



*Monthly newsletter of
Amateur Radio
Emergency
Communications*

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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:

Hamish ZL4ERU was based at the Hanging Valley Shelter as part of AREC running communications for the Kepler Challenge (see more on Page 6).



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Welcome to 2022!

It's hard to believe that Christmas has come and gone. 2022 has started off with a hiss and a roar with plenty going on.

Volunteer Survey

One of the things I am very conscious of is that nearly all our members are volunteers. And, for any organisation that relies on volunteers, it is important that we support you so you can support us. We will soon be inviting all members to take part in an AREC Volunteer Engagement Survey. I encourage you all to take part and please give us constructive feedback so we can adapt where we need to.

You are also welcomed to reach out to me, or any of our management team, to discuss issues or opportunities at any time. A list of names, e-mail addresses and telephone numbers are on the previous page.



Tait Police SAR Repeaters

NZ Police, LandSAR and AREC have been collaborating on a project to refresh the Police portable repeaters that are used to support SAR operations.

Following a procurement process that included AREC completing technical evaluations of submitted units, NZ Police chose Tait as the supplier of the new units.

The first of the production units are expected to be ready for testing this month.

Tait are also doing some work on their TM/TP9300 radio firmware to support the LIP protocol for position reporting.

This will allow Tait radios and SARTrack to be used through Motorola and other DMR repeaters which will help with interoperability with other organisations.

Xero, Friendly Manager and AREC Sharepoint

As part of our move into new systems, we have been busy migrating our financial management into the Xero system. This will provide better visibility and management of our money; particularly given the NZ SAR funding we have been fortunate to receive and the need to provide detailed reporting on how we are progressing with our projects.

We are also in implementation of the AREC Intranet central document management repository on the Sharepoint platform. This will provide access to all documentation, policies, procedures and other important information.

The Friendly Manager membership system is the next priority. This system promises to be a great platform for us to keep our membership details up to date; members will be able to log-in directly to update their details. We will also be able to send messages and this newsletter out from the platform, and hopefully bypass some of the spam filtering issues some members have experienced with this newsletter.

Until next month, stay safe.

Don, ZL2TYR

Chief Executive Officer, AREC



90 Years of AREC

February 2022 marks 90 years since AREC was established. AREC CEO Don Robertson shares his thoughts on our history, and where he sees our future.



When I first became involved in AREC, in about 1978-79 through Branch 42 Titahi Bay Amateur Radio Club, I never thought I would end up running the organisation. Looking back, it was a different time for our AREC – we were heavily involved with Porirua Civil Defence, and there seemed to be a never-ending number of sporting and community events that needed communications.

In some ways however, the late 1970's weren't a lot different than today. HF, VHF and UHF voice were how we handled traffic, and even though digital voice modes have started to become more mainstream, we are still very reliant on voice traffic to get the message through.

In my role, I feel privileged to carry the torch that was originally lit by ZL2GE, G E Taylor of Napier, who very quickly set up a communications link with ZL2GK, S Perkin of Lyall Bay in the immediate aftermath of the 1932 Hawke's Bay earthquake. Taylor was joined by ZL2BE, James Mills of Hastings and ZL2FF, C T C Hands of Gisborne – who became one of the only source of communication between Hawke's Bay and the outside world until normal links could be restored.

These operators, and those who stood-up stations in Wellington at the Post Office and Red Cross sites to pass messages back-and-forth, filled a void that, at the time, could be filled no other way.

As most will know, that was where this all started. Not long after, Radio Emergency Corps. (as it was then known) was formed after work done by Norm Laugesen ZL3AS in Christchurch. A couple of name changes later, we are now Amateur Radio Emergency Communications.

Craig Crawford ZL3TLB, NZART Historian has put together a PowerPoint presentation which follows our history over the last 90-years. A link to this interesting work is here <https://arec.nz/90-years-of-service/>, look-out for his article on the subject in the January / February issue of *Break-In*.

