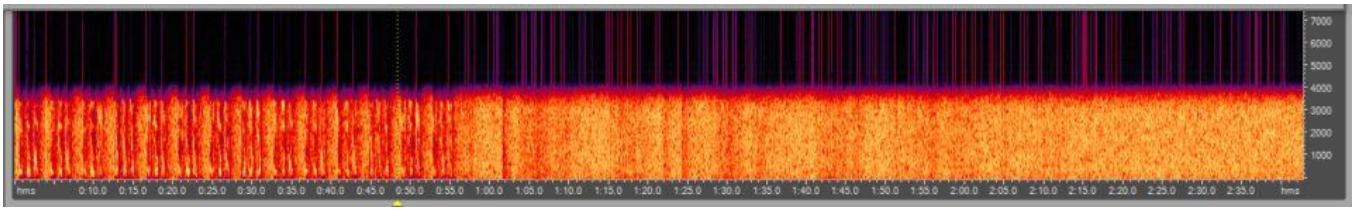
E07a

Others' Logs:

Wednesday

November 2021

2100z	**5877kHz**	**2120z**	**5277kHz**	**2140z**	**4577kHz**



03/11/2021 2120z 5277kHz 55s only '825 825 825 000'

03/11		825 000				[2120z 55s only]	Very strong
10/11		825 000					Strong QRM2
17/11		825 000					Very strong
24/11		825 000					Strong QRN2
December 2021							
01/12		825 000					Very strong
08/12		825 000					Strong
15/12		825 000				[2120z QRM2]	Very strong
22/12		825 000				[*S5 with M8*]	Strong
29/12		825 000				[2100z BCQRM2]	Strong

Thursday

November 2021

0530z	**5111kHz**		**0550z**	**5811kHz**	**0610z**	**6911kHz**		
04/11		189 000					[0530z QRM2]	Weak
11/11		189 000						Very strong
18/11		189 000						Very strong
25/11		189 000						Strong
December 2020								
02/12		189 000						Very strong
09/12		189 000						Strong
16/12		189 000						Strong
23/12		189 000						Very strong
30/12		189 000						Very strong

Friday

November 2021

1610z	**8138kHz**		**1630z**	**7538kHz**	**1650z**	**6838kHz**		
05/11		158 000					[1610z XJTQRM2]	Fair
19/11		158 000						Weak
26/11		158 000						Strong QRM3

December 2021

1610z	**5887kHz**		**1630z**	**5387kHz**	**1650z**	**5087kHz**		
03/12		830 000					[1630z QRM2]	Fair
10/12		830 000						Strong
17/12		830 000						Fair
24/12		830 000						Strong
31/12		830 000						Fair

Saturday

November 2021

0900z	**11553kHz**	**0920z**	**12153kHz**	**0940z**	**13553kHz**		
06/11	515 000					[0920z QRM2]	Fair
13/11	515 000					[0900z Unworkable]	Weak QRM3/4
20/11	515 000					[0920z QRM3/4]	Weak
27/11	515 000						Weak

December 2021

0900z	**11121kHz**	**0920z**	**12221kHz**	**0940z**	**13421kHz**		
04/12	124 000						Fair
11/12	124 000						Weak
18/12	124 000						Weak
25/12	124 000						Fair

E11 & E11a log Nov/Dec

4181kHz	1910z	01/09 [392/00] Out 1913z S9	Malc, HfD	WED
4505kHz	1910z	03/11 [395/34 43835…….06032] Out 1920z S7	Malc	WED
	1910z	06/11 [395/34 43835….etc] Repeat of Wednesday	Malc	SAT
	1910z	13/11 [393/00]	Brixmis	SAT
	1910z	17/11 [396/00]	Brixmis, Malc	WED
	1910z	24/11 [395/00] Out 1913z S9	Malc, Gary H	WED
	1910z	27/11 [399/00] Out 1913z S9	Malc, Brixmis	SAT
	1910z	01/12 [399/40 71772…….94929] Out 1941z S9	Malc	WED
	1910z	04/12 [399/40 71772 49204 45132 81955 42378.....24024 54333 48574 59083 15352 94929]	Gary H, Brixmis	SAT
	1910z	08/12 [392/00] Out 1913z S9	Malc	WED
	1910z	15/12 [394/00] Out 1913z S9	Malc	WED
	1910z	18/12 [396/00] Out 1913z S9	Malc	SAT
	1910z	22/12 [396/00] Out 1913z S5	Malc	WED
	1910z	29/12 [396/00] Out 1913z S9	Malc	WED
4909kHz	1300z	01/11 [313/00] Out 1303z S2	Malc, XAH	MON
	1530z	06/11 [363/00] Out 1533z S3	Malc	SAT
	1530z	07/11 [369/00] Out 1533z S2	Malc, Brixmis	SUN
	1300z	08/11 [315/39 25534…….62597] Out 1311z S3 (Dutch SDR)	Malc	MON
	1300z	11/11 [315/39 25534….etc] Repeat of Monday	Malc	THU
	1300z	15/11 [311/00] Out 1303z S5 (Dutch SDR)	Malc	MON
	1300z	18/11 [312/00] Out 1303z S2	Malc	THU
	1530z	20/11 [364/44 32925 58912 19673 29841 66583 85730 18370 66741……73525 47000]	Malc, Gary H	SAT
	1530z	21/11 [364/44 32925……..etc] Repeat of Saturday	Malc	SUN
	1300z	22/11 [313/00] Out 1303z S2	Malc	MON
	1300z	25/11 [314/00] Out 1303z S2	Malc	THU
	1530z	27/11 [369/00] Out 1533z S9	Malc	SAT
	1530z	28/11 [368/00] Out 1533z	Brixmis	SUN
	1300z	29/11 [311/00] Out 1303z S2	Malc	MON
	1300z	02/12 [314/00] Out 1303z S2	Malc	THU
	1530z	04/12 [364/00] Out 1533z S3	Malc,	SAT
	1530z	05/12 [367/00] Out 1533z S4	Malc, Brixmis, Gary H	SUN
	1300z	06/12 [311/34 97968 65073 76543 52938 69261 80266 14419……38640 18476] out 1313z S3	RNGB, Malc	MON
	1300z	09/12 [311/34 97968…..etc] Repeat of Monday	Malc	THU
	1300z	13/12 [316/00] Out 1303z S3 (Dutch SDR)	Malc	MON
	1300z	16/12 [319/00] Out 1303z S3	Malc	THU
	1530z	18/12 [365/33 10920…….93089] Out 1540z S5	Malc	SAT
	1530z	19/12 [365/33 10920…..etc] Repeat of Saturday	Malc	SUN
	1300z	20/12 [312/00] Out 1208z S5 (Finnish SDR)	Malc	MON
	1530z	26/12 [365/00] Out 1533z	Brixmis	SUN
	0450z	27/12 [412/40 12846…….…….60265]	HfD	MON
	1300z	27/12 [310/00] Out 1303z S3 (Dutch SDR)	Malc	MON
	1300z	30/12 [311/00] Out 1303z S2 (Dutch SDR)	Malc	THU

5082kHz	1715z	03/11 [975/00] Out 1718z S7	Malc	WED
	1330z	04/11 [520/00] Out 1333z S2	Malc	THU
	1715z	05/11 [977/00] Out 1715z S6	Malc	FRI
	1330z	07/11 [521/00] Out 1333z S7 (Dutch SDR)	Malc	SUN
	1715z	17/11 [974/00] Out 1718z S4+QRM	Malc	WED
	1715z	19/11 [970/00] Out 1718z S4	Malc	FRI
	1330z	21/11 [520/00] Out 1333z S4	Malc	SUN
	1715z	24/11 [972/00] Out 1718z S9	Malc	WED
	1330z	25/11 [528/36 66827…….24929] Out 1341z S3	Malc	THU
	1715z	26/11 [976/00] Out 1718z S9	Malc	FRI
	1330z	28/11 [528/36 66827…….24929] Out 1341z S2	Malc	SUN
	1715z	01/12 [976/00] Out 1718z S3	Malc	WED
	1330z	02/12 [524/38 58168…….67435] Out 1341z S2	Malc	THU
	1715z	03/12 [976/00] Out 1718z S4	Malc	FRI
	1330z	05/12 [524/38 58168…….67435] Out 1341z S3	Malc	SUN
	1715z	08/12 [975/30 97688…….58334] Out 1724z S5	Malc	WED
	1330z	09/12 [521/00] Out 1333z S2 (Dutch SDR)	Malc	THU
	1715z	10/12 [975/30 97688…….58334] Out 1724z S5	Malc, Gary H	FRI
	1330z	16/12 [527/00] Out 1333z S3	Malc	THU
	1715z	15/12 [970/00] Out 1718z S9	Malc, RNGB	WED
	1715z	17/12 [977/00] Out 1718z S2	Malc	FRI
	1330z	19/12 [528/00] Out 1333z S3	Malc	SUN
	1715z	22/12 [978/00] Out 1718z S9	Malc, Gary H	WED
	1715z	29/12 [970/00] Out 1718z S5	Malc	WED
	1330z	30/12 [527/00] Out 1333z S2	Malc	THU
	1715z	31/12 [970/00] Out 1718z S5	Malc	FRI
5149khz	0820z	04/11 [435/00] Out 0823z S3 (Dutch SDR)	Malc, RNGB	THU
	0820z	05/11 [430/00] Out 0823z S2	Malc, RNGB	FRI
	0820z	11/11 [435/31 62674…….48713] Out 0829z S2	Malc	THU
	0820z	18/11 [434/00]	RNGB, Malc	THU
	0820z	19/11 [435/00] Out 0823z S2	Malc	FRI
	0820z	25/11 [434/00] Out 0748z S2	Malc	THU
	0820z	26/11 [435/00] Out S3	Malc	FRI
	0820z	02/12 [434/00] Out 0823z S3	Malc	THU
	0820z	03/12 [435/00] Out 0823z S3	Malc	FRI
	0820z	09/12 [430/00] Out 0823z S6	Malc	THU
	0820z	10/12 [434/00] Out 0823z S4	Malc	FRI
	0820z	16/12 [430/00] Out 0823z S3	Malc	THU
	0820z	17/12 [436/00] Out 0823z S5	Malc, RNGB	FRI
	0820z	23/12 [430/00]	RNGB	THU
	0820z	24/12 [438/00] Out 0823z S3	Malc	FRI
	0820z	30/12 [438/33 27329 99221 83297 41061 89994 75791 24180…….34877] Out 0830z S3	RNGB, Malc	THU
	0820z	31/12 [438/33 27329…..etc] Repeat of Thursday	Malc	FRI
5371kHz	0730z	07/11 [498/36 18816…….28444] Out 0740z S2	Malc	SUN
	0730z	14/11 [495/00]	Andre	SUN
	0730z	21/11 [490/00] Out 0733z S3	Malc	SUN
	0730z	27/11 [490/00] Out 0733z S5	Malc	SAT
	0730z	04/12 [495/00] Out 0733z S3	Malc	SAT
	0730z	19/12 [492/00] Out 0733z S4	Malc	SUN
5409khz	1530z	04/11 [264/00] Out 1533z S9	Malc	THU
	1530z	11/11 [264/00] Out 1533z S9	Malc, Brixmis	THU
	1530z	18/11 [268/00] Out 1533z	Brixmis, Malc	THU
	1530z	25/11 [264/40 91452 91121 79628 77389 79078 89700 73306 99943…….21240 22314]	Gary H, Malc	THU
	1530z	02/12 [260/00] Out 1533z S5	Malc, Brixmis	THU
	1530z	09/12 [261/00] Out 1533z S3	Malc	THU
	1530z	16/12 [261/00] Out 1533z S9	Malc, Brixmis	THU
	1530z	23/12 [267/40 37082 70223 39595 50558 19169 48239 45005 88963……11334 21389]	Gary H	THU
	1530z	30/12 [260/00] Out 1533z S5	Malc, Brixmis	THU
5432kHz	1605z	02/11 [232/00]	Ary	TUE
	1605z	07/11 [231/00] Out 1608z S4	Malc, Brixmis	SUN
	1605z	09/11 [230/00] Out 1608z S7	Malc, Brixmis	TUE
	1605z	14/11 [236/00]	Brixmis	SUN
	1605z	16/11 [235/00] Out 1608z S7	Malc	TUE
	1605z	21/11 [237/00] Out 1608z S4	Malc	SUN
	1605z	23/11 [238/40 39939……..95351] Out 1616z S9	Malc	TUE
	1605z	28/11 [238/40 39939……..95351] Out 1616z S5	Malc	SUN
	1605z	30/11 [230/00] Out 1608z S6	Malc	TUE

	1605z	05/12 [236/00] Out 1608z S7	Malc, Brixmis	SUN
	1605z	07/12 [238/35 98866……..44564] Out 1615z S7	Malc	TUE
	1605z	14/12 [238/00] Out 1608z S6	Malc	TUE
	1605z	21/12 [238/00] Out 1608z S9+QRM	Malc	TUE
	1605z	26/12 [237/00] Out 1608z	Brixmis	SUN
	1605z	28/12 [238/00] Out 1608z S4+QRM	Malc	TUE
5779kHz	1730z	04/11 [416/00] Out 1733z S5	Malc	THU
	1730z	11/11 [414/00] Out 1733z S3	Malc	THU
	1730z	18/11 [416/00] Out 1733z S7	Malc	THU
	1730z	25/11 [416/38 96353 29819 39905 ... 10937 65869 22447] Out 1741z S9	Ary, Gary H, Malc	THU
	1730z	02/12 [414/00] Out 1733z S5	Malc, Brixmis	THU
	1730z	09/12 [412/00]	Gary H, Malc	THU
	1730z	16/12 [412/00] Out 1733z S9	Malc	THU
	1730z	23/12 [414/00] Out 1733z	Brixmis	THU
	1730z	30/12 [412/40 12846…….60265] Out 1741z S2 QSB1	Malc, Ary	THU
6433Khz	1205z	02/11 [469/00] Out 1208z S3	Malc, XAH, RNGB	TUE
	1205z	03/11 [469/00] Out 1208z S5 (Dutch SDR)	Malc	WED
	1205z	09/11 [463/31 02502…….93004] Out 1215z S7 (Finnish SDR)	Malc	TUE
	1205z	17/11 [469/00]	dMHz	WED
	1205z	23/11 [465/00] Out 1208z S4	Malc	TUE
	1205z	24/11 [469/00] Out 1208z S3	Malc	WED
	1205z	30/11 [464/00] Out 1208z S2	Malc	TUE
	1205z	01/12 [465/00] Out 1208z S2	Malc, Brixmis	WED
	1205z	14/12 [463/00] Out 1208z S2	Malc	TUE
	1205z	15/12 [469/00] Out 1208z S2	Malc	WED
	1205z	21/12 [466/00] Out 1208z S2	Malc	TUE
	1205z	22/12 [646/00] Out 1208z S2	Malc	WED
	1205z	29/12 [463/40 20540…….53366] Out 1216z S2	Malc	WED
6804kHz	0700z	02/11 [577/00] Out 0703z S3	Malc, RNGB	TUE
	0700z	05/11 [577/00]	Ary	FRI
	0700z	09/11 [571/00] Out 0703z S2	Malc	TUE
	0700z	12/11 [577/00] Out 0703z	Brixmis	FRI
	0700z	16/11 [570/35 10571 27982 10902 96224 96324 14493 84989 88447……26247 27971] Out 0710z	RNGB, Malc	TUE
	0700z	19/11 [570/35 10571…..etc] Repeat of Tuesday	Brixmis	FRI
	0700z	23/11 [571/00] Out 0703z S2	Malc	TUE
	0700z	30/11 [579/00] Out 0703z S3	Malc	TUE
	0700z	07/12 [571/34 29533 44940 29645 43364 12193 19783 85201 38697……45806 83256] Out 0710z	RNGB, Malc	TUE
	0700z	21/12 [576/00] Out 0703z S4	Malc, RNGB	TUE
6849kHz	1900z	01/11 [648/00] Out 1903z S3	Malc	MON
	1900z	04/11 [641/00] Out 1903Zz S4	Malc	THU
	1900z	08/11 [646/00] Out 1903z S2 QSB1	Malc	MON
	1900z	11/11 [649/00] Out 1903z S9	Malc, Brixmis	THU
	1900z	15/11 [647/00] Out 1903z S2 (Dutch SDR)	Malc, Gary H	MON
	1900z	18/11 [644/00] Out 1903z	Brixmis	THU
	1815z	21/11 [925/37 59413…….98347] Out 1826z S2 (Dutch SDR)	Malc	SUN
	1900z	22/11 [641/34 57253…….02004] Out 1910z S2 (Dutch SDR)	Malc	MON
	1900z	25/11 [641/34 57253……etc] Repeat of Monday	Malc	THU
	1815z	26/11 [929/00] Out 1818z S2	Malc, dMHz	FRI
	1900z	29/11 [646/00] Out 1903z S3	Malc	MON
	1815z	05/12 [921/32 83243…….92461] Out 1825z S2 (Dutch SDR)	Malc, HfD	SUN
	1900z	06/12 [644/39 88479…….07699] Out 1911z S2 (Dutch SDR)	Malc	MON
	1900z	09/12 [644/39 88479….etc] Repeat of Monday	Malc	THU
	1815z	10/12 [922/00] Out 1818z S2	Malc	FRI
	1900z	13/12 [640/00] Out 1903z S3 (Dutch SDR)	Malc	MON
	1900z	16/12 [643/00] Out 1903z S2 (Dutch SDR)	Malc	THU
	1815z	17/12 [921/00] Out 1818z S3	Malc	FRI
	1815z	19/12 [927/00] Out 1818z S4 (Dutch SDR)	Malc	SUN
	1900z	20/12 [648/00] Out 1903z S2	Malc, Gary H	MON
	1900z	27/12 [648/00] Out 1903z S3 (Dutch SDR)	Malc	MON
	1900z	30/12 [648/00] Out 1903z S2+QRM (Dutch SDR)	Malc	THU
	1815z	31/12 [925/00] Out 1818z S2	Malc	FRI
7469kHz	0930z	03/11 [278/00] Out 0933z S9 (Dutch SDR)	Malc, RNGB	WED
	0930z	04/11 [277/00]	RNGB	THU
	0930z	11/11 [271/40 11617…….60200] Out 0941z S5	Malc	THU
	0930z	17/11 [270/00] Out 0933z S3	Malc	WED
	0930z	18/11 [278/00] Out 0933z S3	Malc	THU
	0930z	24/11 [273/00] Out 0933z S5	Malc	WED

	0930z	25/11 [277/00] Out 0933z S2	Malc	THU
	0930z	01/12 [278/33 01327 28582 77482 54150 46024 28788 82553 37292……17488 70710] Out 0940z	RNGB, Malc	WED
	0930z	02/12 [278/33 01327….etc] Repeat of Wednesday	Malc	THU
	0930z	08/12 [273/00] Out 0933z S2	Malc	WED
	0930z	09/12 [279/00]	Brixmis	THU
	0930z	15/12 [275/00] Out 0933z S3	Malc	WED
	0930z	16/12 [270/00] Out 0933z S2	Malc, RNGB	THU
	0930z	22/12 [278/00] Out 0933z S2	Malc	WED
	0930z	29/12 [270/00] Out 0933z S3	Malc	WED
	0930z	30/12 [279/00] Out 0933z S2	Malc	THU
7840kHz	0645z	02/11 [515/00]	Ary, RNGB	TUE
	0645z	14/12 [518/00]	HfD	TUE
7850kHz	0600z	20/12 [351/31 49559……etc]	HfD	MON
7984kHz	1045z	01/11 [696/36 03122 60177 43093 26857 32469 23523 07167……39982 36478] Out 1055z	RNGB, Malc	MON
	1045z	03/11 [696/36 03122….etc] Repeat of Monday	Malc	WED
	1045z	10/11 [698/00]	Brixmis	WED
	1045z	15/11 [694/00] Out 1048z S5 (Dutch SDR)	Malc, Brixmis	MON
	1045z	17/11 [690/00] Out 1048z S4	Malc	WED
	1045z	22/11 [693/00] Out 1048z S3	Malc	MON
	1048z	24/11 [693/00] Out 1048z S4	Malc	WED
	1045z	29/11 [691/00] Out 1048z S6	Malc	MON
	1045z	01/12 [690/00] Out 1048z S4	Malc	WED
	1045z	06/12 [690/00] Out 1048z S2	Malc	MON
	1045z	08/12 [693/00] Out 1048z S3	Malc	WED
	1045z	13/12 [693/32 32967…….79714] Out 1055z S4	Malc	MON
	1045z	15/12 [693/35 32967…..etc] Repeat of Monday	Malc	WED
	1045z	20/12 [693/00] Out 1048z S6	Malc	MON
	1045z	22/12 [693/00] Out 1048z S3	Malc	WED
	1045z	27/12 [691/00] Out 1048z S2	Malc	MON
	1045z	29/12 [698/00] Out 1048z S2	Malc	WED
9052kHz	0315z	17/11 [258/31 58559 24327 14951 27591 24618 17759 47329 38101……76583 89210]	Ary	WED
	0315z	22/12 [253/00]	HfD	WED
9079kHz	1000z	02/11 [300/00]	Ary, Malc, RNGB	TUE
	1000z	05/11 [300/00] Out 1003z S4	Malc	FRI
	1000z	09/11 [308/37 73402…….78590] Out 1011z S4	Malc	TUE
	1000z	16/11 [304/00] Out 1003z S3	Malc, RNGB	TUE
	1000z	19/11 [306/00] Out 1003z S3	Malc	FRI
	1000z	23/11 [307/00] Out 1003z S8	Malc	TUE
	1000z	26/11 [304/00] Out 1003z S3	Malc	FRI
	1000z	30/11 [304/00] Out 1003z S5	Malc	TUE
	1000z	03/12 [300/00] Out 1003z S5	Malc	FRI
	1000z	07/12 [308/00] Out 1003z S3	Malc	TUE
	1000z	10/12 [309/00] Out 1003Z S5	Malc	FRI
	1000z	14/12 [302/35 53601…….17904] Out 1010z S5	Malc	TUE
	1000z	17/12 [302/35 53601…..etc] Repeat of Tuesday	Malc	FRI
	1000z	21/12 [304/00] Out 1003z S3	Malc	TUE
	1000z	24/12 [300/00] Out 1003z S5	Malc	FRI
	1000z	28/12 [300/00] Out 1003z S7	Malc	TUE
9130kHz	0715z	02/11 [639/00] Out 0718z S5	Malc, RNGB	TUE
	0715z	05/11 [636/00] Out 0718z S6	Malc	FRI
	0715z	09/11 [636/35 07230……..46584] Out 0725z S4	Malc	TUE
	0715z	16/11 [630/00]	RNGB	TUE
	0715z	19/11 [637/00] Out 0718z S4	Malc, Brixmis	FRI
	0715z	23/11 [630/00] Out 0718z S4	Malc	TUE
	0715z	30/11 [635/00] Out 0718z S6	Malc	TUE
	0715z	03/12 [631/00] Out 0718z S4	Malc	FRI
	0715z	07/12 [637/00] Out 0718z S3	Malc, RNGB	TUE
	0715z	14/12 [637/00] Out 0718z S7	Malc	TUE
	0715z	17/12 [639/00] Out 0718z S4	Malc	FRI
	0715z	21/12 [633/33 45480 87020 31542 10502 28478 62211 60063 98413……32360 49861] Out S5	RNGB, Malc	TUE
	0715z	28/12 [639/00] Out 0718z S4	Malc	TUE
	0715z	31/12 [636/00] Out 0718z S8	Malc	FRI
10213kHz	0745z	01/11 [269/00] Out 0748z S4	Malc, XAH	MON
	0745z	08/11 [261/00] Out 0748z S9	Malc	MON
	0745z	15/11 [269/00] Out 0748z S4	Malc	MON

