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WIRELESS INSTITUTE OF AUSTRALIA

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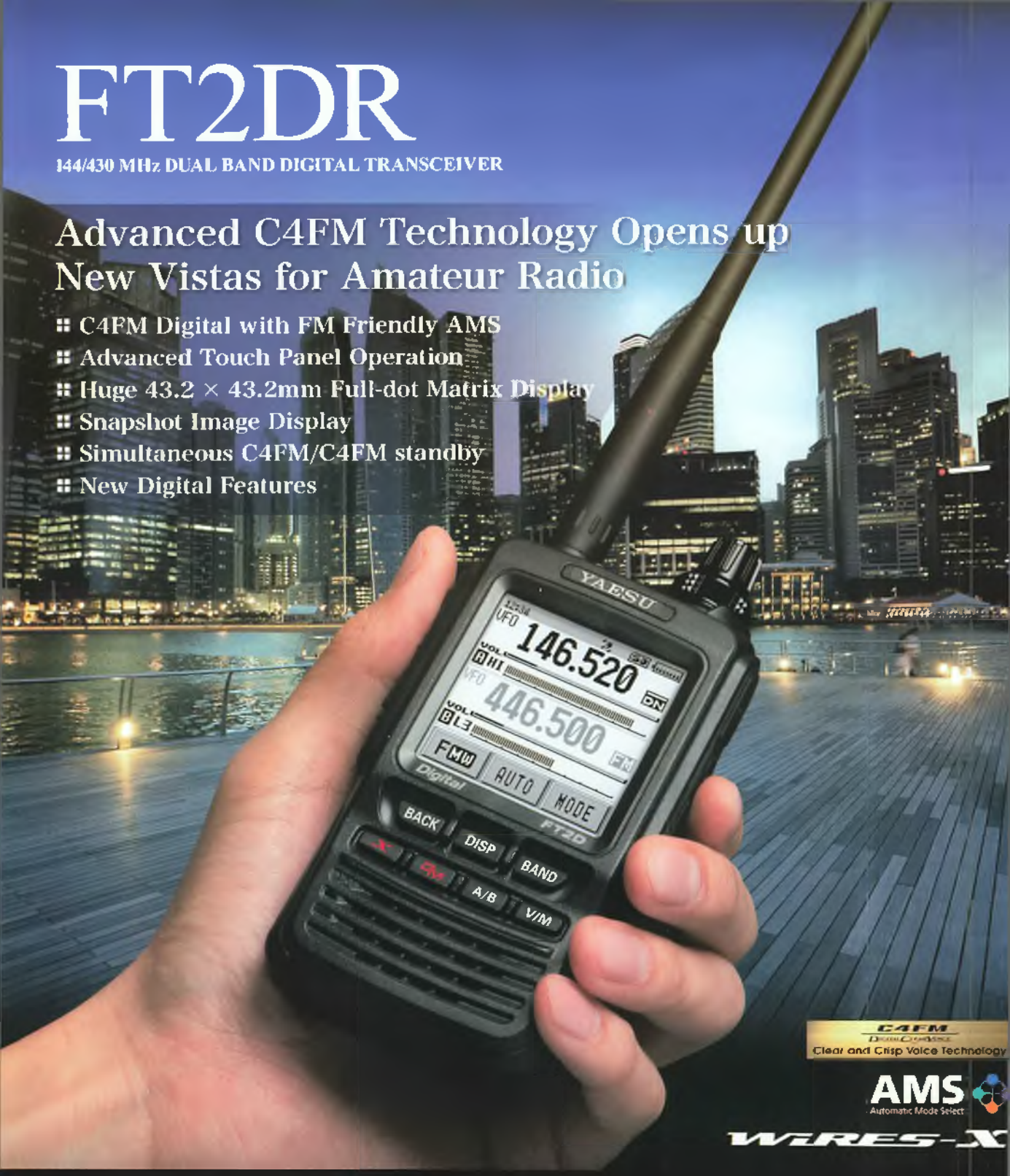

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Technical

Columns

General

This month's cover

This month our cover shows Roger VK2ZRH/1 operating VK100ANZAC on 10 GHz from Mt Ainslie in the ACT as part of the launch of the ANZAC Centenary celebrations on ANZAC Day 2015. Photo by Fred Swainston VK3DAC.

Contributions to Amateur Radio

Amateur Radio is a forum for WIA members' amateur radio experiments, experiences, opinions and news. Manuscripts with drawings and/or photos are welcome and will be considered for publication. Articles attached to email are especially welcome. The WIA cannot be responsible for loss or damage to any material. Information on house style is available from the Editor.

Back Issues
Back issues are available directly from the WIA National Office (until stocks are exhausted), at $8.00 each (including postage within Australia) to members.

Photostat copies
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Disclaimer
The opinions expressed in this publication do not necessarily reflect the official view of the WIA and the WIA cannot be held responsible for incorrect information published.

Amateur Radio Service

A radiocommunication service for the purpose of self-training, intercommunication and technical investigation carried out by amateurs; that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.

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Member of the International Amateur Radio Union

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Editorial

Peter Freeman VK3PF

The New Year begins...

As we have seen in the News releases from the WIA, there have been some changes in our organisation. Notably, two Directors have resigned. The Board has decided to see out the remainder of their year with only six directors, having appointed Paul VK5PAS to fill the vacancy arising from the resignation of Chris Platt VK5CP.

Any member who is interested in serving on the Board has only a very short time to nominate – hard copy nominations must be received by 31 January 2016 at the WIA office.

If we have more nominations than positions available, I would expect that voting papers will be distributed with a coming issue of *Amateur Radio*. I urge members to carefully consider the candidates and to participate in the election by completing and returning the voting papers.

We will expect to see an announcement sometime in the near future about a replacement Executive Officer for the WIA. Fred VK3DAC is currently filling that role, but I know that he is keen to return to a more normal life.

Social media – friend or foe?

I have noticed that there is a lot of discussion on social media regarding the WIA and its performance (or perceived lack thereof!). Some attempts to deliver some simple facts are being interpreted as the author being abusive. It seems that sometimes you can never win or even attempt to enlighten some individuals – they appear to have either closed minds or extremely narrow perspectives. They certainly do not allow the facts to get in the way of their views.

Oops – perhaps I should not have made such a statement, despite giving a general perspective on content of some posts, without identifying any individuals!

One thing is clear: several (many?) people seem to consider having the AGM of the WIA on Norfolk Island is somehow going to cost the Institute extra money. In reality, the travel costs for anyone to attend the meeting are unlikely to be significantly different from those of attending the meetings held in Perth or Darwin. I see that argument as a Furphy – a falsehood without foundation. The meeting venue has created a storm of comment. But how many of the individuals who are protesting have attended any of the meetings in recent years, I wonder?

One thing that is clear is that there are legitimate means by which members can raise their issues with **our** organisation which should be more productive than posting on social media.

Everyone needs to remember that the WIA has a very small paid staff: the Executive Officer (once appointed) and a single staff member who deals with the Assessment Services and requests for callsigns. The latter role is governed by the agreement between the WIA and the ACMA and the associated fees cover the costs of the role.

The WIA cannot be compared to the ARRL or the RSGB, which have much larger membership bases and can therefore afford to have large numbers of staff to undertake many roles. Much of the day to day work of the WIA is undertaken by volunteers, many of whom are also

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WIA comment

Phil Wait VK2ASD

2016 – A year of Challenges

A New Year is always a good time to take stock of where we are, and where we want to go.

Last year, three key items took quite a lot of the WIA's time: The ANZAC Centenary celebrations; submissions and representations to the Department of Communications' Spectrum Review and the restructure of the WIA national office. The last two are still works in progress.

The Spectrum Review has entered its implementation phase and the WIA is expecting quite wide-ranging changes to the administration and licensing of the Amateur Service. The WIA made extensive recommendations for changes to the Amateur Service and the Amateur Licence Conditions Determination (the LCD), and those discussions with the ACMA will continue during 2016 as the Review outcomes are progressively implemented.

The other major item in 2015 was the restructure of the WIA national office in Bayswater, VIC. The Office Manager position has been replaced with an Executive Administrator position, and by the time this magazine appears, hopefully, that position will be filled. WIA Vice President Fred Swainston has been contracted in that position in the interim period, and member service and the WIA business activities have both improved considerably.

The WIA national office is a busy place, and the two full-time positions are fully occupied answering the various phone calls and emails, fulfilling the ACMA business commitments, bookshop and merchandise sales, and all the other day-to-day membership, accounting and administrative functions. At the current membership rates the WIA can't afford additional staff, so we need to take a closer look at how the WIA functions and try to reduce the workload in the national office as much as possible. That's going to be one of the major challenges of 2016, and the solution probably involves using our many volunteers and committee members more effectively.

But, there is an even bigger issue.

When the single national WIA was formed in 2004, it was structured with principal control vested in a small Board of elected Directors, with a number of specialist "advisory" groups making recommendations to the Board. The new structure made the WIA a more flexible and responsive organisation, better able to meet ongoing and emerging challenges, and as much as possible avoid the previous conflicts and delays in making policy changes that sometimes occurred under the old Divisional system. The new structure has served us well, especially during the recent Spectrum Review process where policy discussion papers needed to be responded to very quickly indeed, often within only a few weeks. With the new structure, the WIA has also enjoyed a long period of stability – long may it continue!

However, the down-side is that the WIA does not really have an effective two-way member consultation structure in place, where matters of concern to members can be brought up to the Board and be dealt with quickly and easily and on an equal basis. I believe this lack of a consultative structure is a shortcoming of the present WIA and the organisation risks being ensnared by the *'squeaky-door syndrome'* (or is it now the *'Facebook syndrome'*?), where the loudest voices get the greatest attention. The WIA Board would very much like to find a way to improve member and affiliated club consultation, and finding a way to achieve that without reverting to an unwieldy structure is going to be another challenge of 2016.

In December last year, in the normal course of events under our Constitution, the WIA called for nominations for Directors. In a President's Comment, way back in 2007, President Michael Owen VK3KI (SK) discussed what it means to be a WIA Director. Michael thought it worth raising the whole question because *"anyone considering nominating will think about what he or she can contribute to the WIA and then, when members are asked to vote, they will consider what each candidate can contribute, and hopefully look to a Board of Directors with synergistic skills and experience"*.

Michael's comments are as relevant today as they were then. In using the term *'synergistic'*, Michael expressed the key to an effective Board because, when synergistic components work together, more is accomplished than could be done alone.

These days, the WIA Board meets monthly by Go-to-Meeting teleconference and communicates

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Editorial

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still in full-time employment in a normal (non-WIA) job. Whilst most individuals acting as volunteers attempt to give a response quickly, sometimes that is not possible. So if you place an enquiry with the WIA, please be patient and give a few days for a response to be sent back to you. If you have received no response in a week, it may be worth asking the question again, as something may have gone awry.

Accessing the Digital Edition

I have received a couple of emails regarding accessing the Digital Edition of this magazine. One reason for the questions was that a hiccup in the automated systems failed to send out an email notice when the Digital Edition became available. I am aware that the issue is being examined but am unsure when the problem will be resolved.

But it is easy to find the Digital Edition on the WIA website. Simply navigate from the home page to the *AR* page for the month of interest:

Look for **For Members** on the main menu, then move down the pop-up menu and click on **AR magazine** (under the "Member Benefits" heading)

From the menu on the left of screen, select the Year of interest and then the month.

When the page for that month opens, the link to the Digital Edition should be near the top of the main panel. If you have not yet done so, you will be asked to log in via Memnet. Remember that the Digital Edition is usually available from the anticipated date of delivery of the paper magazine to addresses in Melbourne.

Until next month,

Cheers,

Peter VK3PF

WIA news

Changes for the WIA Board

Over the Christmas-New year Period, the WIA Board has undergone some changes, with one director resigning, and a new Director and a new Treasurer being welcomed.

Rowan Dollar VK8RD resigned on 27 December 2015.

At a Board meeting on 5 January 2016, the Board accepted Rowan's resignation and appointed Paul Simmonds VK5PAS as a Director, replacing Chris Platt VK5CP, who resigned on 1 December 2015 as he became a Commissioner on the Fair Work Commission.

Paul VK5PAS.

Paul VK5PAS is well-known for his work in promoting and supporting the popular portable amateur activities such as the VK5 Parks Award, World Wide Flora and Fauna (promoting conservation via amateur radio) and Summits on the Air (SOTA). Paul is a Detective in the South Australian Police Force. He will continue as a Director through to the end of the AGM in May, in accordance with the provisions of the WIA Constitution.

A new Treasurer was appointed at the Board's 5 January meeting. He is Chris Chapman VK3QB, who is well known in the DX world as Team Leader of recent DXpeditions VK9NT to Norfolk Island, and YJ0VK to Vanuatu, organised by the Oceania DX Group. Chris has also served in various roles with the Gippsland Gate Radio and Electronics Club, including two years as President. Chris and his wife own and run a business in Foster.

The Board welcomes Paul and Chris, and looks forward to their contributions to the important work of the Board and the Institute. They will participate in the Board's scheduled January teleconference meeting on 19 January.

The Board has resolved to continue with six directors until the end of the AGM in May.

In other news, the Board has arranged for the Institute's 2015 financial year audit to occur over January. Results will be published on the WIA website when they become available, and in the Annual Report inserted in *Amateur Radio* magazine in the normal course of events.

WIA supports move on NBN interference complaints

A technical solution to fix spurious emissions that sometimes come from the National Broadband Network or NBN fixed wireless network has been found. Steen Jensen VK7AP has raised the issue of severe interference to high frequencies, medium wave broadcasts and fire alerts in rural areas of Tasmania.

Chris Holliday VK7JU in Deep Bay Tasmania also reports the same problems, and it may occur elsewhere with a particular brand of fixed

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most frequently by email. That means that, as Michael said, *"you do have to be responsive and able to express yourself adequately in writing to try and ensure that all points are properly considered. And, you also have to read a lot."*

Continuing, Michael emphasised that *"much of it that has to be read is dry, regulatory stuff. Certainly not scintillating! That is because the directors are asked to provide input on many policy issues, whether it is a draft Determination, a Request for Expression of Interest, responding to a discussion paper, or just a report on an area where the WIA is represented. Much of the important work of the Board is involved in things that are not the fun of Amateur Radio, rather, what many find much less interesting."*

"In addition, while each Director may take a special responsibility for particular matters, such as contests or QSLs, the WIA relies on people who are appointed as coordinators or managers to look after those areas."

"On the other hand, a Director who takes responsibility for a matter has to ensure that the matter is brought to finality. You not only need the time to deal with the daily emails, but also to complete particular tasks you undertake."

"Actually, what the Board needs is a mixture of skills. In (Michael's) view, underlying the Board's approach to virtually every question, the economics of publishing a book or magazine, the management of the ACMA Amateur qualification examination system, indeed the whole question of ACMA outsourcing, taking responsibility for the financial outcomes of the company, the subscriptions we charge, the insurance cover we seek, all involve a mixture of managerial, accounting, financial, commercial and other skills. The WIA would not be served by a Board made up solely of accountants any more than it would by a Board of only communication engineers."

"Yes, of course we want true Amateurs. But a mix of technical, managerial, commercial and professional experience and skills at Board level means that the WIA is better equipped to meet the challenges of the next period".

Michael goes on to ask: *"Does it matter where people come from?"* and answers: *"One of the criticism of the structure of the WIA before it became a single national body was that policy was determined by people representing a particular state or territory, and so it was said a position could be based on what was seen as being in the best interests of a group, rather than in the best interests of Amateur Radio as a whole. Today, no Director represents a particular group or area. Each Director must act in the best interests of all members".*

The Board cannot act to please all members at all times and, more recently, the phenomenon of the Keyboard Warrior on Facebook can make the job pretty challenging when a few people disagree. Michael suggested that a thick skin is also needed – I would add to that a very well developed sense of humour.

Michael sums it up this way: *"In short, being a Director of the WIA is nothing like being a member of a tennis club committee, where there is a monthly meeting and all correspondence is read out, every payment is discussed, every issue, like whether the club can afford better biscuits, is discussed. Being a WIA Director means a lot of time, a lot of effort, a lot of reading and a lot of writing"* ... and a director must be prepared to be very responsive on a day-to-day basis, and aspire to high professional standards. It's also important to realise that, although the Board tries to achieve consensus in decisions, not every Board member is going to agree on every issue and, at the end of the day, all decisions are a majority decision. If a decision on a heart-felt issue doesn't go your way it's important to be able to move on, and maybe try again another day.

Michael's closing comments still hold true in 2016, *"the WIA faces new and real challenges; if you have the skills and experience and the time and the interest, then it can be totally satisfying, because you are working to secure the future of Amateur Radio".*

Happy 2016!

Phil Wait VK2ASD

President, WIA

PS. There is still time to put in your nomination as a Director of the WIA. At the time of writing, we have received only three nominations, but I'm hoping more will be forthcoming. In other Board changes: Rowan Dollar has resigned as a Director, and we welcome our new Director, Paul Simmons VK5PAS, carrying on up to the next election in place of Chris VK5CP, who has been appointed a Commissioner to the Fair Work Commission. We also welcome our new WIA Treasurer, Chris Chapman VK3QB. The national office is back in business after the Christmas break, and Fred tells me that he is well and truly on top of it.

Help us

Contribute to the Weekly WIA News Broadcast. See our website for details.

www.wia.org.au/members/broadcast/contribute/

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wireless network device. Steen VK7AP thanked the WIA for its representations including statements to the ACMA backed up by Standard Australia compliance, and VK7WI broadcast publicity by Justin Giles-Clark VK7TW.

The wireless network on 2300 MHz is acknowledged as being not supposed to result in interference.

Following inquiries and WIA representations, a manufacturer has proposed elimination of the problem caused by an Ethernet controller, through better isolation and the use of higher specification cabling. A close watch is being kept on developments by the WIA and the ACMA, as the NBN continues to roll out its wireless network access fast broadband service.

A New Year's Resolution for us

As this is the season to sing Auld Lang Syne, it also raises thoughts about friends and acquaintances in amateur radio from years past.

That traditional song translates to *"times gone by"* and is about remembering family, friends and associates from the past and not letting them be forgotten – "should auld acquaintance be forgot", as the lyric goes.

WIA Director Roger Harrison VK2ZRH believes that we should strive to bring inactive radio amateurs back again, and has started the 'Bring Them Back' project that many can join.

Roger said: *"From the ACMA's register it is clear that there are many radio amateurs who pay their licence fees year-in and year-out, but are not heard on the air, and rarely seen at hamfests or club meetings".*

"Although they maintain an interest in the hobby, but choose to be, or perhaps have to be, inactive for one reason or another".

"Likewise, there are those who let their licence lapse, and have no current callsign, but their interest in amateur radio smoulders beneath the surface nevertheless."

As he dug deeper the topic soon became a theme, backed up with anecdotal evidence including some visiting maker faire DIY events, that there was an undercurrent of revived individuals lured by the modern amateur radio.

Roger said that if these radio amateurs could be encouraged to revitalise their once-burning interest, the hobby would be all the better for it.

WIA Vice President Fred Swainston's stint as administrator in the National Office over recent months has revealed a steady stream of one-time radio amateurs applying for callsigns as the first step in returning to the hobby.

"If you think about it, there are many situations where you know, or discover, a colleague or acquaintance once held a callsign - they may well be amenable to being encouraged to return to amateur radio," Roger said.

"Personally, I'm in the habit of reading Amateur Radio *magazine (print edition) on my daily train commute to and from the Sydney CBD".*

"On one occasion, I happened to be sitting next to a fellow traveller who saw me reading AR and struck up a conversation. Before I got off the train, I gave him my copy and encouraged him to take up his hobby once again. Did he do it? I don't know, for sure," he said.

On another occasion, at a business event, a fellow recognised Roger VK2ZRH from his days editing electronics magazines and he struck up a conversation – mostly reminiscences about the *"good old days"*. He went and applied for a new callsign and is now back on the air.

Roger VK2ZRH said: *"Think about this - if each of us who have been in the hobby for some time took the opportunity, wherever it arose, to encourage a "lapsed" radio amateur to return, those with callsigns would be higher and the number active on the air would increase too."*

He proposes that many of us to get behind a project for 2016: Let's call it – Bring Them Back.

There are many more situations where individuals may have let their interest in amateur radio lie dormant.

Roger VK2ZRH said he had only outlined a few examples. He suggests we look out for the opportunities - in doing so it will be a positive move by the hobby, helping to make it to grow and thrive.

Available Callsigns facility back online

The Available Callsigns List facility on the WIA website relies on an automated nightly data feed from the ACMA Spectra database.

Recently the ACMA Spectra system experienced a technical fault; as a result the available callsign listing service on the WIA website was temporarily suspended.

The problem has been resolved and the WIA is pleased to announce the available callsign listing has been reinstated on the WIA website

Wireless Institute of Australia Merit Awards

The WIA Board at its discretion makes awards to members for their contribution to amateur radio. These are announced at WIA's Annual Conference, to be held in May on Norfolk Island.

The merit awards are important recognition of the work done within the hobby. When completing a nomination form, you are not required to suggest which award should be made. The Board will assess each nomination, and decide which awards, if any, it will make. To help, please include as much information as you can. Try to keep it in some sort of chronological order. Include any information about other awards the nominee may have received.

Nominations close on March 31. These will be announced, and where possible presented, at the WIA's AGM and Conference on Norfolk Island, May 27-29.

WIA ANZAC 100 closing address

Jim Linton VK3PC

The Wireless Institute of Australia ran its ANZAC 100 campaign for eight months. This speech was given on December 20, through VK1WIA broadcast outlets.

Hello this is Phil Wait VK2ASD, President of the Wireless Institute of Australia. It is my honour to close what has been a most respectful commemoration of the Australian and New Zealand Army Corps - or ANZAC - battle at Gallipoli 100 years ago. That costly fight, and defeat, is part of Australia's psyche that we particularly remember on ANZAC Day, April 25. Historians tell us that Gallipoli was the first major time that Australians fought in World War I, and their exploits and bravery have struck a chord.

The Commonwealth of Australia was formed in 1901, and it is the Gallipoli battle in 1915 that has enduringly defined us as a nation. Australia, tied to Britain, and just finding its feet as a nation having formed a Commonwealth out of six former British colonies, entered World War I when the mother country declared war on Imperial Germany and Austro-Hungary, on August 4, 1914.

Australia was quick to react, as shown by the commemoration and memorial service that took place at Fort Queenscliff in Victoria on August 5 last year. On the declaration of war, Australians fired a shot across the bows of a fleeing German ship at the Port Phillip Heads - described as the *'first shot fired in anger in World War I'*. At the invitation of the First Shot Organising Committee, the Geelong Amateur Radio Club had VI3ANZAC on air from Fort Queenscliff – where 100 years ago the German merchant ship SS Pfalz, was stopped.

In February this year the Darwin Amateur Radio Club as VI8ANZAC joined the historical re-enactment of the epic journey by Albert Chalmers Borella to enlist in World War 1.

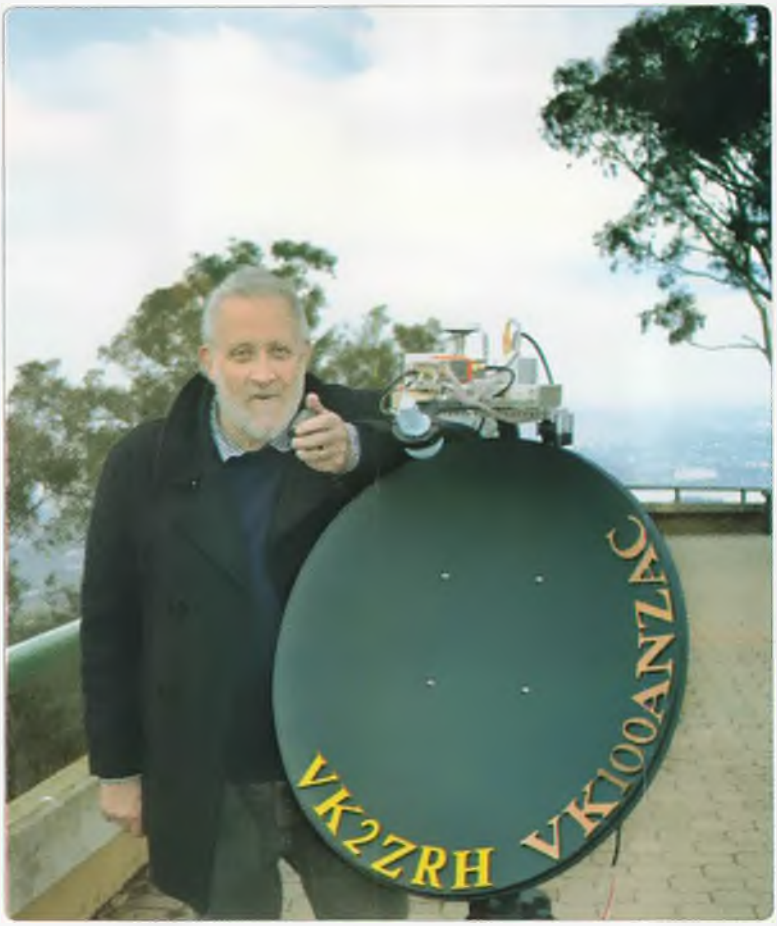
Australia responded to the German threat in the Pacific, while under control of the British Admiralty. A mixed military force, called the Australian Naval and Military Expeditionary Force, was sent to seize German New Guinea. The strategically placed part of the German colonial empire fell in September 1914.

The loss of life there included all 35 hands on the Australian E-class submarine AE1, in the fledgling RAN, presumed that it hit an uncharted reef. Its sister submarine AE2 was also involved in the recapture of German New Guinea - and more about its momentous role in the Gallipoli conflict shortly.

There were notable Australian firsts in World War I before Gallipoli. These included a land operation, aircraft, combat casualties, the loss of an RAN warship, enemy warship sinking, and the awarding of a bravery decoration. The Royal Australian Navy tells us that in the last five months of 1914, Australian forces were in a series of actions, including sweeping the Indian and Pacific Oceans of enemy warships, and seizing all German colonies in the South Pacific.

Back in Australia troops were being gathered and trained. The first convoy of ships carrying ANZAC troops left West Australia from late in 1914, with the major enemy naval threat now gone. The Southern Electronics Group VI6ANZAC joined the many re-enactments, including the origins of ANZAC Day that began in Albany. The RAN submarine, AE2, mentioned earlier in the German New Guinea capture, was sent to Gallipoli, and ordered to penetrate the narrow opening at the Dardanelles, in the Sea of Marmara. Under fire from the Dardanelles Strait, the AE2 made it possible for the troops to land at Gallipoli to do battle with the Ottoman soldiers. It blocked the reinforcing and re-supplying of enemy troops at Gallipoli. The Ottoman Empire was an ally of Germany.

The story of the AE2, and the Royal Australian Navy Bridge Train, has been commemorated firstly by the callsign VI4AE2, and told by the current VI4ANZAC operation. In the ANZAC 100 program the WIA has sought to concentrate on the eight month battle at Gallipoli, from April 25, until December 20 - the ANZAC tradition. The first ANZAC landing was about 1,000 strong, but on the first day more than 620 Australians died in battle. That was repeated at many locations with more troops throughout the campaign for the Gallipoli Peninsula. The ANZAC troops faced a fierce enemy in trench warfare, and despite diversions, attacks and offensives made little headway, and the losses



VK100ANZAC was on Mt Ainslie, Canberra, for the ANZAC 100 opening address by WIA President Phil Wait VK2ASD on HF. Director Roger Harrison VK2ZRH added 10 GHz with a contact to Dale AX1DSH across town. Picture by Fred Swainston VK3DAC.

mounted up on both sides. What had been planned as a bold strike to put the Ottomans out of the war, became a stalemate.

