BRANCH 27 NEWSLETTER MARCH 2024

Hi Everyone,
Welcome to our second newsletter Hope you are enjoying these summer months and making the most of the fine weather.

Hello from Terry ZL2TNB your President
We have kicked off the year so far with our talk on the VNA instrument which I hope you found interesting.
The next few months we have planned shack visits, A quiz, and Car rally with Fox hunt (this will be later in the year).
Early February Graeme ZL2TE, Ngaire ZL2UJT & myself delivered a gift basket to Desiree & Mike who are the trustees of our 720 repeater. Mike & Desiree kindly offered their property to our club to erect a hut and install our repeater and solar panels.
Their property is totally off the grid so a perfect spot with very little noise and they already had a big tower which they offered to us to use for our antenna. We are so fortunate to have this facility.

Profile of Doug ZL3DUG: Vice President & Secretary

Doug was born in England, and moved to New Zealand as a toddler in February 1972. During his early years, he developed an interest in receiving shortwave radio signals using a valve radio that had been built by a neighbour. The radio got regular use for several years until it caught fire, but fortunately no damage was done to the house or any other property.

He met some people talking on their car CB radio, (then 11 channels on 26 MHz AM), while delivering newspapers about 1985. This got him hooked, and shortly after purchased a President AX-55 handheld CB with 6 crystalised channels with the callsign NU398.

In 1992, Doug attended classes at the Civil Defence building (now known as TEMO). The tutor was Trace Ward ZL2BS (SK). After sitting the exam at the old Post Office on Currie Street, the marks received were insuffient for a Limited class license, but with passing a morse test of 6wpm, a Novice class could be issued. The thought of doing Morse Code at that time was terrifying and out of the question, and the interest waned.

CB continued though, and had changed into a 40-channel, AM and SSB service. Doug remembers taking part in on-air quiz nights. The usual arrangement was if you won, you set the questions and presented the quiz on the following week. Doug was a frequent winner, so was a regular presenter. His mother sometimes participated, and had to prepare a quiz or two herself. Her accent from Inverness, capital of the Scottish Highlands, was well received.

CB lost a lot of its appeal for Doug through the rest of the 1990's, and the radio was used less and less until it stopped altogether. It wasn't until about 2010 that paths crossed with Trace Ward again. Over the next few years, they discussed Amateur Radio several times. In 2017, a HamCram class was advertised, and the timing seemed right. Doug attended the full weekend course held in November, and by Sunday afternoon had passed the exam comfortably, with only a handful of questions missed. Success.

Having attended a couple of club meetings before gaining the callsign ZL3DUG, Doug attended the 2017 AGM and was nominated for the committee which he declined. The following year he accepted the nomination. In 2019, Doug accepted a nomination to the Secretary position which he has held since.

Other roles he has held include Taranaki Award co-ordinator, and editor of the NZART *Break-In* magazine. Doug has attended each Jock White Field Day since joining the club, and has helped with comms at Trail Bike rides, and for the Scouts Jamboree On The Air (JOTA).
Doug has a very simple shack. Just a radio, power supply and antenna. The antenna is a homebrew fan-dipole which is resonant on 80m, 40m, and 20m. No tuner required, and only 100 watts output with no amplifier. The radio covers bands from 70cm to 160m. There is a 5-element triband yagi under his house for putting up one day. In the car is a small dual bander with a whip antenna.Trying to repay the favour to his mentor, friend, and the one who encouraged him to get on Amateur Radio, Doug was close to persuading Trace Ward to become active again. Unfortunately this was not to be, as Trace collapsed while walking with friends in February 2021, and could not be revived.In closing, Doug is currently working on improving his speed on Morse Code, having long since got over the fear of it.

For disposal: I am offering on behalf of Gavin Reid (ZL4GR) the following equipment either for sale, donation or disposal by negotiation with ZL2TE.

hygain av12 trapped vertical 40 to 10 mtr

6element 2 mtr yagi

mfj 904travel tuner

tradiper model te15

yaesu ft2800 2 mtr rig

tait cb radio

icom ic440n prs radio brand new

unicom sanfu65b mobile antenna for above brand new

cb mobile whip brand new

2 yaesu ft209rh handheld 2 mtr rigs no batteries

standard 2 mtr handheld has fault in power on

noise blanker speaker

2 home made 49:1 unun’s

9:1 unun

low pass filter modified for 500w input

Embracing Preparedness and Camaraderie: The NZART 'Jock White Memorial Field Day'

Introduction: The NZART 'Jock White Memorial Field Day' stands as a beacon of preparedness and camaraderie within the amateur radio community. Backgrounded in emergency readiness and club solidarity, this annual contest serves as a platform for enthusiasts to hone their skills while fostering bonds that strengthen the fabric of our clubs. In this article, we delve into the essence of the 'Jock White Field Day' and its significance in enhancing our collective capabilities.