	0745z	22/11 [26?/40 91452…….22314] Out 0756z S2 (Dutch SDR)	Malc	MON
	0745z	29/11 [268/00] Out 0748z S5	Malc	MON
	0745z	06/12 [260/00] Out 0748z S5	Malc, Brixmis	MON
	0745z	13/12 [260/00] Out 0748z S9	Malc	MON
	0745z	20/12 [367/40 37080…….21389] Out 0756z S5	Malc	MON
10487kHz	1910z	05/11 [616/00] Out 1913z S2 (Dutch SDR)	Malc, RNGB	FRI
	1910z	26/11 [613/00]	dMHz	FRI
	1910z	28/11 [616/00] Out 1913z S2	Malc	SUN
	1910z	10/12 [613/00] Out 1913z S2	Malc	FRI
	1910z	17/12 [611/35 48477 61144 71858 90821 30625 66841 10762 11785…… 65670 20573]	Ary	FRI
11092kHz	0900z	01/11 [535/34 97824 92835 83646 07974 08022 02539 52353 04368……12036] Out 0910z S5	RNGB, Malc	MON
	0900z	03/11 [535/34 97824…..etc] Repeat of Monday	Malc	WED
	0900z	08/11 [535/00] Out 0903z S3	Malc, RNGB	MON
	0900z	10/11 [537/00]	RNGB	WED
	0900z	15/11 [537/00] Out 0903z S5	Malc, RNGB	MON
	0900z	17/11 [714/00] Out 0903z S4	Malc	WED
	0900z	22/11 [537/00] Out 0903z S5	Malc	MON
	0900z	24/11 [538/00] Out 0903z S6	Malc	WED
	0900z	29/11 [534/00] Out 0903z S4	Malc	MON
	0900z	01/12 [533/00] Out 0903z S3	Malc, RNGB	WED
	0900z	06/12 [535/00] Out 0903z S3	Malc, RNGB	MON
	0900z	08/12 [538/00] Out 0903z S6	Malc	WED
	0900z	13/12 [536/00] Out 0903z S3+QRM	Malc	MON
	0900z	15/12 [538/00] Out 0903z S5	Malc	WED
	0900z	20/12 [533/34 55718 12836 41475 78500 31596 16778 61068……05205 28405] Out 0910z S4	RNGB, Malc	MON
	0900z	22/12 [533/34 55718…….etc] Repeat of Monday	Malc	WED
	0900z	27/12 [535/00] Out 0903z S3+QRM	Malc	MON
	0900z	29/12 [530/00] Out 0903z S3	Malc, RNGB	WED
11104kHz	0715z	03/11 [757/00] Out 0718z S6	Malc	WED
	0715z	08/11 [753/00] Out 0718z S4	Malc	MON
	0715z	15/11 [755/00] Out 0718z S4	Malc	MON
	0715z	17/11 [759/00] Out 0718z S6	Malc	WED
	0715z	24/11 [757/38 61157…….37062] Out 0726z S6	Malc	WED
	0715z	01/12 [752/00] Out 0718z S2	Malc	WED
	0715z	08/12 [753/00] Out 0718z S2	Malc	WED
	0715z	13/12 [750/00] Out 0718z S2+QRM	Malc	MON
	0715z	15/12 [751/00] Out 0718z S2	Malc	WED
	0715z	20/12 [751/33 99777…….11030] Out 0725z S6	Malc	MON
	0715z	22/12 [751/33 99777…..etc] Repeat of Monday	Malc	WED
	0715z	29/12 [753/00] Out 0718z S2	Malc	WED
12067kHz	0845z	01/11 [713/00] Out 0848z S3	Malc, XAH, RNGB	MON
	0845z	03/11 [719/00] Out 0848z S6	Malc, RNGB	WED
	0845z	08/11 [715/00] Out 0848z S3	Malc	MON
	0845z	10/11 [713/00]	RNGB	WED
	0845z	15/11 [714/00] Out 0848z S9	Malc, RNGB	MON
	0845z	17/11 [714/00]	Brixmis, RNGB, Malc	WED
	0845z	22/11 [719/33 49390…….38307] Out 0855z S4	Malc	MON
	0845z	24/11 [719/33 49390….etc] Repeat of Monday	Malc	WED
	0845z	29/11 [713/00] Out 0848z S3	Malc	MON
	0845z	01/12 [719/00] Out 0848z S6	Malc	WED
	0845z	06/12 [719/00] Out 0848z S5+QRM	Malc	MON
	0845z	08/12 [719/00] Out 0848z S7	Malc	WED
	0845z	13/12 [710/00] Out 0848z S4	Malc	MON
	0845z	15/12 [710/00] Out 0848z S4	Malc, RNGB	WED
	0845z	20/12 [711/00]	RNGB	MON
	0845z	22/12 [718/00] Out 0848z S3	Malc	WED
	0845z	27/12 [714/37 14950 02532 80342 27277 71847 52616 09377 20820……15972 14235] Out 0856z	RNGB, Malc	MON
	0845z	29/12 [714/37 14950…..etc] Out 0856z S3	Malc	WED
12089kHz	0845z	02/11 [151/38 46813 36400 25920 97109 79358 99685 11027 29696……65909 64388] Out 0856z	XAH, Malc	TUE
	0845z	04/11 [151/38 46813….etc] Repeat of Tuesday	RNGB, Malc	WED
	0845z	09/11 [151/00] Out 0848z S3	Malc	TUE
	0845z	11/11 [155/00] Out S5	Malc	THU
	0845z	16/11 [150/00] Out 0848z S2	Malc	TUE
	0845z	18/11 [157/00] Out 0848z S4	Malc	THU
	0845z	23/11 [155/00] Out 0848z S7	Malc	TUE
	0845z	25/11 [150/00] Out 0848z S2	Malc	THU
	0845z	30/11 [151/00] Out 0848z S2	Malc	TUE

	0845z	02/12 [157/00] Out 0848z S9	Malc	THU
	0845z	07/12 [159/00] Out 0848z S4	Malc, RNGB	TUE
	0845z	09/12 [152/00] Out 0848z S4	Malc, RNGB	THU
	0845z	14/12 [156/32 75656 30724 69483 87500 91722 99602 29106……46823 58422] Out 0855z S5	RNGB, Malc	TUE
	0845z	16/12 [156/32 75656……etc] Repeat of Tuesday	Malc	THU
	0845z	21/12 [159/00] Out 0848z S7	Malc	TUE
	0845z	28/12 [150/00] Out 0848z S4	Malc	TUE
	0845z	30/12 [154/00] Out 0848z S3	Malc, RNGB	THU
12924kHz	1745z	01/11 [244/39 45431 47629 92875 66656 28422 55225 53812 32725…..…99499 67644]	dMHz	MON
	1745z	07/11 [244/39 45431….etc] Repeat of Monday	Malc	SUN
	1745z	06/12 [242/00] Out 1748z S2	Malc	MON
	1745z	20/12 [248/00] Out 1748z S2 (Dutch SDR)	Malc	MON
	1745z	26/12 [245/00]	Gary H	SUN
	1745z	27/12 [249/00] Out 1748z S2 (Finnish SDR)	Malc, dMHz	MON
13363kHz	1430z	27/11 [911/31 75506 37931 64195 40803 68480 98069 93910 44265…….60945 37746]	Ary	SAT
	1430z	30/11 [918/00] Out 1433z S5	Malc	TUE
	1430z	04/12 [915/00] Out 1433z S4	Malc	SAT
	1430z	07/12 [917/00] Out 1433z S7	Malc, HfD	TUE
	1430z	14/12 [919/00] Out 1433z S5	Malc	TUE
	1430z	18/12 [910/00] Out 1433z S9	Malc	SAT
	1430z	21/12 [912/31 43710…….59031] Out 1440z S4	Malc	TUE
	1430z	28/12 [911/00] Out 1433z S6	Malc	TUE
13908kHz	0745z	02/11 [221/00] Out 0748z S8	Malc, RNGB	TUE
	0745z	04/11 [225/00] Out 0748z S2	Malc, RNGB	THU
	0745z	09/11 [224/00] Out 0748z S9 (Finnish SDR)	Malc, RNGB	TUE
	0745z	11/11 [220/00] Out 0748z S4	Malc, RNGB	THU
	0745z	16/11 [223/00] Out 0748z S2 (Dutch SDR)	Malc, RNGB	TUE
	0745z	18/11 [229/00]	RNGB, Malc	THU
	0745z	23/11 [229/32 83114……..47787] Out 0755z S2 (Dutch SDR)	Malc	TUE
	0745z	25/11 [229/32 83114…….etc] Out 0755z S2	Malc	THU
	0745z	30/11 [220/00] Out 0748z S6	Malc	TUE
	0745z	02/12 [221/00] Out 0748z S2	Malc	THU
	0745z	07/12 [225/00] Out 0748z S2	Malc	TUE
	0745z	09/12 [225/00] Out 0748z S2 (Dutch SDR)	Malc	THU
	0745z	14/12 [221/00] Out 0748z S2	Malc	TUE
	0745z	16/12 [225/00] Out 0745z S2	Malc, RNGB	THU
	0745z	21/12 [225/34 60373 40315 95047 45918 22716 92576 68747 09133…….27814] Out 0755z S7	RNGB, Malc	TUE
	0746z	23/12 [225/34 670373…..etc] Repeat of Tuesday	RNGB	THU
	0745z	28/12 [223/00] Out 0848z S2	Malc	TUE
	0745z	30/12 [228/00] Out 0748z S2	Malc	THU
14611kHz	0820z	02/11 [131/40 03771 04827 83898 53572 18920 18700 22174……53648 66459] Out 0831z S9	RNGB, Malc	TUE
	0820z	03/11 [131/40 03771….etc] Repeat of Tuesday	Malc, RNGB	WED
	0820z	09/11 [132/00] Out 0823z S4	Malc	TUE
	0820z	16/11 [131/00]	RNGB	TUE
	0820z	17/11 [138/00] Out 0823z S5	Malc	WED
	0820z	23/11 [135/00] Out 0823z S3	Malc	TUE
	0820z	24/11 [138/00] Out 0823z S6	Malc	WED
	0820z	30/11 [135/00] Out 0823z S4 (Dutch SDR)	Malc	TUE
	0820z	01/12 [135/00] Out 0823z S3 (Dutch SDR)	Malc, RNGB	WED
	0820z	07/12 [138/00] Out 0823z S2 (Dutch SDR)	Malc	TUE
	0820z	08/12 [138/00] Out 0823z S9	Malc	WED
	0820z	14/12 [133/00] Out 0823z S6	Malc, RNGB	TUE
	0820z	15/12 [135/00] Out 0823z S2 (Dutch SDR)	Malc, RNGB	WED
	0820z	21/12 [133/40 55729 92708 91440 48048 51175 56748 91146 58959……70363 12171] Out 0831z	RNGB, Malc	TUE
	0820z	22/12 [133/40 55729……etc] Repeat of Tuesday	Malc	WED
	0820z	28/12 [138/00] Out 0823z S5	Malc, RNGB	TUE
	0820z	29/12 [138/00] Out 0823z S4	Malc	WED
14940kHz	0830z	05/11 [181/00] Out 0833z S2	Malc, RNGB	FRI
	0830z	08/11 [184/00] Out 0833z S4	Malc, RNGB	MON
	0830z	12/11 [182/00] Out 0833z	Brixmis	FRI
	0830z	15/11 [182/00] Out 0833z S4	Malc, RNGB	MON
	0830z	19/11 [189/00] Out 0833z S4	Malc	FRI
	0830z	22/11 [185/24 15093…….44434] Out 0837z S4	Malc	MON
	0830z	26/11 [185/24 15093….etc] Repeat of Monday	Malc	FRI
	0830z	29/11 [182/00] Out 0833z S4	Malc	MON
	0830z	03/12 [180/00] Out 0833z S5	Malc, RNGB	FRI
	0830z	06/12 [183/34 67242 46548 71320 80509 97675 79884 41924……..29945 37387]	RNGB	MON

	0830z	10/12 [184/24 67242…….37387] Out 0840z S4	(Finnish SDR)	Malc	FRI
	0830z	13/12 [183/00] Out 0833z S2		Malc, HfD	MON
	0830z	17/12 [180/00] Out 0833z S2		Malc, RNGB	FRI
	0830z	20/12 [188/00] Out 0833z S2		Malc, RNGB	MON
	0830z	24/12 [183/00] Out 0833z S8		Malc, RNGB	FRI
	0830z	31/12 [180/00] Out 0833z S9		Malc	FRI
16005kHz	0640z	15/11 [941/00]		RNGB	MON
	0640z	13/12 [942/00]		RNGB	MON
	0640z	27/12 [942/00]		HfD, RNGB	MON
17378kHz	0745z	03/11 [346/00] Out 0748z S3 (Dutch SDR)		Malc	WED
	0745z	05/11 [344/00] Out 0748z S3 (Dutch SDR)		Malc	FRI
	0745z	17/11 [348/00] Out 1748z S2 (Dutch SDR)		Malc	WED
	0745z	19/11 [349/00] Out 0748z S3 (Dutch SDR)		Malc	FRI
	0745z	24/11 [344/32 60174…….56439] Out 0755z S2	(Dutch SDR)	Malc	WED
	0745z	26/11 [344/32 60174…. etc] Repeat of Wednesday		Malc	FRI
	0745z	01/12 [348/00] Out 0748z S3 (Dutch SDR)		Malc	WED
	0745z	03/12 [340/00] Out 0748z S3 (Dutch SDR)		Malc	FRI
	0745z	08/12 [340/00] Out 0748z S2 (Dutch SDR)		Malc	WED
	0745z	10/12 [340/00] Out 0748z S2 (Dutch SDR)		Malc	FRI
	0745z	15/12 [347/00] Out 0748z S2 (Dutch SDR)		Malc	WED
	0745z	17/12 [347/00] Out 0748z S3 (Dutch SDR)		Malc	FRI
	0745z	22/12 [349/00] Out 0748z S2		Malc	WED
	0745z	24/12 [346/00] Out 0748z S4 (Dutch SDR)		Malc	FRI
	0745z	29/12 [340/39 65723…….00932] Out 0756z S2	(Dutch SDR)	Malc	WED
	0745z	31/12 [340/40 65723……etc] Repeat of Wednesday		Malc	FRI

E17z

Thursday

November 2021

0800z 11170kHz 0810z 9820kHz

04/11	217 930 5 53516 25616 56069 96813 14199 930 5 00000	[0800z DutchSDR]	Weak
11/11	217 930 5 53516 25616 56069 96813 14199 930 5 00000		Weak
18/11	217 843 5 10597 23521 47660 92883 69901 843 5 00000		Weak
25/11	217 843 5 10597 23521 47660 92883 69901 843 5 00000		Weak

December 2021

02/12	217 980 5 40614 77249 40678 17987 20597 980 5 00000	[0800z DutchSDR]	Weak
09/12	217 980 5 40614 77249 40678 17987 20597 980 5 00000	0800z Fair, 0810z	Weak
16/12	217 489 5 37184 36129 33983 83321 85246 489 5 00000	[0800z Dutch SDR]	Weak
30/12	217 00000	[0809z Dutch SDR]	Weak

S06

Thursdays (Repeats Friday) 0830z 19875kHz 0930z 16067kHz

04/11 NRH (Russian national holiday)

11/11 ‘842’ 913 42 89523 35541 54595 57912 55773 81658 69976 11042 63763 39476 79164 11290 05578 96633 31467 35734 94318 32197 64957 63485 44254 86131 97602 50087 36607 57003 59516 07500 13175 38837 20997 63070 64972 33076 96064 95958 08084 96569 26171 74431 63898 11540 913 42 00000

18/11 ‘842’ 576 43 20565 33444 16084 92572 76961 60984 78343 10559 19759 36487 49258 61348 00779 06918 77989 37403 90604 41587 67996 15563 46160 63758 03834 34796 18221 81966 76493 66627 22304 38229 93205 07935 21379 15341 82662 50786 93830 70435 31584 09023 85113 87006 13565 576 43 00000

25/11 ‘842’ 930 44 56204 64085 19841 80902 25191 04352 27818 03907 05328 78158 00260 72136 21378 57051 08553 85146 65312 31821 36302 86094 35489 27140 48304 59293 98193 28024 06581 35182 26231 91544 42700 17643 94258 42231 08540 07202 35542 74608 92708 01849 89824 11292 02787 87030 930 44 00000

Fridays (1st & 3rd) **2000z 7553khz** **2100z 5329kHz**

05/11 ‘768’ 00000

19/11 ‘768’ 259 40 27286 04156 70242 22851 77820 41191 43991 68193 39789 60388 45162 47275 32192 03214 70988 33315 97350 33661 38755 69436 30902 85067 19942 43664 57330 28710 54440 91355 28881 78105 89404 27974 76731 85129 09891 67017 91627 29953 47120 38734 259 40 00000

S06s Nov log:

Monday

1st/8th	0630/0640z	13470/16515	‘462’ 510 7 17976 21816 42997 94184 74374 74154 08531
15th/22nd			‘462’ 593 7 46186 16945 80744 86200 84706 42227 61736
1st/8th	0830/0840z	8057/8530	‘764’ 823 5 53516 25616 56069 48834 50128
15th/22nd			‘764’ 938 5 22262 54385 72704 06321 33354
1st/8th	0900/0910z	14675/12830	‘232’ 418 5 41736 23990 56281 63156 05365
15th/22nd			‘232’ 490 5 30614 77249 40678 17966 22917
1st/8th	1300/1310z	8420/10635	‘149’ 235 6 86862 29534 17228 88147 40429 11230
15th/22nd			‘149’ 865 7 21767 53672 22834 82022 36993 42412 55786

Tuesday

2nd/9th	0600/0610z	16145/14240	‘438’ 219 5 96191 80933 58135 11133 80873
16th/23rd			‘438’ 276 5 52401 62929 93699 34500 64248
2nd/9th	0700/0710z	5250/6320	‘452’ 863 7 79419 81542 91791 93413 69552 94321 00229
16th/23rd			‘452’ 936 7 25534 24690 85580 50286 02008 71341 65152
2nd/9th	0730/0740z	7410/11532	‘427’ 891 5 88620 48069 61732 74537 44330
16th/23rd			‘427’ 863 5 46062 68672 97478 39685 30485
2nd/9th	0800/0810z	11945/13195	‘127’ 436 5 29534 16228 15626 47891 22247
16th/23rd			‘127’ 930 5 21767 53672 11834 81022 36903
2nd/9th	1000/1010z	6440/5660	‘427’ 831 5 40614 77249 40678 17977 21716
16th/23rd			‘427’ 538 6 88620 58069 61732 74537 57440 10597
2nd/9th	1100/1110z	5035/5975	‘265’ 439 7 22272 54385 83707 06123 33534 88280 74226
16th/23rd			‘265’ 914 7 39534 17338 15636 47891 23247 54770 10597

Wednesday

3rd/10th	0830/0840z	7062/10532	‘464’ 287 5 65906 66610 20336 17301 88554
17th/24th			‘464’ 870 5 52536 55678 69528 94083 70552
3rd/10th	1000/1010z	12365/14280	‘276‘ 918 5 40614 57856 98835 46186 16945
17th/24th			‘276’ 910 5 64687 68321 23809 52985 14199

Thursday

4th/11th	(E17z) 0800/0810z	11170/9820	‘217’ 930 5 53516 25616 56069 96813 14199
18th/25th			‘217’ 843 5 10597 23521 47660 92883 69901
4th/11th	0830/0840	11535/11830	‘172’ 860 5 16070 58834 53735 78386 91497
18th/25th			‘172’ 903 5 88280 84116 53718 79827 34694
4th/11th	0930/0940z	8812/9540	‘698’ 270 5 80744 86200 84706 42227 61736
18th/25th			‘698’ 213 5 88620 58069 61732 74537 57440
4th/11th	1200/1210z	12155/10920	‘175’ 940 6 97067 58604 55581 20044 79628 11171
18th/25th			‘175’ 239 6 88146 98835 46186 16945 80744 82707

Friday

5th/12th	0830/0840z	11040/12153	‘156’ 930 7 21767 53672 11834 81022 36903 41412 55678
19th/26th			‘156’ 480 7 17301 88554 82045 36707 24042 75956 31680
5th/12th	0900/0910z	5765/6315	‘239’ 814 5 40614 77249 40678 17976 21816
19th/26th			‘239’ 805 6 45279 43825 55581 20044 52985 40614

Saturday

6th	0800/0810z	8680/8260	‘132’ 470 5 46062 68672 97478 39685 30485

Other transmissions:

S06e. 11073kHz 0600z 11073kHz

30/11 ‘352’ (R4) 819 40 56552 71932 41908 16873 40571 45765 41774 79766 23160 50768 84430 67874 70942 91434 24155 86648 56472 31963 64144 38073 94718 47471 56330 38526 26145 08123 65758 77525 41334 14895 03177 11342 32849 03291 92510 61107 28709 75464 06333 37839 819 40 ;

‘352’ (R1) 476 19 12597 92102 42301 15566 12803 76341 19675 84018 66415 18234 83731 04524 06279 85393 64507 621022 06697 70312 04323 476 18 00000. 0615z. Strong.

Searched at 0630 and 0700z and found no repeat transmissions. Ed Smith TUE. SDR Enschede.

S06 log Dec 2021

Thursdays (Repeats Friday) **0830z 17435kHz 0930z kHz**

02/12 '842' 167 45 78779 20913 00896 56498 83491 41018 54746 45412 91493 23868 11621 84984 75813 29989 26073 82631 21742 01928 66284 31484 31053 04093 07004 43836 32958 96280 90942 26864 06484 64335 75810 86581 43975 56372 09192 70944 10384 98006 98436 88058 78053 85023 67755 60425 41685 167 45 00000

09/12 '842' 953 46 91866 91839 56011 74602 62195 28263 98652 73520 00873 19714 34400 85665 33218 62487 68253 28583 84727 47909 51050 02538 62074 11082 41964 96734 52957 73868 42191 51495 05732 86811 23258 93574 74764 99652 98407 86822 42452 15167 10484 65346 53829 05969 34753 41400 24722 99012 953 46 00000

16/12 '842' 610 47 14870 13908 01425 01176 38327 78868 94590 58720 34128 45838 07069 98218 61996 61169 84265 89947 64490 68579 74438 98503 56178 73797 45655 36368 35181 21018 61836 12873 71765 54618 85072 14517 53675 64557 96392 77566 92885 38914 52175 38882 23476 71983 18403 75899 45298 01379 49920 610 47 00000

23/12 '842' 753 48 78985 88740 26415 27962 69966 18236 10412 48416 63935 93351 46242 98257 13767 81467 60819 37131 18050 52362 62194 76064 60805 45542 19942 98165 08716 25166 83541 69258 58074 83504 43428 61905 48614 78876 64409 41237 86432 18989 46135 86041 43179 25633 90301 43541 23697 41654 79281 41304 753 48 00000

Fridays (1st & 3rd) **2000z 7553khz 2100z 5329kHz**

03/12 '768' 00000
17/12 '768' 00000

Other transmissions:

0930z 10755kHz

15/12 '975' 341 60 62294 78392 56764 22918 74610 09880 56208 92577 97114 53494 30046 42061 53340 15258 25164 64670 79096 95778 27385 78447 84303 18170 94828 61771 74692 55291 87869 71850 88049 29745 62849 82077 24705 85059 21760 99157 76949 51503 35058 45963 87055 54965 79825 21053 88605 42340 60434 70781 10809 21856 03931 34047 50490 41775 47311 51916 41447 55919 58872 34152 341 60 00000 (restarts during the transmission) Thanks Ary

S06s Dec log:

Monday

6th/13th	0630/0640z	13470/16515	'462' 980 5 27284 26129 22983 82221 75246
20th/27th			'462' 873 5 46062 68672 97478 39685 30485
6th/13th	0830/0840z	8057/8530	'764' 801 5 22992 22529 28408 26265 36983
20th/27th			'764' 931 5 96320 36793 53038 76342 15009
6th/13th	0900/0910z	14675/12830	'232' 860 5 42798 46927 22032 28224 44623
20th/27th			'232' 491 5 65907 66610 20336 17301 88554
6th/13th	1300/1310z	8420/10635	'149' 208 5 33584 40485 46170 43306 37796
20th/27th			'149' 237 5 50128 99477 83574 48874 94031

Tuesday

7th/14th	0600/0610z	16145/14240	'438' 910 5 38366 42544 30638 43375 43806
21st/28th			'438' 965 7 47891 23247 17099 94961 35826 65906 77233
7th/14th	0700/0710z	5250/6320	'452' 931 6 37833 30024 32958 32235 87880 33582
21st/28th			'452' 981 6 26634 14690 95590 60386 03009 81413
7th/14th	0730/0740z	7410/11532	'427' 910 5 34558 42154 30342 36112 89898
21st/28th			'427' 895 6 33796 13577 74526 46647 79302 53516
7th/14th	0800/0810z	11945/13195	'127' 964 5 43530 41385 33511 97321 47827
21st/28th			'127' 849 5 20534 11160 43494 37638 16953
7th/14th	1000/1010z	6440/5660	'427' 830 5 37885 38365 37846 43798 35387
21st/28th			'427' 895 6 33796 13577 74526 46647 79302 53516
7th/14th	1100/1110z	5035/5975	'265' 901 7 46062 67672 97478 39685 30495 96632 52537
21st/28th			'265' 834 7 88620 58069 61732 74537 57440 10597 23521