On May 19, 1915 the Ottomans attacked aiming to wipe out the ANZAC beachhead – they failed with 3,000 dead – the ANZAC contingent lost 160.

The Gallipoli battle had cost ANZAC more than 11,400 lives, and heavy losses from the United Kingdom, France, and British India. The most highly decorated RAN unit in World War I was the Royal Australian Navy Bridging Train – at first building pontoon piers for supplies to go ashore, then the wharves for troops, and was among the last ANZACs to leave Gallipoli. The sad news of Gallipoli had a profound impact on Australians and New Zealanders at home, resulting in a surge of enlistments in the Australian Imperial Force.

A total of nine Victoria Crosses were earned at Gallipoli. The ANZAC campaign left a powerful legacy, the creation of the ANZAC legend, shared by Australia and New Zealand.

From it was born ANZAC Day. Every town was impacted by that war, a heavy loss of life, returned wounded, monuments erected, and avenues of honour installed to honour the ANZACs, in the war to end all wars. Each year many travel to Gallipoli, or at home attend dawn services, marches, commemorations, reunions and even two-up games with pennies. Our friend, the Telsiz Radyo Amatorleri Cemiyeti or TRAC, was

there to greet us at Gallipoli this year, and had many commemorative callsign stations for the occasion of the Centenary. The commemoration equally involved the Royal Belgian Amateur Radio Union UBA, and the New Zealand Association of Radio Transmitters NZART with ZL100ANZAC. The WIA obtained the alternative AX prefix for all VK radio amateurs on April 25 and 26.

The WIA acknowledges not only the bravery of the ANZACs, but those actions that occurred before Gallipoli, and honours all Australians involved in wars and conflicts. An illustrated publication of some of the radio amateurs involved in war is to be produced by the WIA, for release on ANZAC Day 2016. The ANZAC 100 program has been under the guidance of WIA Vice President Fred Swainston VK3DAC, who has organised the enormous behind-the-scenes action necessary. This has included liaison with the Australian Communications and Media Authority on licence and rostering, and the Minister for Veterans' Affairs on use of the protected word *'ANZAC'*.

Publicity was by Jim Linton VK3PC, broadcast on VK1WIA through Graham Kemp VK4BB, included on the website by Robert Broomhead VK3DN, run in *Amateur Radio* magazine though its editor Peter Freeman VK3PF, put on qrz.com by Trent Sampson VK4TS who also loaded electronic logs on the eQSL system, ClubLog and Logbook of The World.

The ANZAC-suffixed callsigns have had 50 events held throughout Australia, including VI0ANZAC twice from Casey Base in the Australian Antarctic Territory. The outstanding and most fitting ANZAC 100 events, have attracted considerable worldwide interest. In Australia the clubs and individuals involved helped make it a success - there are far too many to mention individually - a sincere thank you to all. Many ANZAC-suffixed callsigns have been taking part in the ANZAC 100 'last hurrah' campaign December 12 to 20, timed with departure day from Gallipoli in 1915. From World War I to Afghanistan ... Soldiers, Sailors, Airmen and Nurses. It is a pleasure to be able to pay honour via amateur radio, to the ANZAC spirit, and all who have served this country.

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SunSDR2 PRO review

Andrew Barron ZL3DW

The SunSDR2 PRO is a direct digital sampling QRP transceiver which is able to work on either the HF bands (90 kHz to 80 MHz) or on VHF (80 MHz to 160 MHz) including the 2 m amateur band.

First impressions

First impressions: the radio arrived very well packed. It was double boxed with the radio box inside a standard DHL box. There was ample foam packaging around the radio. The radio is quite small and fairly heavy. It looks to be very solid and well-constructed. It measures about 167 x 180 x 50 mm and its mass is 1.5 kg. I am impressed with the build quality. The finish is good and the labelling is good too. There is a serial number sticker on the bottom. The serial number consists of both a date code and a number. The original SunSDR2 had BNC antenna connectors but the PRO model has mini UHF connectors which were new to me. They are gold plated and seem to be a quality connector. The other connectors on the back are gold plated SMAs, plus an RJ45 Ethernet port and a connector for the ALC.

Although Expert Electronics, the company that makes the SunSDR radio is based in Taganrog, Russia, the radio like a lot of consumer electronics is actually made in Taiwan. The review radio was shipped direct from Taiwan.

What's in the box?

Inside the box there was the radio, two 3.5 mm to 2.5 mm stereo phone adapters for the front panel microphone and headphone jacks, a 1.9 m DC cable pre-terminated with the DC connector at one end, a 1.8 m Ethernet cable, and a 340 mm PL259 female to mini UHF male adapter cable. I thought that it was a nice detail that all connectors had protective caps on them, even the Ethernet and 'Mic2' RJ45 ports.

There was no documentation shipped with the radio. I expected at least a sheet referring me to the web site, or a quick start guide. Maybe it was just because the radio was sent to me specifically for this review.

Anyway, it was no problem. I downloaded the software ExpertSDR2 v1.0.2 for SunSDR2 and the 15 page getting started guide. Although the documents are probably similar, you should make sure that you download the software and documentation from the SunSDR2 PRO page *http://eesdr.com/en/products-en/transceivers-en/sunsdr2pro-en#documentation*, not from the earlier SunSDR2 page.

As well as the getting started guide, there is a manual in the German language, a document on how to use the radio with CW Skimmer, a document on how to

Photo 1: The transceiver front panel view.

Photo 2: The transceiver rear panel layout.

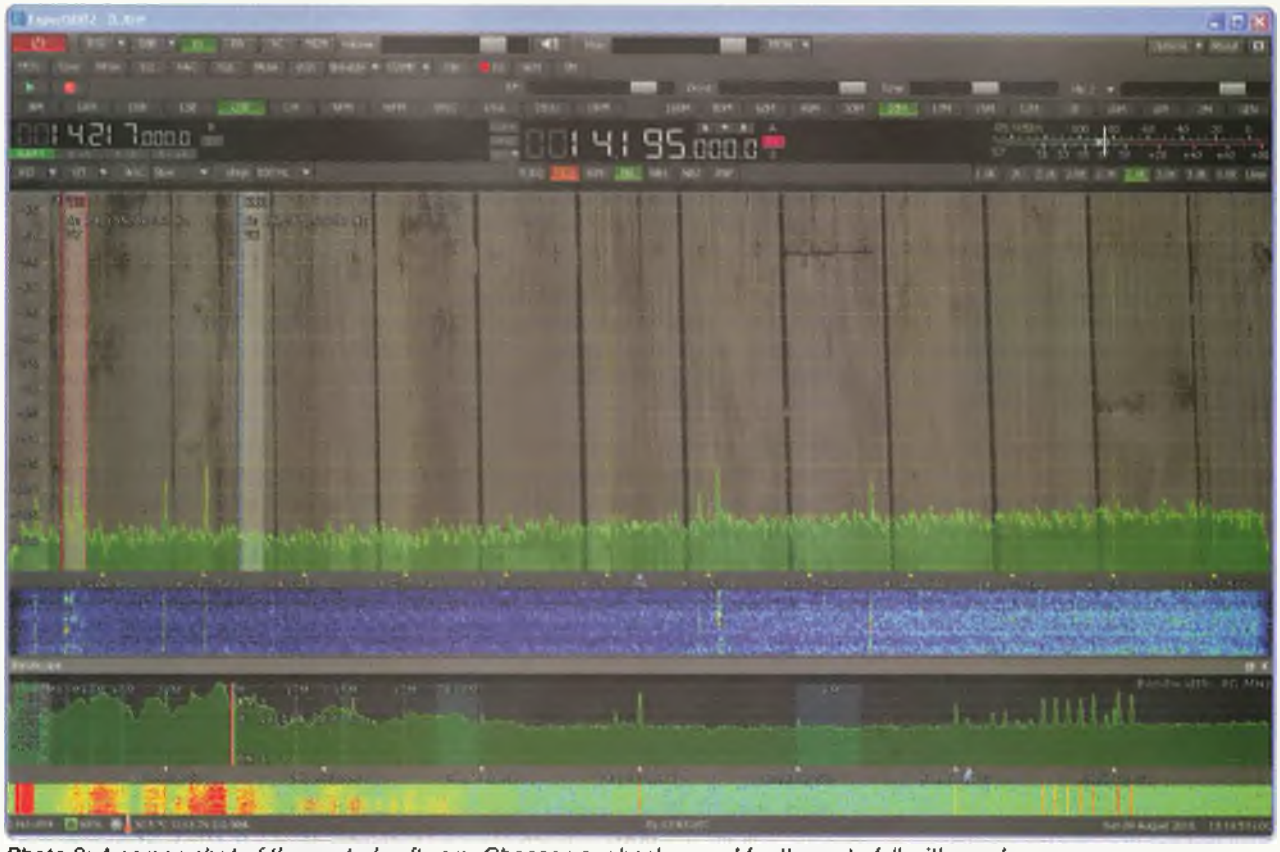

Photo 3: A screen shot of the control software. Choose your background for the waterfall with care!

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use the radio with a linear amplifier and a product brochure. It is well worth while downloading all of the English language documents, as the brochure has information that is not included in the getting started guide.

The ExpertSDR2 software

This review is necessarily a review of both the SunSDR2 PRO transceiver and the bundled ExpertSDR2 software which supports all of the SunSDR range. There is a version for the Colibri receiver as well.

As far as I know, you cannot use any other SDR software with the SunSDR2 PRO. Luckily ExpertSDR2 is very good indeed. This software is very well featured and has obviously been developed over quite a long time. It does have some differences to the software I am familiar with and I did have to ask a few questions. All of my emails were promptly answered.

Loading and starting a new version of ExpertSDR2 may result in an associated automatic firmware upgrade. When I upgraded to the Beta version of the v1.1.0 version this happened seamlessly with no problems. It also works fine if you decide to return to using the v1.0.2 version.

As you can see from Photo 3, you are able to change the background image to any photo that you like. It is best if you choose a dark photo so that the spectrum shows clearly on top. You are able to change the colours and transparency of the spectrum, waterfall and background grid as well.

The second receiver, wideband spectrum and waterfall, equaliser, alternate S meter, and mixer can all be used while docked to the main window or in a floating window of their own. You can place these windows on a second monitor if you are using one. That could be useful if you were using the radio for a SO2R (single operator two radio) contest. I think that it is the first time that I have seen a waterfall on the wideband display as well as on the panadapters. There is a second larger S meter which can be placed in a separate window. It is designed to look like a traditional meter rather than the flat bar scale meter at the top right of the console. The standard panel meter displays S points and the signal strength in dBm while receiving. It displays transmit power, reflected power and SWR while you are transmitting.

You can set the program to use either Russian or English for the menu settings, although most of the buttons don't change, resulting in a mix of Russian and English text on the Russian setting. It is all English on the English setting.

The program can automatically launch other applications when it starts. This could be your favourite digital mode program, rotator controller, propagation, or logging program. Or all of them! You can start up to 10 other applications.

Making it go

The SunSDR2 PRO uses static network addressing which did present an initial challenge. Unlike radios that can accept an address allocated by DHCP from a router, this radio needs to be specifically allocated a network address. There are instructions on how to do this in the User's Guide. The address setting only has to be done once and after that the radio will work with no problem. The radio ships with an address of 192.168.16.200. If your computer uses a different sub-net, the ExpertSDR2 software will be able to locate the radio but it will not be able to receive or send any data. There are a couple of ways to resolve the problem. You can connect the radio directly to the Ethernet port on the computer and then set the address of the radio so that it is in the correct sub-net, or you can take the approach that I did. I left the radio connected to my Ethernet switch, the same as the ANAN. Then I set up a static route in my Internet router to 192.168.16.200. It is actually easy to do. That let the radio communicate with the PC over the network. I could have left it that way, but instead I used the ExpertSDR2 software to change the address of the radio to 192.168.1.20 which is in my subnet. After that I could disable the static route and the radio continues to work fine.

The Quick Start User's Guide does not include the pin-outs for the microphone connectors, although the German language Manual does. By the time you read this the new English language Manual should be available online. I have seen a preview copy.

I thought that this might be a problem, but my Yaesu microphone just plugged in and worked using a standard Ethernet patch cable as a cord. I had to use the Ethernet cable because my microphone has an 8-pin Yaesu connector on the supplied curly cord.

I had no problem at all downloading and installing the ExpertSDR2 program. The first time you start the program it may automatically update the radio firmware. It only takes a few seconds.

Using the radio

The SunSDR2 PRO supports sample rates of 39.0625, 78.125, 156.250 and 312.500 ksps, resulting in maximum panadapter spans of around 39, 78, 156 and 312 kHz respectively.

The radio can work on either the HF bands from 90 kHz to 80 MHz, or on VHF from 80 – 160 MHz. This gives it coverage of the 2 m amateur band in addition to all of the HF bands and 6 m. It should be noted that since there is only one ADC, you cannot use the radio on VHF and HF at the same time. When you tune to any frequency above 80 MHz the radio automatically switches to VHF mode and to antenna port A1. There are two antenna ports for HF, so it is possible to use one antenna port for receiving and the

Photo 4: Front view of the radio ready to operate.

other for transmitting. This would be very useful for those who use a separate receive antenna such as a Beverage for 160 m or a receiving loop antenna. Unlike the earlier SunSDR2 model the three antenna connectors are mini UHF types not BNC connectors. These were new to me but they are gold plated and they seem to be of good quality.

Like the ANAN radios, the radio supports the Kenwood TS-480 CAT commands. This will make it compatible with most digital mode programs.

The radio runs HOT!!! The heatsink gets up to about 41.5 degrees Celsius during normal operation. Interestingly it gets much hotter when the radio is actually running rather than just being left turned on with the software in standby mode. I don't know if that is because of heat dissipation from the audio amplifier, or from the FPGA, or the ADC. Anyway it does get hot. I thought that this would be a problem when extra heat was being generated by the power amp while transmitting, but it does not seem to get significantly hotter on transmit. However I think that it would be wise to down rate the transmitter for high duty cycle modes like RTTY and PSK. In fact the radio puts out more power than you need. If you are serious about operating QRP then 20 W is probably a bit high and if you are driving a 100 W or similar linear amplifier you probably won't need 20 W to drive it. By the way, 20 W will drive my Elecraft KPA-500 to nearly full power output. There are control outputs which can be used to connect an external fan.

Panadapters

On the 39 ksps sample rate the panadapter can be zoomed from 39 kHz down to a span of 1.2 kHz. On the 312 ksps sample rate the span ranges from 312 kHz to 10 kHz. I quite like how you change frequencies on the panadapter. If you right click and hold, you can drag the frequency up and down but the receiver stays in the same place on the screen. Alternatively if you right click the shaded receiver part of the panadapter you can drag the receiver and the panadapter frequency at the same time. This is useful if you want to stay listening to the same frequency but look further up or down the band. Of course you can also change the numbers on the frequency display and the mouse wheel fine tunes the frequency in pre-set steps.

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Receiving Valves (NOS except as noted)

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6BN8	$8.00	6AF4	$9.00
7360	$34.00	5Y3GT	$20.00
6U8 (A)	$8.50	5AR4	$28.00
6SK7	$8.00	13DE7	$8.00
6SH7	$8.00	12DK6	$6.00
6SG7	$8.00	12BZ6	$18.00
6SC7	$17.00	12BY7	$20.00
6SA7	$12.00	12BE6	$12.00
6K6GT	$9.00	12BA6	$12.00
6JN8	$9.00	12AX7	$25.00
6H6GT	$9.00	12AU7	$25.00
6GK6	$14.00	12AT7	$20.00
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6EV7	$8.00		
6DC6	$12.00		
6D10	$19.00		
6CX8	$8.00		
6CA4	$25.00		
6BZ6	$10.00		
6BV8	$12.00		
6BN8	$15.00		
6BE6	$7.50		
6AW8	$7.50		
6AU6A	$9.00		

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You can have two panadapters operating on the same or on different bands. This includes having two panadapters on VHF, but you can't concurrently use one on HF and the other on VHF. Each panadapter can have two VFOs (receivers), so you can work using 'split' operation. You can hear the audio from both VFOs and you can use the mixer panel to move one onto the left audio channel and the other to the right. I find this very

useful for listening to a DX station and the pileup at the same time.

It is OK to leave the balance controls set that way because when you switch off the sub receiver (2nd VFO) the audio returns to mono on both audio channels. You can listen to the two VFOs on the second panadapter as well. This means that it is possible to listen to four signals at the same time. On each panadapter, both VFOs must be within the current panadapter bandwidth, i.e. a 312 kHz slice of the spectrum if the radio is set for that sampling speed. If you set the sub receiver to a frequency outside of the panadapter bandwidth it will be muted. There is a squelch control so you could possibly monitor four repeater outputs at the same time.

The 'RX Wideband Filter' checkbox disables the band pass filters leaving only the wideband anti alias filter. There is an auto function which will select the narrow band-pass filter when one panadapter is in use, or when both panadapters are on the same band. On auto mode, it will select the wideband mode when the two panadapters are open on different bands or when you display the wideband spectrum display.

The wideband scope displays from about 26 kHz up to 80 MHz with the amateur bands and the HF CB band highlighted. The wideband filter needs to be enabled or on the auto setting to get the full wideband display otherwise a low pass filter is in circuit. Unusually the wideband scope has its own waterfall display. Another unique feature is that the wideband scope can be zoomed to show the band or bands of interest. I thought that this was a good feature. You could restrict the wideband scope to only show the activity on 10-15-20, or just 40 and 80. The wideband scope runs docked or in a separate window which can be moved away from the SDR console and even onto another monitor if you have an expanded desktop. On VHF, the wideband scope covers from 80 MHz to 160 MHz.

There are large spurs at every 10 MHz with the largest being at 10 MHz at -62.2 dBm and 40 MHz at -62.8 dBm. These are a minor annoyance since for most users they fall outside of the bands of interest. These spurs are also evident on the VHF band but they are much lower. The worst one is -81.7 dBm at 120 MHz. The spurs are extremely sharp which probably indicates very low phase noise on the main clock. In fact you can zero beat the spur and receive WWV on 10 MHz AM with no problem.

Memories and other displayed items

The 'quick memory' automatically remembers the last 16 frequencies. There is a memory bank as well which you can tag with a description for each frequency entered. The main console shows the temperature of the radio, DC voltage applied, current draw, CPU loading, day and date, local and UTC time. On transmit the S meter shows both transmit power and reflected power along with a numeric indication of the SWR. On receive it shows the received signal strength within the receiver passband, in S points and dBm.

Performance

The radio is extremely sensitive with performance similar to my ANAN-100. With the 10 dB preamp turned on, you can expect MDS figures better than -131 dBm and up to -136 dBm on some bands. With the 10dB pre-amp off, the MDS ranged from -120 on 15 m to -130 on 80 m. In all cases you can hear any signal that is showing above the panadapter noise floor. At most locations the local noise will be above -120 dBm so that will become the limiting factor. The radio sensitivity is even better with the front end filters turned off. I suppose there is a little insertion loss. Most bands improved to an MDS of -136 dBm with the pre-amp on and the 'use RX wide filter' check box selected. On the 160 m, 20 m and 15 m bands, I noticed a slight increase in the noise floor when the narrow filters were engaged.

By the way you have to be careful when you switch between the narrow and wide filters, because the pre-amp / attenuator settings are remembered for each filter setting. That means when you switch to the wideband filter you may also be changing the overall gain. If you see a large change in the panadapter noise floor when you change from the wide to the narrow filter, this is likely to be the reason.

On the 2 m band, with the VHF LNA (low noise amplifier) turned on as well as the usual preamp, I could hear a signal at -140 dBm which is exceptional. This would make the radio a real contender for weak signal work on the 2 m band. You would normally leave the LNA turned on unless you were listening to big signals such as an FM broadcast station. There is a wideband FM mode, but I don't think there is a stereo decoder.

Frequency stability and offset

According to my rather old IFR radio test set the radio was very slightly high in frequency. 10 Hz on 30 m HF and about 130 Hz high at 145.2 MHz. This is a very creditable 0.9 ppm so nothing to worry about and the error might be inside my test setup. However you can adjust the frequency in the setup screen and I was able to get zero Hz error on both VHF and HF by setting a frequency coefficient adjustment of minus 0.000100. The specification sheet says that the master clock has a stability of 0.5 ppm and I am sure that the test radio is well within that. I did not notice any frequency drift as the radio comes up to temperature. The frequency was stable and the same every time I checked it. Once I changed the offset it stayed rock solid.

Transmitting

Generally the displayed transmit power readings are accurate with 19 – 20 W out on all of the HF bands except 15 W on 160 m and 13 W on 6 m. The specification says 15 W – 20 W output on the HF bands with reduced power on 6 m, so the output power is pretty spot on. You can control the maximum power output by altering settings in the setup, but you can't make it higher. On the 2 m band the internal ExpertSDR2 power meter shows 9.8 W but the radio is only putting out 6 W. The specification states 7 W max on VHF, so the meter reading is a bit optimistic. I only checked one VHF frequency using a DC voltage of 14.4 V so it is likely that the 7 W power can be achieved if you are running the full 15 V DC supply voltage.

I conducted some test QSOs on 2 m and on 10 m with my good friend Rod ZL3NW. He reported good audio on both FM and SSB on HF and on VHF. You do have to be a bit careful about the microphone level on FM. I believe that you can deviate the signal too wide if you set the microphone level too high. I recommend selecting the Mic AGC option to make sure that you don't overdrive anything. The panadapter switches to showing your transmit signal on transmit. Unfortunately the display changes bandwidth on transmit making your transmit signal look very wide, particularly on FM.

CW

The radio generates CW modulation inside the FPGA so it should have fast switching for QSK operation and negligible latency. I'm not a CW guy so I was unable to fully test the radio on CW transmit. The ExpertSDR2 software has built in CW Skimmer support. Both panadapters can output IQ signals for Skimmer to work in its wideband mode. There is also the facility to make a Telnet connection to the CW Skimmer server.

I tried out the CW keyer using a stereo 3.5 mm phone plug and shorting the contacts, but I was not able to make any timing measurements. The switching sounds fast. There was no noticeable latency on the side tone. The internal keyer works up to 60 wpm. The ExpertSDR2 program does not have the CWX text macros that PowerSDR has, but you could easily interface a CW keying program.

DRM

The DRM mode sets a 10 kHz filter for receiving digital shortwave broadcasts. A third party program like 'Dream' is required in order to decode DRM transmissions. I tried this, but with my antenna, I can't get enough signal strength to decode the DRM transmission.

RTTY and PSK

I compared the radio receiving both PSK31 and RTTY against my ANAN-100. It is very subjective but the SunSDR2 PRO seemed maybe a tiny bit better than the ANAN. Using MixW the digital signals looked a little cleaner and possibly decoded a little better. Really any differences were "too close to call" but the SDR2 PRO was certainly at least as good and it was a good test of the VAC operation.

SSB

I compared the radio against my ANAN-100 on the 20 m band. As far as I can tell the two radios had identical performance on a typical ham band.

CAT Control

Another excellent feature of the ExpertSDR2 software is that the two panadapters each have their own separate CAT control. Each can be set to a different COM port. You could use one panadapter with a CW program at the same time as using the other with a digital mode program.

Final impressions

The radio is well made and it works pretty much as advertised. It is a bonus that you get the VHF band including transmit on the 2m band. The software is pretty good, I was impressed. It seems to be well thought out and to perform well. I found that the company responded well to emails and were able to answer my questions. Taganrog Russia is nine hours behind New Zealand time but I always got a reply the next day. The online reviews confirm good communication from the company.

Overall the radio is very good. It is available from a range of dealers in the USA, Europe and the UK, so there is local support in most regions.

Interesting and unusual features

The SunSDR2 PRO has some features which are rare or unique in this type of transceiver.

- The radio covers HF up to 80 MHz and VHF up to 160 MHz.
- You can listen to four VFOs at the same time, on two different bands.
- There is an ALC output to control a linear amplifier.
- There is a proposed option for built in WiFi networking. The case already has a position for the WiFi antenna.
- It has a low noise amplifier for the VHF band.
- There is direct access to the ADC input and the DAC output, which you could use to create a UHF or SHF radio. In other words you can use this radio as the SDR portion of a radio that uses completely different front end hardware.
- There is a connector for the connection of a 10 MHz reference oscillator. Although the built in oscillator is very stable and has very low phase noise.
- There is a receiver output for connection to another receiver.
- You can configure the HF antenna ports so that one is used for transmit and the other is used for receiving. This would let you use a separate receive

antenna such as a loop or a Beverage.

- The radio has two microphone connectors, one for a PC Electret type microphone and the other for a standard dynamic microphone (Yaesu pin out).
- There are programmable pins for band switching and other control (like the ones on an ANAN radio).
- There is an internal thermometer. This can be used to drive outputs which can switch on and off an external fan at preset temperatures. You also get a display of the temperature on the main console.
- The software displays the day and date, local and UTC time, computer CPU loading, the power supply current and voltage and the window size.
- Recommended power supply is 15 Volts. The radio will run fine, with a slight reduction in maximum RF power on transmit, off a standard 13.5 V supply.
- Separate CAT control for each panadapter.

Expert Electronics sites

www.sunsdr.com/ or *eesdr.com/en/*

Downloads and manuals

http://eesdr.com/en/products-en/transceivers-en/sunsdr2pro-en#documentation

http://eesdr.com/en/products-en/transceivers-en/sunsdr2pro-en#downloads

Dealer sites

sunsdr.eu/product/sunsdr2pro/

www.wimo.com/sunsdr2-PRO-sdr-transceiver_e.html

www.cheapham.com/sunsdr2-PRO-transceiver/

http://www.hamradio.co.uk/sdr-software-defined-radio-expert-electronics/expert-electronics/sunsdr2-PRO-transceiver-pd-5828.php

Reviewer

Andrew Barron ZL3DW: licensed amateur since 1975, keen SDR operator and author of 'An introduction to HF software defined radio.' For more information please see *http://www.qsl.net/zl3dw/* or email me via SDRzone.

Specifications – from the Expert Electronics product brochure

Features

- DUC/DDC Architecture
- Quick hardware formed CW
- Two independent receiver channels
- I/Q stream up to 312 kHz
- Reception from 9 kHz
- Bandpass filters in receiver front end
- LAN interface for connection to PC
- Optional WLAN interface
- External devices control
- CAT and VAC interfaces for connections to third-party software like loggers and digital modes software
- Reception of Broadcasting FM stations
- Contest special functions

Receiver

General coverage receiver in HF	0.09 - 65 MHz
Frequency coverage in HF in TX mode	All amateur frequencies HF +6m
General coverage receiver in VHF	95-148 MHz
Frequency coverage in VHF in TX mode	144-148 MHz (depends on region)
Sensitivity	0,07 uV (same as I measured)
Blocking dynamic range in HF mode (BDR)	129dB
Blocking dynamic range in VHF mode (BDR)	114dB
RF ADC clock frequency	160 MHz
RF ADC resolution	16 bits

Transmitter

Nominal transmitter's output power HF	15 W (I measured 19 W)
Nominal transmitter's output power VHF	7 W (I measured 6 W on 145 MHz)
RF DAC clock frequency	640 MHz
RF DAC resolution	14 bits
ALC input voltage range	0-4 V

General

Recommended power supply	15 V
Supply voltage range	12 – 16 V
Local oscillator's stability	+/- 0.5 ppm
Maximum consumption current	5 A
Built-in audio codec resolution	24 bits
Operating temperature	0 - +75 °C
Dimensions	165x165x35 mm
Mass	1.5 kg

Plan Ahead

WYONG Field Day | 28 February 2016
EMDRC Hamfest | 28 February 2016

Activating Mount McKay in the Snow Season

Keith Gooley VK5OQ

During the winter of 2015, my wife Jeanne VK5JQ and I made another of our now yearly trips to the Victorian snow fields for two weeks skiing. I took my portable HF equipment with the idea of activating one of the SOTA mountain tops in the Falls Creek area. Two years ago, I managed to get to Mt McKay (1850 m ASL) on cross-country skis and my account of that trip was published in *AR* in November 2013. The following year I decided to try for Mt. Nelse which is about the same height as Mt McKay but further away from the village. A combination of poor weather conditions and taking a wrong turn in the morning prevented us from reaching the summit but I set up the station in the snow near Edmonson's Hut which was tantalisingly close to Mt Nelse but far enough not to risk running out of time and energy. I had several contacts on 40 m which was something of a consolation.

