

**FEBRUARY 2020**



**AREC.info is the newsletter of Amateur Radio Emergency Communications, the public service arm of the New Zealand Association of Radio Transmitters. AREC.info is published monthly (except January).**



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## Cover:

*Peter ZL1PJH taking part in January's Auckland AREC communications exercise from Grahams Beach, Awhitu Peninsula.*



**AREC Administration – Debbie and Annalise**  
[admin@arec.nz](mailto:admin@arec.nz), 04 939 2189

**Newsletter Editor - Soren Low, ZL1SKL**  
[newsletter@arec.nz](mailto:newsletter@arec.nz), 021 813 541

## Amateur Radio Emergency Communications

### National Officers:

**Chief Executive Officer**  
 Don Robertson, ZL2TYR  
[ceo@arec.nz](mailto:ceo@arec.nz), 021 654 085

**Regional Manager North**  
 Andrew Brill, ZL1COP  
[RMNth@arec.nz](mailto:RMNth@arec.nz), 022 354 6451

**Regional Manager South**  
 Lindsey Ross, ZL4KS  
[RMStH@arec.nz](mailto:RMStH@arec.nz), 021 116 1686

**Project Coordinator**  
 John Murphy, ZL2XJ  
[projects@arec.nz](mailto:projects@arec.nz), 021 0807 5075

**National Training Manager**  
 Steve Davis, ZL2UCX  
[training@arec.nz](mailto:training@arec.nz), 027 436 1796

**Health & Safety Advisor**  
 Dave Wilkins, ZL1MR  
[hsw@arec.nz](mailto:hsw@arec.nz), 021 185 7903

**Treasurer – Evan Sayer**  
[Treasurer@arec.nz](mailto:Treasurer@arec.nz), 021 612 164

### District Managers:

**Northland/Auckland – Richard Gamble**  
[DMAuckland@arec.nz](mailto:DMAuckland@arec.nz), 021 729 270

**Bay of Plenty – Karl Hunt**  
[DMBOP@arec.nz](mailto:DMBOP@arec.nz), 021 167 0477

**Central – Brian Purdie**  
[DMCentral@arec.nz](mailto:DMCentral@arec.nz), 027 321 4470

**Eastern – John Newson**  
[DMEastern@arec.nz](mailto:DMEastern@arec.nz), 027 230 3642

**Wellington – John Murphy**  
[DMWellington@arec.nz](mailto:DMWellington@arec.nz), 021 0807 5075

**Tasman – Paul Rennie**  
[DMTasman@arec.nz](mailto:DMTasman@arec.nz), 027 458 9740

**Canterbury – Geoff Chapman**  
[DMCanterbury@arec.nz](mailto:DMCanterbury@arec.nz), 021 246 9128

**Southern – Lindsay Eunson**  
[DMSouthern@arec.nz](mailto:DMSouthern@arec.nz), 027 432 5136



## Chief Executive Comment

Welcome to our first issue of 2021, and I hope that you all had the opportunity for some time out with your friends and family over the festive season. As you will read, there has been a lot happening already this year and the holidays seem a distant memory to me too with plenty going on.

## Cathy Purdie, SK

As I write this, news has just come through that Cathy Purdie ZL2ADK has become a silent key. Cathy is the wife of AREC Central Area Manager Brian Purdie ZL2ADL. Together with Brian, Cathy has been active in Amateur Radio including AREC. Cathy was also very active within WARO.

I am sure you all join me as I pass on our condolences to Brian, their family and friends for this very sad loss.

## AREC in the News

Brian lives in the Hutt Valley and likes to use his gold card to visit friends in Waikeanae by train. It's an inexpensive and enjoyable day out. After failing to get off the train home at the correct station on one occasion, he was reported missing and eventually located by Police at the end of the line in Upper Hutt. Following that incident he was supplied with a WandaTrak pendant. Since the WandaTrak equipment has been used to trace him to Porirua and Wellington railway stations and on the local Waikeana Beach bus, minimising the numbers of Police staff and LandSAR volunteers needed to find him.