Our history, the where and why we have come from, is important to me. It serves as a compass to make sure that we keep moving ahead and keeping the vision alive. Which brings me to the future.

Things have certainly changed in the last 90-years. While emergency first-responders have their own sophisticated systems that will allow them to carry on with their operational communications, experience has shown us that cellular networks and the internet can be vulnerable for those first few days following a significant event. Overloading and batteries going flat in a prolonged power outage are common issues – so how can we organise to be able to provide a social service in such situations?

I remember hearing questions asked over why we didn't have a role to play following the 2016 Kaikoura earthquake. This saw many tourists stranded with no way of contacting their loved ones to let them know

they were okay. Readers of Craig's history will note how AREC provided services to CDEM following the 2010 and 2011 Christchurch earthquakes.

Looking forward there is no question that we have a real role to play in this space. We retain a close relationship with LandSAR – helping them with their communications so they can get on with “providing search and rescue support for the lost, missing and injured” is a real example of how we can add value.

However, organisations like LandSAR need us to keep innovating. While voice worked well for the Napier earthquake, we need to work out how to move data quickly and efficiently. Things are moving fast, and the convergency of technologies means mesh networks, digital HF and other advancements need to be harnessed and applied. As they say, “a picture is worth a thousand words.”

I often get asked “what excites you about AREC Don?” The answer is simple; the people. We are a 300-strong group of like-minded, passionate people from all walks of life who want to share our skills to help others.

The next 90-years will be a great adventure, that's for sure!



AREC

Amateur Radio

**Emergency
Communications**

Ngā Irirangi Ohotata Tūao

90 Years of Service

Serving the Community since 1932

The Kepler Challenge is the premier mountain running event in New Zealand and follows the 60km Kepler Track through the Fiordland National Park. It has been held annually since 1988, and draws competitors from throughout New Zealand.

The 2021 event was due to take place in December, and was postponed until the 15th of January due to COVID-19 restrictions. 8 AREC, 5 LandSAR and 2 NZ Army volunteers assisted with communications for the event. To be ready for an 0530 start, radio operators were flown into their checkpoints on Friday night – the track huts or alpine shelters which were their designated locations.

Communications are primarily via a three-site commercial Motorola DMR system installed by Dunedin dealer CRS Communications.

SARTrack tracking of the sweepers and tail end Charlie was achieved by using LandSAR radios through DOC repeaters, hopefully this can be achieved through the CRS system this year.

The event also had timing transponders for the runners, with a number of Wi-Fi repeaters around the track for this purpose.

There was only one serious injury, that being a broken arm with the runner being extracted by helicopter.

Communications went well, and the efforts of the volunteers was highly regarded. Thanks team!

Right: Equipment and volunteer's bags were transported to the huts by helicopter.



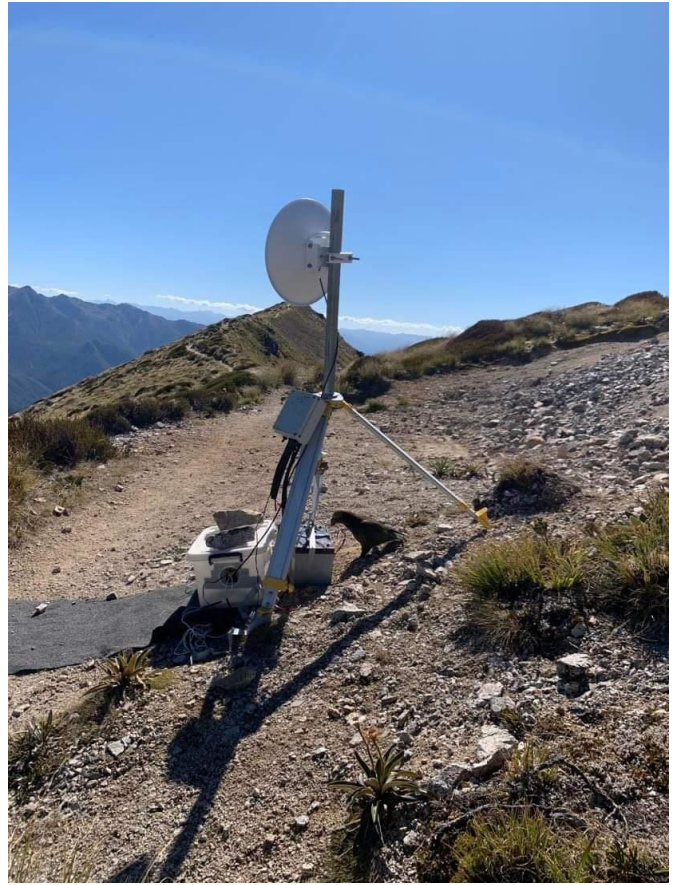
Course Hut GEAR Gear Check WC Toilet Drink Station



