

STARLITE

THE JOURNAL FOR THE STOURBRIDGE AND DISTRICT A.R.S.



**G6OI
G6SRS**



ISSUE: MARCH 2022



G4CVK

**STOURBRIDGE & DISTRICT AMATEUR RADIO SOCIETY
INCORPORATING
OLDSWINFORD HOSPITAL SCHOOL RADIO CLUB**

MEETINGS NORMALLY HELD AT

**OLDSWINFORD HOSPITAL SCHOOL
HEATH LANE
STOURBRIDGE
[8:00 TO 10:00 PM]**

VISITORS ALWAYS WELCOME

**DURING COVID, THE SOCIETY HOLDS ITS MEETINGS
EVERY MONDAY AT NORTON SOCIAL CLUB,
OSMASTON ROAD, STOURBRIDGE**

RSGB AFFILIATED SOCIETY

STARLITE

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StARS Website URLs:-

www.g6oi.org.uk

StARS Facebook Page:-

<https://www.facebook.com/groups/stourbridge.ars/>

Forthcoming Meetings

March 7 th	Club Meeting at Norton Social Club. 8pm
March 14 th	Club Meeting at Norton Social Club. 8pm
March 21 st	Annual General Meeting ? 8pm
March 28 th	Club Meeting at Norton Social Club. 8pm
April 4 th	Club Meeting at Norton Social Club. 8pm
April 11 th	Club Meeting at Norton Social Club. 8pm
April 18 th	Club Meeting at Norton Social Club. 8pm
April 25 th	Club Meeting at Norton Social Club. 8pm
May 2 nd	Club Meeting at Norton Social Club. 8pm
May 9 th	Club Meeting at Norton Social Club. 8pm
May 16 th	Club Meeting at Norton Social Club. 8pm
May 23 rd	Club Meeting at Norton Social Club. 8pm
May 30 th	Club Meeting at Norton Social Club. 8pm
June 6 th	Club Meeting at Norton Social Club. 8pm

Editor's Comment

[Editor: g4xom@g6oi.org.uk]

Following my question, last month, I am pleased to report that I received a response from approximately 20% of the membership and I thank those for replying to my query. I intend to continue with the current format of content for future issues.

The following item came from Jim G4WAO, who commented, “ *I did wonder whether there is anything like this in our club history.* “ It may be worth a look.

Club President's lecture, in 1924 [VK2MB]

Just been doing a bit more spelunking (and OCR correcting) in *Trove*, and I found a lecture given at the School of Arts, by then club President, the illustrious F C Swinburne, on the history, technology, applications, and future of wireless. The story was featured in the *Gloucester Advocate*.

It includes what appears to be a transcript of the lecture, so you can get a feel for what lecture were like, back in June 1924:

<https://trove.nla.gov.au/newspaper/article/159065250/15526795>

73 Richard VK2SKY

Netherlands special event

The JOTA station of the 'Scouting Campsite De Rendierhoeve' (PC6RH) will be activating the special callsign PC70RH to celebrate the 70th anniversary of the campsite which is situated in the near the Pijnendijk in Moergestel (see QRZ.com for details).

Their activity will take place between April 2022 and March 2023.

QSL via the Bureau to PF1SCT.

Foundations of Amateur Radio

All the things that aren't amateur radio...

Recently I illustrated the diversity of our community by highlighting social media posts made to a single community over a 24 hour period. Each reflecting a different aspect of our community.

It occurred to me that although those things are amateur radio, some more obviously than others, there's a whole other side of the community that isn't amateur radio.

Look at radio astronomy for example. One of my friends is an astronomer and we've been having loads of fun learning from each other. I'm getting exposed to concepts like Fourier transforms, interferometry, sampling and plenty of the mathematical concepts that underlie my interest in amateur radio.

Then there's things like physics. While I've always been interested, long before I met my physics teacher in high-school who helped me kick off a career in computing, I've been playing with light bulbs, batteries, disassembling old hardware like the valve radio that I was given when I was about twelve or so.

There's the continued curiosity about audio. I've been making mix-tapes since I was nine, and that has blossomed into an ongoing interest in audio production, some of which is reflected in my weekly podcast and fuelled by my hearing loss.

