Good evening, it is Tuesday 7th of May 2024.

This is **ZS6KTS**, being operated by **Etienne ZS6ZA**, with the weekly news bulletin of the Kempton Park Amateur Radio Technical Society.

This bulletin is being transmitted on the 2m Kempton Park Repeater, on 145.6625 MHz

If Echolink is available: Echolink users can connect to **ZS0AWA-L** (ZS6KTS, or node 8041), to listen to and partake in the news bulletin.

Welcome to everyone on frequency. Please stay tuned for some interesting SARL and Club news items.

SARL NEWS:

SILENT KEY:

It is with deep regret that we announce that the key of **Craig Dalgleish**, **ZS5CID** went silent on the 21st of March 2024 in Hermanus. Craig had been an active member of SARL Hamnet whilst living and working in Underberg, KZN. He had been involved with repeater and high-site maintenance with the **Midlands Amateur Radio Club** and for the **Hibiscus Club** when he moved to the South Coast. We extend our sincere condolences to his family and friends.

THE MAY 2024 RADIO ZS:

The May 2024 issue of Radio ZS was uploaded on Wednesday 1 May to the League website. Click on Publications on the left-hand menu and select Radio ZS Downloads to get your copy.

We give feedback about the 2024 SARL National Convention held in Cape Town, with reports from the SARL Annual Report. You can also read about the response to the new criteria for the Worked All ZS Award. SARL Hamnet Gauteng talks about their new beginning and SARL Hamnet Eastern Cape found a Personal Locator Beacon at a refuse site.

Read about the DXPedition to Socotra Island, Yemen - 7O2WX 2024, about equalization and Ham Radio, a remote control of a magnetic loop variable capacitor and what is Meshtastic radio. The Museum Piece talks about Marconi and the Lizard Wireless Station, with the Top Band QSO Party in June we look at experiments with 160 m antennas and ask, 'Are satellites a forgotten technology?'

PROPAGATION REPORT:

Hannes Coetzee, **ZS6BZP**, reports that the solar activity is expected to be at low to moderate levels. There are currently six sunspot regions with simple to complex magnetic configurations visible. There is a high probability for C and M-class and a low to moderate for X-class solar flares. If you want to do your own frequency predictions, the expected effective sunspot number for the week will be around 80. The 10 to 30 m bands may especially in the late afternoon provide some good DX fun. Please visit the website spaceweather.sansa.org.za for further information.

DIARY OF SOME UPCOMING EVENTS:
11 and 12 May – The 2024 Mills on the Air
12 May – Mother's Day
17 May – World Telecommunication Day
17 to 19 May – The Dayton Hamvention
18 May – The May RAE
20 May – The SARL's 99th birthday

CLUB NEWS:
MAY CLUB MEETING:
We are looking forward to enjoy our monthly club meeting for May this forthcoming Saturday 11th of May 2024 at our clubhouse in Ysterhout Street, Birchleigh from 14h00 onwards.

*** Hamnet Talk Saturday**

As usual and if we have enough members that are interested, we will end the meeting with the traditional bring-and-braai, so make sure that you bring something to enjoy afterwards.

It would be great to see as many members and visitors as possible

See you all there !!!

Etienne ZS6ZA, HF happenings:

HF and Other News:
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Why can't radio waves transmit through water?

Radio waves are a type of electromagnetic radiation with the longest wavelengths in the electromagnetic spectrum, typically with frequencies of 300 gigahertz (GHz) and below. They are generated by charged particles undergoing acceleration, such as time-varying electric currents. They can travel through air and space at the speed of light, but they have trouble penetrating some materials, such as metals and water.

Radio waves are affected by free electrons in electrical conductors, which can absorb or reflect them. Metals have a lot of free electrons, so they act like mirrors for radio waves. That's why you can use a metal foil to block radio signals or create a radio antenna. Water is also a weak conductor of electricity, because it contains dissolved ions and molecules that can carry electric charges. When radio waves encounter water, they induce electric currents in the water molecules, which dissipate some of the energy of the waves. The more conductive the water is, the more energy it absorbs.