Event Overview: The 'Jock White Memorial Field Day' is more than just a competition; it's a testament to our commitment to preparedness. Held annually by the New Zealand Association of Radio Transmitters (NZART), this event challenges participants to set up temporary stations under simulated emergency conditions. From remote locations to urban set-ups, amateurs across the country immerse themselves in scenarios that mimic real-world challenges, demonstrating their proficiency in communication and resourcefulness. Moreover, the event promotes teamwork and collaboration, forging stronger ties within our club and nurturing a spirit of unity.

Key Highlights: Each year, the 'Jock White Field Day' offers a unique set of challenges and experiences. From battling adverse weather conditions to troubleshooting technical issues on the fly, participants must adapt swiftly to overcome obstacles. The event also provides an invaluable opportunity for knowledge exchange, with seasoned amateurs sharing insights and novices gaining practical skills through hands-on participation.

Impact on Preparedness: The benefits of participating in the 'Jock White Field Day' extend far beyond the confines of the competition. By honing their emergency communication abilities and refining their operational procedures, participants contribute to a more resilient amateur radio community. In times of crisis, the expertise gained from this event can make a crucial difference in our ability to coordinate response efforts and provide essential services to those in need as has been well demonstrated in the past.

Promoting Club Camaraderie: Beyond its role in enhancing preparedness, the 'Jock White Field Day' plays a vital role in strengthening the bonds within our club. Through shared experiences and collaborative endeavours, the participants forge friendships that transcend the confines of the competition. Whether setting up antennas or swapping stories around the barbecue, the event fosters a sense of belonging and solidarity that is integral to the amateur radio community.

Event Schedule: Stations were permitted to be set up after 12:00 pm on Saturday, marking the official commencement of the contest. Operating began at 3:00 pm Saturday and the contest finished at 3:00 pm on Sunday. Yes there was a break from midnight to 6:00 am to get some sleep.

The antennas at Onaero. The images have been enhanced so the aerials show against the grey sky. In the background is the 80 metre antenna with the 40 M in the foreground. Its right hand support (out of frame) is also a Norfolk Pine.

How we put the aerials up

This year rather than the fishing rod or bow and arrows of the past, we used a drone to fly a drawstring over the Norfolk pines used as a mast for both 80 metres and 40 metres.

We Have Lift-off

François operates his drone to fly the draw string over the support trees at each end of the antenna. It was fairly tricky flying conditions with a brisk northerly trying to dictate where the drawstring was placed but François was master of his machine.

Up up and away

After the draw string had been flown over the tree, the antenna was tied to the appropriate end and was pulled up to the top of the tree from the other end of the draw string and tied off. The same procedure was applied for the tree at other end and bingo! we had an antenna in the air.

Assembling our site:

Onaero Domain is a wonderful site where the Onaero river flows out to a small bay with a sandy, safe swimming beach and a good surf-casting spot. The domain is shared by a camp site and was the home of a surf club whose clubrooms have been dismantled. It is at that spot where we set up our camp. Two small tents joined by a gazebo formed our shelter with one tent dedicated to the 80 metre band and the other to 40 metres. Jonny ZL2JBK has built himself a communications trailer complete with a Clark Mast which formed one end of the 40 metre antenna and part of our shelter. The camp owners are great people and very supportive of the amateur radio activities allowing us the use of toilet facilities and the use of the playground for the children of our participants families.

Here is a collage of our site and set up:

Another view of our site where the Norfolk pine in the foreground and the left hand Norfolk in the background formed the masts for our 80 metre antenna

The participants: This year, the event saw the usual attendees who are fairly seasoned operators but this time capped with enthusiastic newcomers. Upon arrival at the picturesque Onaero Domain, participants wasted no time in setting up antennas and tents, transforming the tranquil site into a bustling hub of activity. With meticulous care, equipment was prepared, and provisions were laid out to ensure the comfort and sustenance of all involved.

From left to right: Stephen ZL2KJB, Ken ZL2KJT and Terry ZL2TNB

We had the site set up in an hour and a half so there was plenty of time left for socialising. Terry ZL2TNB our President took the opportunity to sling up a random length of wire with a 9:1 balun and counterpoise and demonstrate to our newand potential new hams how easy a field antenna is to erect and the surprising number of bands that it would cover.

Operational Dynamics: As the event unfolded, participants operated on the band of their choice, Single Sideband (SSB) but unfortunately only one on Morse code (CW). The rhythmic cadence of keying and the crackle of voices over the airwaves underscored the dedication and skill of those manning the stations. Notable was Ken ZL2KJT who “gave it a go”. Ken is one of the successful hams from the ham cram conducted last November by Warren ZL2AJ and he took to it like a duck to water running up a creditable score on his session. Despite the gradual decline in participant numbers over the years, the enthusiasm and camaraderie among operators remained undiminished, creating an atmosphere of shared purpose and mutual support.