## Kapiti's amateur radio operators can track wanderers

Police, Ambulance, Fire and Emergency New Zealand, Land Search and Rescue (LSAR) and medical personnel immediately come to mind when people think of emergency responders.

But they are huge assets from a dedicated group of specialists who can perform a key role getting information to and from the crews in the field. Skilled in radio operation procedures and communications they are members of the Amateur Radio Emergency Communications or AREC.

AREC volunteers are members of Kipiti Amateur Radio Society, who also provide radio operators for regular testing of the Civil Defence radio network on behalf of Kipiti

AREC was born out of the amateur radio fraternity in 1992 after the Major earthquake. Its mission is to train radio operators in providing reliable message handling for any type of emergency throughout New Zealand. Members answer callsouts as and when required - no matter the time or place.

As well as their more well known role in assisting with searches for overdue travellers, volunteers are also increasingly called on to assist Police in urban searches for missing persons, usually either children or the elderly with dementia. Community support is also a high priority and they have been helped with the introduction some 15 years ago, of the WandaTrak / Wander Search equipment based on radio tracking technology originally developed for tracking animals by organisations such as DOC.

WandaTrak is a miniature radio beacon worn by people with disabilities such as autism, dementia, or Alzheimer's who might wander away from their place of residence or get lost in their travels.

"It acts as an insurance. If you like," says KAPIT AEROSPACE coordinator, Jeff Grayson. "Call phones with their GPS tracking systems can be very effective in locating a person, but they rely on the user knowing what they're doing, actually using the cell phone with them when needed and that the battery has charge."

"With WandaTrak there are very few occasions when the pendant needs to be taken off, so it forms a durable means of finding a person when they're reported missing." The second benefit is that the pendant is waterproof. "If you're in the bath or shower. The battery does not need recharging, instead the entire pendant is replaced with a fresh unit all

When a wearer is reported missing to Police, local volunteers are sent out in the direction of the missing person's last known location together with a photo of the person. The volunteers use a special directional aerial that, depending on the terrain, can detect a pendant up to five kilometres away. The searcher knows the stronger the received signal, the nearer the missing person is. "I've been standing by the side of the road and tracked a person sitting on a bus coming from the bus station," says police officer Peter Bannister.

Searches for people wearing a pendant usually result in a successful location in under an hour, whereas a search for someone without a pendant can sometimes take many hours or even run into days and the delay can be fatal.

Families are made aware of the WandaTrack program by word of mouth, or by Police following a missing persons incident. A number of the retirement complexes in the district have been recommended to buy the pendants. It is available for free to anyone who feels the person is at risk of becoming missing.

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Jeff Graham with a search, actual and WandaTrak pendant

Details of each wearer are held in a Police database, so even if a person is visiting Kāpiti from elsewhere in New Zealand, the searchers know the unique pendant frequency and can

The Wellington Wander Search Trust, a registered charity, was formed in 2012 to support the WandaTrak program. It has provided sets of tracking equipment to Wellington Central, Lower Hutt, Porirua and Kapiti Police stations. A further four sets are held by AREC or LandSAR volunteers across the region.

Further information on the Wander Search program can be found at [www.wandersearch.org](http://www.wandersearch.org), by email to [wandersearch@jettiforma.com](mailto:wandersearch@jettiforma.com) or by calling Jeff Graham on 827 934 8883.

**Paraparaumu Pop-In Centre**  
Pop in for a chat and a cuppa. Meet & make new friends, come and go as you please.  
**Where:** Murray Jensen Room, Paraparaumu Community Centre.  
**Every Friday 1pm-3pm.**

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Left – The February-April issue of the Kapati Grey Power newsletter includes an article on Wandertrack featuring an interview with (and photograph of) Jeff Graham ZL2JG of Kapati Branch 69 AREC. Nice work Jeff.