The following year, 2015 we watched the weather forecasts and on a day predicted to have good weather, we decided to try for Mt McKay. Three of us did the trip last time, Ian a non-radio amateur friend and David from Port Lincoln, also a non-radio amateur friend and regular at the ski lodge. This time David didn't arrive until later, so just Ian and I set off after a full breakfast and the preparations necessary for a comfortable and safe day away from the vicinity of the ski resort.

Photo 1: Ian Ritchie below the summit of Mount McKay.

Photo 2: Keith VK5OQ below the summit of Mount McKay.

We both had season passes for the chair lifts rather than use of the lifts for a fixed number of days and so we decided to use the main Falls Creek Express lift to the mountain top above the village, known as Cloud 9, rather than go up the hill on the cross-country ski trails. We are, after all, two years older and I for one am not as fit as I used to be. I had in my backpack the radio, an FT-817D with a lithium ion battery to ensure I could put out a full 5 watts. The antenna was a linked dipole capable of 80, 40 and 20 m operation. Strapped to the outside of the pack was the 9 metre squid pole, a little bit awkward on the chair lift but I held the pack on my lap.

We arrived at the top of the chair lift at about 1030 a.m. The weather was partly sunny with some low cloud

Photo 3: The shelter hut on the summit with the squid pole in place.

Photo 4: The summit communications tower encrusted with snow and ice.

over our destination as we set out. Initially of course there were many downhill skiers and we made our way between them without incident. The tracks towards Mt McKay from Cloud 9 were over undulating ground making for very pleasant skiing. Before the final climb up to the summit there is a lower hill with three alternative tracks, one to the left, one to the right and you guessed it one over the top. Ian said he hadn't been over the top of this hill before, so as it wasn't very high, we took that track and had a better view of Mt McKay from the top.

There were a few other cross country skiers out and we stopped to talk to a couple who were standing at the junction of the tracks on the saddle between the two hills. Ian is a much better skier than me and was able to ski all the way up the final approach to the summit but I took my skis off for the last steep bit of the climb and I knew I would have to do the same on the way down.

On top of Mt McKay there is a communications building and tower with many antennas on a range of frequencies. A diesel generator runs in the building continuously. Alongside the tower is a shelter hut of octagonal shape or maybe there are a few more sides than that. Windows allow a full view all around and on a sunny day make for a nice warm place to have lunch. But first we had to put up the antenna.

Ian helped roll out the dipole which I set to the 40 metre band. With the dipole centre clipped to the top

Photo 5: The operating position in the comfort of the hut.

of the squid pole, I raised the pole pulling out 8 of the 9 sections, leaving the top one inside as it tends to bend a lot if there is any sideways pull from the dipole. I stood the squid pole against the side of the hut and held it in place with a bungee cord hooked onto the door frame.

This dipole generally works very well despite being only 8 metres or so from the ground and I think I prefer it to the vertical on the squid pole I used last time. I had put a "spot" on the website and had no trouble getting contacts. With antenna so close to the hut I was able to run the coax inside and sit on the bench. There we could enjoy the warm sun. Sitting outside on the snow as I did two years before soon gets the bare hands cold with the air temperature a couple of degrees below freezing. It is a bit difficult to hold the mike, operate the PTT with a gloved hand and write the log with the other gloved hand.

I continued making QSOs until there were no more callers and was pleased with the total of 12 contacts. Ian had brought a small billy and gas stove and he brewed up some hot chocolate, a welcome drink to have with our sandwich for lunch. It was then time to drop the squid pole and roll up the dipole. I use a plastic frame intended for extension cords for this job and it makes a neat convenient package with the builder's line on the end of the dipole tied around the wire and coax.

It was about 1:30 p.m. when we set off back down the mountain. As mentioned previously, the steepness of the track down was too much for my limited skills on cross-country skis and I walked carrying the skis and poles. The track soon becomes less steep and on skis we got going more quickly. Once we were in the vicinity of the downhill ski runs, the McKay road goes under a couple of the lifts and it is a fairly quick run. The road passes above the village then doubles back. We arrived back at our lodge after a trip of about one and half hours. It had been a very pleasant day with nice weather and a successful SOTA activation.

MERC Hamfest 2016

Saturday 13th February
Werribee Masonic Centre
223 Watton St, Werribee 3030
Melways map ref 205, H9

Entry is only $6.00

(Doors open from 10am entry
tickets will be on sale from 9am)
"ticket includes one free draw in the major prize"
extra tickets are able to be purchased as well
Call in on VK3RBW 438.450 tone 91.5

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please contact Andy Kay, VK3VKT on 0409 160 948 or vk3vkt@gmail.com

VI8ANZAC operations in 2015

Stuart Birkin VK8NSB

I was deeply honoured to be able to activate the very significant callsign VI8ANZAC on three occasions during 2015, to mark the 100 year commemorations of the ANZACs. Particularly poignant, as I am a serving member in the Australian Defence Force (RAAF) with approximately 28 years Service, a veteran of overseas Operations and personally visiting Gallipoli in 1988.

Photo 1: The VI8ANZAC QSL card.

With Bob VK8BOB, Simon VK8ZJZ, Pooyan VK8PKH and Patrick VK8ZMX, the call sign was on air for seven days over the 2015 ANZAC Day week. The callsign was activated by other VK8s around the Northern Territory, including my great mate Greg VK8GM (ex-Army) in Alice Springs. The plan was for Greg to operate a couple of days over that week and on ANZAC Day from the Alice Springs RSL with the Darwin team operating on the other days including Sunday 26th April from the North Darwin RSL.

Both Alice Springs and Darwin teams were very successful during the week. These portable operations from the RSLs over the ANZAC 100 year anniversary weekend in particular generated much interest from on-air QSOs and returned veterans alike. Lots of radio activity with many QSOs being made on the bands and most importantly meeting some great blokes (ANZACs) and enjoyed a quiet beer with these guys at the RSLs in Alice and Darwin.

The real highlight for me over the ANZAC week was operating the VI8ANZAC call sign on the ANZAC Day evening and working TC100GP in Gallipoli on 15 m SSB.

After the success of the ANZAC week, I obtained the callsign on one more occasion for eight days over the Remembrance Day commemorations (11th November 2015), during this time I operated mostly CW on all bands and was joined by Rowan VK8RD. Rowan and I enjoyed operating from my air-conditioned QTH in Darwin using the VI8ANZAC callsign.

The so called Last Hurrah event of the celebrations was scheduled for the week ending 20th December 2015. I was very honoured to be asked to be involved in the activation of the VI8ANZAC callsign for the last time in 2015. Although relatively unknown the 20th December is a very important date in Australian Military history as it is the day the ANZACs evacuated Gallipoli, after 8 months of brutal war.

Rowan VK8RD and I decided to operate 12-19 December from my QTH in Darwin on all bands and modes but to end the week on the 20 December, and the 100 year commemorations of the ANZACs, with a portable operation from somewhere in Darwin. The Charles Darwin National Park was chosen for this event after we had assessed a couple of locations around Darwin. The recon visit the week before found a great location for amateur radio, but not a nice place for humans, due to the very large number of mosquitoes. A couple of days prior to the Sunday portable activation the weather in Darwin was not playing the game for Rowan and I with the monsoon beginning and battering Darwin with heavy winds and 150 mm of rain most days. On the Saturday afternoon a decision was made to push on and attempt the portable operation from the National Park.

Arriving at about 0730 both Rowan and I were set up with two stations on air with 40-10 m antennas in the air by 0900 local. We had a great day, the conditions were great on the bands and the weather cooperated with a light wind keeping the mosquitoes at bay. We made just over 50 QSOs into 10 DXCC countries, including Alaska and mainland USA and worked VK call areas 1-8. We had been on air for just over three hours when the weather started to change and with thunderstorms rolling in at about 1230 we started to pack up. Rowan and I had done what we had set out to complete, operate portable to end the 100 Year commemorations for the ANZACs, and we had some great fun doing it.

Both Rowan, with strong family links to the Great War, and I felt very honoured to be part of the celebrations and the Last Hurrah. I don't know how many QSOs we made over the year with the VI8ANZAC callsign, it does not matter; what matters is that we remembered those who fought for us at Gallipoli and all other Wars and military operations around the World in the last 100 years.

RIP to all that have fallen.

Lest We Forget.

73

Stuie VK8NSB.

Photo 2: Operating at Charles Darwin National Park VKFF-0095.

From BACAR to Pico Ballooning - Part 1

Jim Linton VK3PC

Photo 1: Project Horus about to launch a balloon, image by Grant Willis VK5GR.

Launching a payload high into the stratosphere, lifted by a Balloon Carrying Amateur Radio (BACAR), also called Amateur Radio High Altitude Balloon (ARHAB), has long been part of our diverse activity.

Originally the payload was somewhat bulky, but transmitted signals or telemetry to Earth and was protected by insulation from the cold temperatures at high altitude.

The balloons are now more advanced (even Google has its experimental balloon-based Internet). APRS (Automatic Packet Reporting System) and/or GPS (Global Position System) has made the recovery processes much more reliable and interesting. Software and the Internet enables balloons to be easily tracked, and even predicting the likely landing location with a degree of accuracy.

The UK (United Kingdom) High Altitude Society has an online tracking system as well as several other useful tools at *http://habhub.org/*

Photo 2: Getting ready for an early morning Project Horus launch at Mildura.

Standard latex weather balloons last around 2-3 hours and reach a space-like environment. As it rises the outside pressure decreases, the balloon expands, and can be incredibly stretchy, but then bursts.

The valved latex balloons can float for more than 24 hours. A world record was set with that type of balloon in 2011 in a successful US transcontinental flight. The ballooning distance has since been beaten.

The uniform gas used is Helium. While Hydrogen has more lift and other advantages, it can be dangerous. (The Hydrogen floated German passenger airship, the Hindenburg, caught fire and exploded in 1937, and marked the end of the airship era.) Compressed helium still has risks and requires sensible use. In fact safety is important for all who launch or chase balloons.

Balloons can carry data loggers, cameras, other scientific experiments, and translators that in earlier days included modified hand-held VHF/UHF transceivers.

As size came down in electronics, smaller digital cameras are used to capture still photos and video.

These weather-type balloons carrying various packages with

sensors also have an aluminium reflector so that other airspace users know their location using radar tracking. In most countries, it is mandatory to notify the aviation authority of a pending launch and rules need to be met.

These are still popular, and are described as up-and-down balloons, because with greater height their latex envelope expands, then bursts sending the whole lot back to earth. Cars known as a 'Chaser' can follow them leading to some very good retrievals and re-use.

As we moved deeper into the digital age, new technology in both electronics and power got smaller and more powerful. Weak signal modes developed by Joe Taylor K1JT, further opened the possibilities for high altitude balloons. The Australian Civil Aviation Authority (CASA) has rules on the release of balloons, which require the larger types to be notified to them for a Notice to Airmen (NOTAM) and be fitted with a reflector.

However, small balloons with a payload of not more than 50 grams may be released six nautical miles from an airport, without being notified or having any other restriction.

Over recent years, several balloon groups in Australia have put up packages. Among these, are Project Space Balloon PSB5 that floated from Bendigo with its 434.65 MHz USB transmission for telemetry, and Slow Scan Digital Video (SSDV) where images are encoded including error detection and correction codes, and RTTY (radioteletype).

Photo 3: Project Horus gave a taste of ballooning through a WIA AGM 2012 keynote address.

Another from Bendigo, PSBPI had a Raspberry Pi computer payload, camera and a LIPD (Low Interference Potential Device) on 434 MHz.

A leader in ballooning is the Adelaide-based Project Horus group. It aims to float low-cost weather balloon payloads into the stratosphere, capturing photographs, recording sensor data and providing a reliable launch platform for high altitude experiments. Horus 22 was flown by the team, with video captured by Grant Willis VK5GR which he provided to the Network 10 children's TV science program *'Scope TV'*, and shown on 24 May 2012.

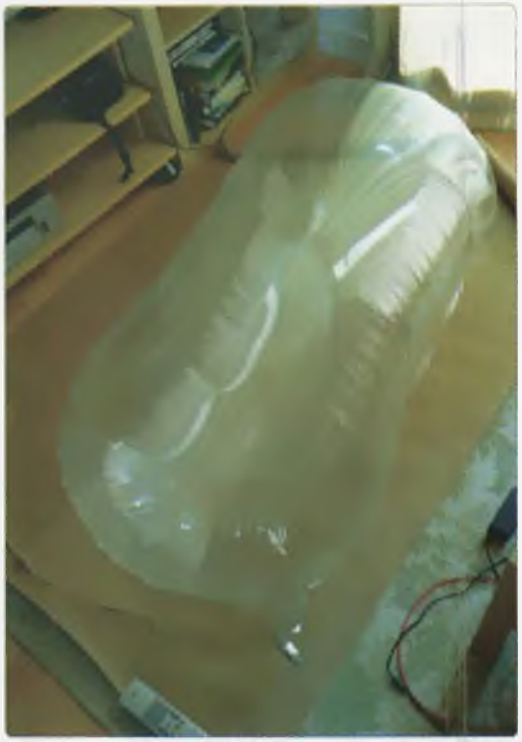

Photo 4: Inflated and under test is a self-made envelope.

Another, but different, segment for Network 10 on the Kids TV Show *'Totally Wild'* was shown nationally. Featuring on the TV shows for the Project Horus team was Terry Baume VK5VZI, an IT consultant from Adelaide.

He also gave an excellent address at the Wireless Institute of Australia annual general meeting weekend in May 2012.

The talk told of typical launches that reach altitudes in excess of 35,000 m, passing through regions of extremely low pressure and temperatures as low as -55 degrees. Payloads are tracked by GPS and radio communications - once the balloon has burst, the payload descends to Earth, slowed by a parachute.

For the WIA AGM occasion, two balloons were flown simultaneously, with Horus 26 carrying a payload of an amateur radio voice repeater, while Horus 27 carried a high resolution camera payload. The Horus 26 repeater had an input on 70 cm and an output on 2 m which enthralled users before it burst and parachuted back down to the ground. Ground control was run by VK3WIA.

This was the first time the project team had launched from Mildura, giving it a chance to nearly span Adelaide to Sydney (contacts were had between Port Lincoln and the Blue Mountains).

The second balloon, Horus 27, was fitted with several high resolution cameras, an APRS tracker and a RTTY 70 cm beacon. It captured footage which was used by Rising Sun Pictures (an Adelaide based Hollywood Special Effects company) in forming the special effects for the Academy Award winning movie "Gravity".

On 18 October 2015, Project Horus in conjunction with *'Launch Box'* launched its latest balloon, carrying payloads designed by South Australian school students from Mount Barker in South Australia.

The history and flights by Project Horus, the TV shows and other videos are on its website *http://projecthorus.org/*

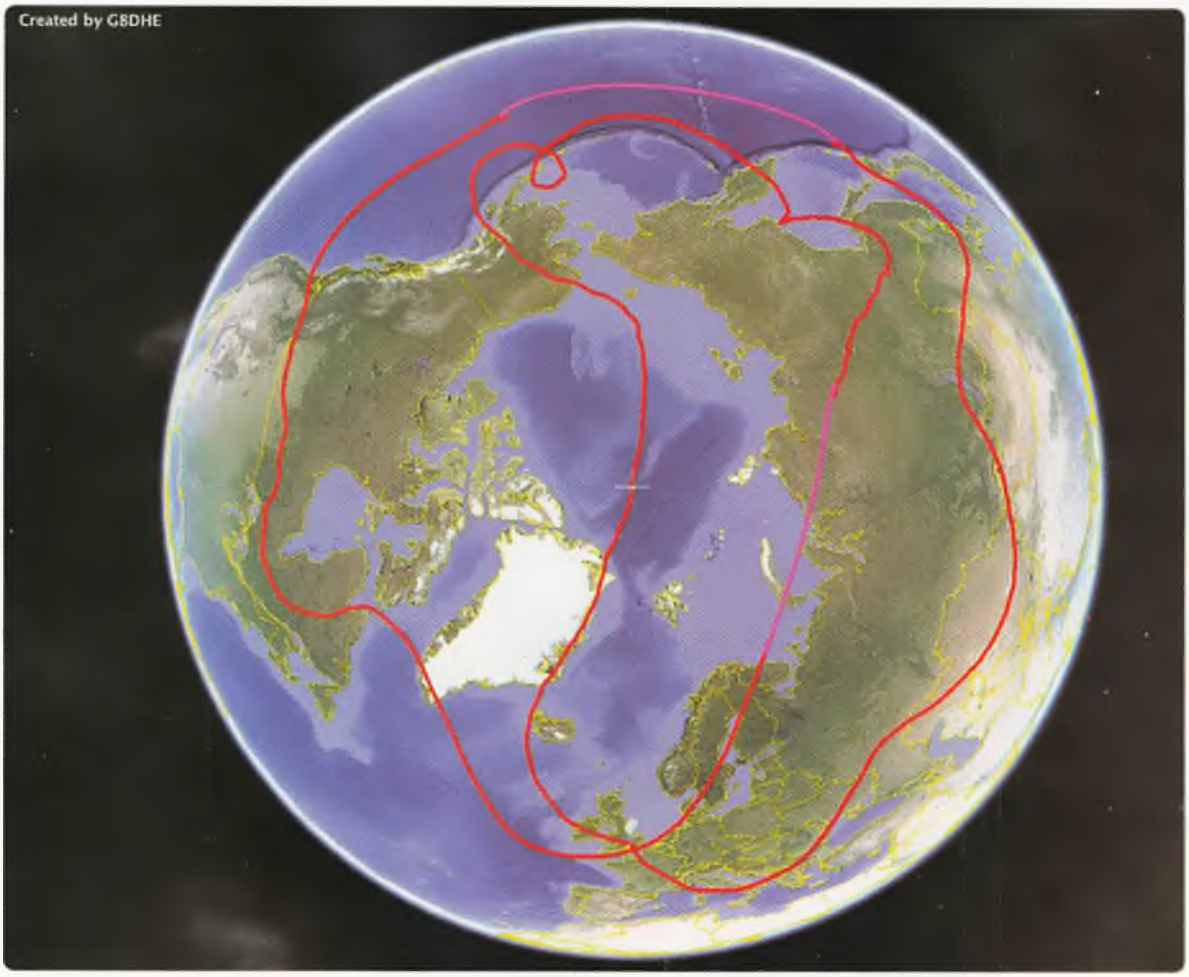

Photo 5: The path taken by B-64 on its trip around the Northern Hemisphere with its DIY envelope.

Leo Bodnar M0XER of Silverstone England started with a latex balloon on 6 June 2013. His experiments have been diverse, with all of them at: *http://www.leobodnar.com/balloons/*

These include balloons flights that tested battery technology, reflective surface to gain extra solar radiation, antennas, power saving strategy, temperature/pressure sensors, trial use of the 27 MHz ISM (industrial, scientific and medical) band, telemetry modes, and infrared radiation absorption mitigation.

What is most interesting is that Leo M0XER made three plastic envelopes that circumnavigated the northern hemisphere, along with an 11 gram payload of solar power and a *lithium polymer* (LiPo) battery to power a transmitter.

His first circumnavigation balloon B-64 was launched on 12 July 2014. It went around the Earth in 19 and a half days, then went on to fly within 9 km of the North Pole, and 10 km of the launch site.

The second balloon to go around the Earth was B-63, launched on 8 July 2015, followed by B-66 on 19 July 2014.

The payload of B-64 had a transmitter at 10 mW on 434.500 MHz USB Contestia 64/1000, and APRS on regional frequencies.

The Melbourne Amateur Radio Technology Group of electronic engineering professionals and long term radio amateurs launched two balloons in the Global Space Balloon Challenge.

That event on 10-27 April 2015 had 306 teams in 46 countries. Further reading on it is at: *https://www.balloonchallenge.org/*

An article *'Amateur radio group has its head in the clouds'* explains the MTG003 and MTG004 flights in *Amateur Radio* magazine, June 2015, pages 10-15. A report those balloons can also be read at its website *http://projectspaceballoon.net*

A trick with all such balloons is to avoid touching them because oil from human hands can weaken their structure. This is why you often see launchers wearing gloves.

Amateur Radio High Altitude Ballooning has a worldwide following both by those floating or following flights, enabling experimentation and the study of aerospace science.

Part 2 of this article concentrates on the Pico Space balloon series by Andy Nguyen VK3YT, that have circled the globe on more than one occasion, and been launched from both sides of the equator.

Ham celebrates 105 years

Ian Sutcliffe VK5IS

Believed to be the oldest active radio amateur in Australia, Darcy Hancock VK5RJ recently celebrated his 105th birthday.

This great milestone was at the Tonsley Hotel in Adelaide with family and friends including two great grand-children.

Darcy is still having regular contacts with the group on 80 metres in the mornings and afternoons on most days.

Darcy VK5RJ (seated) with Ian VK5IS, Ian VK5MA and Darcy's son Bruce VK5TRJ.

AMSAT-VK

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Group Moderator
Judy Williams VK2TJU
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Website:
www.amsat-vk.org

Group site:
group.amsat-vk.org

About AMSAT-VK

AMSAT-VK is a group of Australian amateur radio operators who share a common interest in building, launching and communicating with each other through non-commercial amateur radio satellites. Many of our members also have an interest in other space based communications, including listening to and communicating with the International Space Station, Earth-Moon-Earth (EME), monitoring weather (WX) satellites and other spacecraft. AMSAT-VK is the primary point of contact for those interested in becoming involved in amateur radio satellite operations. If you are interested in learning more about satellite operations or just wish to become a member of AMSAT-Australia, please see our website.

AMSAT-VK monthly net
Australian National Satellite net

The net takes place on the 2nd Tuesday of each month at 8.30 pm eastern time, that is 0930 Z or 1030 Z depending on daylight saving. Check-in starts 10 minutes prior to the start time. The AMSAT-VK net has been running for many years with the aim of allowing amateur radio operators who are operating or have an interest in working in the satellite mode, to make contact with others in order to share their experiences and to catch up on pertinent news. The format also facilitates other aspects like making 'skeds' and for a general 'off-bird' chat. In addition to the EchoLink conference, the net will also be available via RF on the following repeaters and links.

In New South Wales
VK2RBM Blue Mountains repeater on 147.050 MHz

In Queensland
VK4RIL Laidley repeater on 147.700 MHz
VK4RRC Redcliffe 146.925 MHz IRLP node 6404, EchoLink node 44666

In South Australia
VK5TRM, Loxton on 147.175 MHz
VK5RSC, Mt Terrible on 439.825 MHz IRLP node 6278, EchoLink node 399996

In Tasmania
VK7RTV Gawler 6 metre repeater 53.775 MHz IRLP node 6124
VK7RTV Gawler 2 metre repeater 146.775 MHz IRLP node 6616

In the Northern Territory
VK8MA Katherine 146.700 MHz FM

Operators may join the net via the above repeaters or by connecting to EchoLink on either the AMSAT or VK3JED conferences. Past experience has shown that the VK3JED server offers clearer audio. The net is also available via IRLP reflector number 9558. We are keen to have the net carried by other EchoLink or IRLP enabled repeaters and links in order to improve coverage. If you are interested in carrying our net on your system, please contact Paul via email. Frequencies and nodes can change without much notice. Details are put on the AMSAT-VK group site.

Become involved

Amateur satellite operating is one of the most interesting and rewarding modes in our hobby. The birds are relatively easy to access and require very little hardware investment to get started. You can gain access to the FM 'repeaters in the sky' with just a dual band handheld operating on 2 m and 70 cm. These easy-to-use and popular FM satellites will give hams national communications and handheld access into New Zealand at various times through the day and night. Currently only SO-50 is available.

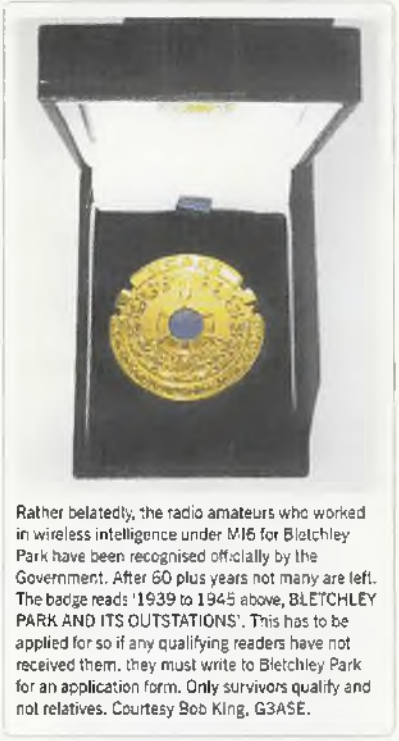
Should you wish to join AMSAT-VK, details are available on the web site or sign-up at our group site as above. Membership is free and you will be made very welcome.

Band monitoring in Australia during WWII

Peter Wolfenden VK3RV

I must go back to the set again, to the superhet and the phones
And switch off the broadcast music, the announcer's measured tones
And search again on the short-waves, with loud calls blending,
For the dim sounds of the Morse code, that a far foe's sending.

[Part of a WWII poem written by an unknown Voluntary Interceptor and recited by British amateur Bob King, in "The Secret Wireless War".] (1)



Rather belatedly, the radio amateurs who worked in wireless intelligence under MI6 for Bletchley Park have been recognised officially by the Government. After 60 plus years not many are left. The badge reads '1939 to 1945 above, BLETCHLEY PARK AND ITS OUTSTATIONS'. This has to be applied for so if any qualifying readers have not received them, they must write to Bletchley Park for an application form. Only survivors qualify and not relatives. Courtesy Bob King, G3ASE.

Photo 1: Bletchley Amateurs Medal. (RSGB 11-2009, p74 v2).