Above: Route map courtesy <https://keplerchallenge.co.nz>



Above: Barry Munro ZL4MB retrieving the Wi-Fi repeater for the runner's transponders at the Iris Burns Hut.



Above: The Wi-Fi repeater for the timing system at Hanging Valley



Above: Hanging Valley Hut where Hamish ZL4ERU (cover photo) was stationed.

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 (possibly subject to change depending on the ongoing Covid situation).

We provide a small team to assist with communications for the practical exercise portions of the course. This helps Police, and other attendees 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 at a minimum from Saturday 7th May until Friday 13th May. Suitable travel will be arranged and paid for depending on the 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 bio of background and experience need to be sent to glchristchurch@arec.nz by 31st March

Steve Davis
for Christchurch AREC Group

Ideas for a Comms Room

One of the Marlborough agencies is re-thinking their IMT and have asked local AREC for ideas on how to set-out the communications room.

Paul Rennie is keen to hear any thoughts from people who may have thoughts on what works and what doesn't for consideration as part of the design.

Paul can be reached at DMTasman@arec.nz, or on 027 458 9740.

Situations Vacant

AREC Innovation in Technology Leader

- Be the AREC representative on the NZSAR Innovation in Technology Forum and coordinate AREC activities under the NZSAR Innovation in Technology Strategy.
- Provide or make available technical advice, expertise and recommendations relating to radio communications to AREC's executive leadership team (ELT) and technical project groups.
- Plan, certify and oversee the development and maintenance of AREC's communications network and infrastructure within an annually allocated budget.
- Manage repeater site planning and acquisition, engineering, licensing
- Define, develop and review applications for network equipment allocations between AREC districts.
- Provide thought leadership for AREC's strategic plans for technical and network development.
- Define the AREC Innovation & Technology annual business plan and budgets for approval by the CEO
- Recommend the procurement and allocation of hand-held equipment that is fit for purpose, homogeneous and interoperable with AREC's partners

- Plan and coordinate technical activities necessary to integrate AREC's equipment and frequency assets
 - Provide or make available technical assistance for AREC's Groups on request
 - Receive and process requests for equipment purchases to be funded partially or wholly by AREC and determine feasibility and if appropriate provide recommendations to AREC Executive
 - Attend the AREC National Management meetings and other meetings as required.
 - Liaise with the AREC Licensing & Technical Advisor as necessary.
 - Provide a monthly report to the CEO on the Innovation & Technology and TWG activities.
 - Convene and chair an AREC Technical Working Group (TWG) that will provide:
 - Research and advise on new and innovative technologies that may be of future benefit to AREC or any of the AREC partners in SAR and civil emergencies.
 - Advice, guidance, standards
 - Work on/in AREC Technical Projects
- Liaise with AREC Technical Project owners/managers and with the Licensing and technical Advisor

If you are interested in applying for the role of Innovation in Technology Leader please send you application accompanied by your CV and other supporting documentation to admin@arec.nz.

If you have any questions on the role please contact the AREC CEO Don Robertson ceo@arec.nz.