My interests outside amateur radio have always been wide and varied. I've learnt to fly an aeroplane, learnt to navigate a sailboat, learnt to drive a truck, installed satellite dishes in the bush and built a mobile satellite ground station, built software solutions for piggeries and bakeries, provided logistics for remote outback events, built vehicle mounted GPS tracking and mapping solutions and I continue to read articles as they come my way.

What amateur radio has given me is a context, a framework if you like to bring together these wide ranging fields and make them hang together.

An obvious, though simple example, is learning the phonetic alphabet. In amateur radio it's a given that you'll need to learn that so you can effectively communicate using a poor signal path, but my phonetic learning predates my amateur radio exposure by at least a dozen years. In order to pass my aviation radio certificate, I was required to learn the phonetic alphabet before I was allowed to use the radio.

It's only a small example, but it's illustrative on how, for me at least, amateur radio is the glue that binds it all together.

It happens at other levels too. I've mentioned in the past that looking at a television antenna on the roof of any house before getting a license was a non-event. Today I can't look without thinking about propagation, how the antenna is aligned and if it's installed back-to-front or not. Once you know a thing, it's hard to un-see, or unlearn the background of it.

The same happens when I spot an antenna in the wild, stuck to a lamppost, or bolted to a random roadside cabinet. Previously they would go unremarked, today I wonder what information they're transmitting or receiving, what band they're operating on, who owns the equipment and what interference they might be causing or experiencing in their environment.

I have a growing interest in computer controlled manufacturing like 3D printing, laser engraving and CNC and spend some of the available time in the day learning about how

that works, how to improve things and I wonder about how the speed of communications between the various components create an RF field of some sort and what that does to other components and circuits.

As a final experience, recently I had a medical procedure where there was a notice supplied with the logging hardware that specifically called out amateur radio as a source of electromagnetic radiation and that I was required to refrain during the process due to a potential failure of the equipment. If anything, for the first time in a long time, I felt that there was a visible link between my hobby and the rest of the community, since that notice was given to every single person, not just the radio amateurs.

Some links between amateur radio and the rest of the world are visible and some are not. What kinds of interactions between the hobby and society at large have you come across?

Onno VK6FLAB

The BBC - A People's History

I am reading 'The BBC - A People's History' by David Hendy. It's a new book with 638 pages and many black and white illustrations within the text, absolutely fascinating.

'A fascinating and informative account of the BBC's first 100 years' Daily Telegraph

'A dramatic tale of innovation and determination' Guardian

Mike Terry

<https://www.goodreads.com/book/show/58293896-the-bbc>

TX Factor is back

TX Factor is back after a year's break and the RSGB is delighted to sponsor Episode 28.