Wednesday

1st/8th	0830/0840z	7062/10532	'464' 283 5 32993 32539 38408 36364 36982
15th/22nd			'464' 921 5 50535 46615 30766 32376 36872
1st/8th	1000/1010z	12365/14280	'276' 849 5 43798 46937 33032 38334 44613
15th/22nd			'276' 941 5 47837 38576 37867 43798 43209

Thursday

2nd/9th	(E17z)	0800/0810z	11170/9820	'217' 980 5 40614 77249 40678 17987 20597
16th/23rd				'217' 489 5 37184 36129 33983 83321 85246
2nd/9th		0830/0840z	11535/11830	'172' 830 5 88620 58069 61732 64537 47440
16th/23rd				'172' NRH
2nd/9th		0930/0940z	8812/9540	'698' 210 5 31467 33351 43533 35211 33212
16th/23rd				'698' 413 5 32993 32539 38408 36364 36982
2nd/9th		1200/1210z	12155/10920	'175' 984 6 37867 86001 40275 44333 31502 33886
16th/23rd				'175' 480 6 33584 40485 46170 43306 37796 85258

Friday

3rd/10th	0830/0840z	11040/12153	‘156’ 830 7 46062 68672 97478 39685 30485 96632 52537
17th/24th			‘156’ 803 7 88620 58069 61732 74537 57440 10597 23521
3rd/10th	0900/0910z	5765/6315	‘239’ 470 5 88620 58069 61732 74537 57440
17th/24th			‘239’ 405 6 52401 63919 92699 14600 74248 48754

Saturday

4th	0800/0810z	8680/8260	‘132’ 467 5 17099 94961 35826 65906 77233

S11a log Nov/Dec

5371kHz	0830z	06/11 [379/00] Konyetz 0833z	Malc	SAT
	0830z	07/11 [379/00] Konyetz 0833z S4	Malc	SUN
	0830z	20/11 [379/00] Konyetz 0833z S4	Malc	SAT
	0830z	21/11 [370/00] Konyetz 0833z S7	Malc	SUN
	0830z	27/11 [377/00] Konyetz 0833z S4	Malc	SAT
	0830z	28/11 [372/00] Konyetz 0833z S5	Malc	SUN
	0830z	04/12 [370/00] Konyetz 0833z S5	Malc	SAT
	0830z	05/12 [379/00] Konyetz 0833z S5	Malc	SUN
	0830z	18/12 [371/00] Konyetz 0833z S5	Malc	SAT
	0830z	19/12 [378/00] Konyetz 0833z S3	Malc	SUN
6252kHz	0915z	01/11 [483/36 15692 65926 75517 63458 73725 61951 48902……91947 31289] Konyetz 0926z	RNGB, Malc	MON
	0915z	05/11 [483/36 15692…..etc] Repeat of Monday	Malc	FRI
	0915z	08/11 [481/00] Konyetz 0918z S3	Malc	MON
	0915z	15/11 [481/00] Konyetz 0918z S5	Malc, RNGB	MON
	0915z	19/11 [483/00] Konyetz 0918z S2	Malc	FRI
	0915z	22/11 [486/00] Konyetz 0918z S4	Malc	MON
	0915z	26/11 [483/00] Konyetz 0918z S4	Malc	FRI
	0915z	29/11 [484/00] Konyetz 0918z S3	Malc	MON
	0915z	03/12 [482/00] Konyetz 0918z S4	Malc, RNGB	FRI
	0915z	06/12 [483/32 77694 80037 99142 68614 23395 60768 06900…….46848 48723] Konyetz 0926z	RNGB, Malc	MON
	0915z	10/12 [483/32 77964….etc] Repeat of Monday	Malc	FRI
	0915z	13/12 [482/00] Konyetz 0918z S6	Malc	MON
	0915z	17/12 [485/00] Konyetz 0918z S4	Malc, RNGB	FRI
	0915z	20/12 [487/00] Koneytz 0918z S4	Malc	MON
	0915z	27/12 [485/00] Konyetz 0918z S2	Malc	MON
	0915z	31/12 [487/00] Konyetz 0918z S3	Malc	FRI
8102kHz	1020z	02/11 [424/00]	Ary	TUE
	1020z	05/11 [422/00] Konyetz 1023z S2	Malc	FRI
	1020z	09/11 [426/37 59537 66743 30705 03078 15765 90534 53441 80295……04515 18458]	RNGB, Malc	TUE
	1020z	16/11 [424/00] Konyetz 1023z S2	Malc	TUE
	1020z	19/11 [424/00] Konyetz 1023z S4	Malc	FRI
	1020z	23/11 [429/00] Konyetz 1023z S5	Malc	TUE
	1020z	26/11 [427/00] Konyetz 1023z S3	Malc	FRI
	1020z	30/11 [422/00] Konyetz 1023z S3	Malc	TUE
	1020z	03/12 [421/00] Konyetz 1023z S4	Malc	FRI
	1020z	07/12 [429/31 29388 75519 17629 50530 38867 06552 13643……49056 07693] Konyetz 1030z	RNGB, Malc	TUE
	1020z	10/12 [429/31 29388…..etc] Repeat of Tuesday	Malc	FRI
	1020z	14/12 [423/53 45223…….82281] Konyetz 1036z S3	Malc	TUE
	1020z	17/12 [428/53 45223…..etc] Repeat of Tuesday	Malc	FRI
	1020z	21/12 [427/00] Konyetz 1023z S2	Malc	TUE
	1020z	24/12 [427/00] Konyetz 1023z S4	Malc	FRI
	1020z	28/12 [429/00] Konyetz 1023z S3	Malc	TUE
9050kHz	0700z	01/11 [477/00] Konyetz 0703z S7	Malc	MON
	0700z	04/11 [475/00] Konyetz 0703z S2	Malc, RNGB	THU
	0700z	25/11 [477/00] Konyetz 0703z S4	Malc	THU
	0700z	02/12 [472/00]	RNGB	THU
	0700z	16/12 [479/38 75882 95232 84933 87352 31775 68866 12344……37870 81741] Konyetz 0712z	RNGB, Malc	THU
9057kHz	0510z	27/12 [655/00]	HfD	MON
11486kHz	1850z	03/11 [281/00] Konyetz 1853z S2	Malc	WED
	1850z	17/11 [281/00] Konyetz 1853z S2 QSB1 (Dutch SDR)	Malc	WED
12530kHz	0500z	23/12 [385/00]	HfD	THU

V07

Sunday

November 2021

0100z 15946kHz 0120z 14846kHz 0140z 13486kHz

07/11 984 1 332 100 36124 ... 14252 000 000 Weak

984 984 984 1
332 100
36124 73341 48679 67769 12404
85103 45783 49054 11369 89953
89863 58529 96042 00944 74038
57070 17329 00460 10821 06112
58923 46296 54990 68317 56475
45149 33068 41092 73457 82228
63189 55723 58183 85591 07606
74204 54629 25799 41076 38522
21611 31716 58198 50176 26014
22718 62761 92159 42569 42527
76710 08420 38573 84975 85458
62152 68094 31141 49777 24116
71012 66810 57028 23731 52591
52937 98661 04833 63987 30205
03565 34391 28947 11220 79954
62544 58558 84956 38353 28282
36687 71623 15335 85054 83531
27557 73387 10232 39359 58156
34542 53684 16310 01668 63424
15944 62096 68217 19187 14252
000 000 *Courtesy DanAR*

14/11 984 1 591 116 98396 ... 13088 000 000 Weak

984 984 984 1
591 116
98396 24514 31409 21477 60501
21078 06841 99065 12053 06558
36835 40445 38666 44229 80885
09546 15279 42351 13780 79540
80048 25445 53667 90159 34729
27086 69839 69427 79604 84473
58846 56174 75692 94231 61277
31113 58847 25860 68795 50165
39420 95403 78818 49031 81651
27112 90094 36174 53780 05229
42887 14311 84951 27418 37049
66807 78533 91211 15026 68248
77739 47123 20099 20375 13320
32043 62693 62700 94026 45054
78722 21912 65266 54730 08588
50656 35530 47316 08925 48618
44904 23021 65109 24686 37539
88341 94989 09456 46135 03954
03197 61840 34779 70181 28321
26587 74814 79740 72762 86588
70140 81650 73197 35413 43318
18269 82774 09165 75180 37698
20526 42773 79225 54734 70089
13088 000 000 *Courtesy DanAR*

21/11 984 000 [Unusually no message] Weak

28/11 984 1 484 122 81809 ... 54492 000 000 Weak

984 984 984 1
484 122
81809 53409 34304 95353 60814
89905 79066 02212 13366 66779
09017 27519 71341 43077 76749
06260 61603 79723 80184 59938
53219 68007 73398 02664 67843
90569 07356 58484 32342 31504
05871 87225 06039 96889 52724
94342 48838 15909 04487 75380
63610 23235 44296 43538 60098
45842 77382 85472 99556 38131
70419 78999 00201 98966 85072
58579 32560 52455 79779 35842
39896 01604 65955 15954 01678
01876 62911 25051 90122 04780
74105 02962 40163 05389 19448
17422 03293 17896 52260 81927
65819 26122 67350 82260 82687
42194 48173 65790 01064 64851
12118 70337 01836 36949 58058
52714 93747 10468 78135 77915
24870 08129 96430 01769 54658
54629 29458 64747 40184 33370
50272 64110 96107 00191 86775
36449 24813 23109 72548 74487
57006 54492 000 000
Courtesy DanAR

December 2021

0100z 11594kHz 0120z 10794kHz 0140z 10194kHz

05/12 571 1 6168 126 89767 ... 38692 000 000 [0140z via SDR Japan] Weak

38692 000 000

571 571 571 1
6168 126
89767 71737 82890 66060 36326
70303 16761 07450 27031 89946
65174 21077 64724 67330 50225
15461 00878 41462 60267 32249
41276 66635 86238 04442 48676
13415 62097 08524 93033 84488
74249 97828 55343 74161 87357
25737 62800 92502 70517 82537
41726 23203 25738 81394 24474
62260 20179 75138 06769 21795
92267 41011 50374 28692 69026
60659 76884 98533 81059 65331
00740 79608 98310 38285 08601
94645 37465 78246 73553 53146
79583 39833 91767 48113 55142
70041 38255 20700 70140 96646
04268 34642 45021 93540 50033
02316 22938 57315 42276 44035
01656 85757 91401 89551 95984
84167 26616 74721 72789 50822
31465 80816 43204 38686 56537
56824 72438 07423 18085 17210
14442 77579 88493 55755 38045
67865 8864 47999 92507 49947
10453 92130 01908 11552 36826
38692 000 000 *Courtesy PLdn*

12/12 571 1 502 76 50159 ... 85526 000 000 Weak
DanAR noted: 0100z 11594kHz Heavy QRM from BC , 10794 khz 0120z Low signal and QRM in both receivers (Local and SDR Japan); QSB1 on 0140z

571 571 571 1
502 76
50159 36472 06155 28444 14426
70712 58176 11242 29820 34795
58582 63515 5967 97466 42443
68213 52819 77915 06677 78145
76138 14556 62293 07511 12350
69554 89236 82959 29320 12730
98028 50917 52703 62281 46204
93033 50857 01741 29636 88094
86772 76053 98503 56034 63734
57072 54684 44178 46502 17022
55542 07501 60351 67138 16578
31054 03123 38996 66114 13304
30808 00781 89830 42219 59774
87232 28874 74968 81047 02902
70091 00123 49548 27437 05712
85526 000 000 *Courtesy DanAR*

19/12 571 000 [0100z BCQRM4] Weak

26/12 571 000 [0120z 10795.8kHz*] [0100z NRH BCQRM5] Weak, via JapanSDR
Dan writes, *Note frequency error (+ 1,8 khz) Too much drink yesterday ?

V13

Nil Reports

V15 North Korean Intelligence via Radio Pyongyang

Nil Reports

V24 South Korean Intelligence

Nil Reports

V26

Nil Reports

Polytones

XPA1 c

Tuesday/Thursday

November 2021

0810z	**13978kHz**	**0830z**	**14859kHz**	**0850z**	**15871kHz**		
02/11		587 000 074nn 00001 00000 … 36263				[0830z QRM5]	Weak QRM2
04/11		NRH				[Note 0830z QRM5]	
09/11		587 000 09724 00001 00000 ... 34270				[0810z NRH]	Strong
11/11		587 000 05041 00001 00000 ... 31661				[0830z QRM5]	Fair QSB2
16/11		Null Msg				[0810z NRH, 0830z QRM5]	Unworkable
18/11		587 000 [07292 ?] 00001 00000 last group lost to QRM				[0830z QRM5]	Unworkable
23/11		587 000 01382 00001 00000 - 33661				0810z Strong, 0830z QRM5, 0850z Weak	

587 587 587 000 587 587 587 000 587 587 587 000
01382 00001 00000 33661
Courtesy PLdn

25/11		587 000 08665 00001 00000 ... 36666				[0850z NOT MONITORED]	0810zNRH 0830z Fair
30/11		587 1 msg txt unworkable ... 77600?				[0830z QRM5]	Weak

December 2021

0810z	**11531kHz**	**0830z**	**12137kHz**	**0850z**	**13932kHz**		
02/12		395 1 06393 00150 06070 ... 77600				[0830z QRM3]	Strong

395 395 395 1 395 395 395 1 395 395 395 1

06393 00150 06070 96920 86709 89206 87889 77881 32122 38643
45205 70599 25134 88474 64435 96824 28223 63386 28041 40288
92453 51991 53010 72049 29521 81766 41861 36374 55866 15949
50514 53043 02542 06922 96031 47097 12097 72698 94226 85257
98856 86624 59490 47878 43579 11545 06614 94022 49171 12162
21283 52558 35119 59878 22127 94298 13531 15628 16296 58967
08616 83768 33755 36502

16008 89873 20370 96030 06520 69893 73301 87309 20218 43977
00174 72584 14426 19848 74706 65432 13284 95379 38014 77555
52552 64259 02417 77600 78558 76958 78959 79170 21292 10479
06046 72417 46636 29346 40937 97459 01773 36992 01291 74470
18622 90395 78683 25878 80457 28543 83408 75690 07129 96165
10020 56736 23671 06039 34617 73051 08043 11973 53508 44253
46313 59453 19393 03011

64840 68343 31864 89652 28255 41648 57527 52907 15905 49281
87974 94205 67578 25212 80760 22980 29013 07689 78333 28958
75266 34719 33147 93620 77600 *Courtesy PLdn*

07/12		395 1 06393 00150 06070 ... 77600				[0830z Strong QRM3]	Very weak
09/12		395 1 06393 00150 06070 ... 77600				[0830z QRM3]	Strong QRM2
14/12		395 000 08224 00001 00000 ... 34262				[0830z QRM3; 0850z strong]	Fair
16/12		395 000 01672 00001 00000 ... 35260				[0810z Strong]	Very strong
21/12		395 000 03639 00001 00000 ... 40656				[0830z Very strong]	Very strong QRM2
23/12		395 000 01427 00001 00000 ... 36653				[0810z Weak, QRM2]	Strong
28/12		395 000 05972 00001 00000 ... 36664				[0850z Very strong]	Fair QRM3
30/12		395 000 07298 00001 00000 ... 36270				[0830z QRM3/4]	Strong

XPA1 Wed/Fri

November 2021

Wednesday/Friday

1310z	**13875kHz**	**1330z**	**13375kHz**	**1350z**	**10875kHz**		
03/11	838 1 00516 00140 06011 … 71121					[1310z Very strong]	Strong QRM3
05/11	838 1 00516 00140 06011 … 71121					[1310z Very strong]	Fair QRM3

838 838 838 1 838 838 838 1 838 838 838 1

00516 00140 06011 30178 78680 46855 97473 08128 75813 50962
12750 11007 08345 09520 97224 83486 20099 73832 55727 95636
77944 08580 13576 21362 87987 26796 85674 51854 94211 73344
77442 58708 32539 69590 30238 56627 50124 79388 36141 53224
95928 06813 58166 89782 22853 00732 32972 59539 02197 96948
80921 00086 82053 95724 36935 86028 85889 67840 15127 71893
59693 81513 49932 58075

53812 61066 31627 65278 19246 03548 18853 58008 11883 20555
83584 92632 32292 02087 18405 84324 42384 48196 84712 92676
14100 90733 05224 07101 20973 63330 52461 69873 54762 82406
38322 46845 13625 76461 69293 54622 68392 90816 76086 86170
36674 37288 90640 90741 29042 11853 22827 27252 86198 33275
68659 59441 62380 27980 64614 52681 87327 00617 38843 72036
90084 91688 69276 25512

06096 17974 36706 74725 52258 94809 68559 60181 75820 63151
06988 21849 03049 88069 71121 *Courtesy PLdn*

10/11	838 1 00516 00140 06011 ... 71121	[1330z Tx ceased 3m12s. 1350z Unworkable]	Strong
12/11	838 1 00516 00140 06011 ... 71121	[1350z Fair]	Strong
17/11	838 000 09332 00001 00000 ... 33664	[1330z Weak QRM2]	Strong
19/11	Null Message 2m26s lg		Unworkable
24/11	838 000 03808 00001 00000 ... 41253	[1310z QRM1]	Strong QRM3
26/11	838 000 00799 00001 00000 ... 41272		Weak

December 2021

1310z	**13465kHz**	**1330z**	**12165kHz**	**1350z**	**10265kHz**		
01/12	412 1 02273 00180 06655 ... 73717						Weak
03/12	412 1 00273 00180 06655 ... 73717					[1330z Fair]	Weak

412 412 412 1 412 412 412 1 412 412 412 1

02273 00180 06655 12489 73709 35208 26582 76070 45615 56120
82741 51847 98269 72895 85866 96041 75528 19084 40428 57439
53754 69948 73523 76961 40228 85764 24244 79378 48953 18889
86382 97610 63244 44784 10282 68022 06153 14592 23952 62555
77831 02260 71784 00131 94536 90901 26509 16168 29936 24547
44746 10973 44954 93541 53790 49361 96553 93051 30593 51338
60558 26532 64296 93566

27128 51213 49060 53068 67419 00581 92837 46590 97991 38850
11782 58956 08693 12042 28031 98488 37295 17130 81062 13892
80284 17136 51995 13795 71070 28951 58983 23916 24363 55336
09660 43838 84459 15852 96092 11231 76678 58364 42332 45259
88429 27388 91088 94330 46924 73985 45168 72133 56621 79914
29288 22529 47180 55639 55494 80385 22433 19408 94830 08449
72401 78406 83255 34170

48364 41528 37646 79932 85800 45927 25299 39021 44432 86311
47942 56604 31136 07397 26778 74897 05488 33453 56439 85321
42547 62306 06526 91169 45685 94796 06890 48180 41483 83293
23549 17665 30794 78477 58436 84954 63041 03686 85524 45457
44869 57674 71182 75124 21617 30158 90824 22665 16966 42498
34893 45401 08736 95509 73717 *Courtesy PLdn*

08/12	412 1 02273 00180 06655 ... 73717	1310z Unworkable, 1330z Fair, 1350z DIGIQRM5	
10/12	412 1 00273 00180 06655 ... 73717	[1350z Weak QSB4]	Fair
15/12	412 000 09065 00001 00000 ... 33667		Weak
17/12	412 000 07481 00001 00000 ... 33667	[1330z QRM3]	Fair

22/12 412 1 00648 00065 02301 ... 04123 1310z Strong, 1330z Weak, 1350z QRM5

412 412 412 1 412 412 412 1 412 412 412 1

00648 00065 02301 16751 96960 69351 29392 94667 41446 90852
20954 59233 32321 45901 44340 66177 26319 81895 78346 39697
00064 83802 43696 36426 16324 32772 81572 58468 71106 85532
78426 91779 60286 04256 75211 46132 04959 75224 26519 45602
75355 16007 20929 42417 69913 37946 18127 64097 28541 80025
36266 85280 28549 94365 41099 48578 42231 05685 64576 65492
71426 51373 96406 10433

59593 25884 28036 04123 *Courtesy PLdn*

24/12 412 1 00648 00065 02301 ... 04123 [1350z Fair QRM3] Strong

29/12 412 000 07587 00001 00000 ... 37267 [1330z Strong] Fair QSB2

31/12 412 000 02983 00001 00000 ... 37262 [1330z QSB3, 1350z Fair] Weak

XPA2 m

Sunday/Tuesday

November 2021

1200z 14783kHz 1220z 13883kHz 1240z 12183kHz

02/11 02049 00142 92552 … 05060 Strong

07/11 02049 00142 92552 ... 05060 [1200z Strong] Very strong

02049 00142 92552 43634 12088 86402 35902 64504 60673 86974
21805 99129 06894 99072 82665 72988 57407 10964 78603 28008
02258 67431 38052 82761 09701 29883 99417 18395 51853 38173
06881 79150 03993 88959 74464 28494 99632 41952 72276 36971
75974 37724 49385 35012 94694 86000 01032 95515 97770 13256
76367 88429 73692 67382 58682 21927 10824 89916 22207 01362
24691 41353 35206 62003 25721 48303 07570 80145 85214 22699
52266 16080 36591 41226 32483 96461 98097 64031 93094 77218
01255 85339 35880 76846 75312 25231 82478 48924 84613 92325
33143 45245 44968 85760 83790 34961 97636 76265 29889 46503
55344 25091 68411 06383 27216 68965 62113 08020 73263 18034
34043 77488 12509 82715 67167 86772 04283 32842 58408 04793
19259 47687 55032 27461 30203 63329 62395 47116 89621 42141
27588 20364 98292 04904 09016 45397 84593 00278 47368 78136
28356 23530 89683 86909 05060 *Courtesy PLdn*

09/11 00726 00226 80159 ... 24602 [1220z Very strong] Strong

00726 00226 80159 28154 41807 69731 45793 74830 11708 51043
08066 89704 45649 16279 86263 07424 86102 59847 06164 38462
56260 15300 68523 30347 20615 53669 99612 03094 06072 26353
49882 67294 18789 84031 18671 30544 92724 54591 25153 49226
n5095 56410 92757 62345 73584 38803 30564 26823 28381 95024
92410 52670 27198 83170 61990 47608 76418 18615 40299 22420
28368 59568 96977 08834 05149 67823 47000 73070 56848 14737
09350 07369 08250 02890 07526 41168 04339 14698 23028 41904
86714 90989 15746 07233 30504 61243 09543 41754 87533 74519
54907 56951 71873 30338 83941 47359 06655 80921 13518 52651
45295 45581 98500 11907 17929 29843 53616 50333 17772 78475
84915 12950 78319 96069 26141 48057 60253 88029 66255 49052
45735 88916 73481 55477 81099 21776 44954 07978 49984 43534
45936 06914 34372 58393 84820 11343 38160 80762 19277 01048
43710 68450 49803 64775 50477 48796 57649 33339 80990 12527
68830 94005 27828 89591 68992 73077 01992 11274 95865 80401
21499 40700 60680 73771 74061 05878 27642 82908 14617 27767
46110 99902 30093 64807 77873 34954 62485 44938 89752 22999
16430 11740 02810 57868 87125 56395 17294 20598 74161 06412
19460 25241 87832 64011 44357 38981 16460 94506 30467 63735
24160 60280 51468 26945 99375 23974 86508 35973 70468 58098
40542 41029 07942 19300 30363 58778 69180 24123 54117 38055
88322 68385 68603 18673 44484 74915 74863 42972 24602
Courtesy PLdn

14/11 00726 00226 80159 ... 24602 [1240z QRM2] Very strong

16/11 07879 00164 22625 ... 16326 Strong

07879 00164 22625 76787 15062 54240 94094 12852 02595 85485
77576 15002 11272 25118 48580 89311 33530 37476 06780 85123
61834 20804 03743 50928 42075 32387 78677 66723 76846 40832
54963 96807 49780 18089 03806 24228 45699 79659 74065 45814
76286 65252 52634 73897 05179 65635 53899 17921 00354 72748
02026 65631 09049 64879 44094 14988 22303 82327 63115 53439
53342 39910 11155 18947 99683 26782 73407 22433 85964 36674
73554 17681 32067 09235 87897 01868 49526 74928 71241 27304
55220 64584 16875 69762 08285 27412 47219 52305 45448 55619
45387 87929 63518 45124 87958 78286 45661 46264 78252 26978
80131 14767 22041 47577 04267 20505 19043 26071 42763 47132
19644 20489 58972 89467 96419 93913 36410 59224 48918 84480
66670 00574 53642 91140 46095 61963 41246 30227 65689 60142
60613 12301 54031 62441 64282 50884 96098 73397 45419 45460
54296 39122 59051 89812 95276 09495 65805 19557 57101 10946
05297 94456 64124 51977 78620 93722 36174 06770 14263 21924
40985 86682 10755 16868 98460 51956 16326 *Courtesy PLdn*