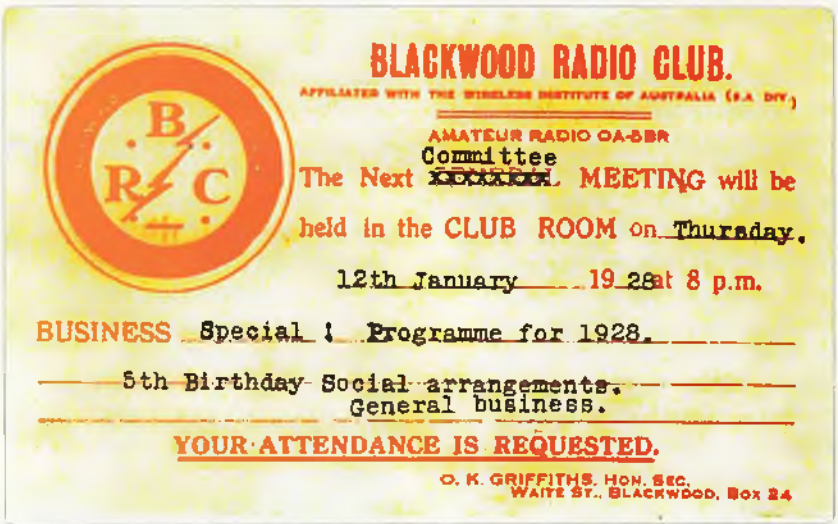
Those who have followed the gradual release of information about activities surrounding the British code breaking facilities at Bletchley Park during WWII, are aware of the work of the Voluntary Interceptors later known as the Radio Security Service. Some 1500, mainly radio amateurs, contributed greatly to the flow of this important information about enemy communications for the staff at Bletchley Park. Surely this is one of the greatest national public service contributions made by any country's amateur radio operators!

British amateurs began hearing transmissions from Europe which initially had many aspects of typical amateur CW or Morse code exchanges, but there were subtle differences such as call signs, procedure, and in some cases the intercepted messages were made up of five letter groups and these were certainly not of amateur origin.

Interest in these *"messages"* was taken up by the Authorities, and the RSGB was asked to organise amateurs into listening for more such signals. Well known UK amateurs helped set up the monitoring network including: Arthur Watts G6UN RSGB President, Gerald Marcuse G2NM initiator of the Empire Wireless Service (later BBC Overseas Service), Roy Stevens G2BVM, Doug. Charman G6CJ of Aerial Circus fame, Pat Hawker G3VA and George Jessop G6JP who were involved with many books published by the RSGB and Louis Varney G5RV, of the ubiquitous G5RV aerial. Initially only a few hundred volunteers were involved, but as time passed the numbers grew.

All VI reports at first were sent to Wormwood Scrubs Prison which had been partially taken over for their processing, but the available area there was soon unsuitable and an old house known as Barkley View near Bletchley Park became the processing centre for the increasing number of reports. This was known to all VIs as simply Post Office Box 25, Barnet, Hertfordshire.

Reports of interest were passed onto Bletchley for final processing



BLACKWOOD RADIO CLUB.

AFFILIATED WITH THE WIRELESS INSTITUTE OF AUSTRALIA (S.A. DIV.)

AMATEUR RADIO OA-5BR

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BUSINESS Special ! Programme for 1928.

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General business.

YOUR ATTENDANCE IS REQUESTED.

O. K. GRIFFITHS, HON. SEC.
WAITE ST., BLACKWOOD, Box 24

Photo 2: 5BR Club notice 1928.

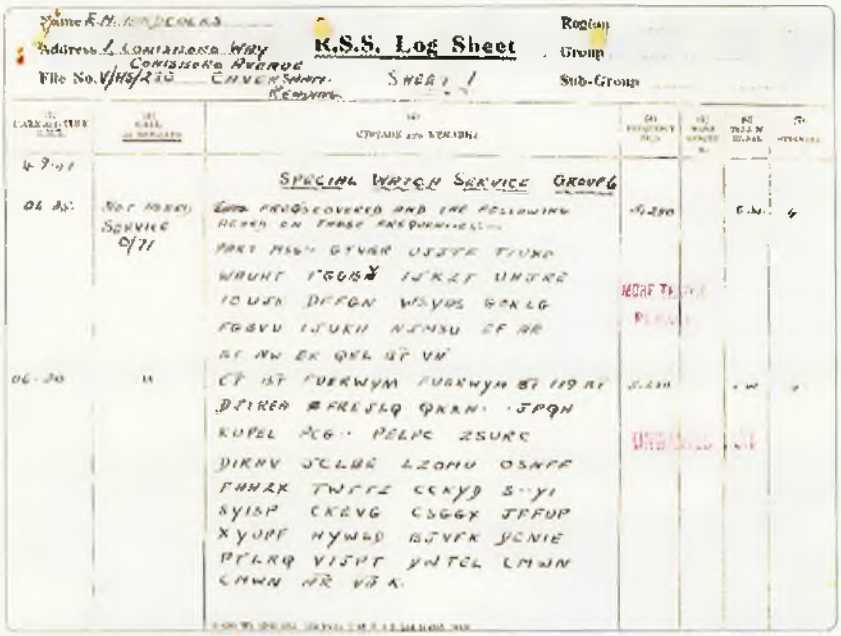
R.S.S. Log Sheet

Photo 3: R.S.S. Log Sheet.

and code breaking. Frequently an amateur would be asked to obtain further traffic from a particular station he was monitoring so that a more complete picture could be established by those assessing the messages. The VIs (or RSS) had no idea of the meaning of the traffic they received and recorded, although they all suspected it was of strategic interest – the subject matter was the realm of those further up the chain, and all were to remain silent about their activities! The amateurs effectively played the important part of being the wireless-waves ears for much of the UK (1, 2).

And what of Australia? Did any amateurs here get involved in monitoring *"enemy traffic"*?

Unfortunately little is known of Australia's activities along the lines of what was happening in England, Scotland and Ireland. However, a 1951 Adelaide newspaper report covering almost a full page and entitled *"ADELAIDE 'HAMS' DID GREAT WORK IN WAR"*, written by Ralph Turner VK5TR, a former Flight Lieutenant, does touch on the subject of monitoring work in South Australia.

The relevant section from the large article simply states: *"G.B. Ragless (VK5GR) and I. Thomas (VK5IT) gave outstanding service on important observation duties for the security services in connection with monitoring of illicit transmissions and other signals of enemy origin"* (3).

So what was this about? As luck had it, a tape recording of Gordon Ragless VK5GR SK, made in 1986 was recently given to the WIA Archive. In this recording which was made in front of the Adelaide Hills Amateur Radio Society, Gordon talks of his early days in radio. He mentions 5BR, the club station of the Blackwood Radio Club in the Adelaide Hills and then goes on to speak of his personal war-time activities – especially the monitoring of foreign signals! (4)

It appears that during 1941, Gordon was asked by S.A. Radio Inspector H.W. Harrington, if he would be interested in joining a small group being established by the Security Service in South Australia to monitor radio frequencies 24 hours a day! According to Gordon, similar facilities were to be set up in the other capital cities. Four operators would work in shifts around the clock at the PMG Frequency Measuring Station located at Somerton a suburb of Adelaide. The group finally selected consisted of Gordon, Ivor Thomas VK5IT and two others, Harry Rogers and Arnold Brydon both of whom had some connection or experience with the Navy.

They started from scratch in 1942 and had to largely use their own initiative. Hallicrafters receivers were made available and their job was to listen to certain sets of frequencies and record every station heard and report on anything untoward. Any messages received containing five letter cyphers (five letter words), would be passed on to be decoded by the experts –this small group were, in effect, to be the "ears of Adelaide"!

Surprisingly, one of the early messages intercepted was not made up of five letter groups – it was in fact a strange mixture of letters in all sorts of sized groups which didn't initially make any sense. When finally *"decoded"* it was found to be the name of every boat in Port Adelaide and Outer Harbour spelt backwards! Was this the work of a practical joker, or a Fifth Columnist, perhaps on board a ship within Port Adelaide? No call signs accompanied the message and it appears that it was sent at a predetermined time to someone waiting for the information. This incident took place in the summer of 1942 (4, 5).

One of the team's tasks was to record anything out of the ordinary. Earlier, an unusual signal heard on a number of nights in late May 1942 sounded a bit like a continuous carrier, as if someone was holding a key down. The signal was always sent in the early morning hours and on the same frequency. One of the former Navy men thought he knew what it was – a homing signal for one boat to return to the position of another. After reporting the occurrence a couple of times, the team were not surprised to learn that a few days later, three midget

submarines attacked Sydney Harbour. They had been brought to the Sydney Heads area by a group of five larger submarines. One of the midget subs destroyed itself after being entangled in an anti-torpedo net, another discharged its two torpedoes in the harbour, one torpedo ran ashore and failed to explode, the other stuck in mud under the depot ship HMAS Kuttabul where it exploded killing 21 sailors (19 Royal Australian Navy and 2 Royal Navy). The third midget submarine was depth charged and sunk in Taylor Bay. Both members of that submarine's crew committed suicide. Whether the authorities were able to make use of the radio reports from Adelaide is unknown. Components from two of the wrecked submarines were combined to make a near complete model and this is on display at the National War Museum in Canberra (6).

The understanding of how high frequencies propagated, skip distances and ground waves were important to any monitoring activity. The Adelaide monitoring team were told to listen on two specific frequencies between 9.30 pm and 5.30 am each day. Weak signals were heard at 9.30 pm time slot, but the 5.30am signals were much stronger transmitting what appeared to be the same message. After forwarding the intercepted messages to Melbourne, they received a reply back saying it was *'good stuff'* and to *'carry on at all costs'*! It transpired that the traffic on both frequencies was identical and diplomatic in nature, the 9.30 pm signals being originated in Berlin, destined for Tokyo but forwarded via a delayed relay in Burma at 5.30 am! The Adelaide monitoring facility was in just the right place! (4, 5)

The secrecy of war prevented detailed stories of this sort of operation being told at the time. We are fortunate that Gordon was able to recall at least some of his experiences many years later, so that we can all obtain some understanding of his activities at that time. The simple newspaper report: *"G.B. Ragless (VK5GR) and I. Thomas (VK5IT) gave outstanding service on important observation duties for the security services in connection with monitoring of illicit transmissions and other signals of enemy origin"* has far more to it than the printed story reveals!

Perhaps in time, further information about similar activities in other States of Australia will become available, but at present we still know very little.

References

1. *"The Secret Wireless War – Beyond Bletchley Park"*, DVD, Grindlewald Productions GP002.
2. Information collected on a trip to Bletchley Park by the author, 2011.
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   (Name of the Adelaide newspaper is currently uncertain. Possibly The News – yet to be confirmed)
4. Lecture by Gordon Ragless OA5GR/VK5GR to Adelaide Hills Amateur Radio Society, 1986, Audio recording, CD34. WIA Archive.
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ADELAIDE "HAMS" DID GREAT WORK IN WAR

(By RALPH R. TURNER (VK5TR), former flight lieutenant in the R.A.A.F.)

RADIO and radio men—among them many South Australians—played a very big part in winning the war. This article reveals for the first time the part some well known South Australian amateurs played in the war effort.

Perhaps the ultimate in the modern development of electronics, as the science of radio is now

loaned his "ham" transmitter to the Royal Australian Air Force. This transmitter is still in use in Adelaide.

Regular exercises were held usually on Sunday morning, and surprise tests proved the efficiency of the set up. Fortunately the

Plan Ahead

MERC Hamfest | 13 February 2016

VK5news Adelaide Hills Amateur Radio Society

Christine Taylor VK5CTY

Photo 1: Some of the happy diners.

We had a very interesting talk for our November meeting. Graham VK5ZFZ talked about the need to and the problems of servicing a microwave site on Mount Arden, about 60 km NE of Port Augusta. The site is so remote that the only access is by helicopter or by four-wheel drive vehicle. Because of the remoteness and to use local knowledge, experienced aboriginal drivers are used for the vehicles as an inexperienced driver could get lost very easily.

The site gets anything up to 30,000 lightning strikes a year, because of its remoteness and the height of the aerials (800 m above ground level). The only still existing aerial is the Telstra microwave antenna. There have been other services using the tower but the problems are such that they have been abandoned. To illustrate the severity of the problems, the 7/8" birdproof heliax feedlines have had the outer coating melt. In fact the feedlines are replaced annually. All the feedlines pass through a 25 mm aluminium bulkhead via gas arrestors and the internal transmitter hut has a Faraday shield, purely for protection.

The tower is triple earthed and to reduce the damage to the tower 3 metre lengths of 100 mm waterpipe are mounted on the top of the tower. These are also vaporized by the strength and frequency of the lightning strikes, so they need to be replaced approximately once a month! Occasionally even the reflectors or the driven elements of the Yagi have been found on the ground.

It must be a very important part of the microwave distribution system for Telstra to continue to persevere at Mount Arden.

It was a very interesting talk.

To finish the year AHARS had a Christmas Dinner, at the Belair Hotel this time. There were 60 attendees and, as usual, one of the features of the occasion was the raffle. There was a wide selection of prizes from which to choose, including a few especially aimed at the interests of the OMs.

The photos show some of the happy diners and President Barry VK5BW making sure that each winner chose another ticket before they chose their prize.

73

Christine

Photo 2: Barry VK5BW supervising the raffle draw.

Photo 3: Some of the raffle prizes.

VK3news Amateur Radio Victoria

Jim Linton VK3PC
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In a fitting tribute, VI3ANZAC was put on air December 12-20 during the 'last hurrah' effort of the WIA ANZAC 100 campaign, with a dedicated team of six who made nearly 1,000 QSOs. This is the second time Amateur Radio Victoria has been involved. VI3ANZAC was earlier on air on the ANZAC Weekend from the Lake Boga Flying Boat Museum at Swan Hill, in conjunction with the Sunraysia Radio Group.

On December 12-20, VI3ANZAC worked Antarctica, the Americas, Russia, Europe, Asia, and Oceania with plenty of VK and ZL stations.

Opening the VI3ANZAC 'last hurrah' was Peter Freeman VK3PF who worked on HF, including scoring a contact with VI4ANZAC, and he heard about the Royal Australian Navy Bridge Train. Propagation on HF was poor. On Sunday he found that conditions were slightly improved, with a period of reasonable activity on 40 m SSB, before the band went quiet again. In the afternoon Peter VK3PF had a 6 m SSB contact with Tony Middleditch VK3CAT/p on a SOTA summit some 80 km away.

On several days Joe Gonzales VK3YSP took his turn at VI3ANZAC making QSOs, including the unusual contact with QRP enthusiast Peter Parker VK3YE, who was flying a kite antenna on 40 m from Chelsea Pier. The team used Olivia, PSK31, PSK63, Amateur Digital Television, SSB and of course the best performer of the lot, CW.

Luke Steele VK3HJ, an avid brass pounder, enjoyed himself as he added about 600 QSOs to the log on his favourite mode, much to the delight of those who contacted VI3ANZAC.

Along the way it was eagerly sought by those portable whether they were in parks or on peaks through the SOTA program. It made a number of notable firsts for a commemorative callsign, including the 'VI3ANZAC from schools' initiative by Julie Gonzales VK3FOWL. She reported that the students now had a better understanding of the ANZAC true spirit.

Photo 1: Tony VK3VTH at Fort Gellibrand as VI3ANZAC.

The VK3RTV repeater on Mt Dandenong was effectively used with the ATV gang joining in the digital amateur television stint under VI3ANZAC. On Tuesday December 15, it used Digital Amateur Television through VK3RTV, with a leading exponent of that mode Peter Cossins VK3BFG as anchor.

Finally the callsign set up at the historic Fort Gellibrand in Melbourne's inner west, with Tony Hambling VK3VTH on 40 m making 60 contacts in three hours. He had also earlier added many DX contacts to the VI3ANZAC log.

On December 20 a contact was made with **VI8ANZAC** at the Charles Darwin National Park VKFF-0095, with Rowan Dollar VK8RD on the microphone with a top-end commemoration with Stuie Birkin VK8NSB.

Then the sky over Fort Gellibrand went dark with a cool, windy and wet change putting an end to that portable operation, and closing the successful VI3ANZAC activity.

The team that made the 'last hurrah' possible were thanked for their fine efforts, and hopefully it will form again at a future event.

Training, assessment and licences

Quality training resumes this month so people can gain a Foundation licence, and perhaps once qualified at that level take a quantum leap to upgrade, with an intensive bridging course.

Enrolments are now open for the Foundation licence training and assessments held on the weekend

of February 13-14, at the Amateur Radio Victoria office 40G Victory Boulevard, Ashburton.

Prospective candidates at this level are expected to read the contents of the operational practice guide book for the Foundation Licence, available as a mail order for $26 from the Amateur Radio Victoria on-line shop.

The Standard licence bridging course, for those who already have the Foundation licence, is held on six Wednesday evenings (February 3, 10, 17 & 24, and March 2, and 9), and ends with revision and assessments on the weekend of March 12-13.

Attendance on all days is expected for this training that bridges the knowledge gap between the Foundation licence and the Standard licence. An experienced and knowledgeable instructor will help you on the path to upgrade.

To enrol in either please contact Barry Robinson VK3PV *vk3pv@amateurradio.com.au* or 0428 516 001.

Handsome KRMPA plaques

The Keith Roget Memorial National Parks Award continues to promote portable operation from National Parks.

Although there will be the 6th annual KRMNPA activation weekend on November 11-14 2016, many go portable in them during the year. Mick Geraghty VK3PMG is among the latest to be issued with the KRMNPA Merit Award. He achieved all 45 National Parks worked in 12 months - well done. He completed the tally with a contact to Tony VK3VTH in the Snowy River National Park during the KRMNPA activation period in November 2015. Mick VK3PMG is also a keen activator and supporter of all the parks and summits programs.

Photo 2: Mick VK3PMG with his KRMNPA plaque.

Bruce White VK5007SWL, an avid listener (SWL) at Karoonda in the Murray Mallee region with 50 years' experience, has turned his Hunting expertise to the KRMNPA program.

He has sent a very comprehensive log with 20 qualifying contacts made mostly over recent months, with many being added across the KRMNPA activation weekend.

Bruce has the Level 2 certificate but now needs another five National Parks, and was listening for them. Well done so far and good luck with your interest.

Archive Donations

I apologise for not acknowledging the receipt of donations for some time and wish to thank the following for their donations to the **WIA Archive**:

- Heather, daughter of Len VK3KW, for reference books and other paper work.
- Merv VK5MX for a copy of Australian magazine *Radio Realm* (1934).
- John VK5EMI for a selection of Call Books.
- Christine VK5CTY for a number of reference books.
- Rob VK5RG for a collection of material relating to his Antarctic and other involvements.

In addition, a number of members have sent in photographs and other material relating to the series of ANZAC articles published in *AR*. Most of this material has been added to our Archive listings. On behalf of the Institute, thank you all.

Peter Wolfenden VK3RV
WIA Historian,
For **WIA History and Archive Committee**

VK3 news Geelong Amateur Radio Club

Tony Collis VK3JGC

EMDRC Presentation

As part of the Friday evening Syllabus, Lou VK3ALB arranged for Ralph VK3LL and Damian VK3KQ to provide and demonstrate a medley of four projects that the EMDRC had undertaken. This turned out to be a highly entertaining and informative session holding the members attention for over a two hour period.

The first project was a clock GPS locked for contest work which, during the course of its implementation, identified a 14 second discrepancy between "standards" for GPS time and UTC.

The second project was a Bluetooth headset for mobile operation which Damian demonstrated from his car, outside the club house, during the presentation.

The third project was the EMDRC's version of an Anderson connection box with six outputs.

Photo 1: Damian VK3KQ with GARC President Lou VK3ALB and Ralph VK3LL.

This was of particular interest as the GARC club and the majority of its members use Anderson PowerPoles for power connections in both the shack and on field days.

The fourth project was a hands free interface box for mobile operational use.

GARC in the Park

The now established annual Christmas break up celebration dinner took place at the Rotunda in Eastern Gardens Geelong, with 40 club members and partners attending; the weather was very overcast and cold but that did not

Photo 2: The Annual "GARC in the Park" group photograph.

dampen the spirit of the occasion.

Lee VK3PK once again took over the role of BBQ chef cooking chicken, sausages and hamburgers; cold drinks were freely available along with plenty of other food provided by the members. Barry VK3SY arrived wearing a kilt, relating to his mother's Scottish clan. This came about after an agreement between Bob VK3BYS and Barry that if Bob played **Highland Cathedral** during his program on the **Geelong Pulse Radio** station, which he did, he would wear the kilt.

In spite of continuous queries, Barry refused to clarify what was worn beneath it!

Photo 3: Lee VK3PK - Head Chef.

Photo 4: Barry VK3SY in his kilt.

VK2news

Tim Mills VK2ZTM
e *vk2ztm@wia.org.au*

Greetings for 2016 The big VK2 event for this month – February – is the annual Central Coast Field Day at the Wyong Racecourse on Sunday the 28th. On that Sunday there will be no morning VK2WI broadcast, in its place will be a transmission at 7.30 pm Saturday evening the 27th. Sunday evening will be as normal.

The month of February is when many clubs have their first meetings after the summer break, like HADARC with their informal meeting on Tuesday the 9th and the main meeting two weeks later on the 23rd. Also in February the Mid South Coast ARC have their quarterly meeting on the second Saturday.

It is generally a quiet month in February for ARNSW who had the first Foundation weekend and Trash & Treasure last month. There is more action in March with the next Foundation weekend on the 19th and 20th and assessments on the Sunday. The Trash & Treasure is on Sunday the 27th. While this is a public holiday, the T&T are always held on the last Sunday of the odd numbered month. On Saturday the 19th nominations for the ARNSW committee close. The 2016 AGM of ARNSW is scheduled for Saturday the 30th April. Monday March the 7th is the first night of the upgrade course at the VK2WI Dural site. Bookings for all courses and assessments require an email to *education@arnsw.org.au*

Each year ARNSW has a series of seminar talk fests which appear on the calendar as field days. The first of these is to be held on Sunday March the 6th. The event commander would like to know what topics attendees would like to hear or whether they would like to be a presenter on a topic of their choice. If you will be attending you need to email *fieldday@arnsw.org.au* to register or to advise topics or presentation.

The Summerland ARC has courses proposed soon. These will be a Standard March 7th to 10th and Foundation 12th and 13th March. In November an Advanced is planned November 7th to 11th with

Foundation 12 and 13 November. Contact Duncan VK2DLR.

Late in December financial members of ARNSW were sent their 2016 fridge magnet calendar which lists all the major activities. You can see a copy of the calendar if you go to the home page of ARNSW *www.arnsw.org.au*

For the past half century the VK2 region has had some on air Morse practice provided by volunteer operators often under the call VK2BWI. In the early days it was a nightly transmission followed by VK5WI. More recently the service dropped back to weekly on a Thursday evening on 3550 kHz provided by Ross VK2ER at Orange with help from Geoff VK2BGP. Ross was finding that interest was dropping and in the past year often there were no call-ins after the session. In late November 2015 Ross terminated the operation when circumstances changed at his end. If anyone would like to resume the service please contact ARNSW by an email to *office@arnsw.org.au* The automated service from VK2WI on 3699 kHz continues.

For the past couple of years ARNSW has made available to VK2 clubs some development funds for projects that the club may be considering. As these notes were being prepared no word had come down from the ARNSW committee if this offer would be available this year.

Some VK2 history

In the 1950s, the NSW Division had two projects on the go. These were to develop a Home for VK2WI and the other was to obtain a headquarters property. Well the Home for VK2WI won and the Dural site purchased in 1955 and the transmitter building constructed and opened in May 1957. Disposal trading by the Division in the 1950s was good and funds were building up. This enabled the NSW Division to purchase in 1959 the small cottage at 14 Atchision Street, St. Leonards. By 1962 the rear of the property had been demolished and a hall built over a basement store and radio room. The property was known at the Wireless Institute Centre. This was now the Headquarters of the NSW Division. The front of the original building contained an office, class room and library.

By the 1970s, the area had started to develop some low rise buildings and it was suggested that the Division could join with others to build some more practical properties. Instead it was decided to sell Atchison Street and move westwards to the geographical centre of Sydney. In the early 1980s, the Wigram Street property in Harris Park was purchased and named Amateur Radio House. After leaving Atchison Street, the property of number 14 was replaced with a three story office building. The Division remained at Wigram Street until early 2000s, when the change in the WIA National structure reduced the need for the property. It was decided that all the Division's operations could be conducted from the VK2WI Dural site. This resulted in the construction of the Centenary Building, opened in 2010 and the renovations of the original VK2WI building.

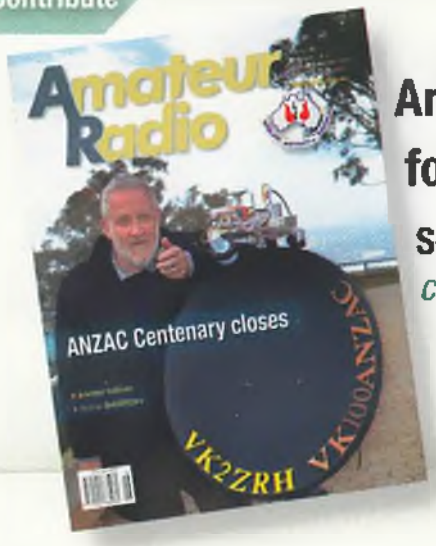
About the same time the NSW Division decided on the name change to Amateur Radio New South Wales so there would be less confusion with the operation of the WIA as the National body.

In time, Atchison Street and the surrounding area, being near a major transport hub, changed. Recently the strip from number 4 to 18 Atchison Street was demolished and in its place there is being developed a high rise apartment block of more than 25 floors.

Like many areas there is history in Atchison Street. In the beginning it was mainly small cottages which small business started to occupy. The neighbours to number 14 included Dick Smith with an early shop at number 10 and Keith [later VK2ZZO] with an electronic business at number 12. In those days, parking was easy in the street – just try it now.

73 – Tim VK2ZTM.

Contribute



Articles and high quality photographs for *Amateur Radio* and *Callbook*.

See *http://www.wia.org.au/members/armag/contributing/*

VK6news

Keith Bainbridge
e *vk6rk@wia.org.au*

Another year over! They seem to be flying past these days, must be a part of getting older I assume :(

Welcome to 2016's start to VK6 Notes to all members and others who suffer my scribblings :)

There have been some controversial comments about our Institute over the Christmas period, so hopefully all members will get behind the current committee and make sure your vote counts in the upcoming Election for Directors, keep an eye out for the voting papers included with your copy of *AR* magazine.

WA VHF Group

Now we have a new contributor! Taking over from Terry VK6ZLT we have Ty VK6HTY.

Hello from WA VHF Group and me, Ty VK6HTY, the new publicity officer for the group. As an introduction I grew up on the family farm in mid-west WA and enjoy working with anything electronic. This year I'm looking forward to doing more building and experimenting with home-brew transmitters, APRS, WSPR and get into mobile radio seeing that my QTH has way too much RF interference. But enough about me.

Group News

2015 was progressive for the group. The new shack is finally finished with comms rack, grounding cables, shelving, PC's and radios. Co-ax and Ethernet cables were brought across from the main Wireless Hill Telecommunication Museum. The new communications room adjacent to the antenna tower and housing VK6RIB was completed and sealed up. Thanks go out to members who helped with the new shack, especially Bob VK6KW.

In October 2015 we had a talk from one of our founding members, Wally VK6KZ on his experience in working 10 GHz and below in the 1950s-70s. There was a challenge thrown down by Wally on the fact that there is no record of contacts on 5.7 GHz across the Great Australian Bight. This challenge I hope will bring new vigour to our projects and new bragging rights for those who achieve the contacts.

The groups website has had a good re-vamp (Got to admit, I'm a bit biased on this, we've been working hard on making it a good resource for the members and AR community) I'm still working on the mapping for the beacons.

AGM in September brought in new Office Bearers and Council for 2015/2016.

President: Terry VK6ZLT
Vice-President: Denis VK6FADF
Secretary/Treasuer: Graeme VK6LV
Committee Members:
Tom VK6ZAF
Ty VK6HTY
Phil VK6ZKO
Graham VK6FGMC
Bob VK6KW

In 2016 we'll be introducing an extra day of club activity on the first Saturday of each month (time TBA). This will give the members more chance to get together, work on group or individual projects and use the new shack. We're working to have more build days on antennas, 23 cm transverters and the GPS-locked beacons.