Right – Southern District Police have been searching for a missing 68-year-old male during February. Their Facebook update on 17 February included an acknowledgement of the 12 LandSAR and four AREC volunteers who have been supporting the search efforts. Thanks for your efforts Team.

I recently met with volunteer managers from Surf, Coastguard and LandSAR exploring joint collaborations for training programmes. I also met with the team leader for Defence Career & Transition, People Capability Portfolio to discuss people leaving the Defence force transitioning to their next career. Part of that includes recommending volunteer organisations that helps them use their skills and experience as well as meeting new people. We will get a chance to present to NZDF in leavers around New Zealand which may help us attract new members.

Police are close to finalising replacement portable repeaters for Search & Rescue and I have been involved in that project for AREC. Recent progress includes visiting vendors to discuss repeater, link, antenna and carry packs.

I have also been working closely with our Project Coordinator John Murphy ZL2XJ to progress our project planning in conjunction with NZ SAR. We are starting to make some good progress and hope to bring you an update in the next issue.

## ID Cards & Branding

Our long-awaited ID cards are now in the process of being printed and should be with members over coming weeks.

Andy Brill, Regional Manager – North  
 ZL1COP has finalised our branded gear with a supplier and the account is now in place. More on this soon.

Until next month, 73's for now.

Don, ZL2TYR

Chief Executive Officer, AREC



# Auckland AREC Communication Exercise

*Andy Brill ZL1COP*

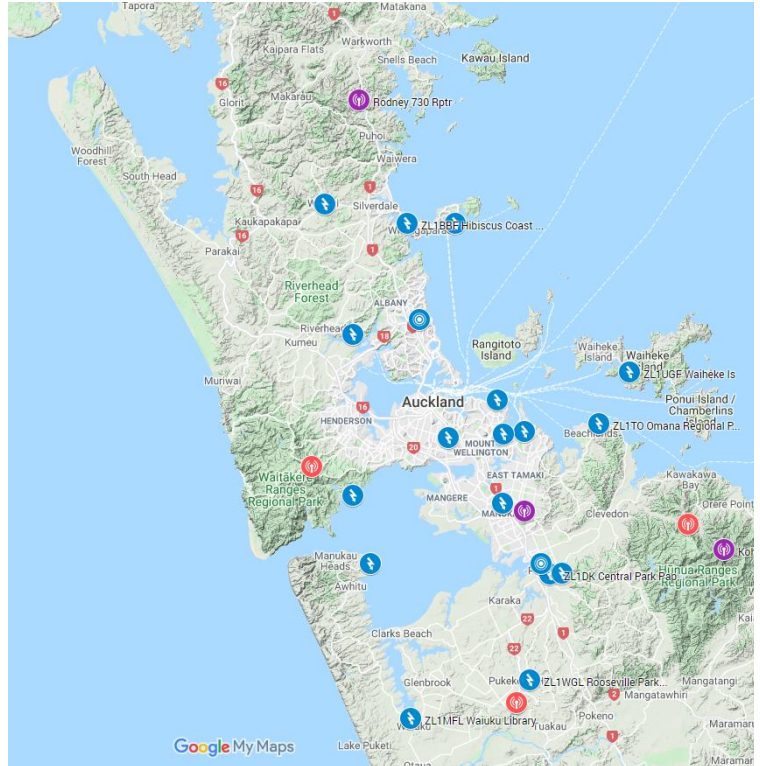
On Saturday morning 23 January 2021 North Shore AREC group organised a half-day field exercise for amateurs throughout the Auckland region. The objective was to set up field stations at various locations around the city, and relay pre-written messages between operators and back to a base station at the North Shore Branch clubrooms.

To increase the level of difficulty the field stations were encouraged to relay their messages via at least one other field station using a variety of VHF or UHF simplex channels, HF USB or CDEM ESB band repeaters. Use of STSP portable repeaters was also within the rules.