21/11	07879 00164 22625 ... 16326	[1200z Not monitored]	Strong
23/11	03391 00146 56711 .. 07056	[1200z NOT MONITORED]	Very strong

03391 00146 56711 84670 64088 80130 59109 31849 77760 31517
92635 13595 37615 31644 93511 28361 83477 74698 34658 04914
49527 32506 12220 87257 52694 72238 64634 88723 56480 82961
44698 71601 53948 97378 81786 34387 51949 84485 51050 17042
24835 72524 60305 89922 38039 22754 84786 26684 30953 21466
43399 31009 36034 05691 92726 04788 80474 40611 52285 50138
66239 14709 58415 63808 40336 27677 00570 84479 32942 49811
13280 43324 68767 28373 90994 22269 06243 44053 95894 79802
73556 99312 79371 83803 23760 65280 59014 57244 50481 05729
83899 26829 62019 42074 37197 74139 14537 65853 08176 77633
33791 60488 12671 82971 76832 82076 97831 50684 91919 91722
85615 91969 03133 94764 60007 46904 45057 41021 00394 43735
67244 28324 69318 35130 13029 22147 44228 00134 72191 78746
36934 97880 21132 22523 16927 12364 53608 53924 46090 65985
64029 16363 96921 43313 74147 97064 71219 61839 07056
Courtesy PLdn

28/11	03391 00146 56711 ... 07056		Strong
30/11	00345 00152 22858 ... 21122	[1200z Weak]	Fair

December 2021

1200z 10807kHz 1220z 12207kHz 1240z 13507kHz

05/12	00345 00152 22858 ... 21122	[1200z Fair]	Strong
07/12	04226 00084 07812 ... 71021	[1200z Weak QRM3]	Strong

04226 00083 07812 52965 06002 46572 69990 03605 54385 19537
23461 73243 97445 18577 63604 25162 42265 29079 14044 44602
53007 07713 82056 16024 25135 81249 99646 97743 30038 30680
17151 38314 29131 69480 35909 26456 56497 54336 17380 80314
94507 33912 98585 15037 22483 52992 66709 97264 95008 27193
86833 84452 50456 77882 67397 33038 76616 37346 94856 01733
37034 77145 71959 80457 18902 00140 10425 45156 96553 88946
80883 94881 87407 66495 92914 93679 79388 84722 81776 52445
51138 57048 93236 00524 01349 49785 71020 *Courtesy PLdn*

12/12	04226 00084 07812 ... 71021	[1240z Fair]	Very strong
14/12	07164 00001 00000 ... 33665		Very strong
19/12	01703 00001 00000 ... 36251		Strong
21/12	04370 00068 21039 ... 36641	[1240z Very strong]	Strong

04370 00068 21039 69736 71695 06234 21023 69838 80008 75005
25512 61260 83974 69629 70807 36297 44789 67840 65665 05317
12060 27020 84464 35696 94329 06794 84788 15380 19462 16995
11026 43157 04490 73903 36296 74470 91512 97183 43046 41295
01408 45392 91818 09213 60655 08736 70058 88395 26226 31393
68910 24944 17200 49716 81459 15782 93408 92298 12228 89747
18604 04385 45087 04498 76035 14374 61270 83935 24436 51071
36641 *Courtesy PLdn*

26/12	04370 00068 21039 ... 36641		Very strong
28/12	04588 00001 00000 ... 37666	[1200z Fair]	Strong

XPA2 p

Monday/Wednesday

November 2021

0800z 11529kHz 0820z 13429kHz 0840z 13929kHz

01/11	01100 00102 80814 ... 35531	[0800z 1049HzQRM2, 0820z Very strong]	Strong

01100 00102 80814 82825 55770 00472 63916 57848 53345 06323
31676 82123 91479 36081 27405 30058 04673 78527 51323 75534
73455 85297 30524 06050 36950 27382 16364 25179 82656 98861
39870 03248 26137 19875 93291 91063 39607 18859 07742 61229
22614 90661 63932 61014 51573 00381 89765 04324 02126 64925
38974 71157 94607 58933 45234 41560 75823 08399 97097 55487
50727 81675 46381 40321 62711 64571 86257 20552 79693 34727
79196 41480 50254 57727 03905 08056 66625 73357 50608 86158
68203 82792 46591 00099 55627 66758 16469 96380 29298 95460
49982 39190 15976 44485 51827 11820 22853 30887 46119 85988
01611 15565 69506 46654 35531 *Courtesy PLdn*

03/11	01100 00102 80814 ... 35531	[0800z QRM5]	Very strong
08/11	01100 00102 80814 ... 35531	[0800z 1049HzQRM2]	Very strong

10/11	01100 00102 80814 ... 35531	[0800z BCQRM2, 0840z Very strong]	Strong
15/11	01286 00001 00000 ... 35261	[0800z NRH BCQRM+Het 1049Hz]	Very strong
17/11	07907 00001 00000 ... 41257	[Strong BCQRM4]	Very strong
22/11	00117 00133 51814 ... 57173	[0800z Strong BCQRM+1056Hz Het]	Very strong

00117 00133 51814 17976 61190 90014 76916 67034 67536 00186
85350 51865 86589 33639 49910 66211 43570 89621 18110 90978
36709 06740 38267 15530 09038 08658 06574 08012 26948 61604
58290 71493 12592 95493 31820 79657 58685 62643 83991 64376
59740 41681 45318 08491 11072 26219 52262 94141 39746 61566
03106 67236 65927 78869 03668 49878 70904 01512 65244 22183
87701 41314 90478 73013 39587 28975 33596 11141 52231 04880
73517 34256 94546 25381 64230 37123 40879 87371 20676 26249
36382 75117 28205 59235 91922 74835 38481 83578 26190 49393
47427 43343 08012 42406 54961 53123 29457 36054 57504 22025
29993 85984 80382 81722 54063 52826 36128 81555 53954 83814
20062 01134 60467 52756 45590 66197 32997 98728 29196 98372
05934 97213 02161 54107 29871 41445 79133 59463 09068 22051
55596 36669 43782 18987 92995 57173 *Courtesy PLdn*

24/11	00117 00133 51814 ... 57173	[0800z Strong BCQRM+1051Hz Het]	Very strong
29/11	00592 00089 91408 ... 52323	[0800z Weak]	Strong

December 2021

0800z	**11493kHz**	**0820z**	**13393kHz**	**0840z**	**13993kHz**	
01/12	00592 00089 91408 ... 52323					Very strong
06/12	00592 00089 91408 ... 52323				[0800z Very strong]	Strong
08/12	00592 00089 91408 ... 52323				[0800z NRH]	Fair QSB4
13/12	09557 00001 00000 ... 37266					Fair QRM3
15/12	05771 00001 00000 ... 35264				[0800z NRH]	Fair
20/12	03563 00087 24472 ... 65713				[0800z Weak]	Strong
22/12	03563 00087 24472 ... 65713				[0800z Weak, 0840z QRM3]	Strong

03563 00087 24472 78947 19754 61197 35604 93434 37297 08757
19599 76453 44022 35519 54084 38949 29099 85440 91270 07051
26964 05277 78220 84780 55566 08022 56680 57278 18067 41499
31715 71963 22157 73286 99119 95993 14598 21519 23644 28726
06364 09245 64640 57740 53910 24263 71632 50442 94277 68575
17628 12493 40507 16859 90191 86215 59221 07421 09675 75405
53118 27556 35643 14156 93072 99716 72612 95993 98950 39488
56670 36169 32614 40823 02468 12014 43469 15656 66915 26026
88753 83877 38383 04318 23694 50352 94978 00873 92820 65713
Courtesy PLdn

27/12	02878 00001 00000 ... 41261	[0820z Strong]	Fair
29/12	04156 00001 00000 ... 34661	[0800z Fair]	Very strong

XPA2 Wed/Fri

November 2021

1200z	**10968kHz**	**1220z**	**12168kHz**	**1240z**	**13368kHz**	
03/11	00549 00162 66249 … 23727					Very strong
05/11	00549 00162 66249 … 23727					Very strong

00549 00162 60249 39441 39235 27289 20753 28880 84466 62682
09134 39786 89288 46820 76811 34763 20116 32970 99967 77984
79960 80932 97485 80045 28431 37439 28581 84030 32294 04794
61367 95682 13310 13605 88984 79487 47211 45416 32414 84365
39728 02669 20372 07848 01349 58905 91943 24640 55394 55550
11385 27499 38553 83438 67507 65539 49611 25412 56294 96507
00792 15516 67615 28972 81385 53795 24075 46260 73876 78685
95165 14139 61333 93302 61473 90216 01381 77691 37214 28793
29224 47724 10896 76228 34993 35684 60009 99467 60110 87239
55663 32629 59625 74071 48441 75119 28857 09052 98515 91483
67209 27095 66593 98099 18886 64496 60009 85177 76276 84779
08375 58886 97620 83745 32215 88798 60373 06337 75892 21476
07010 75356 32197 43037 35754 16018 99753 84458 06979 25364
95325 23470 32573 74662 09525 92293 52802 58507 44735 07326
64902 18804 48568 90226 54208 41965 67605 20536 75892 20110
76356 84677 80281 89298 15089 47992 07832 55299 35596 46853
17584 27512 02896 55587 23727 *Courtesy PLdn*

10/11 03715 00214 53212 ... 24052 [1240z QRM3] Strong

03715 00214 53212 10941 34869 33795 87156 07970 03791 65475
12069 30560 70713 04914 86629 07789 19184 01211 28002 16389
62935 09953 49940 94820 90700 32943 14831 57144 26997 05408
28816 50159 61185 57817 96649 55231 54519 37794 48795 96504
83548 59062 09341 25067 48026 10538 56507 53338 23192 76870
61179 65243 74207 94563 46770 86060 22714 29452 08350 55670
97919 67595 67420 59229 22585 23945 09384 68766 17262 94323
35129 26606 69288 48406 93023 87476 97862 33363 03755 74525
17194 01968 04636 18131 88898 00007 24792 39791 61142 28993
99483 11053 58634 05438 84398 26733 22494 00518 16754 07714
22862 78680 26758 52769 53513 77441 71248 12929 29229 23553
91719 08294 02904 85343 22736 48944 65535 55728 62681 26238
45887 75068 83590 35648 74131 78771 75435 85533 24978 15576
24004 08861 56986 78145 82085 74514 00130 45710 93336 57040
41601 50575 48952 23544 35460 39844 48363 01838 93540 66758
24984 18205 80415 40587 62871 85789 20329 90602 73714 41814
53535 51168 49446 58321 83008 50260 32182 53321 97689 64120
57440 83717 00570 61622 36254 72217 14276 00561 29454 03324
59163 68007 94451 69263 64379 90051 28161 60989 67822 89059
35720 10526 27758 53845 67568 05347 64509 02523 29395 98849
13904 41897 19630 39287 25784 00257 70026 34738 58117 39659
53197 87187 84899 06582 22597 05020 24052 *Courtesy PLdn*

12/11 03715 00214 53212 ... 24052 Very strong

17/11 Not monitored [Tesco experience]

19/11 08437 00166 77696 ... 05532 Strong

08437 00166 77696 94583 68400 86390 43807 54606 20433 68601
95336 24456 60280 63251 82430 61277 91658 13969 77737 98955
01443 71959 02623 02742 04695 28338 80969 67574 24144 01216
66408 76298 63318 64469 78537 41741 58662 40299 63754 60292
76984 76886 38226 91348 72216 36961 54234 41192 85262 46675
26700 02574 47671 92171 12014 21013 61275 66373 65997 33487
27160 90354 94392 32533 82653 73140 06211 26941 49505 69886
28987 01331 93797 87214 49797 24361 82514 51738 62864 06682
30906 79356 03749 88620 17021 95073 75855 32632 19708 28241
43512 18138 03337 84665 16276 44732 67889 31753 42871 30753
03886 27786 22702 59515 16695 35982 15220 55827 30636 89562
01726 68969 60379 37395 31081 48273 93494 38488 10476 86569
46579 76120 10061 06007 19842 52881 67944 72540 52379 89634
74533 27555 01145 60774 62049 76776 68033 52147 58764 89774
59274 03813 44582 10544 62211 17152 46260 06243 87821 46623
57664 39693 12350 78681 32469 13832 63084 81766 30039 42821
80198 18766 39192 44199 44330 81311 04615 52255 05532
Courtesy PLdn

24/11 07528 00078 26072 ... 13461 [1240z Strong] Very strong

07528 00078 26072 50359 05708 18243 41620 13211 10343 67502
55576 22675 07630 47478 30688 92340 57139 51767 45247 23720
74613 07652 29316 40417 53648 11735 45466 87219 28689 01179
09228 79175 35308 88896 84242 64961 06404 77334 40371 81581
43646 08853 56896 48243 83393 97351 92281 01785 37825 32411
52255 66703 25193 63879 91610 94651 72085 79836 05791 28474
23736 54552 17164 68628 70974 72180 42974 88694 03096 45892
76385 37577 80313 52067 88009 90855 04296 95487 31534 51153
13461 *Courtesy PLdn*

26/11 07528 00078 26072 ... 13461 [1240z Fair] Strong

December 2021

1200z 9389kHz 1220z 10289kHz 1240z 11589kHz

01/12 00256 00158 32036 ... 71422 [1220z Very strong] Strong

03/12 00256 00158 32036 ... 71422 [1200z Fair] Strong

08/12 01762 00092 59191 ... 04103 [1200z V.Weak QSB4] Fair

01762 00092 59191 39836 00108 54000 09136 55374 86214 48637
52077 07244 98348 23110 97919 71334 40852 11798 65770 16200
47443 91690 22663 91487 37918 51328 04474 95631 31183 47797
80715 29775 96816 90604 88802 04498 73033 66119 52654 40224
51404 99881 33111 38761 44568 88795 30842 13640 82206 22114
57889 62842 19072 40365 82042 17106 62966 55888 81500 44688
85925 93948 65273 55246 97922 37206 19988 22325 65155 38463
99167 09413 66621 37467 29851 22431 92874 04495 93514 36853
19375 70238 13288 75829 62625 77635 83582 53791 61093 42578
42385 01133 94295 05340 04103 *Courtesy PLdn*

10/12 01762 00092 59191 ... 04103 [1220z Very strong] Fair

15/12 03533 00001 00000 ... 35256 [1200z Fair] Very strong

17/12 06116 00001 00000 ... 34657 [1240z Very strong] Strong

22/12	04096 00080 37435 ... 73034	Strong

04096 00080 37435 48650 48666 93064 02452 46693 40401 58110
46821 10419 75995 89897 24627 09564 74765 80597 72051 47859
54966 70474 66748 63531 71025 47054 78006 21322 60176 56429
99897 76992 25771 88680 37055 42365 35582 89486 78720 87614
06811 86237 99067 55230 58730 43581 84278 29692 60159 81158
77898 67153 52812 41835 05325 74368 91324 22895 66772 00864
54853 74654 47624 61596 00402 27673 45201 40479 80973 87117
77530 59179 84846 14300 99901 44830 86911 35976 41119 18034
31716 80330 73034 *Courtesy PLdn*

24/12	04096 00080 37435 ... 73034	[1240z Very strong]	Strong
29/12	07501 00001 00000 ... 34257	[1200z Weak]	Fair
31/12	04027 00001 00000 ... 34656	[1240z Fair]	Weak

Other XPA2 scheds [H-FD]:

Wed 03.11.2021 0910Z 17413 msg
Wed 03.11.2021 0930Z 15852 msg
Wed 03.11.2021 0950Z 13363 msg

Thu 04.11.2021 0910Z 15985 msg
Thu 04.11.2021 0930Z 14885 msg
Thu 04.11.2021 0950Z 13885 msg

Thu 04.11.2021 1100Z 13393 msg
Thu 04.11.2021 1120Z 12193 msg
Thu 04.11.2021 1140Z 11093 msg

Fri 05.11.2021 1100Z 10653 msg
Fri 05.11.2021 1120Z 9353 msg
Fri 05.11.2021 1140Z 8153 msg

Mon 08.11.2021 1600Z 8126 msg
Mon 08.11.2021 1620Z 6826 msg
Mon 08.11.2021 1640Z 5326 msg

Thu 11.11.2021 1600Z 10223 msg
Thu 11.11.2021 1620Z 9223 msg
Thu 11.11.2021 1640Z 8123 msg

Wed 01.12.2021 0910Z 13562 msg
Wed 01.12.2021 0930Z 11583 msg
Wed 01.12.2021 0950Z 10281 msg

Wed 01.12.2021 1100Z 11579 msg
Wed 01.12.2021 1120Z 10979 msg
Wed 01.12.2021 1140Z 10279 msg

Thu 02.12.2021 0910Z 13919 msg
Thu 02.12.2021 0930Z 11519 msg
Thu 02.12.2021 0950Z 10719 msg

Fri 03.12.2021 1100Z 9265 msg
Fri 03.12.2021 1120Z 8165 msg
Fri 03.12.2021 1140Z 7665 msg

Tue 07.12.2021 1600Z 8184 msg
Tue 07.12.2021 1620Z 7684 msg
Tue 07.12.2021 1640Z 6784 msg

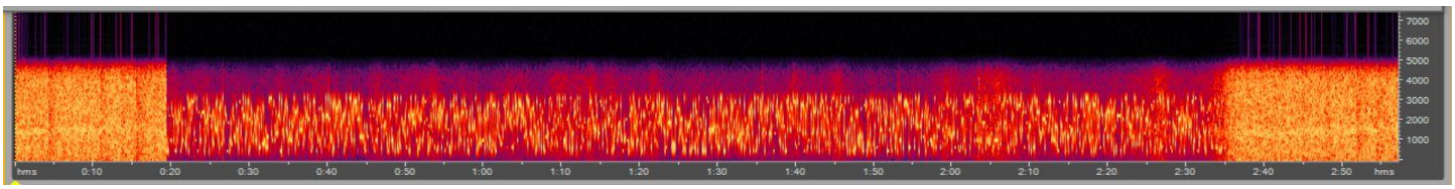
Mon 13.12.2021 1600Z 6984 msg
Mon 13.12.2021 1620Z 5884 msg
Mon 13.12.2021 1640Z 4784 msg

XPB1

Sunday/Tuesday

November 2021

7876kHz 2000z	02/11	NRH			PLdn	TUE
7576kHz 2010z	02/11	Fair	2m15s	QRM3	PLdn	TUE
6876kHz 2020z	02/11	MISSED			PLdn	TUE
5876kHz 2030z	02/11	Fair	2m15s		PLdn	TUE
5376kHz 2040z	02/11	Strong	2m15s		PLdn	TUE
4476kHz 2050z	02/11	Strong	2m15s		PLdn	TUE
7876kHz 2000z	07/11	NRH			PLdn	SUN
7576kHz 2010z	07/11	NRH			PLdn	SUN
6876kHz 2020z	07/11	NRH			PLdn	SUN
5876kHz 2030z	07/11	Weak	2m15s		PLdn	SUN
5376kHz 2040z	07/11	Fair	2m15s		PLdn	SUN
4476kHz 2050z	07/11	Fair	2m15s	QRM3	PLdn	SUN
7876kHz 2000z	09/11	Weak	2m15s		PLdn	TUE
7576kHz 2010z	09/11	Weak	2m15s	4031Hz het	PLdn	TUE
6876kHz 2020z	09/11	Strong	2m15s		PLdn	TUE
5876kHz 2030z	09/11	Strong	2m15s		PLdn	TUE
5376kHz 2040z	09/11	Strong	2m15s		PLdn	TUE
4476kHz 2050z	09/11	Strong	2m15s		PLdn	TUE



XPB1 5876kHz 2030z 14/11 2m15s lg, Very strong

7876kHz 2000z	14/11			BCQRM + 1049Hz het	PLdn	SUN
7576kHz 2010z	14/11	Fair	2m15s		PLdn	SUN
6876kHz 2020z	14/11	Fair	2m15s		PLdn	SUN
5876kHz 2030z	14/11	V.strong	2m15s	See above	PLdn	SUN
5376kHz 2040z	14/11	V.strong	2m15s		PLdn	SUN
4476kHz 2050z	14/11	Strong	2m15s		PLdn	SUN
7876kHz 2000z	16/11	NRH			PLdn	TUE
7576kHz 2010z	16/11	Strong	4m28s	QRM2	PLdn	TUE
6876kHz 2020z	16/11	Strong	4m28s		PLdn	TUE
5876kHz 2030z	16/11	Strong	4m28s		PLdn	TUE
5376kHz 2040z	16/11	V.strong	4m28s		PLdn	TUE
4476kHz 2050z	16/11	Fair	4m28s	QRM3	PLdn	TUE
7876kHz 2000z	21/11	NRH			PLdn	SUN
7576kHz 2010z	21/11			QRM5	PLdn	SUN
6876kHz 2020z	21/11	Strong	4m28s		PLdn	SUN
5876kHz 2030z	21/11	Strong	4m28s		PLdn	SUN
5376kHz 2040z	21/11	Strong	4m28s		PLdn	SUN
4476kHz 2050z	21/11	V.strong	4m28s		PLdn	SUN
7876kHz 2000z	23/11	Weak	2m15s		PLdn	TUE
7576kHz 2010z	23/11	Fair	2m15s	BCQRM3	PLdn	TUE
6876kHz 2020z	23/11	V.strong	2m15s		PLdn	TUE
5876kHz 2030z	23/11	V.strong	2m15s		PLdn	TUE
5376kHz 2040z	23/11	V.strong	2m15s		PLdn	TUE
4476kHz 2050z	23/11	V.strong	2m15s	QRM2	PLdn	TUE
7876kHz 2000z	28/11	Fair	1m40s		PLdn	SUN
7576kHz 2010z	28/11	Strong	1m40s		PLdn	SUN
6876kHz 2020z	28/11	V.strong	1m40s		PLdn	SUN
5876kHz 2030z	28/11	V.strong	1m40s		PLdn	SUN
5376kHz 2040z	28/11	V.strong	1m40s		PLdn	SUN
4476kHz 2050z	28/11	V.strong	1m40s		PLdn	SUN
7876kHz 2000z	30/11	NRH			PLdn	TUE
7576kHz 2010z	30/11	NRH		BCQRM5	PLdn	TUE
6876kHz 2020z	30/11	Weak	2m15s		PLdn	TUE
5876kHz 2030z	30/11	Strong	2m15s		PLdn	TUE
5376kHz 2040z	30/11	Strong	2m15s		PLdn	TUE
4476kHz 2050z	30/11	Strong	2m15s		PLdn	TUE

December 2021

8058kHz 2000z	05/12	NRH			PLdn	SUN
7558kHz 2010z	05/12	Weak	2m15s		PLdn	SUN
5858kHz 2020z	05/12	Strong	2m15s		PLdn	SUN
5158kHz 2030z	05/12	Strong	2m15s		PLdn	SUN
4858kHz 2040z	05/12	Fair	2m15s		PLdn	SUN
4458kHz 2050z	05/12	Fair	2m15s	XWPQRM3	PLdn	SUN
8058kHz 2000z	08/12	NRH			PLdn	TUE
7558kHz 2010z	08/12	NRH			PLdn	TUE
5858kHz 2020z	08/12	Weak	4m28s		PLdn	TUE
5158kHz 2030z	08/12	Weak	4m28s		PLdn	TUE
4858kHz 2040z	08/12	Weak	4m28s		PLdn	TUE
4458kHz 2050z	08/12	Weak	4m28s	XWPQRM3	PLdn	TUE
8058kHz 2000z	12/12	Weak	4m28s		PLdn	SUN
7558kHz 2010z	12/12	Fair	4m28s		PLdn	SUN
5858kHz 2020z	12/12	Fair	4m28s		PLdn	SUN
5158kHz 2030z	12/12	Strong	4m28s		PLdn	SUN
4858kHz 2040z	12/12	Strong	4m28s		PLdn	SUN
4458kHz 2050z	12/12	Fair	4m28s		PLdn	SUN
8058kHz 2000z	14/12	Fair	4m28s		PLdn	TUE
7558kHz 2010z	14/12	Fair	4m28s		PLdn	TUE
5858kHz 2020z	14/12	Strong	4m28s		PLdn	TUE
5158kHz 2030z	14/12	Strong	4m28s		PLdn	TUE
4858kHz 2040z	14/12	Strong	4m28s		PLdn	TUE
4458kHz 2050z	14/12	Strong	4m28s	XWPQRM2	PLdn	TUE
8058kHz 2000z	19/12	NRH			PLdn	SUN
7558kHz 2010z	19/12	NRH			PLdn	SUN
5858kHz 2020z	19/12	V.strong	4m28s		PLdn	SUN
5158kHz 2030z	19/12	V.strong	4m28s		PLdn	SUN
4858kHz 2040z	19/12	Strong	4m28s		PLdn	SUN
4458kHz 2050z	19/12	Weak	4m28s	QRM3	PLdn	SUN