Monthly meetings will continue at 2000H on the fourth Monday of each month except December. Membership is open to all radio amateurs. Annual fees are $25 for metro and $22 for country.

Welcome to VK6 notes Ty and I hope to hear from you EVERY month from now on :)

From a newcomer to Mr Reliable, Norm VK6GOM :)

Bunbury Radio Club

The Bunbury Radio Club's "Christmas" party for members and prospective members and spouses is planned for 9 January 2016, to be held at 21Halsy Street, Bunbury commencing at 1500 hrs. For details contact Dicko VK6VRO. This get together will replace the regular monthly meeting. A Fox Hunt will occur from 2:00 pm on January 9, 2016 prior to the club's annual Christmas Party.

The Club's website has been upgraded and moved to *http://www.bunburyradioclub.com*
Many thanks to Jonathon VK6JON for his hard work in developing and improving the website. The site covers the following menu items:

- Meetings
- Coming Events
- Licensing
- Club Activities
- News
- Files
- Contact us

As mentioned last month we ran a mobile contest called "Bunbury Dunnies on the Air", a couple of hours before our regular meeting in November. It involved getting points awarded for "activating" a registered BDTOA public toilet (by operating portable without support from a vehicle within 50 metres of the toilet and making two or more valid BDOTA contacts) and for "chasing" a registered BDTOA public toilet being activated by

someone else (by making a radio contact with them). The purpose of the contest was to have fun, practice portable operation and promote radio as a hobby.

Despite some concerns about the propriety of such an activity it went off with a hitch (or a jail term). Seven members took part in BDOTA on 14th November and eight different toilets were activated during the one hour competition with 34 contacts made. Our repeaters got a lot more exercise than usual, the 70 cm repeater surprised with solid handheld contacts from everywhere we tried.

- Overall winners on 117 points were "The Plumbers" - VK6TGQ & son Cameron.
- Runners up: "The Baileys" - VK6MIB and son William on 110 points
- Chaser category winner was VK6JON, closely followed by VK6VRO.

Overall, it was a success with no problems, although it'd be nice to have a bigger field if we run it next year.

At the December monthly meeting the issue of linking South West (and possibly Southern) repeaters was discussed. The existing repeaters are clearly underutilised and it was the majority view that they would provide a better service and higher level of activity if some or all of the repeaters in the SW region were linked. It was recognised that there are many technical, political and administrative issues to be resolved, but it would provide the club with a major worthwhile project to take under its wing.

Licence assessments are planned for 6 February, 2016 at Bunbury. So far, we have seven applicants (five Foundation and two upgrades to Standard level). Anyone interested in sitting for upgrades should contact Norman VK6GOM on 0438 878 582.

Any South West based amateur (or anyone interested in radio or electronics) is more than welcome to join and participate in our activities. The annual fee is only $25.00. Those wishing to join can contact the Club via our Secretary, Nick Evans on 0429 201 343, or *vk6brc@wia.org.au*

Photo 1: John VK6AG repairing traps on the HARG beam. Photo by VK6ZMS.

The next monthly meeting of the Bunbury Radio Club will be held on Saturday, 13 February from 2.00 pm. at Collie - 166 Wittenoom Street, Cnr of Wittenoom and Marsh Street. Locations for future meetings are:

- March – Bunbury
- April – Bunbury
- May – Harvey
- June – Bunbury

West Australian Repeater Group

On behalf of the West Australian Repeater Group, Anthony VK6AXB reports that WARG's final meeting for 2015 took place on 7 December, featuring guest speaker Matt VK6ML. Matt described Yaesu's WIRES X system, which allows interconnection of Fusion radios via the web, and proposed this linking feature be added to WARG's existing Fusion repeater at Tic Hill, VK6RTH.

The extensive discussion which followed highlighted the benefits of the WIRES X system, and ideas for solving the various technical

challenges, including tower loading, solar capacity and data link options. A recent firmware upgrade from Yaesu has allowed the DR-1X repeater to be WIRES-X compatible whilst still remaining capable of both FM and Fusion modes of operation.

The meeting resolved to support the WIRES X concept as outlined, and investigate its installation at Tic Hill, recognising that a lot of detail still needs to be worked out. The spare Fusion repeater will be loaned to VK6ML to assist in testing the concept.

Also in December a site visit to Mt Saddleback took place, with Bob VK6ZGN and Anthony VK6AXB making some progress on getting the VK6RMS repeater back on air after a very long absence. Refurbished 2 m repeater and 70 cm link transceivers were installed and the antenna and cavity filters were checked and adjusted as required. However, this effort did not succeed in bringing the site back on-line, due to mains power supply problems. A second site visit is being planned, and hopefully by the time these notes appear in print VK6RMS will be back on air.

Work is also progressing on restoring the Kellibernin repeater VK6RKN, with Avon Valley stalwarts Jim VK6CA and Peter VK6PK leading a site visit to recover the equipment for checking. Ray VK6ZRW has repaired/retuned the cavity filters, options for the next visit to replace the lightning-damaged antenna and feedline are being worked out. Thanks are also due to Colin VK6ACT and Peter VK6FUN for their efforts in keeping VK6RKN on air.

WARG members were saddened to learn that Cyril VK6OE had passed away in December, after a short illness. Cyril was a regular check-in to WARG's technical and general net every Sunday, and will be missed.

A reminder that WARG's first meeting for 2016 will be on Monday 1 February, followed by meetings on Monday 14 March and Monday 4 April, prior to our AGM on 2nd May. Meetings take place at the Peter Hughes Scout Communications Centre, located on the corner of Gibbs St and Welshpool Rd in East Cannington. WARG's technical and general net continues every Sunday at 10:30 am local time on VK6RLM, 146.750. More information will be on *www.warg.org.au*

Once again, WARG is grateful to VK6RK for his efforts in preparing the VK6 Notes every month.

And VK6RK is extremely grateful for your contributions Anthony!

Next in line is our newest incorporated body in VK6, the WA Amateur Radio News.

WA Amateur Radio News

WA Amateur Radio News, one of Western Australia's younger clubs, has a busy year planned for 2016. If it's anything like 2015 was, we'll be busy enough.

Along with preparing and recording the NewsWest weekly news broadcast, and maintaining the *VK6.NET* website that serves as an information gateway to all things Amateur Radio in Western Australia, we are planning other services to Amateur Radio individuals and clubs.

Following on from the success of the NewsHound101 training in 2015, there are more training courses on the drawing board including interfacing your radio to a computer, broadcasting news programmes, a beginner's guide to contesting, and Public Relations and promotion of activities.

We're also in the process of finalising details for a one-day Amateur Radio Technical Expo in Perth. We are expecting to have four or five technical presentations that will be interesting and educational.

The WAARN team will also be working some of the Aussie contests, especially the John Moyle and RD contests, and seeking opportunities to record news programmes live at various venues.

Thanks to Bob VK6POP for the update.

Now an update from the other Mr Reliable, Bill VK6WJ and the Hills Amateur Radio Group

Hills Amateur Radio Group

Hello from HARG, the Hills Amateur Radio Group.

The last few months of 2015 were very busy at HARG. We were able to present two very interesting talks during November. On 14th November, Bob VK6ZGN gave us a talk on the benefits of the All Star Link Network resulting in a number of members deciding to give the system a try.

On 28th November Mal VK6LC gave an illustrated talk on propagation with lots of information on the basics plus explanations and links to the various ionospheric prediction services and DX aids such as the DX Atlas and DX Summit. Mal also gave us a listing of the international beacons and a guide to various devices for reading the CW idents of the beacons. Complete illustrated notes of 23 A4 pages from the talk are available to HARG members on the club website at harg.org.au

Thank you Bob and Mal. Your talks were really appreciated by all who attended. We concluded the year with some work to repair faulty traps on the HF beam thanks to the hard work of Ray VK6ZRW, John VK6AG, Marty VK6RC and many others. Our Christmas barbecue of sausages, steaks, salads, fruit and soft drinks was appreciated by 30 members and visitors including friends from down south.

Allan VK6AN has recently upgraded and tested our security system which now includes a high quality camera.

HARG Meetings are held twice a month at the club rooms at the Paxhill Guide Hall near the corner of Brady and Sanderson Roads in Lesmurdie. The Social and Practical meeting is held on the second Saturday of the month and the General Meeting, often with a technical talk, on the last Saturday of the month. Doors open

at 1.00 pm for a barbecue lunch and the meeting starts at 2.00 pm and everyone is welcome. More information is available at *www.harg.org.au*. The HARG website has recently been revamped by Richard VK6BMW so please have a look.

Cheers from Bill VK6WJ Publicity Manager for HARG.

Thanks Bill, your input is always appreciated.

I have also received a couple of articles from Michelle VK6MLW from the **Peel Amateur Radio Group** but given the amount of input this month and the fact that they are quite long technical articles, I have forwarded them separately to the Publications Committee for inclusion elsewhere in the magazine (when space allows, Ed.), thanks Michelle!

Tony Boddy VK6DQ

Finally the NCRG, where there has been a hive of activity of late.

NCRG

We have had several working bees, the results of which are the towers are now ALL cabled afresh, professional earthing systems have been installed on every tower and other locations throughout the club, thanks to the efforts of Stu VK6BG.

Mel VK6TVA and Tim VK6EI with assistance, have installed several security cameras, monitoring systems, improved our alarm system and installed a nice overhead projector in the meeting room for presentations etc. and watching the cricket :)

The club has also received a considerable amount of LDF 450, 550 and 750 coax cable, so many VHF and up projects will benefit from this in the future.

Progress is continuing on our remote station operation with a Stepplr DB18e antenna and a controllable rotator now at the club, and other aspects of this remote Station project coming together steadily. Hopefully members who cannot put up antennas or those in retirement villages etc. will soon be able to operate a full station based at the club from the comfort of their lounge chairs at home.

We also had a working session at the club to build some excellent Anderson break out power boxes thanks to Wayne VK6EH and his hard work in gathering the required bits and pieces for us to assemble together.

Well I'd better stop there and wish you all health, wealth and happiness and plenty of DX!

May you get those projects finished this year at last :)

73

Keith VK6RK

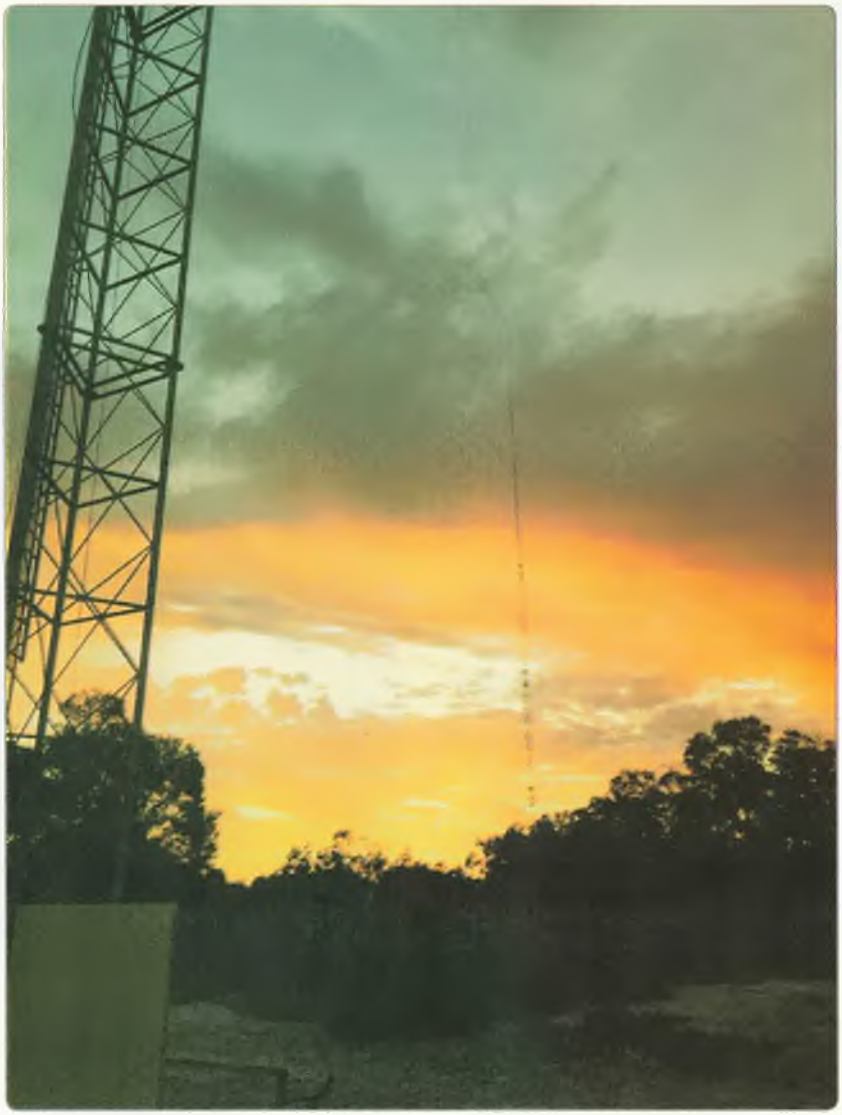


Photo 2: NCRG sunset.

Plan Ahead

John Moyle Field Day | 19 - 20 March 2016

VK7news

Justin Giles-Clark VK7TW
e *vk7tw@wia.org.au*
w *groups.yahoo.com/group/vk7regionalnews/*

Interference reports: NBN equipment

Reports are coming through of interference from NBN Fixed Wireless equipment on the MW AM broadcast and amateur HF bands. There are at least two amateurs in Southern VK7 who are experiencing severe broad S9 +60 db noise interference from NBN Fixed Wireless Outdoor Unit (ODU) equipment manufactured by Netcomm.

In tests the ODU has been disconnected from the Network Termination Device (NTD) which uses Power over Ethernet to power the ODU and the interference disappears. The equipment has been replaced, however the noise remains.

The interference appears to have been created by an ODU firmware update from Version 1 to Version 2. Version 1 firmware does not cause detectable interference. The interference has been reported to the ACMA and Netcomm. Watch this space.

VK7 SOTA milestone

Congratulations to Steve VK7CW, who is the first to attain Shack Sloth status in VK7. This occurred on the 28 November 2015 and reached 1004 chaser points with a contact with Compton VK2HRX who was on summit Mt Bindo which is VK2/CT-003 on 20 m SSB.

The UTC year changeover went well in VK7 with many stations and summits activated and on a personal level it was great to work VK7 summit to VK7 summit.

Many thanks to all who participated.

Photo 1: Author "selfie" on VK7/SC-002 Collins Bonnet during UTC year change over.

Cradle Coast Amateur Radio Club

The Cradle Coast Amateur Radio Club held a General Meeting on 28 November 2015 and elected a new committee following the resignation of the previous committee. The new committee is President David Spicer VK7EX, Vice President Marlene Gardiner VK7FX, Secretary and Public Officer Vernon French VK7VF and Committee Person John Klop. Treasurer Dick Whatley VK7EZ remains as Treasurer. The committee is working on getting repeater VK7RMD back on air and looking for a new location for club meetings.

North West Training News

Congratulations to Tracey VK7FTLH and Kirsty VK7FKKK who both passed their Foundation licence assessment prior to Christmas 2015 and we look forward to hearing you on the air in 2016. Thanks to Tony VK7AX for assisting in the assessment process throughout the past year. Training sessions will be held in 2016 and anyone in the North West wishing to sit for a licence or undergo training for any class of licence are encouraged to contact David VK7DC by email *vk7dc@wia.org.au*

Northern Tasmanian Amateur Radio Club

Congratulations to Andrew VK7FADW and Pat VK7FPLT who both passed their Foundation licence assessments in December and we look forward to hearing them on the air in 2016. In December 2015, NTARC provided safety communications for the 2015

Tasmanian Equine Endurance Rider Association's State Championships at Sassafras. 39 riders started the 160 km ride and a further 49 started the 95 km ride. The newly fitted out NTARC Communications Trailer was used and provided a great operating base. Particular notice and praise was given to the RFID tracking system by the Chief Steward along with praise from the New Zealand competitors.

The NTARC Christmas party was held over four days at Myrtle Park just outside Launceston. This venue caters for all - campers, day-trippers and "slippery trout" devotees! The Saturday night was the big night with BBQ, entertainment and much enjoyment. Thanks to Kay xyl VK7KPC, Lyn VK7FROG, Lorraine xyl of VK7KTN and member Meg; it was an absolute feast! Even Santa made an appearance (aka Brendan VK7VIP) and even Brendan's guitar had a good work-out that night. Unfortunately the "slippery trout" was exactly that..... slippery and no one caught a trout, even Joe VK7JG! A fantastic event and a fitting end to 2015 for NTARC.

Radio and Electronics Association of Southern Tasmania

REAST wrapped-up the year with a BBQ and show and tell session with some interesting items including VK7RO's small steam engine, VK7TW brought along a copperhead snake skin from a recent SOTA activation and Skywave Linux with an RTL DVB-T dongle and VK7MO brought along a Chinese GPS Disciplined Oscillator.

Rex VK7MO has been encouraging an active group of 23 cm enthusiasts each Sunday morning after the VK7 Regional News broadcast. There have been regular 23 cm QSO parties involving up to nine stations. This group has experimented with a control station on Mt Wellington and then scattering a signal off the Organ Pipes on Mt Wellington around greater Hobart with both FM and SSB contacts.

Photo 2: L to R: Peter VK7KPC and Roger VK7ARN at Equine Endurance Checkpoint. (Photo courtesy of Roger VK7ARN.)

Photo 3: Chinese GPS Disciplined Oscillator Unit for narrow band weak signal work. (Photo courtesy of Justin VK7TW.)

Photo 4: L to R: Garry VK7JGD, Peter VK7TPE, Justin VK7TW, Chris VK7FCDW and Roger VK7ARN at Spion Kop Radio Base. (Photo courtesy of Chris, VK7FCDW.)

Joe VK7JG in Launceston has also been making regular contact North-South. Rex VK7MO is also running antenna building workshops for a 23 cm Yagi design. Rex reported some interesting 2 metre Sporadic E opening between Hobart to ZL and VK5 just before Christmas. Rex worked eight ZLs who were 5/9+ and then worked VK5s who were also 5/9+.

Our DATV Experimenter's nights have been very popular over the Christmas break with huge show and tell and video sessions. A steam engine night thanks to VK7BEN, VK7ZL, VK7KAJ & VK7TW and VK7OO with his crab walking strandbeest model. 23 cm antennas and rigs thanks VK7MO and VK7ZMS. VK7ZL and VK2DDI gave us the "what three words" website where the globe has been mapped in 3x3 m squares and each square has a unique three word combination. We focused in on the clubrooms and it was the words "thinkers.transmit.almost" which the studio audience thought was very apt! We also covered Peltier devices, calculators, slide rules and VK7WN's biolite camp stove complete with smartphone charging peltier/seebeck device. A regular feature is the Pico balloon update thanks to VK3YT, using CCTV cameras, IRLP node changes and an Aircraft Scatter article on the HackaDay.com website thanks to VK7MO and VK3HZ. Our videos were many and varied from the interweb including from the RSGB, TX factor, Ham Sandwich and 9V1YC DXpedition videos.

WICEN Tasmania (South)

Late in November 2015, WICEN Tasmania South members Peter VK7TPE, Garry VK7JGD, Roger VK7ARN, Chris VK7FCDW and the author helped the Tasmanian Scouting movement under the direction of Peter VK7KPC provide radio communications for their annual Sir Ernest Clark Trophy – a competition testing Scouting skills. Thirteen patrols of Scouts walked between twelve widespread activity nodes and were tested in three areas of knowledge or skill including overnight camping competency.

WICEN personnel collected and relayed results back to base through a combination of UHF CB and 2 m frequencies. At base was Scout Lachlan VK7FJLH and Scout Leader Dale VK7FNED (also a WICEN member) who recorded and passed them to the results team. It was a full weekend with three radio channels going from dawn till dusk and was great fun!

Silent Key

Roger Hall VK7ALA

It is with sadness that we inform you that Roger Hall VK7ALA became Silent Key on 22 December 2015. Our sincere condolences to family and friends.

Vale Roger.

Chris VK7HCH.

ALARA

Christine Taylor VK5CTY – Publicity Officer

The December luncheon in Adelaide was held at Tea Tree Plaza (TTP) as part of a trial to move the luncheon venues to different parts of the city to make it a little easier for some of the more remote YLs to attend.

To reach TTP from the city, we travelled on the O-Bahn busway. This is unique. The design originated in Germany where they built a 1 km length as a demonstration, but Adelaide is the only city in the World that has a working O-Bahn. It is now over 20 years old and still as good as it ever was. The idea is that a bus with normal road wheels can enter a concrete "roadway" where it is guided by having small wheels projecting from the sides of the wheel arches that guide the vehicle smoothly at up to 100 km/hr along the exclusive busway.

We had to catch the bus in the city in the normal way, then just outside the actual city the bus went down through a short tunnel and onto the busway after which it sped up to the 100 km/hr. There are only two stopping places between that tunnel and TTP, at the Klemzig and the Paradise Exchanges. Some buses using the O-Bahn divert at one or the other of the exchanges, onto local roads to serve people in the areas, our bus kept going to the end at TTP. The whole journey from the City to Tea Tree Plaza took 14 minutes (in a car it can take from 45 minutes to an hour).

Travelling on the busway is as smooth as travelling in a train and there is no sensation of speed at all. An interesting trip.

Marilyn's noise blanker and antenna switching system

Further to the magnetic loop we showed a couple of months ago, here are some photos of the noise blanker Geoff VK5ACZ has made to combat the astonishingly bad radio noise in that area. As you can see

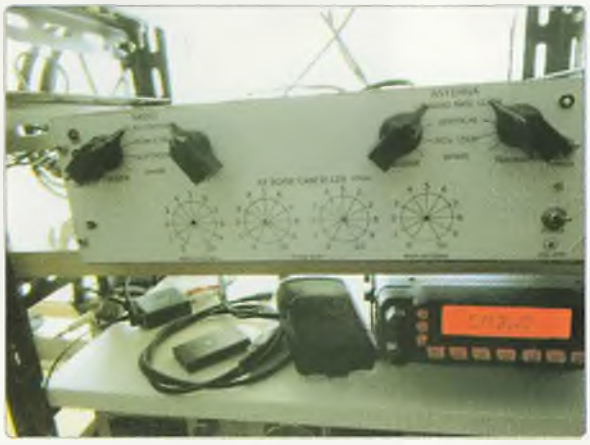


Photo 1: The noise blanker and the antenna switching system.

each individual section of the bands can be tuned out separately. And, just to round out the set-up here is the vertical row of aerial plugging

Photo 2: Vertical plugging system.

points as the particular antenna is in use. The intention is to eventually have both noise blanker and antenna switching in system the same box but that is a later step.

VK3

Well a very Happy New Year to you all and I hope Santa gave you all lots of radios.

We have been away on a Christmas and New Year cruise - more of that in the next newsletter.

On Friday 20th November we travelled up to Bendigo for the

Photo 3: Santa on a Cruise ship.

memorial service of George Loft VK3AGM (SK).

Whilst in Bendigo we were invited to the home of Heidi VK3FHID for a cuppa, and also caught up with Monica VK3FMON and her little dog Chloe.

On Friday Evening we attended the meeting of the Bendigo Radio Club and caught up with Barbara VK3FJBD and Lyn VK3FNLO at the club. Unfortunately my OM John was taken unwell and we had to leave early, and next morning made a dash back to Melbourne where John was admitted to hospital and spent the next week there.

Hopefully he is now on the mend.

On Saturday 28th November we set off for Sunbury for our ALARA Christmas break up lunch where about 19 ALARA members and OMs attended. We had our Kris Kringle, I made the Ginger Ale fruit cake with a Merry Christmas on it.

I would like to thank Jenny VK3WQ, for suggesting the Olive Tree Hotel where everybody had a great time. Welcome to ALARA to Monique VK6FMON, who signed up at the event.

On Sunday 29th November Mum, John and I headed down to Rosebud for the annual Hamfest. We had a very busy day with new members from New South Wales signing up and also a lot of current members paying their fees for the next year.

We had just an hour's rest before we headed out again to catch up with our daughter Sarah and our two grandsons, who were down from Queensland.

That's all for now.

73 33 88 Jean VK3VIP

Photo 5: The ALARA and friends group who enjoyed lunch.

Other news

ALARA station on EchoLink is now available for Monday Net sessions. These occur on the first Monday of the month and will be on the third Monday of the month from 15th February 2015. Please join us.

ALARA has YL members across Australia and DX YLs around the world. Further information can be found at *alara.org.au*

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Christine VK3CTY

Photo 6: The ALARA group at the Rosebud Hamfest.

Promote our hobby

Have you considered using your unwanted *Amateur Radio* magazine to promote the hobby and the WIA?

Consider taking it to the office of the your local health professional (doctor, dentist, etc.).

You never know, **you might stimulate someone** to consider taking up our hobby!

VHF/UHF - An Expanding World

David K Minchin VK5KK

Photo 1: Cape Reinga ZL1 to VK4 path with sea view on the horizon.

Introduction

Well one could say it has been a long time between drinks!

Firstly I would like to personally thank David Smith VK3HZ for running the VHF/UHF An Expanding World column for the past (nearly) 13 years. His communication and promotion of what (arguably) is the pointier end of amateur radio activity via this column has been well appreciated. I caught up with David at Mt Dandenong post-Christmas whilst I was doing some 24/47 & 76 GHz tests with Alan VK3XPD. It was great to share thoughts and experiences.

Things have changed greatly in the past decade with a rejuvenation of activity through new digital/technical modes, better knowledge and equipment. The re-emergence of what I call the "Cottage" amateur industry (globally) now provides an almost endless source of projects with which to be involved. The Internet has helped immensely. Whilst this resource has been with us for 20 or more years now, the recent growth in project activity is now almost exponential.

I've had the opportunity to get across a number of emerging technologies and have been involved presenting a few times both here and O/S. SDR is one example, how that can be used with Digital modes has become a hot topic. The challenge of extending tropospheric paths and mm Wave operation are my passions also so they will also get a fair bash from time to time!

New 10 GHz World Record

Nothing like opening the column up with a New World Record! Rex VK7MO and Derek VK6DZ have extended their world record set early last year during the January 7th to 10th Tropo opening across

Photo 2: GARC club technical night modifying 3400 MHz transverters.

the Great Australian Bight. After a late start to the Tropo season this opening was equal to (or slightly better) to those previously experienced in 2013/2014/2015.

Rex Moncur VK7MO reports:

"On 8 January 2016 at 1129 UTC VK6DZ worked VK7MO on JT4f over a 2796 km path which extended their existing 10 GHz World Record of 2732 km made on 5 January 2015 by some 64 km. VK5KK at PF95hx also worked VK6DZ on JT4f over a 1986 km path at the same time. Spreading was extremely narrow such that the JT65a mode was also successfully used allowing signals as low as -30 dB to be decoded. Signals were decodable for some 4 hours and faded gradually over this period from typically around -15 dB to around -28 dB at the VK7MO end and suggesting that propagation may have been better prior to the tests. SSB was not attempted due to the low signal strength.

Equipment used VK7MO 50 watts to a 77 cm dish, VK6DZ 10 watts to a 60 cm dish and VK5KK 7 watts to a 90 cm dish. All stations were fully GPS locked.