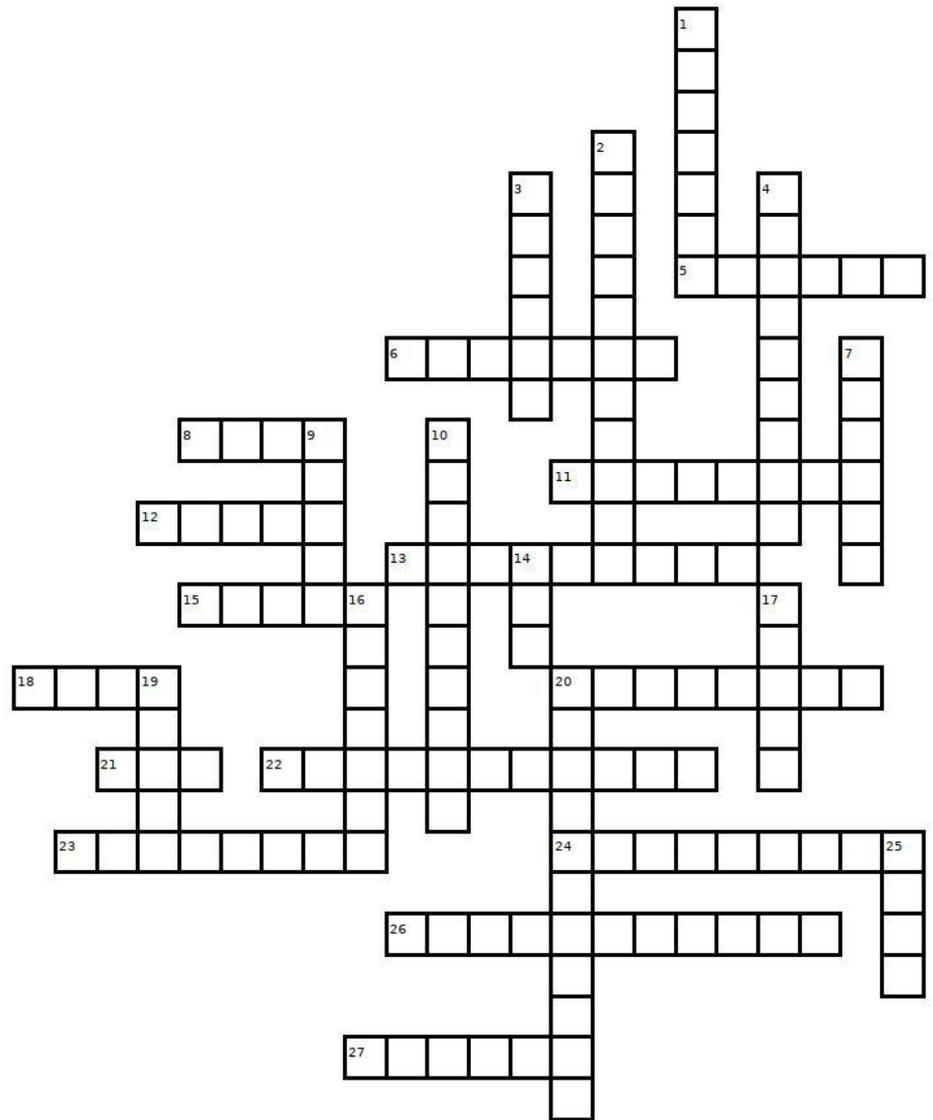
Bob and Mike get to grips with constructing a digital voice modem using an MMDVM module kit and Raspberry Pi Zero, and Bob reviews the long-awaited ID-52 5W hand-held transceiver from Icom.

There's a chance to win a bundle of books from the RSGB in the free-to-enter draw, and you'll find a quick overview of EMF requirements during the show: <http://www.txfactor.co.uk/>

Amateur Radio Crossword

Down:

1. A type of cable with an inner conductor and outer braid
2. The opposite of resistance
3. A form of data transmission used widely by radio amateurs
4. The amount frequency spectrum or width that a signal requires
7. Crystal used in tuning
9. A CW transmission
10. An audio input device
14. A confirmation postcard
16. A wide-band receiving antenna
17. Originally a ship's radio room
19. To use voice communication
20. Receiver property that rejects off-frequency unwanted signals
25. Radio teletype



Across:

5. A type of amplifier
6. Mute or turn off the audio when no signal is present
8. A directional antenna
11. A coiled electronic component
12. An electronic Morse key
13. A modulation type
15. The receiver should do this when transmitting
18. Reflected in the atmosphere and bounced back
20. An upper and a lower
21. This circuit automatically switches to transmit
22. A Vertical antenna
23. Transmission cable
24. A component that passes AC but blocks DC
26. The ability for a receiver to pick up weak signals
27. A digital mode that is not packet

BBC Crowd Science: How does my radio work?

This BBC show explains how radios work and BBC World Service presenter **Gareth Mitchell M7GJM** takes **Geoff Marsh** to a little-known room in the BBC called the Radio Shack

The BBC description reads:

How is a small budget pocket radio able to recreate all the atmosphere and sounds of a football match? CrowdScience listener Andy wants to know about the science enabling his radio listening, so presenter CrowdScience Geoff Marsh sets off - microphone in hand - to follow the journey of sound on the radio.