8058kHz 2000z	21/12	NRH			PLdn	TUE
7558kHz 2010z	21/12	NRH			PLdn	TUE
5858kHz 2020z	21/12	Fair	4m28s		PLdn	TUE
5158kHz 2030z	21/12	Strong	4m28s		PLdn	TUE
4858kHz 2040z	21/12	Strong	4m28s		PLdn	TUE
4458kHz 2050z	21/12	Fair	4m28s	XWPQRM2	PLdn	TUE
8058kHz 2000z	26/12	V.weak	4m28s		PLdn	SUN
7558kHz 2010z	26/12	Weak	4m28s		PLdn	SUN
5858kHz 2020z	26/12	Weak	4m28s		PLdn	SUN
5158kHz 2030z	26/12	Strong	4m28s		PLdn	SUN
4858kHz 2040z	26/12	Strong	4m28s		PLdn	SUN
4458kHz 2050z	26/12	Strong	4m28s	XWPQRM2	PLdn	SUN
8058kHz 2000z	28/12	V.weak	4m28s		PLdn	TUE
7558kHz 2010z	28/12	Weak	4m28s		PLdn	TUE
5858kHz 2020z	28/12	Fair	4m28s		PLdn	TUE
5158kHz 2030z	28/12	Fair	4m28s		PLdn	TUE
4858kHz 2040z	28/12	Fair	4m28s		PLdn	TUE
4458kHz 2050z	28/12	Fair	4m28s		PLdn	TUE

Monday/Saturday

November 2021

13894kHz 1100z	01/11	MISSED			PLdn	MON
13394kHz 1110z	01/11	MISSED			PLdn	MON
12194kHz 1120z	01/11	MISSED			PLdn	MON
11494kHz 1130z	01/11	MISSED			PLdn	MON
11094kHz 1140z	01/11	Strong	1m40s		PLdn	MON
10494kHz 1150z	01/11	Weak	1m40s	QRM3	PLdn	MON
13894kHz 1100z	06/11	Strong	1m40s		PLdn	SAT
13394kHz 1110z	06/11	Strong	1m40s	QRM3	PLdn	SAT
12194kHz 1120z	06/11	Strong	1m40s		PLdn	SAT
11494kHz 1130z	06/11	Strong	1m40s		PLdn	SAT
11094kHz 1140z	06/11	Fair	1m40s	QRM2	PLdn	SAT
10494kHz 1150z	06/11	Weak	1m40s		PLdn	SAT
13894kHz 1100z	08/11	MISSED			PLdn	MON
13394kHz 1110z	08/11	NRH			PLdn	MON
12194kHz 1120z	08/11	NRH			PLdn	MON
11494kHz 1130z	08/11	Weak	2m15s		PLdn	MON
11094kHz 1140z	08/11	Fair	2m15s		PLdn	MON
10494kHz 1150z	08/11	Fair	2m15s	QRM3	PLdn	MON
13894kHz 1100z	13/11	Fair	4m28s	QRM2	PLdn	SAT
13394kHz 1110z	13/11	Fair	4m28s	QRM2	PLdn	SAT
12194kHz 1120z	13/11	Fair	4m28s	QRM2	PLdn	SAT
11494kHz 1130z	13/11	Fair	4m28s	QRM2	PLdn	SAT
11094kHz 1140z	13/11	Fair	4m28s	QRM3	PLdn	SAT
10494kHz 1150z	13/11	Fair	4m28s	QRM2	PLdn	SAT
13894kHz 1100z	15/11	Fair	1m29s		PLdn	MON
13394kHz 1110z	15/11	Fair	1m29s		PLdn	MON
12194kHz 1120z	15/11	Fair	1m29s	QRM2	PLdn	MON
11494kHz 1130z	15/11	Fair	1m29s		PLdn	MON
11094kHz 1140z	15/11	Fair	1m29s	QRM2	PLdn	MON
10494kHz 1150z	15/11	Fair	1m29s	QRM2	PLdn	MON
13894kHz 1100z	20/11	Weak	1m29s		PLdn	SAT
13394kHz 1110z	20/11	V.strong	1m29s		PLdn	SAT
12194kHz 1120z	20/11	V.strong	1m29s		PLdn	SAT
11494kHz 1130z	20/11	Strong	1m29s		PLdn	SAT
11094kHz 1140z	20/11	Strong	1m29s		PLdn	SAT
10494kHz 1150z	20/11	Strong	1m29s		PLdn	SAT
13894kHz 1100z	22/11	Fair	4m28s		PLdn	MON
13394kHz 1110z	22/11	Strong	4m28s		PLdn	MON
12194kHz 1120z	22/11	Strong	4m28s		PLdn	MON
11494kHz 1130z	22/11	Strong	4m28s		PLdn	MON
11094kHz 1140z	22/11	Strong	4m28s		PLdn	MON
10494kHz 1150z	22/11	Fair	4m28s		PLdn	MON
13894kHz 1100z	27/11	Weak	4m28s		PLdn	SAT
13394kHz 1110z	27/11	Weak	4m28s		PLdn	SAT
12194kHz 1120z	27/11	Fair	4m28s		PLdn	SAT
11494kHz 1130z	27/11	Strong	4m28s	QRM3	PLdn	SAT
11094kHz 1140z	27/11	Weak	4m28s		PLdn	SAT
10494kHz 1150z	27/11	Weak	4m28s		PLdn	SAT

13894kHz 1100z	29/11	Strong	1m40s		PLdn	MON
13394kHz 1110z	29/11	Strong	1m40s		PLdn	MON
12194kHz 1120z	29/11	Fair	1m40s	QRM2	PLdn	MON
11494kHz 1130z	29/11	Fair	1m40s	QRM3	PLdn	MON
11094kHz 1140z	29/11	Weak	1m40s	QRM3	PLdn	MON
10494kHz 1150z	29/11	Weak	1m40s		PLdn	MON

December 2021

14483kHz 1100z	04/12	Strong	1m40s`		PLdn	SAT
13983kHz 1110z	04/12	Fair	1m40s		PLdn	SAT
13483kHz 1120z	04/12	Strong	1m40s	QRM3	PLdn	SAT
12183kHz 1130z	04/12	Strong	1m40s		PLdn	SAT
11583kHz 1140z	04/12	Strong	1m40s		PLdn	SAT
10983kHz 1150z	04/12	Strong	1m40s		PLdn	SAT
14483kHz 1100z	06/12	Fair	4m28s	QRM3/4	PLdn	MON
13983kHz 1110z	06/12	Strong	4m28s	QRM3	PLdn	MON
13483kHz 1120z	06/12	V.strong	4m28s		PLdn	MON
12183kHz 1130z	06/12	V.strong	4m28s	QRM2	PLdn	MON
11583kHz 1140z	06/12	Strong	4m28s	QRM2	PLdn	MON
10983kHz 1150z	06/12	Fair	4m28s	QRM3	PLdn	MON
14483kHz 1100z	11/12	Fair	4m28s		PLdn	SAT
13983kHz 1110z	11/12	Fair	4m28s		PLdn	SAT
13483kHz 1120z	11/12	Strong	4m28s		PLdn	SAT
12183kHz 1130z	11/12	Strong	4m28s	QRM3	PLdn	SAT
11583kHz 1140z	11/12	Fair	4m28s	QRM3	PLdn	SAT
10983kHz 1150z	11/12	Weak	4m28s	QRM3	PLdn	SAT
14483kHz 1100z	13/12	Weak	1m40s		PLdn	MON
13983kHz 1110z	13/12	Weak	1m40s		PLdn	MON
13483kHz 1120z	13/12	V.weak	1m40s		PLdn	MON
12183kHz 1130z	13/12	Fair	1m40s		PLdn	MON
11583kHz 1140z	13/12	Weak	1m40s	QSB4	PLdn	MON
10983kHz 1150z	13/12	Fair	1m40s		PLdn	MON
14483kHz 1100z	18/12	Weak	1m40s		PLdn	SAT
13983kHz 1110z	18/12	Fair	1m40s		PLdn	SAT
13483kHz 1120z	18/12	Fair	1m40s		PLdn	SAT
12183kHz 1130z	18/12	Fair	1m40s		PLdn	SAT
11583kHz 1140z	18/12	Weak	1m40s		PLdn	SAT
10983kHz 1150z	18/12	Weak	1m40s		PLdn	SAT
14483kHz 1100z	20/12	Strong	4m28s		PLdn	MON
13983kHz 1110z	20/12	Strong	4m28s		PLdn	MON
13483kHz 1120z	20/12	Strong	4m28s		PLdn	MON
12183kHz 1130z	20/12	Strong	4m28s	PulseQRM2	PLdn	MON
11583kHz 1140z	20/12	Fair	4m28s	QRM2/3	PLdn	MON
10983kHz 1150z	20/12	Fair	4m28s	QRM2	PLdn	MON
14483kHz 1100z	25/12	Fair	4m28s		PLdn	SAT
13983kHz 1110z	25/12	Fair	4m28s		PLdn	SAT
13483kHz 1120z	25/12	Strong	4m28s	QRM3	PLdn	SAT
12183kHz 1130z	25/12	Weak	4m28s		PLdn	SAT
11583kHz 1140z	25/12	Weak	4m28s		PLdn	SAT
10983kHz 1150z	25/12	Weak	4m28s		PLdn	SAT
14483kHz 1100z	27/12	Fair	4m28s	QRM2	PLdn	MON
13983kHz 1110z	27/12	Strong	4m28s		PLdn	MON
13483kHz 1120z	27/12	Strong	4m28s	QRM3	PLdn	MON
12183kHz 1130z	27/12	Strong	4m28s		PLdn	MON
11583kHz 1140z	27/12	Weak	4m28s		PLdn	MON
10983kHz 1150z	27/12	Weak	4m28s		PLdn	MON

Wednesday/Saturday

November 2021

03/11	Frequencies not found
06/11	Frequencies not found
09/11	Unable to search [Tesco experience]

16353kHz 1200z	13/11	Fair	1m40s		PLdn	SAT
15953kHz 1210z	13/11	Fair	1m40s		PLdn	SAT
14953kHz 1220z	13/11	Strong	1m40s		PLdn	SAT
13453kHz 1230z	13/11	V.strong	1m40s		PLdn	SAT
12153kHz 1240z	13/11	Strong	1m40s		PLdn	SAT
11453kHz 1250z	13/11	Strong	1m40s	DIGIQRM3/4	PLdn	SAT

16353kHz	1200z	17/11	MISSED		[Tesco experience]	PLdn	WED
15953kHz	1210z	17/11	Strong	4m28s		PLdn	WED
14953kHz	1220z	17/11	V.strong	4m28s		PLdn	WED
13453kHz	1230z	17/11	V.trong	4m28s		PLdn	WED
12153kHz	1240z	17/11	Strong	4m28s	QRM3	PLdn	WED
11453kHz	1250z	17/11	Strong	4m28s	DIGIQRM5	PLdn	WED
16353kHz	1200z	20/11	Weak	4m28s		PLdn	SAT
15953kHz	1210z	20/11	Weak	4m28s	QRM2	PLdn	SAT
14953kHz	1220z	20/11	MISSED			PLdn	SAT
13453kHz	1230z	20/11	Strong	4m28s		PLdn	SAT
12153kHz	1240z	20/11	MISSED			PLdn	SAT
11453kHz	1250z	20/11	Strong	4m28s	DIGIQRM5	PLdn	SAT
16353kHz	1200z	24/11	MISSED			PLdn	WED
15953kHz	1210z	24/11	Weak	1m40s		PLdn	WED
14953kHz	1220z	24/11	MISSED			PLdn	WED
13453kHz	1230z	24/11	V.Strong	1m40s		PLdn	WED
12153kHz	1240z	24/11	MISSED			PLdn	WED
11453kHz	1250z	24/11	Weak	1m40s	DIGIQRM3/4	PLdn	WED
16353kHz	1200z	27/11	Weak	1m40s		PLdn	SAT
15953kHz	1210z	27/11	Strong	1m40s		PLdn	SAT
14953kHz	1220z	27/11	MISSED			PLdn	SAT
13453kHz	1230z	27/11	Strong	1m40s		PLdn	SAT
12153kHz	1240z	27/11	MISSED			PLdn	SAT
11453kHz	1250z	27/11	Weak	1m40s		PLdn	SAT

December 2021

14978	01-12-2021	1200	XPB1	MFSK-16	Russian intel.	Ary	WED
13978	01-12-2021	1210	XPB1	MFSK-16	Russian intel.	Ary	WED
13378	01-12-2021	1220	XPB1	MFSK-16	Russian intel.	Ary	WED
12178	01-12-2021	1230	XPB1	MFSK-16	Russian intel.	Ary	WED
11078	01-12-2021	1240	XPB1	MFSK-16	Russian intel.	Ary	WED
10278	01-12-2021	1250	XPB1	MFSK-16	Russian intel.	Ary	WED

08/12 NOT MONITORED

14978kHz	1200z	11/12	NRH		PLdn	SAT
13978kHz	1210z	11/12	V.weak	1m40s	PLdn	SAT
13378kHz	1220z	11/12	NRH		PLdn	SAT
12178kHz	1230z	11/12	V.weak	1m40s	PLdn	SAT
11078kHz	1240z	11/12	V.weak	1m40s	PLdn	SAT
10278kHz	1250z	11/12	NRH		PLdn	SAT

15/12 NOT MONITORED

18/12 NOT MONITORED

22/12 NOT MONITORED

25/12 NOT MONITORED

29/12 NOT MONITORED

XPB1 Early Morning fm H-FD

Mon 15.11.2021 0600Z 13446 msg 4:29
Mon 15.11.2021 0610Z 14446 msg
Mon 15.11.2021 0620Z 14946 msg
Mon 15.11.2021 0630Z 15846 msg
Mon 15.11.2021 0640Z 16146 msg
Mon 15.11.2021 0650Z 17446 msg

Tue 07.12.2021 0600Z 12118 msg 1:42
Tue 07.12.2021 0610Z 13418 msg
Tue 07.12.2021 0620Z 13918 msg
Tue 07.12.2021 0630Z 14418 msg
Tue 07.12.2021 0640Z 14918 msg
Tue 07.12.2021 0650Z 15918 msg 0640/0640?

Hybrids and Tones

HM01

Whilst thought active no reports via E2k

X06 Mazielka

New signature X06d

The single tone variant is now designated with X06d. As you will note within the logs, there were long tests with this variant, which is a special one, this led to the new ident of X06d

Here are the logs as usual :

X06 Mazielka (1c) logs section

Date	Day	UTC	Freq	Scale	Monitor	Comments
20211101	Mon	0750	10161	165324	Ary/NL	TX to Vienna, G1, no end time
20211101	Mon	0829	11562	432516	Ary	TX to Bern, G6, no end time
20211102	Tue	0902	15836	165423	Ary	Alert 2 (TX to Brussels, G12) 1
20111102	Tue	0914	12157	165423	Ary	2.2
20211108	Mon	0827	20690	156234	Ary	TX to Kampala, G68
20211108	Mon	0913-0915	10127	421635	Ary	Alert 7 (TX to Oslo, G74) 1
20211108	Mon	0918-0921	10127	421635	Ary	7.2
20211108	Mon	0927-0947	11537	421635	Ary	7.3
20111108	Mon	0936-0940	13517	463125	Ary	TX to Rabat, i. p., G77
20211108	Mon	0946-0947	12109	431625	Ary	TX to Warsaw, i. p., G75
20211110	Wed	0924-0931	9127	263145	Ary	TX to Prague, i. p., G428 (new)
20211111	Thu	0952-0954	13506	621543	Ary	TX to Lisbon - error? i. p., G426
20211111	Thu	0954	13506	164532	Ary	TX to Dublin, G106(1)
20211112	Fri	0928	10653	356412	Ary	TX to Berlin, G126, no end time
20211115	Mon	0757	10161	165324	Ary	TX to Vienna,i.p.,G145, no end time
20211116	Tue	0900	12174	154632	Ary	G427, no end time
20211116	Tue	0936	18206	246531	Ary	TX to Accra, G153, no end time
20211117	Wed	0840-0847	12830	2-5616	Ary	X06b i. p.
20211119	Fri	1007	12215	361245	Ary	TX to Copenhagen, i.p., G190(2)
20211119	Fri	1042-1113	18640	1--6--	Ary	X06b i. p.
20211122	Mon	0805-0953	14650	1--6--	Ary	Very long X06b i. p. (CW)
20211122	Mon	0944-0950	12109	431625	Ary	TX to Warsaw, i. p., G221
20211123	Tue	0813-0814	14861	542136	Ary	TX to Beijing, i. p., G88
20211123	Tue	0903-1012	12550	1--6--	Ary	Very long X06b i. p. (CW)
20211123	Tue	1052-1313	14550	1--6--	Ary	Another long X06b test i. p. (CW)
20211124	Wed	0836-0838	13369	412356	Ary	TX to Budapest, i. p., G243
20211124	Wed	0907-0910	16116	134265	Ary	TX to Tunis, i. p., G90
20211125	Thu	0703	16450	1--6--	Ary	X06b i. p. (CW)
20211125	Thu	0803-1045	11450	1--6--	Ary, Edd	Another very long X06b test
20211125	Thu	0936-0939	13506	621543	Ary	TX to Lisbon, i. p., G429 (error?)
20211125	Thu	0940-0945	13506	164532	Ary	TX to Dublin, G252 (usual scale)
20211125	Thu	1046-1226	9450	1--6--	Ary	The next very long X06b test (CW)
20211125	Thu	1130-1156	15878	621543	Ary	TX to Lisbon, i. p., G429 (new)
20211126	Fri	0638-1135	8560	1--6--	Ary	Next X06b test (almost 5 h!) (CW)
20211126	Fri	0857	13356	1--6--	Ary	X06b shortie (CW)
20211126	Fri	0910-0911	13350	1--6--	Ary	X06b(3)
20211126	Fri	0930-0932	10653	356412	Ary	TX to Berlin, G271
20211126	Fri	1110-1201	13350	4---6-	Ary	Carrier alternating with X06b
20211127	Sat	1013	12194	1--6--	Schorschi	X06b with S1 before XPB1
20211129	Mon	0700-1332	13350	111111	Ary	Long X06d test (4a)
20211129	Mon	0750-0814	14650	111111	Ary	Next X06d test (CW)
20211129	Mon	0935-0939	14560	621543	Ary	TX to Lisbon, R
20211129	Mon	0944-1012	18650	111111	Ary	Next X06d test (CW)
20211129	Mon	0948-1007	14650	111111	Ary	X06d (CW)
20211129	Mon	1008-1020	14650	111111	Ary	X06d (CW)
20211201	Wed	1235-1248	16103	231654	Ary, HFD	TX to Abuja, S9+, G422
20211204	Sat	1109-1115	14650	215346	Eddy/AU	TX to Mumbai, G60
20211206	Mon	1006	14483	1--6--	Schorschi	X06b with S9 before XPB1
20211208	Wed	0830-0838	13369	412356	Ary	TX to Budapest, i. p., G97
20211210	Fri	0730-0857	13250	1-----	Ary	Next long X06d test(CW)
20211210	Fri	0746-0748	12207	215346	Ary	TX to Mumbai, i. p., G124
20211210	Fri	0858-1028	15450	1-----	Ary	Next long X06d test(CW)
20211210	Fri	0935-0950	12177	356412	Schorschi	TX to Berlin, S9, G126
20211210	Fri	1018-1037	17450	1-----	Ary	X06d test (CW)
20211210	Fri	1020-1034	10150	1-----	Ary	X06d test (CW)
20211210	Fri	1034-1051	14650	1-----	Ary	X06d test (CW)
20211210	Fri	1035-1039	13449	6-----	Schorschi	X06d test, S9 (USB)(4b)
20211210	Fri	1040	10149	6-----	Schorschi	X06d shortie, S9 (USB)

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20211210 Fri 1050-1150 17250 1----- Ary         Long X06d test(CW)(4c)
20211210 Fri 1052-1058 12207 215346 Ary         TX to Mumbai, G124
20211214 Tue 0800      13420 534216 Ary         TX to Bagdad,i.p.,G87, no end time
20211215 Wed 0715-1200 15820 1----- Ary         Long X06d test (CW)(4d)
20211215 Wed 1103-1104 14650 215346 Ary         TX to Mumbai, i. p., G167
20211215 Wed 1200-1325 11230 1----- Ary         X06d, moved from 15820 kHz (CW)
20211215 Wed 1257-1258 18245 231654 Ary         TX to Abuja, i. p., G423
20211216 Thu 0905-1316 11230 1----- Ary         Long X06d test (CW)(4e)
20211217 Fri 0823-0830 14944 621543 Ary, RNGB   TX to Lisbon, R
20211217 Fri 0827-0840 13954 213546 Ary         TX to Islamabad, G390
20211217 Fri 0900-1051 12550 1----- Ary         Long X06d test (CW)
20211217 Fri 1000-1007 12215 361245 Ary         TX to Copenhagen, G190
20211220 Mon 0753      13452 165324 Ary         TX to Vienna,i.p.,G145, no end time
20211220 Mon 0822      12133 263514 Ary         I. p., G425, no end time
20211220 Mon 0852      14377 432516 Ary         TX to Bern, i.p.,G341, no end time
20211220 Mon 1013      11438 532614 Ary         TX to Paris, i.p.,G147, no end time
20211221 Tue 0851-0901 10335 154632 Ary,Dave/AU G427
20211221 Tue 0855      15836 165423 Ary         TX to Brussels, G151, no end time
20211221 Tue 0938      14358 154263 Ary         TX to Rome, G148, no end time
20211221 Tue 1200      15782 325614 Ary         TX to Nairobi, G400, no end time
20211222 Wed 1115      12320 111111 Schorschi   X06d shortie, S9 (USB)
20211222 Wed 1125-1126 10278 1--6-- Schorschi   X06b with S9
20211224 Fri 1116-1130 12550 1----- Ary         X06d test (CW) (4f)
20211224 Fri 1130-1215  8250 1----- Ary         Moved from 12550 kHz (CW) (4g)
20211227 Mon 0819      20690 156234 Ary         Alert 2 (TX to Kampala, G203), 1(5)
20211227 Mon 0850-1024 16350 1----- Ary         Long X06d test (CW)
20211227 Mon 0900-1016 17475 156234 Ary         2.2: i. p.
20211227 Mon 0906-0918 10127 421635 Ary         TX to Oslo, G220
20211228 Tue 0759      11545 534216 Ary         Alert 2 (TX to Bagdad, G232) 1(5)
20211228 Tue 0804      13420 534216 Ary         2.2(5)
20211228 Tue 0823-1058 10350 1----- Ary         Long X06d test (CW)(4h)
20211228 Tue 1033      20813 216354 Schorschi   TX to Chennai, S9, G228
20211228 Tue 1110-1123 14824 625413 Ary         TX to Tel Aviv, R
20211228 Tue 1237-1305 10550 1--6-- Ary         X06b
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1) Tones changed into the usual scale with short break after 6 rounds (no end time)

2) Still going on at 1015 UTC, no end time

3) Carrier from 0900 UTC on, X06b for 1 minute, then off

4a) Also heard by Schorschi in USB on 13349 kHz with “6-----“

4b) Also heard by Ary in CW on 13450 kHz with “1-----“

4c) Also heard by Schorschi in USB on 17249 kHz with “6-----“ and QSA5 QRM1 QRN1 QSB1

4d) Also heard by Schorschi at ca. 0909 UTC in USB on 15819 kHz with “6-----“ and QSA5 QRM1 QRN1 QSB1

4e) Also heard by Schorschi at 1135 UTC in USB on 11229 kHz with “6-----“ and QSA5 QRM1 QRN1 QSB1

4f) Also heard by Schorschi at 1125 UTC in USB on 12549 kHz with “6-----” and with QSA5 QRM1 QRN1 QSB1

4g) 15 secs break at 1158 UTC, off at 1200 UTC, back at 1205 UTC. Also heard by Schorschi at 1137 UTC in USB on 8249 kHz with “6-----” and QSA5 QRM1 QRN1 QSB1

4h) Also heard by Schorschi at 1028 UTC on 10349 kHz in USB with “6-----” and QSA5 QRM1 QRN1 QSB1

5) No end time

Many thanks as usual to all contributors to the logs section.