This is the same equipment as used for the earlier World record on 5 January 2015. VK7MO operated from the same location at Cape Portland in North East Tasmania as for the previous World record on 5 January 2015 while VK6DZ moved some 64 km further west to Peaceful Bay."

On the first attempt to extend the record to Peaceful Bay (February 11th 2015), whilst Rex and Derek were not successful; VK5KK worked both Rex (1050 km) and Derek on 10 GHz (1986 km) over several hours. Given the angular displacement to VK6 and VK7 from Adelaide, it just demonstrates how dynamic the Bight path can be.

From the VK5KK end this opening was probably the best of the seven openings in the past few years on 10 GHz to VK6 but still under the level of the 1994 opening. Signals from VK6DZ at one point reached -6 dB on JT65a and -16 dB when Derek was aimed at Rex! At one point signals were good enough for SSB but the rapid 2-second cycle of QSB (15-20 dB) makes it difficult.

Working the Bight path on 10 GHz is a buzz, we now know so much more about this mode of propagation from this first worked on 10 GHz by VK5NY and VK6KZ in 1994. So what is the next step?

2400 MHz to ZL

Without starting any (much!) debate on the effects of the current El Nino conditions reported in the Pacific region, one cannot pass the significant VK-ZL Tropo events that occurred from October to December 2015. At the same time the Great Australian Bight path recorded virtually nil openings from the two that occurred in the first week of October until 21st December! Stephen ZL1TPH reports his portable activation to Cape Reinga during the VHF and microwave band tropospheric opening occurred to VK4 late 2015:

"On Saturday the 21 November 2015 I activated RF65jm in the far north of New Zealand. This necessitated loading up 144, 432, 1296 MHz and 2.4 GHz radio gear on the Thursday prior, then driving north to Kaitaia on the Friday and

he last leg to Cape Reinga early Saturday morning.

Once setup on site the VHF bands were open to VK4. Predicting an opening three or so days ahead s relatively easy with experience and use of propagation charts - but in saying that it always risky when dealing with the weather and ropospheric ducting is formed by weather patterns.

As the morning progressed n the log VK4FSCC, VK4BOO, /K4ADM, VK4NWH, VK2WDD, /K4VDX, VK4OX, VK4REX, VK4CZ and VK4FLR on the 2 metre band. Frank VK4FLR is around 450 km north of Brisbane and was the most northern station worked at 2469 km. Up at Cape Reinga, it is closer to Brisbane than realised at around 2050 km, whereas down in Auckland it is circa 2200 km.

On 70 cm in the log were /K4VDX, VK4OX, VK4REX and /K4CZ, Scott VK4CZ had only 10 watts at the time and was easy copy, the others were S9. The 70 cm band for many years has been a good indicator of the intensity of a propagation duct along with entry evel to the duct. In other words f you can't work them on 70 cm ou won't work them on the higher bands above.

In the log on 23 cm or 1296 MHz were VK4AFL, VK4REX and VK4CZ all circa 2050 km. Signal strengths varied with these three stations in order from S1 to S5 depending upon their elevation and site and all three were running high performance 23 cm stations. VK4CZ was the strongest so we decided to test the path on 2.4 GHz.

With initial tests on 2403 MHz or 2.4 GHz nothing was heard. Up at Cape Reinga I was plagued with high winds and dish movement which did not help. Once dish alignment was secure, we heard Scott VK4CZ with his CW indent and SSB with ease at around S2 with surprisingly little QSB as commonly evident. Sadly no two-way contact eventuated due to equipment failure at my end.

However this records the third VK to ZL Tasman crossing on 2.4 GHz, it was set prior by Adrian VK4OX and John VK4JMC back in January 2011. It also establishes that the higher bands are open more than is realised."

Watch this path! With what we know about the mode of propagation (from the Bight duct experiences) clearly there is clearly room to work further and higher in frequency. There is nothing better than a challenge like this to promote microwave operation between VK2, 3 & 4 and ZL. To that point I am happy to promote via this column to communicate any activity towards achieving this.

Summer Field Day DX

The Summer Field Day has been and gone (just!). This time around some good propagation (both Es & Tropo) coincided with the event providing some long distance contacts to boost Division 2 scores. The Tropo enhancement across the Bight that provided 10 GHz contacts the night before "peaked" the next day. Lou Blasco VK3ALB reports:

"Don't often get excited about DX contacts but these were two personal bests for me. Late on Saturday evening our field day team started hearing comments on the air about a VK6 being active on 70 cm. It wasn't long before we found Rob VK6LD working a small pileup of VK3s and VK5s and a little while later I was able to work Rob on both 2 m and 70 cm. The signal strength of the contact was an amazing S9 for both bands. With whoops and cheers from the rest of the team these 2333 km contacts were gratefully entered in the log.

09-Jan-16 12:00 VK3ALB/P >> VK6LD/P in OF84XX on 144.140 SSB 59 > QF11VS @ 2333.6 km 271

09-Jan-16 11:59 VK3ALB/P >> VK6LD/P in OF84XX on 432.150 SSB 59 > QF11VS @ 2333.6 km 271

3.4 GHz QSO Party!

The Geelong Amateur Radio club will be holding a 3.4 GHz "QSO Party" on Sunday 21st February 2016. The club will field a number of 3.4 GHz capable stations on hilltops and high spots around the Geelong area and invites all those with 3.4 GHz equipment to join in. A parallel QSO Party will run in the Adelaide area by EARC club members at the same time.

The Geelong club has sold over 120 VCOM 3.5 GHz transceiver panels in the last year, this activity is aimed to promote the conversion and get as many as possible on air. When converted, the units output around 1 Watt into their 16 dBi antenna and have a decent receive noise figure so with a good take off it should be possible to make contacts out past 100 km. For more information on the panel conversion please go to the Geelong AR club website.

The QSO Party will start at 10 am AEST (2300 UTC) on 21/2/2016 and run for 2 hours till Noon. Tune 3400.100 MHz and downwards for SSB or CW contacts. Tune 3400.200 and upwards for FM contacts. For the VK3 party, locate yourself on a good vantage point with a clear path towards Geelong. Liaison will be via the VK3RGL repeater on 147.000 MHz (91.5 Hz tone). The VK5 QSO party will run in the Adelaide area, liaison via the VK5RAD repeater on 439.925 MHz.

DXCC on 144 MHz

Wayne VK5APN has advised he has achieved DXCC status on 144 MHz. QSL Cards have now been verified, the current tally is actually 101 confirmed and verified out of 108 worked. This has taken nearly six years to achieve.

Wayne is the third VK to achieve a DXCC on 144 MHz on EME. What makes his a little different is that a significant number of these countries have been worked whilst portable activating many Grid squares in VK2, 3, 5 and 8 on EME.

Photo 3: Keith VK5AKM's garage and tower after the Pinery Fire.

Many of these QSOs are with just a single Yagi with some ground gain advantage. Congratulations and well done Wayne!

SA fires

The current spate of fires in VK2, VK3, VK5 and VK6 has taken their toll on families and communities. Along with floods and droughts, an unavoidable almost cyclic reality in this country. Locally the "Pinery" fires in SA late November 2015 impacted 85,000 hectares of mostly agricultural area just 70 km north of Adelaide. The speed at which such a large area was devastated over six hours is incomprehensible. There has not been a fire in this area in the 170 years of European history. The first class warnings and emergency services/support are to be commended in saving many lives.

Caught up in the middle of this was one amateur, Keith VK5AKM (ex VK5ZMK from the 1960s), aka father of VK5KK. The property was extensively (98%) burnt with plant, shed, crop and fences lost. Keith stayed to defend and managed to save the house and one shed with what water was on hand. Just how close it got to the house can be seen in the photo of what is left of the garage and the black marks up the side on one of tower with some of the microwave antenna. Some of the coax on that tower didn't fair very well! All are well but as always it will be a long journey to rebuild.

Need a 50 MHz contributor!!

Apologies for no 50 MHz content this time around. I am not currently active on 50 MHz (as I was in the 70/80s!), so I seek contributions or even better someone to manage/report on this part of the spectrum. I keep seeing posts on "the cycle that wasn't" and so forth but also how digital modes have extended the boundaries (as has happened higher in frequency), so let's hear all about it!

In closing

I can only hope to continue the standard that has already been set in this column. The formulae won't change, this is the open forum where the VHF and above communities can contribute. What I hope to do, over time, is introduce some new and/or emerging technologies of interest as well as throw down the good ole odd challenge or two. Over to you!!

David VK5KK

WIA **2016** Callbook

Available now

VK2news Waverley Amateur Radio Society

Laurie Gordon VK2GZ

A smaller Sydney Ferry passing the Sydney Opera House.

Sydney Amateur Radio Ferry Contest - a unique new event

Waverley Amateur Radio Society is proud to announce a unique new contest which aims to bring amateurs together on Sydney's world-famous harbour and its historic ferry service.

The date is Sunday 13 March, 2016 and the object will be to make as many contacts as possible, afloat from the ferries or from any of the system's 36 wharves. Operation will be restricted to VHF and UHF bands, any mode, simplex or through repeater using hand-held transceivers.

A scoring system will encourage operators to visit as many wharves and travel on as many ferries as possible in a six-hour period.

As points will be claimed per location/contact rather than distance and with no advantage for high power or digital modes, all classes of licensees, including Foundation, can compete equally.

Many parts of the harbour are within range of several repeaters, with plenty of scope for simplex operation ferry-to-ferry or wharf-to ferry.

There will be a number of awards for achieving goals such as Worked All Ferries, as well as for highest number of points achieved.

Home and mobile operators will also be able to take part by contacting amateurs riding the ferries or activating wharves.

It is hoped that if successful, this inaugural event may become part of the regular amateur radio contest calendar.

Since its formation in 1919, WARS has had a long association with central Sydney and the harbour. Many of our diverse member base lives and works around the harbour and regularly use the ferry service to travel for business and leisure.

With its headquarters at Rose Bay, just a few metres from the harbour itself, the club is well-positioned to host this exciting event.

As the special Sunday fare allows you to travel all day for just $2.50, the club is hoping that the contest will attract a good number of participants for an exciting and enjoyable day out on one of the world's most beautiful harbours.

Further details will be added to the club's Ferry Contest page which can be found at: *http://vk2bv.org/home/general-information/club-activities/ferry-contest/*

73

Laurie Gordon VK2GZ

Can you contribute?

Our **SWL** and **Contests** contributors have retired.

Our DX News columnist appears to be missing in action....

Are you able to put together regular contributions on these subjects, or on a topic not already covered in the magazine?

Please read the information on how to contribute (*http://www.wia.org.au/members/armag/contributing/*) and then send an expression of interest outlining your interest to: *armag@wia.org.au*

Guy Fletcher Gridsquares Table at 13 December 2015

David Smith VK3HZ

144 MHz	Terrestrial		
VK2FLR	Mike	120	
VK3NX	Charlie	109	
VK2KU	Guy	102	
VK3HZ	David	93	
VK3PF	Peter	90	
VK2ZT	Steve	88	SSB
VK5AKK	Phil	88	SSB
VK3PY	Chas	82	SSB
VK2DVZ	Ross	80	SSB
VK2ZAB	Gordon	78	SSB
VK3BDL	Mike	77	SSB
VK2AMS	Mark	75	
VK3BJM	Barry	70	SSB
VK3QM	David	69	SSB
VK7MO	Rex	69	
VK3AKK	Ken	64	SSB
VK3HY	Gavin	63	
VK2TK	John	62	
VK3WRE	Ralph	60	SSB
VK3PF	Peter	56	SSB
VK3KH	Michael	55	SSB
VK4CDI	Phil	53	
VK2MER	Kirk	52	SSB
VK3ZLS	Les	51	SSB
VK7MO	Rex	49	SSB
VK4CDI	Phil	48	SSB
VK7MO	Rex	48	Digi
ZL3TY	Bob	46	
VK4VU	Rod	43	
VK2TG	Bob	40	SSB
VK3EJ	Gordon	40	SSB
VK3PF	Peter	40	Digi
VK3UH	Ken	40	
VK2TK	John	35	SSB
VK3ZUX	Denis	33	SSB
VK3DXE	Alan	32	
VK1DA/p	Andrew	31	
VK3DXE	Alan	31	SSB
VK3AV	Bernard	30	SSB
VK2TK	John	27	Digi
VK3KH	Michael	26	Digi
VK4CDI	Phil	26	Digi
VK3ES	Andy	24	SSB
VK4EME	Allan	23	
VK3ALB/p	GARC	22	SSB
VK2DVZ	Ross	21	Digi
VK6KZ	Wally	20	
VK2ZT	Steve	19	Digi
VK4EME	Allan	19	SSB
VK3AL	Alan	18	SSB
VK2AMS	Mark	16	Digi
VK6KZ/p	Wally	16	
ZL3TY	Bob	15	Digi
VK4EME	Allan	13	Digi
ZL1UJG	Kevin	10	Digi
VK3MEG	Steve	9	SSB
ZL3TY	Bob	7	CW
VK3DXE	Alan	5	Digi
VK4KJJ	Geoff	5	SSB
ZL1UJG	Kevin	5	SSB
VK3DXE	Alan	4	CW
VK4QG	Allan	4	SSB
VK4QG	Allan	3	Digi
VK3QM	David	1	Digi

144 MHz	EME		
VK2KU	Guy	494	
VK2KU	Guy	480	Digi
ZL3TY	Bob	424	
VK3AXH	Ian	390	Digi
VK4CDI	Phil	360	Digi
VK7MO	Rex	157	Digi
VK3BJM	Barry	152	Digi
VK2DVZ	Ross	127	Digi
VK2FLR	Mike	120	
VK3KH	Michael	62	Digi
VK2KU	Guy	44	CW
VK2ZT	Steve	28	Digi
VK3HZ	David	19	
VK3DXE	Alan	16	Digi
VK3NX	Charlie	5	CW
VK4EME	Allan	5	Digi
VK3AXH	Ian	4	CW
VK2DVZ	Ross	2	CW
VK3AXH	Ian	1	SSB

432 MHz	Terrestrial		
VK2ZAB	Gordon	57	SSB
VK3PY	Chas	53	SSB
VK3QM	David	52	SSB
VK3NX	Charlie	50	SSB
VK3HZ	David	42	
VK5AKK	Phil	41	SSB
VK3ZLS	Les	40	SSB
VK2ZT	Steve	39	SSB
VK3BJM	Barry	39	SSB
VK2KU	Guy	38	
VK3BDL	Mike	37	SSB
VK3AKK	Ken	36	SSB
VK2DVZ	Ross	35	SSB
VK3WRE	Ralph	34	SSB
VK3PF	Peter	32	
VK3PF	Peter	30	SSB
VK1DA/p	Andrew	24	
VK3KH	Michael	22	SSB
VK7MO	Rex	22	
VK3ES	Andy	21	SSB
VK7MO	Rex	21	SSB
VK2AMS	Mark	20	
VK4CDI	Phil	19	
VK2TK	John	18	
VK3ALB/p	GARC	18	SSB
VK3HY	Gavin	18	
VK4CDI	Phil	18	SSB
VK2TK	John	17	SSB
VK3AV	Bernard	16	SSB
VK3ZUX	Denis	15	SSB
VK4VU	Rod	15	
VK2MER	Kirk	13	SSB
VK6KZ	Wally	13	
VK2TG	Bob	12	SSB
VK3AL	Alan	10	SSB
VK3KH	Michael	8	Digi
VK3UH	Ken	8	
VK4CDI	Phil	8	Digi
VK6KZ/p	Wally	8	
VK7MO	Rex	8	Digi
ZL3TY	Bob	8	
VK2DVZ	Ross	7	Digi
VK4EME	Allan	6	SSB
VK2ZT	Steve	4	Digi
VK3PF	Peter	4	Digi
VK3PY	Chas	4	Digi

VK3QM	David	4	Digi
VK2AMS	Mark	3	Digi
VK3DXE	Alan	3	SSB
VK3MEG	Steve	3	SSB
VK4QG	Allan	3	SSB
VK4KJJ	Geoff	2	SSB
VK2TK	John	1	Digi
VK4QG	Allan	1	Digi

432 MHz EME			
VK4EME	Allan	103	
VK4EME	Allan	92	Digi
VK4CDI	Phil	63	
VK4CDI	Phil	62	Digi
VK4EME	Allan	13	CW
VK7MO	Rex	10	
VK7MO	Rex	9	Digi
VK3NX	Charlie	5	CW
VK3AXH	Ian	4	Digi
VK3HZ	David	4	
VK3KH	Michael	3	Digi
VK3NX	Charlie	3	Digi
VK2ZT	Steve	2	Digi
ZL3TY	Bob	2	Digi
VK4CDI	Phil	1	CW

1296 MHz Terrestrial			
VK3PY	Chas	42	SSB
VK3QM	David	42	SSB
VK3NX	Charlie	40	SSB
VK3AKK	Ken	30	SSB
VK2ZAB	Gordon	29	SSB
VK2DVZ	Ross	27	SSB
VK3ZLS	Les	26	SSB
VK5AKK	Phil	26	SSB
VK2KU	Guy	25	
VK3BJM	Barry	23	SSB
VK3PF	Peter	22	
VK3BDL	Mike	21	SSB
VK3WRE	Ralph	21	SSB
VK3PF	Peter	20	SSB
VK3HZ	David	19	
VK3KWA	John	19	
VK3KH	Michael	17	SSB
VK2ZT	Steve	16	SSB
VK3ALB/p	GARC	16	SSB
VK3ES	Andy	13	SSB
VK4VU	Rod	12	
VK7MO	Rex	12	SSB
VK1DA/p	Andrew	10	
VK2TK	John	10	SSB
VK2AMS	Mark	9	
VK3HY	Gavin	8	
VK3AL	Alan	7	SSB

VK3UH	Ken	7	
VK2MER	Kirk	6	SSB
VK2DVZ	Ross	5	Digi
VK3AV	Bernard	5	SSB
VK3ZUX	Denis	5	SSB
VK4CDI	Phil	5	
VK4CDI	Phil	5	SSB
VK6KZ/p	Wally	5	
VK3KH	Michael	4	Digi
VK6KZ	Wally	4	
VK2TG	Bob	3	SSB
VK4EME	Allan	3	SSB
VK7MO	Rex	3	Digi
VK3PF	Peter	2	Digi
VK3QM	David	2	Digi
VK4CDI	Phil	2	Digi
VK4KJJ	Geoff	2	SSB
VK2ZT	Steve	1	Digi
ZL3TY	Bob	1	SSB

1296 MHz EME			
VK4CDI	Phil	128	
VK4CDI	Phil	117	Digi
VK3NX	Charlie	77	
VK3NX	Charlie	75	CW
VK4CDI	Phil	45	CW
VK2AMS	Mark	44	Digi
VK7MO	Rex	41	
VK3AXH	Ian	39	Digi
VK2DVZ	Ross	37	Digi
VK7MO	Rex	36	Digi
VK3WRE	Ralph	8	Digi
VK3NX	Charlie	5	SSB
VK4CDI	Phil	5	SSB
VK3NX	Charlie	4	Digi
VK2MER	Kirk	3	Digi
VK3AXH	Ian	3	CW
VK2AMS	Mark	2	SSB
VK2DVZ	Ross	1	SSB
VK3AXH	Ian	1	SSB

2.4 GHz Terrestrial			
VK3PY	Chas	31	SSB
VK3QM	David	31	SSB
VK3AKK	Ken	29	SSB
VK3NX	Charlie	29	SSB
VK3WRE	Ralph	12	SSB
VK3ES	Andy	8	SSB
VK3ALB/p	GARC	7	SSB
VK3BJM	Barry	7	SSB
VK3PF	Peter	7	SSB
VK3KH	Michael	6	SSB
VK3HZ	David	5	
VK3HY	Gavin	4	

VK4VU	Rod	4	
VK6KZ	Wally	4	
VK3KH	Michael	3	Digi
VK3ZUX	Denis	3	SSB
VK1DA/p	Andrew	2	
VK2AMS	Mark	2	
VK3PF	Peter	2	Digi
VK2DVZ	Ross	1	SSB
VK4EME	Allan	1	SSB

2.4 GHz EME			
VK3NX	Charlie	50	CW
VK7MO	Rex	14	
VK7MO	Rex	10	Digi
VK3NX	Charlie	8	SSB

3.4 GHz Terrestrial			
VK3QM	David	28	SSB
VK3AKK	Ken	28	SSB
VK3NX	Charlie	27	SSB
VK3PY	Chas	27	SSB
VK3WRE	Ralph	8	SSB
VK3PF	Peter	6	SSB
VK6KZ	Wally	4	
VK2AMS	Mark	3	
VK4CDI	Phil	3	SSB
VK4VU	Rod	2	
VK2AMS	Mark	1	Digi
VK2EM	Bruce	1	SSB

3.4 GHz EME			
VK3NX	Charlie	33	CW
VK4CDI	Phil	17	
VK4CDI	Phil	15	CW
VK3NX	Charlie	8	SSB
VK4CDI	Phil	5	Digi
VK3NX	Charlie	3	Digi

5.7 GHz Terrestrial			
VK3PY	Chas	28	SSB
VK3QM	David	28	SSB
VK3AKK	Ken	27	SSB
VK3NX	Charlie	26	SSB
VK3WRE	Ralph	9	SSB
VK3PF	Peter	7	SSB
VK3ALB/p	GARC	6	SSB
VK3KH	Michael	4	SSB
VK6KZ	Wally	4	
VK2AMS	Mark	2	
VK3BJM	Barry	2	SSB
VK3PF	Peter	2	Digi
VK3ZUX	Denis	1	SSB

5.7 GHz EME			
VK3NX	Charlie	42	CW
VK3NX	Charlie	5	SSB
VK3NX	Charlie	1	Digi

10 GHz Terrestrial			
VK3HZ	David	82	
VK3HZ	David	41	SSB
VK3NX	Charlie	33	SSB
VK3PY	Chas	31	SSB
VK3QM	David	30	SSB
VK3AKK	Ken	29	SSB
VK6DZ	Derek	25	Digi
VK3HY	Gavin	16	
VK3PF	Peter	13	SSB
VK3WRE	Ralph	12	SSB
VK6DZ	Derek	12	SSB
VK3ES	Andy	10	SSB
VK3ALB/p	GARC	7	SSB
VK7MO	Rex	7	
VK3KH	Michael	6	SSB
VK7MO	Rex	6	SSB
VK6KZ	Wally	5	
VK2AMS	Mark	3	
VK2EM	Bruce	3	SSB
VK3KH	Michael	3	Digi
VK4KJJ	Geoff	3	SSB
VK1DA/p	Andrew	2	
VK2ZRH	Roger	2	SSB
VK3BJM	Barry	2	SSB
VK3NX	Charlie	2	Digi
VK3UH	Ken	2	
VK3ZUX	Denis	2	SSB
VK7MO	Rex	2	Digi
VK4CDI	Phil	1	SSB
VK4VU	Rod	1	

10 GHz EME			
VK3NX	Charlie	40	
VK3NX	Charlie	38	CW
VK7MO	Rex	9	Digi
VK3NX	Charlie	6	Digi
VK3NX	Charlie	3	SSB

24 GHz Terrestrial			
VK3HZ	David	24	
VK3HZ	David	12	SSB
VK3QM	David	6	SSB
VK3AKK	Ken	5	SSB
VK3NX	Charlie	5	SSB
VK7MO	Rex	3	SSB
VK6KZ	Wally	2	
VK3WRE	Ralph	1	SSB

24 GHz EME			
VK3NX	Charlie	8	
VK3NX	Charlie	6	CW
VK3NX	Charlie	4	Digi
VK7MO	Rex	4	Digi

47 GHz Terrestrial			
VK3AKK	Ken	4	SSB
VK3NX	Charlie	4	SSB
VK3QM	David	4	SSB

76 GHz Terrestrial			
VK3HZ	David	3	SSB
VK3KH	Michael	1	SSB

122 GHz Terrestrial			
VK3KH	Michael	1	SSB

474 THz			
VK3WRE	Ralph	3	AM
VK3HZ	David	2	
VK7MO	Rex	2	
VK7MO	Rex	2	Digi
VK7TW	Justin	2	
VK3QM	David	1	AM
VK7TW	Justin	1	Digi

This Table is managed by David Smith VK3HZ who may be contacted by email at *vk3hz@wia.org.au*

The guidelines for the Table may be found at *www.vk3hz.net/gridsquares*

Next update of this Table will be on **17 April 2016.**

WYONG FIELD DAY

28 FEB 2016

Flea market opens from 6:30 am

Traders & exhibitions 9:00 am

Lectures from 9:00 am

www.fieldday.org.au

John Moyle Field Day Contest 2016

enis Johnstone VK4AE/VK3ZUX

) - 20 March, 2016
100 UTC Sat - 0059 Sun

wish all entrants good luck, and ook forward to hearing some of you ı air during the contest!

N.B. new email address: *ıfd2016@wia.org.au* will be set up ose to the event for entries and ou can check out latest info at *tp://www.wia.org.au/contests/*

verview

The aim is to encourage and provide familiarisation with portable operation, and provide training for emergency situations. The rules are therefore designed to encourage field and portable operation.

The contest takes place on the third full weekend in March each year, and runs from 0100 UTC Saturday to 0059 UTC Sunday, 19 - 20 March, 2016.

The contest is open to all VK, ZL and P2 stations. Other stations are welcome to participate, but can only claim points for contacts with VK, ZL and P2 stations.

Single operator portable entries shall consist of ONE choice from each of the following (e.g. 6 hour, portable, phone, VHF/UHF):

a. 24 or 6 hour;
b. Phone, CW, Digital or All modes;
c. HF, VHF/UHF or All Bands.

Multi-operator portable entries shall consist of ONE choice from each of the following (e.g. 24 hour, portable, phone, VHF/UHF):

a. 24 or 6 hour;
b. Phone, CW, Digital or All modes;
c. HF, VHF/UHF or All Bands.

6. Home and SWL entries shall consist of ONE choice from each of the following (e.g. 24 hour, portable, phone, VHF/UHF):
   a. 24 or 6 hour;
   b. All modes;
   c. HF, VHF/UHF or All Bands.

   Multi operator stations are not permitted in the Home Category.

   If a Home Station works the same station regularly on any band or any mode they should submit their log to verify those contacts. (See sect. 17 below.)

Scoring

7. Portable HF stations shall score 2 points per QSO. CW only contacts to score 4 points per QSO for contacts with either home or portable stations.
8. On VHF/UHF portable stations for Phone and Digital each contact scores 2 points per contact, and CW contacts score 4 points. In addition the VHF/UHF Portable stations shall add a distance score of the following on 6 m:
   a. 0-49 km, 2 points per QSO;
   b. 50-99 km, 5 points per QSO;
   c. 100-149 km, 10 points per QSO;
   d. 150-299 km, 20 points per QSO;
   e. 300-499 km, 30 points per QSO;
   f. 500 km and greater, 2 points per QSO.
9. Portable stations shall add an additional distance score on 144 MHz and higher:
   a. 0 to 49 km, 2 points per QSO;
   b. 50 to 99 km, 5 points per QSO;
   c. 100 to 149 km, 10 points per QSO;
   d. 150 to 299 km, 20 points per QSO;
   e. 300 km and greater, 30 points per QSO.
10. For each VHF/UHF QSO where more than 2 points are claimed, both the latitude and longitude of the station contacted or other satisfactory proof of distance such as the 6-figure Maidenhead Locator must be supplied.
11. Home stations shall score:
    a. Two points per QSO with each portable station.
    b. One point per QSO with other home stations.
    c. For VHF/UHF QSO Home stations shall add as a distance score on 6 m:
       i. 0-49 km, 1 points per QSO;
       ii. 50-99 km, 2 points per QSO;
       iii. 100-149 km, 5 points per QSO;
       iv. 150-299 km, 10 points per QSO;
       v. 300-499 km, 15 points per QSO;
       vi. 500 km and greater, 2 points per QSO.
    d. Home stations shall add as a distance score on 144 MHz and higher:
       i. 0 to 49 km, 1 points per QSO;
       ii. 50 to 99 km, 2 points per QSO;
       iii. 100 to 149 km, 5 points per QSO;
       iv. 150 to 299 km, 10 points per QSO;
       v. 300 km and greater, 15 points per QSO.