Around 25 people took part in the exercise, with a total of 13 stations established around the region.

Each station was provided with ten pre-written messages which consisted of obscure sentences containing plain text, acronyms, abbreviations and figures. These were obtained from the US Notices to Airmen website and were designed make it less likely that operators could infer the message from the context rather than actually recording what was transmitted.

Right: Map showing the location of field stations.



An example of a message: "BATOS THREE PAPA DEPARTURE - RNAV (BATOS3P) NOT AVAILABLE"

Papakura Branch 65 AREC set up an STSP repeater on Redoubt Rd Manukau and a relay base at Papakura Branch clubrooms. This base relayed messages from the STSP repeater to North Shore via VHF simplex.

The operation commenced at about 0900 hours and once everyone had reached their designated location and set up their stations the message traffic commenced at about 10:00 and continued until about 12:30.

A total of 59 messages percolated through the network to the base station. Accuracy of the incoming was checked against the originals, and was extremely good – better than 95% accurate.

Three members shared first prize for getting all ten of their messages through the system – ZL1AOX Ian, ZL1MR Dave and ZL1SKL Soren.

While the STSP repeater and base station relay made message handling quick and effective, unfortunately most operators took the line of least resistance and used this method rather than the more complex process of relays via other field stations on simplex.

Left: Alan ZL1TUQ and Andy ZL1COP check the logs at North Shore Base







Above: Tom ZL1TO operating from Omana Regional Park.

Of the 59 total messages relayed to base, 46 were via the Papakura relay, while only 12 were relayed without recourse to a repeater. Thanks to the five stations who did it the "old school" way.

We may have to repeat the exercise in the future without repeater support to see how good you really are!

Overall feedback from participants indicates it was an enjoyable morning and it is already clear that there will be lots of learnings from the operation. Thanks to all who took part.

We need to do more of this type of activity in order to rejuvenate AREC and raise our profile among the amateur fraternity and the public. Hands up anyone else who would like to help design and run an activity?

The following feedback from Peter ZL1PJH sums up what the day was about:

"For me, the best thing was that the exercise happened at all. AREC were the most visible we have been since I became a ham three years.

I was at Grahams Beach on the Awhitu Peninsula. A young man and his wife pulled up beside me in an enormous motorhome. As he pulled on the handbrake, he glanced across at the five-metre antenna that extended upwards from my tow bar. He opened his door and walked across the grass towards me.

"Is the cell phone system down?" he asked.

"No," I answered. "We are doing an exercise to exchange messages."

"How far can your radio reach?" he asked.

"This one can cover all of Auckland," I answered.

He thought about this for a few seconds. "I thought you could reach further than that," he remarked.

"Oh, we can," I replied. "But for today we are testing how well we can cover Auckland if the cell system did go down."

He nodded. He had rolled up at a beach, seen my antenna and guessed immediately there was something that involved an emergency in what I was doing. The more exercises we do like this one, where people can see and talk with us, the more the public will see ham radio as a valuable community asset. Just keep them coming!"

73

Peter Henderson, ZL1PJH



Above Left: Dennis ZL1TAY handling HF traffic at North Shore Base

Above Right: Vaughan ZL1VH at North Shore working ZK1ESX Papakura.