Starting with the microphone, Geoff learns how acoustic energy is converted into electrical signals. Then BBC World Service presenter Gareth takes Geoff to a little-known room in the BBC called the Radio Shack. Gareth demonstrates how these electrical signals are attached to radio waves before being sent over the airwaves and they take a radio kit apart to understand how these waves are received and converted back into sound waves. Geoff talks to a speech and hearing specialist who, through the use of auditory illusions, shows Geoff that our brains are often filling in the gaps of lower quality audio.

Finally, Geoff visits an acoustic lab at Salford University where he hears a demonstration of 'object based audio'. This technology could enable us to create our own bespoke mix of dramas and sports, such as heightening the commentary sound or choosing to hear just the crowd, just by using the everyday speakers many have lying around them, such as mobile phones.

Tune in and join us!

Presented by Geoff Marsh

Produced by Melanie Brown

Download and listen to the MP3 of the show at

<https://www.bbc.co.uk/programmes/w3ct1prp>

What is Amateur Radio?

<http://www.essexham.co.uk/what-is-amateur-radio>

Free UK amateur radio Online Training course

<https://essexham.co.uk/train/foundation-online/>

A pirate on HF

During December of last year, and again throughout January, a pirate station transmitted on 80 and 40 meters, using USB. The strong signal was heard across Europe.

The pirate broadcasted Italian and English language messages against Covid-19 measures, but the audio was frequently distorted by overmodulation.

The German DARC DF-team found an approximate location in Italy, and informed the Bundesnetzagentur who in turn contacted their Italian counterparts. The broadcasts have stopped since.

Cruise ship under rocket's flight path forces another SpaceX launch scrub

A cruise ship that ventured under the planned flight path of a Falcon 9 rocket near Cape Canaveral Sunday forced SpaceX to delay launch of an Italian Earth-imaging satellite for a fourth time, setting up the mission for another try just after sunset Monday.

SpaceX was set to fire a Falcon 9 rocket into orbit from pad 40 at Cape Canaveral Space Force Station at 6:11 p.m. EST (2311 GMT), but the Coast Guard could not clear a cruise liner out of the rocket's downrange hazard area in time for the mission's instantaneous launch opportunity.

The launch director called a hold in the countdown at T-minus 33 seconds, and announced SpaceX's launch team will try again Monday at the same time.

The last-minute hold marked the fourth delay for SpaceX's mission to launch Italy's newest COSMO-SkyMed radar remote sensing satellite. Bad weather prevented the Falcon 9 from taking off Thursday, Friday, and Saturday.

Weather conditions were chilly but ideal for launch Sunday. Similar conditions are forecast Monday evening, when there's a 90% chance that winds and clouds will be acceptable for lift-off of the Falcon 9. The rocket's reusable first stage will return to landing at Cape Canaveral about eight minutes after launch.

SpaceX did not identify which cruise ship caused the delay Sunday. Cruise liners from Royal Caribbean and MSC Cruises departed Port Canaveral Sunday evening. The port is located just south of Cape Canaveral Space Force Station.

The COSMO-SkyMed radar satellite will join a fleet of remote sensing spacecraft monitoring shipping traffic, natural disasters, and climate change for the Italian military and the Italian Space Agency. SpaceX will launch the 4,850-pound (2.2-metric ton) satellite into a polar orbit, requiring the Falcon 9 to fly south from Cape Canaveral, rather than the east or northeast corridors used by most rockets departing Florida.

Read the full SpaceFlight Now article at

<https://spaceflightnow.com/2022/01/30/cruise-ship-under-rockets-flight-path-forces-another-spacex-launch-scrub/>

RSGB 2022 Bandplans now online

The RSGB has announced the 2022 Bandplans have been published online with the bands now referred to by frequency instead of wavelength

In a Tweet the RSGB said:

The RSGB 2022 Bandplans have been published online. In response to feedback, the Excel version is now tabbed by frequency but the alternative viewer still uses wavelengths for those who prefer the information in that format: <https://rsgb.org/main/operating/band-plans/> #hamr

Source <https://twitter.com/theRSGB/status/1488882543206309894>

Tabbed HTML Bandplan

https://rsgb.services/public/bandplans/html/rsgb_band_plan_2022.htm

Rye radio amateur convicted for making racial remarks

The Hastings and St. Leonards Observer reports a radio amateur was convicted at Hastings Magistrates Court on Wednesday, January 19

The newspaper says:

A Rye man has been convicted of broadcasting racist messages over the CB and amateur radio frequencies, police confirmed today (Wednesday, February 2).