Log Submission

12. For each contact: UTC time, frequency, station worked, RST/serial numbers sent/received and claimed score. (VHF and above location of other station

and distance showing the Lat/Long or Maidenhead Locator to 6 figures for the station worked.)

13. All logs must be accompanied by a summary sheet showing: call sign, name, mailing address, section entered, number of contacts, claimed score, location of the station during the contest, and equipment used, and a signed declaration stating *"I hereby declare that this station was operated in accordance with the rules and spirit of the contest and that the contest manager's decision will be accepted as final"*. For multi-operator stations, the full names and all call signs (legible) of all operators must be listed.
14. The email address for this year's JMFD contest should be setup a few days before the contest, and I would suggest to those who will be sending in your Logs electronically, to send in a test email with the words "TEST JMFD 2016", in subject the line and also set the "READ REQUEST RECEIPT" flag. Your call sign can then be added into the database for this year's contest. When actually submitting your log, if you do not receive an e-mail acknowledging receipt, then the log has not been received.
15. Paper logs may be posted to "John Moyle Contest Manager, 27 Laguna Ave, Kirwan 4817 QLD". Alternatively, logs may be e-mailed jmfd2016@wia.org.au, vk4ae@wia.org.au, or snail mailed via the WIA Contest Manager, JMFD, P.O. Box 2042 Bayswater, VIC 3153. Club stations must forward in the first instance an electronic version of their log. Club Stations who submit only a paper log will have that log returned as unreadable, due to the very large amount of work involved in entering and checking large paper logs.
16. The following formats are acceptable: Microsoft Excel or Word, ASCII text or the print log output from electronic log programs such as VK Contest Log (VKCL). Logs sent by disc or e-mail must include a summary sheet and declaration, but the operator's full name (legible) is acceptable in lieu of a signature. Logs must be postmarked no later than 15 April 2015.
17. If any station works the same station multiple times on any band or on any mode, both stations should each enter a log to verify those contacts. This rule was introduced to overcome a problem experienced in previous contests where a portable station worked a significant number of home stations, but those home stations did not enter a log, so there were a very large number of unverifiable contacts.

Certificates and Trophy

18. At the discretion of the Contest Manager, certificates will be awarded to the winners of each portable section. Additional certificates may be awarded where operation merits it. Note that entrants in a 24 hour section are ineligible for awards in a 6 hour section.
19. The Australian WIA Affiliated club station, with the highest overall score will be awarded the President's Cup, a perpetual trophy held at the Executive Office, and will receive an individually inscribed wall plaque as permanent recognition.

Disqualification

20. General WIA contest disqualification criteria, as published in *Amateur Radio* from time to time, applies to entries in this contest. Logs which are illegible or excessively untidy are also liable to be disqualified.

Definitions

21. A portable station comprises field equipment operating from a power source, e.g. batteries, portable generator, solar power, wind power, independent of any permanent facilities, which is not the normal location of any amateur station.
22. All equipment comprising the portable station must be located within an 800 m diameter circle.
23. A single operator station is where one person performs all operating logging, and spotting functions.
24. A single operator may only use a call-sign of which he/she is the official holder. A single operator may not use a call-sign belonging to any group, club or organisation for which he/she is a sponsor except as part of a multi-operator entry.
25. A multi-operator station is where more than one person operates checks for duplicates, keeps the log, performs spotting, etc.
26. A multi-operator station may use only one call sign during the contest.
27. Multi-operator stations may only use one transmitter on each band at any one time, regardless of the mode in use.
28. All stations, both Single and Multi operator stations must submit a separate log for each band.
29. Logs submitted electronically can use a separate Excel worksheet for each band linked to a summary sheet. A typical example is shown at *http://www.wia.org.au/contest* which can be copied and adapted for the individual use of either a single or multi operator station.
30. Any station operated by a club, group, or organisation will be considered to be multi-operator by default.
31. None of the portable field equipment may be erected on the site earlier than 28 hours before the beginning of the contest.
32. Single operator stations may receive moderate assistance prior to and during the contest, except for operating, logging and spotting. The practice of clubs or groups providing massive logistic support to a single operator is, however, totally against the spirit of the contest. Offenders may

be disqualified, and at the discretion of the Contest Director, may be banned from further participation in the contest for a period of up to three years.

33. Phone includes SSB, AM, Simplex FM and Simplex D-STAR.
34. CW includes CW hand or computer generated. Fully automatic CW operation is not permitted. CW contacts will score 4 points for HF and 4 points for VHF & UHF contacts plus the distance points.
35. Digital modes such as PSK31, RTTY, and packet may be used in the contest, but if they are, they shall be classed as Digital. Other modes such as ATV may be used and will be classed as Digital for scoring. Digital contacts will score points at the same rate as Phone.
36. All amateur bands may be used except 10, 18 and 24 MHz. VHF/UHF means all amateur bands above 30 MHz. Note: On 50 MHz, the region below 50.150 has been declared a contest free zone, and contest CQs and exchanges may only take place above this frequency. Stations violating this rule may be disqualified.
37. Cross-band, cross-mode and contacts made via repeaters or satellites are not permitted for contest credit. However, repeaters may be used to arrange a contact on another frequency where a repeater is not used for the actual contact.
38. Stations may make repeat contacts and claim full points for each one. For this purpose, the contest is divided into eight consecutive three-hour blocks: 0100-0359, 0400-0659, 0700-0959, 1000-1259, 1300-1559, 1600-1859, 1900-2159, 2200-0059 UTC. If you work a station at 0359 UTC a repeat contact may be made after the start of a new block providing they are not consecutive, or are separated by at least five minutes, since the previous valid contact with that station on the same band and mode.
39. Stations operating on Phone must exchange ciphers comprising RS plus a 3 digit number commencing at 001 for each band and incrementing by one for each contact.
40. Stations operating on CW must exchange ciphers comprising RST plus a 3 digit number commencing at 001 for each band and incrementing by one for each contact. Where the CW contact is with an overseas station that is unable or unwilling to give a valid serial number, the serial number shall be assumed to be 001.
41. Portable stations shall add the letter "P" to their own cipher, e.g. 59001P.
42. Multi-operator stations are to commence numbering on each band with 001.
43. Receiving stations must record the ciphers sent by both stations being logged. QSO points will be on the same basis as for Home Stations, unless the receiving station is portable.
44. The practice of commencing operation and later selecting the most profitable operational period within the allocated contest times is not in the spirit of the contest, and shall result in disqualification. The period of operation commences with the first contact on any band or mode, and finishes either 6 or 24 hours later.

If anyone wishes to contact me privately to discuss rules etc, my home phone number is (07) 4723 4229, and my snail mail and e-mail address are as shown in the Log Submission section above.

Denis Johnstone VK4AE/VK3ZUX.

Over to you

WIA Board Elections

The Editor
Amateur Radio Magazine

Dear Sir

The recent call for nominations for election of Directors to the WIA Board has certainly produced a flurry of activity in social media. Of course some amateurs have polarised perspectives leading to discussions that are probably not constructive or in the best interest of the hobby. What does appear to be the case is that the WIA is overall doing a good job, across a large range of areas, many of which, for example, involvement with the IARU, are not immediately obvious. In my opinion, there are however areas where the WIA can and must improve and this requires change.

In all organisations change in practices and procedures can be seen as a threat by those who are within.

I have noticed that there has been a call for younger Directors. It is my view that age is not relevant. What is important is getting the right skill set and balance across the membership of a Board. This is often difficult to achieve through an election and easier for other not-for-profit organisations that can appoint Directors who have the relevant skills. It is also sometimes hard for organisations such as the WIA to actually attract volunteers to stand for election since providing a substantial time commitment is difficult for many.

In the spirit of wanting the WIA to achieve the best possible outcomes for amateur radio in Australia, I encourage members with a relevant skill set, time availability, a passionate support of the WIA and willingness to be a positive contributor, to "throw their hat into the ring" on this occasion and seek election.

I would like to invite a free and frank discussion from my fellow WIA members and look forward to their comments.

Sincerely,

Andrew Smith VK6AS
vk6as@wia.org.au

SOTA & Park News

Allen Harvie VK3HRA

We finished up 2015 with the K index down, UV index up and the weather doing whatever it felt like. The propagation continued to provide challenges that we are now getting used to. The conditions impact SOTA activations to a greater degree than Park activations. The equipment is generally the same; a Park activator is able to have alternative antennas, higher powered radios or larger batteries on hand but when you are carrying the radio station to the site there will be a compromise between weight and the amount of equipment you can carry.

We may not be able to do much about propagation but activators can improve the chances of contacts by deploying simple steps prior to going out to promote your activation including:

Alerting before the event – Send a message to SOTAwatch, ParksnPeaks, Facebook and Yahoo Groups to get your message out ensuring chasers are looking for you.

Spotting during the activation – If phone or web access is available, a Spot will alert chasers as to the activation. It takes time for the spots to be processed and displayed. Some have to travel around the world so it is important to call for at least 10 minutes after sending a Spot or a change of frequency, thereby giving the Chasers/Hunters a chance to try to catch you.

Adapting to conditions – use different bands when conditions are poor. Many are using higher bands and 2 m Aircraft Enhancement to gain contacts. The SOTA 10 m/6 m challenge has resulted in several SOTA operators now prepared for higher bands. If the deep summits are off limits then practice selecting summits closer to populations supporting higher bands is a desirable outcome.

Of course Hunters / Chasers can help by scanning the bands and listening on known frequencies then spotting any stations they hear or work. Once spotted, there will be many seeking a contact.

With improved weather comes improved access with roads being opened. Some sites are still out of reach after previous fire damage. Spring provided a window for many however summer with the always present fire threat will be impacting activations. Activations will not stop; they require an additional layer of planning and awareness to ensure the conditions are safe. Remember the last thing we need is to have an activator rescued from a fire zone.

Fire, temperature or access; if the conditions are not right then walk away from the activation. We have seen a couple of aborted activations due to challenging physical access or weather conditions. It is a difficult decision to make to turn back. I have personally been in position where thick undergrowth had hampered progress not leaving me enough time to safely complete the activation. Activation or no activation, you have still spent time in parts of the Aussie bush that many only dream of accessing. So soak in the views and enjoy your time out there.

There were also several reports of activations where poor propagation limited contacts. One contact allows you to claim the SOTA activation with four contacts required to qualify the summit and claim the activation points. If the propagation is plotting against you, then remember it may be time to enjoy the view from the summit and put the activation down to experience.

Andrew VK1DA/VK2UH, the VK2 Association Manager, has updated the VK2 ARM with summit name and location fixes. Locations were updated for Bulgo Hill VK2/IL-017 and unnamed summit VK2/SM-046 and summit names updated for VK2/SM-031, VK2/SM-081, VK2/ST-051, and VK2/SY-002.

KRMNPA Weekend

2015 saw the KRMNPA 5th Annual Activation weekend held across four days being Friday November 13 to Monday November 16, on the same weekend as the Spring VHF/UHF Field Day. A total of 28 VK3 National Parks were activated across the four day period by 18 Operators. Much welcomed and appreciated activators from VK2 and VK5 travelled to participate in the event with VK3 operators.

Many Activators had the support and assistance of their partners as they activated the Parks. Two husband and wife teams, Lesley VK5LOL and Hans VK5YX & Joe VK3YSP and Julie VK3FOWL participated.

With the increased activity, hunters had a busy time chasing. There was plenty of Park to Park contacts which is always good for all Hunter/Activators, however very little DX was found.

The weekend allowed as least two chasers John VK5BJE and Mick VK3PMG to qualify for the KRMNPA Merit Award by gaining the remaining contacts to claim all 45 KRMNPA Parks worked.

The 2016 KRMNPA activation weekend will take place **Friday November 11- Monday November 14**. Please put this date in your diary now.

Inaugural VKFF Activation Weekend

First annual VFFF activation weekend was held across the 28th and 29th of November 2015.

This was well received with over 30 unique parks activated (VK1, VK2, VK3, VK4, VK5, VK6, VK8) by around separate 50 activators. It may have been a first time for many Tony VK5FTVR, Giles VK5GK and Cliff VK2NP, with many activating multiple parks over the weekend collecting hundreds of contacts and dozens of Park to Park contacts – a prized entry in the log.

Thanks to all the Activators and Hunters for a great weekend. Special thanks go out to Paul VK5PAS (VKFF Award Manager) and Tony VK3VTH (KRMNPA Manager) for their efforts promoting these weekend activities.

2015 was the apex of portable activity with expanded award schemes, supporting web sites and an increasing involvement from amateurs from all walks in all aspects.

In closing, a sincere thanks to all who participated. Be it activating, hunting, chasing or partners supporting, be it on a SOTA peak or in a Park. This aspect of the hobby has produced positive benefits to amateur radio of which we call can be proud.

Spring was good for portable operations. Hopefully Summer is allowing this activity to continue....

73 all & RIP Larry.

Allen VK3HRA

Over to you

Licensing – getting started

November's *AR* magazine included a letter in the "Over to You" column from Rob VK3NBC. In reply, I would like to highlight the following points:

Difficulty?

If someone is prepared to put in the effort required to study for a Foundation call, they reap the rewards. They can the work the world or the rest of the country. They soon realise they needed to know quite a bit of information about electronics and regulations so they can fit into our hobby. The Foundation licence is just the first step to continual learning and upgrading as far as you want. It just takes a little effort!

For all the others who consider it too hard and want it given to them on a plate, there is Citizens Band (CB) radio!

Expensive?

They can already source second hand equipment from many sources including many internet sites, radio club events, local amateurs, even garage sales and a few shops. No need to inflict even more work on the few WIA volunteers we constantly rely on. The new amateur can construct effective antennas with their newly found knowledge for very little cost, and learn a lot while enjoying some "hands-on" experience. You can build anything you like! Just don't radiate a signal without supervision or an upgraded licence.

Old Fashion?

Yep, a lot of the rag chewing on VHF/UHF repeaters, and even on some HF bands is probably not stimulating to other casual listeners, BUT..... try some of the following: contesting, award hunting, SOTA, IOTA, WWCC, CW, RTTY, PSK31, UI-View, MS, AE, EME, and dozens of other modes which you can learn about as you listen. If you don't understand all these abbreviations, you have the choice of LEARNING, or moving to the CB band.

I finally got my Novice licence after many years of pirating on 27-28 MHz until one day, an amateur came up on frequency and politely explained the havoc we had been unknowingly causing to some of the 10 metre band-plan. Oops! He was a local, he wasn't a perceived threat, he invited us round to his shack, we got to play "real radio". I was hooked!

About six months later I got my first call: VK4VHQ, and my first "legal" overseas QSL cards. That was a Novice call which still needed Morse code (CW) send and receive passes, as well as the theory and regulations.

My first amateur radio had valves, my second had 10 watts of solid state output. I connected a Tono multi-mode communications keyboard to it. The rest, like they say in the classics, is history!

Have a go!

73,

Steve Stephens VK4KHQ.

Don't forget

Don't forget to register for MEMNET.

CW Today

Louis Szondy VK5EEE
e *vk5eee@wia.org.au*

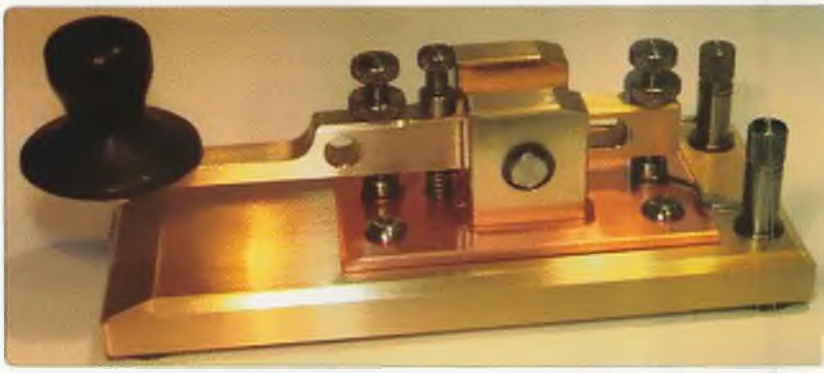

Photo 1: One of the many beautiful keys hand made by George VK2DLF who is one of the few current day Morse key producers in the world, and perhaps Australia's only regular manufacturer. Due to a backlog of orders and the slow speed of production, it may be a while before he can however take on new orders Check his website www.morsekeys.com for more information.

CW revolution

A review of the CW situation in Australian amateur radio over the past year provides for good news: there is most definitely a CW revival underway! The first half of the year, one could call CQ on 40 m for hours without getting a response, but by the end of the year the situation has very much improved. The 43 year old Sunday morning CW Net continues to attract good participation, and I had the honour of presiding over a new record number of participants in session #2173 on 2nd August, with 32 stations participating. In addition there is now a week-day evening short CW net on 7051.2 at 0830Z and some other CW nets including practice sessions run by Michael VK2CCW on 7115 LSB currently Mondays and Fridays at 0900Z. Latest schedules are on the *www.vkcw.net* site.

Perhaps a world first in amateur radio history – certainly since I've been a listener since the 1970s – Australian radio amateurs have successfully established a real CW Calling Frequency on 7050 kHz with some 60 stations using it on a regular basis, with the number constantly growing. This operates in similar fashion to the former maritime radio telegraphy CW calling frequency 500 kHz. A weekly CW news broadcast is sent in Morse code every Saturday afternoon at 20 wpm with repeats on Sunday morning at 17 wpm and Monday evening at 14 wpm in each case on three frequencies simultaneously, the schedule and the text of past bulletins is available at *www.vkcw.net/qst* – as far as I know the only other CW bulletin in the world is the ARRL one broadcast from W1AW.

Certainly, with the requirement to know Morse code dropped from most amateur radio examinations around the world, the CW mode declined in popularity but in Australia at least, this situation is now reversed with the decline having halted and turned around. This is clearly evident listening around the bands during the past six months with increased usage of CW, more operators using the mode and more activities outside of contests. I am absolutely sure that because of the wonderful ability of human beings to talk with our fingers at speeds of up to 40 wpm or more even with a mouthful and the enjoyment that sending and receiving CW brings to those who have mastered the art, this unique mode of communication will always remain and may continue to grow.

Hardly a week now goes by without us coming across a new returnee or even newcomer to CW and I've had the honour of being the first QSO in a great many years for several old timers who are now returning to the mode. The number of high speed operators who are happy to send very slowly for newcomers to CW is also growing, and especially on Tuesday and Thursday nights from around 0830Z for an hour or so, many QRS (slow speed) contacts can be made around 7050 kHz on 40 m. Some o us are also using our bug keys mor often, and with great thanks to Dre VK3XU my favourite key is now the Simplex Auto, an Australian-made bug key by Leo Cohen, from the 1940s.

Talking of keys, in this 4th issue of **CW Today** our thanks go to Joh VK4TJ who reviews three of his Morse keys as follows.

Junker – The "Taste" of fine CW

German speakers will appreciate the pun. More correctly "Joseph Junker Elektoapparatebau Fernmeldetechnik GmbH model DBGM". By consensus, this was "the one to beat" before a young upstart named Pietro Begali appeared on the scene. Perhaps it still is, if the Lotto Commission has been a bit remiss in contacting you

bout your good fortune. Out of roduction for years, the Junkers re a regular feature on eBay, but ven better bargains are to be had you happen to have wooden hoe-clad feet "a terre" in der lederland's, where they routinely how up at ham car boot sales for bout 15 Euro.

As you might expect for typically German craftsmanship, there is othing junky about Junkers! With lmost micrometre-like adjustments or both gap and spring tension, if ou cannot find settings that result in mooth, crisp CW, rest assured that he problem is with you, not the key!

All is not sweetness and light ith the Junker, however. Bucking he trend towards roller bearings, he pivot is a simple tapered pin/ onvex cone which is both more ritical to adjust and subject to reater wear and "gunking". The henolic contact insulator is prone o breakage and misalignment.

I've saved the worst for last, owever: The Junker employs a elatively) complex "teeter-totter" ension adjustment assembly, which, n my view, adds considerable inertia. Why has my code speed dropped y 5 wpm?" was my reaction after iving the Junker a solid workout n day one. Although a fine piece f precision craftsmanship, sadly, ou will not be setting any new land peed records on this baby...

Photo 2: German Junker key.

Czech Army Key – The ugly duckling with swan-like grace

With typical cold war ruthless efficiency, not 1 Kcs was spent on the aesthetics of this rather homely key. With 90% of the works encased in a Bakelite "bathtub", it's not even apparent how it works! One is given the option to "Prijem" by lifting up on the knob or "Vysilani" by pressing downwards. Presumably, we want the latter.

Photo 3: Czech army key.

In my quest for ever higher straight key code speeds, all I really ask of a key is:

- Fine gap control that stays put once adjusted
- Fine spring tension adjustment that stays put
- No lateral slop in the pivots
- No torsion of the main bar

"Is that all?" you say! "Mortgage the homestead, then, because what you are asking for don't come cheap!" Wrong! The bad Czech comes very, very close indeed, and I think mine cost me the princely sum of about $30 AUD, delivered to my door from the UK.

Do take the time to personalise the spacing and spring tension – as delivered, the key was only useful for cracking macadamia nuts betwixt the contacts. I've now got mine screwed down so tight that a single sheet of paper dropped on the operating console has my duckling attempting to Vysilani the old country, all on its own.

Cheap, great performing – there's gotta be a catch, right? A couple of minor nits to pick, really:

- The base. Well, there is no base, really. Eastern bloc transceivers tended to give the key top berth, with a weird, slide-in clamp arrangement that would be difficult for a capitalist war-monger to replicate. Resign yourself – you are going to be providing stability control by means of your non-sending hand. Fortunately, life over the bathtub is quite comfortable. Whilst you are at it, glue some shelf "non-slip" material to the base plate.
- If you are a "thumb and two fingers" knob-gripper like me, the knob is really too close to the bathtub. I have to send with the key at a 45 degree angle to accommodate my 00 gauge fingers. Even then, it is only JUST adequate.
- At VERY high straight key speeds, I think some ops "assist" the spring return with a bit of upwards motion. Get carried away with this on the bad Czech, and you might find yourself prijeming, when you wanted to vysilani.
- There ain't any more. Mike G0CVZ sold thousands of these keys worldwide, but, alas, all good things come to an end. With that many out there, however, just put out the word that you are after one – some are bound to have fallen into the hands of non-believers or CW wannabees.

Photo 4: Russian "tiny" key.

Russian "Tiny" Key

No nomenclature appears to exist to describe this little comrade except "tiny" or "small". Rumour has it that these never saw military service, but rather, were produced en masse to allow children of the revolution to practice dobbing in capitalist oppressors for fun and (tsk!) profit. If you don't have a child, you might well need to obtain under lend/lease to adjust this key, as your pre-metric double-naught gauge fingers will fail miserably at this task. If you should ever find yourself in a "sorta-SOTA situation" where every gram of baggage has to levitated at great personal cost to your aching backside, this key might just fit the bill. It *is* possible to send quite good, albeit QRS code on the wee beastie, but as a shack sloth main mill? Nyet!

Silent Key

Doug Dowe VK3FDUG

The M&DRC has lost another old timer and as with the passing of some others we again have lost a lot of oral history of Australian RADAR in WW2.

Douglas George Dowe was born on 5th December 1923 and grew up on a farm near Tenterfield in the northern NSW tablelands. As a school boy he befriended a local saddler who was known as 'The True Tenterfield Saddler' and who also owned the local radio dealership. He taught Doug some basic radio principles after the shop closed in the evenings.

Doug was enthralled by being able to pick up distant radio stations after the sun went down. As he became more knowledgeable he built a crystal set and then built a radiogram for his parents.

Like many farmers sons he was sent to a boarding school, St Johns Armadale, New South Wales. Here he won a scholarship to Mentone Grammar School where he matriculated.

Doug got his first job with Standard Telephones and Cables in Sydney assembling and testing radio equipment. When WW2 broke out, he joined the RAAF and was sent to the Radio School in Point Cook. Doug was top of his class he so he was transferred to Richmond NSW to learn the new secret radar technology. By the time he completed the course he was a sergeant. During the war he had postings to various Early Warning sites in Australia, New Guinea and Borneo.

After the Japanese surrender Doug served with British Commonwealth Occupation Forces to investigate Japanese Radar systems which he believed were inferior to ours and British equipment. Doug continued to serve in the RAAF and was seconded to the US Air Force where he received instruction to train others back home in the newest developments in Radar and the Ground Control Intercept equipment. He worked on numerous RADARs and reached the rank of Warrant Officer. Doug left the RAAF in 1960 with highly regarded qualifications. The CSIRO Division of Atmospheric Physics at Aspendale snapped him up for a senior technical officer position. Here he built and continued to develop a specialised atmospheric research RADAR. After 20 years there, he left and formed his own consulting business.

When he retired he made time for restoring old gramophones and radios. Doug was a foundation member (number 2) of the Historical Radio Society of Australia and restored many a Bakelite radio to its former glory in appearance and working condition. He was also a member of the Australian Historical Telephone Society.

Earlier on when Television was first broadcast in Australia he converted about 300 American sets to the Australian standards; TVs sets were much cheaper in the US. He also found time to build two Holden station wagons from parts he acquired.

Several years ago at a RAAF RADAR reunion, Rolfe Fox (SK and an M&DRC member) suggested that Doug come to the Moorabbin and District radio Club. Doug had serviced some amateur transceivers in the past and the Club had a few WW2 RAAF radio men in it. At this time he also joined the RAOTC and thoroughly enjoyed reading OTN News and attending the luncheons.

Doug typically became quite involved and served as vice president of the M&DRC and obtained his own amateur radio licence, VK3FDUG, one of the oldest ever to do so. He took part in many of the Clubs activities including presenting several talks on RADAR and his WW2 experiences. He would often bring in a piece of hardware, usually from a WW2 radar set for an impromptu show and tell much to the enjoyment of the members. He rarely missed a meeting or a function.

Doug made a determined effort to keep fit. He did weight training at home to maintain strength and up to two years ago he used to swim in the Bay with his wife Sarah. Their favourite beach was at Timaru in New Zealand.

Doug retained a keen wit, an impish sense of humour and was a logical thinker with extensive knowledge. He could be very philosophical and spiritual. He was a man with great determination, to the point of being obsessive but he could also be kind and generous.

Doug passed away on 9th November 2015.

He is survived by his wife Sarah and children from his first marriage, Robert, John, David, Peter and Wendy and four grandchildren.

Rest quietly old fellow.

Ron Cook VK3AFW and Sarah Dowe VK3SD from MDRC

(Sec. Note: Written in collaboration by Sarah with Ron's help.)