Saltwater is more conductive than freshwater, so it absorbs more radio waves.
The longer the wavelength, the more easily it can bend around obstacles or diffract through openings.

This is why long-wave radio signals can travel farther than short-wave signals. However, even long-wave radio signals have a limit when it comes to water.

Very low frequency (VLF) radio waves can penetrate seawater just over one hundred feet (30 metres), but they require very powerful transmitters and large antennas. Anything higher than VLF is blocked by water.

So, radio waves can't transmit through water because water is a weak conductor that absorbs and reflects them, and because their wavelengths are too short to bend or diffract through water. This poses a challenge for wireless communication between underwater and airborne devices, such as submarines and planes.
Some researchers have developed novel systems that use sonar signals to cause vibrations on the water surface that can be decoded by airborne receivers, but these are still in their early stages.

How many light years from Earth could aliens pick up our radio waves?

Our earliest radio waves will have travelled some 200 light years by now. Far enough to reach the closest stars in our galaxy, but it's a tiny distance compared to the size of our galaxy, never mind to others
The first man-made radio signals began even before 1901 when Guglielmo Marconi demonstrated wireless telegraph across the Atlantic Ocean. But basically, before the 20th century began, aliens would not have heard any radio communication signals coming from Earth.

Since then, more than 120 years ago, Earth has been emitting more and more sophisticated radio and television transmissions. When Nuclear bombs were dropped in Japan, as well as all of the Nuclear tests done during the cold war, these too sent out tremendous bursts of electromagnetic waves into space. Anyone listening might figure out we had nuclear power. More recently we have cell phones and Bluetooth and wifi, and all of these things use radio waves to be transmitted from an electronic device.

So any alien planet that is more than 120 light years away, would never have heard a peep from us because our radio waves haven't travelled that far yet, and hearing about rocket launches and advances in science would probably not started reaching aliens unless they were less than 50 light years away.

Finally, in physics, every time a radio wave doubles its distance, the signal gets 4 times weaker. For this reason, some scientists suggest it's unlikely anyone further away than 4 or 5 light years would be able to discern our weak and garbled audio and video radio waves, which at that distance would be indistinguishable from background radiation.

Therefore, It's unlikely anyone's listening given the galaxy in which we live is over 100,000 light years across, and our signals haven't even left the neighbourhood.

What is one of the world's greatest industrial secrets that has not yet been revealed or discovered?

The world's biggest trade secret is not locked in any underground vault or guarded by dozens of armed guards. It probably isn't even written on paper. Of course, I am referring to the formula of WD-40, the famous water-repellent often used as a lubricant, rust remover, and penetrating oil.

In 1953 in San Diego, California, a group of engineers from a small company called Rocket Chemical Company created a product intended for use in the aerospace industry as an anti-corrosion agent. The product's name refers to Water Displacement, and the number 40 refers to the number of attempts made to get the formula to work. They must have been quite significant because, even after nearly 70 years, the formula is still in use and unmatched by any other.

Its first commercial use, for the Atlas missile, was to protect the rocket's exterior from rust and corrosion (the rocket was intended to carry nuclear bombs to intercontinental destinations and was later used to transport astronauts into space as part of the Gemini Program). The product worked so well that some employees began to bring cans of it home for personal use. Only a few years later, the company's director had the brilliant idea to package the liquid in aerosol cans and sell it to the public.

The secret lies in another brilliant strategy; the company decided, contrary to usual practice, not to patent their product, as doing so would require submitting the recipe. The patent would only last a few years, and after a certain date, anyone could manufacture and market it without issue.

A secret so well kept that seven decades later, no one has managed to decipher it.