From 3:00 pm Saturday afternoon until 12:00 pm Saturday night, participants engaged in intense operation, seizing every opportunity to maximize their scores. We had breaks and meals wherever it fitted in with the operating schedule and Saturday night meal was a real treat with Ken arriving with enough fresh caught snapper to feed us all. After Saturday finished Doug ZL3DUG and Terry ZL2TNB slept over on our site while the rest of us went home to return on Sunday but with depleted numbers. Activity resumed again on Sunday, culminating in the event's conclusion at 3:00 pm.

A huge contributor to the performance of our station was the purchase of Lithium Batteries for each band. These batteries weighed half that of the Lead Acid and lasted the distance without reliance on Solar Panels or Generators. Yes the price was “eye wateringly” high but performance worth every cent.

One of the great features of the Onaero Domain is how family friendly it is and it was great to see Brett ZL2VZ enjoying his inquisitive grandson as he operated 40 metres. Similarly François ZL1CZZ and his XYL Lydia had their kids there and it was interesting to note how reluctant they were to leave. They would have stayed on and watched the operating if given the chance – watch for future operators here.

With the last transmissions echoing across the airwaves, participants dismantled their stations and bid farewell to Onaero Domain, their spirits buoyed by memories of another memorable 'Jock White Field Day' experience.

Conclusion: As we reflect on the significance of the 'Jock White Field Day,' let us reaffirm our commitment to preparedness and the power of teamwork. By embracing the challenges of this annual event, we not only sharpen our skills as amateur radio operators but also reinforce the enduring spirit of cooperation that defines our community. Together, we stand ready to face whatever challenges the future may hold, united in purpose and resolve.

Graeme ZL2TE

Unravelling the Mystery of the Sunspot Cycle: Predictions and Amateur Radio Impact

As amateur radio enthusiasts, we are intimately connected with the dynamic nature of the sun and its influence on radio propagation. The sunspot cycle, a natural phenomenon that waxes and wanes

over approximately an 11-year period, plays a crucial role in shaping the conditions of our ionosphere and subsequently impacts our ability to communicate via radio waves. In this article, we delve into the current state of the sunspot cycle, predictions on its duration, and its effects on amateur radio operations.

The State of the Sunspot Cycle: As of 2024, we find ourselves in the midst of Solar Cycle 25, the latest iteration of the sunspot cycle. Solar Cycle 25 officially began in December 2019, following a period of relatively low solar activity during Solar Cycle 24. Historically, solar cycles exhibit a pattern of increasing sunspot activity, reaching a peak, and then gradually declining back to a minimum before the cycle begins anew. Understanding where we stand in this cycle provides valuable insights into what to expect in terms of radio propagation conditions.

Predictions and Duration: Forecasting the duration and intensity of a sunspot cycle is a challenging endeavour, as solar activity is influenced by a myriad of factors, including magnetic interactions within the sun. However, scientists and researchers utilize various models and observational data to make informed predictions. Currently, indications suggest that Solar Cycle 25 is expected to be relatively moderate in terms of sunspot activity, with a peak likely to occur around **July 2025**, with a peak of 115 sunspots as sourced from NOAA's Space Weather Prediction Center. This projection aligns with observations of the current cycle's progression thus far.

Effects on Amateur Radio: For amateur radio operators, the state of the sunspot cycle directly impacts radio propagation conditions, affecting the range and reliability of communication. During periods of heightened solar activity, characterized by increased sunspot numbers and solar flares, high-frequency (HF) bands experience enhanced propagation, allowing for long-distance communication and improved signal strength. Conversely, during solar minimum phases, HF propagation conditions tend to be less favourable, with reduced ionization levels in the ionosphere leading to decreased signal range and increased absorption of radio waves.

As we navigate through Solar Cycle 25, amateur radio operators should anticipate a gradual improvement in propagation conditions as solar activity continues to ramp up towards the cycle's peak. However, it's essential to remain adaptable and resourceful, utilizing techniques such as frequency selection, antenna optimization, and propagation forecasting tools to maximize communication effectiveness even during periods of reduced solar activity.

In conclusion, the sunspot cycle remains a captivating phenomenon that profoundly influences the world of amateur radio. By staying informed about the current state of Solar Cycle 25, understanding its predicted duration, and adapting our operating strategies accordingly, we can continue to enjoy the thrill of amateur radio communication while embracing the dynamic interplay between the sun and our ionosphere. Happy DXing, and may the bands be ever in your favour!

Hope you have enjoyed this Newsletter and a Thank you to all who contributed

Ngaire ZL2UJT