"John Saxby, 61, of Rye Harbour Road, was convicted of a charge of committing racially aggravated harassment without violence when he appeared at Hastings Magistrates Court on Wednesday, January 19.

Police said he received a restraining order, a community order, an unpaid work requirement of 80 hours and fines totalling £180.

The court heard between March and June 2021, Saxby made a number of racial remarks over the radio networks.

Police said one victim in particular was targeted by Saxby who made racial comments and remarks about his disabilities over the course of several months."

PC Ryan Welby, of Hastings CID, said: "We will always treat such reports seriously and act on the evidence presented."

Read the full story at

<https://www.hastingsobserver.co.uk/news/crime/rye-man-convicted-for-making-racial-remarks-over-amateur-radio-networks-3551480>

Austrian special event

Look for the special event callsign OE22M to be active sometime around April 23rd.

Activity is to commemorate the anniversary of Guglielmo Marconi's birthday (April 25th, 1874) and to celebrate International Marconi Day (Saturday, April 23rd).

QSL direct to:

DokuFunk, OE22M, An den Steinfeldern 4A, Vienna A-1230, Austria.
QSL by the Bureau via OE1YPP.

For more details on International Marconi Day, see:

<http://gx4crc.com/gb4imd>

Suffix /70 permitted for Platinum Jubilee Celebrations

Following a request by the RSGB, Ofcom has indicated that stations wishing to retain their usual Regional Secondary Locator to identify their DXCC entity may use the suffix /70 to celebrate the Queen's Platinum Jubilee.

It is also permitted to use the /70 suffix with the GQ/MQ/2Q prefix if desired.

The RSGB would like to thank Ofcom for its support of the Queen's Jubilee Celebrations

Foundation Online training course statistics

Essex Ham have produced a very informative statistics page covering their free Foundation Online amateur radio courses as of January 2022

Over the years a total of 9286 course enquires have been received and of those 7603 enrolled on a course.

See the Foundation Online Statistics page at

<https://www.essexham.co.uk/train/stats/>

The RSGB's introduction of online exams that can be taken at home has led to a surge in demand for free online amateur radio training courses such as that run by Essex Ham.

The next free course run by Essex Ham volunteers starts on February 20. You can find out more about online training and register to join a course at

<https://www.essexham.co.uk/train/foundation-online/>

Essex Ham

<https://www.essexham.co.uk/>

<https://twitter.com/EssexHam>

Saint Patrick's Day Award

The organisers of the Saint Patrick's Day Award are excited to announce the launch of a new web page where visitors can learn everything they need to know about the Saint Patrick's day award.

On the new page, you will also find the simple registration form to be completed by all participants in this year's festivities which will be running from the 16th-18th March 2022.

Previous years have seen over 100 amateurs register to participate and we are hopeful that this will continue to grow.

The award is an opportunity for amateurs around the world to celebrate Saint Patrick's day and turn the airwaves green.

The new page can be accessed at www.stpatricksaward.com

We look forward to celebrating with you all.



Enthusiast's radio collection in the press

The Daily Mail newspaper has published a well illustrated article about the extensive radio collection of **Richard Allan** from Norfolk

Richard Allan, a retired electrical engineer, has spent the last fifty years collecting antique transistor, valve and crystal sets and has now shown off his impressive collection of more than 200 pieces.

The 85-year-old from Norfolk, first fell in love with radios because of his father, Alexander William, who built his own transmitter and spoke to people all over the world through the airwaves.