At the end here is something new:

Documentary film about numbers stations

On the last January weekend 2022, 2 journalists will come to Marburg for an interview with me for a documentary film about numbers stations. Of course, the mentioning of E2K will be guaranteed. If I have more details about the film, I will let you all know. Many thanks to Ary for mediation.

A happy and especially healthy new year to all of you, and further good work of E2K.

Till next time I say “Good-bye”

Jochen Schäfer, Numbers-, X06 Database and Teamkopf …. *Thanks, Jochen*

Special Stations [No apparent schedule, possibly training/exercise or 'Radio Wars']

E06 and G06 stations heard [via Ary]

11073 13-12-2021 1520 E06 USB Ary MON

10755kHz1210z 17/12 ENDS 1220z Weak M8 FRI
975 824 30
33668 74822 95181 38570 31870 47063 20106 59676 59176 39258
99286 56037 40435 78651 40955 83881 57145 49573 31915 18004
12175 85766 12933 97469 51993 50316 28117 61250 38613 64107
824 30 00000 *Courtesy M8*

Double E06:

10755 kHz 17-12-2021 1201z E06 USB Several restarts during the first message Ary THU

975 (R) 038 26
49576 63374 79720 03804 88947 28065 64514 46319 38467 56373
64577 13154 89749 45892 40509 48467 14389 58581 97002 24201
99530 17340 59467 96975 51106 40963
038 26
975 (R) 824 30
33668 74822 95181 38570 31870 47063 26106 59676 59176 39258
99286 56037 40435 78651 40955 83881 57145 49573 31915 18004
12175 85766 12933 97469 51993 50316 28117 61250 38613 64107
825 30 00000 *Courtesy Ary*

G06 b

10755 13-12-2021 1310 G06b USB 975 (R)
352 46897 (R5)
867 40
99164 21567 02776 83860 34612 90714 86499 84488 08238 13534
85274 57898 53735 37077 02304 34833 73427 90997 51069 83749
89846 64206 32349 64670 58743 88653 46886 61256 73205 78677
85878 02043 13577 99359 66502 06769 22871 62316 04634 18749
867 40 00000 *Courtesy Ary*

E17z additional messages:

10240 01-11-2021 1230 E17z Synthesized lady. On/off and several restarts Ary MON
7685 01-11-2021 1255 E17z Synthesized lady. 274 repeated for two minutes. Several times off and back again.
7685 01-11-2021 1258 E17z Live transmission. Male operator

274 839 20
33797 12577 74526 46647 79202 53516 21717 56069 96812 14499
20534 22260 42494 27628 16070 48834 53745 72088 02440 58514
839 20 000000

10237.5 03-11-2021 1300 E17z USB Ary WED
Synthesized lady. Several restarts during the message.
274 806 31
14288 83431 47365 93778 96654 83555 46798 39823 83826 84071
25086 72974 34674 13715 33927 84757 87565 84548 44952 80955
30492 93543 48616 43989 51418 48981 36674 71352 83420 26860
59791
806 31 00000

8080 03-11-2021 1328 E17z USB Ary WED
Synthesized lady. Garbled voice then readable:
13715 33927 84757 87565 84548 44952 80955 30492 silence
then live, male operator
274 (repeated)
followed by the rest of the message

Ary writes 'Just like yesterday E17z had a lot of problems. I couldn't find the repeat.' Ary TUE

5082 16-11-2021 1430 E17z no repeat heard. Synthesized lady
274 (R) off/restart
274 (R) 913 24
47048 80974 83173 48034 off/restart
274 (R) 913 24
47048 80974 83173 48034 58176 37025 32951 off/restart
274 (R) off/restart
274 (R)
83173 48034 58176 37025 32951 17414 89191 off/restart, now live, male operator

274 (R)
32951 17414 89191 88796 58872 48810 96167 99345 89786 37345
44534 20979 46336 25593 69951 24876 91917 46220
913 24 00000

Double E06:

10755 kHz 17-12-2021 1201z E06 USB Several restarts during the first message Ary THU

975 (R) 038 26
49576 63374 79720 03804 88947 28065 64514 46319 38467 56373
64577 13154 89749 45892 40509 48467 14389 58581 97002 24201
99530 17340 59467 96975 51106 40963
038 26
975 (R) 824 30
33668 74822 95181 38570 31870 47063 26106 59676 59176 39258
99286 56037 40435 78651 40955 83881 57145 49573 31915 18004
12175 85766 12933 97469 51993 50316 28117 61250 38613 64107
825 30 00000

XPA2

11221 12-11-2021 0840 XPA2 MFSK-16/20bd Ary FRI
14803 12-11-2021 0852 XPA2 MFSK-16/20bd i.p. same message? Both ended at the same time

00589 00985 37713 84572 01903 88463 26685 97750 18749 94615
43755 70793 73522 71854 07961 23404 42219 99027 80823 72522
85074 64033 35649 51433 70685 08733 08286 82462 58793 34328
68284 79114 76792 52780 26708 92642 55457 25448 90324 81768
06425 90104 52788 22120 08301 22450 85962 90297 13493 62432
59567 13403 75696 93159 10148 64465 98134 90281 65160 57433
31840 57081 68754 94246 90242 58542 89132 79629 29464 77521
14964 28414 61562 67436 97954 96605 82321 30489 84583 03737
93251 35414 52466 38259 62537 52124 58225 50717 86333 60919
10241 67876 03169 70101 20170 09101 43922 45719 71956 54746
58806 19540 75861 73935 13013 01604 62736 64951 40201 23339
14394 27766 93494 57405 24320 10090 77312 19893 87291 16356
48377 71093 17868 29363 69567 51308 57535 94534 98952 18619
22610 52702 67908 42509 74913 70046 64216 21320 67518 28877
93612 83472 42345 14845 38292 08731 92266 28198 97505 44157
79314 01782 95052 29673 23966 63138 56264 98126 01268 36973
57424 30648 60306 23413 37402 11282 93393 72921 92649 07105
02840 73392 17828 26478 03193 11002 49221 75995 48099 13456
43425 70808 63378 15501 77414 12292 77447 04074 76819 05217
68349 79373 58880 88997 65863 08313 69025 93040 11239 98000
16340 19708 86137 57631 58486 53574 28212 96613 06961 59853
11785 22485 83966 03017 81591 98860 54032 00359 72855 66391
29675 06775 43770 33635 99410 63934 25858 67282 43605 34051
20931 24578 66332 85183 61701 63466 12322 25535 12496 79276
83115 12815 90917 33100 39732 36744 70697 81161 96386 13322
47273 85892 45477 83948 21590 66961 02529 98958 32246 42507
73939 31267 25271 19187 03455 08136 40883 63126 85385 70424
41726 49379 40993 17345 88819 50608 03882 33629 70331 76354
06066 62521 42399 11079 81147 74402 86158 33125 07305 47440
55655 85699 27503 71715 89719 08182 99096 29509 76233 32277
30282 57465 04769 26530 85717 17486 85319 96271 45948 39631
66969 73101 83696 50560 54825 25234 10079 26612 55152 19973
23035 17616 11759 72804 93444 93294 36401 70618 49550 48565
80933 99596 74772 56741 75710 98939 17645 36162 84750 92724
80147 32824 00295 98229 94013 28200 70681 06261 07822 72790
19525 30904 50716 03385 35508 15895 00299 75337 96126 09751
48947 53443 71054 57729 59005 64348 18271 10824 30990 86571
21466 48891 00061 88242 49585 40006 98535 94616 32803 30371
94156 26601 47821 24602 42178 20542 46397 56062 37692 53681
93356 72474 21287 74946 54978 76243 84622 03720 22220 25725
04116 44568 10035 84956 36644 21675 28982 42468 68048 12962
75252 48673 37806 21111 50279 55253 02048 66468 55734 99076
01756 73456 86142 17329 66435 03920 55492 94480 31809 94302
25770 36496 43150 21113 72516 48436 50808 08799 29526 99397
82175 90515 52130 45160 44210 77356 44457 38148 92534 98112
47692 30077 27040 08557 53770 28870 95122 67534 28466 21123
12646 00980 51267 75813 22214 79017 06539 78751 68628 15788
73091 89599 00700 85870 88297 35923 22130 66620 73761 51620
56080 80017 20266 88393 28663 40681 29727 51332 55558 71192
77697 70455 74195 32080 75077 63085 39664 42840 57884 14505
41285 17921 39591 78550 04585 07226 28031 27712 73537 51866
28994 95434 44659 59278 00433 68219 98553 38081 73467 26031
68176 24668 03245 68025 69461 76750 08892 07791 91300 30910
35785 74469 56167 25314 91105 55357 66646 40945 62196 30728
86860 23629 10982 89693 15967 79142 58169 08033 04743 62377
43797 37183 32204 38382 99252 78521 56478 11286 37100 82790
79457 50160 41878 68413 16429 27244 40524 51993 09681 18424
07568 05254 78615 35632 49482 10508 43004 75933 09355 23427
51199 12636 09170 38568 86292 56920 85222 22013 49562 17542
37849 88173 53338 56957 17333 80670 70406 17723 31288 15287
48971 53411 82366 48267 88613 95541 28706 80790 72615 07614
33519 52841 08908 05397 31360 52452 28308 92601 52279 92635
53640 19913 28318 14918 78381 18561 26006 92996 93578 78187
43447 70729 34200 68349 94959 43504 26686 91529 84793 50461
85698 03953 34677 67441 42040 46913 48995 69705 52096 48926
75056 65183 34719 45710 60485 21086 66755 88429 17961 15802
80710 71294 44316 66250 61429 81764 73067 58548 65484 64794
42295 75521 63557 13730 81774 06682 43829 40100 03332 30803
27386 35555 09697 24362 02730 47440 97559 69955 84649 16450
87272 00072 51046 23190 25804 56239 73841 25729 69130 74187
74448 38237 47684 13623 75993 23506 14461 29368 33355 92388
47859 25415 93176 93061 29049 41344 09612 36969 64208 91695
52766 47355 11965 07942 24365 77969 24488 72057 62318 44558
21163 18018 77753 67187 86476 00280 32476 02756 81860 94772
73780 66402 06215 53992 39518 67867 53462 95670 38726 28705
54858 78593 88737 72686 07288 52256 80711 04974 19642 40458
01944 82963 56034 81626 22934 00763 48665 71262 75248 58204
34186 72504 75328 79477 69999 70549 18720 06798 45124 22951

54427 34198 76002 98018 11492 07756 50933 73457 54811 85104
31879 40506 57622 67674 64442 63384 56612 42249 78392 88584
08358 96452 16660 80498 45287 70513 87433 62133 78617 01783
73590 56580 90214 42324 59161 68106 62786 41437 01324 65563
88537 81984 74513 63359 27953 85915 02468 77307 32699 51288
31071 08099 22733 40826 89376 00058 73031 82658 87405 04355
52929 48201 98512 82315 23347 15226 57492 44747 00648 02286
71203 18557 95045 23597 44845 17956 92458 34460 58278 49186
77302 22851 49988 61461 78881 52160 25199 19335 16956 68481
35568 89496 01148 87086 68000 09225 67347 70501 25465 05467
88614 54557 86230 28771 82974 13340 54546 81191 25922 52062
27758 58973 10052 31772 16758 33748 93728 77060 92460 24308
44341 50165 21484 73764 61162 82146 89654 49212 76308 78512
97752 23722 38697 24840 70646 07074 07926 12031 02099 99435
29114 80382 52971 68435 04529 50747 03721 15877 09206 83273
04175 84819 83811 14759 00754 12451 27907 62962 77689 60095
35783 97524 69307 04835 95022 24857 01408 60068 86626 74508
22745 75450 48943 54220 03156 28765 88875 83040 16553 06180
21398 80173 97792 50295 14829 38626 57853 75887 81311 38537
94238 83104 04917 28165 02327 01615 52246 14575 34746 41138
56887 70068 76948 81555 73411 54952 89220 22167

Courtesy Ary

7849 12-11-2021 1200 XPA2 MFSK-12/20Bd Ary FRI

00517 00364 23256 73889 16020 91703 43314 44699 12611 67802
99287 98644 03886 99001 37897 80813 13784 41545 57148 84742
77799 10208 89403 76942 74545 56419 42396 46892 38467 62011
14324 21233 56103 55549 08018 80979 35398 99144 33457 75431
06620 34235 22530 93123 64095 73532 16558 68098 56782 08157
25195 66762 09814 66944 02278 74114 92969 64602 01464 68646
48606 02405 94913 79218 19923 97621 10010 15899 09553 62326
75464 49477 26193 86802 10324 14487 74354 56165 21116 68615
93205 72112 04590 82548 15150 08168 38338 31307 25045 76218
42124 42794 81439 21207 69565 55793 35073 06094 14358 11743
53142 47578 94761 31698 61365 15984 48267 93659 30305 66745
94767 40580 98724 02181 95194 58219 47424 00593 98740 53064
45935 42722 57385 13474 06242 17699 17675 98079 72368 14898
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11982 85128 02710 12958 98610 11977 21347

Courtesy Ary

16297 15-11-2021 0800 XPA2 Ary MON
15871 15-11-2021 0820 XPA2
14803 15-11-2021 0840 XPA2

13383 15-11-2021 0800 XPA2
12213 15-11-2021 0820 XPA2
11221 15-11-2021 0840 XPA2

00245 00916 28040 48141 44908 03010 75423 10411 37392 09844
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26498 21245 44269 05961 54335 88469 51941 97966 59883 02810
58281 82139 47550 24840 26306 65595 59264 68033 66562 83370
54408 85224 27173 44913 33504 60678 21790 15275 16880 84728
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76330 77930 66085 75920 31165 76908 26443 05673 44619 92608
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76156 43652 04926 98692 88160 31779 24788 89460 24817 99582
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40027 29453 61117 82142 37791 63428 67379 79820 73169 85293
56373 63101 94167 98410 94835 06093 01492 04532 37711 31490
90094 17923 02170 89236 53086 16722 81193 90541 24302 16903
39025 60132 40705 81130 74724 09064 47689 90847 98226 17253
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01634 67428 45118 88172 55187 09808 60957 42760 33284 39040
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72594 15504 26202 74396 54729 08233 14746 83543 03039 82195
06784 35304 23263 78734 39866 13431 77373 57893 30500 71301
95742 17123 90986 59438 00700 23859 00311 20851 75663 21645
76921 97739 79622 86873 41920 53168 17392 31102 53454 88345
52810 56715 56058 95608 75747 16482 60612 89286 63947 92974
22357 04339 92998 49939 02731 35377 87639 47141 35997 44062
03583 04933 51551 15504 78525 53867 94757 52899 08705 19385
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78515 13885 03692 65174 59919 01499 30826 74858 66655 32795
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Courtesy Ary

7849	15-11-2021	1200	XPA2	MFSK-16/20Bd	Ary	MON
6854	15-11-2021	1210	XPA2	MFSK-16/20Bd		
5823	15-11-2021	1220	XPA2	MFSK-16/20Bd		

9387	15-11-2021	1200	XPA2	MFSK-16/20Bd
9048	15-11-2021	1210	XPA2	MFSK-16/20Bd
8192	15-11-2021	1220	XPA2	MFSK-16/20Bd

00565 00306 09663 53887 53298 13017 52645 57281 73491 76523
28246 24736 27630 83108 71070 29280 48885 79183 09819 96083
44445 18534 21931 39883 81377 82871 58455 04323 94740 90595
98254 21677 89729 36471 96543 44977 87921 66903 97554 06556
26875 33710 81999 19502 77342 20093 78415 29168 38704 78563
01529 42353 22783 07846 27919 89395 44462 63210 95635 01964
90191 21320 59408 88157 65647 61559 60655 33540 49905 91647
19397 44614 16734 43845 53653 75597 54187 76680 96398 71660
62192 83869 88739 64957 86035 89665 59891 22269 37081 09902
32192 92733 86214 90826 41263 06124 90641 27861 04920 75942
01638 19561 31584 80891 11116 92056 57694 83260 32258 88081
66920 99578 89905 64546 57288 89537 02139 87495 87471 33292
42626 84141 94207 68507 80697 72465 57512 76970 36985 45495
57123 46648 60495 28170 98893 20733 28410 85378 09484 32022
53796 68181 38306 75397 74399 03050 00508 80544 03464 26426
88155 00805 27680 33227 70847 30647 49881 19957 82481 27561
83249 80682 03331 29769 43759 45934 64038 07393 12136 48178
29877 46654 20336 62041 55837 12494 64242 65363 40840 09879
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10668 22598 97313 74879 01854 14494 19705 17910 52715 76373
74061 02126 88557 09352 04774 74606 51766 68185 96641 77145
82743 27323 55160 71990 27492 47266 02257 23223 94940 35043
58242 18729 45753 23587 49651 78999 87821 29726 45038 47417
09169 61625 28820 76540 25313 89377 94829 95225 03463 57720
72904 45921 68955 80531 14299 90677 02060 74774 35908 23915
52318 29004 38250 47258 43787 65107 61522 88877 73630 43403
40321 24432 68938 23922 69581 06483 21172 57310 43440 93348
14177 55510 59600 56202 49828 24072 63901 80407 02204 46345
21223 15894 04793 29691 52232 17783 50529 50769 21556 54371
40420 08801 38058 08597 22099 36676 74068 55328 71745 41966
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Courtesy Ary

18492	16-11-2021	0700	XPA2	MFSK-16/20Bd	Ary	TUE
17462	16-11-2021	0710	XPA2	MFSK-16/20Bd		
16072	16-11-2021	0720	XPA2	MFSK-16/20Bd		

15825 16-11-2021 0700 XPA2 MFSK-16/20Bd
14703 16-11-2021 0710 XPA2 MFSK-16/20Bd
13371 16-11-2021 0720 XPA2 MFSK-16/20Bd

00556 00352 67987 70684 78540 59376 83029 77342 71361 79937
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02038 80768 36788 62506 38076 06083 00331 38608 52978 61108
21284 11376 29738 22364 65300 09380 05000 98580 26856 65686
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09141 17595 87485 80087 87116 68757 65636 81533 04641 06974
18423 38885 39929 21107 64856 31605 08805 70383 82680 14358
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65844 98875 00022 54765 43197 04878 52123 54234 51994 00355
28141 33864 50080 88887 00318 23156 81316 60600 05588 58085
02363 05858 80305 36823 62685 36323 22285 67576 00020 82335
80858 84420 30705 68358 60262 50385 20865 23606 02370 84073
08958 77223 70577 22033 33387 38533 00755 41388 50378 06699
73539 74183 82881 51803 08266 28586 72545 74368 80538 22352
96468 91956 88216 66335 28333 82765 03066 06856 55688 08382
68800 03038 64306 38555 87888 70332 08838 23066 87568 00626
22833 88003 08608 74023 88887 21288 53170 80588 23835 80582
60388 33860 87317 67909 78031 58637 26462 48286 40980 59858
10584 70072 57689 12693 74134 69226 50045 21515 38561 74198
23920 78138 78717 56126 07439 99427 28333 10738 39137 50485
02828 58531 73966 94375 48743 15153 85666 99157 35420 90577
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07739 21045 15402 64508 09646 33581 99026 24171 84045 98439
94453 00276 86125 15149 23880 59287 48191 44496 21413 23783
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07751 11138 14922 11784 47170 65355 91383 68218 04397 85948
61220 35945 67588 01185 29693 03102 05878 78070 09752 28416
63085 75290 94814 08700 21485 31070 19046 65011 25171 60612
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08117 92637 39219 94992 53265 *Courtesy Ary*

11431 25-11-2021 0835 XPA2 MFSK-16/20Bd

06602 00135 25270 16147 97003 51843 73029 24561 37859 21782
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08931 60820 76491 79146 91662 25261 40960 15388 36760 62577
69171 92318 07115 67789 16252 23965 00594 59251 92198 55613
95675 07548 53658 02160 74270 94277 77736 43734 73765 65517
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52494 63100 64808 96285 91314 82252 30991 56731 43344 25964
85154 49255 40586 55992 28870 58871 32514 33764
Courtesy Ary

16338 07-12-2021 1000 XPA2 MFSK-16/20Bd Ary TUE
14538 07-12-2021 1020 XPA2 MFSK-16/20Bd
13438 07-12-2021 1040 XPA2 MFSK-16/20Bd

00316 00992 02128 24195 29383 37439 85832 81678 43703 09137
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61136 50823 48104 46899 89631 74545 99676 25790 37272 92241
90360 74729 05363 41441 99886 06912 42026 95078 88509 73637
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08836 64257 46270 09470 69109 20900 44465 28578 13386 48407
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29940 13335 54382 61886 13585 15682 27908 48692 42477 35677
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81279 39214 50215 07561 79192 65237 37552 51473 91400 05626
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58727 90619 38532 95075 12855 03279 33166 20806 50109 62625
62331 30266 57916 06960 25304 *Courtesy Ary*

12229 07-12-2021 1400 XPA2 MFSK-16/20Bd Ary TUE
11129 07-12-2021 1420 XPA2 MFSK-16/20Bd
10429 07-12-2021 1440 XPA2 MFSK-16/20Bd

00461 00993 17991 35905 45879 64947 12129 10382 19908 33018
67111 43543 35142 95699 32174 45785 24860 31015 84949 57589
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81191 21516 19699 86705 51461 12187 02270 58085 47545 80357
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59592 37652 91308 70637 16633 88793 42889 12654 79218 10477
66325 82153 40728 73507 54099 14452 84917 78520 80020 72031
74402 26433 48635 90541 87398 53892 94134 30995 14286 93660
77512 01417 87504 97381 90599 45439 17194 19904 25726 39147
29750 62518 57125 06562 07249 32326 43966 19687 93719 54565
73526 57356 49253 17553 19783 69043 97668 17791 46023 00277
79934 76680 56827 63562 39549 49443 57275 97220 41895 78846
75554 84540 81154 84167 90357 21681 60985 01737 52812 39247
37277 61081 67624 72394 66882 61134 38207 88209 81910 85574
15390 69350 59637 85545 89305 57674 05483 85200 95794 94532
20015 12245 93509 95709 33546 32366 02251 04231 62741 69694
36448 94652 98574 60999 42493 15029 35312 37772 58701 76905
59700 12507 34458 45450 82273 65376 45064 48311 12708 13127
22496 27074 68742 83814 51348 55281 23103 20001 77664 35279
85081 09010 74151 27700 72896 85695 02493 72283 30994 26052
68171 57113 42160 40213 94876 73844 15178 21678 01148 09380
23912 29414 18761 91478 23532 82385 80032 75946 36536 24439
94607 88583 95555 18343 32905 67160 48096 34964 90007 71075
41095 75551 06989 04681 79704 31827 47416 37139 78343 20106
35257 53042 57286 32826 33293 85262 29764 95830 97613 05570
92933 92319 90329 69637 83417 57153 30563 90324 61740 84417
19101 58768 21785 95699 55390 66009 03071 39457 12742 54881
28411 55295 87677 91961 00118 38865 28296 28866 87598 45073
34161 16338 77533 05704 12393 35123 77131 76574 54579 11168
88022 11128 65091 95225 49958 66502 13445 87900 54398 04669
59904 89436 55196 20542 16110 96978 19907 24306 93545 03325
98238 97704 29754 56024 86583 80769 63618 37528 56363 96009
32087 23409 89007 82560 71849 13943 29766 42845 93429 55285
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21748 20287 48259 73095 24993 04145 19031 33604 13969 23499
22898 72818 88826 57936 36054 95291 79253 80153 15425 24703
44035 52248 29800 96298 55304 72792 48266 38997 57760 27415
52718 80087 34324 46236 17313 78791 07546 20177 37014 04426
65054 88680 02077 59861 44453 36162 33535 56097 33377 17248
15802 10411 17957 66721 98987 01782 63671 74413 41875 64791
49029 26031 93695 70140 12687 79121 64777 63478 04193 05927
62289 22252 34725 45918 46369 70746 20945 42985 40855 66948
46733 98591 15789 25271 26054 47813 01251 62515 66064 82052