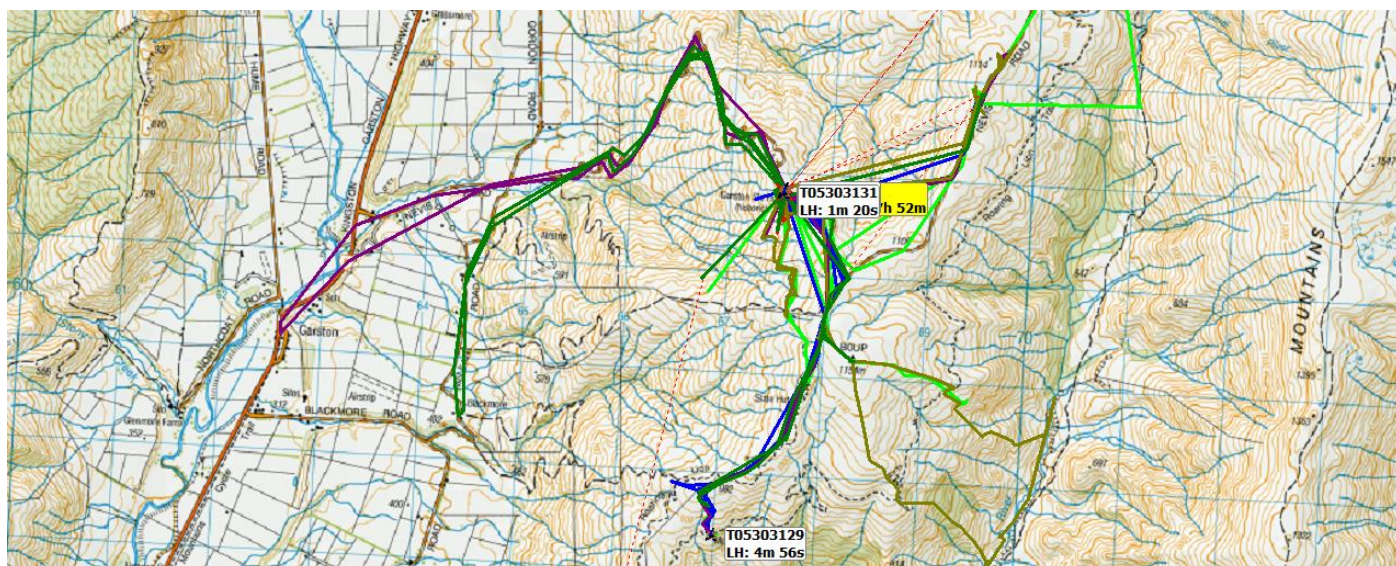


Above: Joe ZL1PMY operates from the worlds neatest field station, Waiheke Island.

## Welcome Rock – *The Revenant* Daniel Erickson ZL4DE

Southland AREC provided DMR radios and use of their VHF DMR repeater at Mid Dome for Welcome Rock (in Northern Southland) for The Revenant event.

Described as “NZ’s most gruelling ultra-adventure run”, The Revenant is a 190km race that boasts 16,000 metres of vertical ascent. It is an unmarked course; competitors must navigate between a number of checkpoints that have to be reached in sequence. And navigations can only be by map and compass. Of the 25-starters, three completed the event within the maximum 60-hours.