Health, Safety & Welfare

David Wilkins ZL1MR

I am sure most of us a getting a little fatigued with this ongoing focus on COVID-19 and its various effects. However, it is the single biggest emergent public threat for a while.

Strangely the biggest threat is probably the old stalwart of alcohol. Whilst the toll of injury, long term harm, and death from alcohol is not really widely understood, the embedded nature of the liquor industry and the desire of people to drink the stuff is likely too ingrained to alter. Anyway what is wrong with a beer on a hot afternoon after mowing the lawns? No problem at all, it the slab of cans that follows that could be an issue!

Covid-19

As I write this article we have recently moved from CV-19 Orange across most of Aotearoa to Red. This is because the SARS-CoV-2 Omicron variant is so much more transmissible, and a rapid spread will likely result in a burden on the health system that will be unsustainable.

As well as being AREC HSW Advisor, I am also a St John Emergency Medical Technician (EMT) and I have been out on multiple shifts this past two-month here in Auckland to try and relieve the burden on what is an already strained ambulance service. The hospitals are in a similar state with widespread staff shortages and staff getting worn out. It is now not uncommon to have most beds in the ED full on a Friday night, and that is without any significant CV-19 cases to deal with.

In other words, if we don't spread out the looming impact of CV-19 Omicron over a period of many weeks, known as 'flattening the curve', the ambulance and hospital systems will be unable to cope. So, try to avoid any activities that may require you to visit a hospital ED. Of course, if you have a medical or other condition just call 111 as normal but a response may take some time to arrive if multiple ambulance staff are out of action having to isolate.

The change to Red should not affect our ability to respond or support our SAR colleagues in Police and LandSAR. I have provided some updated advice on the homepage of the website – arec.nz along with the Covid-19 Safety Plan and the Fatigue Safety Plan/Advice/Guidelines.

We must also remember the standard response we should have whenever we go out. Wear a well-fitting mask (preferably N95 but anything is better than nothing), stay physically distanced from others (especially avoid anyone who is coughing or sneezing), wash your hands on a regular basis, use alcohol hand cleaner if you cannot wash your hands or to wipe down the handles of shopping trolleys and remember to use your tracking app and scan-in wherever you go.

Fatigue

In December I summarised the AREC Safety Plan to address the hazard of fatigue. A copy can also be found here – arec.nz.

The risk from fatigue is similar to that from drink-driving. From the inside looking out it can sometimes be hard to spot how fatigue is affecting your responses. Possibly you can spot the signs of others suffering from fatigue but not notice the same symptoms in yourself.

Please have a read of the document and see if you can recognise how you have responded to fatigue in the past. We can all learn from our own near-misses.

I used to help out and drive the company 40ft refrigerated trailer-truck back in the day. One memorable occasion was when the regular truck driver was taken away to Thames Hospital with severe alcohol poisoning. I always wondered why he needed 5x bottles of meths to clean the inside of the truck windows!

Anyway after collecting the truck from Ngatea I had to do a couple of Gisborne to Auckland runs with live crayfish and backhaul fish-frames as crayfish bait. One day I left Gisborne at 2200 and finally got back at 2100 the following night with only a 30 minute power nap on the way. The muscles holding my eyeballs were so tired the eyes were wobbling around in my head and all I could see was a tunnel of light as I drove through the hills west of Gisborne. Talk about fatigued!

Thankfully we now have logbooks that limit the stupidity of young truck drivers and force employers to hire a motel room and give the driver a decent sleep. I also now have a Nana nap for 3 hours before I do any ambulance nightshifts so that my total sleep in any 24 hour period is pretty consistent at around 7-hours. That is my strategy, what is yours when you go out to support a search IMT?

So don't try and emulate my stupidity! Have a read of the fatigue advice and the attached supplementary information on the website. Reflect on how you respond and work out a strategy to avoid the adverse effects.

As always – keep up the good work, keep safe, and don't forget to report any issues, injuries, or near misses that crop up.

David Wilkins ZL1MR
AREC Health & Safety Advisor



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.