Read the Daily Mail story at

<https://www.dailymail.co.uk/news/article-10522803/Retired-electrical-engineer-85-15-000-collection-200-antique-radios.html>

Richard's stepmother was G3HYL and his father G2AWA, further information can be found at

<http://www.richardsradios.co.uk/g2awa.html>

2MT Marconi Hut reimagined for centenary

Artist **Sian Fan** is collaborating with Chelmsford Museum to create Forecast22 – Birth of British Broadcasting, an immersive digital model of the Marconi Writtle Hut, where groundbreaking 2MT radio broadcasts started on February 14, 1922

Interdisciplinary artist Sian will scan the Writtle Hut using Lidar technology to create a virtual 3D version of the building and its contents, including a replica of the 2MT transmitter and the piano used in the original 1922 broadcasts. The immersive, interactive model will blend historic content from museum curators with present day performances and contributions from the Chelmsford community, producing a new interpretation of this famous space.

Read the full story at

<https://citylife.chelmsford.gov.uk/2022/02/14/groundbreaking-writtle-hut-reimagined-for-bbc-centenary/>

Chelmsford radio amateurs operated "GB100 2MT" to commemorate the centenary

<http://g0mwt.org.uk/events/gb1002mt-writtle/index.htm>

Essex Ham operated GB2MTC from the East Essex Hackspace

<https://www.essexham.co.uk/2mt-centenary.html>

Morse Code in HackSpace magazine

Mike Bedford G4AEE writes about Morse code on pages 84-89 of the March 2022 edition of HackSpace magazine (issue 52) which is available as a free PDF

The extensive article gives suggestions on how to learn Morse, covers Morse Keys and Paddles and mentions how you can decode Morse automatically using your PC and MultiPSK software.

The magazine PDF is available for Free download at

<https://hackspace.raspberrypi.com/issues/52/pdf>

Home-made panadapter brings waterfall to old radio

Ham radio operators can be pretty selective about their gear. Some are old-school tube purists who would never think of touching a rig containing transistors, and others are perfectly happy with the small Software Defined Radio (SDR) hooked up to their PC. The vast majority, though, of us are somewhere in between — we appreciate the classic look and feel of vintage radios as well as the convenience of modern ones. Better yet, some of us even like to combine the two by adding a few modern bells and whistles to our favorite “boat anchor.”

Scott Baker is one such Ham. He’s only had his license for a few months now and has already jumped into some great projects, including [adding a panadapter to an old Drake R-4B Receiver](#). What’s a panadapter, you may ask? As [Scott] explains in his excellent

writeup and video, a panadapter is a circuit that grabs a wideband signal from a radio receiver that typically has a narrowband output. The idea is that rather than just listen to somebody's 4kHz-wide transmission in the 40m band, you can listen to a huge swath of the spectrum, covering potentially hundreds of transmissions, all at the same time.

Read the full Hackday article and watch the video at:

<https://hackaday.com/2022/02/20/homemade-panadapter-brings-waterfall-to-old-radio/>

EIOMAR Hurdy Gurdy Museum of Vintage Radio in Howth

Tony, EI5EM, has good news to report regarding Ye Olde Hurdy Gurdy Museum of Vintage Radio in the Martello tower in Howth.

Two Community Employment Scheme workers have been recently assigned, and it is planned to reopen from April, initially at weekends. International Marconi Day takes place on the 23rd of April and, as usual, EIOMAR will be taking part as an Award Station from the museum.

We look forward to welcoming many visitors on that day. Pat Herbert, who set up the Museum in 2003, sadly passed away in 2020. However, we are grateful to Pat's son, Simon, for taking up the baton where his father left off.

How to capture satellite images

Sophie Dyer M6NYX and **Sasha Engelmann M6IOR** have written an article about how they used amateur radio tech to capture and decode images from NOAA Satellites for #COP26 – and how you can do the same

"On the first day of COP26 (the latest UN climate change conference in Glasgow) our network of 29 volunteers captured a collective image of Earth by tuning into transmissions from three orbiting National Oceanic and Atmospheric Administration (NOAA) satellites. We did this using DIY satellite ground stations made up of radio antennas plugged into laptops.

Each member of the group recorded a satellite image as well as what they could feel and observe of the weather on the ground. Across 14 countries and six continents, the network recorded a total of 38 images which, when stitched together onto a map, produced a snapshot of the planet on October 31 2021."

Read the full article at

<https://theconversation.com/how-to-capture-satellite-images-in-your-backyard-and-contribute-to-a-snapshot-of-the-climate-crisis-167327>

What is Amateur Radio?