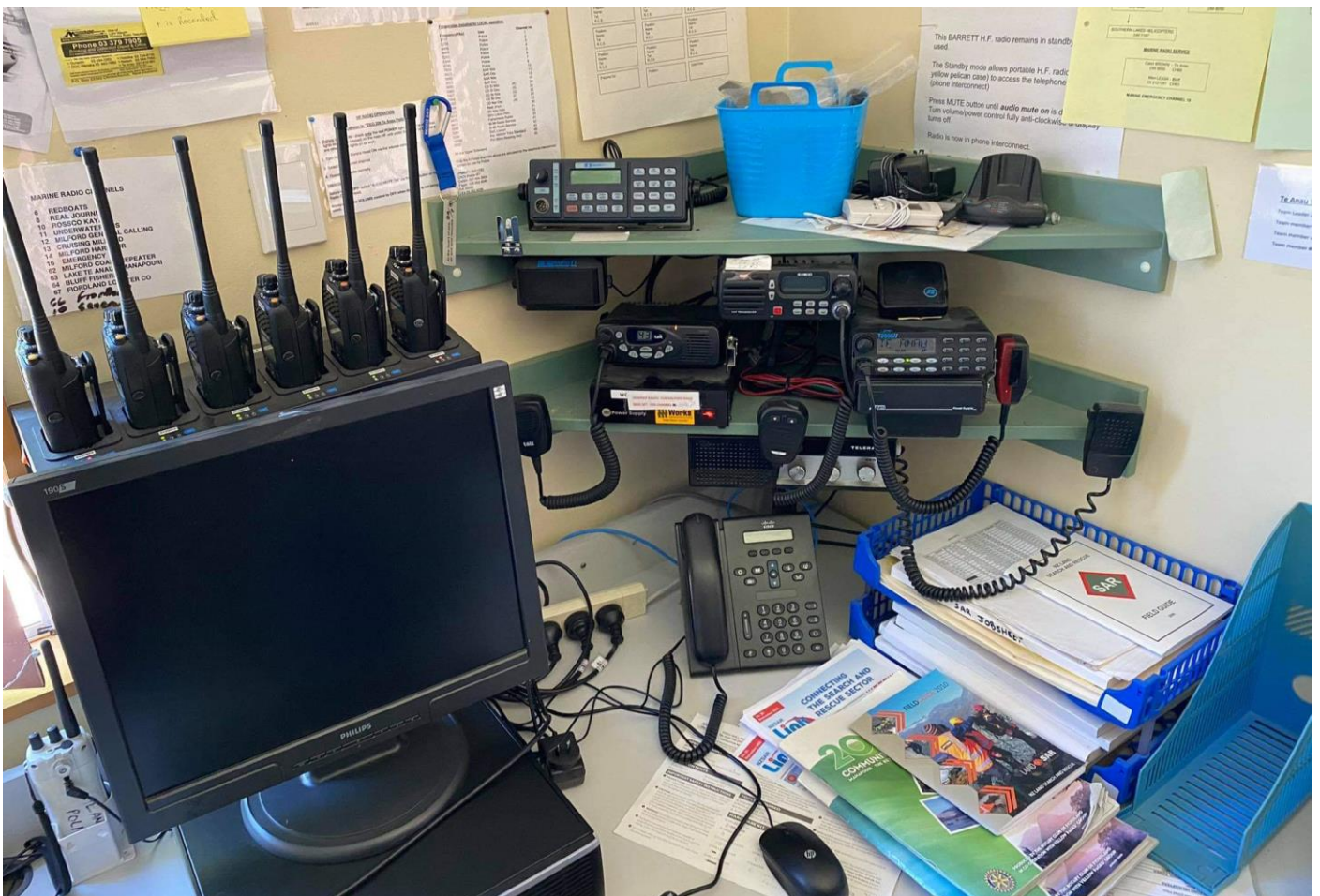


# Hollyford Track Search

*Daniel Erickson ZL4DE*

On Saturday the 9<sup>th</sup> of January, Brendan ZL4BDS, Nick ZL4NB, Steven Smith and Daniel ZL4DE assisted a Police search for a 59-year-old male on the Hollyford Track in Fiordland.

The man was found by LandSAR teams safe and well. Communications were over DOC13 via phone batch, and InReach devices were used for tracking due to the long distance from Hollyford back to the search base in Te Anau.



Above: Te Anau Search Base.



NZART has started supporting a Portable Operating Day on the first of January each year. The objective of this is to encourage operators to “go portable”. AREC CEO Don Robertson comments that “this is a great opportunity for AREC members to get out there, set up a portable station and see who they can make contacts with. The ability to do this is a basic skill that we should all have. And it is a great way to stay familiar with your kit.” In this article, Wynne Morgan explains how he spent New Year’s Day:

My partner Sarah and I were back down south again for our 2020-21 summer holiday. We started our journey off in the Nelson lakes area but the long-term weather for anywhere at altitude in the South Island was not promising, so chasing the sun, we moved down to the Tasman district and set up camp at beautiful Kina beach between Nelson and Motueka.

Wherever we might be around New Year’s day, I try to pre-plan a UTC rollover activation nearby, by activating each side of 00:00z 1January UTC (1pm NZDST) you gain double the activation points and the chance of many summit-to-summit points.