Four Weeks in November - Reflections on the 2015 World Radiocommunications Conference

Dale Hughes VK1DSH

The International Telecommunications Union (ITU) is a specialist agency of the United Nations (UN) based in Geneva, Switzerland. The ITU radio sector (ITU-R) hosted the 2015 World Radiocommunications Conference (WRC-15) which ran from 2 November through 27 November and more than 3500 delegates from over 160 countries attended. WRC-15 cost the ITU in excess of 6 million Swiss Francs or approximately 9 million Australian Dollars.

World events and international politics are never far from ITU activities and this was manifest in a number of ways: the recent inclusion of the WRC-15 global flight tracking agenda item following the loss of flight MH370, an extraordinary and very sombre plenary meeting after the Paris terrorist tragedy and the subsequent placement of armed police at the conference venue, after lengthy negotiations the announcement of an agreement between Israel and Palestine regarding spectrum management issues which is a positive step forward for that troubled part of the world. And finally, the ongoing territorial disagreement between Argentina and the United Kingdom over the Malvinas/Falklands Islands which, at the very last moment, nearly derailed the possibility of a new 60 m amateur allocation.

As WRC-15 is an international treaty level meeting, attendance was subject to ministerial approval and individual agreement to abide by a strict set of guidelines governing conduct, confidentiality, what can be said and to whom. There is a strict meeting and conference process that must be followed in the attempt to reach consensus regarding each agenda item.

All WRC meetings are very formal and hierarchical; the lowest formal level is that of Sub Working Group (SWG) which decides the fate of individual WRC agenda items and develops the necessary draft regulatory text for the revised ITU Radio Regulations. Drafting, informal and ad-hoc groups are also established to address specific issues and difficulties if required. The SWG reports to the Working Group (WG) which reports to the relevant Committee which then reports to a WRC Plenary meeting.

The draft regulatory text created by each SWG is reviewed at each meeting level above and changes are possible at each level, though substantive changes become less likely as the proposal proceeds through the approval process (except for contentious issues). The draft text is then subject to 'first and second' readings in a WRC Plenary meeting which then approves the final text. At the final WRC Plenary meeting successful proposals becomes part of the 'Final Acts' of the conference. After each of the ITU member states sign the final document, the modified ITU Radio Regulations come into effect approximately one year after the conference.

Individual member states then apply the ITU Radio Regulations to their own particular circumstances. In Australia the Radio Regulations become part of Australian law, though local restrictions or adjustments (through footnotes to the Australian band plan) may be applied. All users of the radio frequency spectrum may be affected by changes to the radio regulations, so the WRC outcome might affect Australia's defence, maritime and aviation systems, broadcasting and satellite services etc. For amateur issues the final outcome is changes to the Amateur Licence Conditions Determination.

The WRC is the culmination of three years of intense work at ITU-R working party meetings, discussions in each national administration as part of their individual preparation for the WRC and at meetings of various Regional Telecommunications Organisations (RTO). In Australia the lead is taken by the ACMA and the relevant RTO is the Asia-Pacific Telecommunity (APT).

My role since early 2012 has been:

- Under the auspices of the ACMA as part of Australia's WRC preparation, act as the Australian WRC-15 agenda item 1.4 and 1.18 coordinator, lead the relevant coordination groups, liaising with concerned and interested stakeholders, developing the 'Australian position' on these agenda items and then presenting and defending the Australian view at ITU and APT preparatory group meetings. I was also a member of the agenda item 1.12 coordination group and ensured that the views of amateurs were considered.
- From November 2012 as chairman of ITU-R Working Party 5A-1 ('Amateur and amateur satellite services') lead the process to develop the required sharing and compatibility studies

for WRC-15 agenda item 1.4 as well as the ongoing work of maintaining and updating ITU-R reports and recommendations relevant to the amateur service.

- During WRC-15 chair the Sub Working Group handling WRC-15 agenda item 1.4, making sure that due process was followed, that everyone was able to have their say on the matter and that we achieved our goal within the given time frame.

Including WRC-15, I attended 21 meetings with a total of 114 days devoted to discussion on WRC-15 agenda items. It was important to be at the various meetings, 'on the floor and on the day', to present the agreed Australian position and amateur viewpoints on agenda items – there is no other way. Outside of the meetings there were many hours spent writing reports, reading input documents for the various meetings and undertaking the necessary work involved in leading the two Australian agenda item coordination groups for which I was responsible.

WRC-15 agenda items of interest to amateurs

At WRC-15 there were a number of agenda items relevant to amateurs, though the issue of most interest was agenda item 1.4 which was for a new secondary amateur allocation around 5300 kHz. It was the task of Sub Working Group (SWG-4B1) to deal with this issue and to decide whether or not a new allocation to the amateur service could be made and to develop the necessary regulatory text for the conference and ITU Radio Regulations if an allocation was agreed.

In the beginning there were a large number of options presented by contributing states with proposed allocations being as wide as 175 kHz down to zero i.e. no allocation. From the start it was apparent that the opponents of a new amateur allocation were determined and well organised and the proponents had to work very hard to establish the legitimacy of their case. Over 15 sometimes acrimonious SWG-4B1 meetings a compromise was reached that allowed for a small amateur allocation with regional power limitations. The discussions were very complex and it is fair to say that both opponents and proponents of the new secondary amateur allocation left the meeting 'equally unhappy'.

An item of concern for countries that already have a 60 m allocation under domestic arrangements was that their allocations may be reduced to the 15 kHz allocated in the new Radio Regulations; however it appears likely that in most cases those countries will continue to enjoy their existing privileges with perhaps minor adjustment to achieve global frequency harmonisation.

What does this WRC-15 outcome mean for Australian amateur operators? While the 15 W e.i.r.p. power limitation is seemingly harsh, calculations indicated that it is probably in accordance with typical mobile usage where a 100 W transmitter and vertical whip is used. More problematic is that the nominated frequency band is used by the Royal Flying Doctor and other important services. So at this time it is far from clear how this situation can be resolved and the WIA will be involved in further discussions with the ACMA regarding this issue. If and when a 60 m allocation is made available to Australian amateurs we must remember that it is a secondary allocation and this means that we must not cause interference to the primary service and amateurs cannot claim protection from harmful interference from stations of the primary service.

Irrespective of the specific Australian situation, achieving a new global HF allocation for the amateur service is a remarkable outcome and it is a result of hard work by many individual amateurs, national amateur societies and supportive administrations.

Another issue of interest to amateurs was agenda item 1.18 which was for a new allocation in the 77.5 – 78 GHz frequency band for the radio location service. This issue is of interest/concern to amateurs because of the primary amateur allocation in the same band. Sharing studies indicate that there will be minimal impact on typical amateur operations in that band by the short range vehicle radar systems. The main input to this agenda item was by way of the sharing studies undertaken before WRC-15 where representatives of the amateur service ensured that the sharing studies were representative of typical amateur practice that is likely in that band.

Agenda Item 1.12 was for a new allocation to the Earth Exploration Satellite Service and there was some concern that the earth exploration satellites could cause interference to amateur activities in the 3 cm band. The proposal that went forward covers the 10.0 – 10.4 GHz frequency band and sharing studies indicate that typical terrestrial amateur activities would not be affected by signals from the earth exploration satellites. This issue was highly contentious with a number of countries objecting because of security concerns as the new satellites would have image resolution of tens of centimetres meaning little could be hidden from them.

Agenda Item 1.1 sought up to 500 MHz of additional spectrum for International Mobile Telecommunications and was a possible threat to a number of microwave amateur bands. It was another very contentious agenda item and it was difficult to achieve agreement. Australia has added its name to footnotes which allocates the 3400 – 3600 MHz frequency band to IMT and this formalises what has been the Australian position for some time. The issue of more bandwidth for IMT remains

potential threat to amateur locations.

WRC-19 agenda items of relevance to the amateur service

WRC-15 decided on a number of WRC-19 agenda items relevant to amateurs:

1.1 is a proposal to globally harmonise the 6 m amateur band by allocating the 50 – 54 MHz frequency band to the amateur service in ITU-R Region 1.

1.13 is for more IMT spectrum which might affect the 47 – 47.2 GHz amateur allocation within that band.

1.15 is for new allocations in the 275 – 450 GHz band and the amateur service may consider seeking a new allocation in that range.

1.16 is for a possible allocation to radio local area networks between 5150 and 5925 MHz which might affect the amateur allocation within that band.

Work on these issues will start in early 2016 and these agenda items will require significant input from the worldwide amateur community.

Conclusion and Acknowledgements

Win-lose-or-draw the most important point is that the amateur service presented a united, professional front to the world radiocommunications community and the views of the amateur service continue to be taken into account when significant decisions regarding the radio frequency spectrum are made. Our success in obtaining a new high frequency allocation for the amateur service and making sure our concerns were heard was a result of a very good team effort by all involved. The role of being a Sub Working Group Chairman enabled me to take a very active role in WRC-15 and was a privilege that few get to experience. It gave me a unique perspective on WRC-15 and it was probably the most challenging task I have ever undertaken.

I wish to thank the WIA President, WIA Board and the IARU for their support and funding to attend WRC-15, earlier ITU-R Working Party 5 meetings and APT WRC-15 preparatory meetings. It was a pleasure to work with all the amateur delegates representing the IARU and various national administrations as well as the other Australian delegates attending WRC-15 in their various capacities.

The WG4B chairman Mr Mohamed Moghazi and the WG4B secretary Mr Karlis Bogens gave me unequivocal support for the work of SWG-4B1 and I thank them for their guidance during those intense weeks of negotiations at WRC-15. The ITU security, administrative and IT staff also worked long hours to ensure the security and smooth running of a complex and long conference.

Mr David Murray of the Defence Spectrum Office deserves special thanks for his flexibility and understanding in the final part of the delicate negotiations given the long standing interest of the Australian Department of Defence in spectrum around 5300 kHz.

From the ACMA, in particular I would like to thank Ms Maureen Cahill and Mr Neil Meaney who, as very effective leaders, managed the Australian delegation and WRC preparatory process which led to a number of positive and important outcomes for Australia.

Finally, I thank my wife for accepting my frequent and lengthy absences from home to attend ITU and APT preparatory group meetings.

Silent Key

Allan Bengtsson VK3AB

Many radio enthusiasts throughout Australia will be saddened to hear the passing away of Allan VK3AB. After a protracted illness, Allan passed away peacefully during his sleep on 10th July 2015 aged 79 years.

Allan will be remembered by all who knew him for his dedication and principal builder, fine tuner, seller and deliverer of the FAMPARC multi-band HF mobile antenna. His dedication to perfection was unlimited. All FAMPARC mobile whips where individually fine-tuned fitted to the front of his four by four and in the same position on his drive. His dedication resulted in the FAMPARC whip having a reputation of quality and sold throughout Australia and overseas. The final

multi band whip antenna built by Allan and his right hand helper Bill VK3MMM is encased and on display in the club premises.

Allan was a keen amateur radio enthusiast and could be relied on for helping out with club activities; even though he was not a contester himself, he was always willing to help out in setting up a FAMPARC contest station.

Allan was a life member of FAMPARC and Vice President for many years, who took an active interest in committee meetings. Due to declining health, Allan and Bill retired from building the FAMPARC whip a little over twelve months ago.

Allan will be sadly missed by all with whom he came in contact, in particular members and lifelong friends at FAMPARC.

Contributed by Roy Seabridge VK3GB, FAMPARC President.

Hamads

FOR SALE – VIC

Books for sale surplus to my requirements. Electronic Data Handbook (Radio Shack) 1982 128 pages $4. Electronics Reliability – Calculation and Design Drummer & Griffin 1966 238 pages $5. Standard Handbook for Electrical Engineers 7th Edition A.E. Knowlton McGraw Hill 1941 2303 pages HC $30. Radio Installations their design and maintenance – W.E. Pannett (Marconi) 1951 Commercial, 454 pages HC $15. The Services Textbook of Radio – The Services Textbook of Electrical Engineering, Vol 1 – Electrical Fundamentals Edited by Wireless World 1956 645 pages HC $15. Integrated Circuit Pocket Book R.G. Hibberd Newnes- Butterworths 1972 74 pages HC $10. Analog Electronics – Analysis and Design Malcolm Goodge MacMillan 1990 508 Pages $10. Audels Electrical Power Calculations by E. P. Anderson 443 pages 1953 HC $10. Microprocessor Technology by David Terrell, Reston 562 pages 1983 HC $10. Beginner's Guide to Transistors, 2nd edition, Sinclair Newnes 1976 162 pages HC $5. Digital Electronic Circuits & Systems Noel Morris Macmillan 1974 143 pages $5. The seven following for $10 the lot: Digital Integrated Circuits National Semi-Conductors 1974; Linear Integrated Circuits National Semi-Conductors 1975; Engineer's Min-Notebook (Radio Shack) 1970s Formulas, Tables and Basic Circuits. 48 pages; Engineer's Mini-Notebook (Radio Shack) 1987s Basic Semiconductor Circuits. (X2) 48 pages; Engineer's Mini-Notebook (Radio Shack) 1988 Communications Projects 48 pages; Engineer's Min-Notebook (Radio Shack) 1990 Schematic Symbols, Device Packages, Design and Testing. 48 pages; Special Function Analog and Digital Circuits National Semi-Conductors. Postage extra. Email for postage quote, and complete list of books. Rodney Champness VK3UG, QTHR, Tel: 03 5825 1354, *rodlynn6@bigpond.com*

WANTED – QLD

Good or bad FT-101s, Kenwood TS-520s or similar type trans. contact VK4DV QTHR phone 0749 285537 at nights.

FOR SALE – TAS

Available on behalf of another amateur who has relinquished his licence due to infirmity. 1 x IC2KW S# 2132 500 W all solid state linear amplifier. 1 x IC2KLPS S# 2588 companion power supply for the IC2KW. Very good condition – with original manual. Price $1000.00 the pair. Will pack, purchaser to arrange freight. Contact via *graeme.rand@randelectronics.com.au* Graeme Rand VK7AQ.

The Wireless Institute of Australia ACN 004 920 745

Election of Directors - Call for Nominations

Pursuant to clause 14.1 (c) of the Constitution the WIA Board has determined that the election of directors shall be conducted by postal ballot.

Three directors retire at the conclusion of the next Annual General Meeting which will be held in Norfolk Island, 28th May 2016, namely Phil Wait, Rowan Dollar and Chris Platt. Each is eligible for re-election and Phil Wait and Rowan Dollar have offered themselves for re-election to two of the three vacancies. Retiring Director Chris Platt is not renominating.

Nominations are called for from others also seeking election as a director of the WIA.

A director must be a voting member of the WIA and must hold an Australian amateur radio licence.

Any person wishing to nominate as a candidate for election as director of the WIA must deliver or cause to be delivered to the Returning Officer by not later than 31 January 2016:

A statement signed by the candidate signifyng his or her willingness to be a candidate for election as a director together with;

the full name, age, occupation and callsign of the candidate, and

such other biographical details or other information as the candidate wishes to accompany the ballot papers, but in all not exceeding 250 words.

Delivery to the Returning Officer may be made by hand when the WIA national office is open at:

Unit 20
11-13 Havelock Road
Bayswater
Victoria 3153

or by mail to:
PO Box 2042
Bayswater
Victoria 3153

Nominations received by facsimile or by electronic means cannot be accepted.

Geoffrey Atkinson VK3AFA
Returning Officer

Contributions to *Amateur Radio*

AR is a forum for WIA members' amateur radio experiments, experiences, opinions and news.

Your contribution and feedback is welcomed.

Guidelines for contributors can be found in the AR section of the WIA website, at *http://www.wia.org.au/members/armag/contributing/*

Email the Editor: *editor@wia.org.au*

About Hamads

- Submit by email **(MUCH PREFERRED)** or if written and mailed please print carefully and clearly, use upper AND lower case.
- Deceased estates Hamads will be published in full, even if some items are not radio equipment.
- WIA policy recommends that the serial number of all equipment for sale should be included.
- QTHR means the address is correct in the current WIA Call Book.
- Ordinary Hamads from those who are deemed to be in general electronics retail and wholesale distributive trades should be certified as referring only to private articles not being re-sold for merchandising purposes.
- Commercial advertising on these pages Contact admanager@wia.org.au
- Copy to be received by the deadlines on page 1 of each issue of Amateur Radio.
- Separate forms for For Sale and Wanted items. Include name, address STD telephone number and WIA membership number.

'Hamads'
PO Box 2042
BAYSWATER VIC 3153
hamads@wia.org.au

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A $5 joining fee, plus $18 for one year or $32 for two years, gets you two interesting 64 page ***OTN Journals*** each year, **PLUS** good fellowship, and a regular broadcast of news and events. More information and a membership application are available from our web site at **www.raotc.org.au** or write to:- **PO Box 107, Mentone VIC 3194** or email:- **raotc@raotc.org.au** or call Secretary: Ian Godsil VK3JS on 03 9782 6612 .

TRADE PRACTICES ACT
It is impossible for us to ensure that the advertisements submitted for publication comply with the Trade Practices Act 1974. Therefore, advertisers will appreciate the absolute need for themselves to ensure that the provisions of the Act are strictly complied with.

VICTORIAN CONSUMER AFFAIRS ACT
Advertisements with only a PO Box number address cannot be accepted without the addition of the business address of the box-holder or seller of the goods.

ADVERTISERS INDEX

WIA Functional Committees

The WIA is a membership organisation with a very wide range of complex functions and member services. Core functions and services are administrative in nature (general administrative functions, membership services, examination and callsign management, financial etc...) and are performed by salaried staff.

Volunteers perform a diverse range of highly specialist functions (ACMA liaison, Frequency Co-ordination, Standards liaison, Interference issues, technical support and training and assessment etc.). These volunteers provide the majority of member services, however they have been loosely organised and often overstretched.

The new committee system attempts to structure the WIA's non-core activities into 10 broad functional areas, each comprising a team of volunteers under the direction of the WIA Board. This structure is intended to spread the workload on our volunteers, improve communications between members and the WIA Board, improve services to members, and encourage more people to become involved in the WIA.

WIA Committee Charters

Spectrum Committee

(Regulatory, ACMA, ITU, IARU, Repeaters & Beacons, Standards, Interference & EME, Monitoring Service)

Andrew VK4QF, Brian VK3MI, Dale VK1DSH, Gilbert VK1GH, Jim VK3PC, Noel VK3NH, Peter VK3APO, Peter VK3MV, Phil VK2ASD, Richard VK2AAH, Rob VK1KRM, Roger VK2ZRH, Ron VK3AFW.

- Perform all ITU and IARU liaison activities.
- Liaise with, and act as the 1st point of contact for, the ACMA.
- Advise the Board, and enact Board policy in relation to all radio communications regulatory issues and the LCD.
- Represent the WIA to State and Local Government
- Represent the WIA to Standards Australia
- Provide specialist technical advice and coordinate repeater and beacon licence applications and frequency allocation.
- Develop responses to significant and prolonged harmful interference issues affecting amateur radio operations.
- Provide an information resource for EMC/EMR issues.
- Administer the IARU Monitoring Service in Australia
- Provide a technical resource to other committees and the WIA Office.

Technical Advisory sub-Committee (Tech support, Band plans etc.)

Amanda VK1WX, Barry VK2AAB, Bill VK4XZ, Doug VK3UM, Eddie VK6ZSE, John VK3KM (Co-ordinator), Paul VK2TXT, Pau VK5BX, Peter VK3APO, Peter VK3BFG, Peter VK3JFK, Peter VK3PF, Rex VK7MO, Tim VK2ZTM, Walter VK6KZ

General Committee

Executive Administrator TBA, President (Phil, VK2ASD), Vice President (Fred, VK3DAC), Treasurer (Chris,VK3QB), WIA Secretary (David, VK3RU)

- Responsible for the efficient and correct operation of the WIA office.
- Responsible for staffing and workplace safety.
- Provide a specialist administrative resource to the WIA office as required.
- Manage contractual agreements.
- Manage business relationships.
- Ensure compliance with the ACMA Business Rules
- Prepare yearly budgets
- Prepare quarterly financial reports for the Board
- Prepare independently reviewed YE financial reports and balance sheets for circulation to the membership prior to each Annual General Meeting.
- Manage insurances and to be responsible for currency of insurance policies.
- Maintain a complaints register.
- Ensure complaints are handled in accordance with WIA policy and any contractual agreements.

Communications, Media and Events Committee

Jim VK3PC, Phil VK2ASD, Robert VK3DN, Roger VK2ZRH

- Communication with members and the public:
- Communicate with the membership.
- Publicise WIA activities and initiatives.
- Develop strategies and resources for the promotion of Amateur radio to the public.
- Develop strategies and resources for the promotion of WIA membership to the Amateur community.
- Supervise and/or perform promotional activities.
- Co-ordinate the yearly AGM activities

Education Committee

Fred VK3DAC, Ron VK2DQ, WIA Executive Administrator TBA

- In association with the WIA's RTO and affiliated clubs offering training services, develop and administer the WIA's training and assessment systems.
- In association with the Spectrum Strategy Committee, develop and maintain the various licence syllabi and associated question banks.
- In association with the Community Support Committee and the RTO, develop and maintain the Emergency Communications Operator scheme.
- Ensure the confidentiality and security of all personal information, question banks and examination papers.

Grants Committee

Drew VK3XU, Gary VK2KYP, Peter VK3PF (Coordinator), Peter VK3PH, Scott VK3CZ

Radio Activities Committee

WIA Director TBA

Contests sub-Committee

Alan VK4SN, Colin VK5DK, Denis VK4AE / VK3ZUX, James Fleming VK4TJF, John VK3KM, Kevin VK4UH, Tony VK3TZ

Operating Awards sub-Committee

Bob VK3SX (Coordinator), Alan VK2CA, Alek VK6APK, David VK3EW, Laurie VK7ZE, Marc VK3OHM, Paul VK5PAS

ARDF

Jack VK3WWW (Co-ordinator)

ARISS

Tony VK5ZAI (Co-ordinator)

- All activities associated with actual radio operation, such as: contests, awards, distance records, QSL services, ARISS, AMSAT, ARDF e

QSL Card sub-Committee

Alek VK6APK, Alex VK2ZM (Outwards Manager), John VK1CJ, John VK7RT, June VK4SJ, Max VK3WT, Stephan VK5RZ, WIA Office (Inwards Manager)

Historical and Archive Committee

David VK3ADW, Drew VK3XU, Ian VK3IFM, Jenny VK3WQ, Linda VK7QP, Martin VK7GN, Peter VK3R (Coordinator), Will VK6UU

- Develop, maintain and preserve the WIA's historical and archive collection
- Encourage access to the collection by WIA members and those seeking historical mater for publication.

IT Services

Robert VK3DN, Marc Hillman VK3OHM, Tim VK3K

- Provide an IT resource to other committees and the WIA Board.
- Be responsible for the off-site data back-up all IT systems information.
- To update and maintain the WIA website as required.
- Advise the Administrative / Financial committee in relation to the MEMNET Cloud Service contract.

Community Service Committee

Fred VK3DAC (Director), Greg VK2SM (Assistant Treasurer), Ewan VK4ERM (Director), Paul VK5PH

- Develop, promote and co-ordinate all WIA community support activities

New Initiatives

Phil VK2ASD (Director), Robert VK3DN (Director), Roger VK2ZRH (Director), David VK3RU (Company Secretary)

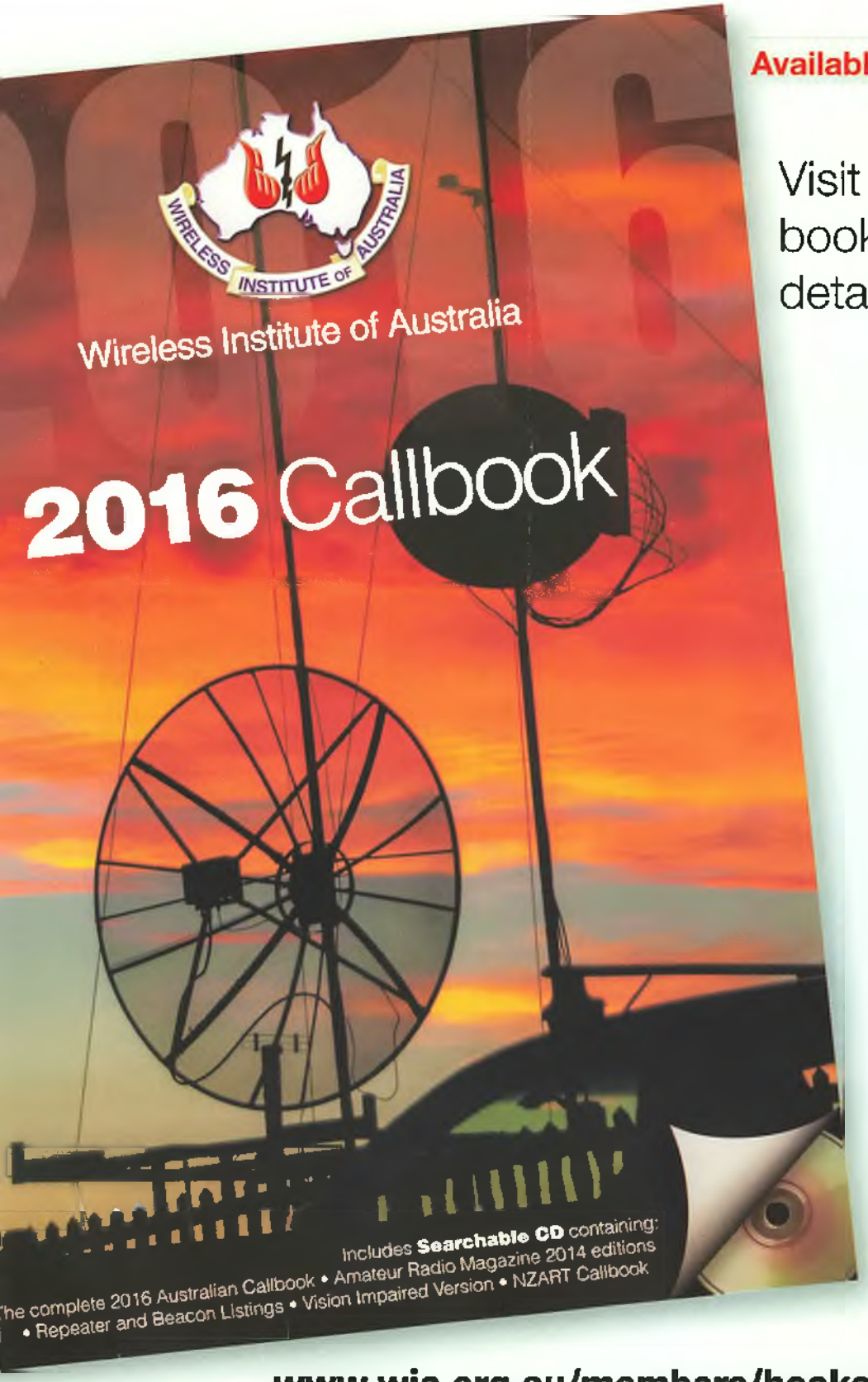
- Think-tank ideas and initiatives to advance amateur radio and WIA membership.
- On approval by the Board, run proof of conce trials.

Affiliated Clubs Committee

Ted Thrift VK2ARA, President (Phil Wait VK2ASD), Vice President (Fred VK3DAC)

- Manage all arrangements between the WIA and WIA Affiliated Clubs
- In cooperation with the Administrative / Financial committee, manage the Club Insurance Scheme
- Encourage stronger relationships and communications flow between the WIA and WIA Affiliated Clubs
- Encourage increasing WIA membership ratio in Affiliated Clubs
- Manage the Club Grants Scheme
- Identify and bring regional Affiliated Club issues to the attention of the WIA Board.

WIA **2016** Callbook



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