<http://www.essexham.co.uk/what-is-amateur-radio>

Free UK amateur radio Online Training course

<https://essexham.co.uk/train/foundation-online/>

Aland Islands

Wies, SP1EG, informs OPDX of the upcoming activities from Aland Islands (EU-002):
* Operators Wies/SP1EG, Hans/DK8RE, Frank/DM5WF and Hans/DL8UUF will be active as OH0EG from Jomala, Fasta Aland, between April 1-9th.

Activity will be on 160-10 meters using a K3 + Expert PA, Dipoles for 160/80m and a GP for the remaining bands. An IC-7300 will be use for the Digital modes.

The team will be in the SP DX Contest (April 2-3rd) which is a Polish CW and SSB contest.

Rules for the contest, see: <https://spdxcontest.pzk.org.pl>

QSL via SP1EG. Outside of the contest, operators may be active as OH0/DM5WF, OH0/DK8RE ... etc.

Svalbard update

The 'DX Adventure Team' provides the following update to the DXpedition to Svalbard as JW0X and JW1000QO taking place between April 19-26th, 2022.

The following is a press release [edited]: DX-Adventure is a joint venture of Max-ON5UR and Erik-ON4ANN, and consists of 15 very enthusiastic people with all experience in participating or organizing a DX-pedition.

The first DX-Adventure project is therefore immediately ambitious: The Arctic Archipelago - Svalbard - IOTA EU-026 from April 19-26th, 2022. The setup is to be active with 5 stations on all HF bands in different modes (CW, SSB, RTTY, FT8-FT4). In addition, we have the ambition to be the first to activate EU-026 on QO-100 (as JW1000QO). Three team members take on the challenge of driving a snowmobile all the way to Kapp Linné, about 100km east of Longyearbyen. This is the only location that allows a "line of sight" on the QO-100 satellite. In addition, Kapp Linné is also on the edge of the satellite footprint - speaking of a challenge...

Read all about the DXpedition here:

<https://www.dx-adventure.com/en/svalbard-dx-pedition>

Sponsorship: Every contribution is welcome and appreciated, but with a donation of at least 25 Euros you have a chance to win one of the 10 JW0X flags. With a donation of 50 Euro you will receive a beautiful JW0X scarf (17 x 125 cm), a nice souvenir that should not be missing in the shack.

A list of all registered sponsors can be found on the JW0X sponsor page:

<https://www.dx-adventure.com/en/svalbard-dx-pedition>

You hear our signals we feel the pile-up

DX Adventure team <https://www.dx-adventure.com>

Retro and new tech combine in this hybrid ham transmitter

We've said it before and we'll say it again: the best part about holding an amateur radio license is that it lets you build and use your own transmitting equipment. Hams have been doing this for more than a century — indeed, it was once the only way to get on the air - using whatever technology was available. But the mix of technologies in this low-power transmitter for the 80-meter band is something you don't see every day.

As ham Helge Fykse LA6NCA describes in the video link below, the project began when he came into possession of a bonanza of vacuum tubes — 12A6 tetrodes, specifically. The new-old-stock tubes were perfect for an RF power amplifier, but that left the problem of what to use for an oscillator. [Helge] chose to meld the old with the new and used oscillator board that he designed. The board has an ATmega88 microcontroller and an Si5351 oscillator, along with a 3V3 regulator to let the module run on 12 volts. And for a nice retro touch, Helge put the board in a 3D printed case that looks like an old-fashioned quartz crystal.

There are some other nice design touches here too. A low-pass filter cleans up the harmonics of the oscillator's 3.5-MHz square wave output before feeding it to the amplifier, in a nod to proper spectrum hygiene. The primary for the amp's air-core output transformer is hand-wound, with 3D printed spacers to keep the winding neat and even. The tuning process shown below is interesting, and the transmitter was used to make a solid contact with another ham about 100 km away. And we really liked the look of Helge's shack, stuffed as it is with gear both old and new.