13136 85199 29450 92263 09125 56416 16282 70993 10622 61454
50322 12970 10037 57633 92322 93899 32860 03960 40182 09346
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76074 06725 22082 80788 66163 08509 87263 39689 25354 11014
92437 14433 10636 49458 83886 03622 98369 53992 95257 18989
16535 54576 88213 37031 10539 31305 23721 23004 17223 03114
38678 01231 40524 51900 07999 38298 09261 37940 11699 12088
93103 69784 29241 48800 71499 90098 18409 68124 40007 28175
23970 79114 69702 45155 66665 71417 08245 88601 76088 52073
77628 57322 64933 86344 59138 96780 50680 31959 05375 26649
88537 85249 99517 58139 66853 95385 20381 64201 79550 00209
35243 20098 32386 86600 05112 61243 92391 77849 64328 55691
43108 84027 18568 09468 08213 62826 14228 50203 37578 88738
60001 50062 65766 65273 96325 32535 75540 04213 40587 79911
35909 97757 35714 00355 23148 90557 42411 15550 27749 92336
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01277 73535 04403 81431 89692 04216 62030 83882 87717 76669
84501 15347 20469 73194 42613 11514 47618 17929 29409 82019
45724 67479 00192 53288 03802 47515 90320 90472 32238 28484
49239 16799 81320 96983 49564 70519 62761 98029 22483 19929
58559 44681 01502 54610 06690 25623 71213 77276 42209 16357
73818 91647 87353 98464 81946 84698 51145 42034 50798 78760
32709 54459 55662 66999 67118 74968 06995 24050 08439 04061
09873 51521 14779 86610 26489 83728 33257 18250 09839 50731
47968 45975 23238 71298 93119 27093 75314 53663 69408 66441
48851 06876 64937 69193 45562 99032 63689 97894 84906 10021
64506 82231 06549 37038 91145 96590 98815 17611 74473 29402
39742 43057 26232 27388 51921 47312 01576 91490 87048 01050
45626 20427 79927 11572 13479 81430 26807 45204 96123 87867
86329 00828 15014 01942 69523 52141 03862 62507 36913 35982
78341 90094 89417 87497 85878 99399 93313 29452 51668 41844
61904 29551 97095 55374 83872 68284 81943 73371 33842 80713
98096 33287 47612 87667 12561 44443 51154 91089 41496 57714
14031 72372 88742 36163 76763 07695 76302 00737 67261 53973
95176 47390 96314 15721 28786 93158 77866 15537 36828 93119
06651 18317 15803 17753 69348 69496 52957 10344 21367 77797
16583 02275 14351 76322 04200 55770 81524 97127 88693 87849
14466 73578 55466 99102 05153 17372 77379 47856 62331 33023
86719 52924 90750 71762 21536 81730 77033 19183 18517 54833
16301 70350 34527 29419 80921 45460 43498 13025 05670 62235
59635 17186 16746 00545 89158 24125 13014 47047 32154 38119
67886 68043 75835 86502 29071 58614 33029 35248 66619 73805
72196 66060 81999 45641 34115 63973 29557 01152 74530 47615
27392 31930 37328 86328 24014 88811 96711 56523 92759 91342
73333 76154 43721 69103 10088 96524 75393 53474 84088 64543
09210 62444 01916 90885 34464 70102 41193 83196 38933 75929
66789 64562 60429 99977 68912 45037 21906 83297 38560 23743
76143 76565 13190 41360 57903 73209 17699 50478 18646 96656
19038 06105 43463 37294 46678 71544 17748 17319 98424 83903
24611 43241 91663 66082 63194 51330 41411 70533 84899 82797
13186 93665 20937 76556 60643 24106 34469 00542 43970 74521
26220 06644 41691 85246 70132 21836 79884 71158 43197 27952
11064 14908 97387 43854 64751 50431 *Courtesy Ary*

Same times and freqs as last Tuesday, Dec 7th [as above] Ary TUE

12229 14-12-2021 1400 XPA2 MFSK-16/20Bd 00237 00001 00000 35653
11129 14-12-2021 1420 XPA2 MFSK-16/20Bd 00237 00001 00000 35653
10429 14-12-2021 1440 XPA2 MFSK-16/20Bd 00237 00001 00000 35653

16338 18-12-2021 1000 XPA2 00721 00001 00000 35252 *Same times and freqs as last Saturday* Ary SAT
14538 18-12-2021 1020 XPA2 00721 00001 00000 35252
13438 18-12-2021 1040 XPA2 00721 00001 00000 35252

12229 18-12-2012 1400 XPA2 MFSK-16/20Bd Ary SAT
11129 18-12-2012 1420 XPA2 MFSK-16/20Bd
10429 18-12-2012 1440 XPA2 MFSK-16/20Bd

18/12 00619 00918 14975 ... 66644

16338 21-12-2021 1000 XPA2 MFSK-16/20Bd
14538 21-12-2021 1020 XPA2 MFSK-16/20Bd
13438 21-12-2021 1040 XPA2 MFSK-16/20Bd

21/12 00276 00999 82138 ... 17170 **[1002 grps in total]!** Ary TUE

12229 21-12-2021 1400 XPA2 MFSK-16/20Bd
11129 21-12-2021 1420 XPA2 MFSK-16/20Bd
10429 21-12-2021 1440 XPA2 MFSK-16/20Bd

21/12 00439 00951 69207 ... 42771 Ary TUE
Ary writes: Another long one. This schedule was active on 7, 11, 14, 18, 21 December just like the one at 1000z. Both will probably also send on Saturday.

F06

We do not usually monitor/report these stations but Ary was good enough to offer and writes:
“While listening to my recordings I found these Russian diplo/intel. training messages:’

3889 16-11-2021 1700 F06 FSK 200/1000 Russian diplo/intel. 7 messages
3744 16-11-2021 1710 F06 FSK 200/1000 Russian diplo/intel. 7 messages
3542 16-11-2021 1720 F06 FSK 200/1000 Russian diplo/intel. 7 messages

11100 00000 14758 15049 01029
09866 46906 03728 85328 02701 70901 16081 75288 25025 02838
65921 18148 21963 72516 98123 92651 34093 92073 94638 89870
98389 29463 85641 87709 14503 08597 93984 91912 43556 72082
92639 42018 31652 67494 79811 05686 75269 43122 01418 09845
70746 64128 75619 82092 15031 85045 99089 00787 49884 39573
39706 77265 66742 33582 45360 18636 14391 52291 23563 44560
76674 17534 71544 56495 12405 56063 61523 82795 74669 64829
10845 48149 51714 84168 91663 40751 96607 14832 59872 75680
37845 39814 07950 77901 88116 36888 71422 33333 93391 92814
43635 81417 89531 55137 78496 47636 58607 82522 85911 39401
49100 00000

11100 00000 25869 15050 01029
19868 73989 10015 48615 15836 57330 88266 67818 52657 50829
29577 77727 90371 37177 34878 95377 51042 86147 25278 62516
99444 76758 46621 37153 44542 23437 94069 85200 41463 04627
48882 33157 98643 17278 44604 67754 19843 05643 04821 93523
35699 37836 19695 84205 04535 28585 53456 88941 87077 31600
00030 79196 24799 50023 29006 47331 76559 38374 89125 92782
93226 94435 61469 56773 34988 64524 79546 91493 61012 10572
58464 74695 46167 12465 00362 05633 04479 04072 68312 43291
24010 66403 45856 72833 42853 26335 24377 11211 20933 34336
85490 87866 87283 19637 70645 61481 67512 46282 55114 58689
50100 00000

11100 00000 36958 15051 01029
29290 01362 63949 32501 00604 29317 46114 82507 82803 82278
26506 91191 03880 96171 39608 80251 93799 03131 32592 93049
81838 86915 86142 17450 04561 91542 01384 39231 66623 94090
07619 99507 21610 77586 70546 54578 65064 64937 05658 61671
56919 99834 26503 38988 15515 85565 82495 73518 50373 17670
65964 75031 25943 71389 93130 99703 73478 29833 88696 91815
93258 63806 28730 16946 14323 99234 21548 85107 03909 33125
31267 87271 43792 84002 73722 93695 15705 87748 39430 87512
63023 74793 23301 32010 20915 89597 65763 95039 32123 38343
35016 78989 90595 75797 05068 29762 80122 67271 09277 23197
51100 00000

11100 00000 96352 15052 01029
43619 51643 18585 46996 80532 45490 80982 58690 06960 64578
47024 21098 76002 74782 22914 24399 09332 13345 14271 68735
42887 11110 06055 07588 62514 64465 91024 33836 52981 74183
32675 38164 08814 93331 73577 94539 80380 51470 25071 52411
53674 47289 99242 40345 87221 26904 69120 10766 54551 89973
68036 80505 65678 90844 64082 46838 66022 26897 70603 83683
36203 31290 78659 47688 41160 12284 22402 48843 02017 06337
13296 65348 89144 37155 04129 07401 59850 97891 68737 59594
89133 98668 08402 56623 66942 46632 20831 71972 60379 50700
92687 24280 64276 68217 01584 31070 88594 35683 38484 64533
52100 00000

11100 00000 95136 15053 01029
55348 52104 20865 87737 53282 41145 27274 47589 00463 61096
69427 81177 36714 54897 56137 78148 13171 67750 36043 69847
02357 16252 37027 95182 71248 72470 80350 40023 22018 86404
86674 36069 30137 95247 16168 30135 34531 92918 09882 59774
59472 58276 24582 96197 72900 65462 78227 40407 10853 24818
48280 83491 22699 27799 90031 67022 16863 94327 67141 04487
11718 46035 11564 49680 21350 53810 55066 23030 30866 33108
99504 31745 40945 85445 18068 44769 86314 09531 04657 08444
57837 30453 13605 13837 82900 20382 56907 51670 43797 09206
51169 15776 38772 08549 31437 41037 15449 97602 74120 86722
53100 00000

11100 00000 24851 15054 01029
16941 56110 61532 96410 34087 86064 24897 43584 33710 63027
04243 14459 66124 51930 66013 25113 06033 72839 18320 30041
70605 10123 50557 88991 97433 20942 69608 16719 37022 16499
99808 51582 39533 14466 38876 03923 40443 86054 86981 70173
74823 46142 91151 23624 74914 59912 72188 17782 30691 64423
26306 63271 18104 28568 18647 64205 24687 99844 10894 24966
27205 11381 90141 63332 01056 47649 91233 90895 66081 92313
29737 46694 98504 06646 87750 95011 63663 11931 19736 23269
49229 74333 70554 00957 03604 15632 22893 85535 09184 98267
16282 86249 45169 58154 04873 21783 19612 83673 46180 32710
54100 00000

11100 00000 75319 15055 01029
37402 10296 14796 64020 01705 62596 27790 74245 18073 65485
21590 10636 89995 40096 95298 10865 91655 61410 19207 78315
74605 35423 39378 98746 19872 03361 17484 33236 71384 52635
04339 79572 11714 39231 70551 19294 66013 51193 42753 92563
45128 67926 18826 68058 63807 94979 60567 00069 94939 79004
87248 89989 45773 32578 18470 94397 67035 23578 39785 46894
30910 08794 89508 85907 38792 16464 90158 05640 44767 07428
72958 72342 05757 69577 68849 73116 94248 25298 64439 89414
34577 56583 46333 12442 48664 77516 82280 42640 22180 08796
12573 40431 27040 34009 50140 20431 61200 42324 12765 06299
55100 00000

The F06 slots at 1700, 1710 and 1720 UTC are interesting. They popped up recently and seem to have a fixed schedule. Thu and Fri are not 100% sure. We'll see in the next two days if I am right.

Sun no transmission
Mon 2 messages
Tue 7 messages
Wed one 1000 groups message
Thu 1 hex message
Fri 1 message
Sat no transmission

3889 24-11-2021 1700 F06 FSK 200/1000 Russian diplo/intel.
3744 24-11-2021 1710 F06 FSK 200/1000 Russian diplo/intel.
3542 24-11-2021 1720 F06 FSK 200/1000 Russian diplo/intel.

11100 00000 23598 23068 10029
03629 16108 32350 44833 98786 27143 91401 97643 41507 88683
11742 27288 53180 82950 55826 77759 87332 20415 65237 78139
70216 11516 63048 73165 47363 68170 05112 98416 53284 21004
09956 48568 46489 63240 21992 12154 77045 57187 87701 71264
78821 64263 49504 89630 03645 84492 86984 37516 39527 16409
60174 26867 80167 73312 34568 55159 37913 16805 92570 81361
17354 93555 61052 82478 91765 86218 09708 64087 49558 14454
99902 23321 02937 46984 88695 87730 75959 10618 17721 78462
14174 07188 41631 71187 83023 74337 75766 53226 47213 51090
67755 00301 48215 34141 22731 21352 22111 35811 36845 44858
24954 79596 18766 45107 57832 94256 03864 31828 08833 92369
90747 51660 54084 44302 54861 74857 85070 83525 18810 65696
54403 04217 84121 60008 57231 37084 54111 98280 90491 14349
02559 87756 57177 59828 67860 91982 07804 65051 77369 71229
36286 37352 31590 22235 72379 30863 02928 90696 37908 96370
28678 54958 58933 10939 02936 04319 51079 73272 97124 60422
20187 75727 63821 15134 45481 88926 03573 83368 37458 19905
99386 94299 87651 29733 48584 69372 52496 21548 46706 60589
38447 34931 03159 47464 80566 07572 93276 16131 31750 90153
76512 68994 04787 25403 35414 38402 34436 27230 15099 02750
51714 20912 67900 28468 87577 30242 32881 86323 48181 22594
04887 15478 28912 47828 72856 33731 59378 31994 32038 17405
96545 11740 99833 99276 08196 20394 89932 58038 13920 61641
24448 97671 75804 31734 88710 40227 56021 76172 58442 80399
83493 91800 53971 75370 96838 10245 01187 68335 55758 23647
03924 69162 38080 38603 57454 40614 64630 69281 57785 63580
19127 05625 86441 79743 55273 17593 75426 35130 08253 81378
82043 72974 52808 38531 28272 49337 75077 23927 84377 69918
50405 23533 01451 71490 44280 47881 22558 96411 78620 32211
27191 33630 30563 99207 88714 24637 55977 45274 49471 57794
54857 36278 43272 99485 20808 23710 19917 35511 41789 17182
51469 21181 44333 74219 24949 63536 98387 93272 51136 84137
25005 20888 44184 35851 74045 08978 51713 72085 64086 83122
40082 91899 01731 07852 64527 09434 22491 59827 78843 21086
20449 44880 64315 68888 58868 19834 82559 23511 78953 05038
81996 35322 48939 98581 12609 26968 20704 28088 28697 25885
86081 01050 84306 60186 50080 39640 51022 66378 63167 10931
12805 82318 79842 88456 17580 23870 35648 06067 90237 68686
59842 90001 36757 95558 65889 80124 94122 52772 86981 76252
05738 53895 48758 70527 27006 24460 96427 51750 90780 47946
18461 92634 87364 84529 34069 55904 38743 61015 36624 80172
71751 55399 10231 31549 19849 24504 61634 31909 08197 48112
34634 99748 01720 88037 99223 64589 20853 85586 32606 40848
54642 45824 34305 72114 25898 82102 42540 81782 88093 19276
44058 90965 58678 79046 94610 89629 18516 95875 92264 71892
32112 36902 70729 71414 68339 24295 04896 57834 26334 83494
45761 80164 96254 65760 26948 68106 09595 18480 09980 27213
58735 01668 60526 88826 90412 74088 72782 00755 02815 97454
84184 69593 00966 32119 47648 90653 90106 22715 53508 26421
11747 97176 18353 19492 52081 27567 82949 50912 77457 26170
86425 79876 76583 75267 08918 25695 14158 14049 99860 77997
25613 31084 34111 46095 07665 35800 63083 83429 84343 07407
53103 48072 53203 44687 28151 85184 41396 65119 59182 42395
26298 26743 67225 54020 00367 71217 32432 55074 84930 11514
26275 10995 22593 12669 09072 74039 02930 39048 60039 02269
01183 66540 32040 02072 34625 83142 48240 80160 66288 26355
82831 15979 10745 30831 93041 90452 21625 84718 94583 32030
65561 18129 97762 65945 12247 72179 46409 77634 95292 22025
26834 26261 23573 52349 38987 69266 47749 08722 47014 83899
11657 73272 51395 96651 43235 38129 49848 56543 64710 75035
79196 13192 26691 24607 55376 85609 95881 53644 53776 32648
51098 53957 97098 61058 67271 81131 42926 32067 92124 56666
88183 52444 45213 81933 32683 60964 94021 37393 68931 46225
86790 65497 90410 56750 46776 60719 35481 89311 57616 15158
09140 66413 94505 93134 49775 38874 80852 33246 33152 74446
75110 01281 30769 18400 17483 42463 64816 37029 91167 06446
26891 79994 77842 43494 52675 22458 12082 95302 69755 72937
64381 28875 60777 57822 07485 86906 09121 18487 45698 53112
19271 81937 11882 55932 29104 90934 61804 59048 56232 04523
20550 12167 45638 04910 60656 60477 10754 71631 16689 36254
85186 08937 65921 81015 27283 37333 29818 71687 44701 85234
76005 49216 31204 41638 25423 73048 32833 55776 94326 49938
85676 94680 25857 10502 92397 94590 90835 31963 29722 67149
62489 30535 04079 46319 94791 71858 97557 86963 59100 72953
71397 51019 18785 94103 19181 42208 46533 44123 86916 75218
14012 47446 02211 90304 08592 46458 79704 49221 56795 37528
94969 73451 59187 64166 44046 10661 66360 15749 30819 40297
50739 05244 49403 54306 53858 24382 53747 73868 13823 99709
31625 88116 02636 97944 25207 25758 28066 54105 65409 95545
79764 20814 12195 56543 24300 62236 18016 04096 78810 41091
56595 82475 17956 72157 84222 60121 93857 40725 25761 28406
73715 09424 02541 09888 24785 61872 44349 86963 01408 56577
52674 86873 13783 89521 07413 83988 83156 88890 34228 05323
13134 90353 74728 50207 31782 66359 26675 60054 84232 07865
46389 99166 80447 81945 30562 32512 27859 13728 19637 11412
03556 66066 89971 03075 45703 15417 26948 24917 68900 47340
96233 69604 33137 20068 55372 31760 21064 69576 72889 72256
03241 54598 47115 81060 96066 65016 41895 24532 42071 42074
81378 88152 67260 83831 71088 50582 95191 34328 37439 50018

22485 79858 02900 28764 85439 00827 38992 66965 72458 52595
64309 41443 61954 73784 79734 70558 90433 45441 58061 31053
80446 49534 30197 57797 83087 00193 35125 62392 14726 46145
25837 31547 92677 67781 48401 91187 99471 17286 36368 47218
30437 75268 87689 38891 04258 22345 16352 65697 41221 49086
95895 73741 38822 52796 37028 12523 99411 94531 66491 98062
89597 14820 99403 43319 36058 31506 22229 41823 87477 68163
28591 15475 97280 86508 75099 62439 06847 21263 49387 66072
33917 40880 67543 50827 95847 82609 43118 96065 22423 35293
94913 43713 37908 68368 85716 60712 17018 30493 09186 42183
44513 66240 67064 66254 33085 24293 03918 36489 79232 55585
68000 00000

All F06 above Courtesy of Ary

Gizza Job!

Chart Section Index

January 2022

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jan kHz, ID, ...	Feb kHz, ID, ...
x	x	x	x	x			0000		F01	01A	17471	17471
x				x			0010/0030/0050		M12	01B	16253/15953/13453 294	17461/16161/15861 418
x				x			0025/0035		F01	01A	13452/11106	15803/18040
	x			x			0030/0050/0110		M12	01B	5886/ 6786/ 874, **search**	5734/ 6834/ 7634 786
x	x	x	x	x	x	x	0100		V13	0	18040	18040
	x		x				0100/0120/0140		M12	01B	17472/16272/15972 429	17451/16151/15851 418
x				x			0125/0135		F01	01A	13452/11106	15803/18040
						x	0100/0120/0140		V07	01B	15893/14693/13893 868	15874/14474/13874 878
			x			x	0110/0130/0150		M12	01B	11439/10339/ 9239 432	11464/10464/ 9164 441
x	x	x	x	x	x	x	0200		V13	0	18040	18040
x							0210/0310		E06	01A	9349/13413 537	10628/14364 537
			x	x			0300/0400		E06	01A	14918/12218 361	15683/13373 361
x	x	x	x	x	x	x	0300		V13	0	18040	18040
						x	0300/0320/0340		V07	01B		
		x	x				0315		E11	03	9052 25#	9052 25#
x	x	x	x	x	x	x	0400		V13	0	18040	18040
x	x	x	x	x			0400/0420		S06	01A	11616/ 9322 480	11616/ 9322 480
x							0450		E11	03	4909 41#	4909 41#
x		x		x		x	0455		HM01	18	10860	10860
	x		x		x		0455		HM01	18	11462	11462
x	x	x	x	x	x	x	0500		V13	0	11430	11430
	x		x				0500		S11A	03	12530 38#	12530 38#
x	x	x	x	x			0500/0520		M14	01A	12211/10243 952	12211/10243 952
x		x					0510		S11A	03	9057 65#	9057 65#
	x			x			0530		M01A	14	9441 751	9441 751
		x	x				0530		M01A	14	9129 or 9192 498	9129 or 9192 498
	x						0530/0550/0610		M12	01B	9317/10484/11552 135	9317/10484/11552 135
			x				0530/0550/0610		E07A	01B	5111/ 5811/ 6911 189	5111/ 5811/ 6911 189
		x	x				0540		M01A	14	7692 536	7692 536
x		x		x		x	0555		HM01	18	10345	10345
	x		x		x		0555		HM01	18	14375	14375
				x		x	0600		E11	03	7850 35#	7850 35#
x	x	x	x	x	x	x	0600		V13	0	11430	11430
	x						0600/0610		S06S	01A	16145/14240 438	16145/14240 438

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jan kHz, ID, ...	Feb kHz, ID, ...
x	x						0600/0610/0620 0630/0640/0650		XPB1	01B	12187/13387/13887 14487/14987/15887	13443/13943/14443 14943/15843/16343
			x	x			0600/0700	1/3	E06	01B	13960/16350 139	17480/20085 702
	x			x			0620		M01A	14	10233 or 10235 354/458	10233 or 10235 354/458
		x	x				0620		M01A	14	9421 135	9421 135
	x			x			0630		M01A	14	9447 143/796	9447 143/796
		x	x				0630		M01A	14	8111 902/536	8111 902/536
x							0630/0640		S06S	01A	13470/16515 462	13470/16515 462
x		x					0640		E11	03	16005 94#	16005 94#
	x		x				0645		E11	03	7840 51#	7840 51#
x		x		x		x	0655		HM01	18	9330	9330
	x		x		x		0655		HM01	18	13435	13435
x			x				0700		S11A	03	9050 47#	9050 47#
	x			x			0700		E11	03	6804 57#	6804 57#
x	x	x	x	x	x	x	0700		V13	0	8169, 7502	8169, 7502
						x	0700		M01	01B	5465 197	5465 197
	x						0700/0710		S06S	01A	5250/ 6320 452	5250/ 6320 452
	x			x			0700/0720/0740		E07	01B	14472/14972/16272 492	15**8**23/16**3**23/18**6**23 836
						x	0700/0720/0740		E07	01B	9326/10426/11526 345	9326/10426/11526 345
	x			x			0710		M01A	14	10651 297/358	10651 297/358
		x	x				0710		M01A	14	9175 146/208	9175 146/208
x		x					0715		E11	03	11104 75#	11104 75#
	x			x			0715		E11	03	9130 63#	9130 63#
	x			x			0720		M01A	14	9151 728	9151 728
					x	x	0730		E11	03	5371 49#	5371 49#
x	x						0730/0740		S06S	01A	7410/11532 427	7410/11532 427
x			x				0745		E11	03	10213 26#	10213 26#
	x		x				0745		E11	03	13908 22#	13908 22#
		x		x			0745		E11	03	17378 34#	17378 34#
x		x		x		x	0755		HM01	18	9065	9065
	x		x		x		0755		HM01	18	11365	11365