IN THE WORLD OF DX :

9X, **RWANDA** Harold, DF2WO will once again be active as 9X2AW from Kigali until the 17th of May. Operation on HF and 6m using CW, SSB with some FT4/8.

JD1, **OGASAWARA** Tosy, JA6VZB will be QRV as JD1BQW between May 22 and June 5. He will concentrate on 6 and 12 meter using FT8.

IOTA (SA-017) **Gorgona Isl** - A team large Colombian team will be active between June 7-11. Operation from 80 to 6 meter using SSB, digi and sat. Last expedition to Gorgona Island was in 1989.

DF2WO / D44TWO (FT8 and CW) and Franz DG9KAN / D44KAN (SSB) will be active on AF-005 Santiago Isl (AF-005) in **Cape Verde** from the 8th to the 20th of June 2024. Operation mainly on 6m using FT8 and CW.

VP2V, **BRITISH VIRGIN ISL** Dave, W9DR will be active as VP2V/call from Anegada Isl sometime June 2024. Operation on 6 meter only using FT8, CW and SSB.

Gregg, W6IZT and Hal, W8HC will be operating from Falaise des Oiseaux, **St. Martin** (FS) for a one week DX-cation from June 25 to July 2. They will be active 6m-40m with a 5 element LFA yagi for 6m.

Giovanni IZ2DPX will be active from Saint-Leu, **Reunion island** as TO7PX during July 8-14, 2024. QRV on 40-6m; SSB & FT8 using fishing rod antenna; holiday-style activity.

KV1J will be active as FP/KV1J on **St Pierre & Miquelon** (FP) from the 10th to the 2nd to the 16th of July 2024. Operation from 80 to 6 meter using CW, SSB and digi.

F, FRANCE: The special event callsign TM83JO will be active on 15 individual days between April 16 and July 26, between the lighting of the **Olympic torch in Greece** and the beginning of the Games in Paris. QRV on 80-6m (CW, SSB, digital modes) and via QO-100.

KH5, JARVIS ISL The Dateline DX Association has received a permission from the USFWS for a DXpedition to **Jarvis**. It's ranked number 9 in Europe's most wanted list. The small team of four, consisting of George, AA7JV, Don, N1DG, Tomi, HA7RY and Mike, KN4EEI, will install 6 RIB stations on Jarvis, operating on 160 to 6 meters, using CW, SSB and FT8 modes. The on-island team will be augmented by 25 remote operators from Asia, Europe and North America, running CW and FT8. FT8 operations will use the Fox/Hound mode. Operation will be around August 1 depending the WX.

Good DX to all! 73 de ZS6ZA

Pieter ZS6PJE, Technical Manager to give feedback and update:

Echolink & WiFi feedback. Thanking Peet for all his assistance with the internet

Johan ZR6JT, Contest Manager to give feedback and update:

Contest News events

Jacques ZS6MAV, for any AMSAT feedback and update:

Amsat News

BIRTHDAYS AND ANNIVERSARIES:

We have one birthday on our list for the week. **Debbie XYL** of **Etienne ZS6ZA** celebrating her birthday on Sunday 12th of May. Happy birthday and congratulations from all of us.

If we have missed out on your big day, please contact any committee member to update our records.

ADDITIONAL NEWS:

If there is anyone who would like to share any additional or any specific club news with the listeners, you are welcome to call in now.

Sandton Fox Hunt on the 19th of May at Zoo-Lake
Congratulations Martin for passing his HF Assessment

SWAP SHOP:

This is your opportunity to advertise a swap, or any amateur equipment for sale.

Please note that NO prices are to be quoted on air. Only a description of the items and your contact details must be provided.

ZS6PJE Still have lots of LMR400 coax, Two Quansheng handheld radios available.

That brings us to the end of tonight's bulletin.

You have listened to the weekly news bulletin of the Kempton Park Amateur Radio Technical Society, compiled by Corrie ZS6CDB and read by Etienne ZS6ZA.

Thank you for having listened!