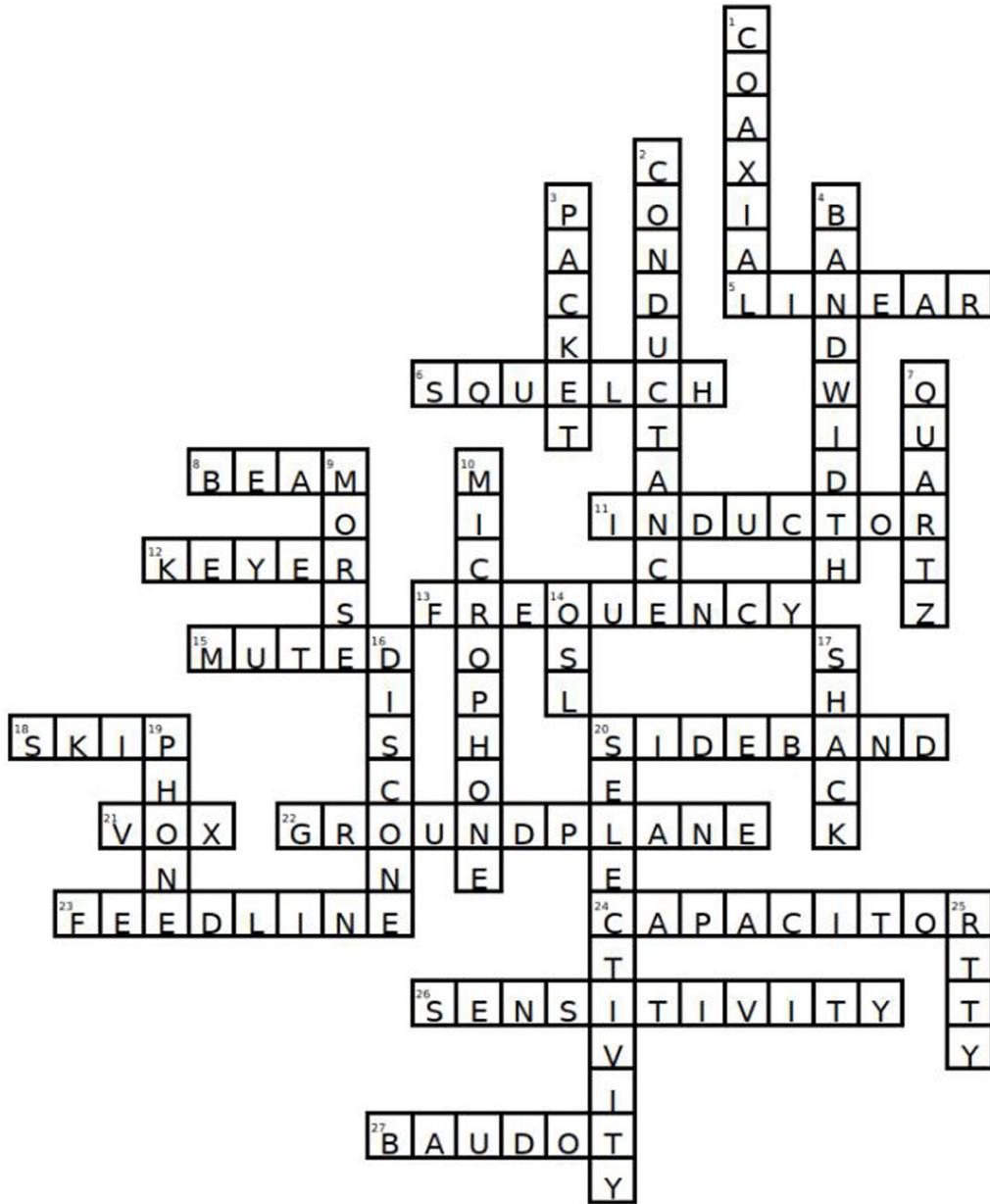
We've personally tried the Si5351 for QRP transmitters before, but this blend of the old and new really makes us want to find some tubes and get to playing.

Source: <https://hackaday.com/2022/02/27/retro-and-new-tech-combine-in-this-hybrid-ham-transmitter/>

- Our thanks to

Stephen Walters G7VFX

Crossword Answer Key



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