In New Zealand there is an active group of SOTA activators and chasers spread around the country plus a larger group across the ditch in Australia and throughout the rest of the world.

This day is an important day on the SOTA calendar. I had a couple of summits in mind on this trip and had been given key holder contact details for those summits before leaving home in the North Island. When we knew we would be in the Tasman district for New Year’s I contacted the appropriate person to gain vehicle access to Mt Campbell, situated on the edge of Kahurangi National Park in the hills to the back of Motueka.

At 1330m ASL Mt Campbell’s summit, when not shrouded in cloud, can be easily seen from Motueka township, with the largest privately owned Comms tower in NZ being easy to spot above the bush line atop its high point.





On picking up the key we were given comprehensive written instructions on how to get to the first of two locked gates but somehow we still managed to get slightly lost at the start, ending up on friendly private property nearby and having to descend again and retrace our steps back to the main road for another stab at it.

The road to the summit, once through the first gate, is in reasonable condition, but in many places it's a very steep gradient with large and potentially vehicle swallowing culverts to the sides. Water run-off is obviously quite a problem up there when it rains.

A 4x4 with low range and good ground clearance is a must for this one, or of course, it could be walked from the first gate, but for us a little 4x4 adventure in the South Island was an added bonus.

It was 22.00 UTC by the time we finished the long grind to the summit and my phone was already receiving a steady flow of spots from other activators, so with only a couple of hours to go to rollover there was no time to waste. There would be time later to take in the stunning views and checkout the impressive comms site.

The weather on the summit was generally warm and sunny with some occasional cloud and very little wind. I used my usual SOTA setup for this activation, my Yaesu FT-817, MX-P 50a portable amp and Sotabeams link dipole antenna.



Up and running by 22:20 it was quickly apparent that 40 meters was the band for ZL's, with most signals being relatively strong, summit to summits were had with all the regular ZL activators in Christchurch, Auckland and all places in between.

VK's proved harder to catch, only two summit-to-summits with VK were had before rollover. The pace of the spots coming in via Sotawatch was quite frantic at times and it was difficult to know who to chase next, spots were coming in from ZL, VK, Japan and the US, but from my location I could only work the ZL and some VK stations.

After a short break for lunch and a look around I was back into it and working at getting as many summit-to-summits in the new day as possible, my final tally for the activation was 22 summit-to-summits, six of those were VK's and they were all on CW, no VK's were heard on SSB, such were the band conditions for me on the day. There were also a dozen or so QSO's with mostly ZL chasers.

Around 14.30 local time it was time for us to start thinking about packing up and heading back down, it would take.

us a fair while to drop back down to sea level and the key had to be dropped back to Stoke near Nelson.

By the time that was delivered it was time to get back to the camp and relax with a cold one and watch the sun go down on another lovely day.





Hello everyone, and welcome to my first report of 2021.

## **Issues, Incidents, Improvement**

No issues, incidents, near-misses or HSW improvement ideas have been reported.

## **Injuries – head-butting**

One anecdotal injury of a non AREC person was they head-butted a protruding beam in a shed when walking to a comms vehicle. This type of event is surprisingly common e.g., a tree branch across a track or a built element such as a dangling antenna cable at head height.

I have noticed myself after many head bangs that a peaked cap or simply the top frame of my glasses can obscure these hazards. The best answer is to ensure all potential obstructions are over 2.5m above ground level – there are people I know who are over 2m tall so we need to protect their heads as well. The next step if you cannot move the item is to flag it with a dangling tape or anything else that will hang down into a walker's field of view. They may not see the item at head height but they should see the dangling flag and then look up and spot the hazard.