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jan kHz, ID, ...	Feb kHz, ID, ...
x	x	x	x	x	x	x	0800		V13	0	8169, 7502	8169, 7502
			x				0800/0810		E17Z	01A	11170, 9820 217	11170, 9820 217
	x						0800/0810		S06S	01A	11945/13195 127	11945/13195 127
					x		0800/0810	1	S06S	01A	8680/ 8260 132	8680/ 8260 132
		x				x	0800/0820/0840		M12	01B	16357/17457/18357 343	17415/18215/18715 427
		x					0800/0820/0840		XPA2	01B	11493/13393/13993	13387/13887/14787
	x		x				0810/0830/0850		XPA1	01B	12157/13462/14374	13397/14413/15972
	x	x					0820		E11	03	14611 13#	14611 13#
			x	x			0820		E11	03	5149 43#	5149 43#
x				x			0830		E11	03	14940 18#	14940 18#
					x	x	0830		S11A	03	5371 37#	5371 37#
							0830/0840		S06S	01A	8057/ 8530 764	8057/ 8530 764
x		x					0830/0840		S06S	01A	7062/10532 464	7062/10532 464
x			x				0830/0840		S06S	01A	11535/11830 172	11535/11830 172
				x			0830/0840		S06S	01A	11040/12153 156	11040/12153 156
x			x	x			0830/0930		S06	01A	16243/13469 842	17440/15614 842
x		x					0845		E11	03	12067 71#	12067 71#
	x		x				0845		E11	03	12089 15#	12089 15#
		x		x		x	0855		HM01	18	9240	9240
	x		x		x		0855		HM01	18	11462	11462
x		x					0900		E11	03	11092 53#	11092 53#
x							0900/0910		S06S	01A	14675/12830 232	14675/12830 232
				x			0900/0910		S06S	01A	5765/ 6315 239	5765/ 6315 239
					x		0900/0920/0940		E07A	01B	11123/12123/13423 114	11053/12153/13553 015
x		x					0910/0930/0950		XPA2	01B	14977/13971/13371	16102/14951/13991
			x		x		0910/0930/0950		XPA2	01B	14794/13994/12194	16146/15846/14446
x				x			0915		S11A	03	6252 48#	6252 48#
x	x	x	x	x	x	x	0930		M14	01A	17458 617, only 10.+25. when msg repeat 15994 on 11.+26.	17458 617, only 10.+25. when msg repeat 15994 on 11.+26.
		x	x				0930		E11	03	7469 27#	7469 27#

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jan kHz, ID, ...	Feb kHz, ID, ...
x			x				0930/0940		S06S	01A	8812/ 9540 698	8812/ 9540 698
						x	0930/1000		S06	01A	9946/8095 480	10423/ 8167 480
x		x		x		x	0955		HM01	18	9155	9155
	x		x		x		0955		HM01	18	12180	12180
	x			x			1000		E11	03	9079 30#	9079 30#
	x						1000/1010		S06S	01A	6440/ 5660 427	6440/ 5660 427
		x					1000/1010		S06S	01A	12365/14280 276	12365/14280 276
	x	x	x	x			1015/1025/1035		F01	01A	11079/ 9162/ 7509	12184/10169/ 8079
	x			x			1020		S11A	03	8102 42#	8102 42#
x		x					1045		E11	03	7984 69#	7984 69#
	x						1100/1110		S06S	01A	5035/5975 265	5035/5975 265
x					x		1100/1110/1110 1130/1140/1150		XPB1	01B	14769/14369/13969 13369/12169/11169	15814/14814/14414 13914/13414/12214
	x			x			1100/1120/1140		XPA2	01B	10231/ 9331/ 8131	12147/10347/ 9247
		x	x				1100/1120/1140		XPA2	01B	13384/12184/10984	13967/13367/11567
			x				1110/1130/1150		M12	01B	13386/2189/11491 725	13386/2189/11491 725
x							1200/1220/1240		M12	01B	14377/13461/12114 317	14377/13461/12114 317
x	x	x	x	x	x	x	1200		V13	0	7688	7688
x			x				1200/1210		S06S	01A	12155/10920 175	12155/10920 175
		x			x		1200/1210/1210 1230/1240/1250		XPB1	01B	**search**	**search**
	x					x	1200/1220/1240		XPA2	01B	10921/12221/13521	11163/13363/14563
		x		x			1200/1220/1240		XPA2	01B	10726/11426/12226	11575/13375/13975
	x	x					1205		E11	03	6433 46#	6433 46#
x			x				1300		E11	03	4909 31#	4909 31#
x	x	x	x	x	x	x	1300		V13	0	7688	7688
x							1300/1310		S06S	01A	8420/10635 149	8420/10635 149
					x		1300/1330		S06	01A	7377/ 5410 480	8116/ 5410 480
		x		x			1310/1330/1350		XPA1	01B	14852/13952/11552 895	14374/13374/11474 334
			x			x	1330		E11	03	5082 52#	5082 52#
x			x				1400/1420/1440		M12	01B	**search**	**search**
					x		1400/1420/1440		E07	01B	10323/ 9123/ 8023 310	11464/10764/ 9264 472
			x		x		1410/1430/1450		E07	01B	11593/10293/ 9293 916	13368/12168/11168 745
	x				x		**1430**		E11	03	13363 91#	13363 91#

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jan kHz, ID, ...	Feb kHz, ID, ...
					x		1500		M01	14	5810 197	5810 197
x	x						1500/1510		S06S	01A	6845/ 9170 914	6845/ 9170 914
			x				1530		E11	03	5409 26#	5409 26#
					x	x	1530		E11	03	4909 36#	4909 36#
	x	x	x	x	x	**x**	1555		HM01	18	11435	11435
					x		1600/1620/1640		XPA2	01B	9317/ 8117/ 7517	11461/10261/ 9161
	x		x				1600/1620/1640		XPA2	01B	10465/ 9165/ 8065	12173/1ß373/ 9373
	x					x	1605		E11	03	5432 23#	5432 23#
				x			1610/1630/1650		E07A	01B	7632/ 6832/ 5832 688	9347/ 8147/ 6847 318
	x		x				1645		E11	03	 33#	 33#
	x	x	x	x	x	**x**	1655		HM01	18	11530	11530
			x				1700/1720/1740		M12	01B	12162/11566/1ß711 546	12162/11566/1ß711 546
		x					1710/1730/1750		M12	01B	12162/11566/10711 546	12162/11566/10711 546
		x		**x**			1715		E11	03	5082 97#	5082 97#
x			x				1730		E11	03	5779 41#	5779 41#
x						x	1745		E11	03	12924 24#	12924 24#
x	x	x	x	x	x	**x**	1755		HM01	18	11635	11635
	x		x				1800		M01	14	5320 197	5320 197
		x				x	1800/1820/1840		E07	01B	6963/ 5863/ 4763 987	8144/ 6944/ 5744 197
			x				1800/1820/1840		M12	01B	12162/11566/10711 546	12162/11566/10711 546
					x		1800/1820/1840		M12	01B	11435/10598/ 9227 938	11435/10598/ 9227 938
				x		x	**1815**		E11	03	6849 92#	6849 92#
		x			x		1850		S11A	03	11486 28#	11486 28#
x			x				1900		E11	03	6849 64#	6849 64#
		x					1900/1920/1940		M12	01B	8047/ 6802/ 5788 463	8047/ 6802/ 5788 463
				x			1900/2000	1/3	S06	01A		7553/ 5329 768
		x			x		1910		E11	03	4505 39#	4505 39#
				x		x	1910		E11	03	10487 61#	10487 61#
	x			x			1940/1950/2000	1	F01	01A	7629/ 6783/ 4030	8156/ 6844/ 4527
	x		x				2000		M01	14	4490 197	4490 197

Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC	wk	Stn	Fam	Jan kHz, ID, ...	Feb kHz, ID, ...
	x					x	2000/2010/2010 2030/2040/2050		XPB1	01B	7771/ 7471/ 6771 5771/ 5171/ 4771	8064/ 7964/ 6964 5864/ 5364/ 4464
		x		x			2000/2020/2040		M12	01B	**search**	**search**
			x				2000/2020/2040		M12	01B	14377/13461/12112 317	14377/13461/12112 317
				x			2000/2100	1/3	S06	01A	7553/ 5329 768	
x		x		x		x	2055		HM01	18	11635	11635
	x		x		x		2055		HM01	18	16180	16180
		x					2100/2120/2140		E07A	01A	5877/ 5277/ 4577 825	5877/ 5277/ 4577 825
x		x		x		x	2155		HM01	18	10715	10715
	x		x		x		2155		HM01	18	17480	17480
				x	x		2200/2220/2240		M12	01B	5778/ 6778/ 8178 771	5832/ 6832/ 7732 887
			x				2210/2230/2250		M12	01B	6937/ 5737/ 4537 975	6937/ 5737/ 4537 975
					x		2230/2240		F01	01A	17411/15956	20741/18401
x			x				2300/2320/2340		M12	01B	11079/10279/ 9179 136	9362/ 8062/ 7462 451
					x		2330/2340		F01	01A	17411/15956	20741/18401

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	Jan kHz, ID, ...	Feb kHz, ID, ...	Nov kHz, ID, ...	Dec kHz, ID, ...	Remarks
		x	x				0315		E11	03	9052 25#	9052 25#	9052 25#	9052 25#	since 01/14, last log 12/21
x							0450		E11	03	4909 41#	4909 41#	4909 41#	4909 41#	since 02/10, last log 12/21 2nd transmission Thu 1730z
	x		x				0500		S11A	03	12530 38#	12530 38#	**12530** 38#	12530 38#	since 05/14, last log 12/21
x		x					0510		S11A	03	9057 65#	9057 65#	9057 65#	9057 65#	since 08/19, last log 11/21
				x		x	0600		E11	03	7850 35#	7850 35#	**7850** 35#	7850 35#	since 04/15, last log 11/21
x		x					0640		E11	03	16005 94#	16005 94#	**16005** 94#	16005 94#	since 07/17, last log 12/21
	x		x				0645		E11	03	7840 51#	7840 51#	7840 51#	7840 51#	since 07/09, last log 11/21
x			x				0700		S11A	03	9050 47#	9050 47#	9050 47#	9050 47#	since 04/10, last log 12/21
	x			x			0700		E11	03	6804 57#	6804 57#	6804 57#	6804 57#	since 01/12, last log 12/21
x		x					0715		E11	03	11104 75#	11104 75#	**11104** 75#	11104 75#	since 06/21, last log 12/21
	x			x			0715		E11	03	9130 63#	9130 63#	9130 63#	9130 63#	since 02/11, last log 12/21
					x	x	0730		E11	03	5371 49#	5371 49#	**5371** 49#	5371 49#	since 07/15, last log 12/21
x			x				0745		E11	03	10213 26#	10213 26#	10213 26#	10213 26#	since 03/14, last log 12/21 2nd transmission Thu 1530z
	x		x				0745		E11	03	13908 22#	13908 22#	13908 22#	13908 22#	since 01/20, last log 12/21
		x		x			0745		E11	03	17378 34#	17378 34#	17378 34#	17378 34#	since 06/17, last log 12/21
	x	x					0820		E11	03	14611 13#	14611 13#	14611 13#	14611 13#	since 12/18, last log 12/21
			x	x			0820		E11	03	5149 43#	5149 43#	5149 43#	5149 43#	since 10/09, last log 12/21
x				x			0830		E11	03	14940 18#	14940 18#	**14940** 18#	14940 18#	since 07/15, last log 12/21
					x	x	0830		S11A	03	5371 37#	5371 37#	5371 37#	5371 37#	since 02/14, last log 12/21
x		x					0845		E11	03	12067 71#	12067 71#	12067 71#	12067 71#	since 09/10, last log 12/21
	x		x				0845		E11	03	12089 15#	12089 15#	12089 15#	12089 15#	since 07/17, last log 12/21
x		x					0900		E11	03	11092 53#	11092 53#	11092 53#	11092 53#	since 10/05, last log 12/21
x				x			0915		S11A	03	6252 48#	6252 48#	6252 48#	6252 48#	since 04/19, last log 12/21
		x	x				0930		E11	03	7469 27#	7469 27#	7469 27#	7469 27#	since 02/14, last log 12/21
	x			x			1000		E11	03	9079 30#	9079 30#	**9079** 30#	9079 30#	since 11/16, last log 12/21
	x			x			1020		S11A	03	8102 42#	8102 42#	8102 42#	8102 42#	since 02/10, last log 12/21 2nd transmission Thu 1730z
x		x					1045		E11	03	7984 69#	7984 69#	7984 69#	7984 69#	since 03/18, last log 12/21
	x	x					1205		E11	03	6433 46#	6433 46#	6433 46#	6433 46#	since 03/10, last log 12/21 2nd transmission Mon 0450z
	x		x				1230		E11	03	33# **search**	33# **search**	33# **search**	33# **search**	since 10/11, last log 10/21 Nov-Feb & May-Aug at 1645z (?)
x			x				1300		E11	03	4909 31#	4909 31#	4909 31#	4909 31#	since 07/14, last log 12/21
			x			x	1330		E11	03	5082 52#	5082 52#	5082 52#	5082 52#	since 05/15, last log 12/21
	x				x		**1430**		E11	03	13363 91#	13363 91#	13363 91#	13363 91#	since 10/15, last log 12/21 **until 10/21 at 1345z**
			x				1530		E11	03	5409 26#	5409 26#	5409 26#	5409 26#	since 06/14, last log 12/21 2nd transmission Mon 0745z
					x	x	1530		E11	03	4909 36#	4909 36#	4909 36#	4909 36#	since 03/14, last log 12/21 2nd transmission Thu 1530z
	x					x	1605		E11	03	5432 23#	5432 23#	**5432** 23#	5432 23#	since 11/15, last log 12/21
	x		x				1645		E11	03	33# **search**	33#	33# **search**	33# **search**	since 10/11, last log 10/21 (only ?) Mar/Apr/Sep/Oct at 1230z
		x		**x**			1715		E11	03	5082 97#	5082 97#	5082 97#	5082 97#	since 02/15, last log 12/21 **during 10/21 change from Wed/Sun to Wed/Fri**
x			x				1730		E11	03	5779 41#	5779 41#	5779 41#	5779 41#	since 03/10, last log 12/21 2nd transmission Mon 0450z
x						x	1745		E11	03	12924 24#	12924 24#	12924 24#	12924 24#	since 04/18, last log 12/21
				x		x	**1815**		E11	03	6849 92#	6849 92#	6849 92#	6849 92#	since 05/16, last log 12/21 until 10/21 at 1650z
		x			x		1850		S11A	03	11486 28#	11486 28#	11486 28#	11486 28#	since 06/17, last log 12/21
x			x				1900		E11	03	6849 64#	6849 64#	6849 64#	6849 64#	since 05/16, last log 12/21 until 10/21 at 1650z
		x			x		1910		E11	03	4505 39#	4505 39#	4505 39#	4505 39#	since 02/14, last log 12/21
				x		x	1910		E11	03	10487 61#	10487 61#	10487 61#	10487 61#	since 04/17, last log 11/21

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		
Jan	12157	13462	14374	10921	12221	13521	11493	13393	13993
Feb	13397	14413	15972	11163	13363	14563	13387	13887	14787
Mar	12132	13453	14576	13384	13984	14984	13931	14831	16131
Apr	10428	11431	13441	14442	15842	16342	11409	12209	13409
May	11169	12179	13431	13376	11576	10776	12148	13448	13948
June	11421	12151	13972	13427	12227	10827	12148	13448	13948
July	10446	11474	12175	13394	12194	10794	12148	13448	13948
Aug	10234	11511	12117	12159	11559	10559	12152	13552	13952
Sept	10862	11571	12216	13914	15814	16314	12152	13552	13952
Oct	12167	13437	14972	14469	16169	17469	13372	14672	15872
Nov	13978	14859	15871	14783	13883	12183	11529	13429	13929
Dec	11531	12137	13932	10807	12207	13507	11493	13393	13993

XPA1 and XPA2 Wednesday/Friday schedules

Zulu > / Month v	XPA1 Wed/Fri Schedule H+10	H+30	H+50	XPA2 Wed/Fri Schedule H 00	H+20	H+40
	1210 / 1310z			1200/2100z		
Jan	14852	13952	11552	10726	11426	12226
Feb	14374	13374	11474	11575	13375	13975
Mar	14451	13451	12151	12139	13539	14639
Apr	13368	12168	11168	14377	14977	15977
May	13419	12219	11419	12124	11124	10624
June	13545	12145	11145	13462	12162	11562
July	13368	12168	11168	12124	11124	10624
Aug	13491	12191	10691	13919	14719	16219
Sept	12137	11137	10237	13484	14684	15984
Oct	14564	13564	11464	13452	14452	15852
Nov	13875	13375	10875	10968	12168	13368
Dec	13465	12165	10265	9389	10289	11589

Time UTC			Freq kHz			ID	M	T	W	T	F	S	S
Jan													
1700	1720	1740	12162	11566	10711	546				X			
17**10**	17**30**	17**50**	12162	11566	10711	546			X				
1800	1820	1840	12162	11566	10711	546				X			
20**50**	21**10**	21**30**	6864	5764	- - -	875			X		X		
2200	2220	2240	5778	6778	8178	771					X	X	
22**10**	22**30**	22**50**	6937	5737	4537	975	X			X			
Feb													
1700	1720	1740	12162	11566	10711	546				X			
17**10**	17**30**	17**50**	12162	11566	10711	546			X				
1800	1820	1840	12162	11566	10711	546				X			
20**50**	21**10**	21**30**	6941	5841	- - -	986			X		X		
2200	2220	2240	5832	6832	7732	887					X	X	
22**10**	22**30**	22**50**	6937	5737	- - -	975	X			X			
Mar													
1700	1720	1740	12162	11566	10711	546				X			
17**10**	17**30**	17**50**	12162	11566	10711	546			X				
1800	1820	1840	12162	11566	10711	546				X			
20**50**	21**10**	21**30**	10172	9072	- - -	105			X		X		
2200	2220	2240	8126	7526	6826	178					X	X	
22**10**	22**30**	22**50**	8164	6964	5764	197	X			X			
Apr													
1700	1720	1740	12162	11566	10711	546				X			
17**10**	17**30**	17**50**	12162	11566	10711	546			X				
1800	1820	1840	12162	11566	10711	546				X			
19**50**	20**10**	20**30**	13453	12153	- - -	414			X		X		
2100	2120	2140	7575	8175	9175	511					X	X	
21**10**	21**30**	21**50**	10572	9372	8172	531	X			X			
May													
1700	1720	1740	12162	11566	10711	546				X			
17**10**	17**30**	17**50**	12162	11566	10711	546			X				
1800	1820	1840	12162	11566	10711	546				X			
19**50**	20**10**	20**30**	16194	14794	- - -	173			X		X		
2000	2020	2040	14377	13461	12114	317				X			
2100	2120	2140	10843	10243	9243	822						X	
21**10**	21**30**	21**50**	13381	12181	10781	317	X			X			
Jun													
1700	1720	1740	12162	11566	10711	546				X			
17**10**	17**30**	17**50**	12162	11566	10711	546			X				
1800	1820	1840	12162	11566	10711	546				X			
2000	2020	2040	13892	13392	11592	119	X			X			
2000	2020	2040	14377	13461	12114	317				X			
2100	2120	2140	11144	10544	9344	153					X	X	
21**10**	21**30**	21**50**	14493	13393	12193	431	X			X			
22**10**	22**30**	22**50**	10223	9323	8023	239						X	

Time UTC			Freq kHz			ID	M	T	W	T	F	S	S
July													
1600	1620	1640	13979	13379	12179	913			X				X
1700	1720	1740	12162	11566	10711	546				X			
17**10**	17**30**	17**50**	12162	11566	10711	546			X				
1800	1820	1840	12162	11566	10711	546				X			
2000	2020	2040	12217	10817	9317	617	X			X			
2000	2020	2040	14377	13461	12114	317				X			
2100	2120	2140	10767	10167	9267	712					X	X	
21**10**	21**30**	21**50**	13381	12181	10781	317	X			X			
22**10**	22**30**	22**50**	9284	8084	7584	295						X	
Aug													
1600	1620	1640	14681	13381	13381	683			X				X
1700	1720	1740	12162	11566	10711	546				X			
17**10**	17**30**	17**50**	12162	11566	10711	546			X				
1800	1820	1840	12162	11566	10711	546				X			
2000	2020	2040	12148	10648	9148	374	X			X			
2000	2020	2040	14377	13461	12114	317				X			
2100	2120	2140	10314	9114	8014	310					X	X	
21**10**	21**30**	21**50**	12214	11014	9914	209	X			X			
22**10**	22**30**	22**50**	9052	8052	6952	992						X	
Sep													
1600	1620	1640	14927	13927	12227	992			X				X
1700	1720	1740	12162	11566	10711	546				X			
17**10**	17**30**	17**50**	12162	11566	10711	546			X				
1800	1820	1840	12162	11566	10711	546				X			
2000	2020	2040	11109	10309	9209	385	X			X			
2000	2020	2040	14377	13461	12114	317				X			
2100	2120	2140	7961	6861	5861	988					X	X	
21**10**	21**30**	21**50**	9246	8146	6846	218	X			X			
22**10**	22**30**	22**50**	12218	11118	10218	212						X	
Oct													
1700	1720	1740	12162	11566	10711	546				X			
17**10**	17**30**	17**50**	12162	11566	10711	546			X				
1800	1820	1840	12162	11566	10711	546				X			
2000	2020	2040	10318	9218	8118	178	X			X			
2100	5794	2120	6794	2140	8094	770					X	X	
21**10**	21**30**	21**50**	8164	6964	5764	197	X			X			
22**10**	22**30**	22**50**	10936	9336	8136	931			X			X	
Nov													
1700	1720	1740	12162	11566	10711	546*				X			
17**10**	17**30**	17**50**	12162	11566	10711	546			X				
1800	1820	1840	12162	11566	10711	546*				X			
2200	2220	2240	6859	7459	7959	849					X	X	
22**10**	22**30**	22**50**	6937	5837	- - -	975	X			X			
Dec													
1700	1720	1740	12162	11566	10711	546*				X			
17**10**	17**30**	17**50**	12162	11566	10711	546			X				
1800	1820	1840	12162	11566	10711	546*				X			
2200	2220	2240	5832	6832	7732	887					X	X	
22**10**	22**30**	22**50**	6937	5737	- - -	975	X			X			

* No reception in the UK – Poor in Western Europe

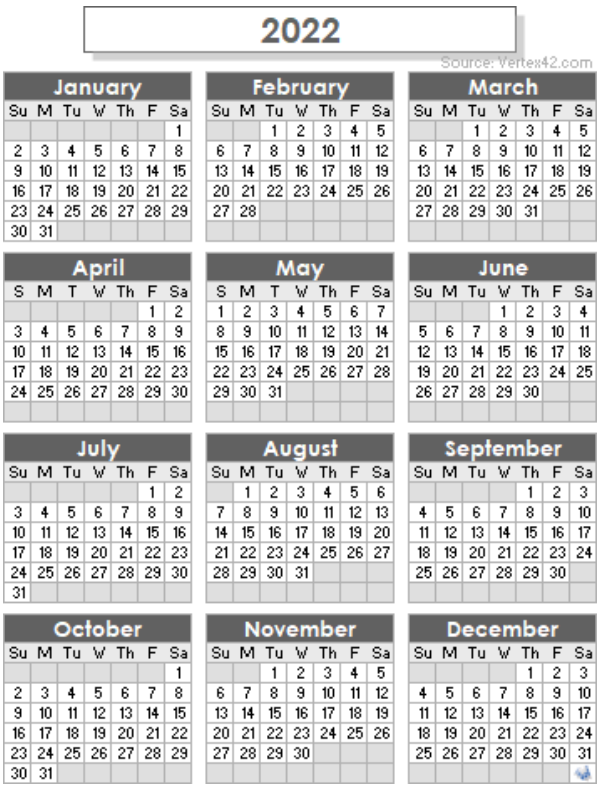
Special Matters

Thanks to all our contributors:
Ary, BR, Brixmis, DanAr, Danix, DG, DrMHz, HJH, Jochen, JTR, KW, M8, MCX, PLdn, RNGB, SloRoll, TSG
Apologies to anyone missed.

E: A Happy New Year to you and yours!

RELEVANT WEBSITES

ENIGMA 2000 Website:	www.enigma2000.org
Frequency Details can be downloaded from:	http://www.cvni.net/radio/
Time zone information:	http://www.timeanddate.com/library/abbreviations/timezones/
Encyclopedia of Espionage, Intelligence, and Security	http://www.espionageinfo.com/



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