## **Repeater deployment**

Late 2020 LandSAR had an incident with a person carrying a LSAR repeater in a Pelican case down from a mountain top in North Canterbury. The person was holding the case in front of them and stepped down. The case banged into their knee causing some minor injury. This shows that these larger Pelican cased items really need to be in or on a back pack to prevent such injury types. Any object held in front of you obscures your peripheral view of your feet when walking, especially over rough ground. Those with variable or tri-focal glasses can easily suffer this problem as the reading section of the glasses suited for close vision is at the bottom of the lens, this can make the close in view of the feet go right out of focus leading to stumbles, trips and falls.

So, in general terms larger Pelican cased items are best suited to vehicle deployment involving only short carries across relatively obstruction free ground. Longer carries should be in a back pack. Hopefully future repeater builds will be in smaller Pelican cases that easily be backpack deployed.

On that basis most AREC members should not be deploying items such as repeaters unless they can drive to within a short walk to the final location. If the AREC member is also field qualified to LandSAR standards and have the correct pack and other outdoor equipment then maybe they can deploy a repeater. However, is this best use of a skilled resource? Generally speaking, AREC should train the young and physically fit LandSAR team members to carry, set up and test repeaters and change batteries. They are better suited to this sort of work.

Finally, an AREC member might think it's a great option to fly in via helicopter and install a repeater, after all who wants to miss a helicopter flight? Anyone contemplating this option must be capable and equipped to walk out from the repeater location as if they had to carry it in. Flying machines can crash, break down or otherwise may get re-deployed whilst you are setting up the repeater. If some adverse event such as cloud rolling in occurs, they may not be able to return to collect you. You will then have to survive by yourself with what you have. That could mean a 10+km walk out through rough terrain possibly off track for portions of the journey. This is a completely avoidable situation so be cautious when contemplating remote repeater deployment and think well outside the square when suggesting this as an option. Repeaters have had to be abandoned in the past. Some have been recovered others are still there.



## Reporting issues

Finally, please report any injuries, near misses, improvement ideas and suggestions, or common hazards to [HSW@arec.nz](mailto:HSW@arec.nz). AREC will be creating a common hazard and risk register this year. We need your input as you know best what hazards are out there. Also dredge through your memory banks and tell me the key things that you have noticed to be hazardous. We can all learn from the errors and knowledge of the past.

Have a safe 2021.

Dave ZL1MR ZK6EXH

## Call for Applicant to assist AREC at Police National SAR Course

We are looking for an experienced AREC member to attend with Christchurch and Marlborough AREC at the Police National SAR Course at Dip Flat in May.

We provide a small team to assist with communications for the practical exercise portions of the course. This helps Police, and other attendees, attending to get to know a bit about AREC capabilities and see typical SAR Comms in action. As attendees, and trainers, come from Police SAR from around the country it is advantageous to have some AREC presence from other centres. Attending will also give you some experience with providing SAR Comms in a challenging environment and see how other Groups work.

While there are no costs involved, catering and accommodation is covered during the course and AREC will cover travel costs. You will need to be available for the week from 16-23 April (if possible, a day or two earlier may be advantageous). Suitable travel will be arranged and paid for depending on location of the applicant.

Expectations of the applicant are that they will participate and learn while working with Christchurch and Marlborough AREC Groups and take back some new ideas and skills to their own Group. AREC National will also expect a short report suitable for publishing in the AREC-Info Newsletter (or Break-in) from the successful applicant after the course on how they would use that experience gained for AREC in their group. Applications with a brief experience background need to be sent to [manager@chc.arec.net.nz](mailto:manager@chc.arec.net.nz).

Steve Davis  
Christchurch AREC Group

## Health and Safety is the responsibility of us all

### Remember to:

**STOP** – In your mind you need to be constantly pausing and evaluating no matter the task or the location.

**THINK** – You need to think about what you see. Identify Hazards and associated Risk (the chance of it going wrong)

**PLAN** – Talk to others, compare notes, make a plan

**COMMUNICATE** – Brief the plan and plan to brief others as they arrive.

**ACT** – Execute the plan, monitor and review progress.